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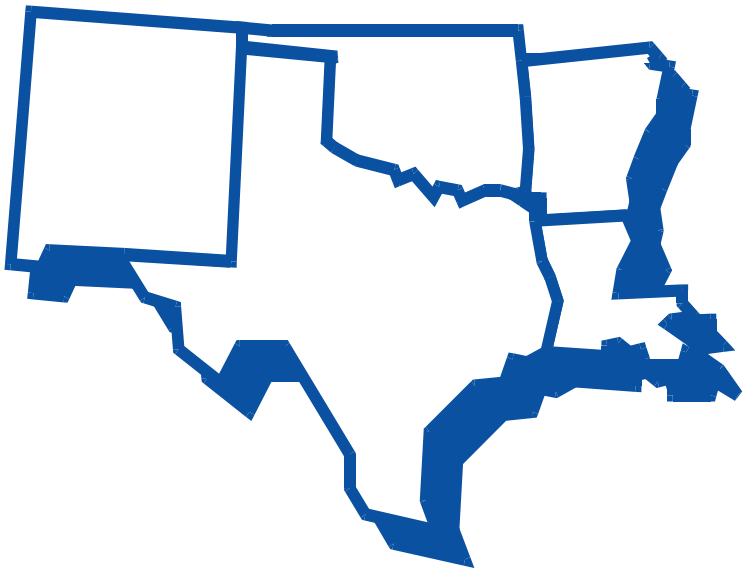
Version 1.1
Supplemental Remedial Investigation Report
October 2006

Supplemental Remedial Investigation
State Marine Superfund Site
Port Arthur, Texas

Remedial Action Contract No. EP-W-06-021
Task Order No. 0002-RICO-06BX



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Supplemental Remedial Investigation Report

State Marine Superfund Site
Port Arthur, Jefferson County, Texas

Remedial Action Contract No. EP-W-06-021
EPA Task Order No. 0002-RICO-06BX
CH2M HILL Project No. 344479
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Prepared for:

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Prepared by:
CH2M HILL, INC
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Executive Summary

This report documents the results of the Supplemental Remedial Investigation (RI) performed for the State Marine Superfund (SMS) Site located in Port Arthur, Jefferson County, Texas. This Supplemental RI Report summarizes the data collected during the Supplement RI field investigation. The data collected were also used to support the completion of the Baseline Human Health Risk Assessment (BHHRA) and the Supplemental Baseline Ecological Risk Assessment (BERA), contained within **Appendix E** of this report.

The SMS Site is located on Pleasure Islet, within Sabine Lake. Pleasure Islet was constructed of dredge spoils from the construction and routine maintenance of the Sabine-Neches Canal. The City of Port Arthur operated a municipal landfill on Pleasure Islet (including portions of the SMS Site) beginning in 1963. The landfill was closed in accordance with Texas Department of Health (TDH) requirements in December 1974. The SMS Site was operated as a barge cleaning and maintenance facility beginning in about 1973. A refining operation was also located onsite during the early 1980s.

An RI was conducted at the Site in 2001 to determine the nature and extent of contamination present at the SMS Site. Data collected during the RI indicated that Site soils, sediments, and ground water have been impacted with metals and SVOCs. During the RI, difficulties encountered during drilling prevented the collection of subsurface soil samples over much of the Site.

A Focused Feasibility Study (FFS), BHHRA, and BERA were performed for the SMS Site in 2005. The BHHRA indicated that potential risks are posed to human receptors by Site sediments through ingestion of fish. However, the BHHRA concluded that actual fish tissue data collected from Sabine Lake showed results that were much lower than the modeled results included in the BHHRA. The BERA identified potential risks to ecological receptors by Site sediments. The primary risks posed are to benthic organisms. Eight areas were identified where Site sediments exceeded Preliminary Remediation Goals (PRGs) for ecological risks. The BERA also indicated that the sediments might have been contaminated through the ground water-to-sediment pathway. The BERA did indicate that updated Site sediment data might yield results that indicate PRGs are no longer exceeded in Site sediments. In addition, Site stakeholders expressed concerns that the former wastewater impoundments might be the source of ground water contamination at the Site that then impacted Site sediments. In order to address these concerns, a Supplemental RI was performed in May and June 2006.

The Supplemental RI included the completion of seven soil borings and collection of soil samples at 17 locations. Five of the soil borings were completed within the area of the former wastewater impoundments to determine if soils in this area were the source of metals and SVOCs in ground water. Two borings were advanced downgradient (east) of the former wastewater impoundments and completed as monitor wells.

Three monitor wells (two new wells and one existing well) completed within the shallow perched ground water zone at the Site were sampled to determine the concentrations of metals and SVOCs present. These wells were located downgradient of the former wastewater impoundments and between the impoundments and Sabine Lake. Ground water sampling was performed to determine the concentrations of metals and SVOCs in ground water and determine the potential for the ground water to be a source of the sediment contamination.

Sediment sampling was performed at eight onsite and one background location for metals and SVOCs to update the sediment data for the Site. The sediment sampling was performed to evaluate the risks to ecological receptors based on current Site conditions. The ground water and sediment data were evaluated as part of the Supplemental BERA to determine the exposure pathways and risks to ecological receptors.

The BHHRA determined that Site soils do not pose a potential current or future risk to human health. Ground water is deemed non-potable at the Site due to the presence of a nearby large brackish water body and the presence of the ground water within the buried landfill material. Estimated risks to human receptors through the sediment pathway via ingestion of fish exceeded acceptable risk levels for Arochlor 1242, copper, and zinc. However, the modeled fish tissue concentrations used in the BHHRA are much higher than the measured fish tissue concentrations from Sabine Lake as reported by the TDH. Therefore, the modeled fish tissue concentrations are overly conservative, and it is recommended that the measured concentrations be used rather than the modeled concentrations. PCBs were not detected in the fish tissue samples collected by TDH, and the maximum detected concentrations of copper and zinc in edible fish tissue were approximately one order of magnitude lower than the modeled concentrations. Since estimated Excess Lifetime Cancer Risks (ELCRs) and Hazard Indices (HIs) are directly proportional to exposure point concentration, use of the measured fish tissue concentrations in the BHHRA would result in acceptable risk levels from fish ingestion exposures. Therefore, no further action in sediments is needed for protection of fish ingestion exposures**.**

The Supplemental BERA identified barium, manganese, and selenium as slightly exceeding primary Ecological Screening Values (ESVs) in Site sediments for benthic organisms, suggesting risks are possible. Only selenium exceeded the secondary ESV suggesting a likely risk. However, based on the ground water and soil data collected as part of the Supplemental RI, the Supplemental BERA concluded that the Site is most likely not the source of selenium in sediments. Furthermore, the weight of evidence analysis conducted for the BERA concludes that there is very low probability of any elevated risk to sediment dwelling organisms from constituents of concern (COCs) originating at the SMS. A Net Environmental Benefit Analysis (NEBA) of remedial alternatives was conducted in 2005 that concluded that monitored natural attenuation would be the preferred alternative if active sources of contamination still existed. Since the new 2006 data suggest that concentrations do not pose a risk to benthic communities and since the Site is not considered a source of potential risk to these communities the NEBA was not updated. Monitoring may not be necessary based on the current data and the decision to continue monitroring is left to the discretion of the risk managers for the site (the EPA WAM and other stakeholders).

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Acronym List

AST	Aboveground Storage Tank
BERA	Baseline Ecological Risk Assessment
bgs	below ground surface
BHHRA	Baseline Human Health Risk Assessment
bss	below sediment surface
C	Celsius
CCV	continuing calibration verification
COC	Constituents of Concern
COPC	Chemicals of Potential Concern
CRQL	Contract Required Quantitation Limit
CSM	Conceptual Site Model
CT	Central Tendency
DO	Dissolved Oxygen
DPT	Direct-Push Technology
DQO	Data Quality Objective
DRO	Diesel Range Organic
ELCR	Excess Lifetime Cancer Risk
EPA	U.S. Environmental Protection Agency
ESI	Expanded Site Inspection
ESV	Ecological Screening Value
FFS	Focused Feasibility Study
FS	Feasibility Study
FSP	Field Sampling Plan
ft	feet
ft/ft	feet per foot
GPS	Global Positioning System
GRO	Gasoline Range Organic
HI	Hazard Index
HRS	Hazard Ranking System
in	inch
IDW	investigation-derived waste
LCS	laboratory control sample
mg/kg	milligrams per kilogram
mg/L	milligrams per liter
mS/cm	milliseimens per centimeter
MS/MSD	matrix spike/matrix spike duplicate
MSL	Mean Sea Level
MSSL	Media Specific Screening Level
mV	millivolts
N&E	Nature and Extent

NPL	National Priorities List
NTU	Nephelometric Turbidity Unit
ORP	Oxidation Reduction Potential
PA	Preliminary Assessment
PAH	Polycyclic Aromatic Hydrocarbon
PBLS	Palmer Barge Lines Superfund Site
PCB	Polychlorinated Biphenyl
PCL	Protective Concentration Levels
PCP	Pentachlorophenol
PID	Photoionization Detector
PRG	Preliminary Remediation Goal
PPE	Personal Protective Equipment
PVC	Polyvinyl Chloride
QA/QC	Quality Assurance/Quality Control
QAPP	Quality Assurance Project Plan
RI	Remedial Investigation
ROD	Record of Decision
RPD	relative percent difference
SIM	Single Ion Monitoring
SMP	Site Management Plan
SMS	State Marine Superfund Site
SSI	Screening Site Inspection
STL	Severn Trent Laboratory
SVOC	Semivolatile Organic Compound
TACB	Texas Air Control Board
TAL	Target Analyte List
TCEQ	Texas Commission on Environmental Quality
TCL	Target Compound List
TCLP	Toxicity Characteristic Leaching Procedure
TDH	Texas Department of Health
TDS	Total Dissolved Solids
TDWR	Texas Department of Water Resources
TPH	Total Petroleum Hydrocarbon
TNRCC	Texas Natural Resources Conservation Commission
TOC	Total Organic Carbon
TRRP	Texas Risk Reduction Program
TWC	Texas Water Commission
USFWS	US Fish and Wildlife Service
VOC	Volatile Organic Compound
µg/kg	micrograms per kilogram
µg/L	micrograms per liter

1.0 Introduction

The Remedial Investigation/Feasibility Study (RI/FS) is a process by which the nature and extent of risks posed by a hazardous waste site are quantified and potential remedial options are evaluated sufficient to support an informed risk management decision regarding remedial action for a site. A RI was completed by the United States Environmental Protection Agency (EPA) for the State Marine Superfund Site (SMS), as documented in the RI Report dated April 2003 (**Weston, 2003**). The results from the RI were used by EPA to complete a Focused Feasibility Study (FFS), a Baseline Human Health Risk Assessment (BHHRA), and a Baseline Ecological Risk Assessment (BERA) (**CH2M HILL, 2005a, CH2M HILL, 2005b, and CH2M HILL, 2005c**). These reports identified the need for additional data collection to verify the ground water to sediment pathway, with respect to the former wastewater impoundment area at the site, and the need to update the sediment analytical data for evaluating risk to benthic organisms. This Supplemental RI was conducted by EPA to address these data needs. The BHHRA and BERAhave been updated to incorporate the results of the Supplemental RI.

This introductory section provides a discussion of the site background and history, a summary of the environmental setting, a summary of previous site investigations, a description of the nature and extent of contamination based on the results of the 2001 RI, and a description of the contents of this Supplemental RI Report.

1.1 Site Background

This section provides a summary of the site background, including a brief history of the site and an overview of site waste management areas. A map of the site location is provided in **Figure 1-1**.

1.1.1 Site History

During a routine aerial surveillance of Jefferson County in July 1980, the SMS (also referred to as the 'Site') was identified as a potentially hazardous waste site. The Site was a barge maintenance, cleaning, and salvage facility from 1974 through the early 1980s. Prior to that time, the City of Port Arthur used the Site as a municipal landfill between 1963 and 1974. As a result of subsequent investigations by the Texas Department of Water Resources (TDWR, predecessor agency to the Texas Water Commission [TWC], then the Texas Natural Resources Conservation Commission [TNRCC], which is currently the Texas Commission on Environmental Quality [TQEC]), the Site

became a Listed Hazardous Waste Site. Following TWC scoring efforts in 1987 and later in 1992 using the Hazard Ranking Scoring (HRS) system, the Site was referred to EPA Region 6 because the Site scored a 50.00 under the new HRS, indicating eligibility for listing on the National Priorities List (NPL). The EPA completed two separate HRS efforts, the last of which occurred in 1997. The Site was officially placed on the NPL on August 27, 1998. In June 1998, EPA requested CH2M HILL to conduct a preliminary RI/FS and prepare a Technical Memorandum. A RI was performed at the site in the autumn of 2001 (**CH2M HILL, 2005a**).

1.1.2 Site Location and Description

The Site is located on Old Yacht Club Road, Pleasure Islet, within the City of Port Arthur, Jefferson County, Texas. Pleasure Islet is a peninsula located approximately one-half mile southwest of the confluence of the Neches River and Sabine Lake. The approximately 17.2-acre Site consists of tracts 3 and 6 on Old Yacht Club Road. The Sabine-Neches Canal forms the eastern border of the Site. The Site is bordered to the north by the Palmer Barge Lines Superfund Site (PBLS), to the west by Old Yacht Club Road, and to the south by undeveloped land owned by the State Marine property owner. **Figure 1-2** provides current site features displayed on a 1998 aerial photograph.

The Islet is a man-made landmass consisting of dredge spoils generated during the construction and maintenance of the Sabine-Neches Canal. The canal was constructed between 1898 and approximately 1920, near Sabine Lake and the Neches River, between the current Site location and the mainland (**Port Arthur Historical Society, 1997**). Pleasure Islet did not exist at the time as the area encompassing the Site was actually part of the northern tip of Pleasure Island. Between 1955 and 1957, a portion of the canal along the western side of Pleasure Islet was abandoned and a new canal cut along the eastern and southern sides of Pleasure Islet. Pleasure Islet was created when a land bridge was constructed across the abandoned portions of the canal, between the northern tip of Pleasure Island and the mainland.

1.1.3 Operational History

Prior to 1957, Pleasure Islet was a part of Pleasure Island. Before 1955, few changes were observed in the area of Pleasure Islet. The islet was heavily vegetated and undeveloped. The islet received dredge spoils, most likely from the construction and routine maintenance of the initial intercoastal canal. Ownership of Pleasure Islet was transferred from the State of Texas to the City of Port Arthur in 1955. A land bridge was constructed across the abandoned portions of the Sabine-Neches Canal, located on the western side of the islet, and development in the area began in 1957 (**CH2M HILL, 1999**).

The City of Port Arthur began municipal landfill operations on the northern and central portions of the islet in approximately 1963. The landfill operation initially consisted of a burn pit in which wastes were incinerated. Burn operations ceased in 1969, after which time the landfill was used only for disposal of wastes. Trench methods were used for disposal of wastes in the landfill. In general, 50-foot (ft) wide trenches were excavated to depths of approximately 6 to 9 feet. Approximately 6 inches (in) of cover were placed over the wastes every two days, and a minimum of 2 feet of soil was placed over the area once a trench was filled (**Weston, 2003**).

The City of Port Arthur closed the landfill in December 1974 in accordance with Texas Department of Health (TDH) regulations. This required that the entire landfill be covered with approximately 2 feet of fine-grained fill material. It is believed that the cover material used was dredge spoils that originated on the islet (**CH2M HILL, 1999**).

Operations at the Site began about 1973. The Site was initially operated under the names “State Welding and Marine Works” and “Golden Triangle Shipyard.” The specific operations at the Site during this time are unknown. However, operations likely included marine salvage and repairs, and off-loading and bulk storage of petroleum products (**Weston, 2003**).

The construction of wastewater impoundments in the northwestern portion of the Site was also reported. The impoundments were reported to have been approximately 2 acres in size, unlined, and constructed with earthen dikes. The impoundments were used to store oil and wastewater from barge cleaning operations. Inspection reports from the Texas Air Control Board (TACB) and TDWR indicate that wastewater from the barge cleaning operations was directed to two aboveground storage tanks (ASTs) and then pumped to the wastewater impoundments. Some oil from the ASTs was diverted to an old ship located on land that was used as an oil/water separator (**CH2M HILL, 1999**).

A TDWR inspection report from August 1980 indicated that facility modifications were made at the Site to allow process waste oils to be converted into bunker fuels. The facility modifications included a distillation column, three ASTs, one 20,000-barrel tank, and two 10,000-barrel tanks. Additional smaller tanks were later constructed at the Site. A TDWR inspection report associated these storage tanks with the Lauren Refining Company, which was also owned and operated by the owners of the Site. It is not known when the Lauren Refining Company first began operations at the Site, but it is likely to have occurred sometime in 1980 (**CH2M HILL, 1999**).

1.1.4 Summary of Waste Management Areas

The wastes generated and/or disposed at the Site appear to have included both raw product (original barge contents) and effluent generated during the cleaning and maintenance of barges. Waste

generated and stored at the Lauren Refining Company includes wastes similar to those generated at the Site. Five different waste areas that were identified are listed below (**CH2M HILL, 1999**):

- Wastewater treatment facility (excluding the impoundments)
- Wastewater impoundments
- Former Lauren Tank Farm
- Sunken dock barges and offshore sunken barges
- Vehicle storage and maintenance and waste storage/handling areas

The locations and approximate sizes of the waste management areas, shown in **Figure 1-2,** were compiled from aerial photographs and Site inspection reports. Additional information regarding these areas is provided below:

- The former wastewater treatment facility includes all structures and work areas between the dock barges and the former impoundments, including an area of blasting sand occurring at the shoreline and dock barges.
- The impoundments include the areas previously identified on historical aerial photographs.
- The former tank farm, which is considered a waste management area, includes the boundary of the former tank farm as well as the boundary of a spill that migrated outside of this area.
- The dock barges (sunken and/or floating) and sunken barges are considered waste management areas and include sediments within and around the barges.
- The vehicle storage, maintenance, and waste storage/handling areas include most of the area between the former tank farm and the former wastewater treatment facility. This area includes wastes associated with the repair or storage of vehicles or salvage materials, such as marine engines. Also included are at least three storage tanks from the Former Lauren Tank Farm, which were moved to the area between the office building and pump house (**CH2M HILL, 2005a**).

1.2 Site Environmental Setting

This section provides an overview of the Site environmental setting. Described in this section are the Site physical characteristics including topography, Site features, surface water, geology and hydrogeology, ground water use, and ecological resources.

1.2.1 Topography

Ground elevations range from sea level along the shoreline to a maximum of 11 feet above mean sea level (MSL) in the north central portions (**Engineer's Office, City of Port Arthur, 1998**). The highest relief on Pleasure Islet is associated with the City of Port Arthur's former municipal landfill, which underlies most of the central and northern portions of the Islet. Onsite, elevations range from approximately 2 to 7 feet above MSL. Drainage on the Islet is toward the adjacent waterways with surface drainage on the Site occurring to the east-southeast.

1.2.2 Site Features

The understanding of current conditions and Site features is based on aerial photographs, a Site inspection conducted in August 1998, and the 2003 RI (**Weston, 2003**). Vehicle access to the Site is limited to a single dirt road originating at the western Site border along Old Yacht Club Road. Within the Site, dirt roads and trails connect various areas of current or historical operations. Along the shoreline are two sunken barge docks, orientated parallel to and forming part of the shoreline. These two structures are the primary location where barges were moored during cleaning or maintenance. Two additional sunken barges lie perpendicular to the shoreline, as well as a third barge that is oriented parallel to the shoreline (**CH2M HILL, 2005a**). These features are clearly shown on 1998 aerial photographs, as well as older photographs. Dredging of the canal in this area occurs approximately every two years (**Saez, 1998**).

Old marine equipment, including cranes and marine salvage debris, are present on the dock barges and inland areas. Several structures still exist, including a maintenance shed, a former office building, former wastewater treatment facility structures (boiler house, compressor building, and a former pump house), and at least one additional structure of unknown use. Most of these structures are partially collapsed and appear abandoned except for the maintenance shed, which may still be in use. Several ASTs and 55-gallon drums sit at the Site. The status of the tanks and their contents was not investigated during the preliminary inspection (**CH2M HILL, 1999**), although several drums appeared to be partially full. Numerous vehicles, including old cranes, pickup trucks, and several tractors and tractor-trailers, are parked at the Site. None of the vehicles looked operational and several appear to be in various states of salvage or repair. The soil around many of the vehicles is oil stained.

The Site is partially vegetated with native shrubbery and grasses. Much of the Site is overgrown and few structures are recognizable relative to the original operations observed on historical aerial photographs. Less than 10 feet of shoreline is exposed at most locations. However, aerial photographs indicate a broader shoreline between the two dock barges, which were not visited during the

preliminary inspection. The area is tidally influenced (1 to 2 feet) and the amount of shoreline exposed is likely to vary between tides. During the preliminary inspection, passing ships were observed to generate significant wave action at the shoreline. Based on the wave action and proximity of the canal, it is likely that the shoreline is eroding. Several trees exist and wetland vegetation occurs near or along some areas of the shoreline. Sea gulls were observed roosting on the offshore sunken barges (**CH2M HILL, 1999**).

Figure 1-2 shows the general Site conditions as of 2000 (the year the aerial photograph used as the basemap was taken). Changes to the general Site conditions have occurred since that time. **Figure 1-3** shows the general site conditions base on an aerial photograph taken in the autumn of 2005 (after Hurricane Rita made landfall in the area of the Site). Based on a comparison of the two photographs, many of the sunken barges shown in the 2000 photograph were much less visible in the 2005 photograph. The sunken barges appear to have deteriorated during the intervening years. Several tugboats are shown stranded offshore of the northern portion of the Site in 2005 that were not present in 2000. Also, many of the Site structures have further collapsed or lost their roofs since 2000. The 2005 aerial photograph also shows that additional erosion has occurred along the shoreline in the southern portion of the Site. Hurricane Rita made landfall near and passed through the area of the Site in September 2005. It is possible that some or all of the changes in Site conditions are related to Huricane Rita.

1.2.3 Surface Water

The surface water bodies near the Site include Sabine Lake, the Sabine and Neches Rivers, and the Sabine-Neches Canal. The Site is located along the shore of Sabine Lake. These surface water bodies are used for a variety of purposes (**Weston, 2003**).

Sabine Lake is used for both commercial and recreational fishing. The lake also serves as a tourist and recreational water body for activities such as swimming and boating (**Weston, 2003**). Sabine Lake is an estuarine environment that supports vegetation, fish, crustacean, amphibian, reptile, and marine mammal species. In addition, the lake is used by migratory and fish eating species of birds. The lake is home to several threatened and endangered species including the green turtle (*Chemlondia mydas*), loggerhead sea turtle (*Caretta caretta*), ridley sea turtle (*Lepidochelys kmpii*), the gulf salt marsh snake (*Nerodia clarkia*), and the Texas diamondback terrapin (*Malachlemys terrapin*) (**Texas Parks and Wildlife Department, 2001**, and **EPA, 2000**).

The Sabine-Neches Canal connects the Gulf of Mexico to the cities of Port Arthur, Beaumont, and Orange. The canal has been improved and dredged over the years with the expansion of oil operations

and chemical industries in the area. The canal is a busy water body with the shipping of assorted cargo and petroleum or petroleum-related products (**Weston, 2003**).

1.2.4 Site Geology and Hydrogeology

The geology and hydrogeology of the Site are unusual, because the Site is situated on a man-made landmass within a waterway of considerable flow volume. This landmass consists of dredge spoils generated during construction and maintenance of the Sabine-Neches Canal. The City of Port Arthur used the Site as a municipal landfill from approximately 1963 until 1974. Trench and fill methods were employed for disposal of the municipal waste. The entire Site was subsequently capped with what is believed to be dredge spoils. Municipal landfill debris is present in the shallow subsurface across the majority of the Site (**CH2M HILL, 1999**).

During the RI conducted by Weston in 2001, the presence of landfill debris prohibited recovery of subsurface soil samples in most instances; thus, detailed information on the subsurface soil conditions across the majority of the Site could not be obtained. The landfill material is usually encountered approximately 2 feet below the surface and typically ranges in thickness from 3 to 10 feet. Based on observations during monitor well installation activities, the soils underlying the landfill debris consist of dredge spoils underlain by alluvial deposits to the depths investigated (40 to 55 feet below ground surface [bgs]). These materials consisted primarily of saturated, very soft, gray silty clay. At one location, MW061, saturated, gray, silty sand was encountered at a depth of approximately 35 feet bgs (**Weston, 2003**).

Monitor wells were installed at three locations during the RI field activities. The well locations were selected to obtain samples downgradient of the most significant source areas. In addition, based on observations during monitor well installation, ground water was typically encountered at depths of approximately 2 to 4 feet bgs. Below this depth, soils remained saturated throughout the depths investigated (40 to 55 feet bgs) without the presence of a distinct confining layer. Due to the extensive saturated thickness, two nested wells were installed at each of the three monitor well locations (shown on **Figure 1-2**), one to screen the upper 20 feet and one to screen the next 20 feet below. Because no previous ground water sampling had been conducted, the wells were used as a screening assessment of the ground water conditions (**Weston 2003**).

Although an obvious aquitard was not observed during the well installations, the water quality data indicate the presence of two separate zones. Salinity measurements were consistently higher in the deeper wells, which could indicate that a shallow perched zone is present and has a fresh water impact from precipitation. In addition, the piezometric surface of the shallow well measurements

appears to follow the land surface topography. This is commonly seen in shallow perched aquifers. Based on the depth-to-water measured in the shallow screened wells, the base of the landfill may serve as the lower aquitard of a perched shallow ground water zone. For both the deep- and shallow-screened wells, ground water appears to flow to the southeast with a hydraulic gradient of 1.18×10^{-3} feet per foot (ft/ft) and 2.13×10^{-2} ft/ft, respectively (**Weston, 2003**).

1.2.5 Ground Water Use

The main source of deep ground water in the area of the Site is the Gulf Coast Aquifer. The Gulf Coast Aquifer consists of alternating beds of clay, silt, sand, and gravel that are hydraulically connected and form a large, leaky, artesian aquifer system. Ground water is used for industrial and irrigation purposes approximately 1.5 miles from the Site (**TNRCC, 1997**). There is one domestic well located approximately 1 mile from the site. This well is hydraulically upgradient from the Site. In addition, 33 public, industrial, unknown use, test, and domestic wells were identified within a 4-mile radius of the Site. Based on the ground water flow direction documented during the RI, these wells appear to be located upgradient or cross-gradient from the Site (**Weston, 2003**).

Ground water at the Site is not known to be used for drinking purposes. There is no current or anticipated future use of ground water as a source of potable water at the Site. Because of the underlying landfill, which precludes use of shallow ground water and the proximity to brackish surface water, ground water is believed non-potable (**Weston, 2003**).

1.2.6 Ecological Resources

Pleasure Islet is situated in the northwest corner of Sabine Lake, a tidally-influenced estuary. Part of the designated use of this lake is high quality aquatic habitat and shellfish waters. The lake, which is an active habitat for a variety of water fowl and aquatic wildlife, contains a number of environmentally sensitive wetlands and bird rookeries, most of which have been designated as a National Wildlife Refuge. Critical habitats for various threatened or endangered species occur within a 15-mile radius of the Site. The high quality aquatic habitat provided by Sabine Lake supports a variety of wetland plants. Detailed information regarding wetlands, protected species, and critical habitat locations were not available in the reviewed site literature.

Both commercial and noncommercial fishing occur in the area. There are three surface water intakes used only for industrial purposes within 15 miles downstream of the site. There are no drinking water intakes downstream of the site (**TNRCC, 1997**).

1.3 Previous Investigations

Pleasure Islet provided a convenient barge cleaning area for vessels carrying supplies and petroleum products through Sabine Lake. The SMS and PBLS both provided these types of services. In the course of the cleaning operations conducted at these two sites, hazardous materials spilled or were disposed inappropriately, potentially affecting human health and the environment. Several investigations have been conducted at the two sites in order to identify and characterize the sources and contaminants at both sites. This section summarizes the significant investigations at both the PBLS and SMS sites.

1.3.1 Expanded Site Inspection (ESI) at SMS (TNRCC)

In 1995, TNRCC initiated an Expanded Site Inspection (ESI) at SMS. The objective of the TNRCC ESI was to collect sufficient data to develop an understanding of the Site contaminants and to identify the potential migration pathways, primary contaminant sources, exposure pathways, and presence of potential human health and ecological receptors. The following reports were completed from the data obtained from the field work during the ESI:

- 1996 ESI (TNRCC).
- 1997 HRS Documentation Report (TNRCC).
- 1999 Technical Memorandum (CH2M HILL).

The work performed, summary of results, and conclusions are provided in the 1996 ESI Report (**TNRCC, 1996)**. The data obtained from the ESI enabled the TNRCC to assign a hazardous ranking score to the Site as reported in the 1997 HRS Documentation Report.

The analytical results from the ESI were also summarized by CH2M HILL in the 1999 Technical Memorandum and were used to develop a Conceptual Site Model (CSM) as part of a screening level RI/FS. As a result of the CSM, it was found that waste materials associated with barge cleaning operations were the primary source of contamination. In addition, complete exposure pathways to human and ecological receptors were found to exist (**CH2M HILL, 1999**).

The 1995 sampling event included the collection of 30 soil samples, 34 sediment samples, and 9 surface water samples by TNRCC. In addition, 8 background samples were collected from locations around Sabine Lake near the Site. The samples were analyzed for volatile organic compounds (VOCs), semivolatile organic compounds (SVOCs), pesticides and polychlorinated biphenyls (PCBs),

metals, and cyanide (**CH2M HILL, 1999**). The following bullets summarize the investigation results obtained from the CH2M HILL 1999 Technical Memorandum:

Soil Samples

- VOCs were detected infrequently and at relatively low levels in several soil samples. None of the detected VOCs exceeded Preliminary Remediation Goals (PRGs). Two of the detected VOCs—acetone and methylene chloride—were potential laboratory contaminants and may not be Site related.
- SVOCs including human carcinogens benzo(a)pyrene, benzo(a)anthracene, benzo(a)fluoranthene, benzo(b)fluoranthene, and benzo(k)fluoranthene were encountered in exceedences of PRGs in at least two samples from each waste area. These contaminants are part of a group of compounds referred to as polycyclic aromatic hydrocarbons (PAHs).
- Pesticides and polychlorinated biphenyls (PCBs) were detected sporadically across the Site. At least one sample from each waste management area contained pesticides and/or PCBs that exceeded applicable PRGs.
- Metals were identified in every soil sample collected. Elevated levels of aluminum, chromium, copper, iron, lead, and zinc were encountered onsite and offsite. The highest levels of metals were generally located near or within the blasting sands area.

Sediment Samples

- VOCs were detected infrequently and at relatively low levels in several sediment samples. None of the VOCs detected were at concentrations exceeding their respective PRGs. Acetone and methylene chloride were potential laboratory contaminants and may not have been site-related.
- SVOCs, consisting primarily of PAHs, were found in five of seven sediment samples analyzed for SVOCs. Each of the five samples was collected adjacent to areas in which petroleum products were managed or disposed. Levels of benzo (a) pyrene, benzo (a) anthracene, benzo (b) fluoranthene, and benzo (k) fluoranthene were consistently elevated among the PAHs detected.
- Pesticides and PCBs were detected infrequently in the sediment samples collected in Lake Sabine. Aroclor-1242 was detected in one sample, and lindane was detected in two sediment samples.

- Metals including arsenic, copper, iron, lead, manganese, mercury, nickel, and zinc were identified in every sediment sample. The highest concentrations of metals were reported to occur along the shoreline and near the sunken barges.

Surface Water Samples

- Nine surface water samples were collected from Sabine Lake. No VOCs or pesticides/PCBs were detected. SVOCs that were detected included benzo (g,h,i) perylene and bis (2-ethylhexyl) phthalate. The concentrations for both compounds were below their respective PRGs.
- Metals that were detected above their respective PRGs in the surface water samples included antimony, arsenic, selenium, and thallium.

No ground water samples were collected by TNRCC during this investigation.

The ESI confirmed the presence of contaminated soil in source areas. The presence of SVOCs and metals in sediment and surface water samples suggested that contaminants had migrated from source areas.

1.3.2 Remedial Investigation (Weston)

An RI was conducted by Weston in 2001, consisting of two sampling events in the fall of 2001, where sediment samples from offsite locations in Sabine Lake and soil and ground water samples from onsite locations on the SMS were collected.

As part of the field activities, the following sampling efforts were conducted:

- Completion of 6 deep borings (to depths ranging from 25 ft to 60 ft bgs).
- Installation of 6 monitor wells.
- Completion of 5 shallow borings (to depths ranging from 4 ft to 9 ft bgs).
- Collection of surface soil samples at 87 locations (to depths ranging from 0 to 6 in. bgs).
- Collection of intertidal samples at 9 locations (to depths ranging from 0 to 6 in. bgs).
- Collection of sediment samples from 46 locations (to depths ranging from 0 to 6 ft below sediment surface [bss]).

The analytical results in the 2001 RI Report were reviewed and compared to the Tier 1 Commercial/Industrial Protective Concentration Levels (PCLs) established under the Texas Risk Reduction Program (TRRP), and where appropriate, the results were also compared to background numbers for site contaminants. The following paragraphs summarize the findings of the 2001 RI. The 2001 RI Report did not compare the analytical results to numerical concentration values to assess ecological risks. The 2001 RI analytical results were evaluated in terms of ecological risks posed by the site contaminants in the 2005 BERA (**CH2M HILL, 2005c**), which is further discussed in **Section 1.5.2**.

The most frequently detected contaminants for all sediment samples collected were metals including arsenic, lead, and mercury. For intertidal sediments, six metals (antimony, arsenic, cadmium, lead, mercury, and selenium) and one SVOC (pentachlorophenol) exceeded Tier 1 PCLs. Constituents that exceeded Tier 1 PCLs for nearshore sediments included six metals (arsenic, barium, beryllium, cadmium, lead, and mercury) and one SVOC (3,3-dichlorobenzidine). Only arsenic, lead, and mercury exceeded Tier 1 PCLs for offshore sediments. The most frequently detected contaminants for all soils at the Site were metals including antimony, arsenic, barium, lead, mercury, and silver. These metals consistently exceeded the PCL for soil to protect ground water (^{Gw}Soil PCL).

Based on the distribution of these constituents, Weston concluded that their occurrence is most likely a result of the former incineration and landfill operations (**Weston, 2003**). In general, the metals are widely distributed across the site and not limited to the SMS source areas. Although the distribution is widespread, several distinct patterns of the metals are apparent and include the following:

- A “hot spot” of arsenic, barium, and lead is located on the north central boundary of the site.
- Elevated antimony concentrations can be seen primarily in the north central portion of the site.
- A hot spot of mercury and silver concentrations appears to be located near the northern edge of the Former Lauren Tank Farm area.

Isolated detections of the SVOCs (including benzo (a) pyrene, benzo (a) anthracene, benzo (b) fluoranthene, and pentachlorophenol) were reported at relatively low concentrations for onsite soils. Because the SVOC exceedences were only detected at isolated locations, impact from operations on the Site appeared to be minimal (**Weston, 2003**).

Nine constituents, including eight metals (antimony, arsenic, barium, beryllium, lead, manganese, silver, and thallium) and one SVOC (pentachlorophenol), exceeded the Tier 1 PCLs for ground water

ingestion ($^{GW}GW_{Ing}$ PCL). Based on a preliminary comparison of ground water analytical results to Class 3 ground water criteria, no constituents exceeded Class 3 ground water PCLs. However, due to the considerable saturated thickness observed in the subsurface soils, it is unlikely that determination of sustainable yield would result in a Class 3 ground water resource classification. As discussed previously, the site is situated on a man-made landmass within a very large waterway. The near surface strata consist of landfill debris and dredge spoils underlain by recent alluvial deposits. These materials are unconsolidated and saturated. Based on drilling observations and the water quality data collected at the site, it appears that the deeper ground water encountered at the site is directly influenced by the adjacent brackish water body, and the shallow ground water zone is perched within the landfill material. These data and the fact that a former landfill overlies the site make it unrealistic to assume any beneficial use of the shallow ground water (**Weston, 2003**).

1.3.3 Other Investigations Adjacent to the SMS

A Preliminary Assessment (PA), a Screening Site Inspection (SSI), and an ESI were conducted immediately adjacent to the Site at the PBLS. The PBLS is located on Pleasure Islet immediately north of the SMS. These investigations did not involve collecting soil, sediment, or ground water directly from the SMS; however, some sediment data obtained from the PBLS at nearshore and offshore locations were used in the human health and ecological screening risk assessment. Details of the PBLS investigations are summarized below.

1.3.3.1 Preliminary Assessment (TNRCC)

The PA at PBLS was conducted by TNRCC in November 1997. The objective during the PA was to assess whether there was contamination at PBLS that posed an immediate threat to human health and the environment. Source areas identified as potentially hazardous included the vacuum tank sump, the boiler house, the flare, the 12-tank battery and roll-off boxes, and the wastewater tanks (**TNRCC, 1998**). These areas of concern were further evaluated in the 1998 SSI.

1.3.3.2 Screening Site Inspection (TNRCC)

In March 1998, TNRCC conducted the SSI at PBLS. The investigation was conducted in order to characterize the nature and extent of contamination and to determine whether the site would be eligible for placement on the NPL. Field activities included the collection of 13 soil samples at the various sources and 12 sediment samples from Sabine Lake (**TNRCC, 1998**).

Soil samples were collected at the vacuum tank sumps, the boiler house, the flare, the 12-tank battery and roll-off box, and the wastewater tanks. The laboratory results showed numerous SVOCs, pesticides, and metals present at concentrations exceeding the contract required quantitation limits (CRQLs) at all the source areas. Two pesticides (aroclor-1254 and aroclor-1260) were detected in exceedence of their CRQLs at the 12-tank battery and roll-off box area (**TNRCC, 1998**).

Sediment Samples

Nine sediment samples were collected offsite in Sabine Lake to assess whether contamination had migrated from onsite source areas. Three background samples were collected to establish a comparison value for the release samples. The analytical results showed concentrations of cyanide, metals, and SVOCs. Barium, copper, manganese, and mercury were detected at concentrations three times the background values and were attributed to source areas at PBLS. Therefore, they were identified as released substances (**TNRCC, 1998**).

The SSI determined that contaminated soil existed at offsite source areas at PBLS. Barium, copper, manganese, and mercury were detected at concentrations three times background levels in the sediment samples and could be attributable back to source areas; therefore, it was determined that hazardous substances had been released from the PBLS.

1.3.3.3 Palmer Barge Line Site Expanded Site Investigation (Weston)

In October 1999, Weston conducted an ESI at the PBLS. The purpose of the ESI was to identify immediate or potential threats that hazardous substances, attributable to the site, posed to human health and the environment and to identify the receptors, or targets, potentially exposed to the hazardous substances. The field activities during the ESI focused on determining the presence and nature of onsite contaminated soil and ground water and offsite contaminates in Sabine Lake. The information obtained in the ESI was used to evaluate whether the site should have been placed on the NPL or given a status of "No Further Remedial Action Planned" (**Weston, 2000**).

Soil Samples

The soil boring locations included the wastewater ASTs, the boiler house ASTs, the open top slop tanks, horizontal ASTs, 12 other ASTs, the flare, and background locations. Samples were collected from 0 to 2 feet and from 2 to 4 feet in depth. The laboratory results showed numerous VOCs, SVOCs, pesticides, PCBs, and metals present at concentrations exceeding the CRQLs at all the source areas (**Weston, 2000**).

Ground Water Samples

Ground water samples were collected downgradient of the wastewater AST (Tank 102) and the 12 ASTs. The ground water samples were generally collected at 8 to 20 feet bgs. The analytical results showed one VOC (tert-butyl methyl ether), no SVOCs, one pesticide (4,4'-DDD), and 13 metals detected at three times the background concentrations (**Weston, 2000**).

Sediment Samples

Weston collected 22 sediment samples, including 5 background samples, to document possible impact to Sabine Lake sediments adjacent to the PBLS. The samples were analyzed for VOCs, SVOCs, pesticides/PCBs, metals, and cyanide. The results of the ESI documented that SVOCs, pesticides/PCBs, and numerous metals were present at levels exceeding background concentrations. The data were used to support the conclusion that a release to the surface water pathway had occurred (**Weston, 2000**).

The ESI performed at the PBLS confirmed the presence of contaminated soil and contaminated ground water at several source areas. The presence of SVOCs, pesticides, PCBs, and metals in the sediment samples collected in Sabine Lake also confirmed that contaminants migrated from source areas to Sabine Lake, potentially affecting human and ecological receptors.

1.4 Nature and Extent of Contamination

The nature and extent (N&E) of contamination at the Site has been documented through sampling onsite and offsite of various environmental media during the RI (**Weston, 2003**) and previous field efforts. This section provides a summary of the N&E of contamination provided in the RI Report. As previously stated in **Section 1.3.2**, the 2001 RI Report did not compare the analytical results to numerical concentration values to assess ecological risks. The 2001 RI analytical results were evaluated in terms of ecological risks posed by the site contaminants in the 2005 BERA (**CH2M HILL, 2005c**), which is further discussed in **Section 1.5.2**.

1.4.1 Soil

Municipal landfill debris is present in the shallow subsurface across a large portion of the Site. The landfill material, which is usually encountered approximately 2 feet below the surface, typically ranges in thickness from 3 to 10 feet. The presence of this material prohibited recovery of subsurface soil samples in most instances; therefore, detailed information on the subsurface soil conditions was unavailable. Based on observations during monitoring well installation activities, the subsurface soils consist of dredge spoils to the depths investigated (40 to 55 feet bgs). These materials consisted

primarily of saturated, very soft, gray, silty clay. At one location, MW061, saturated, gray, silty sand was encountered at a depth of approximately 35 feet bgs.

The soil analytical results were compared to Commercial/Industrial PCLs for the 30-acre source area established in the TRRP. The comparisons were made to both the PCLs for soil considered protective of human health ($^{Tot}Soil_{Comb)}$ and the ^{GW}Soil PCLs and/or the Texas-Specific Background Concentrations (for arsenic, barium, and lead).

Background soil samples were collected from three offsite locations. The background samples were analyzed for Target Analyte List (TAL) metals and Target Compound List (TCL) SVOCs. Background sample analyses can be used to demonstrate that Site contaminants are naturally occurring or are present as a result of anthropogenic activities unrelated to Site operations. The background soil samples were compared to two benchmarks: the TRRP Tier 1 Commercial/Industrial ^{GW}Soil PCLs from a 30-acre source area and the listed Texas-Specific Background Concentrations.

Based on this comparison, arsenic, barium, lead, and mercury were reported at concentrations exceeding TRRP Tier 1 Commercial/Industrial ^{GW}Soil PCLs. After comparing the average background concentrations to the listed Texas-Specific Background Concentrations, it was apparent that Site background conditions are similar to the Texas-Specific Concentrations for these metals.

For the TCL SVOCs, no constituents were detected in the background samples above laboratory reporting limits with the exception of samples that were flagged or qualified based on unique reporting circumstances.

Based on the evaluation of the background sample results, the Tier 1 PCLs were deemed appropriate for use as assessment levels at the Site, rather than the background results. Because the background sample concentrations are so similar to the Texas-Specific Background Concentrations, the published Texas-Specific Background Concentrations for arsenic, barium, and lead were selected for use as the critical PCLs for these constituents.

Nine surface soil samples, including one field duplicate, were collected and analyzed for TAL metals and TCL SVOCs from the former Wastewater Impoundments Area. Based on the comparisons to TRRP Tier 1 Commercial/Industrial PCLs for soils, the following contaminants with the associated maximum reported concentrations were detected at levels exceeding ^{GW}Soil PCLs: antimony (20.5 milligrams per kilogram [mg/kg]), arsenic (7.4 mg/kg), barium (534 mg/kg), lead (210 mg/kg), and mercury (0.16 mg/kg). No TCL SVOCs were detected at levels exceeding PCLs.

Eight surface soil samples, including one field duplicate, were collected and analyzed for TAL metals and TCL SVOCs from the Wastewater Treatment Facility. Arsenic, lead, mercury, and silver were found to exceed TRRP Tier 1 Commercial/Industrial ^{GW}Soil PCLs with maximum reported concentrations of 10.4 mg/kg, 150 mg/kg, 0.98 mg/kg, and 1.4 mg/kg, respectively. No TCL SVOCs were detected at any sample location in the Wastewater Treatment Facility at levels exceeding PCLs.

Four surface soil samples were collected and analyzed for TAL metals and TCL SVOCs from the Tar Burn Area. Lead, mercury, and silver were consistently found to exceed the TRRP Tier 1 Commercial/Industrial ^{GW}Soil PCLs with maximum reported concentrations of 967 mg/kg, 0.31 mg/kg, and 1.0 mg/kg, respectively. No TCL SVOCs were detected at concentrations exceeding risk based levels.

Six surface soil samples, including two field duplicates, were collected and analyzed for TAL metals and TCL SVOCs from the AST area. Arsenic, lead, mercury, and silver were found to exceed TRRP Tier 1 Commercial/Industrial ^{GW}Soil PCLs with maximum concentrations of 7.9 mg/kg, 558 mg/kg, 0.13 mg/kg, and 0.96 mg/kg, respectively. The TCL SVOC analysis detected two constituents at concentrations above Tier 1 PCLs. These constituents and maximum reported concentrations included benzo (a) pyrene, (2.7 mg/kg), which exceeded both the $^{TOT}Soil_{Comb}$ and ^{GW}Soil PCLs, and pentachlorophenol (0.28 mg/kg), which exceeded the ^{GW}Soil PCL.

Five surface soil samples, including one field duplicate, were analyzed for TAL metals and TCL SVOCs from the Maintenance Shed Area. Antimony, arsenic, lead, mercury, and thallium were detected at concentrations exceeding TRRP Tier 1 Commercial/Industrial ^{GW}Soil PCLs. The maximum concentrations reported for these metals were 5.8 mg/kg, 19 mg/kg, 290 mg/kg, 0.11 mg/kg, and 1.6 mg/kg, respectively. No TCL SVOCs were detected at any sample location in the Maintenance Shed Area at levels exceeding PCLs.

Six surface soil samples were analyzed for TAL metals and TCL SVOCs from the Former Lauren Tank Farm Area. Arsenic and lead were consistently detected at concentrations exceeding TRRP Tier 1 Commercial/Industrial ^{GW}Soil PCLs in the Former Lauren Tank Farm Area. The highest reported concentrations for arsenic and lead were 26.4 mg/kg and 1030 mg/kg, respectively. Antimony, cadmium, copper, mercury, nickel, selenium, silver, and thallium were also detected less frequently at concentrations exceeding the ^{GW}Soil PCLs. For TCL SVOCs, benzo (a) pyrene (5.1 mg/kg) was the only constituent to exceed Tier 1 PCLs.

A majority of the sample locations at the Site came from areas that did not fall within the defined source areas. These sample locations were defined as non-source sample locations. A total of 66

surface soil samples, including 6 field duplicates, were analyzed for TAL metals and TCL SVOCs from the non-source area. The same trend was apparent in the non-source area as in the source areas with regard to the pattern of contaminants detected in the soils.

Arsenic and lead were consistently detected at concentrations exceeding the TRRP Tier 1 Commercial / Industrial ^{GW}PCLs for soils with maximum reported concentrations of 48.7 mg/kg and 2040 mg/kg, respectively. Seven additional TAL metals were detected at concentrations exceeding ^{GW}Soil PCLs but were detected much less frequently than arsenic and lead. These metals with the associated maximum reported concentrations included antimony (26.3 mg/kg), barium (744 mg/kg), beryllium (1.2 mg/kg), cadmium (16.4 mg/kg), copper (5480 mg/kg), mercury (0.54 mg/kg), silver (8.3 mg/kg), and thallium (2.9 mg/kg).

For TCL SVOCs, three PAH compounds were detected at two locations that exceeded $^{TOT}Soil_{Comb}$ and/or ^{GW}Soil PCLs. These PAHs and associated concentrations included benzo (a) anthracene (24 mg/kg), benzo (b) fluoranthene (25 mg/kg) and benzo (a) pyrene (19 mg/kg). Carbazole and PCP were also detected at 7.5 mg/kg and 0.060 mg/kg, respectively, at one location, which exceeds the ^{GW}Soil PCL.

The subsurface investigation during the 2001 RI did not proceed as originally intended due to a large portion of the Site having excessive landfill material and debris that prohibited subsurface sample recovery with conventional direct-push sampling equipment. According to the 2001 RI/FS Technical Work Plan, the entire sampling grid (87 stations) would be sampled for subsurface soils; however, due to Site conditions, only 15 locations were attempted. Of the 15 attempted, only 5 were successful in obtaining subsurface samples. Three additional locations were sampled using hollow-stem augers in which subsurface recovery was obtained. Thus, a total of 8 sample locations out of 18 attempted were successful.

A total of 11 subsurface soil samples, including one field duplicate, were collected and analyzed for TAL metals and TCL SVOCs from locations collected across the Site. As with surface soil samples, arsenic and lead were consistently detected at concentrations exceeding the TRRP Tier 1 Commercial / Industrial ^{GW}Soil PCLs with maximum reported concentrations of 12.6 mg/kg and 558 mg/kg, respectively. Seven additional TAL metals (antimony, beryllium, mercury, thallium, barium, cadmium, and silver) were detected at concentrations exceeding the ^{GW}Soil PCL values but were detected less frequently than arsenic and lead. For TCL SVOCs, only one constituent from the 11 subsurface locations exceeded Tier 1 PCLs. PCP was detected at a concentration of 0.060 mg/kg. The remaining constituents were either not detected or detected at concentrations below Tier 1 PCLs.

1.4.2 Sediment

Sediments in the intertidal area typically consisted of brown sand with abundant shell fragments and some wood and roots. Due to the adjacent landfill, intertidal sediments also contained a large amount of debris such as glass and plastic fragments.

Offshore and nearshore sediments varied in composition, depending on their proximity to the sunken barges along the shoreline. Generally, the area around and between the sunken barges consisted predominantly of a fine-grained silty sand with most samples containing occasional shell fragments. The sediments outside the sunken barges predominantly consisted of a dark silty to sandy clay with frequent shell fragments. It was also noted that the sediments adjacent to the PBLS were typically more fine-grained and darker in color.

The analytical results are discussed below. It should be noted that at some stations TCL metal constituents were reported by both Severn Trent Laboratory (STL) and Colombia Analytical. Unless otherwise stated, the metals concentrations discussed in the text were reported by STL. The sediment analytical results have been compared to Commercial/Industrial PCLs for the 30-acre source area established in the TRRP. The tables present comparisons to both the soil PCL for combined ingestion, dermal contact, and inhalation of volatiles and particulates $^{Tot}Soil_{Comb}$, and to the PCL for soil to protect ground water ^{GW}Soil PCLs. These PCLs are appropriate for use as assessment levels for sediments at the SMS site based on the following criteria:

- Surface water adjoining the Site is tidally influenced, and intertidal sediments are exposed at periods of low tide. Therefore, ingestion, dermal contact, and inhalation of volatiles and particulates are potential exposure routes for these media.
- Nearshore and offshore sediments are not exposed during periods of low tide; however, these sediments are continually in contact with surface water. Use classification of Sabine Lake includes recreation, and ingestion is a potential exposure route. Therefore, the PCL for soil to protect ground water could be applied as a conservative measure for nearshore and offshore sediments as well as for intertidal sediments, which are in contact with surface water during periods of high tide.

Further evaluation of the sediment analytical results are provided in the screening-level risk assessments in the RI appendices (**Weston, 2003**).

Background sediment samples were collected from five offsite locations adjacent to Sydnes Island, which is located approximately 2 miles northeast of the State Marine site. The background sediment

samples were analyzed for TAL metals and TCL SVOCs. To evaluate whether it was beneficial to use the background results as assessment levels, the samples were compared to two benchmarks: the TRRP Tier 1 Commercial / Industrial ground water protection PCLs for soils from a 30-acre source area and the listed Texas-Specific Background Concentrations.

Based on this comparison, mercury had detections slightly exceeding TRRP screening levels but significantly less than the listed Texas-Specific Background Concentrations. The average concentration was 0.004 micrograms per kilogram (µg/kg). Although the average background concentration is above Tier 1 PCLs, it is significantly less than the Listed Texas-Specific Concentrations for metals and is reflective of values of background metal concentrations for the area. The remaining TAL metals were detected but did not exceed Tier 1 PCLs.

For the TCL SVOCs, no constituents were detected in the background samples above laboratory reporting limits with the exception of samples that were flagged or qualified based on unique reporting circumstances.

Based on this evaluation of the background sample results, the Tier 1 PCLs are appropriate for use as assessment levels, rather than the background results. Published Texas-Specific Background Concentrations for lead and mercury are appropriate for use as the critical PCL for these constituents.

Nine intertidal sediment samples were collected and analyzed for TAL metals and TCL SVOCs. Lead and mercury were consistently detected at concentrations exceeding the TRRP Tier 1 Commercial / Industrial ^{GW}Soil PCLs for soils with maximum reported concentrations of 942 and 0.18 mg/kg, respectively. It should be noted that the lead concentrate was reported by Colombia Analytical. Antimony, arsenic, cadmium, and selenium were also detected at concentrations above Tier 1 PCLs; however, these metals were detected less frequently. For the TCL SVOCs, Pentachlorophenol (PCP) was detected at a concentration exceeding the TRRP Tier 1 Commercial / Industrial ^{GW}Soil PCLs. PCP was detected at two intertidal locations at concentrations of 0.82 mg/kg and 0.160 mg/kg.

Fifty-eight sediment samples, including eight field duplicates, were collected and analyzed for TAL metals and TCL SVOCs from the nearshore locations. Arsenic, lead, and mercury were consistently detected at concentrations exceeding the TRRP Tier 1 Commercial/Industrial ^{GW}Soil PCLs for soils with maximum reported concentrations of 14.3, 29.9, and 0.075 mg/kg, respectively. Barium, beryllium, and cadmium were additional constituents that were infrequently detected at concentrations above Tier 1 PCLs. For TCL SVOCs, 3,3-dichlorobenzidine was the only constituent to exceed risk-based levels. This constituent was reported at a concentration of 0.075 mg/kg at location PB010-51, which exceeds the ^{GW}Soil PCL.

A total of 12 sediment samples including 1 field duplicate was collected and analyzed for TAL metals and TCL SVOCs from the offshore locations. Arsenic, lead, and mercury were consistently detected at concentrations exceeding the TRRP Tier 1 Commercial/Industrial ^{GW}Soil PCLs for soils with maximum reported concentrations of 8.9, 15.1, and 0.072 mg/kg, respectively. For the TCL SVOCs, no constituents exceeded the comparison values.

1.4.3 Ground Water/Surface Water

The shallow ground water appears to be a mix of fresh and brackish water from the lake, making it unsuitable for human consumption. In addition, the ground water exists at depths where the landfill material exists. Therefore, ground water may be affected by constituents of concern from landfill wastes and not suitable for household drinking water use. Based on the high total dissolved solids (TDS) concentrations, the proximity of the Site to brackish surface water, and the presence of the underlying landfill, there is no current or anticipated future use of ground water as a source of potable water at the Site. Based on the available Site data, the ground water resource classification is Class 2.

Ground water results were compared to both the TRRP Tier 1 Commercial/Industrial PCL for ground water ingestion ($^{Gw}Gw_{Ing}$) and the EPA Region 6 Tap Water Media Specific Screening Levels (MSSLs). Further evaluation is provided in the risk assessments in the RI appendices (**Weston, 2003**). The results from the following subsections are presented in the 2003 RI (**Weston 2003**).

1.4.3.1 October 2001 Ground Water Results

Six monitoring wells were installed at the Site and were sampled for metals, VOCs, and SVOCs. Of the six samples submitted for TAL metals analysis, every constituent exceeded TRRP Tier 1 Commercial / Industrial $^{Gw}Gw_{Ing}$ PCLs for each sample location. In addition, arsenic, barium, lead, and manganese exceeded EPA Region 6 MSSLs.

For VOCs and SVOCs, only PCP exceeded Tier 1 PCLs. The contaminant was detected in monitor well MW061B with a concentration of 0.004 micrograms per liter (µg/L). The remaining VOC and SVOC constituents were either not detected or were detected at concentrations below risk-based levels. Several organic constituents exceeded EPA Region 6 MSSLs for tap water, including the following: pentachlorophenol, 1,1,2,2-tetrachloroethane, 1,1,2-trichloroethane, 1,1-dichloroethane, 1,2-dibromo-3-chloropropane, 1,2-dibromoethane, 1,2-dichloroethane, 1,2-dichloropropane, 1,4-dichlorobenzene, and benzene. These constituents were reported at relatively low concentrations.

1.4.3.2 June 2002 Investigation Results

Weston conducted an additional investigation in June 2002. The investigation included collecting ground water samples from the six existing monitoring wells and collecting surface water from Sabine Lake. The primary objective for sampling the existing monitoring wells was to provide additional ground water data for the SMS site and to compare these data to the October 2001 ground water data.

The primary objective for sampling the surface water adjacent to Site was to evaluate whether constituents were migrating through the ground water to Sabine Lake. The focus for sampling surface water was to detect TAL metals, particularly those that were detected in onsite ground water in excess of ecological-based surface water screening benchmarks.

Surface water samples were analyzed for both total and dissolved metals. The analytical results were compared to the following two regulatory values: TRRP Tier 1 Commercial / Industrial $^{GW}GW_{Ing}$ and EPA Region 6 Tap Water MSSLs. Based on the results, lead (0.09 milligrams per liter [mg/L]) was the only constituent that exceeded regulatory values for total metals. No samples exceeded regulatory values for dissolved metals.

Ground water samples were analyzed for total and dissolved metals. The analytical results were compared to the following regulatory values: TRRP Tier 1 Commercial/Industrial $^{GW}GW_{Ing}$ and EPA Region 6 Tap Water MSSLs. Based on the results, arsenic, and manganese were consistently detected above regulatory values.

1.5 Summary of Risk Assessments

The following sections summarize the results of the BHHRA and BERA completed in 2005.

1.5.1 Baseline Human Health Risk Assessment

The 2005 BHHRA evaluated potential risk to potential receptors including current and future onsite workers and trespassers and current and future offsite adults consuming fish caught from Sabine Lake. All estimated risks for soil exposure areas were within acceptable levels and no constituents of concern (COCs) were identified for the receptors in these exposure areas. Ground water data were not used in the BHHRA due to the lack of ground water receptors (ground water is not used as a potable source and no ground water seeps were observed at the site). Surface water data were not used in the BHHRA. Although one surface water sample was available, the methodology used for its collection reflected ground water quality rather than surface water. For sediment, copper, zinc, and Arochlor

1242 were identified as potentially posing unacceptable risk based on protection of fish ingestion exposures.

However, the modeled fish tissue concentrations used in the BHHRA were much higher than the measured fish tissue concentrations from Sabine Lake as reported by the TDH (which were within acceptable levels). Therefore, modeled fish ingestion exposures are overly conservative and sediments do not warrant risk management on the basis of potential human health risk from fish ingestion (**CH2M HILL, 2005b**).

1.5.2 Baseline Ecological Risk Assessment

Based on data available at the time, the 2005 BERA identified potential risks for the benthic invertebrate community that may be living in the intertidal area along the banks of the site, the nearshore area, and the offshore area. PRGs were developed for nine COCs in sediment. A study of the bioavailability of the metals in sediments at the site indicated that the metals in the intertidal area are available and could be toxic in these areas. Data gaps were identified for the ecological risks identified in sediment. Risks identified in sediments do not take into account site specific information including toxicity studies, community analysis of the existing benthic community in the intertidal area, or evaluation of the available habitat onsite. Site specific information could suggest that the identified risks are over estimated or do not exist. An additional consideration identified in the BERA was that due to the transient nature of sediments and the highly active surroundings, data that are four years old or older may not be reflective of current conditions (**CH2M HILL, 2005c**).

The sources of contamination in sediment were not identified with certainty. Several potential sources exist including the former landfill below the site, ground water, overland flow and erosion of surface soils, sunken barges in the nearshore area, and other facilities located adjacent to Sabine Lake. Analysis of shallow ground water from wells closest to Sabine Lake indicated that concentrations could exceed screening values developed to be protective of the ground water to sediment exposure pathway. The screening values for metals are lower than most common laboratory limits and may not be appropriate for the site. Furthermore, the shallow monitor wells containing the highest detections of contaminants in ground water concentrations were not located near sediment locations with elevated concentrations, suggesting a low influence of ground water on site sediments. The concentrations of COCs in soil were elevated in some locations and therefore, stormwater runoff from the site could be a source of contamination (**CH2M HILL, 2005c**). A supplemental BERA, presented in **Appendix E-2** and summarized in **Section 4.2**, was performed in 2006 based on the supplemental RI results to assess these issues.

1.6 Overview of Supplemental Remedial Investigation Tasks

The Supplemental RI was performed to address the additional data needs identified in the BERA. The field activities were implemented to further evaluate the ground water to sediment contaminant migration pathway, update the sediment COC concentration data for the Site, and evaluate the toxicity of sediments to the benthic organism community in Sabine Lake near the Site. In addition, the former wastewater impoundments were investigated to determine if this area of the Site is a source of contamination to ground water.

EPA performed the Supplemental RI field investigation tasks during late May and early June 2006. The field tasks included the installation of two additional shallow monitor wells downgradient from the former wastewater impoundments, completion and sampling of five soil borings in the area of the former wastewater impoundments, collection of nine composite sediment samples in Sabine Lake offshore from the site, and collection of sediment samples to perform toxicity testing on benthic organisms.

Detailed plans for the implementation of the Supplemental RI tasks are described in the Field Sampling Plan (FSP), Version 1.1 (**CH2M HILL, 2006a**), Quality Assurance Project Plan (QAPP), Version 1.1 (**CH2M HILL, 2006b**), and Site Management Plan (SMP), Version 1.0 (**CH2M HILL, 2006c**). The data quality objectives (DQOs) are provided in the QAPP.

1.7 Report Organization

Section 2 of this report provides a description of the field activities completed in accordance with the site plans. This section includes a description of field procedures followed for the collection of soil, ground water, and sediment data and management of Investigation-Derived Wastes (IDW). **Section 3** discusses the analytical results and the nature and extent of contamination based on the results obtained from the Supplemental RI. **Section 4** summarizes the results of the updated BHHRA and BERA based on the results obtained during the Supplement RI. Summary and conclusions of the Supplemental RI are provided in **Section 5**, and a list of the references cited in this report is provided in **Section 6**.

2.0 Data Collection Activities

This section describes the objectives and procedures for the Supplemental RI field activities. This section includes a discussion of the DQOs and descriptions of the field work performed.

2.1 Data Quality Objectives

The objectives of the Supplemental RI/FS include the following:

- Collect and analyze sediment samples to determine if contaminants in Sabine Lake sediments pose an unacceptable risk to benthic organisms.
- Collect and analyze subsurface soil samples from the wastewater impoundment area to determine if contaminants in the impoundment soil could serve as a potential source of contamination to ground water and eventually to benthic organisms in the sediments of Sabine Lake.
- Collect and analyze subsurface soil samples from the wastewater impoundment area to determine if contaminants in the impoundment soil pose an unacceptable risk to future onsite construction workers.
- Install and develop monitoring wells at two of the soil boring locations in the wastewater impoundment area for associated ground water sampling.
- Collect and analyze ground water samples to determine if site ground water is a current or potentially future source of contamination to benthic organisms in Sabine Lake.
- Store, analyze, and properly dispose of any IDW that is produced during field activities in support of the Supplemental RI/FS.

These project objectives have been used to develop specific DQOs, which are qualitative and quantitative statements that describe the type and quality of data needed to determine the current state of the contaminant distribution and to effectively assess the risk to ecological and human health.

The DQO process used for this project follows the EPA QA/G4 guidance (**EPA, 2000**) and uses the seven-step DQO development process. The DQOs provide a basis for the investigation activities to be performed, and they ensure that data collected during the investigation will be of sufficient and adequate quality for their intended use. A detailed summary of the DQOs and the associated investigation activities established for the Supplemental RI/FS are presented in **Table 2-1**.

The first step in the DQO process is to identify the problem. Semivolatile organics and metals contamination at the Site may potentially pose a risk to ecological and human health. The extent of the contamination must be determined to assess the risk and to develop and implement remediation strategies for the Site. Each specific problem is discussed, by individual matrix, in **Table 2-1**.

The next step in the DQO process is to identify the decisions to be made. The overall goal of the Supplemental RI is to fill data gaps from the previous RI/FS in order to assess potential risk to ecological and human health and to support the development of a Record of Decision (ROD) for the Site. Each specific decision to be made is discussed, by individual matrix, in **Table 2-1**.

The third step is to identify inputs to the decisions to be made. Historical information and data obtained from the previous investigations provided a significant amount of data regarding the Site. This data will be used in addition to the analytical data obtained from this investigation to complete the risk assessments and support the development of the ROD. **Table 2-1** provides more detailed information regarding the various inputs to the decisions.

The fourth step is to identify the boundaries of the study area. The Site is described in **Section 1.1.2**. Sampling took place within the boundaries of the Site, and all analytical data were obtained utilizing EPA-approved methodology. Sampling included the collection of sediment from Sabine Lake, ground water from monitor wells in the wastewater impoundment area, and subsurface soil from the wastewater impoundment area. Sampling occurred in late May and early June of 2006. More detailed information regarding the scope of field activities, the analyses performed, and the levels of data deliverables required from the laboratory are presented in **Table 2-1**.

To achieve the goals of the project, several decision rules were developed as the fifth step of the DQO process. More detailed information regarding each of the decision rules associated with the decisions developed in Step 2 of the DQO process are presented in **Table 2-1**.

The sixth step of the DQO process is to specify the limits of decision errors. The analytical results obtained in the investigation were reviewed to support the completion of the risk assessments and the development of the ROD. The analytical data obtained must be of sufficient completeness and quality to achieve the project DQOs. Random and/or systematic errors may be introduced during sample collection, sample handling and storage, sample analysis, data reduction, and data reporting. The quality control (QC) measures specified in the QAPP and the FSP were followed to aid in the establishment of analytical quality and to minimize these errors. Appropriate EPA-approved analytical methods were used to ensure sufficient analytical sensitivity. Finally, the Project Chemist validated the analytical data in accordance with the EPA's *National Functional Guidelines*

(**EPA, 1994a**, **EPA, 1994b**, and **EPA, 1994c**) to determine if the data met project DQOs (see **Section 2.6** and **Appendix A**).

The final step of the DQO process is to optimize the design of the investigation. The primary goal of this investigation is support the completion of ecological and human health risk assessments and the development of a ROD for the site. Historical data was reviewed during the project planning process to assess the data gaps that exist, and the investigation was designed to collect just enough data to support project objectives, avoiding any unnecessary sample collection.

2.2 Monitor Well Installation and Soil Boring Activities

This section describes the activities associated with the installation of the new monitor wells and completion of the soil borings.

2.2.1 Monitor Well Installation

A preliminary Site visit was conducted on May 11, 2006. During this Site visit, the locations for the monitor well installations were determined. The current Site property owner was present during the Site visit. The property owner assisted with locating the approximate limits of the former wastewater impoundments to ensure that the monitor wells were located downgradient from them.

Monitor well installation commenced on May 22, 2006. Two monitor wells (MW-136 and MW-137) were installed east of and downgradient from the former wastewater impoundments. The locations, along with the locations of the six existing site monitor wells, are shown in **Figure 2-1**. Each monitor well was completed within the shallow ground water to a depth of about 20 feet bgs.

Each monitor well was drilled using the hollow-stem auger drilling method to the final completion depth. During drilling, soil samples were collected at five-foot intervals using split-core barrel samplers. Due to the wet, loose nature of the dredge spoils soil material, low to no recovery of soil material occurred below 5 to 8 feet bgs. Several attempts were made to increase recovery using direct-push technology (DPT) methods, 2-foot long split spoons, and soil catchers within the core barrels. Soil recovery was not increased using the different methods. After installation of monitor well MW137, a second borehole was drilled using DPT next to the well to attempt to recover sufficient soil material for lithologic logging and the collection of samples for analytical testing. Where recovered, the soil samples were visually examined by the onsite geologist to characterize the lithology of the borehole. The soil material was screened prior to logging for organic vapors using a photoionization detector (PID). The lithologic data from each borehole was documented on Soil Boring Logs provided in **Appendix B**.

The drilling equipment (auger flights, core barrel samplers, and split spoons) were decontaminated between boreholes and prior to use at each drilling location in accordance with the procedures specified in the FSP (**CH2M HILL, 2006a**). Decontamination fluids were contained in 55 gallon drums. The soil cuttings were also contained in 55 gallon drums. The drums were labeled and transferred to the designated IDW storage area onsite. Management of IDW is further discussed in **Section 2.5**.

Where sufficient soil material had been recovered, soil samples were collected for analysis of TAL total metals and TCL SVOCs. The FSP stated that at each location, a soil sample would be collected from above the landfill waste, within the landfill waste, and immediately below the landfill waste. Other than glass fragments and some pieces of broken bricks, no landfill wastes were encountered during drilling at either monitor well location. One soil sample was collected from MW-136 and two soil samples were collected from MW-137. **Table 2-2** lists the details regarding each sample, including location, depth, date sampled, sample type, and analytical method. The sample collection was in accordance with the procedures described in the FSP and QAPP (**CH2M HILL, 2006a**, and **CH2M HILL, 2006b**). Each sample was submitted under Chain-of-Custody to the offsite laboratory Kemron Environmental Services for analysis. **Appendix C** includes copies of the Chain-of-Custody forms as well as the laboratory reports containing the analytical results. The analytical results are discussed in **Section 3.3.3**.

After completion of each borehole, the monitor wells were constructed. Each monitor well was constructed of 2-inch diameter schedule 40 polyvinyl chloride (PVC) casing. The well screen consisted of 2-inch diameter schedule 40 PVC screen with a 0.010-in slot size. The screen lengths for both wells were 10-feet. A silica sand pack, consisting of 20/40 silica sand, was placed in each borehole annulus from the bottom of the borehole to a depth of approximately 2 feet above the top of the well screen. A hydrated bentonite seal was then placed on top of the sand pack to a depth of 1 foot bgs. The remaining annulus was backfilled with cement during well pad construction. The finished wells, which extend to a height of approximately 3 feet above the ground surface, are completed at the surface with a protective casing and locking cap assembly. Each well has a 3-foot by 3-foot concrete pad and is further protected by the installation of protective posts set around the well pad in concrete footings.

A summary of the well construction details is provided in **Table 2-3**. The well construction details for the existing Site monitor wells are also provided in the **Table 2-3**. Each monitor well was surveyed to the nearest 0.01 foot to provide horizontal and vertical control after construction by a Registered Public Land Surveyor in the State of Texas. The survey information is also provided in **Table 2-3**.

The monitor wells were constructed in accordance with the procedures described in the FSP (**CH2M HILL, 2006a**). The construction details for each monitor well are provided on Well Completion Diagrams contained in **Appendix B**.

Each newly installed monitor well was developed after installation in accordance with the procedures contained in the FSP (**CH2M HILL, 2006a**). Each well was developed using surging combined with overpumping to remove sediment from the well and sand pack. During pumping, general water quality parameters, including pH, turbidity, conductivity, temperature, dissolved oxygen (DO), and oxidation/reduction potential (ORP) were recorded on Well Development Logs. Drawdown was also measured during pumping. During initial pumping, water levels in both wells decreased to the top of the well screen prior to stabilization of water quality parameters. Each well was allowed to recover 24 hours and pumping continued on the following day until water quality parameters had stabilized and a minimum of 5 well volumes were removed. Copies of the Well Development Logs are contained in **Appendix D**. All development water was contained in 55 gallon drums. The drums were labeled and transferred to the designated IDW storage area onsite. Management of IDW is further discussed in **Section 2.5**.

2.2.2 Soil Boring Activities

A preliminary Site visit was conducted on May 11, 2006. During this Site visit, the locations for the soil borings were determined. The current Site property owner was present during the Site visit. The property owner assisted with locating the approximate limits of the former wastewater impoundments to ensure that the soil borings were located within the limits of the former wastewater impoundments.

Soil boring completion activities began on May 23, 2006. Five soil borings were completed within the identified boundary of the former wastewater impoundments. The locations of the soil borings are shown in **Figure 2-1**. Each soil boring was completed to a depth that was below the limits of the former landfill as determined by the onsite geologist. The soil borings were completed to depths of between 6 feet and 22 feet bgs.

Each soil boring was drilled using the DPT method to the final completion depth. During drilling, soil samples were collected at 2-foot intervals using a 2-foot long split spoon sampler. Due to the wet, loose nature of the dredge spoils soil material and the presence of landfill debris, low to no recovery of soil material occurred at various intervals during the drilling. Where recovered, the soil samples were visually examined by the onsite geologist to characterize the lithology of the borehole. The soil material was screened prior to logging for organic vapors using a PID. The lithologic data from each borehole was documented on Soil Boring Logs provided in **Appendix B**. At boring SM-142, refusal

was encountered within the landfill debris at 6 feet bgs. Attempts were made to move over distances of between 3 and 25 feet and redrill the borehole at 5 additional locations, with the same result. This borehole was not completed to a depth below the landfill.

The drilling equipment (core barrel samplers and split spoons) was decontaminated between boreholes and prior to use at each drilling location in accordance with the procedures specified in the FSP (**CH2M HILL, 2006a**). Decontamination fluids were contained in 55 gallon drums. The soil cuttings were also contained in 55 gallon drums. The drums were labeled and transferred to the designated IDW storage area onsite. Management of IDW is further discussed in **Section 2.5**.

During drilling, up to 3 soil samples were collected at each boring location for analysis of TAL total metals and TCL SVOCs. The FSP stated that at each location, a soil sample would be collected from above the landfill waste, within the landfill waste, and immediately below the landfill waste. The sample collection was in accordance with the procedures described in the FSP and QAPP (**CH2M HILL, 2006a**, and **CH2M HILL, 2006b**). **Table 2-2** lists the details regarding each sample, including location, depth, date sampled, sample type, and analytical method. Including the monitor well borings, a total of 17 soil samples and 3 field duplicate samples were collected. Each sample was submitted under Chain-of-Custody to the offsite laboratory Kemron Environmental Services for analysis. **Appendix C** includes copies of the Chain-of-Custody forms as well as the laboratory reports containing the analytical results. The analytical results are discussed in **Section 3.3.1**.

Each borehole was abandoned after completion. The boreholes were abandoned by backfilling the borehole with hydrated bentonite from total depth to ground surface. A summary of the soil boring completion details is provided in **Table 2-3**. Each soil boring was surveyed to the nearest 0.01-foot to provide horizontal and vertical control after construction using a Global Positioning System (GPS) unit. The survey information is also provided in **Table 2-3**.

2.3 Water Level Measurement and Ground Water Sampling Activities

Water level measurement and ground water sampling activities occurred on May 31, 2006. Water levels and total well depths were measured at the two new and six existing monitor wells to the nearest 0.01-foot using a standard water level meter. The water level measurements are provided in **Table 2-4**.

After water level measurement, monitor wells MW-116B, MW-136, and MW-137 were sampled using a peristaltic pump. Each well was sampled using dedicated tubing. The FSP stipulated that the low-flow purge method would be used to purge and sample each monitor well. Due to low yield,

which resulted in an inability to maintain a drawdown during purging of less than 0.3-foot, wells MW-136 and MW-137 could not be sampled using the low-flow purge method. At both monitor wells, three well volumes were removed from the wells during purging and prior to sample collection. At the completion of purging at these two wells, the wells were almost dry. The pump was turned off and each well allowed to recover to 80 percent of the original static water level prior to ground water sample collection.

During purging at each well, water quality parameters were monitored and recorded on a Well Purge and Sampling Field Data Sheet. At monitor well MW-116B, a ground water sample was collected after one well volume had been removed and the water quality parameters had stabilized. The water quality parameters that were recorded included pH, temperature, DO, turbidity, ORP, and conductivity. Copies of the Well Purge and Sampling Field Data Sheets are provided in **Appendix D**.

After purging was completed at each well, a ground water sample was collected for analysis of total TAL metals, dissolved TAL metals, TCL SVOCs, and PAHs using the single ion monitoring (SIM) method to achieve detection limits that were lower than the ground water to surface water PCLs. **Table 2-2** lists the details regarding each sample, including location, depth, date sampled, sample type, and analytical method. The dissolved TAL metals samples were collected using a 0.45 micron filter. A total of 3 ground water samples and 1 field duplicate sample were collected. Each sample was submitted under Chain-of-Custody to the offsite laboratory CH2M HILL Applied Sciences Laboratory for analysis. **Appendix C** includes copies of the Chain-of-Custody forms as well as the laboratory reports containing the analytical results. The analytical results are discussed in **Section 3.3.2**. The water level data are discussed in **Section 3.2**.

The purge water was contained in 55 gallon drums along with the well development and drilling decontamination fluids. The drums were labeled and transferred to the designated IDW storage area onsite. Management of IDW is further discussed in **Section 2.5**.

2.4 Sediment Sampling Activities

Sediment sampling activities began on June 8, 2006 and were completed on June 9, 2006. Nine sediment samples were collected during the sediment sampling activity. Eight sediment samples were collected from areas where PRGs were exceeded in the intertidal, nearshore, and offshore areas at the Site. One sediment sample was collected from a nearby reference location in Sabine Lake. The locations of the sediment samples are shown in **Figure 2-1**. Each sample was collected in water depths ranging between 2 and 15 feet. The US Fish and Wildlife Service (USFWS) assisted with the collection of the sediment samples.

Each sediment sample was collected from a boat using a ponar dredge sampler. At each sampling area, a composite sample was collected from between 1 and 5 different locations within the sampling area. Each sediment sampling location was surveyed to the nearest 0.01-foot to provide horizontal and vertical control after construction using a GPS unit. The survey information is provided in **Table 2-3**. Each individual composite sample location point is shown on **Figure 2-1**. Due to the limited amount of sediment present in many of the areas, from 3 to over 30 individual grab samples of the sediment material were required to obtain enough sediment volume for sample analysis.

During the sediment sampling, descriptive information from each location including depth of surface water, sediment color, general sediment moisture content, sediment grain size, sediment recovery, number of sample locations, number of grab samples collected for each composite, and water quality parameters were recorded on a Sediment Investigation Sampling Form. The water quality parameters that were recorded included pH, temperature, DO, turbidity, ORP, conductivity, salinity, and TDS. Copies of the Sediment Investigation Sampling Forms are provided in **Appendix D**.

Each sediment sample was collected for analysis of TAL metals, TCL SVOCs, PAHs using the SIM method to achieve detection limits, Total Organic Carbon (TOC), grain size, benthic invertebrate taxonomic identification, and bioassay. **Table 2-2** lists the details regarding each sample, including location, surface water depth, date sampled, sample type, and analytical method. A total of 9 sediment samples and 1 field duplicate sample were collected. The samples collected for TAL metals, TCL SVOCs, PAHs, TOC, and grain size were submitted under Chain-of-Custody to the offsite laboratory Kemron Environmental Services for analysis. The samples collected for benthic invertebrate taxonomic identification were submitted under Chain-of-Custody to the offsite laboratory Dennington and Associates for analysis. The samples collected for bioassay were submitted under Chain-of-Custody to the offsite laboratory PBS&J Environmental Toxicology Laboratory for analysis. Based on the sediment analytical results (discussed in **Section 3.3.3**), it was determined that the sediment bioassays were not required. **Appendix C** includes copies of the Chain-of-Custody forms as well as the laboratory reports containing the analytical results. The analytical results are discussed in **Section 3.3.3**.

2.5 Management of Investigation-Derived Wastes

The field investigation activities resulted in the generation of soil, used personal protective equipment (PPE), and liquid IDW. This IDW was managed in accordance with the FSP and SMP (**CH2M HILL, 2006a**, and **CH2M HILL, 2006c**), as described in the following paragraphs.

During the Supplemental RI drilling activities, 2 drums of liquid IDW and 9 drums of soil and PPE IDW were generated. In addition, drums remaining from the 2001 RI were also present at the Site. At the request of the EPA Remedial Project Manager, these wastes were consolidated onsite with the Supplemental RI wastes and characterized for disposal. The characterization results were received in late September. Disposal of the waste is expected to occur in early October. .

Liquid IDW included decontamination fluids, well development water, and purge water. A composite sample was collected from the Supplemental RI wastes to characterize the wastes and determine if the IDW qualified as a hazardous waste. Samples were collected of the liquid IDW for the analysis of VOCs, SVOCs, Pesticides, Herbicides, Metals, and Total Petroleum Hydrocarbons – Gasoline Range Organics and Diesel Range Organics (TPH-GRO, TPH-DRO). **Table 2-2** lists the details regarding each sample, including location, date sampled, sample type, and analytical method. Each sample was submitted under Chain-of-Custody to the offsite laboratory Kemron Environmental Services for analysis. **Appendix C** includes copies of the Chain-of-Custody forms as well as the laboratory reports containing the analytical results. The liquid IDW will be disposed once the 2001 RI wastes have been consolidated onsite with the Supplemental RI wastes.

The soil IDW included drill cuttings from the soil borings. A composite sample was collected from the Supplemental RI wastes to characterize the wastes and determine if the IDW qualified as a hazardous waste using the Toxicity Characteristic Leaching Procedure (TCLP). Samples were collected of the soil IDW for the analysis of VOCs, SVOCs, Pesticides, Herbicides, Metals, TPH-GRO, and TPH-DRO. **Table 2-2** lists the details regarding each sample, including location, date sampled, sample type, and analytical method. Each sample was submitted under Chain-of-Custody to the offsite laboratory Kemron Environmental Services for analysis. **Appendix C** includes copies of the Chain-of-Custody forms as well as the laboratory reports containing the analytical results. The soil IDW will be disposed once the 2001 RI wastes have been consolidated onsite with the Supplemental RI wastes.

2.6 Data Validation Activities

Upon collection of the field data and receipt of the analytical results from each laboratory, the data were validated to assess the effect of the overall field sample collection and laboratory analytical process on the usability of the data. The data were also validated to ensure that they were sufficient to meet the project DQOs. All data were validated based on the criteria set forth in EPA's *National Functional Guidelines* (**EPA, 1994a**, **EPA, 1994b**, and **EPA, 1994c**). A technical memorandum detailing the data validation and data quality evaluation process and results is provided in **Appendix A**.

The following bullets provide a summary and the conclusions of the data validation and data quality evaluation process:

- Overall, the quality of the analytical data was found to be within the QC limits established by the project DQOs, the analytical methods, and the guidelines presented in USEPA's *National Functional Guidelines.*
- Six non-detect results were rejected due to extremely poor matrix spike/matrix spike duplicate (MS/MSD) recovery – 1 selenium result and 2 SVOC results in sample SM140SB03052306, and 3 SVOC results in sample C-SD-03. Other MS/MSD data and laboratory control sample (LCS) data suggested that these poor MS/MSD recoveries were isolated occurrences.
- The project completeness goal was achieved for the overall data set and for each individual analytical method and sample matrix as well.
- Aside from the six rejected data points discussed above the other QC issues encountered were relatively minor and included the following:
  - Minor blank contamination with metals.
  - Low recovery in one continuing calibration verification (CCV) for TPH.
  - One extraction holding time exceedence for a single pyridine result in an IDW sample.
  - Minor serial dilution exceedence for chromium, cobalt, manganese, sodium, and lead.
  - Field duplicate imprecision in soil samples due to soil heterogeneity and isolated imprecision in water samples.
  - Minor recoveries and relative percent differences (RPDs) outside criteria in soil MS/MSDs.

2.7 Risk Assessment Activities

The results obtained during the Supplemental RI were used to update the BHHRA and BERA for the Site. Both risk assessments were updated to assess, based on the additional data, whether Site-related contaminants pose a potential current or future risk to human health or the environment in the absence of remedial action. This assessment provides a basis for determining whether remedial action is necessary at the Site, identify which exposure pathways might warrant remediation, and provide justification for performance of remedial actions. The results of the updated BHHRA and BERA are summarized in **Section 5**. The complete, updated BHHRA and BERA Technical Memoranda are provided in **Appendices E-1** and **E-2**, respectively.

3.0 Supplemental RI Results

Provided in this section is a discussion of the results of the Supplemental RI field investigation. The geological conditions, ground water flow, soil analytical results, ground water analytical results, and sediment analytical results are discussed in the following sections.

3.1 Geologic Conditions

As discussed in **Section 1.2.4**, the geology at the Site, as determined during the RI, consists of a surface clay layer, landfill debris, and dredge spoils. The surface clay layer is a cap placed over the landfill material when the landfill was closed in 1974. The dredge spoils are material dredged from the Sabine-Neches Canal during construction and maintenance activities and consists of fine sand, silt, and clay (**Weston, 2003**).

The geologic conditions encountered during the Supplemental RI were consistent with those documented during the RI (the boring logs are contained in **Appendix B**). The surface layer was fill material consisting mostly of clay. The fill material contains varying percentages of gravel, sand, silt, and clay. Broken pieces of glass and brick were often present in the surface fill layer. The fill layer was encountered from ground surface to depths of 2 to 3.5 feet bgs. The landfill material consists of gravel, sand, silt, and clay fill containing debris, trash, and glass. The thickness of the landfill material varies in the area of the wastewater impoundments from 4.5 ft to 19 feet. The landfill material is present at depths between 2 feet bgs and 21.5 feet bgs. The landfill material was thickest at borings SM138 and SM140 (see **Figure 2-1** for the boring locations). Although glass and brick fragments were encountered during the drilling of the monitor wells (MW-136 and MW-137 – see **Figure 2-1**), no landfill waste was encountered at these two locations. Below the landfill waste, dredge spoils were encountered at the soil boring locations. The dredge spoils were encountered below the surface clay fill layer at the monitor well locations. The dredge spoils are composed of varying percentages of fine sand, silt, and clay. Saturated conditions were generally encountered within either the landfill material or dredge spoils at depths between 4 feet and 8 feet bgs.

3.2 Water Levels

Water levels were collected from the two new and five of the six existing site monitor wells on May 31, 2006. The water level measurements are provided in **Table 2-4**. The water level meter did not record a water level in monitor well MW068B. The meter was determined to be functioning properly.

During water level collection, the meter provided false water level indications. It is suspected that the probe was sticking to the side of the well casing, and water along the well casing was causing the water level meter to provide inaccurate water level measurements at this well. This monitor well is screened within the deeper ground water zone at the Site.

The water levels collected for the shallow, perched ground water at the site were used to prepare a potentiometric surface contour map, which is provided in **Figure 3-1**. As shown on **Figure 3-1**, ground water in the shallow perched ground water zone at the Site is toward Sabine Lake. The ground water flow direction is toward the southeast in the shallow perched zone in the southern portion of the Site, and toward the south-southeast in the northeast portion of the Site. Horizontal ground water flow gradients for the shallow perched ground water zone were calculated between monitor well pairs MW068B/MW061B and MW136/MW116B. The horizontal flow gradient in the shallow perched ground water between monitor wells MW068B and MW061B is 0.02 ft/ft. The horizontal flow gradient between monitor wells MW136 and MW116B is 0.005 ft/ft. The horizontal ground water flow gradient is steeper across the southern portion of the Site, as compared with the northeast portion of the Site. The potentiometric contour lines on **Figure 3-1** show the difference in the horizontal flow gradient within the shallow perched ground water zone. The contours are much closer together between monitor well MW068B and MW061A, indicating a steeper horizontal flow gradient between these two wells.

3.3 Analytical Results

This section discusses the analytical results obtained from the soil, ground water, and sediment sampling activities performed during the Supplemental RI. Copies of the laboratory reports containing the analytical results are included in **Appendix C**.

3.3.1 Soil Analytical Results

Soil samples were collected from seven soil borings between May 22 and May 24, 2006. Five borings were completed in the area of the former wastewater impoundments (SB138 through SB142) and two borings were completed east of the wastewater impoundments (SB136/MW136 and SB137/MW137). The samples collected from these borings were analyzed for TAL total metals and TCL SVOCs.

The analytical results for metals detected in soil samples are summarized in **Table 3-1**. The analytical results for SVOCs detected in soil samples are summarized in **Table 3-2**.

Further evaluation of the soil analytical results in terms of human health and ecological risks are provided in **Appendix E**. The following sections provide a discussion of the results obtained from the soil samples.

3.3.1.1 Metals Results in Soils

The following metals were detected in the Supplemental RI soil samples: aluminum, antimony, arsenic, barium, beryllium, cadmium, calcium, total chromium, cobalt, copper, iron, magnesium, manganese, mercury, nickel, potassium, selenium, silver, sodium, vanadium, and zinc (see **Table 3-1**).

Aluminum was detected at all 17 soil sample locations. Aluminum concentrations ranged from 5,680 mg/kg at SM138 (11.5 to 12 ft bgs) up to 20,000 mg/kg at SM136 (0.5 to 1.7 ft bgs).

Antimony was detected at 10 soil sample locations. Antimony was not detected at soil sample locations SM137 (7 to 8 ft bgs), SM138 (11.5 to 12 ft bgs, and 20 to 22 ft bgs), SM139 (0 to 2 ft bgs, and 6 to 8 ft bgs), SM140 (21.5 to 22 ft bgs), and SM141 (6.5 to 8 ft bgs). Where detected, the antimony concentrations ranged from 0.504 J mg/kg (see **Table 3-1** for a definition of the data qualifiers) at SM141 (0 to 2 ft bgs) up to 11.7 J mg/kg at SM142 (5 to 6 ft bgs).

Arsenic was detected at all 17 soil sample locations. Arsenic concentrations ranged from 2.64 mg/kg at SM138 (11.5 to 12 ft bgs) up to 14.3 mg/kg at SM139 (5 to 6 ft bgs).

Barium was detected at all 17 soil sample locations. Barium concentrations ranged from 43.3 mg/kg at SM137 (7 to 8 ft bgs) up to 540 mg/kg at SM136 (0.5 to 1.7 ft bgs).

Beryllium was detected at all 17 soil sample locations. Beryllium concentrations ranged from 0.138 J mg/kg at SM137 (7 to 8 ft bgs) up to 1.08 mg/kg at SM139 (6 to 8 ft bgs).

Calcium was detected at all 17 soil sample locations. Calcium concentrations ranged from 3,630 mg/kg at SM141 (in the field duplicate sample collected from 6.5 to 8 ft bgs) up to 79,000 mg/kg at SM136 (0.5 to 1.7 ft bgs).

Cadmium was detected at 13 soil sample locations. Cadmium was not detected at soil sample locations SM137 (7 to 8 ft bgs), SM138 (20 to 22 ft bgs), SM139 (6 to 8 ft bgs), and SM141 (6.5 to 8 ft bgs). Where detected, the cadmium concentrations ranged from 0.118 mg/kg at SM138 (0 to 2 ft bgs) up to 7.77 mg/kg at SM13 (5 to 6 ft bgs).

Chromium was detected at all 17 soil sample locations. Chromium concentrations ranged from 9.3 mg/kg at SM138 (11.5 to 12 ft bgs) up to 81.1 mg/kg at SM142 (5 to 6 ft bgs).

Cobalt was detected at all 17 soil sample locations. Cobalt concentrations ranged from 2.61 mg/kg at SM138 (11.5 to 12 ft bgs) up to 16.6 mg/kg at SM139 (5 to 6 ft bgs).

Copper was detected at all 17 soil sample locations. Copper concentrations ranged from 4.23 mg/kg at SM138 (20 to 22 ft bgs) up to 547 mg/kg at SM139 (5 to 6 ft bgs).

Iron was detected at all 17 soil sample locations. Iron concentrations ranged from 12,600 mg/kg at SM138 (20 to 22 ft bgs) up to 329,000 mg/kg at SM137 (7 to 8 ft bgs).

Potassium was detected at all 17 soil sample locations. Potassium concentrations ranged from 612 mg/kg at SM137 (7 to 8 ft bgs) up to 3,110 at SM139 (6 to 8 ft bgs).

Mercury was detected at all 17 soil sample locations. Mercury concentrations ranged from 0.207 J mg/kg at SM141 (5 to 6 ft bgs) up to 1.04 mg/kg at SM142 (5 to 6 ft bgs).

Magnesium was detected at all 17 soil sample locations. Magnesium concentrations ranged from 953 mg/kg at SM137 (7 to 8 ft bgs) up to 8,150 mg/kg at SM136 (0.5 to 1.7 ft bgs).

Manganese was detected at all 17 soil sample locations. Manganese concentrations ranged from 94.9 mg/kg at SM139 (6 to 8 ft bgs) up to 1,350 mg/kg at SM137 (7 to 8 ft bgs).

Sodium was detected at all 17 soil sample locations. Sodium concentrations ranged from 132 mg/kg at SM138 (0 to 2 ft bgs) up to 1,860 mg/kg at SM140 (7.5 to 8 ft bgs).

Nickel was detected at all 17 soil sample locations. Nickel concentrations ranged from 3.02 mg/kg at SM138 (11.5 to 12 ft bgs) up to 43.8 mg/kg at SM136 (0.5 to 1.7 ft bgs).

Lead was detected at all 17 soil sample locations. Lead concentrations ranged from 9.68 J mg/kg at SM138 (20 to 22 ft bgs) up to 951 mg/kg at SM141 (5 to 6 ft bgs).

Selenium was detected at only two soil sample locations. Selenium was detected at a concentration of 1.99 mg/kg at SM137 (2 to 4 ft bgs) and 4.68 J mg/kg at SM136 (0.5 to 1.7 ft bgs).

Silver was detected at all 17 soil sample locations. Silver concentrations ranged from 0.328 J mg/kg at SM141 (in the field duplicate sample collected at 6.5 to 8 ft bgs) up to 13.9 mg/kg at SM141 (5 to 6 ft bgs).

Vanadium was detected at all 17 soil sample locations. Vanadium concentrations ranged from 10.9 mg/kg at SM138 (11.5 to 12 ft bgs) up to 35.6 mg/kg at SM141 (6.5 to 8 ft bgs).

Zinc was detected at all 17 soil sample locations. Zinc concentrations ranged from 37.8 J mg/kg at SM138 (20 to 22 ft bgs) up to 4,140 mg/kg at SM136 (0.5 to 1.7 ft bgs).

The metals results in soil samples are presented on **Figure 3-2**. Aerially, the metals results show no general pattern relative to higher metals concentrations being associated specifically with the former wastewater impoundments. Maximum detections of individual metals occur at all seven boring locations. Vertically, the metals concentrations do not exhibit an increasing or decreasing trend relative to depth. However, the metals concentrations were typically higher in the samples collected above or within the landfill waste material. The highest detection for aluminum, barium, calcium, magnesium, nickel, selenium, and zinc occurred in a sample collected from above the landfill waste material (all at SM136). The highest detection for antimony, arsenic, cadmium, chromium, cobalt, copper, iron, mercury, manganese, sodium, lead, and silver occurred in a sample collected from within the landfill waste material. The highest detection for beryllium, potassium, and vanadium occurred in a sample collected from below the landfill waste material.

3.3.1.2 SVOC Results in Soils

The following SVOCs were detected in the Supplemental RI soil samples: 2,4-dimethylphenol, 2-methylnaphthalene, acenaphthene, acenaphthylene, anthracene, benzo (a) anthracene, benzo (a) pyrene, benzo (b) fluoranthene, benzo (g,h,i) perylene, benzo (k) fluoranthene, bis (2-ethylhexyl) phthalate, butyl benzylphthalate, carbazole, chrysene, cresols (m&p), di-n-butylphthalate, dibenzofuran, fluoranthene, fluorene, indeno (1,2,3-cd) pyrene, naphthalene, phenanthrene, phenol, and pyrene (see **Table 3-2**).

2,4-Dimethylphenol was detected at only one soil sample location. The concentration was 8,020 µg/kg at SM142 (5 to 6 ft bgs).

2-Methylnaphthalene was detected at two soil sample locations. The 2-methylnaphthalene concentration in these two soil samples was 2,170 J µg/kg (see **Table 3-2** for a definition of the data qualifiers) at SM140 (7.5 to 8 ft bgs) and 9,020 µg/kg at SM142 (5 to 6 ft bgs).

Acenaphthene was detected at two soil sample locations. The acenaphthene concentration in these two soil samples was 1,480 J µg/kg at SM140 (7.5 to 8 ft bgs) and 4,410 J µg/kg at SM142 (5 to 6 ft bgs).

Acenaphthylene was detected at only one soil sample location. The concentration was 5,830 µg/kg at SM142 (0 to 2 ft bgs).

Anthracene was detected at three soil sample locations. The anthracene concentrations ranged from 6,290 µg/kg at SM140 (7.5 to 8 ft bgs) up to 19,000 µg/kg at SM142 (0 to 2 ft bgs).

Benzo (a) anthracene was detected at three soil sample locations. The benzo (a) anthracene concentrations ranged from 2,050 J µg/kg at SM140 (7.5 to 8 ft bgs) up to 10,800 µg/kg at SM142 (0 to 2 ft bgs).

Benzo (a) pyrene was detected at three soil sample locations. The benzo (a) pyrene concentrations ranged from 1,470 J µg/kg at SM140 (7.5 to 8 ft bgs) up to 10,800 µg/kg at SM142 (0 to 2 ft bgs).

Benzo (b) fluoranthene was detected at three soil sample locations. The benzo (b) fluoranthene concentrations ranged from 1,640 J µg/kg at SM140 (7.5 to 8 ft bgs) up to 15,100 µg/kg at SM142 (0 to 2 ft bgs).

Benzo (g,h,i) perylene was detected at only one soil sample location. The concentration was 7,320 µg/kg at SM142 (0 to 2 ft bgs).

Benzo (k) fluoranthene was detected at only one soil sample location. The concentration was 4,330 µg/kg at SM142 (0 to 2 ft bgs).

Bis (2-ethylhexyl) phthalate was detected at eight soil sample locations. The bis (2-ethylhexyl) phthalate concentrations ranged from 120 J µg/kg at SM141 (5 to 6 ft bgs) up to 79,200 µg/kg at SM142 (5 to 6 ft bgs).

Butyl benzylphthalate was detected at two soil sample locations. The butyl benzylphthalate concentration in these two soil samples was 840 J µg/kg at SM138 (11.5 to 12 ft bgs) and 26,200 µg/kg at SM142 (5 to 6 ft bgs).

Carbazole was detected at three soil sample locations. The carbazole concentrations ranged from 1,520 J µg/kg at SM140 (7.5 to 8 ft bgs) up to 9,720 µg/kg at SM142 (0 to 2 ft bgs).

Chrysene was detected at three soil sample locations. The chrysene concentrations ranged from 4,170 µg/kg at SM140 (7.5 to 8 ft bgs) up to 15,500 µg/kg at SM142 (0 to 2 ft bgs).

Cresols (m & p) were detected at only one soil sample location. The concentration was 11,400 µg/kg at SM142 (5 to 6 ft bgs).

Di-n-butylphthalate was detected at only one soil sample location. The concentration was 33,200 µg/kg at SM142 (0 to 2 ft bgs).

Dibenzofuran was detected at two soil sample locations. The dibenzofuran concentration in these two soil samples was 1,260 J µg/kg at SM138 (11.5 to 12 ft bgs) and 4,130 J µg/kg at SM142 (5 to 6 ft bgs).

Fluoranthene was detected at three soil sample locations. The fluoranthene concentrations ranged from 5,460 µg/kg at SM140 (7.5 to 8 ft bgs) up to 18,300 µg/kg at SM142 (0 to 2 ft bgs).

Fluorene was detected at three soil sample locations. The fluorene concentrations ranged from 2,760 µg/kg at SM140 (7.5 to 8 ft bgs) up to 6,190 J µg/kg at SM142 (5 to 6 ft bgs).

Indeno (1,2,3-cd) pyrene was detected at only one soil sample location. The concentration was 4,810 µg/kg at SM142 (0 to 2 ft bgs).

Naphthalene was detected at three soil sample locations. The naphthalene concentrations ranged from 2,170 J µg/kg at SM140 (7.5 to 8 ft bgs) up to 33,900 µg/kg at SM142 (5 to 6 ft bgs).

Phenanthrene was detected at three soil sample locations. The phenanthrene concentrations ranged from 10,600 µg/kg at SM140 (7.5 to 8 ft bgs) up to 19,500 µg/kg at SM142 (5 to 6 ft bgs).

Phenol was detected at only one soil sample location. The concentration was 6,510 J µg/kg at SM142 (5 to 6 ft bgs).

Pyrene was detected at three soil sample locations. The pyrene concentrations ranged from 6,300 µg/kg at SM140 (7.5 to 8 ft bgs) up to 13,700 µg/kg at SM142 (0 to 2 ft bgs).

The SVOC results in soil samples are presented on **Figure 3-3**. SVOC detections occurred at borings SM138, SM140, SM141, and SM142. SVOCs were not detected in soil samples collected from the two soil borings where monitor wells were installed (MW136 and MW137) or at boring SM139. Only bis (2-ethylhexyl) phthalate and butyl benzylphthalate were detected at boring SM138, and only bis (2-ethylhexyl) phthalate was detected at boring SB141. The remaining SVOCs were detected at borings SM140 and SM142 only. The SVOC concentrations were higher in the samples collected at boring SM142. In general, the highest detections of SVOCs occurred in the soil samples collected from within the landfill waste material. At SM142, several SVOCs were also detected in the soil sample collected above the landfill waste material at a depth of 0 to 2 ft bgs. At this location, many SVOC concentrations were higher in the 0 to 2 ft bgs sample than in the 5 to 6 ft bgs sample (collected from within the landfill waste material). Bis (2-ethylhexyl) phthalate was the only SVOC detected in soil samples collected from below the landfill waste material. Bis (2-ethylhexyl) phthalate was detected at SM138 (at a depth of 20 to 22 ft bgs) and SM140 (at a depth of 21.5 to 22 ft bgs). At both locations, the bis (2-ethylhexyl) phthalate concentration decreased in the sample collected below the landfill waste material.

3.3.2 Ground Water Analytical Results

Ground water samples were collected from monitor wells MW116B, MW136, and MW137 on May 31, 2006. These monitor wells are located downgradient of the former wastewater impoundments within the shallow perched ground water zone. The samples collected from these wells were analyzed for TAL metals (total and dissolved), TCL SVOCs, and PAHs (via the SIM analytical method). The SIM analytical method was used to achieve lower detection limits for the PAHs than are achieved using the standard method (SW8270C). In addition, general ground water quality parameters were measured during purging at each monitor well.

The analytical results for metals detected in ground water samples (dissolved and total) are summarized in **Table 3-3**. The analytical results for SVOCs detected in ground water samples are summarized in **Table 3-4**.

Further evaluation of the ground water analytical results in terms of ecological risks are provided in **Appendix E**. The following sections provide a discussion of the results obtained from the ground water samples.

3.3.2.1 General Ground Water Quality in the Shallow Perched Ground Water Zone

General water quality parameters were monitored during purging and sampling of the monitor wells. The parameters monitored included pH, temperature, DO, turbidity, ORP, and conductivity. The water quality data were recorded on Well Purge and Sampling Field Data Sheets, provided in **Appendix D**. All water quality parameters were collected using a Horriba model U-22 meter and flow through cell. Because three well volumes were removed during purging at monitor wells MW136 and MW137, stabilization of all general water quality parameters was not achieved at these wells prior to ground water sample collection.

The pH measurements during ground water sampling ranged from 6.66 to 6.95 standard units. The pH measurements recorded just prior to sample collection were 6.86, 6.85, and 6.95 at monitor wells MW116B, MW136, and MW137 respectively. All measured pH values were near neutral (7.0).

Temperature measurements during ground water sampling ranged from 21.32 degrees Celsius (ºC) to 23.58 ºC.

DO measurements during ground water sampling ranged from 9.48 to 5.58 mg/L. The DO measurements recorded just prior to sample collection were 5.58 mg/L, 7.3 mg/L, and 6.6 mg/L at MW116B, MW136, and MW137, respectively. The DO measurements indicate oxidizing conditions

exist in the perched ground water at the Site. DO measurements can be positively (high) biased due to diffusion of oxygen from air into the sample tubing or flow through cell.

Turbidity measurements during ground water sampling ranged from 8.0 to greater than 1,000 nephelometric turbidity units (NTUs). The turbidity measurements recorded just prior to sample collection were 23.8 (NTUs), 67.3 NTUs, and 162 NTUs at MW116B, MW136, and MW137, respectively. Due to the high turbidity measurements, a filtered and an unfiltered ground water sample was collected at each well to obtained dissolved and total metals concentrations.

The ORP measurements during ground water sampling ranged from -152 to -80 millivolts (mV). The ORP measurements recorded just prior to sample collection were -80 mV, -144 mV, and -94 mV at monitor wells MW116B, MW136, and MW137, respectively. The ORP measurements indicate reducing conditions in the shallow perched ground water at the Site. These measurements contradict the DO measurements. For the reasons given regarding the collection of the DO data, the ORP results are believed to be more representative of the conditions in the shallow perched ground water.

Conductivity measurements during ground water sampling ranged from 5.66 to 11.4 milliseimens per centimeter (mS/cm). The conductivity measurements recorded just prior to sample collection were -5.66 mS/cm, 10.4 mS/cm, and 9.2 mS/cm at monitor wells MW116B, MW136, and MW137, respectively. The high conductivity values are most likely a result of the influence of the brackish water in Sabine Lake being in hydraulic communication with the shallow perched ground water and the presence of the landfill material within the shallow perched ground water at the Site.

3.3.2.2 Metals Results in Ground Water

The following metals were detected in the Supplemental RI total metals ground water samples: aluminum, arsenic, barium, beryllium, calcium, cadmium, chromium, cobalt, copper, iron, potassium, mercury, magnesium, manganese, sodium, nickel, lead, vanadium, and zinc (see **Table 3-3**). The following metals were detected in the Supplemental RI dissolved metals ground water samples: arsenic, barium, calcium, cobalt, copper, iron, potassium, magnesium, manganese, sodium, nickel, lead, selenium, vanadium, and zinc (see **Table 3-3**).

Aluminum was detected in the total metals sample from two monitor wells. Aluminum was not detected in the dissolved metals samples. The total aluminum concentrations ranged from 866 J µg/L at MW137 up to 12,500 µg/L at MW136.

Arsenic was detected in the total metals sample at the three monitor wells. Arsenic was detected in the dissolved metals sample at monitor well MW136 only. The total arsenic concentrations ranged

from 12.7 JH µg/L (see **Table 3-3** for a definition of the data qualifiers) at MW116B up to 22.7 JH µg/L at MW137. The dissolved arsenic concentration at well MW136 was 14.1 JH µg/L.

Barium was detected in the total and dissolved metals sample at all three monitor wells. The total barium concentrations ranged from 517 µg/L in the field duplicate sample at monitor well MW137 up to 1,220 µg/L at well MW136. The dissolved barium concentrations ranged from 543 µg/L at well MW116B up to 1,250 µg/L at well MW136.

Beryllium was detected in the total metals sample at two monitor wells. Beryllium was not detected in the dissolved metals samples. The total beryllium concentration was 0.58 J µg/L in the field duplicate sample from well MW137 and 0.684 J µg/L at MW136.

Calcium was detected in the total and dissolved metals sample at all three monitor wells. The total calcium concentrations ranged from 129,000 µg/L in the field duplicate sample at well MW137 up to 201,000 µg/L at well MW116B. The dissolved calcium concentrations ranged from 146,000 µg/L at well MW137 up to 203,000 µg/L at well MW116B.

Cadmium was detected in the total and dissolved metals sample at two monitor wells. The total cadmium concentrations were 0.457 J µg/L at well MW137 and 1.22 J µg/L at well MW136. The dissolved cadmium concentrations were 0.447 J µg/L at well MW136 and 0.714 J µg/L at MW137.

Chromium was detected in the total metals sample at all three monitor wells. Chromium was not detected in the dissolved metals samples. The total chromium concentrations ranged from 3.97 J µg/L at well MW116B up to 14.5 µg/L at well MW136.

Cobalt was detected in the total and dissolved metals sample at two monitor wells. The total cobalt concentrations were 5.87 J µg/L at well MW136 and 7.95 J µg/L in the field duplicate sample at well MW137. The dissolved cobalt concentrations were 1.65 J µg/L at MW136 and 4.91 J µg/L at MW137.

Copper was detected in the total metals sample at two monitor wells. Copper was detected in the dissolved metals sample at one monitor well. The total copper concentrations were 16.7 J µg/L in the field duplicate sample at well MW137 and 31.4 µg/L at well MW136. The dissolved copper concentration was 5.1 J µg/L in the field duplicate sample from well MW137.

Iron was detected in the total and dissolved metals sample at all three monitor wells. The total iron concentrations ranged from 1,500 J µg/L at well MW137 up to 35,800 µg/L at well MW136. The dissolved iron concentrations ranged from 752 µg/L at well MW137 up to 27,800 µg/L at well MW136.

Potassium was detected in the total and dissolved metals sample at all three monitor wells. The total potassium concentrations ranged from 39,500 J µg/L at well MW116B up to 65,400 J µg/L at well MW137. The dissolved potassium concentrations ranged from 39,200 J µg/L at well MW116B up to 60,400 J µg/L at well MW136.

Mercury was detected in the total metals samples at two monitor wells. Mercury was not detected in the dissolved metals samples. The total mercury concentrations were 0.0355 J µg/L in the field duplicate sample at well MW137 and 0.0455 J µg/L at well MW136.

Magnesium was detected in the total and dissolved metals samples at all three monitor wells. The total magnesium concentrations ranged from 101,000 µg/L at well MW116B up to 317,000 µg/L at well MW136. The dissolved magnesium concentrations ranged from 93,700 µg/L at well MW116B up to 300,000 µg/L at well MW136.

Manganese was detected in the total and dissolved metals samples at all three monitor wells. The total manganese concentrations ranged from 1,400 µg/L at well MW116B up to 8,390 µg/L at well MW136. The dissolved manganese concentrations ranged from 1,310 µg/L at well MW116B up to 7,680 µg/L at well MW136.

Sodium was detected in the total and dissolved metals samples at all three monitor wells. The total sodium concentrations ranged from 591,000 µg/L at well MW116B up to 1,720,000 J µg/L at well MW136. The dissolved sodium concentrations ranged from 521,000 µg/L at well MW116B up to 1,550,000 J µg/L at well MW136.

Nickel was detected in the total and dissolved metals samples at all three monitor wells. The total nickel concentrations ranged from 13.6 J µg/L at well MW136 up to 164 µg/L at well MW116B. The dissolved nickel concentrations ranged from 7.41 J µg/L at well MW136 up to 170 µg/L at well MW116B.

Lead was detected in the total metals samples at all three monitor wells. Lead was detected in the dissolved metals samples at two monitor wells. The total lead concentrations ranged from 2.26 J µg/L at well MW116B up to 71 µg/L at well MW136. The dissolved lead concentrations ranged from 2.37 J µg/L in the field duplicate sample at well MW137 to 2.49 J µg/L at well MW116B.

Selenium was not detected in the total metals samples. Selenium was detected in the dissolved metals sample at one monitor well. Selenium was detected at a concentration of 9.41 J µg/L in the dissolved metals sample at well MW116B.

Vanadium was detected in the total metals samples at all three monitor wells. Vanadium was detected in the dissolved metals samples at two monitor wells. The total vanadium concentrations ranged from 1.87 J µg/L at well MW116B up to 24.6 J µg/L at well MW136. The dissolved vanadium concentrations were 1.69 J µg/L at well MW116B and 5.2 J µg/L in the field duplicate sample at well MW137.

Zinc was detected in the total and dissolved metals samples at all three monitor wells. The total zinc concentrations ranged from 48.1 µg/L at well MW116B up to 258 µg/L at well MW136. The dissolved zinc concentrations ranged from 34.8 µg/L at well MW136 up to 72.8 µg/L at well MW137.

In general, the total metals and dissolved metals results were similar for each sample (see **Table 3-3**). However, for aluminum, arsenic, chromium, and iron, the total and dissolved metals concentrations varied by as much as an order-of-magnitude difference in three of the four samples collected. For beryllium, copper, vanadium, and zinc, the total and dissolved metals concentrations varied by as much as an order-of-magnitude difference in two of the four samples collected. For each of these analytes, the total metals concentrations were higher than the dissolved metals concentrations.

The total metals results in ground water are presented on **Figure 3-4**. Selenium was not detected in the total metals samples. With the exception of arsenic, calcium, cobalt, potassium, and nickel, the highest total metals concentrations occur in upgradient monitor well MW136. Monitor well MW136 is located downgradient of the former wastewater impoundments, but this well is also located downgradient of the PBLS Site (see **Figure 3-1**). Arsenic concentrations were similar in all three wells. Beryllium, cobalt, sodium, and potassium concentrations were similar in wells MW136 and MW137 and slightly lower in downgradient well MW116B. Calcium concentrations were similar in wells MW116B and MW136 and slightly lower in well MW137. The highest nickel concentrations occurred in downgradient well MW116B.

The dissolved metals results in ground water are presented on **Figure 3-5**. Aluminum, beryllium, chromium, and mercury were not detected in the dissolved metals samples. Arsenic, barium, and iron concentrations were highest in monitor well MW136. Arsenic was detected in the dissolved sample from MW136 only. Barium and iron concentrations were similar in wells MW137 and MW116B. Cadmium, cobalt, copper, vanadium, and zinc concentrations were highest in monitor well MW137. The cadmium concentration was slightly lower in MW136, and cadmium was not detected in MW116B. The cobalt was not detected in the dissolved sample from MW116B. Copper was detected in the dissolved samples from MW137 only. Vanadium was not detected in the dissolved sample from MW136, and zinc concentrations were similar in MW136 and MW116B. Potassium,

manganese, and sodium concentrations were similar in MW136 and MW137 and lower in MW116B. Calcium, magnesium, nickel, and selenium concentrations were highest in monitor well MW116B. Calcium, magnesium, and sodium concentrations were higher in well MW136 than in well MW137. Nickel concentrations were slightly higher in well MW137 than in well MW136. Selenium was only detected in the dissolved sample from MW116B. Lead concentrations in MW137 and MW116B were similar, while lead was not detected at MW136. Most dissolved metals concentrations are higher in the downgradient monitor wells MW116B and MW137 than in MW136. Arsenic, iron, and barium concentrations are higher upgradient in well MW136, while cadmium, potassium, and manganese concentrations are higher in upgradient wells MW136 and MW137 than in MW116B.

3.3.2.3 Semi-Volatile Organic Compounds Results in Ground Water

The following SVOCs were detected in the Supplemental RI ground water samples: diethylphthalate, acenaphthene, acenaphthylene, anthracene, benzo (a) anthracene, benzo (a) pyrene, benzo (b) fluoranthene, benzo (g,h,i) perylene, benzo (k) fluoranthene, chrysene, fluoranthene, fluorene, indeno (1,2,3-cd) perylene, naphthalene, phenanthrene, and pyrene (see **Table 3-4**).

Diethyphthalate was detected at all three monitor wells. The diethylphthalate concentrations ranged from 1.83 J (see **Table 3-4** for a definition of the data qualifiers) µg/L at well MW116B up to 4.28 J µg/L in the field duplicate sample at well MW137.

Acenaphthene was detected at all three monitor wells. The acenaphthene concentrations ranged from 0.0114 J µg/L at well MW136 up to 1.12 µg/L at well MW116B.

Acenaphthylene was detected at monitor well MW116B only. The concentration was 0.0408 µg/L.

Benzo (a) anthracene was detected at two monitor wells. The benzo (a) anthracene concentration was 0.0042 J µg/L at well MW137 and 0.0078 J µg/L at well MW116B.

Benzo (a) pyrene was detected at two monitor wells. The benzo (a) pyrene concentration was 0.0028 J µg/L at well MW136 and 0.0037 J at well MW137.

Benzo (b) fluoranthene was detected at two monitor wells. The benzo (b) fluoranthene concentration was 0.0034 J µg/L at well MW136 and 0.0036 J µg/L in the field duplicate sample at MW137.

Benzo (g,h,i) perylene was detected at two monitor wells. The benzo (g,h,i) perylene concentration was 0.0018 J µg/L at well MW136 and 0.0027 J µg/L in the field duplicate sample at MW137.

Benzo (k) fluoranthene was detected at two monitor wells. The benzo (k) fluoranthene concentration was 0.0015 J µg/L at well MW136 and 0.0037 J µg/L at well MW137.

Chrysene was detected at all three monitor wells. The chrysene concentrations ranged from 0.0033 J µg/L at MW136 up to 0.0046 J µg/L at well MW116B.

Fluoranthene was detected at all three monitor wells. The fluoranthene concentrations ranged from 0.0101 J µg/L at well MW136 up to 0.532 µg/L at well MW116B.

Fluorene was detected at all three monitor wells. The fluorene concentrations ranged from 0.004 J µg/L at well MW136 up to 0.0573 µg/L at well MW116B.

Indeno (1,2,3-cd) pyrene was detected at two monitor wells. The indeno (1,2,3-cd) pyrene concentration was 0.0018 J µg/L at well MW136 and 0.0027 J µg/L in the field duplicate sample at MW137.

Naphthalene was detected at all three monitor wells. The naphthalene concentrations ranged from 0.0085 J µg/L at well MW136 up to 0.0247 J µg/L at well MW137.

Phenanthrene was detected at all three monitor wells. The phenanthrene concentrations ranged from 0.0063J µg/L at MW116B up to 0.0161 J µg/L at well MW137.

Pyrene was detected at all three monitor wells. The pyrene concentrations ranged from 0.0079 J µg/L at well MW137 up to 0.297 µg/L at well MW116B.

The SVOC results in ground water are presented on **Figure 3-6**. The concentrations of most SVOCs detected in ground water samples were highest in either monitor well MW116B or MW137. Acenaphthene, acenaphthylene, anthracene, benzo (a) anthracene, chrysene, fluoranthene, fluorene, and pyrene concentrations were highest in MW116B. Diethylphthalate, benzo (a) pyrene, benzo (b) fluoranthene, benzo (g,h,i) perylene, benzo (k) fluoranthene, indeno (1,2,3-cd) pyrene, naphthalene, and phenanthrene concentrations were higher in MW137. Most SVOCs that were detected in ground water were present at concentrations near the laboratory reporting limits. SVOC concentrations are higher in the two downgradient monitor wells (MW116B and MW137) than in upgradient well MW136.

3.3.3 Sediment Analytical Results

Sediment samples were collected from eight locations between June 8 and June 9, 2006. Each sample was comprised of 3 to 30 ponar grabs composited from 1 to 5 sampling locations. A background sample was also collected (Station I). Samples were analyzed for TAL metals and TCL SVOCs. These data were used in the Supplemental BERA to evaluate potential risk to benthic invertebrates in the areas of concern as identified in the FFS (**Appendix E-2**). The analytical results for metals detected in sediment samples are provided in **Table 3-5**. The analytical results for SVOCs detected in sediment samples are provided in **Table 3-6**.

The only protocol deviations from those described in the DQOs were those indicating toxicity bioassays would be performed using *Leptocheirus plumulosus* or *Neanthes virens* 10-day sediment bioassays, and that macroinvertebrate taxonomic identification would be performed for community analysis. These analyses were not performed due to the very low likelihood for adverse effects expected from sediments adjacent to SMS based on the marginal exceedences of primary screening values in recent samples and source evaluation, as discussed in the Supplemental BERA (see **Appendix E-2**).

Descriptions of field sampling locations, including surface water quality measurements at sampling locations and particle size analyses, are provided in Attachment B of the Supplemental BERA (see **Appendix E-2**).

3.3.3.1 Metals Results in Sediment

The following metals were detected in the Supplemental RI sediment samples: aluminum, antimony, arsenic, barium, beryllium, cadmium, calcium, total chromium, cobalt, copper, iron, magnesium, manganese, mercury, nickel, potassium, selenium, silver, sodium, vanadium, and zinc (see **Table 3-5**).

The metals aluminum, arsenic, barium, beryllium, calcium, chromium, cobalt, iron, potassium, magnesium, manganese, sodium, nickel, lead, selenium, vanadium, and zinc were detected at the background sample location (I-SD). Antimony, cadmium, copper, mercury, silver, and thallium were not detected at the background location. For all metals, the concentrations were lowest at the background location.

Aluminum was detected at all eight onsite sediment sample locations. The aluminum concentrations ranged from 4,040 mg/kg at location F-SD up to 16,200 mg/kg at location D-SD.

Antimony was detected at two onsite sediment sample locations. The antimony concentration was 0.121 J (see **Table 3-5** for a definition of the data qualifiers) mg/kg at location B-SD and 0.237 JL at location C-SD.

Arsenic was detected at all eight onsite sediment sample locations. The arsenic concentrations ranged from 3.59 mg/kg at location F-SD up to 6 mg/kg at location A-SD.

Barium was detected at all eight onsite sediment sample locations. The barium concentrations ranged from 27.7 mg/kg at location E-SD up to 264 mg/kg at location C-SD.

Beryllium was detected at all eight onsite sediment sample locations. The beryllium concentrations ranged from 0.266 J mg/kg at location F-SD up to 0.826 mg/kg at location D-SD.

Calcium was detected at all eight onsite sediment sample locations. The calcium concentrations ranged from 556 mg/kg at location F-SD up to 2,820 mg/kg at location A-SD. Cadmium was detected at seven onsite sediment sample locations. Cadmium was not detected at sample location F-SD. The cadmium concentrations ranged from 0.0846 J mg/kg at location D-SD up to 0.158 mg/kg at location H-SD.

Chromium was detected at all eight onsite sediment sample locations. The chromium concentrations ranged from 6.32 mg/kg at location E-SD up to 17.3 mg/kg at location D-SD.

Cobalt was detected at all eight onsite sediment sample locations. The cobalt concentrations ranged from 3.13 mg/kg at location F-SD up to 7.01 mg/kg in the field duplicate sample at location H-SD.

Copper was detected at all eight onsite sediment sample locations. The copper concentrations ranged from 5.24 mg/kg at location H-SD up to 18.3 mg/kg at location E-SD.

Iron was detected at all eight onsite sediment sample locations. The iron concentrations ranged from 9,840 B mg/kg at location F-SD up to 17,100 B mg/kg at location C-SD.

Potassium was detected at all eight onsite sediment sample locations. The potassium concentrations ranged from 717 mg/kg at location E-SD up to 3,200 JH mg/kg at location C-SD.

Mercury was detected at all eight onsite sediment sample locations. The mercury concentrations ranged from 0.0201 J mg/kg at location D-SD up to 0.0405 J mg/kg at location C-SD.

Magnesium was detected at all eight onsite sediment sample locations. The magnesium concentrations ranged from 1,050 mg/kg at location E-SD up to 4,620 mg/kg at location C-SD.

Manganese was detected at all eight onsite sediment sample locations. The manganese concentrations ranged from 65.7 mg/kg at location D-SD up to 405 mg/kg at location C-SD.

Sodium was detected at all eight onsite sediment sample locations. The sodium concentrations ranged from 1,610 mg/kg at location E-SD up to 7,290 mg/kg at location C-SD.

Nickel was detected at all eight onsite sediment sample locations. The nickel concentrations ranged from 5.38 mg/kg at location F-SD up to 12.4 mg/kg at location A-SD.

Lead was detected at all eight onsite sediment sample locations. The lead concentrations ranged from 10.9 mg/kg at location F-SD up to 18.7 mg/kg at location A-SD.

Selenium was detected at all eight onsite sediment sample locations. The selenium concentrations ranged from 2.22 mg/kg at location D-SD up to 4.66 mg/kg at location A-SD.

Silver was detected at one onsite sediment sample locations. The silver concentration was 0.263 J mg/kg at location F-SD.

Thallium was detected at all eight onsite sediment sample locations. The thallium concentrations ranged from 0.0347 mg/kg at location E-SD up to 0.28 mg/kg at location A-SD.

Vanadium was detected at all eight onsite sediment sample locations. The vanadium concentrations ranged from 9.89 mg/kg at location E-SD up to 30.2 JH mg/kg at location C-SD.

Zinc was detected at all eight onsite sediment sample locations. The zinc concentrations ranged from 27.2 mg/kg at location F-SD up to 94.7 mg/kg at location A-SD.

The metals results in sediment are presented on **Figure 3-7**. The metals concentrations in sediment were higher at locations A-SD and C-SD for most metals. The metals concentrations in sediment were lowest at locations B-SD, D-SD, E-SD, and F-SD.

3.3.3.2 SVOC Results in Sediment

The following SVOCs were detected in the Supplemental RI sediment samples: 2-methylnaphthalene, anthracene, benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(g,h,i)perylene, benzo(k)fluoranthene, chrysene, fluoranthene, indeno(1,2,3-cd)pyrene, naphthalene, phenanthrene, pyrene (see **Table 3-6**). SVOCs were not detected as the background sediment sample location I-SD or at onsite sediment sample location H-SD.

2-Methylnaphthalene was detected at onsite sediment sample location F-SD only. The 2-methylnaphthalene concentration at this location was 17.9 µg/kg.

Anthracene was detected at onsite sediment sample location B-SD only. The anthracene concentration at this location was 10 J (see **Table 3-6** for a definition of the data qualifiers) µg/kg.

Benzo (a) anthracene was detected at six onsite sediment sample locations. The benzo (a) anthracene concentrations ranged from 8.23 J µg/kg at location C-SD up to 56 J µg/kg at location A-SD.

Benzo (a) pyrene was detected at five onsite sediment sample locations. The benzo (a) pyrene concentrations ranged from 9.2 J µg/kg at location C-SD up to 54.8 J µg/kg at location A-SD.

Benzo (b) fluoranthene was detected at five onsite sediment sample locations. The benzo (b) fluoranthene concentrations ranged from 10.5 J µg/kg at location C-SD up to 143 µg/kg at location A-SD.

Benzo (g,h,i) perylene was detected at three onsite sediment sample locations. The benzo (g,h,i) perylene concentrations ranged from 9.06 J µg/kg at location F-SD up to 16.6 J µg/kg at location B-SD.

Benzo (k) fluoranthene was detected at onsite sediment sample location A-SD only. The benzo (k) fluoranthene concentration at this location was 29.8 J µg/kg.

Chrysene was detected at six onsite sediment sample locations. The chrysene concentrations ranged from 8.09 J µg/kg at location C-SD up to 82.6 µg/kg at location A-SD.

Fluoranthene was detected at seven onsite sediment sample locations. The fluoranthene concentrations ranged from 11 J µg/kg at location C-SD up to 170 µg/kg at location A-SD.

Indeno (1,2,3-cd) pyrene was detected at onsite sediment sample location B-SD only. The indeno (1,2,3-cd) pyrene concentration at this location was 10.9 J µg/kg.

Naphthalene was detected at onsite sediment sample location F-SD only. The naphthalene concentration at this location was 10.6 J µg/kg.

Phenanthrene was detected at five onsite sediment sample locations. The phenanthrene concentrations ranged from 8.76 J µg/kg at location F-SD up to 58.9 µg/kg at location A-SD.

Pyrene was detected at six onsite sediment sample locations. The pyrene concentrations ranged from 19.8 µg/kg at location D-SD up to 104 µg/kg at location A-SD.

The SVOC results in sediment are presented on **Figure 3-8**. SVOC concentrations in sediment samples were highest at sample location A-SD. The SVOC concentrations decrease away from sample location A-SD toward the southeast.

4.0 Summary of Risk Assessments

This section provides a summary of the evaluation of the estimated risks associated with the State Marine Site contaminants. The full BHHRA and BERA TMs are provided in **Appendix E**.

4.1 Summary of the Baseline Human Health Risk Assessment

The following sections summarize the conclusions of the BHHRA for the State Marine Superfund Site, completed by CH2M HILL in July 2006 (**Appendix E-1**).

4.1.1 Data Used in the HHRA

Soil

All historical soil data from the 0-5 ft interval that were available to CH2M HILL electronically as of June 17, 2005, were used in the BHHRA. The available data consisted of soil samples collected in 1995 and 2001 from various areas, including six hot spot areas that were identified during the ESI and RI. In additional, the BHHRA incorporated supplemental soil samples collected from the Wastewater Impoundment Area in May 2006. The following data groupings were used in the BHHRA:

- Wastewater Impoundment Area
- Wastewater Treatment Facility
- Tar Burn Area
- Current Aboveground Storage Tank Area
- Maintenance Shed Area
- Former Lauren Tank Farm
- Non-Source Area

Ground Water

Ground water data were not used in the BHHRA due to the lack of ground water receptors (ground water is not used as a potable source, chemicals of potential concern are inorganics and semivolatile organic compounds, and no ground water seeps were observed during the site reconnaissance visit on June 17, 2005).

Surface Water

Surface water data were not used in the BHHRA. (Although one surface water sample was available, the methodology used for its collection reflected ground water quality rather than surface water).

Sediment

All historical sediment data collected from the 0 to 6-inch interval and available to CH2M HILL electronically as of June 17, 2005, were used in the BHHRA. The available data consisted of sediment samples collected in 1995 and 2001. All sediment groupings previously identified in the ESI and RI data sets were combined into one sediment grouping. The sediment data were used to model edible fish tissue concentrations.

The 2006 sediment data were not included in the BHHRA. However, sediment concentrations detected in 2006 were lower than the sediment concentrations previously detected that were used to model fish tissue concentrations. Therefore, if the 2006 data had been used in the BHHRA, the modeled fish tissue concentrations and estimated risks would be lower than those presented in the BHHRA. Based on the measured fish tissue concentrations in Sabine Lake, no chemicals warranting risk management were identified for sediment.

Fish

Historical edible fish tissue data were collected by TDH in Sabine Lake, and are discussed in the Uncertainty Assessment of the BHHRA.

4.1.2 Potential Receptors

The following receptors were identified onsite and near the Site and were evaluated for significant exposure pathways in the BHHRA:

- **Current onsite** – industrial/commercial worker (site owner), adult trespasser (although very infrequent since the site is remote in relation to residential areas)
- **Current offsite** – adult or child eating fish caught in Lake Sabine
- **Future onsite** – industrial/commercial worker, construction worker, and adult trespasser (although very infrequent since the site is remote in relation to residential areas)
- **Future offsite** – adult or child eating fish caught in Sabine Lake

4.1.3 Summary

In summary, all risks for soil exposure areas are within acceptable levels and no COCs were identified for the receptors in these exposure areas.

Based on sediment samples collected in 1995 and 2001, copper, zinc, and Arochlor 1242 were identified as chemicals potentially posing unacceptable risks for fish ingestion exposures. The 2006 sediment data were not included in the BHHRA. However, sediment concentrations detected in 2006 were lower than the sediment concentrations previously detected that were used to model fish tissue concentrations. Therefore, if the 2006 data had been used in the BHHRA, the modeled fish tissue concentrations and estimated risks would be lower than those presented in the BHHRA.

The reasonable maximum exposure risks calculated for a current/future offsite fisherman based on the modeled fish tissue concentrations are summarized below.

Ingestion exposures to COPCs in sediment (bioaccumulated by fish in Sabine Lake) were estimated for an adult. An estimated ELCR of 2x10-4 and estimated HI of 7 were calculated. One COPC (Arochlor 1242) was estimated to exceed an individual ELCR of 1x10-5 and copper and zinc were estimated to exceed an HI of 1.

However, it is important to note that the modeled fish tissue concentrations used in the BHHRA are much higher than the measured fish tissue concentrations from Sabine Lake as reported by the TDH. Therefore, the modeled fish tissue concentrations are overly conservative, and it is recommended that the measured concentrations be used rather than the modeled concentrations. PCBs were not detected in the fish tissue samples collected by TDH, and the maximum detected concentrations of copper and zinc in edible fish tissue were approximately one order of magnitude lower than the modeled concentrations. Since estimated ELCRs and HIs are directly proportional to exposure point concentration, use of the measured fish tissue concentrations in the BHHRA would result in acceptable risk levels from fish ingestion exposures. Therefore, no COCs were identified for sediments and no further action in sediments is needed for protection of fish ingestion exposures.

4.2 Summary of the Supplemental Baseline Ecological Risk Assessment

The following sections summarize the conclusions of the supplemental baseline ecological risk assessment (BERA) for the State Marine Superfund Site, completed by CH2M HILL in July 2006 (**Appendix E-2**).

4.2.1 Data Used in the Supplemental BERA

A focused sediment sampling program was executed to investigate current chemical concentrations at target areas (areas of elevated concentrations or hot-spots) identified during the 2006 feasibility study as requiring further investigation. The sampling program targeted the classes of constituents (metals and PAHs) retained as COCs in the BERA in the "hot-spots" vicinities. Chemical concentrations in sediment were used to evaluate the toxicity to lower trophic level organisms and potential source areas for Sabine Lake:

- **Lake Sabine Sediment** – Surface sediment composites of 2 to five samples were collected from each of eight locations where concentrations of historical samples exceeded ecological risk-based criteria. Potential risks to benthic invertebrates were evaluated through the comparison of sediment chemistry to sediment screening values.
- **SMS Ground water** – Potential risk to sediment dwelling organisms resulting from SMS ground water discharging to sediment and thus representing sediment pore water was addressed through the evaluation of the ground water-to-sediment pathway. Ground water data analyzed were used to determine if ground water is a source contributing to contamination identified in sediments in Sabine Lake adjacent to the Site.
- **SMS Soil** – Potential risk to sediment dwelling organisms resulting from SMS soil runoff as overland flow and becoming incorporated in the sediment was addressed through the evaluation of the soil-to-sediment pathway. Current and historical soil data were used to determine if SMS surface soil is a source contributing to contamination identified in Sabine Lake sediments adjacent to the Site.

4.2.2 Summary

Risk analysis performed in 2005 concluded that elevated risks in sediment were marginal and limited to small hot-spots. Recent sediment sampling in the areas of previous hot-spots indicates that concentrations of almost all inorganic and organic constituents were lower in May 2006, than in the

historical dataset. There were very few exceedences of conservative ecological risk screening benchmarks and those that did occur were of low magnitude and only in isolated samples. The supplemental BERA weight of evidence analysis conducted for COPCs indicates there is very low probability of any elevated risk to sediment dwelling organisms from COCs originating at the SMS.

The exact source of the low level risk in isolated sediment areas is uncertain; however, based on further evaluation, SMS is not the likely source of these chemical concentrations. Current Site ground water concentrations do not exceed aquatic organism exposure to water-screening benchmarks protective of benthic invertebrates for COPECs identified in the Supplemental BERA. In addition, the distribution of shallow monitor wells with maximum detected ground water concentrations were not associated with sediment locations with elevated concentrations, a low ground water hydraulic gradient exists across the site, and the high surface water flows in the shipping canal all suggest a low influence of ground water on site sediments. Surface runoff was also investigated as a potential source of contaminants to the sediment. Few detected concentrations of the sediment COCs in soils, the depth of high concentration samples in soils, surface hydrology, and the unlikely soil erosion due to heavy vegetation suggest that this source is also unlikely. Sunken barges in the near shore area and other facilities adjacent to the lake as sources of the low level risks were not investigated.

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5.0 Summary and Conclusions

The Supplemental RI field investigation was implemented to evaluate the potential impacts of contaminated sediments in Sabine Lake to benthic organisms. The BERA and FFS performed during 2005 indicated that nine areas existed where contaminant concentrations in sediments exceeded PRGs for the Site. The BERA indicated that uncertainty existed with the sediment and ground water data collected during the 2001 RI. The BERA recommended that updated data collection and evaluation of the ground water-to-sediment pathway might reduce the uncertainties associated with the BERA. In addition, further evaluation of the former wastewater impoundment area of the Site as a source of contamination was included as part of the Supplemental RI to address stakeholder concerns in this portion of the Site.

The overall objectives of the Supplemental RI were to address concerns regarding the wastewater ponds acting as a source of contamination to sediments in Sabine Lake through the ground water-to-sediment pathway, update the sediment data in the nine areas where PRGs were determined to be exceeded in the 2005 BERA and FFS Reports, and update the BERA and BHHRA using the updated Site data. To address these objectives, five soil borings were completed and soil sampling performed within the former wastewater impoundments. Soil samples were collected to evaluate if the former wastewater impoundments are acting as a source of contamination to the ground water. Two additional soil borings were completed downgradient (east) of the former wastewater ponds for purposes of soil sample collection and monitor well installations. Ground water samples were collected from the two newly installed monitor wells and one existing monitor well located downgradient of the former wastewater impoundments. The ground water sampling was performed to determine if ground water contamination present at the Site is acting as a source of contamination to the sediments. Sediment samples were collected from the nine areas where PRGs were exceeded in Sabine Lake to update the Site data for completion of the BERA. Both the BERA and BHHRA were updated using the additional data collected during the Supplemental RI to evaluate the risks posed by Site contaminants to human and ecological receptors.

The following sections discuss summarize the results and present the conclusions based on the data collected at the Site during the Supplemental RI. Risks to both human and ecological receptors are also discussed.

5.1 Nature of Soil Impacts

The Supplemental RI included the collection of 17 soil samples from seven boring locations for the analysis of TAL metals and TCL SVOCs. The analytical results indicate that Site soils are impacted by both metals and SVOCs. Metals concentrations are typically higher in samples collected from above and within the landfill waste materials.

The metals concentrations show no general pattern relative to higher concentrations being located within the area of the former wastewater impoundments. Selenium was the only metal determined to exceed ESVs within Site sediments (see **Appendix E-2**). Selenium was detected in only two soil samples (at 0.5 to 1.7 ft bgs at SM136, and at 2 to 4 ft bgs at SM137). Based on the lack of detection of selenium in soil samples, the soils are unlikely to be the ultimate source of selenium within the site sediments.

SVOCs were primarily detected at borings SM140 and SM142. These two borings were located at the center (SM140) and southeast corner of the former wastewater impoundments. At SM140, SVOCs were detected primarily within the sample collected from within the landfill waste material (at 7.5 to 8 ft bgs). At SM142, SVOCs were detected from soil samples collected both above and within the landfill waste material (at 0 to 2 ft and 5 to 6 ft bgs, respectively). SVOC concentrations in soil were highest at boring SM142. Bis (2-ethylhexyl) phthalate was the only SVOC detected in soil samples collected from below the landfill waste material. The data indicate that the landfill waste material is the most likely source of the SVOCs, especially at location SM140, and that the SVOCs are not specifically associated with the former wastewater impoundments. No SVOCs were determined to be of ecological concern in Site sediments.

5.2 Nature of Ground Water Impacts

The Supplemental RI included the collection of three ground water samples from three monitor well locations for the analysis of total and dissolved TAL metals—TCL SVOCs, and PAHs. The three monitor wells were completed within the shallow perched ground water zone. The analytical results indicate that the shallow perched ground water zone is impacted with metals and low concentrations of SVOCs.

Total metals concentrations in the shallow perched ground water zone were generally higher in the upgradient monitor well MW136. This well is located downgradient of both the former wastewater impoundments and the PBLS Site. Most dissolved metals concentrations in the shallow perched ground water zone were generally higher in the two downgradient monitor wells MW137 and

MW116B. Selenium was detected in a dissolved ground water sample collected at well MW116B only. This concentration does not exceed the ESV for the ground water-to-sediment pathway protective of benthic organisms. Site ground water is not likely the source of the selenium concentrations in Site sediments.

SVOC concentrations in the shallow perched ground water zone were generally higher in the two downgradient monitor wells MW137 and MW116B. Most of the SVOC detections in ground water were near the laboratory reporting limits.

5.3 Nature of Sediment Impacts

The Supplemental RI included the collection of nine sediment samples from eight onsite locations and one offsite location for the analysis of TAL metals, TCL SVOCs, and PAHs. The analytical results indicate that Site sediments are impacted with low levels of metals and SVOCs.

Metals concentrations in Site sediments were higher at locations A-SD and C-SD. These two locations are both situated in the northern area of the Site. The Supplemental BERA determined that Selenium was the only metal to exceed an ESV value in Site sediments and pose risks to benthic organisms. The selenium exceedences occurred at all eight Site sediment sampling locations.

SVOC concentrations in Site sediments were highest at location A-SD. The SVOC concentrations decreased away from location A-SD toward the south and southeast. The SVOC concentrations in Site sediments were determined to not exceed ESVs.

5.4 Potential Effects on Human Health

The BHHRA (**Appendix E-1**) was performed to assess whether site-related constituents pose a potential current or future risk to human health if no additional remedial actions are performed at the Site. Potentially complete exposure pathways were concluded to be soil and sediment. Ground water was not evaluated because site ground water is not a potable source of water.

All risks for soil and sediment exposure areas were determined to be within acceptable risk levels and no COCs were identified for receptors through soil or sediment exposure.

5.5 Potential Effects to Ecological Receptors

The Supplemental BERA was performed to assess whether site-related constituents pose a potential risk to ecological receptors if no additional remedial actions are performed at the Site. Potentially complete exposure pathways were evaluated to assess risk to sediment dwelling organisms. Sampling

of “hot-spots” identified in the FFS was performed to provide updated sediment data for metals and PAHs in Site sediments.

The Supplemental BERA determined that there were very few exceedences of the conservative ecological screening benchmark values in the updated sediment data. The exceedences that did occur were of low magnitude. Selenium was identified as the primary COC to exceed ESVs in Site sediments (**Appendix E-2**). The weight of evidence analysis performed for the Supplemental BERA indicated that there was a very low probability of any elevated risk to sediment dwelling organisms from COCs originating from the Site.

A Net Environmental Benefit Analysis (NEBA) of remedial alternatives was conducted in 2005. The NEBA concluded that monitored natural attenuation would be the preferred alternative if sources of contamination still existed. Since the new 2006 data suggest that concentrations do not pose unacceptable risk to benthic communities and since the Site is not considered a source of potential risk to these communities the NEBA was not updated. Monitoring may not be necessary based on the current data, and the decision to continue monitoring is at the discretion of the risk managers for the site (the EPA Remedial Project Manager and other stakeholders).

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Tables

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TABLE 2-1
Data Quality Objectives and Associated Supplemental Remedial Investigation Tasks
State Marine Superfund Site, Port Arthur, Texas

Problem Statement	Decision to be Made	Inputs to the Decision	Decision Rule	Remedial Investigation Tasks	Analytes	Data Level
Surface Sediment (0 to 15 centimeters) from Sabine Lake						
Constituents may be present in surface sediment at concentrations that pose potentially unacceptable risks to benthic organisms in Sabine Lake.	Decide whether benthic organisms may be exposed to constituent concentrations in surface sediment of Sabine Lake.	Conceptual site and exposure model Surface sediment analytical data (including historical data of sufficient quality) Ecological risk-based screening levels for sediment TRVs (NOECs and LOECs) developed from site-specific bioassays *Leptocheirus plumulosus* or *Neanthes virens* survival and growth bioassay results qualitative evaluation of habitat taxonomic identification	If analytical chemistry data exhibit constituent concentrations in sediment that exceed ecological benchmarks then proceed with the bioassay analysis. If a weight-of-evidence analysis indicates that benthic organisms from Sabine lake are exposed to constituent concentrations that pose potentially unacceptable risks, this pathway will be addressed as part of the FS.	Within ten defined areas where historical data exceed sediment PRGs, collect sediment samples based upon 2-5 grabs for each area, benthic and epibenthic organisms, and habitat quality data. Analyze composite sediment samples for SVOCs (including PAHs), TOC, TAL Metals, and grain size. Collect field analytical measurements of area surface water where sediments are collected. Perform *Leptocheirus plumulosus* or *Neanthes virens* 10-day bioassays. Compute macroinvertebrate indices of biological integrity from taxonomic identification of sediment samples sieved and archived for community analysis. Discuss habitat quality from additional field data and observations. Conduct the baseline ecological risk assessment, including a weight-of-evidence analysis for community analysis.	TCL SVOCs TOC TAL Metals Grain Size Bioassays Taxonomic ID [Field Readings of Surface Water] Dissolved oxygen pH Temperature Conductivity Turbidity ORP	III III III II III I I I I I I

TABLE 2-1
Data Quality Objectives and Associated Supplemental Remedial Investigation Tasks
State Marine Superfund Site, Port Arthur, Texas

Problem Statement	Decision to be Made	Inputs to the Decision	Decision Rule	Remedial Investigation Tasks	Analytes	Data Level
Site Ground Water						
Constituents potentially present in ground water, resulting from historical surface releases or from subsurface contaminant sources, may constitute a source of contamination to benthic invertebrates in Sabine Lake.	Decide whether modeled concentrations in ground water at the ground water sediment interface are acting as a source of contamination to benthic invertebrates exposed to constituent in surface sediment that pose potentially unacceptable risks.	Conceptual site and exposure model ground water analytical data. Ecological risk-based screening levels for ground water designed to be protective of benthic invertebrates. TRVs (NOECs and LOECs) developed from site-specific bioassays.	If a weight-of-evidence analysis suggests benthic invertebrates are exposed to constituent concentrations that pose potentially unacceptable risks and that ground water is a potential source of the contamination, this pathway will be addressed as part of the FS.	Collect ground water samples from 1 well located between former site operations and Sabine Lake. Analyze all samples for SVOCs (including PAHs), and total and dissolved TAL metals. Conduct the baseline ecological risk assessment, including a weight-of-evidence analysis.	TCL SVOCs TAL Metals-Total TAL Metals-Dissolved	III III III
Subsurface Soil from Wastewater Impoundment						
Contaminants may have been disposed in the former impoundments	Determine whether contaminants are present in subsurface soils	Historical site use info Subsurface soil data	If constituents are detected above screening criteria, a further risk evaluation may be required.	Collect subsurface soil samples from 5 locations and 3 depths within the impoundment. Analyze all samples for SVOCs (including PAHs), and TAL metals. Compare subsurface soil and ground water data. Update original human health risk assessment for the impoundment.	TCL SVOCs TAL Metals	III III
Constituents potentially present in subsurface soil of impoundments may constitute a source of contamination to ground water that flows toward Sabine Lake eventually causing adverse effects to benthic invertebrates in Sabine Lake.	Decide whether compounds detected in the impoundments are leaching to ground water and eventually to sediment.	Conceptual site and exposure model Subsurface soil data ground water analytical data	If detected compounds in the impoundment are also found in ground water, then the impoundments may be a source of present and future risk to benthic organisms exposed to the ground water and this pathway will be addressed as part of the FS.			
Constituents potentially present in subsurface soil of impoundments may constitute a source of contamination to future onsite construction workers.	Decide whether contaminants in the former impoundment pose a risk to future on-site construction workers.	Conceptual site and exposure model Subsurface soil data Human health risk-based screening levels Receptor-specific exposure factors Chemical-specific toxicological data	If the risk assessment indicates potential cancer risks in the range of 1X 10^{-4} to 1X 10^{-6} or hazard indices greater than one then a risk management decision will be made and the pathway may be addressed in the FS.			

TABLE 2-1
Data Quality Objectives and Associated Supplemental Remedial Investigation Tasks
State Marine Superfund Site, Port Arthur, Texas

Problem Statement	Decision to be Made	Inputs to the Decision	Decision Rule	Remedial Investigation Tasks	Analytes	Data Level
Soil Investigation-Derived Waste						
Constituents potentially present in soil cuttings or other soil IDW produced during field activities may constitute a hazardous waste and require special disposal requirements.	Determine whether constituent concentrations in the IDW samples exceed RCRA or LDR limits for classification as hazardous waste.	IDW analytical data RCRA limits LDR limits	If any RCRA constituent concentration in the soil IDW TCLP leachate exceeds the RCRA limit, the waste will be classified as hazardous. If the IDW is classified as hazardous, the concentrations will be compared to LDR numbers to assess disposal options.	At the end of all field activities, the IDW will be sampled to determine if it qualifies as a hazardous, class 1, class 2, or class 3 waste for disposal purposes. The soil IDW will be analyzed for the full TCLP parameters, TPH, and paint filter liquids. Based on the analytical results, the IDW will be transported offsite and disposed of at an appropriate facility.	TCLP VOCs TCLP SVOCs TCLP Pesticides TCLP Herbicides TCLP Metals TPH (GRO/DRO) Paint Filter	II II II II II II I
Liquid Investigation-Derived Waste						
Constituents potentially present in purge water or other liquid IDW produced during field activities may constitute a hazardous waste and require special disposal requirements.	Determine whether constituent concentrations in the IDW samples exceed RCRA or LDR limits for classification as hazardous waste.	IDW analytical data RCRA limits LDR limits	If any RCRA constituent concentration in the liquid IDW exceeds the RCRA limit, the waste will be classified as hazardous. If the IDW is classified as hazardous, the concentrations will be compared to LDR numbers to assess disposal options.	At the end of all field activities, the IDW will be sampled to determine if it qualifies as a hazardous, class 1, class 2, or class 3 waste for disposal purposes. The liquid IDW will be analyzed for the same parameters as the soil IDW except no paint filter will be performed and the liquids will be analyzed as totals (no TCLP leachate performed). Based on the analytical results, the IDW will be transported offsite and disposed of at an appropriate facility.	VOCs SVOCs Pesticides Herbicides Metals TPH (GRO/DRO)	II II II II II II

Notes:

FS = Feasibility study
LOEC = Lowest observed effect concentration
NOEC = No observed effect concentration
TOC = Total organic carbon
TAL = CLP Target Analyte List
TCL = CLP Target Compound List
SVOCs = Semivolatile organic compounds
PAHs = Polynuclear aromatic hydrocarbons
ORP = Oxidation reduction potential
TPH = Total petroleum hydrocarbons
GRO = Gasoline range organics
DRO = Diesel range organics

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Table 2-2
List of Samples Collected During the Supplemental Remedial Investigation
May - June 2006
State Marine Superfund Site
Port Arthur, Texas

Type of Investigation	StationID	Sample Location	SampleID	Depth (feet bgs)*	Date and Time Collected	Matrix	Sample Type		Analysis Method
Soil Boring Samples:			**Total number of samples =**	**21**	**(including quality control samples)**				
Soil Boring	SM136SB01	SM136	SM136SB01052206	0.5 - 1.7	5/22/06 8:05	soil	normal		SW8270C
Soil Boring	SM136SB01	SM136	SM136SB01052206	0.5 - 1.7	5/22/06 8:05	soil	normal		SW6010
Soil Boring	SM137SB01	SM137	SM137SB01052306	2 - 4	5/23/06 9:20	soil	normal		SW8270C
Soil Boring	SM137SB01	SM137	SM137SB01052306	2 - 4	5/23/06 9:20	soil	normal		SW6010
Soil Boring	SM137SB02	SM137	SM137SB02052306	7 - 8	5/23/06 9:25	soil	normal		SW8270C
Soil Boring	SM137SB02	SM137	SM137SB02052306	7 - 8	5/23/06 9:25	soil	normal		SW6010
Soil Boring	SM138SB01	SM138	SM138SB01052306	0 - 2	5/23/06 11:20	soil	normal	MS/MSD	SW8270C
Soil Boring	SM138SB01	SM138	SM138SB01052306	0 - 2	5/23/06 11:20	soil	normal	MS/MSD	SW6010
Soil Boring	SM138SB02	SM138	SM138SB02052306	11.5 - 12	5/23/06 12:10	soil	normal		SW8270C
Soil Boring	SM138SB02	SM138	SM138SB02052306	11.5 - 12	5/23/06 12:10	soil	normal		SW6010
Soil Boring	SM138SB03	SM138	SM138SB03052306	20 - 22	5/23/06 12:55	soil	normal		SW8270C
Soil Boring	SM138SB03	SM138	SM138SB03052306	20 - 22	5/23/06 12:55	soil	normal		SW6010
Soil Boring	SM138SB03	SM138	SM138FD03052306	20 - 22	5/23/06 13:00	soil	quality control	field duplicate	SW8270C
Soil Boring	SM138SB03	SM138	SM138FD03052306	20 - 22	5/23/06 13:00	soil	quality control	field duplicate	SW6010
Soil Boring	SM139SB01	SM139	SM139SB01052306	0 - 2	5/23/06 14:05	soil	normal		SW8270C
Soil Boring	SM139SB01	SM139	SM139SB01052306	0 - 2	5/23/06 14:05	soil	normal		SW6010
Soil Boring	SM139SB02	SM139	SM139SB02052306	5 - 6	5/23/06 14:25	soil	normal		SW8270C
Soil Boring	SM139SB02	SM139	SM139SB02052306	5 - 6	5/23/06 14:25	soil	normal		SW6010
Soil Boring	SM139SB03	SM139	SM139SB03052306	6 - 8	5/23/06 14:40	soil	normal		SW8270C
Soil Boring	SM139SB03	SM139	SM139SB03052306	6 - 8	5/23/06 14:40	soil	normal		SW6010
Soil Boring	SM140SB01	SM140	SM140SB01052306	0.5 - 2	5/23/06 15:20	soil	normal		SW8270C
Soil Boring	SM140SB01	SM140	SM140SB01052306	0.5 - 2	5/23/06 15:20	soil	normal		SW6010
Soil Boring	SM140SB02	SM140	SM140SB02052306	7.5 - 8	5/23/06 15:40	soil	normal		SW8270C
Soil Boring	SM140SB02	SM140	SM140SB02052306	7.5 - 8	5/23/06 15:40	soil	normal		SW6010
Soil Boring	SM140SB03	SM140	SM140SB03052306	21.5 - 22	5/23/06 16:35	soil	normal	MS/MSD	SW8270C
Soil Boring	SM140SB03	SM140	SM140SB03052306	21.5 - 22	5/23/06 16:35	soil	normal	MS/MSD	SW6010
Soil Boring	SM140SB03	SM140	SM140FD03052306	21.5 - 22	5/23/06 16:40	soil	quality control	field duplicate	SW8270C
Soil Boring	SM140SB03	SM140	SM140FD03052306	21.5 - 22	5/23/06 16:40	soil	quality control	field duplicate	SW6010
Soil Boring	SM141SB01	SM141	SM141SB01052406	0 - 2	5/24/06 7:50	soil	normal		SW8270C
Soil Boring	SM141SB01	SM141	SM141SB01052406	0 - 2	5/24/06 7:50	soil	normal		SW6010
Soil Boring	SM141SB02	SM141	SM141SB02052406	5 - 6	5/24/06 8:15	soil	normal		SW8270C
Soil Boring	SM141SB02	SM141	SM141SB02052406	5 - 6	5/24/06 8:15	soil	normal		SW6010
Soil Boring	SM141SB03	SM141	SM141SB03052406	6.5 - 8	5/24/06 8:25	soil	normal		SW8270C
Soil Boring	SM141SB03	SM141	SM141SB03052406	6.5 - 8	5/24/06 8:25	soil	normal		SW6010
Soil Boring	SM141SB03	SM141	SM141FD03052406	6.5 - 8	5/24/06 8:25	soil	quality control	field duplicate	SW8270C
Soil Boring	SM141SB03	SM141	SM141FD03052406	6.5 - 8	5/24/06 8:25	soil	quality control	field duplicate	SW6010
Soil Boring	SM142SB01	SM142	SM142SB01052406	0 - 1	5/24/06 9:20	soil	normal		SW8270C
Soil Boring	SM142SB01	SM142	SM142SB01052406	0 - 1	5/24/06 9:20	soil	normal		SW6010
Soil Boring	SM142SB02	SM142	SM142SB02052406	5 - 6	5/24/06 9:45	soil	normal		SW8270C
Soil Boring	SM142SB02	SM142	SM142SB02052406	5 - 6	5/24/06 9:45	soil	normal		SW6010

Table 2-2
List of Samples Collected During the Supplemental Remedial Investigation
May - June 2006
State Marine Superfund Site
Port Arthur, Texas

Type of Investigation	StationID	Sample Location	SampleID	Depth (feet bgs)*	Date and Time Collected	Matrix	Sample Type		Analysis Method
Soil Boring	SM138EB01	SM138	SM138EB01052306	NA	5/23/06 13:40	water	quality control	equipment blank	SW8270C
Soil Boring	SM138EB01	SM138	SM138EB01052306	NA	5/23/06 13:40	water	quality control	equipment blank	SW6010
Ground water investigation:				**Total number of samples =**	**6**	**(including quality control samples)**			
ground water	MW136GW01	MW136	MW136GW01053106	15	5/31/06 20:25	ground water	normal		SW8270C
ground water	MW136GW01	MW136	MW136GW01053106	15	5/31/06 20:25	ground water	normal		SW8270C-SIM
ground water	MW136GW01	MW136	MW136GW01053106	15	5/31/06 20:25	ground water	normal		SW6010 (total)
ground water	MW136GW01	MW136	MW136GW01053106	15	5/31/06 20:25	ground water	normal		SW6010 (dissolved)
ground water	MW136GW01	MW136	MW136MS01053106	15	5/31/06 20:25	ground water	quality control	MS/MSD	SW8270C
ground water	MW136GW01	MW136	MW136MS01053106	15	5/31/06 20:25	ground water	quality control	MS/MSD	SW8270C-SIM
ground water	MW136GW01	MW136	MW136MS01053106	15	5/31/06 20:25	ground water	quality control	MS/MSD	SW6010 (total)
ground water	MW136GW01	MW136	MW136MS01053106	15	5/31/06 20:25	ground water	quality control	MS/MSD	SW6010 (dissolved)
ground water	MW136GW01	MW136	MW136MSD01053106	15	5/31/06 20:25	ground water	quality control	MS/MSD	SW8270C
ground water	MW136GW01	MW136	MW136MSD01053106	15	5/31/06 20:25	ground water	quality control	MS/MSD	SW8270C-SIM
ground water	MW136GW01	MW136	MW136MSD01053106	15	5/31/06 20:25	ground water	quality control	MS/MSD	SW6010 (total)
ground water	MW136GW01	MW136	MW136MSD01053106	15	5/31/06 20:25	ground water	quality control	MS/MSD	SW6010 (dissolved)
ground water	MW137GW01	MW137	MW137GW01053106	15	5/31/06 19:50	ground water	normal		SW8270C
ground water	MW137GW01	MW137	MW137GW01053106	15	5/31/06 19:50	ground water	normal		SW8270C-SIM
ground water	MW137GW01	MW137	MW137GW01053106	15	5/31/06 19:50	ground water	normal		SW6010 (total)
ground water	MW137GW01	MW137	MW137GW01053106	15	5/31/06 19:50	ground water	normal		SW6010 (dissolved)
ground water	MW137GW01	MW137	MW137FD01053106	15	5/31/06 19:50	ground water	quality control	field duplicate	SW8270C
ground water	MW137GW01	MW137	MW137FD01053106	15	5/31/06 19:50	ground water	quality control	field duplicate	SW8270C-SIM
ground water	MW137GW01	MW137	MW137FD01053106	15	5/31/06 19:50	ground water	quality control	field duplicate	SW6010 (total)
ground water	MW137GW01	MW137	MW137FD01053106	15	5/31/06 19:50	ground water	quality control	field duplicate	SW6010 (dissolved)
ground water	MW116BGW01	MW116B	MW116BGW01053106	15	5/31/06 13:30	ground water	normal		SW8270C
ground water	MW116BGW01	MW116B	MW116BGW01053106	15	5/31/06 13:30	ground water	normal		SW8270C-SIM
ground water	MW116BGW01	MW116B	MW116BGW01053106	15	5/31/06 13:30	ground water	normal		SW6010 (total)
ground water	MW116BGW01	MW116B	MW116BGW01053106	15	5/31/06 13:30	ground water	normal		SW6010 (dissolved)
Sediment investigation:				**Total number of samples =**	**3**	**(including quality control samples)**			
Sediment	A	A	A-SD-01	8 - 9	6/8/06 11:00	Sediment	normal		SW8270C
Sediment	A	A	A-SD-01	8 - 9	6/8/06 11:00	Sediment	normal		SW8270C-SIM
Sediment	A	A	A-SD-01	8 - 9	6/8/06 11:00	Sediment	normal		SW6010
Sediment	A	A	A-SD-01	8 - 9	6/8/06 11:00	Sediment	normal		SW9060
Sediment	A	A	A-SD-01	8 - 9	6/8/06 11:00	Sediment	normal		ASTM D422
Sediment	A	A	A-SD-01	8 - 9	6/8/06 11:00	Sediment	normal		Benthic Invertebrate Taxonomic Identification
Sediment	A	A	A-SD-01	8 - 9	6/8/06 11:00	Sediment	normal		Bioassay
Sediment	B	B	B-SD-01	8 - 9	6/8/06 12:05	Sediment	normal		SW8270C
Sediment	B	B	B-SD-01	8 - 9		Sediment	normal		SW8270C-SIM
Sediment	B	B	B-SD-01	8 - 9	6/8/06 12:05	Sediment	normal		SW6010
Sediment	B	B	B-SD-01	8 - 9	6/8/06 12:05	Sediment	normal		SW9060
Sediment	B	B	B-SD-01	8 - 9	6/8/06 12:05	Sediment	normal		ASTM D422

Table 2-2
List of Samples Collected During the Supplemental Remedial Investigation
May - June 2006
State Marine Superfund Site
Port Arthur, Texas

Type of Investigation	StationID	Sample Location	SampleID	Depth (feet bgs)*	Date and Time Collected	Matrix	Sample Type		Analysis Method
Sediment	B	B	B-SD-01	8 - 9	6/8/06 12:05	Sediment	normal		Benthic Invertebrate Taxonomic Identification
Sediment	B	B	B-SD-01	8 - 9	6/8/06 12:05	Sediment	normal		Bioassay
Sediment	C	C	C-SD-01	15	6/8/06 15:30	Sediment	normal		SW8270C
Sediment	C	C	C-SD-01	15	6/8/06 15:30	Sediment	normal		SW8270C-SIM
Sediment	C	C	C-SD-01	15	6/8/06 15:30	Sediment	normal		SW6010
Sediment	C	C	C-SD-01	15	6/8/06 15:30	Sediment	normal		SW9060
Sediment	C	C	C-SD-01	15	6/8/06 15:30	Sediment	normal		ASTM D422
Sediment	C	C	C-SD-01	15	6/8/06 15:30	Sediment	normal		Benthic Invertebrate Taxonomic Identification
Sediment	C	C	C-SD-01	15	6/8/06 15:30	Sediment	normal		Bioassay
Sediment	D	D	D-SD-01	10	6/8/06 16:40	Sediment	normal		SW8270C
Sediment	D	D	D-SD-01	10	6/8/06 16:40	Sediment	normal		SW8270C-SIM
Sediment	D	D	D-SD-01	10	6/8/06 16:40	Sediment	normal		SW6010
Sediment	D	D	D-SD-01	10	6/8/06 16:40	Sediment	normal		SW9060
Sediment	D	D	D-SD-01	10	6/8/06 16:40	Sediment	normal		ASTM D422
Sediment	D	D	D-SD-01	10	6/8/06 16:40	Sediment	normal		Benthic Invertebrate Taxonomic Identification
Sediment	D	D	D-SD-01	10	6/8/06 16:40	Sediment	normal		Bioassay
Sediment	E	E	E-SD-01	3 - 4	6/8/06 14:20	Sediment	normal		SW8270C
Sediment	E	E	E-SD-01	3 - 4	6/8/06 14:20	Sediment	normal		SW8270C-SIM
Sediment	E	E	E-SD-01	3 - 4	6/8/06 14:20	Sediment	normal		SW6010
Sediment	E	E	E-SD-01	3 - 4	6/8/06 14:20	Sediment	normal		SW9060
Sediment	E	E	E-SD-01	3 - 4	6/8/06 14:20	Sediment	normal		ASTM D422
Sediment	E	E	E-SD-01	3 - 4	6/8/06 14:20	Sediment	normal		Benthic Invertebrate Taxonomic Identification
Sediment	E	E	E-SD-01	3 - 4	6/8/06 14:20	Sediment	normal		Bioassay
Sediment	F	F	F-SD-01	8	6/8/06 17:25	Sediment	normal		SW8270C
Sediment	F	F	F-SD-01	8	6/8/06 17:25	Sediment	normal		SW8270C-SIM
Sediment	F	F	F-SD-01	8	6/8/06 17:25	Sediment	normal		SW6010
Sediment	F	F	F-SD-01	8	6/8/06 17:25	Sediment	normal		SW9060
Sediment	F	F	F-SD-01	8	6/8/06 17:25	Sediment	normal		ASTM D422
Sediment	F	F	F-SD-01	8	6/8/06 17:25	Sediment	normal		Benthic Invertebrate Taxonomic Identification
Sediment	F	F	F-SD-01	8	6/8/06 17:25	Sediment	normal		Bioassay
Sediment	G	G	G-SD-01	8 - 10	6/9/06 10:50	Sediment	normal		SW8270C
Sediment	G	G	G-SD-01	8 - 10	6/9/06 10:50	Sediment	normal		SW8270C-SIM
Sediment	G	G	G-SD-01	8 - 10	6/9/06 10:50	Sediment	normal		SW6010
Sediment	G	G	G-SD-01	8 - 10	6/9/06 10:50	Sediment	normal		SW9060
Sediment	G	G	G-SD-01	8 - 10	6/9/06 10:50	Sediment	normal		ASTM D422
Sediment	G	G	G-SD-01	8 - 10	6/9/06 10:50	Sediment	normal		Benthic Invertebrate Taxonomic Identification

Table 2-2
List of Samples Collected During the Supplemental Remedial Investigation
May - June 2006
State Marine Superfund Site
Port Arthur, Texas

Type of Investigation	StationID	Sample Location	SampleID	Depth (feet bgs)*	Date and Time Collected	Matrix	Sample Type		Analysis Method
Sediment	G	G	G-SD-01	8 - 10	6/9/06 10:50	Sediment	normal		Bioassay
Sediment	H	H	H-SD-01	4	6/9/06 10:15	Sediment	normal		SW8270C
Sediment	H	H	H-SD-01	4	6/9/06 10:15	Sediment	normal		SW8270C-SIM
Sediment	H	H	H-SD-01	4	6/9/06 10:15	Sediment	normal		SW6010
Sediment	H	H	H-SD-01	4	6/9/06 10:15	Sediment	normal		SW9060
Sediment	H	H	H-SD-01	4	6/9/06 10:15	Sediment	normal		ASTM D422
Sediment	H	H	H-SD-01	4	6/9/06 10:15	Sediment	normal		Benthic Invertebrate Taxonomic Identification
Sediment	H	H	H-SD-01	4	6/9/06 10:15	Sediment	normal		Bioassay
Sediment	I	I	I-SD-01	2	6/9/06 11:45	Sediment	normal		SW8270C
Sediment	I	I	I-SD-01	2	6/9/06 11:45	Sediment	normal		SW8270C-SIM
Sediment	I	I	I-SD-01	2	6/9/06 11:45	Sediment	normal		SW6010
Sediment	I	I	I-SD-01	2	6/9/06 11:45	Sediment	normal		SW9060
Sediment	I	I	I-SD-01	2	6/9/06 11:45	Sediment	normal		ASTM D422
Sediment	I	I	I-SD-01	2	6/9/06 11:45	Sediment	normal		Benthic Invertebrate Taxonomic Identification
Sediment	I	I	I-SD-01	2	6/9/06 11:45	Sediment	normal		Bioassay
Sediment	FD	H	FD-01	4	6/9/06 10:15	Sediment	quality control	field duplicate	SW8270C
Sediment	FD	H	FD-01	4	6/9/06 10:15	Sediment	quality control	field duplicate	SW8270C-SIM
Sediment	FD	H	FD-01	4	6/9/06 10:15	Sediment	quality control	field duplicate	SW6010
Sediment	FD	H	FD-01	4	6/9/06 10:15	Sediment	quality control	field duplicate	SW9060
Sediment	FD	H	FD-01	4	6/9/06 10:15	Sediment	quality control	field duplicate	ASTM D422
Sediment	C	C	MS/MSD	15	6/8/06 15:30	Sediment	quality control	MS/MSD	SW8270C
Sediment	C	C	MS/MSD	15	6/8/06 15:30	Sediment	quality control	MS/MSD	SW8270C-SIM
Sediment	C	C	MS/MSD	15	6/8/06 15:30	Sediment	quality control	MS/MSD	SW6010
Sediment	C	C	MS/MSD	15	6/8/06 15:30	Sediment	quality control	MS/MSD	SW9060
Sediment	C	C	MS/MSD	15	6/8/06 15:30	Sediment	quality control	MS/MSD	ASTM D422
Investigation-derived waste sampling for disposal:				**total number of samples = 2**					
IDW	IWSB01	Supplemental RI Soils	IWSB01052406		5/24/06 13:50	solid waste	normal		SW1311/7470
IDW	IWSB01	Supplemental RI Soils	IWSB01052406		5/24/06 13:50	solid waste	normal		SW1311/8015-E
IDW	IWSB01	Supplemental RI Soils	IWSB01052406		5/24/06 13:50	solid waste	normal		SW1311/6010
IDW	IWSB01	Supplemental RI Soils	IWSB01052406		5/24/06 13:50	solid waste	normal		SW8015-P
IDW	IWSB01	Supplemental RI Soils	IWSB01052406		5/24/06 13:50	solid waste	normal		SW1311/8270C
IDW	IWSB01	Supplemental RI Soils	IWSB01052406		5/24/06 13:50	solid waste	normal		SW1311/8260B
IDW	IWSB01	Supplemental RI Soils	IWSB01052406		5/24/06 13:50	solid waste	normal		SW1311/8081A
IDW	IWSB01	Supplemental RI Soils	IWSB01052406		5/24/06 13:50	solid waste	normal		SW1311/8051A
IDW	IWSB01	Supplemental RI Soils	IWSB01052406		5/24/06 13:50	solid waste	normal		EPA 9095A
IDW	IWGW01	Supplemental RI Liquids	IWGW01053106		5/31/06 16:00	liquid waste	normal		SW1311/7470
IDW	IWGW01	Supplemental RI Liquids	IWGW01053106		5/31/06 16:00	liquid waste	normal		SW1311/8015-E
IDW	IWGW01	Supplemental RI Liquids	IWGW01053106		5/31/06 16:00	liquid waste	normal		SW1311/6010
IDW	IWGW01	Supplemental RI Liquids	IWGW01053106		5/31/06 16:00	liquid waste	normal		SW8015-P
IDW	IWGW01	Supplemental RI Liquids	IWGW01053106		5/31/06 16:00	liquid waste	normal		SW1311/8270C

Table 2-2
List of Samples Collected During the Supplemental Remedial Investigation
May - June 2006
State Marine Superfund Site
Port Arthur, Texas

Type of Investigation	StationID	Sample Location	SampleID	Depth (feet bgs)*	Date and Time Collected	Matrix	Sample Type		Analysis Method
IDW	IWGW01	Supplemental RI Liquids	IWGW01053106		5/31/06 16:00	liquid waste	normal		SW1311/8260B
IDW	IWGW01	Supplemental RI Liquids	IWGW01053106		5/31/06 16:00	liquid waste	normal		SW1311/8081A
IDW	IWGW01	Supplemental RI Liquids	IWGW01053106		5/31/06 16:00	liquid waste	normal		SW1311/8051A

Notes:
Analysis Methods:
SW7470 - Mercury
SW8015-E - Total Petroleum Hydrocarbons - Diesel Range Organics
SW6010 - Metals
SW8015-P - Total Petroleum Hydrocarbons - Gasoline Range Organics
SW8270C - Semivolatile Organic Compounds
SW8260B - VOCs
SW8270C-SIM - PAHs single ion monitoring
SW8081A - Pesticides
SW8051A - Herbicides
SW1311 - Toxicity Characteristic Leaching Procedure
EPA 9095A - paint filter liquids

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Table 2-3
Monitor Well and Soil Boring Location Coordinates and Completion Details
State Marine Superfund Site
Port Arthur, Texas

Monitor Wells

Monitor Well ID	Northing	Easting	Reference Elevation (ft MSL)	Ground Surface Elevation (ft MSL)	Total Depth (ft BTOC)	Depth of Screened Interval (ft bgs)	Elevation of Screened Interval (ft MSL)
MW-061A	13932253.35	3595376.96	7.99	5.82	43.08	18 - 43	-12.18 - -37.18
MW-061B	13932253.35	3595376.96	7.97	5.82	26.98	5 - 25	0.82 - -19.18
MW-068A	13932451.58	3595178.31	12.45	10.39	44.88	20 - 45	-9.61 - -34.61
MW-068B	13932451.58	3595178.31	12.62	10.42	23.30	5 - 20	5.42 - -9.61
MW-116A	13932782.17	3595749.92	6.97	4.51	40.80	20 - 40	-15.49 - -35.49
MW-116B	13932782.17	3595749.92	6.97	4.51	27.30	5 - 25	-0.49 - -20.49
MW-136	13933017.70	3595694.50	9.58	6.72	22.93	10 - 20	-3.28 - -13.28
MW-137	13932827.90	3595615.90	10.05	7.04	23.20	10 - 20	-2.96 - -12.96

Soil Borings

Soil Boring ID	Northing	Easting	Ground Surface Elevation (ft MSL)	Total Depth (ft bgs)
SB138	13933144.87	3595454.50	9.00	22
SB139	13933089.95	3595544.64	5.41	12
SB140	13933043.50	3595495.19	4.16	22
SB141	13932931.96	3595387.47	10.53	8
SB142	13932872.67	3595480.78	7.02	6

Sediment Sample Locations

Sediment Sample Area	Location Number	Northing	Easting
A	1	13933019.62	3596068.42
B	1	1392682.96	3595978.71
	2	13932780.78	3595981.93
	3	13932749.24	3596065.51
	4	13932659.45	3596119.64
	5	13932064.90	3596032.39
C	1	13932522.25	3596172.48
	2	13932545.48	3596132.52
D	1	13932405.38	3596033.55
	2	13932369.63	3596043.46
	3	13932510.63	3596027.66
	4	13932323.48	3596070.21
	5	13932411.03	3596005.54
E	1	13932395.72	3595840.66
	2	13932254.59	3595802.03
	3	13932285.48	3595728.84
	4	13932330.43	3595584.06
	5	13932229.59	3595715.87
F	1	13932150.07	3595913.67
	2	13932000.13	3595835.43
G	1	13931942.40	3595660.49
	2	13931911.75	359667.62
H	1	13932049.97	3595517.33
	2	13932084.38	3595466.32
	3	13932012.08	3595016.67
	4	13931986.92	3595436.61
I (reference)	1	13938347.76	3605370.79

Notes:
Northing and Easting coordinates are State Plane, Texas South Central Zone, North American Datum of 1983
Elevations are relative to the North American Vertical Datum, 1988
ft - feet
MSL - Mean Sea Level
bgs - below ground surface
BTOC - Below Top of Casing

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Table 2-4
Water Level Data - May 2006
State Marine Superfund Site
Port Arthur, Texas

Well ID	Date Collected	Reference Elevation (ft MSL)	Depth to Water (ft BTOC)	Water Level Elevation (ft MSL)
MW-061A	05/31/06	8.14	6.65	1.49
MW-061B	05/31/06	8.13	6.49	1.64
MW-068A	05/31/06	12.73	NM	---
MW-068B	05/31/06	12.77	5.48	7.29
MW-116A	05/31/06	7.38	5.61	1.77
MW-116B	05/31/06	7.38	5.14	2.24
MW-136	05/31/06	9.58	6.06	3.52
MW-137	05/31/06	10.05	7.28	2.77

Notes:
ft - feet
MSL - mean sea level
BTOC - below top of casing
NM - water level not measured in MW-068A. Water level meter provided false water level indications from water along the side of the well casing.

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Table 3-1
Detections of Metals in Soil Samples - May 2006
State Marine Superfund Site
Port Arthur, Texas

Station ID :		SM136	SM137	SM137	SM138	SM138	SM138	SM138	SM139	SM139	SM139
Sample ID :		SM136SB01052206	SM137SB01052306	SM137SB02052306	SM138SB01052306	SM138SB02052306	SM138SB03052306	SM138FD03052306	SM139SB01052306	SM139SB02052306	SM139SB03052306
Date Collected :		5/22/06 8:05	5/23/06 9:20	5/23/06 9:25	5/23/06 11:20	5/23/06 12:10	5/23/06 12:55	5/23/06 13:00	5/23/06 14:05	5/23/06 14:25	5/23/06 14:40
Sample Type :		N	N	N	N	N	N	FD	N	N	N
Matrix :		SS	SB	SB	SS	SB	SB	SB	SS	SB	SB
Upper Depth :		0.5	2	7	0	11.5	20	20	0	5	6
Lower Depth :		1.7	4	8	2	12	22	22	2	6	8
Reference Sample ID :								SM138SB03052306			
Analyte	**Unit**										
Aluminum	mg/kg	**20000 =**	**8770 =**	**6030 =**	**11200 =**	**5680 =**	**10600 =**	**12500 =**	**13700 =**	**13800 =**	**18100 =**
Antimony	mg/kg	**4.73 J**	**1.97 J**	0.433 U	**1.84 JL**	0.616 U	0.491 U	0.551 U	4.39 U	**6.88 J**	0.55 U
Arsenic	mg/kg	**13.3 =**	**5.05 =**	**9.71 =**	**5.33 =**	**2.64 =**	**4.58 =**	**4.12 =**	**12.2 =**	**14.3 =**	**8.98 =**
Barium	mg/kg	**540 =**	**137 =**	**43.3 =**	**301 J**	**108 =**	**49.9 J**	**74 J**	**163 =**	**379 =**	**96.8 =**
Beryllium	mg/kg	**0.367 J**	**0.526 =**	**0.138 J**	**0.625 =**	**0.18 J**	**0.646 =**	**0.686 =**	**0.702 J**	**0.358 J**	**1.08 =**
Calcium	mg/kg	**79000 =**	**21800 =**	**5230 =**	**33000 J**	**22600 =**	**1760 J**	**4890 J**	**15900 =**	**24900 =**	**4650 =**
Cadmium	mg/kg	**7.24 =**	**0.959 =**	4.33 U	**0.118 =**	**0.304 =**	0.0491 U	0.0551 U	**0.913 =**	**7.77 =**	0.055 U
Chromium	mg/kg	**55 =**	**25 =**	**34.9 =**	**14.1 =**	**9.3 =**	**11.2 =**	**13.2 =**	**32.1 =**	**61.2 =**	**17.7 =**
Cobalt	mg/kg	**16.9 =**	**4.21 =**	**15.4 =**	**4.79 =**	**2.61 =**	**7.48 =**	**6.6 =**	**11 =**	**16.6 =**	**14.1 =**
Copper	mg/kg	**373 =**	**57.2 =**	**117 =**	**41.6 =**	**30.8 =**	**4.23 =**	**7.46 =**	**115 =**	**547 =**	**11.3 =**
Iron	mg/kg	**103000 =**	**15100 =**	**329000 =**	**16300 =**	**17900 =**	**12600 =**	**13700 =**	**74500 =**	**134000 =**	**18000 =**
Potassium	mg/kg	**1880 =**	**1190 =**	**612 =**	**1460 =**	**718 =**	**1760 =**	**1960 =**	**1280 =**	**1340 =**	**3110 =**
Mercury	mg/kg	**0.134 J**	**0.127 J**	**0.467 =**	**0.0901 J**	**0.0267 J**	**0.03 J**	**0.0253 J**	**0.214 J**	**0.0429 J**	**0.128 J**
Magnesium	mg/kg	**8150 =**	**2380 =**	**953 =**	**2010 =**	**1070 =**	**2490 =**	**2670 =**	**1950 =**	**2450 =**	**3150 =**
Manganese	mg/kg	**534 =**	**188 =**	**1350 =**	**134 J**	**119 =**	**195 =**	**167 =**	**485 =**	**693 =**	**94.9 =**
Sodium	mg/kg	**1230 =**	**271 =**	**424 =**	**132 =**	**244 =**	**1380 =**	**1450 =**	**246 =**	**891 =**	**498 =**
Nickel	mg/kg	**43.8 =**	**16.4 =**	**15.3 =**	**11.4 J**	**3.02 =**	**9 =**	**8.93 =**	**23 =**	**34.6 =**	**21.1 =**
Lead	mg/kg	**574 =**	**118 =**	**641 =**	**59.7 J**	**129 =**	**9.68 J**	**23.7 J**	**264 =**	**718 =**	**18.1 =**
Selenium	mg/kg	**4.68 J**	**1.99 =**	217 U	0.444 U	3.08 U	2.46 U	2.76 U	21.9 U	23 U	5.5 U
Silver	mg/kg	**5.23 =**	**0.991 =**	**7.01 =**	**0.794 =**	**0.851 =**	**0.46 J**	**0.611 =**	**2.31 J**	**5.71 =**	**0.689 =**
Vanadium	mg/kg	**29.9 =**	**18.6 =**	**24.1 =**	**21.3 JH**	**10.9 =**	**21.9 =**	**23.7 =**	**30.5 =**	**23.4 =**	**33 =**
Zinc	mg/kg	**4140 =**	**603 =**	**1440 =**	**287 J**	**285 =**	**37.8 J**	**60 J**	**563 =**	**1500 =**	**72.6 =**

Notes:
mg/kg - milligrams per kilogram
N - normal sample
FD - field duplicate
SS - surface soil sample
SB - subsurface soil sample
Yellow shading and bold text indicates detections

Data Qualifiers:
=: Reported concentration
J: Reported concentration is estimated
U: Not detected at reported quantitation limit
JL: Reported concentration is estimated and biased low
JH: Reported concentration is estimated and biased high

Table 3-1
Detections of Metals in Soil Samples - May 2006
State Marine Superfund Site
Port Arthur, Texas

Station ID :		SM140	SM140	SM140	SM140	SM141	SM141	SM141	SM141	SM142	SM142
Sample ID :		SM140SB01052306	SM140SB02052306	SM140SB03052306	SM140FD03052306	SM141SB01052406	SM141SB02052406	SM141SB03052406	SM141FD03052406	SM142SB01052406	SM142SB02052406
Date Collected :		5/23/06 15:20	5/23/06 15:40	5/23/06 16:35	5/23/06 16:40	5/24/06 7:50	5/24/06 8:15	5/24/06 8:25	5/24/06 8:25	5/24/06 9:20	5/24/06 9:45
Sample Type :		N	N	N	FD	N	N	N	FD	N	N
Matrix :		SS	SB	SB	SB	SS	SB	SB	SB	SS	SB
Upper Depth :		0.5	7.5	21.5	21.5	0	5	6.5	6.5	0	5
Lower Depth :		2	8	22	22	2	6	8	8	2	6
Reference Sample ID :					SM140SB03052306				SM141SB03052406		
Analyte	**Unit**										
Aluminum	mg/kg	**11200 =**	**14100 =**	**9290 =**	**9850 =**	**12600 =**	**14700 =**	**19700 =**	**16200 =**	**10800 =**	**11400 =**
Antimony	mg/kg	**3.19 J**	**2.7 J**	0.626 UJ	0.539 U	**0.504 J**	**3.39 J**	0.64 U	0.493 U	**4.1 J**	**11.7 J**
Arsenic	mg/kg	**5 =**	**6.15 =**	**5.05 =**	**6.26 =**	**3.99 =**	**5.45 =**	**8.55 =**	**12.8 =**	**8.4 =**	**5.56 =**
Barium	mg/kg	**125 =**	**168 =**	**59.6 JH**	**52.5 =**	**72.1 =**	**319 =**	**92.9 =**	**89 =**	**135 =**	**312 =**
Beryllium	mg/kg	**0.61 =**	**0.721 =**	**0.611 J**	**0.661 =**	**0.559 =**	**0.571 =**	**1.03 =**	**0.904 =**	**0.646 J**	**0.319 J**
Calcium	mg/kg	**9040 =**	**6620 =**	**4250 J**	**2330 J**	**11100 =**	**21300 =**	**4510 =**	**3630 =**	**14500 =**	**10300 =**
Cadmium	mg/kg	**0.554 =**	**0.589 =**	**1.13 JL**	**0.635 J**	**0.358 =**	**2.58 =**	0.064 U	0.0493 U	**0.387 J**	**0.807 =**
Chromium	mg/kg	**18.7 =**	**20.9 J**	**12.3 JH**	**12.3 =**	**17.5 =**	**45.9 =**	**17.6 =**	**13.5 =**	**24.5 =**	**81.1 =**
Cobalt	mg/kg	**5.24 =**	**6.64 J**	**7.36 J**	**7.1 J**	**5.48 =**	**13.4 =**	**5.22 =**	**4.1 =**	**9.91 =**	**9.11 =**
Copper	mg/kg	**76.8 =**	**74.2 =**	**14.5 =**	**11.7 =**	**64.7 =**	**291 =**	**13.4 =**	**14.8 =**	**168 =**	**526 =**
Iron	mg/kg	**23000 =**	**28400 =**	**22400 J**	**14100 J**	**24100 =**	**126000 =**	**21500 =**	**13400 =**	**52600 =**	**57400 =**
Potassium	mg/kg	**1550 =**	**2220 =**	**1670 JH**	**1910 =**	**1560 =**	**2140 =**	**2060 =**	**1830 =**	**1460 =**	**892 =**
Mercury	mg/kg	**0.18 J**	**0.121 J**	**0.532 J**	**0.0871 J**	**0.0572 J**	**0.207 J**	**0.0303 J**	**0.0398 J**	**0.0678 J**	**1.04 =**
Magnesium	mg/kg	**1900 =**	**2180 =**	**2630 =**	**2900 =**	**1660 =**	**2400 =**	**2490 =**	**2080 =**	**2280 =**	**1430 =**
Manganese	mg/kg	**158 =**	**191 J**	**181 =**	**193 =**	**200 =**	**590 =**	**386 =**	**130 =**	**299 J**	**282 =**
Sodium	mg/kg	**619 =**	**1860 =**	**1590 =**	**1770 =**	**642 =**	**1290 =**	**1310 =**	**1180 =**	**1490 =**	**1270 =**
Nickel	mg/kg	**13.5 =**	**14.9 =**	**9.45 =**	**10.3 =**	**12 =**	**14.5 =**	**8.66 =**	**7.25 =**	**25.8 =**	**26 =**
Lead	mg/kg	**180 =**	**120 J**	**75.6 J**	**42.5 J**	**132 =**	**951 =**	**25.6 =**	**25 =**	**171 =**	**589 =**
Selenium	mg/kg	4.45 U	2.56 U		2.69 U	4.8 U	22 U	3.2 U	0.987 U	10.9 U	7.41 U
Silver	mg/kg	**1.51 =**	**1.35 =**	**1.13 =**	**0.703 =**	**1.88 =**	**13.9 =**	**0.706 =**	**0.328 J**	**2.42 =**	**2.86 =**
Vanadium	mg/kg	**22.3 =**	**25.1 =**	**20.1 JH**	**20.8 =**	**19.9 =**	**23.9 =**	**35.6 =**	**26.5 =**	**21.9 =**	**17 =**
Zinc	mg/kg	**279 =**	**293 =**	**74.3 =**	**59.2 =**	**178 =**	**2910 =**	**56.1 =**	**44 =**	**377 =**	**1040 =**

Notes:
mg/kg - milligrams per kilogram
N - normal sample
FD - field duplicate
SS - surface soil sample
SB - subsurface soil sample
Yellow shading and bold text indicates detections

Data Qualifiers:
=: Reported concentration
J: Reported concentration is estimated
U: Not detected at reported quantitation limit
JL: Reported concentration is estimated and biased low
JH: Reported concentration is estimated and biased high

Table 3-2
Detections of Semivolatile Organic Compounds in Soil Samples - May 2006
State Marine Superfund Site
Port Arthur, Texas

Station ID :		SM138	SM138	SM138	SM140	SM140	SM140	SM141	SM142	SM142
Sample ID :		SM138SB02052306	SM138SB03052306	SM138FD03052306	SM140SB02052306	SM140SB03052306	SM140FD03052306	SM141SB02052406	SM142SB01052406	SM142SB02052406
Date Collected :		5/23/06 12:10	5/23/06 12:55	5/23/06 13:00	5/23/06 15:40	5/23/06 16:35	5/23/06 16:40	5/24/06 8:15	5/24/06 9:20	5/24/06 9:45
Sample Type :		N	N	FD	N	N	FD	N	N	N
Matrix :		SB	SB	SB	SB	SB	SB	SB	SS	SB
Upper Depth :		11.5	20	20	7.5	21.5	21.5	5	0	5
Lower Depth :		12	22	22	8	22	22	6	2	6
Reference Sample ID :				SM138SB03052306			SM140SB03052306			
Analyte	**Unit**									
2,4-Dimethylphenol	ug/kg	1420 U	116 U	115 U	1110 U	127 U	124 U	113 U	1800 U	**8020 =**
2-Methylnaphthalene	ug/kg	725 U	116 U	115 U	**2170 J**	127 U	124 U	113 U	1800 U	**9020 =**
Acenaphthene	ug/kg	725 U	116 U	115 U	**1480 J**	127 U	124 U	113 U	1800 U	**4410 J**
Acenaphthylene	ug/kg	725 U	116 U	115 U	1110 U	127 U	124 U	113 U	**5830 =**	3580 U
Anthracene	ug/kg	725 U	116 U	115 U	**6290 =**	127 U	124 U	113 U	**19000 =**	**6390 J**
Benzo (a) anthracene	ug/kg	725 U	116 U	115 U	**2050 J**	127 U	124 U	113 U	**10800 =**	**5390 J**
Benzo (a) pyrene	ug/kg	725 U	116 U	115 U	**1470 J**	127 U	124 U	113 U	**10800 =**	**3750 J**
Benzo (b) fluoranthene	ug/kg	725 U	116 U	115 U	**1640 J**	127 U	124 U	113 U	**15100 =**	**4990 J**
Benzo (g,h,i) perylene	ug/kg	725 U	116 U	115 U	1110 U	127 U	124 U	113 U	**7320 =**	3580 U
Benzo(k)fluoranthene	ug/kg	725 U	116 U	115 U	1110 U	127 U	124 U	113 U	**4330 =**	3580 U
Bis (2-ethylhexyl) phthalate	ug/kg	**17200 =**	**491 J**	**998 J**	**1920 J**	**138 J**	**491 J**	**120 J**	1800 U	**79200 =**
Butyl benzylphthalate	ug/kg	**840 J**	116 U	115 U	1110 U	127 U	124 U	113 U	1800 U	**26200 =**
Carbazole	ug/kg	725 U	116 U	115 U	**1520 J**	127 U	124 U	113 U	**9720 =**	**3870 J**
Chrysene	ug/kg	725 U	116 U	115 U	**4170 =**	127 U	124 U	113 U	**15500 =**	**5240 J**
cresols, m & p	ug/kg	1420 U	116 U	115 U	1110 U	127 U	124 U	113 U	1800 U	**11400 =**
Di-n-butylphthalate	ug/kg	725 U	116 U	115 U	1110 U	127 U	124 U	113 U	1800 U	**33200 =**
Dibenzofuran	ug/kg	725 U	116 U	115 U	**1260 J**	127 U	124 U	113 U	1800 U	**4130 J**
Fluoranthene	ug/kg	725 U	116 U	115 U	**5460 =**	127 U	124 U	113 U	**18300 =**	**12800 =**
Fluorene	ug/kg	725 U	116 U	115 U	**2760 =**	127 U	124 U	113 U	**3440 J**	**6190 J**
Indeno (1,2,3-c,d) pyrene	ug/kg	725 U	116 U	115 U	1110 U	127 U	124 U	113 U	**4810 =**	3580 U
Naphthalene	ug/kg	725 U	116 U	115 U	**2170 J**	127 U	124 U	113 U	**2360 J**	**33900 =**
Phenanthrene	ug/kg	725 U	116 U	115 U	**10600 =**	127 U	124 U	113 U	**16100 =**	**19500 =**
Phenol	ug/kg	1420 U	116 U	115 U	1110 U	127 U	124 U	113 U	1800 U	**6510 J**
Pyrene	ug/kg	725 U	116 U	115 U	**6300 =**	127 U	124 U	113 U	**13700 =**	**9400 =**

Notes:
ug/kg - micrograms per kilogram
N - normal sample
FD - field duplicate
SS - surface soil sample
SB - subsurface soil sample
Yellow shading and bold text indicates detections

Data Qualifiers:
=: Reported concentration
J: Reported result is estimated
U: Not detected at reported quantitation limit

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Table 3-3
Detections of Metals in Ground Water Samples - May 2006
State Marine Superfund Site
Port Arthur, Texas

Station ID :		MW116B		MW136		MW137		MW137	
Sample ID :		MW116BGW01053106		MW136GW01053106		MW137GW01053106		MW137FD01053106	
Date Collected :		5/31/06 13:30		5/31/06 20:25		05/31/2006 19:50		5/31/06 19:50	
Sample Type :		N		N		N		FD	
Matrix :		WG		WG		WG		GW	
Reference Sample ID :								MW137GW01053106	
Analyte	**Unit**	Total	Dissolved	Total	Dissolved	Total	Dissolved	Total	Dissolved
Aluminum	UG/L	82.3 U	52.4 U	**12500 =**	43.8 U	**866 J**	42.2 U	**4790 J**	62.3 U
Arsenic	UG/L	**12.7 JH**	9.32 U	**22.3 JH**	**14.1 JH**	**22.7 JH**	7.38 U	**17.2 JH**	7.38 U
Barium	UG/L	**555 =**	**543 =**	**1220 =**	**1250 =**	**573 =**	**557 =**	**517 =**	**579 =**
Beryllium	UG/L	0.0635 U	0.0635 U	**0.684 J**	0.0635 U	0.0635 U	0.0635 U	**0.58 J**	0.0635 U
Calcium	UG/L	**201000 =**	**203000 =**	**198000 =**	**189000 =**	**137000 =**	**146000 =**	**129000 =**	**163000 =**
Cadmium	UG/L	0.351 U	0.351 U	**1.22 J**	**0.447 J**	0.351 U	**0.365 J**	**0.457 J**	**0.714 J**
Chromium	UG/L	**3.97 J**	0.842 U	**14.5 =**	0.842 U	0.842 U	0.842 U	**5.09 J**	0.842 U
Cobalt	UG/L	0.332 U	0.332 U	**5.87 J**	**1.65 J**	**4.94 J**	**4.91 J**	**7.95 J**	**4.79 J**
Copper	UG/L	2.27 U	2.27 U	**31.4 =**	2.27 U	2.27 U	**2.35 J**	**16.7 J**	**5.1 J**
Iron	UG/L	**2030 =**	**981 =**	**35800 =**	**27800 =**	**1500 J**	**752 =**	**5910 J**	**996 =**
Potassium	UG/L	**39500 J**	**39200 J**	**63400 J**	**60400 J**	**65400 J**	**59100 J**	**64000 J**	**54300 J**
Mercury	UG/L	0.0347 U	0.0347 U	**0.0455 J**	0.0347 U	0.0347 U	0.0347 U	**0.0355 J**	0.0347 U
Magnesium	UG/L	**101000 =**	**93700 =**	**317000 =**	**300000 =**	**230000 =**	**239000 =**	**211000 =**	**257000 =**
Manganese	UG/L	**1400 =**	**1310 =**	**8390 =**	**7680 =**	**5510 =**	**6350 =**	**5290 =**	**7230 =**
Sodium	UG/L	**591000 =**	**521000 =**	**1720000 J**	**1550000 J**	**1420000 =**	**1290000 =**	**1390000 =**	**1290000 =**
Nickel	UG/L	**164 =**	**170 =**	**13.6 J**	**7.41 J**	**14 J**	**14.6 J**	**20 J**	**14.5 J**
Lead	UG/L	**2.26 J**	**2.49 J**	**71 =**	1.52 U	**2.47 J**	1.52 U	**18.5 J**	**2.37 J**
Selenium	UG/L	8.77 U	**9.41 J**	8.77 U	8.77 U	8.77 U	8.77 U	8.77 U	8.77 U
Vanadium	UG/L	**1.87 J**	**1.69 J**	**24.6 J**	0.71 U	**7.73 J**	**4.59 J**	**16.7 J**	**5.2 J**
Zinc	UG/L	**48.1 =**	**36.2 =**	**258 =**	**34.8 =**	**70.9 J**	**72.8 =**	**135 J**	**72 =**

Notes:
UG/L - micrograms per liter
N - normal sample
FD - field duplicate
WG = groundwater sample
Yellow shading and bold text indicates detections

Data Qualifiers:
=: Reported concentration
J: Reported concentration is estimated
U: Not detected at reported quantitation limit
JL: Reported concentration is estimated and biased low
JH: Reported concentration is estimated and biased high

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Table 3-4
Detections of Semivolatile Organic Compounds in Ground Water Samples - May 2006
State Marine Superfund Site
Port Arthur, Texas

Station ID :		MW116B	MW136	MW137	MW137
Sample ID :		MW116BGW01053106	MW136GW01053106	MW137GW01053106	MW137FD01053106
Date Collected :		5/31/06 13:30	5/31/06 20:25	5/31/06 19:50	5/31/06 19:50
Sample Type :		N	N	N	FD
Matrix :		WG	WG	WG	WG
Reference Sample ID :					MW137GW01053106
Analyte	**Unit**				
Diethylphthalate	UG/L	**1.83 J**	**2.82 J**	**2.21 J**	**4.28 J**
Acenaphthene	UG/L	**1.12 =**	**0.0114 J**	**0.028 =**	**0.0265 J**
Acenaphthylene	UG/L	**0.0408 =**	0.00121 U	0.00118 U	0.00126 U
Anthracene	UG/L	**0.0199 J**	0.00119 U	**0.0042 J**	**0.0059 J**
Benzo(a)anthracene	UG/L	**0.0078 J**	**0.0032 J**	**0.0021 J**	**0.0035 J**
Benzo(a)pyrene	UG/L	0.00136 U	**0.0028 J**	**0.0037 J**	**0.003 J**
Benzo(b)fluoroanthene	UG/L	0.00142 U	**0.0034 J**	0.00133 U	**0.0036 J**
Benzo(g,h,i)perylene	UG/L	0.0016 U	**0.0018 J**	0.0015 U	**0.0027 J**
Benzo(k)fluoranthene	UG/L	0.00149 U	**0.0015 J**	**0.0037 J**	0.00149 U
Chrysene	UG/L	**0.0046 J**	**0.0033 J**	0.00168 U	**0.0035 J**
Fluoranthene	UG/L	**0.532 =**	**0.0101 J**	**0.0044 J**	**0.0124 J**
Fluorene	UG/L	**0.0573 =**	**0.004 J**	**0.0108 J**	**0.0111 J**
Indeno(1,2,3-c,d)pyrene	UG/L	0.00124 U	**0.0018 J**	0.00116 U	**0.0027 J**
Naphthalene	UG/L	**0.0142 J**	**0.0085 J**	**0.0247 J**	**0.023 J**
Phenanthrene	UG/L	**0.0063 J**	**0.0102 J**	**0.0119 J**	**0.0161 J**
Pyrene	UG/L	**0.297 =**	**0.0101 J**	**0.0079 J**	**0.0154 J**

Notes:
UG/L - micrograms per liter
N - normal sample
FD - field duplicate
WG - groundwater sample
Yellow shading and bold text indicates detections

Data Qualifiers:
=: Reported concentration
J: Reported result is estimated
U: Not detected at reported quantitation limit

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Table 3-5
Detections of Metals in Sediment Samples - June 2006
State Marine Superfund Site
Port Arthur, Texas

Station ID :		A-SD	B-SD	C-SD	D-SD	E-SD	F-SD	G-SD	H-SD	H-SD	I-SD
Sample ID :		A-SD-01	B-SD-02	C-SD-03	D-SD-04	E-SD-05	F-SD-06	G-SD-07	H-SD-08	FD-01FD	I-SD-09
Date Collected :		6/8/06 11:00	6/8/06 12:05	6/8/06 15:30	6/8/06 16:40	6/8/06 14:20	6/8/06 17:25	6/9/06 10:50	6/9/06 10:15	6/9/06 10:15	6/9/06 11:45
Sample Type :		N	N	N	N	N	N	N	N	FD	N
Matrix :		SD	SD	SD	SD	SD	SD	SD	SD	SD	SD
Reference Sample ID :										H-SD-08	
Analyte	**Unit**										
Aluminum	mg/kg	**13000 =**	**9130 =**	**15500 =**	**16200 =**	**4360 =**	**4040 =**	**11400 =**	**11000 =**	**10200 =**	**752 =**
Antimony	mg/kg	0.0947 U	**0.121 J**	**0.237 JL**	0.0801 U	0.0634 U	0.0653 U	0.0963 U	0.0883 U	0.0883 U	0.0629 U
Arsenic	mg/kg	**6 =**	**4.5 =**	**5.73 =**	**5.29 =**	**4.12 =**	**3.59 =**	**5.32 =**	**4.19 =**	**5.03 =**	**1.23 =**
Barium	mg/kg	**191 =**	**135 =**	**264 =**	**43.5 =**	**27.7 =**	**44.4 =**	**36.6 =**	**37.8 =**	**40.4 =**	**5.53 =**
Beryllium	mg/kg	**0.737 =**	**0.527 J**	**0.768 J**	**0.826 =**	**0.284 J**	**0.266 J**	**0.747 =**	**0.625 J**	**0.625 J**	**0.0698 J**
Calcium	mg/kg	**2820 =**	**1430 =**	**2560 =**	**938 =**	**1040 =**	**556 =**	**1670 =**	**1440 =**	**1480 =**	**149 =**
Cadmium	mg/kg	**0.108 J**	**0.0913 J**	**0.1 J**	**0.0846 J**	**0.0989 J**	0.0508 U	**0.133 =**	**0.158 =**	**0.131 =**	0.0466 U
Chromium	mg/kg	**15.1 =**	**11.6 =**	**16.6 =**	**17.3 =**	**6.32 =**	**6.7 =**	**12.7 =**	**12 =**	**11.3 =**	**1.42 =**
Cobalt	mg/kg	**6.37 =**	**4.78 =**	**6.7 =**	**5.58 =**	**3.18 =**	**3.13 =**	**4.37 =**	**6.09 =**	**7.01 =**	**1.07 =**
Copper	mg/kg	**15.2 =**	**7.82 =**	**8.62 =**	**6.04 =**	**18.3 =**	**7.39 =**	**8.85 =**	**5.24 =**	**5.64 =**	0.466 U
Iron	mg/kg	**16700 B**	**12600 B**	**17100 B**	**14100 B**	**11100 B**	**9840 B**	**12600 B**	**15000 B**	**14300 B**	**2320 B**
Potassium	mg/kg	**2880 =**	**2010 =**	**3200 JH**	**2970 =**	**717 =**	**793 =**	**2190 =**	**2030 =**	**1940 =**	**179 =**
Mercury	mg/kg	**0.0396 J**	**0.0288 J**	**0.0405 J**	**0.0201 J**	**0.0376 J**	**0.0232 J**	**0.0215 J**	**0.0215 J**	**0.0246 J**	0.0125 U
Magnesium	mg/kg	**4230 =**	**2820 =**	**4620 =**	**3510 =**	**1050 =**	**1150 =**	**3430 =**	**2930 =**	**2840 =**	**286 =**
Manganese	mg/kg	**297 =**	**173 =**	**405 =**	**65.7 =**	**127 =**	**123 =**	**165 =**	**138 =**	**149 =**	**22.1 =**
Sodium	mg/kg	**5250 =**	**3320 =**	**7290 =**	**3940 =**	**1610 =**	**2050 =**	**4720 =**	**3810 =**	**3590 =**	**1050 =**
Nickel	mg/kg	**12.4 =**	**8.59 =**	**12.2 =**	**11.3 =**	**8.07 =**	**5.38 =**	**10.6 =**	**9.15 =**	**9.37 =**	**0.876 J**
Lead	mg/kg	**18.7 =**	**15.8 =**	**15.7 =**	**11.5 =**	**15.8 =**	**10.9 =**	**12.5 =**	**12.1 =**	**13 =**	**2.28 J**
Selenium	mg/kg	**4.66 =**	**3.15 =**	**3.69 =**	**2.22 =**	**3.85 =**	**2.41 =**	**2.96 =**	**3.87 =**	**3.63 =**	**0.549 J**
Silver	mg/kg	0.346 U	0.287 U	0.391 U	0.288 U	0.255 U	**0.263 J**	0.328 U	0.315 U	0.315 U	0.233 U
Thallium	mg/kg	**0.28 =**	**0.0752 =**	**0.0966 =**	**0.0826 =**	**0.0347 =**	**0.0436 =**	**0.0837 =**	**0.0851 =**	**0.0806 =**	0.0126 U
Vanadium	mg/kg	**25.5 =**	**18.8 =**	**30.2 JH**	**26.5 =**	**9.89 =**	**10.5 =**	**23.7 =**	**21.8 =**	**20.6 =**	**3.07 =**
Zinc	mg/kg	**94.7 =**	**63.2 =**	**59.7 =**	**44.4 =**	**71.2 =**	**27.2 =**	**36.8 =**	**84.1 =**	**66 =**	**5.07 =**

Notes:
mg/kg - milligrams per kilogram
N - normal sample
FD - field duplicate
SD - sediment
Yellow shading and bold text indicates detections

Data Qualifiers:
=: Reported concentration
J: Reported result is estimated
U: Not detected at reported quantitation limit
B: Analyte was detected in associated method blank sample
JL: Reported concentration is estimated and biased low
JH: Reported concentration is estimated and biased high

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Table 3-6
Detections of Semivolatile Organic Compounds in Sediment Samples - June 2006
State Marine Superfund Site
Port Arthur, Texas

Station ID :		A-SD	B-SD	C-SD	D-SD	E-SD	F-SD	G-SD	H-SD	H-SD	I-SD
Sample ID :		A-SD-01	B-SD-02	C-SD-03	D-SD-04	E-SD-05	F-SD-06	G-SD-07	H-SD-08	FD-01FD	I-SD-09
Date Collected :		6/8/06 11:00	6/8/06 12:05	6/8/06 15:30	6/8/06 16:40	6/8/06 14:20	6/8/06 17:25	6/9/06 10:50	6/9/06 10:15	6/9/06 10:15	6/9/06 11:45
Sample Type :		N	N	N	N	N	N	N	N	FD	N
Matrix :		SD	SD	SD	SD	SD	SD	SD	SD	SD	SD
Reference Sample ID :										H-SD-08	
Parameter Name	**Unit**										
2-Methylnaphthalene	ug/kg	29.4 U	9.85 U	5.96 U	9.47 U	19.6 U	**17.9 =**	5.67 U	5.19 U	5.17 U	3.77 U
Anthracene	ug/kg	29.4 U	**10 J**	5.96 U	9.47 U	19.6 U	8.11 U	5.67 U	5.19 U	5.17 U	3.77 U
Benzo (a) anthracene	ug/kg	**56 J**	**20.3 =**	**8.23 J**	**10.8 J**	**25 J**	**12.6 J**	5.67 U	5.19 U	5.17 U	3.77 U
Benzo (a) pyrene	ug/kg	**54.8 J**	**20.4 =**	**9.2 J**	**12.3 J**	19.6 U	**11.7 J**	5.67 U	5.19 U	5.17 U	3.77 U
Benzo (b) fluoranthene	ug/kg	**143 =**	**26.3 =**	**10.5 J**	**15.7 J**	19.6 U	**13.7 J**	5.67 U	5.19 U	5.17 U	3.77 U
Benzo (g,h,i) perylene	ug/kg	29.4 U	**16.6 J**	5.96 U	**9.92 J**	19.6 U	**9.06 J**	5.67 U	5.19 U	5.17 U	3.77 U
Benzo(k)fluoranthene	ug/kg	**29.8 J**	9.85 U	5.96 U	9.47 U	19.6 U	8.11 U	5.67 U	5.19 U	5.17 U	3.77 U
Chrysene	ug/kg	**82.6 =**	**29.6 =**	**8.09 J**	**11.8 J**	**19.9 J**	**10.6 J**	5.67 U	5.19 U	5.17 U	3.77 U
Fluoranthene	ug/kg	**170 =**	**33.5 =**	**11 J**	**12.8 J**	**47.4 =**	**14.8 J**	**5.73 J**	5.19 U	5.17 U	3.77 U
Indeno (1,2,3-c,d) pyrene	ug/kg	29.4 U	**10.9 J**	5.96 U	9.47 U	19.6 U	8.11 U	5.67 U	5.19 U	5.17 U	3.77 U
Naphthalene	ug/kg	29.4 U	9.85 U	5.96 U	9.47 U	19.6 U	**10.6 J**	5.67 U	5.19 U	5.17 U	3.77 U
Phenanthrene	ug/kg	**58.9 =**	**13.7 J**	**9.67 J**	9.47 U	**23.4 J**	**8.76 J**	5.67 U	5.19 U	5.17 U	3.77 U
Pyrene	ug/kg	**104 =**	**44.2 =**	**14.4 =**	**19.8 =**	**49 =**	**33.7 =**	5.67 U	5.19 U	5.17 U	3.77 U

Notes:
mg/kg - milligrams per kilogram
N - normal sample
FD - field duplicate
SD - sediment

Data Qualifiers:
=: Reported concentration
J: Reported result is estimated
U: Not detected at reported quantitation limit
B: Analyte was detected in associated method blank sample
JL: Reported concentration is estimated and biased low
JH: Reported concentration is estimated and biased high

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Figures

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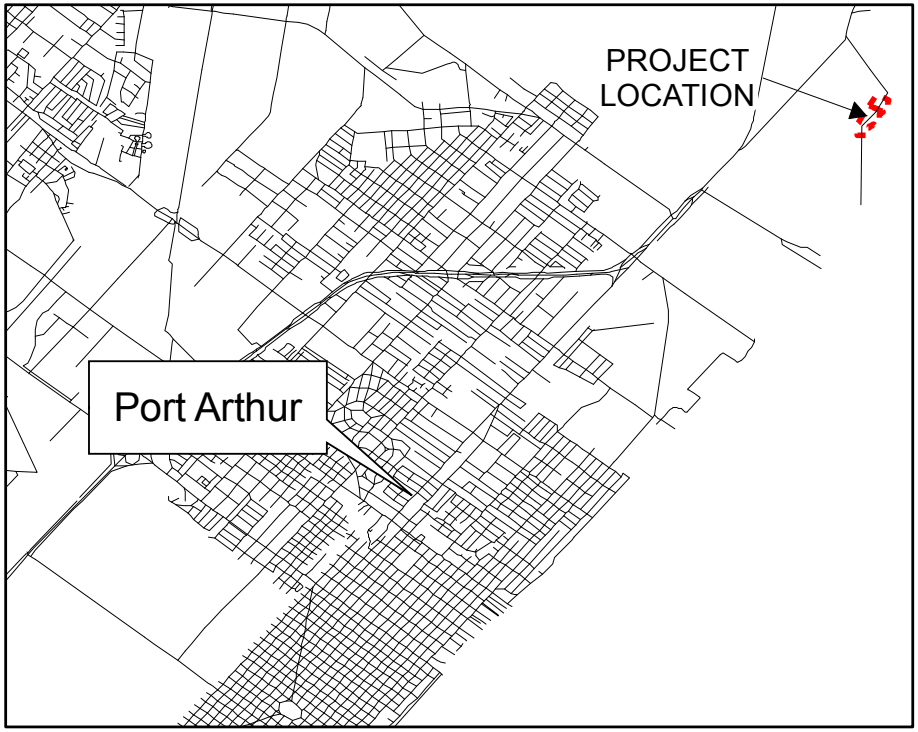

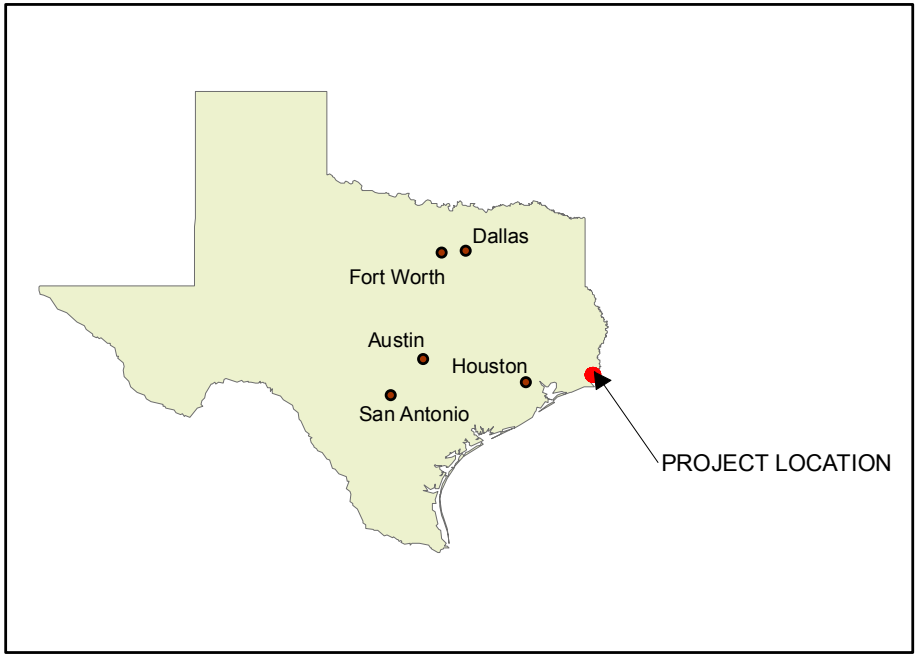

LEGEND

Property Boundary

Streets

* Image Data: Provided by Aerial Viewpoint
Date Flown: 2000

N

200 100 0 200

SCALE IN FEET

Figure 1-1
Site Location Map

State Marine
Superfund Site

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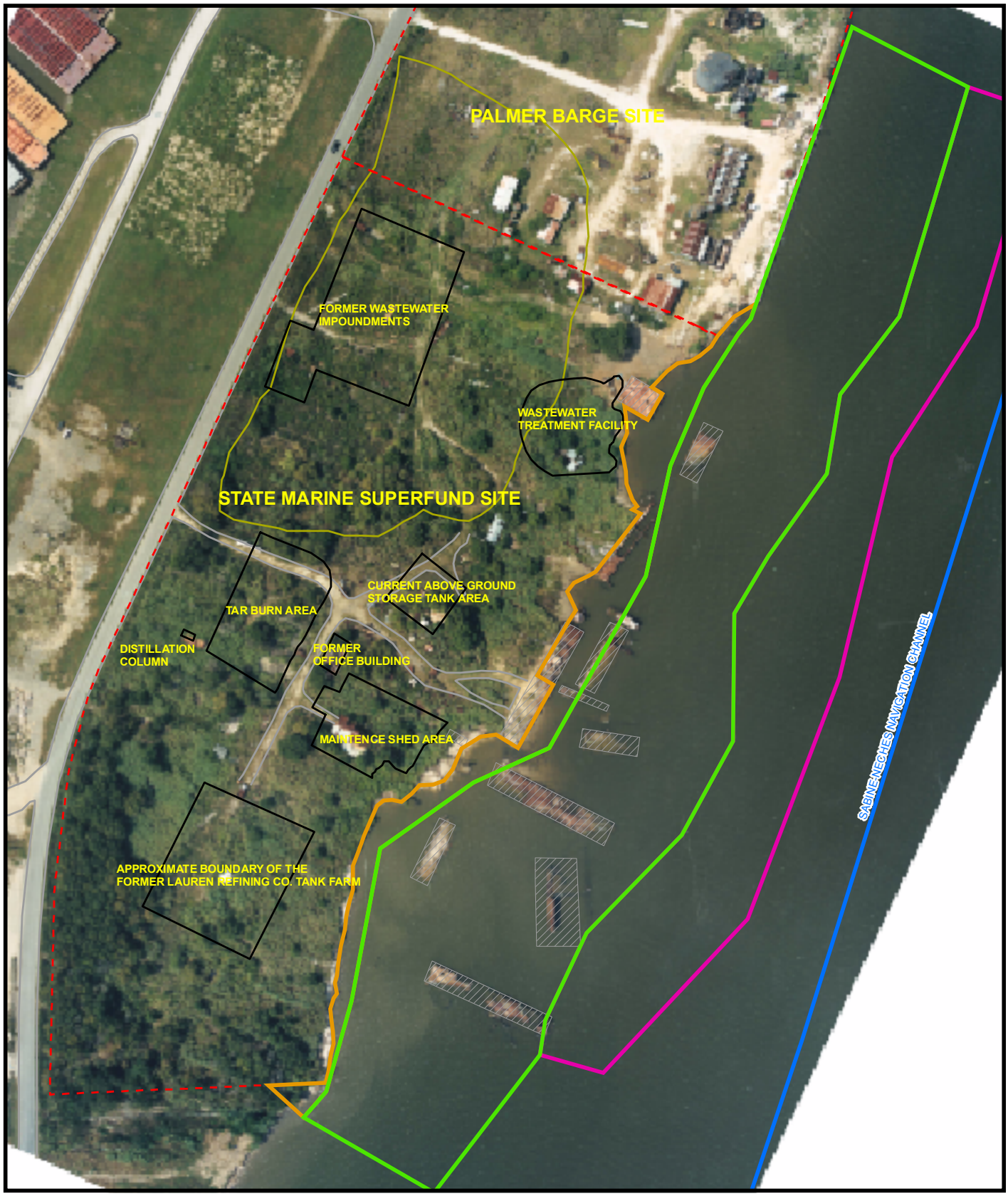

LEGEND

- Area of Interest
- Landfill Area
- Property Boundary
- Road
- Navigation Channel
- Sunken Barge
- Intertidal Area
- Nearshore Area
- Offshore Area

* Image Data: Provided by Aerial Viewpoint
Date Flown: 2000

N

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Figure 1-2
2000 Aerial Photograph
Current Site Features Map

State Marine
Superfund Site

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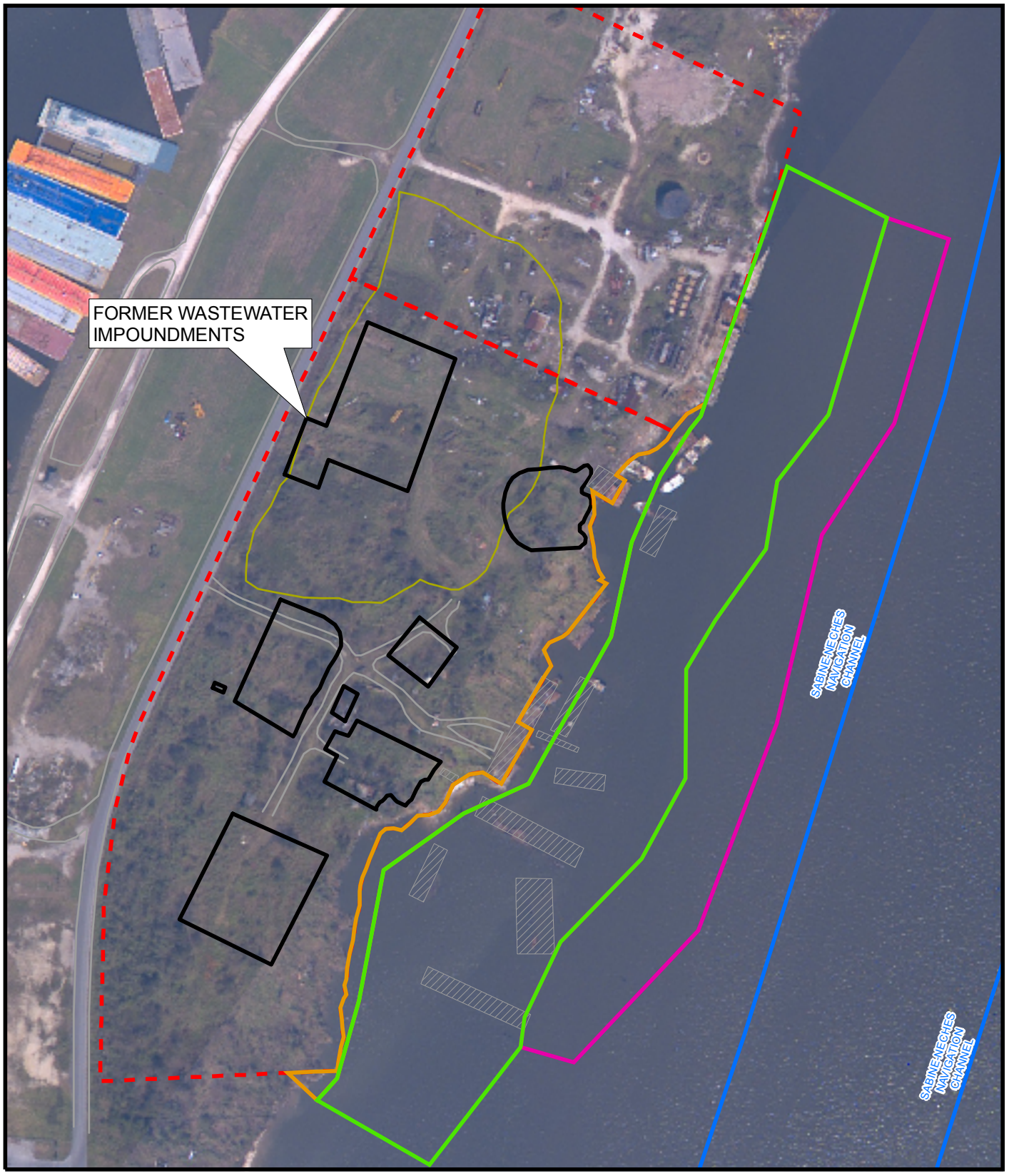

LEGEND

- Area of Interest
- Property Boundary
- Landfill Area
- Road
- Navigation Channel
- Sunken Barge
- Intertidal Area
- Nearshore Area
- Offshore Area

* Image Data: Provided by the US Army Corps of Engineers.
Map Projection is NAD 83 State Plane (feet) South Central TX.
Date Flown: 2005

N

200 100 0 200

SCALE IN FEET

Figure 1-3
2005 Aerial Photograph
Current Site Features Map

State Marine
Superfund Site

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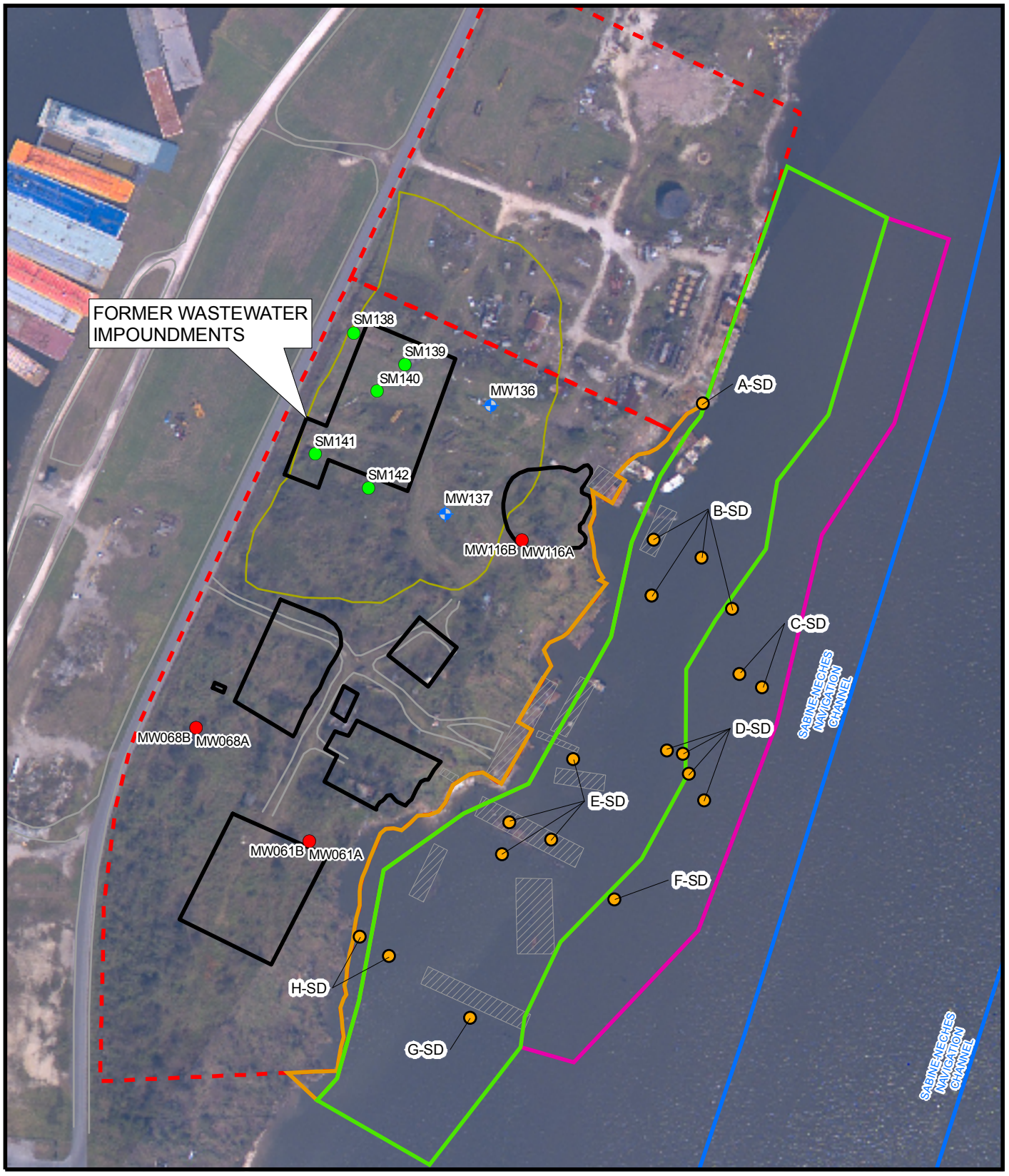

LEGEND

- Area of Interest
- Property Boundary
- Landfill Area
- Road
- Navigation Channel
- Sunken Barge
- New Shallow Monitor Well Locations
- Soil Boring Locations
- MW061 B — Shallow Nested Monitor Well
- MW061 A — Deep Nested Monitor Well
- Location of Grab Sample for Composite Sediment Sample
- Intertidal Area
- Nearshore Area
- Offshore Area

* Image Data: Provided by the US Army Corps of Engineers. Map Projection is NAD 83 State Plane (feet) South Central TX. Date Flown: 2005

N

200 100 0 200

SCALE IN FEET

Figure 2-1
Sample Location Map

State Marine Superfund Site

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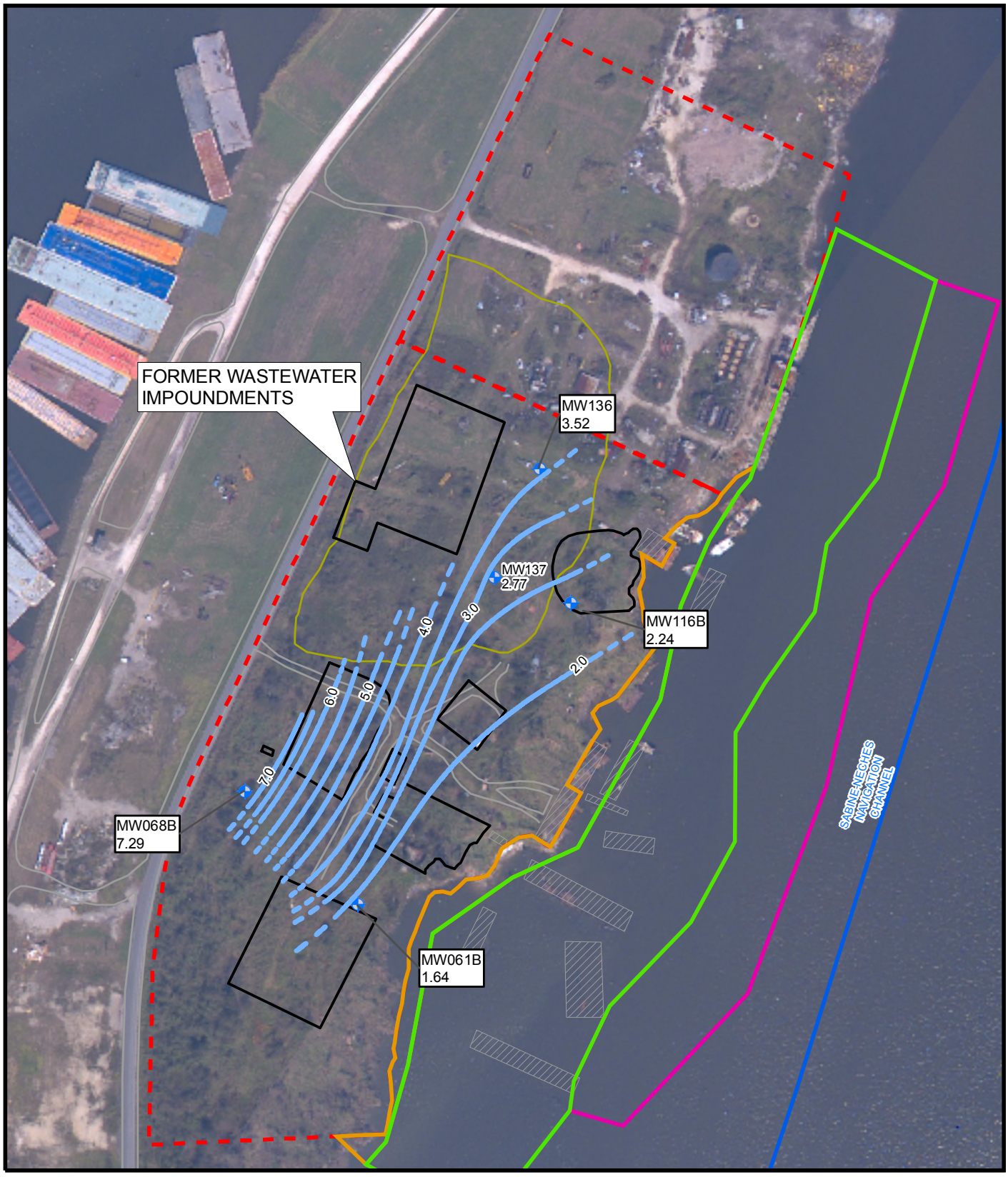

LEGEND

- Area of Interest
- Property Boundary
- Landfill Area
- Road
- Navigation Channel
- Sunken Barge
- Shallow Monitor Well Locations
- Groundwater Contours
- Intertidal Area
- Nearshore Area
- Offshore Area

MW068B 7.29 — Monitor Well ID and Water Level Elevation

Note:
Water level elevations are in ft above MSL.
Water level contour interval is 0.5 ft.
Water level data contoured by hand.

* Image Data: Provided by the US Army Corps of Engineers.
Map Projection is NAD 83 State Plane (feet) South Central TX.
Date Flown: 2005

N

200 100 0 200
SCALE IN FEET

Figure 3-1
Water Level Elevations in the Shallow Perched Ground Water Zone - May 2006
State Marine Superfund Site

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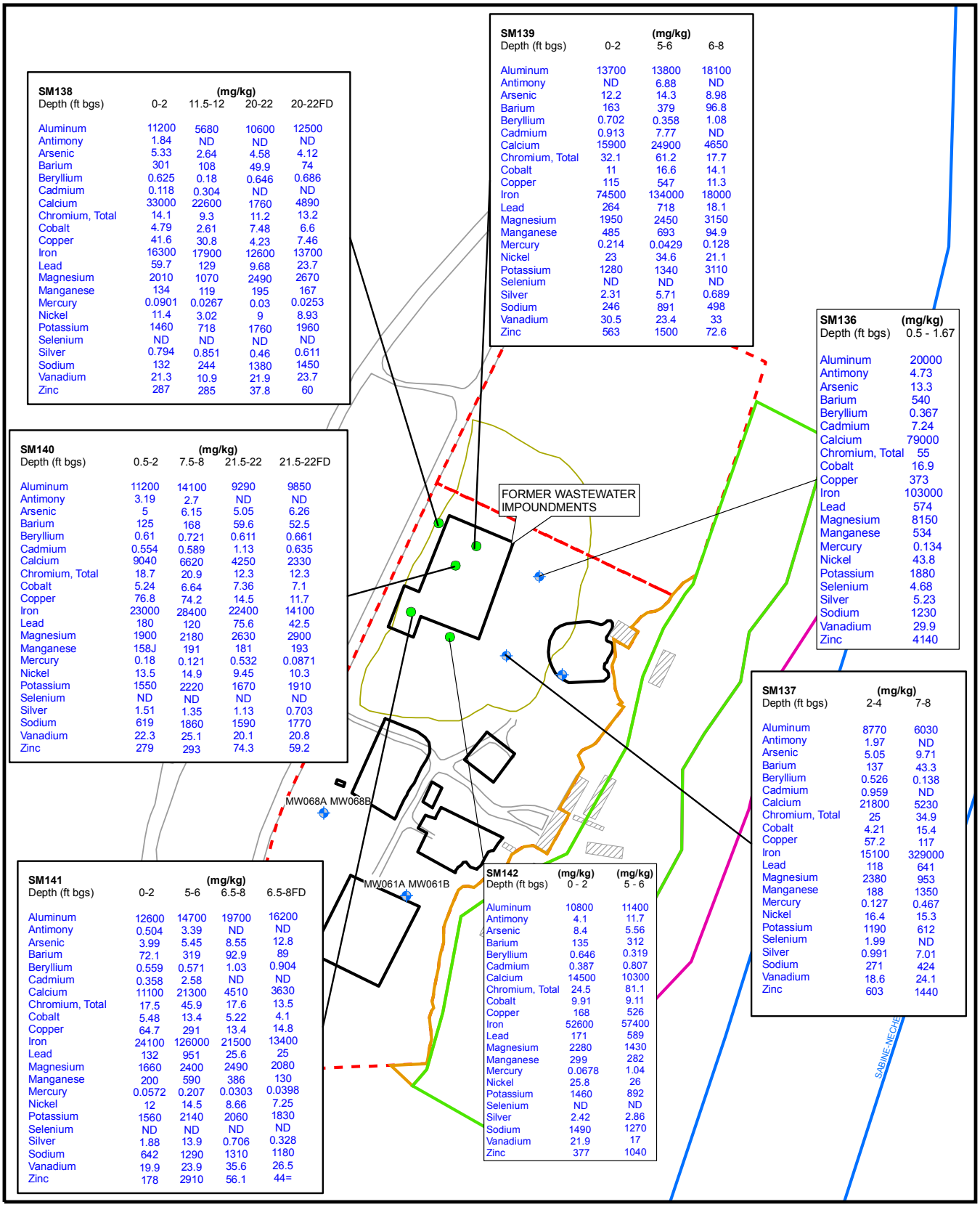

LEGEND

- Area of Interest
- Property Boundary
- Landfill Area
- Road
- Navigation Channel
- Sunken Barge
- Shallow Monitor Well Locations
- Soil Boring Locations
- Intertidal Area
- Nearshore Area
- Offshore Area

Note:
ft - Feet
bgs - Below Ground Surface
mg/kg - Milligrams Per Kilogram
FD - Field Duplicate
ND - Not Detected

N

200 100 0 200

SCALE IN FEET

Figure 3-2
Metals Detections in Soil Samples - May 2006
State Marine Superfund Site

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DATE: 9/20/2006

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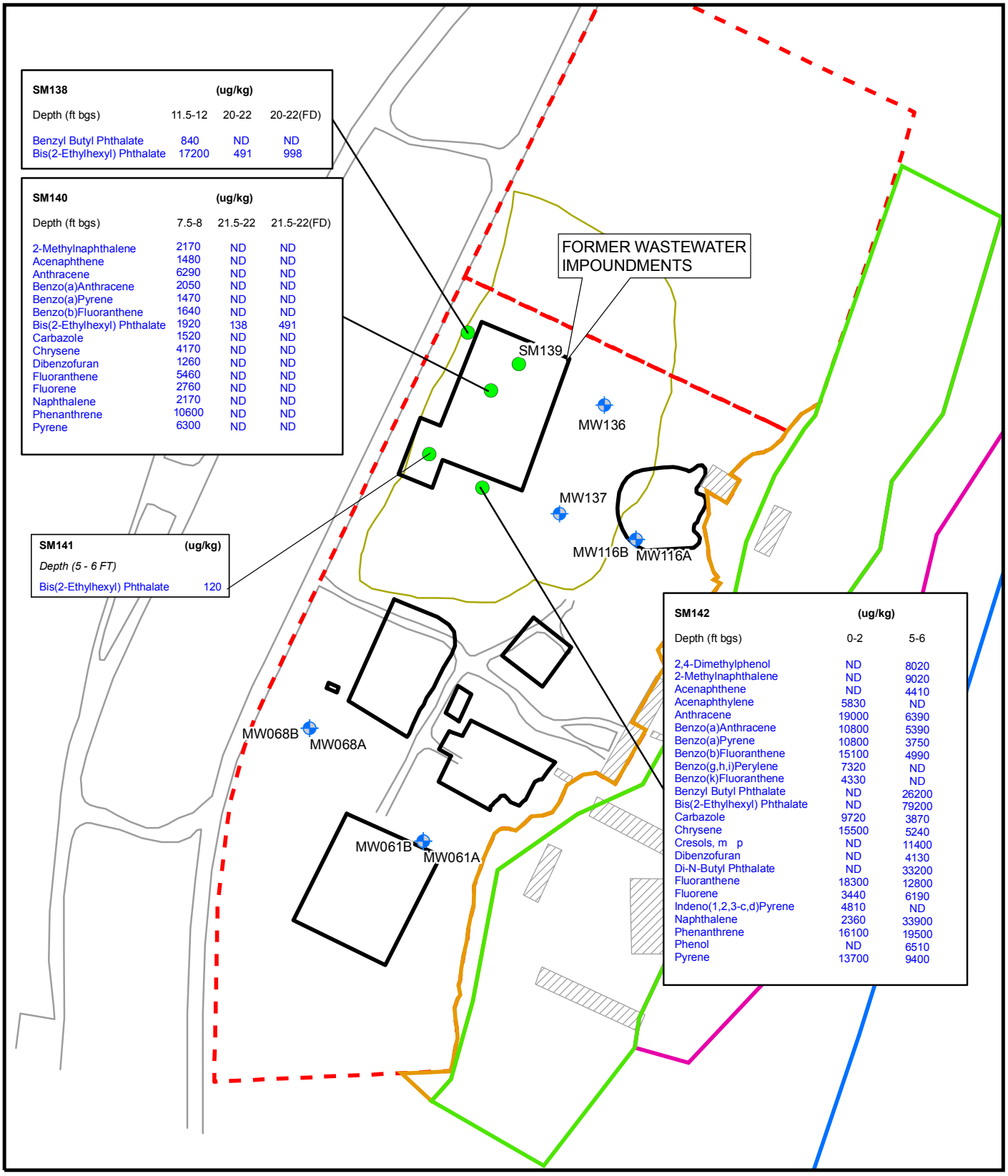

LEGEND

- Area of Interest
- Property Boundary
- Landfill Area
- Road
- Navigation Channel
- Sunken Barge
- Shallow Monitor Well Locations
- Soil Boring Locations
- Intertidal Area
- Nearshore Area
- Offshore Area

Note:
ft - Feet
bgs - Below Ground Surface
ug/kg - Micrograms Per Kilogram
FD - Field Duplicate
ND - Not Detected

N

200 100 0 200

SCALE IN FEET

Figure 3-3
SVOC Detection in Soil Samples - May 2006
State Marine Superfund Site

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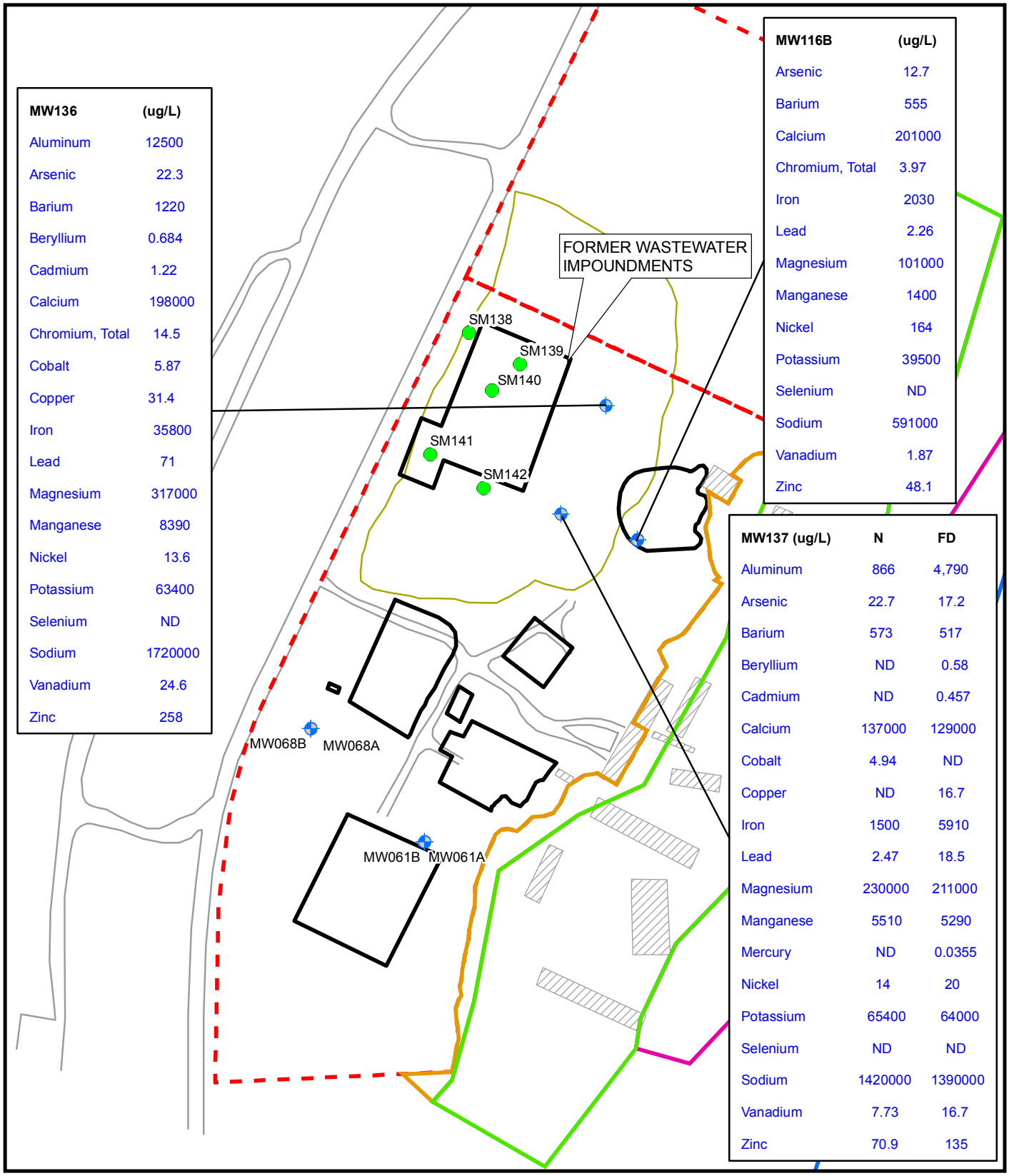

MW136	(ug/L)
Aluminum	12500
Arsenic	22.3
Barium	1220
Beryllium	0.684
Cadmium	1.22
Calcium	198000
Chromium, Total	14.5
Cobalt	5.87
Copper	31.4
Iron	35800
Lead	71
Magnesium	317000
Manganese	8390
Nickel	13.6
Potassium	63400
Selenium	ND
Sodium	1720000
Vanadium	24.6
Zinc	258

MW116B	(ug/L)
Arsenic	12.7
Barium	555
Calcium	201000
Chromium, Total	3.97
Iron	2030
Lead	2.26
Magnesium	101000
Manganese	1400
Nickel	164
Potassium	39500
Selenium	ND
Sodium	591000
Vanadium	1.87
Zinc	48.1

MW137 (ug/L)	N	FD
Aluminum	866	4,790
Arsenic	22.7	17.2
Barium	573	517
Beryllium	ND	0.58
Cadmium	ND	0.457
Calcium	137000	129000
Cobalt	4.94	ND
Copper	ND	16.7
Iron	1500	5910
Lead	2.47	18.5
Magnesium	230000	211000
Manganese	5510	5290
Mercury	ND	0.0355
Nickel	14	20
Potassium	65400	64000
Selenium	ND	ND
Sodium	1420000	1390000
Vanadium	7.73	16.7
Zinc	70.9	135

LEGEND

- Area of Interest
- Property Boundary
- Landfill Area
- Road
- Navigation Channel
- Sunken Barge
- Shallow Monitor Well Locations
- Soil Boring Locations
- Intertidal Area
- Nearshore Area
- Offshore Area

Note:
ug/L - Micrograms Per Liter
N - Normal
FD - Field Duplicate
ND - Not Detected

N

200 100 0 200

SCALE IN FEET

Figure 3-4
Total Metals Detections In Ground Water - May

State Marine Superfund Site

CH2MHILL

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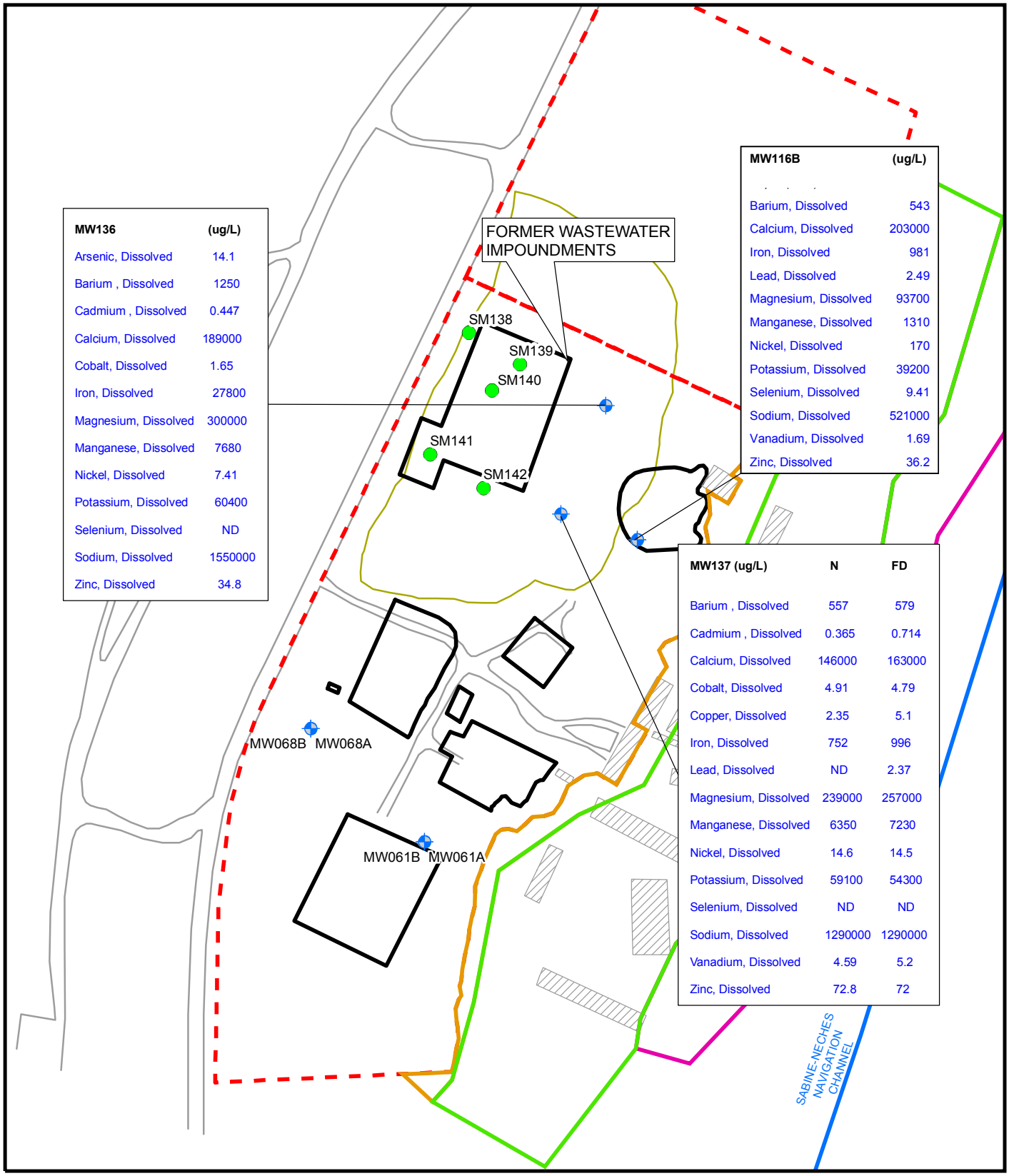

LEGEND

- Area of Interest
- Property Boundary
- Landfill Area
- Road
- Navigation Channel
- Sunken Barge
- Shallow Monitor Well Locations
- Soil Boring Locations
- Intertidal Area
- Nearshore Area
- Offshore Area

Note:
ug/L - Micrograms Per Liter
N - Normal
FD - Field Duplicate
ND - Not Detected

N

200 100 0 200

SCALE IN FEET

Figure 3-5
Dissolved Metals Detections In Ground Water - May 2006

State Marine Superfund Site

CH2MHILL

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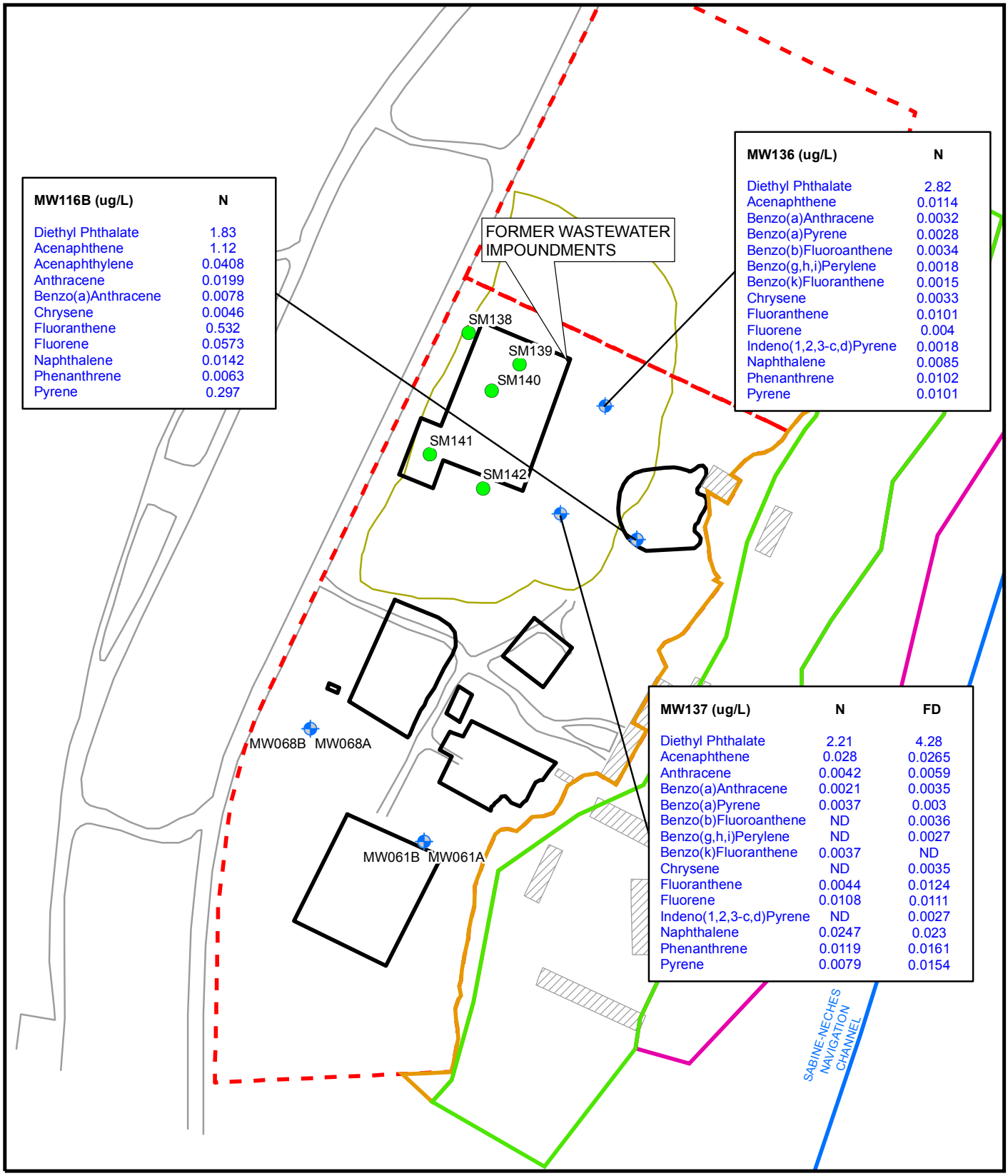

LEGEND

- Area of Interest
- Property Boundary
- Landfill Area
- Road
- Navigation Channel
- Sunken Barge
- Shallow Monitor Well Locations
- Soil Boring Locations
- Intertidal Area
- Nearshore Area
- Offshore Area

Note:
ug/L - Micrograms Per Liter
N - Normal
FD - Field Duplicate
ND - Not Detected

N

200 100 0 200
SCALE IN FEET

Figure 3-6
SVOC Detections In Ground Water - May 2006

State Marine Superfund Site

CH2MHILL

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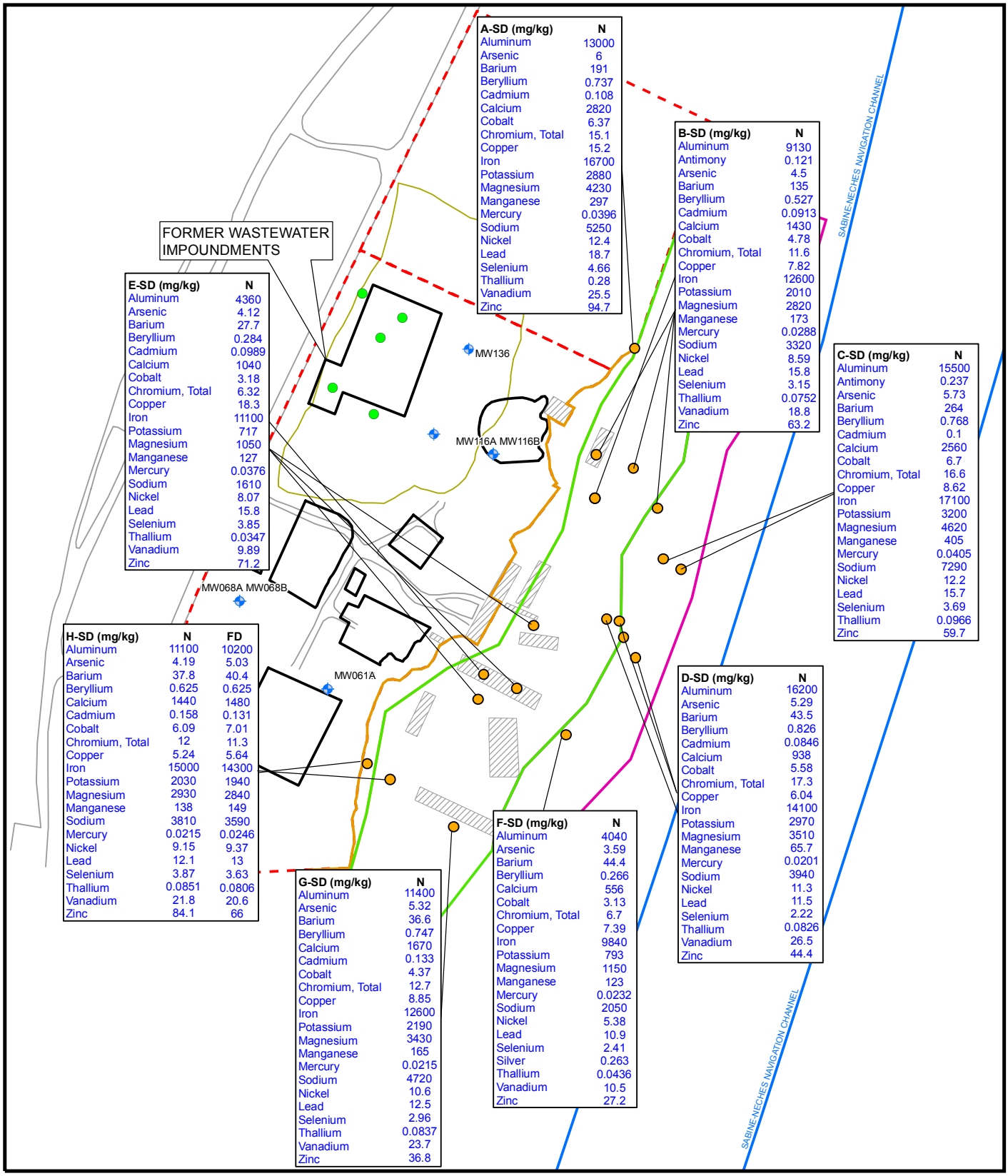

LEGEND

- Area of Interest
- Property Boundary
- Landfill Area
- Road
- Navigation Channel
- Sunken Barge
- Shallow Monitor Well Locations
- Soil Boring Locations
- Location of Grab Sample for Composite Sediment Sample
- Intertidal Area
- Nearshore Area
- Offshore Area

Note:
mg/kg - Milligrams Per Kilogram
N - Normal
FD - Field Duplicate

N

300 150 0 300
SCALE IN FEET

Figure 3-7
Metals Detections in Sediment Samples - June 2006

State Marine Superfund Site

CH2MHILL

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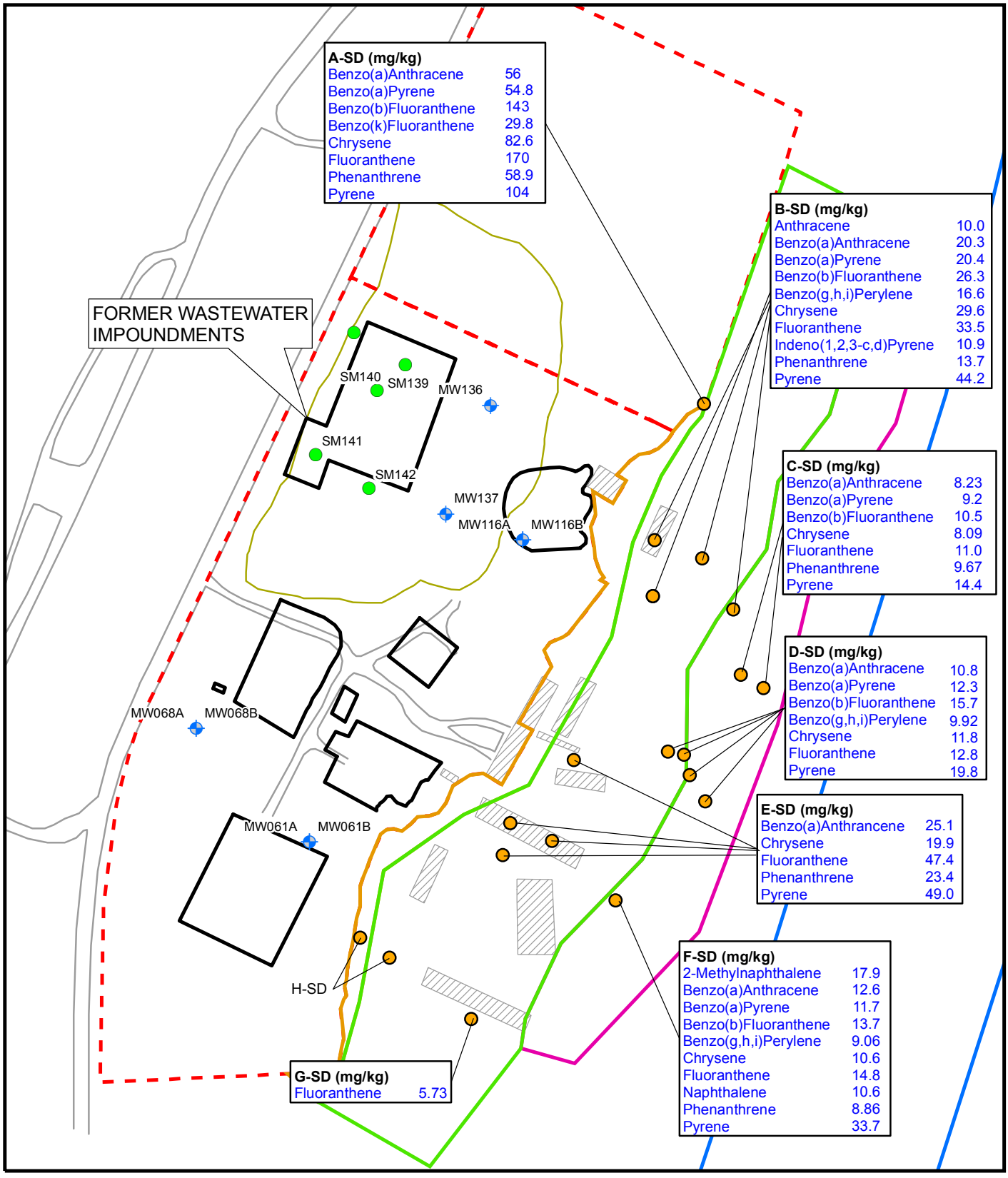

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Appendix A

Data Quality Evaluation Report

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Acronyms, Abbreviations, and Data Validation Qualifiers

Acronyms and Abbreviations

CLP	Contract Laboratory Program
COC	Chain-of-Custody
COPCs	Contaminants of Potential Concern
CRQL	Contract-Required Quantitation Limit
DQE	Data Quality Evaluation
DQO	Data Quality Objective
DRO	Diesel Range Organics
DRS	Data Review Summary (CLP)
DV	Data Validation
EB	Equipment Blank
EPA	Environmental Protection Agency
ESAT	Environmental Services Assistance Team
FD	Field Duplicate
GRO	Gasoline Range Organics
ICP	Inductively Coupled Plasma
IDL	Instrument Detection Limit
IDW	Investigation Derived Waste
LB	Laboratory Blank
LCS/LCSD	Laboratory Control Sample/Laboratory Control Sample Duplicate
MCL	Maximum Contaminant Level
MDL	Method Detection Limit
MS/MSD	Matrix Spike/Matrix Spike Duplicate
QA/QC	Quality Assurance/Quality Control
RL	Reporting Limit
RPD	Relative Percent Difference

SVOCs	Semivolatile Organic Compounds
TCEQ	Texas Commission on Environmental Quality
TCL	Target Compound List (CLP List)
TCLP	Toxicity Characteristic Leaching Procedure
TDS	Total Dissolved Solids
TOC	Total Organic Carbon
TPH	Total Petroleum Hydrocarbons
TR	Traffic Report
VOCs	Volatile Organic Compounds

1. Introduction

The objective of this Supplemental Remedial Investigation (SRI) was to resolve minor data gaps that existed from the RI previously completed at the State Marine Superfund Site in Port Arthur, Texas. The additional data obtained from the SRI will allow the revision of the existing ecological and human health risk assessments as needed to support the EPA's development of a record of decision (ROD) by September 2006.

This work was performed under the Response Action Contract (RAC) No. EP-W-06-21, Task Order 0002-RICO-06BX. Data quality objectives for the project and rationale for achieving them are discussed in the Quality Assurance Project Plan (QAPP).

CH2M HILL personnel collected samples in support of the SRI between May 22, 2006 and June 14, 2006. Samples were shipped to the following laboratories for analysis:

- **Applied Sciences Laboratory (ASL)** of Corvallis, Oregon analyzed ground water samples for semivolatile organic compounds (SVOCs) by SW-846 8270C, low-level polycyclic aromatic hydrocarbons (PAHs) by SW-846 8270-SIM, and dissolved and total metals by SW-846 6010B, 6020, and 7470A.

- **Kemron Environmental Services** of Marietta, Ohio analyzed subsurface soil samples for SVOCs and low-level PAHs by SW-846 8270C and total metals by SW-846 6010B, 6020, and 7471A; sediment samples for SVOCs and low-level PAHs by SW-846 8270C, total metals by SW-846 6010B, 6020, and 7471A, total organic carbon (TOC) by the Lloyd-Kahn method, and grain size by ASTM D422; water investigative derived waste (IDW) samples for volatile organic compounds (VOCs) by SW-846 8260B, SVOCs by SW-846 8270C, pesticides by SW-846 8081A, herbicides by SW-846 8151A, metals by SW-846 6010B and 7470A, and total petroleum hydrocarbons (TPH) by TCEQ method TX1005; and soil IDW samples for paint filter by SW-846 9095A, TPH by TX1005, TCLP VOCs by SW-846 1311/8260B, TCLP SVOCs by SW-846 1311/8270C, TCLP pesticides by SW-846 1311/8081A, TCLP herbicides by SW-846 1311/8151A, and TCLP metals by SW-846 1311/6010B and 1311/7470A

This DQE report covers the samples received within the Laboratory Sample Delivery Groups (SDGs) listed in **Table 1-1** below their respective laboratory of origin:

TABLE 1-1
Laboratory SDGs
State Marine Superfund Site, Port Arthur, TX

SDGs from Applied Sciences Laboratory	SDGs from Kemron Environmental Services
F1890	L0605548
	L0605576
	L0606049
	L0606267

All analyses requested for each sample are listed in **Section 3** - Chain of Custody Synopsis.

2. Data Validation/Data Quality Review Process

The purpose of the data quality evaluation (DQE) process is to identify any deficiencies in data quality, including potential matrix interferences that may possibly affect the data's ability to meet project DQOs. The two major categories of data quality evaluation are laboratory performance and matrix interferences. The assessment of laboratory performance is based primarily on the ability of various QC samples and measures to meet established control criteria. Evaluation of matrix interferences is somewhat more subtle and involves the review and interpretation of several types of data including surrogate spike recoveries, matrix spike recoveries, and duplicate sample precision.

Prior to releasing the analytical results, the various laboratories were required to review the sample and QC data to ascertain whether data achieved analytical method requirements and analytical QC measures were within laboratory-defined limits for accuracy and precision. Non-conformances were identified and discussed in the individual data package's cover letter and case narrative.

Final data packages were reviewed by the project chemist based on criteria outlined in the EPA's *Contract Laboratory Program National Functional Guidelines for Low Concentration Organic Data Review* (**EPA, 2001b**) and *Contract Laboratory Program National Functional Guidelines for Inorganic Data Review* (**EPA, 2004**). This data validation process is independent of the laboratory's checks, and focuses on the usability of the data to support the project data evaluation and decision-making processes.

The CH2M HILL data review focused on the potential impact of laboratory performance and matrix effects on the validity of the analytical results and included a review of the following items:

- Chain of custody and completeness of reports
- Sample receipt conditions
- Case narrative information
- Preservation and holding times
- Laboratory control sample and laboratory control sample duplicate (LCS/LCSD) accuracy and precision
- Matrix spike and matrix spike duplicate (MS/MSD) accuracy and precision
- Blank results for potential positive bias
- Surrogate/Deuterated Monitoring Compound (DMC) recovery accuracy
- GC/MS instrument performance check
- Internal standard recovery and retention times
- Initial and continuing calibration verification standard accuracy and precision
- Serial dilution precision
- Lab duplicate and field duplicate precision

Sample results that did not meet validation criteria were qualified with data validation flags to indicate a potential problem with the data and to aid in data interpretation. The specific

flags applied to results in this data set are presented and defined in **Section 3.2** of this DQE Report. Validation reason codes were also applied with the data validation flags to provide the rationale behind the assignment of a validation flag to the data. The specific validation reason codes utilized in this data set are presented and defined in **Section 3.3** of this DQE Report.

The results of this review process are discussed in **Section 6** of this DQE. Analytical results that were qualified with validation flags during the review process are listed in **Table 7-1**.

3. Data Validation Flags and Validation Reason Codes

3.1 Data Validation Flags

Flag	Definition
J	Estimated. This qualifier indicates that the analyte was detected, but the reported concentration should be considered estimated.
JH	Indicates that this result is an estimated concentration and may be biased high due to QA/QC issues. Actual concentration may be lower than the concentration reported.
JL	Indicates that this result is an estimated concentration and may be biased low due to QA/QC issues. Actual concentration may be higher than the concentration reported.
R	Rejected. This qualifier indicates that due to a QC problem or the fact that another more superior result exists for this sample/analyte this result may not be used to support project decisions.
U	Undetected. This qualifier indicates that the analyte should be considered not detected above the stated quantitation limit or concentration. When applied by the data reviewer, the "U" indicates that the analyte was detected by the laboratory, but blank contamination indicates that the result is likely due to contamination rather than actual site conditions.
UJ	Not detected above an estimated quantitation limit. This qualifier indicates that the analyte was not detected above the quantitation limit, but due to QC problems, the quantitation limit should be considered estimated.
B	Analyte was detected in associated method blank.
=	Analyte was detected and quantitated at the reported concentration.

3.2 Validation Reason Codes

Code	Definition
CB	Calibration blank contamination
CC	Continuing calibration verification recovered outside criteria
FD	Field duplicate precision outside criteria
HT	Holding time expired

MB	Method blank contamination
MD	MS/MSD precision outside criteria
MS	Matrix spike recovered outside criteria
RE	This sample reanalyzed with superior results – use reanalyzed result instead of this one
SD	Serial dilution precision outside criteria

4. Chain of Custody Synopsis

Soil, water, and sediment samples were shipped to the laboratories under the required chain-of-custody (COC) forms which identified the samples and the analyses that were required to be performed. **Table 4-1** summarizes the COC information for all normal field and quality control samples.

TABLE 4-1
Chemical Analytical Methods – Field and Quality Control Samples
State Marine Superfund Site, Port Arthur, TX

Matrix	Sample ID	Date - Time Collected	Sample Type	Station ID	SVOCs	Low-Level PAHs	Total Metals	Dissolved Metals	TOC	TCLP VOCs / VOCs (IDW)	TCLP SVOCs / SVOCs (IDW)	TCLP Pesticides / Pesticides (IDW)	TCLP Herbicides / Herbicides (IDW)	TCLP Metals / Metals (IDW)	Paint Filter (IDW)	TPH (IDW)
SB	SM140SB02052306	5/23/06 15:40	N	SM140	X		X									
SB	SM140FD03052306	5/23/06 16:40	FD	SM140	X		X									
SB	SM140FD03052306DL	5/23/06 16:40	LR	SM140			X									
SB	SM140SB03052306	5/23/06 16:35	N	SM140	X		X									
SB	SM140SB03052306DL	5/23/06 16:35	LR	SM140			X									
SB	SM137SB01052306	5/23/06 9:20	N	SM137	X		X									
SB	SM138SB03052306	5/23/06 12:55	N	SM138	X		X									
SB	SM138SB03052306DL	5/23/06 12:55	LR	SM138			X									
SB	SM138FD03052306	5/23/06 13:00	FD	SM138	X		X									
SB	SM138FD03052306DL	5/23/06 13:00	LR	SM138			X									
SB	SM139SB02052306	5/23/06 14:25	N	SM139	X		X									

TABLE 4-1
Chemical Analytical Methods – Field and Quality Control Samples
State Marine Superfund Site, Port Arthur, TX

Matrix	Sample ID	Date - Time Collected	Sample Type	Station ID	SVOCs	Low-Level PAHs	Total Metals	Dissolved Metals	TOC	TCLP VOCs / VOCs (IDW)	TCLP SVOCs / SVOCs (IDW)	TCLP Pesticides / Pesticides (IDW)	TCLP Herbicides / Herbicides (IDW)	TCLP Metals / Metals (IDW)	Paint Filter (IDW)	TPH (IDW)
SB	SM139SB02052306DL	5/23/06 14:25	LR	SM139			X									
SB	SM137SB02052306	5/23/06 9:25	N	SM137	X		X									
SB	SM137SB02052306DL	5/23/06 9:25	LR	SM137			X									
SB	SM137SB02052306DL2	5/23/06 9:25	LR	SM137			X									
SB	SM139SB03052306	5/23/06 14:40	N	SM139	X		X									
SB	SM139SB03052306DL	5/23/06 14:40	LR	SM139			X									
SB	SM138SB02052306	5/23/06 12:10	N	SM138	X		X									
SB	SM138SB02052306DL	5/23/06 12:10	LR	SM138			X									
SB	SM138SB02052306RE	5/23/06 12:10	LR	SM138	X											
SB	SM142SB02052406	5/24/06 9:45	N	SM142	X		X									
SB	SM142SB02052406DL	5/24/06 9:45	LR	SM142			X									
SB	SM141SB03052406	5/24/06 8:25	N	SM141	X		X									
SB	SM141SB03052406DL	5/24/06 8:25	LR	SM141			X									
SB	SM141FD03052406	5/24/06 8:25	FD	SM141	X		X									
SB	SM141FD03052406DL	5/24/06 8:25	LR	SM141			X									
SB	SM141SB02052406	5/24/06 8:15	N	SM141	X		X									
SB	SM141SB02052406DL	5/24/06 8:15	LR	SM141			X									
SB	SM141SB02052406DL2	5/24/06 8:15	LR	SM141			X									
SD	A-SD-01	6/8/06 11:00	N	A-SD	X		X		X							
SD	A-SD-01DL	6/8/06 11:00	LR	A-SD		X	X									
SD	B-SD-02	6/8/06 12:05	N	B-SD	X		X		X							

TABLE 4-1
Chemical Analytical Methods – Field and Quality Control Samples
State Marine Superfund Site, Port Arthur, TX

Matrix	Sample ID	Date - Time Collected	Sample Type	Station ID	SVOCs	Low-Level PAHs	Total Metals	Dissolved Metals	TOC	TCLP VOCs / VOCs (IDW)	TCLP SVOCs / SVOCs (IDW)	TCLP Pesticides / Pesticides (IDW)	TCLP Herbicides / Herbicides (IDW)	TCLP Metals / Metals (IDW)	Paint Filter (IDW)	TPH (IDW)
SD	B-SD-02DL	6/8/06 12:05	LR	B-SD		X										
SD	C-SD-03	6/8/06 15:30	N	C-SD	X	X	X		X							
SD	D-SD-04	6/8/06 16:40	N	D-SD	X		X		X							
SD	D-SD-04DL	6/8/06 16:40	LR	D-SD		X										
SD	E-SD-05	6/8/06 14:20	N	E-SD			X		X							
SD	E-SD-05DL	6/8/06 14:20	LR	E-SD	X	X										
SD	F-SD-06	6/8/06 17:25	N	F-SD	X		X		X							
SD	F-SD-06DL	6/8/06 17:25	LR	F-SD		X										
SD	G-SD-07	6/9/06 10:50	N	G-SD	X	X	X		X							
SD	FD-01FD	6/9/06 10:15	FD	H-SD	X	X	X		X							
SD	H-SD-08	6/9/06 10:15	N	H-SD	X	X	X		X							
SD	I-SD-09	6/9/06 11:45	N	I-SD	X	X	X		X							
SD	WG215300-05DUP	6/8/06 11:00	LR	A-SD					X							
SS	SM140SB01052306	5/23/06 15:20	N	SM140	X		X									
SS	SM139SB01052306	5/23/06 14:05	N	SM139	X		X									
SS	SM139SB01052306DL	5/23/06 14:05	LR	SM139			X									
SS	SM136SB01052206	5/22/06 8:05	N	SM136	X		X									
SS	SM136SB01052206RE	5/22/06 8:05	LR	SM136	X											
SS	SM138SB01052306	5/23/06 11:20	N	SM138	X		X									
SS	SM142SB01052406	5/24/06 9:20	N	SM142	X		X									
SS	SM142SB01052406DL	5/24/06 9:20	LR	SM142			X									

TABLE 4-1
Chemical Analytical Methods – Field and Quality Control Samples
State Marine Superfund Site, Port Arthur, TX

Matrix	Sample ID	Date - Time Collected	Sample Type	Station ID	SVOCs	Low-Level PAHs	Total Metals	Dissolved Metals	TOC	TCLP VOCs / VOCs (IDW)	TCLP SVOCs / SVOCs (IDW)	TCLP Pesticides / Pesticides (IDW)	TCLP Herbicides / Herbicides (IDW)	TCLP Metals / Metals (IDW)	Paint Filter (IDW)	TPH (IDW)
SS	SM141SB01052406	5/24/06 7:50	N	SM141	X		X									
SS	SM141SB01052406DL	5/24/06 7:50	LR	SM141			X									
SS	SM141SB01052406RE	5/24/06 7:50	LR	SM141	X											
ST	IWSB01052406	5/24/06 13:50	N	IDW							X	X	X	X	X	X
ST	IWSB01052406DL	5/24/06 13:50	LR	IDW						X						
ST	WG214100-03DUP	5/24/06 13:50	LR	IDW											X	
WG	MW137FD01053106	5/31/06 19:50	FD	MW137	X	X	X									
WG	MW137FD01053106	5/31/06 19:50	FD	MW137				X								
WG	MW137GW01053106	5/31/06 19:50	N	MW137	X	X	X									
WG	MW137GW01053106	5/31/06 19:50	N	MW137				X								
WG	MW116BGW01053106	5/31/06 13:30	N	MW116B	X	X	X									
WG	MW116BGW01053106	5/31/06 13:30	N	MW116B				X								
WG	MW136GW01053106	5/31/06 20:25	N	MW136	X	X	X									
WG	MW136GW01053106	5/31/06 20:25	N	MW136				X								
WQ	SM138EB01052306	5/23/06 13:40	EB	FIELDQC	X		X									
WW	IWGW01053106	5/31/06 16:00	N	IDW	X					X		X	X	X		X
WW	IWGW01053106CF	5/31/06 16:00	LR	IDW								X				
WW	IWGW01053106RE	5/31/06 16:00	LR	IDW	X											
WW	IWGW01053106RE1	5/31/06 16:00	LR	IDW							X					

5. Sample Cross Reference Tables

Samples submitted to the analytical laboratories can be referenced by either the field assigned sample ID or the laboratory assigned ID. **Table 5-1** provides a cross-reference between these two identification methods in order of Sample ID and **Table 5-2** provides a cross-reference in order of Laboratory ID.

TABLE 5-1
Sample Cross Reference by Sample ID
State Marine Superfund Site, Port Arthur, TX

Sample ID	Laboratory ID	SDG	Sample Type	Matrix
SM137SB01052306	L0605548-08	L0605548	N	SB
SM137SB02052306	L0605548-17	L0605548	N	SB
SM137SB02052306DL	L0605548-17	L0605548	LR	SB
SM137SB02052306DL2	L0605548-17	L0605548	LR	SB
SM138FD03052306	L0605548-10	L0605548	FD	SB
SM138FD03052306DL	L0605548-10	L0605548	LR	SB
SM138SB02052306	L0605548-19	L0605548	N	SB
SM138SB02052306DL	L0605548-19	L0605548	LR	SB
SM138SB02052306RE	L0605548-19	L0605548	LR	SB
SM138SB03052306	L0605548-09	L0605548	N	SB
SM138SB03052306DL	L0605548-09	L0605548	LR	SB
SM139SB02052306	L0605548-13	L0605548	N	SB
SM139SB02052306DL	L0605548-13	L0605548	LR	SB
SM139SB03052306	L0605548-18	L0605548	N	SB
SM139SB03052306DL	L0605548-18	L0605548	LR	SB
SM140FD03052306	L0605548-04	L0605548	FD	SB
SM140FD03052306DL	L0605548-04	L0605548	LR	SB
SM140SB02052306	L0605548-01	L0605548	N	SB
SM140SB03052306	L0605548-05	L0605548	N	SB
SM140SB03052306DL	L0605548-05	L0605548	LR	SB
SM141FD03052406	L0605576-05	L0605576	FD	SB
SM141FD03052406DL	L0605576-05	L0605576	LR	SB
SM141SB02052406	L0605576-06	L0605576	N	SB
SM141SB02052406DL	L0605576-06	L0605576	LR	SB
SM141SB02052406DL2	L0605576-06	L0605576	LR	SB
SM141SB03052406	L0605576-04	L0605576	N	SB
SM141SB03052406DL	L0605576-04	L0605576	LR	SB
SM142SB02052406	L0605576-03	L0605576	N	SB

TABLE 5-1
Sample Cross Reference by Sample ID
State Marine Superfund Site, Port Arthur, TX

Sample ID	Laboratory ID	SDG	Sample Type	Matrix
SM142SB02052406DL	L0605576-03	L0605576	LR	SB
A-SD-01	L0606267-01	L0606267	N	SD
A-SD-01DL	L0606267-01	L0606267	LR	SD
B-SD-02	L0606267-02	L0606267	N	SD
B-SD-02DL	L0606267-02	L0606267	LR	SD
C-SD-03	L0606267-03	L0606267	N	SD
D-SD-04	L0606267-04	L0606267	N	SD
D-SD-04DL	L0606267-04	L0606267	LR	SD
E-SD-05	L0606267-05	L0606267	N	SD
E-SD-05DL	L0606267-05	L0606267	LR	SD
FD-01FD	L0606267-08	L0606267	FD	SD
F-SD-06	L0606267-06	L0606267	N	SD
F-SD-06DL	L0606267-06	L0606267	LR	SD
G-SD-07	L0606267-07	L0606267	N	SD
H-SD-08	L0606267-08	L0606267	N	SD
I-SD-09	L0606267-09	L0606267	N	SD
WG215300-05DUP	WG215300-05	L0606267	LR	SD
SM136SB01052206	L0605548-12	L0605548	N	SS
SM136SB01052206RE	L0605548-12	L0605548	LR	SS
SM138SB01052306	L0605548-14	L0605548	N	SS
SM139SB01052306	L0605548-11	L0605548	N	SS
SM139SB01052306DL	L0605548-11	L0605548	LR	SS
SM140SB01052306	L0605548-02	L0605548	N	SS
SM141SB01052406	L0605576-07	L0605576	N	SS
SM141SB01052406DL	L0605576-07	L0605576	LR	SS
SM141SB01052406RE	L0605576-07	L0605576	LR	SS
SM142SB01052406	L0605576-02	L0605576	N	SS
SM142SB01052406DL	L0605576-02	L0605576	LR	SS
IWSB01052406	L0605576-01	L0605576	N	ST
IWSB01052406DL	L0605576-01	L0605576	LR	ST
WG214100-03DUP	WG214100-03	L0605576	LR	ST
MW116BGW01053106	F189003	F1890	N	WG
MW116BGW01053106	F189003F	F1890	N	WG
MW136GW01053106	F189004	F1890	N	WG
MW136GW01053106	F189004F	F1890	N	WG
MW137FD01053106	F189001	F1890	FD	WG
MW137FD01053106	F189001F	F1890	FD	WG
MW137GW01053106	F189002	F1890	N	WG
MW137GW01053106	F189002F	F1890	N	WG

TABLE 5-1
Sample Cross Reference by Sample ID
State Marine Superfund Site, Port Arthur, TX

Sample ID	Laboratory ID	SDG	Sample Type	Matrix
SM138EB01052306	L0605548-03	L0605548	EB	WQ
IWGW01053106	L0606049-01	L0606049	N	WW
IWGW01053106CF	L0606049-01	L0606049	LR	WW
IWGW01053106RE	L0606049-01	L0606049	LR	WW
IWGW01053106RE1	L0606049-01	L0606049	LR	WW

TABLE 5-2
Sample Cross Reference by Laboratory ID
State Marine Superfund Site, Port Arthur, TX

Laboratory ID	Sample ID	SDG	Sample Type	Matrix
L0605548-01	SM140SB02052306	L0605548	N	SB
L0605548-04	SM140FD03052306	L0605548	FD	SB
L0605548-04	SM140FD03052306DL	L0605548	LR	SB
L0605548-05	SM140SB03052306	L0605548	N	SB
L0605548-05	SM140SB03052306DL	L0605548	LR	SB
L0605548-08	SM137SB01052306	L0605548	N	SB
L0605548-09	SM138SB03052306	L0605548	N	SB
L0605548-09	SM138SB03052306DL	L0605548	LR	SB
L0605548-10	SM138FD03052306	L0605548	FD	SB
L0605548-10	SM138FD03052306DL	L0605548	LR	SB
L0605548-13	SM139SB02052306	L0605548	N	SB
L0605548-13	SM139SB02052306DL	L0605548	LR	SB
L0605548-17	SM137SB02052306	L0605548	N	SB
L0605548-17	SM137SB02052306DL	L0605548	LR	SB
L0605548-17	SM137SB02052306DL2	L0605548	LR	SB
L0605548-18	SM139SB03052306	L0605548	N	SB
L0605548-18	SM139SB03052306DL	L0605548	LR	SB
L0605548-19	SM138SB02052306	L0605548	N	SB
L0605548-19	SM138SB02052306DL	L0605548	LR	SB
L0605548-19	SM138SB02052306RE	L0605548	LR	SB
L0605576-03	SM142SB02052406	L0605576	N	SB
L0605576-03	SM142SB02052406DL	L0605576	LR	SB
L0605576-04	SM141SB03052406	L0605576	N	SB
L0605576-04	SM141SB03052406DL	L0605576	LR	SB
L0605576-05	SM141FD03052406	L0605576	FD	SB
L0605576-05	SM141FD03052406DL	L0605576	LR	SB

TABLE 5-2
Sample Cross Reference by Laboratory ID
State Marine Superfund Site, Port Arthur, TX

Laboratory ID	Sample ID	SDG	Sample Type	Matrix
L0605576-06	SM141SB02052406	L0605576	N	SB
L0605576-06	SM141SB02052406DL	L0605576	LR	SB
L0605576-06	SM141SB02052406DL2	L0605576	LR	SB
L0606267-01	A-SD-01	L0606267	N	SD
L0606267-01	A-SD-01DL	L0606267	LR	SD
L0606267-02	B-SD-02	L0606267	N	SD
L0606267-02	B-SD-02DL	L0606267	LR	SD
L0606267-03	C-SD-03	L0606267	N	SD
L0606267-04	D-SD-04	L0606267	N	SD
L0606267-04	D-SD-04DL	L0606267	LR	SD
L0606267-05	E-SD-05	L0606267	N	SD
L0606267-05	E-SD-05DL	L0606267	LR	SD
L0606267-06	F-SD-06	L0606267	N	SD
L0606267-06	F-SD-06DL	L0606267	LR	SD
L0606267-07	G-SD-07	L0606267	N	SD
L0606267-08	FD-01FD	L0606267	FD	SD
L0606267-08	H-SD-08	L0606267	N	SD
L0606267-09	I-SD-09	L0606267	N	SD
WG215300-05	WG215300-05DUP	L0606267	LR	SD
L0605548-02	SM140SB01052306	L0605548	N	SS
L0605548-11	SM139SB01052306	L0605548	N	SS
L0605548-11	SM139SB01052306DL	L0605548	LR	SS
L0605548-12	SM136SB01052206	L0605548	N	SS
L0605548-12	SM136SB01052206RE	L0605548	LR	SS
L0605548-14	SM138SB01052306	L0605548	N	SS
L0605576-02	SM142SB01052406	L0605576	N	SS
L0605576-02	SM142SB01052406DL	L0605576	LR	SS
L0605576-07	SM141SB01052406	L0605576	N	SS
L0605576-07	SM141SB01052406DL	L0605576	LR	SS
L0605576-07	SM141SB01052406RE	L0605576	LR	SS
L0605576-01	IWSB01052406	L0605576	N	ST
L0605576-01	IWSB01052406DL	L0605576	LR	ST
WG214100-03	WG214100-03DUP	L0605576	LR	ST
F189001	MW137FD01053106	F1890	FD	WG
F189001F	MW137FD01053106	F1890	FD	WG
F189002	MW137GW01053106	F1890	N	WG
F189002F	MW137GW01053106	F1890	N	WG
F189003	MW116BGW01053106	F1890	N	WG
F189003F	MW116BGW01053106	F1890	N	WG

TABLE 5-2
Sample Cross Reference by Laboratory ID
State Marine Superfund Site, Port Arthur, TX

Laboratory ID	Sample ID	SDG	Sample Type	Matrix
F189004	MW136GW01053106	F1890	N	WG
F189004F	MW136GW01053106	F1890	N	WG
L0605548-03	SM138EB01052306	L0605548	EB	WQ
L0606049-01	IWGW01053106	L0606049	N	WW
L0606049-01	IWGW01053106CF	L0606049	LR	WW
L0606049-01	IWGW01053106RE	L0606049	LR	WW
L0606049-01	IWGW01053106RE1	L0606049	LR	WW

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6. Data Validation Summary

6.1 Semivolatile Organic Compounds

Four ground water samples, 10 sediment samples, 20 soil samples and 1 equipment rinsate blank were collected and analyzed by for SVOCs by GC/MS with a capillary column.

6.1.1 Preservation and Holding Times

Sample receipt conditions and dates and times of collection, extraction, and analysis were reviewed to determine if they achieved method requirements. All sample receipt conditions and holding times were found to be within acceptance criteria. No SVOC data were qualified due to non-compliant sample receipt condition or holding times.

6.1.2 GC/MS Tune / Instrument Performance Check

GC/MS tune/instrument performance check data were reviewed and found to be within acceptance criteria. No SVOC data were qualified due to poor GC/MS tune.

6.1.3 Calibrations

Initial calibration curves and continuing calibration verification standards were reviewed and found to be within acceptance criteria. No SVOC data were qualified due to poor calibration.

6.1.4 Blanks

Blank data were reviewed to assess potential contamination from non-site sources. No target analytes were detected in any method blanks or equipment rinsate blanks so no SVOC data were qualified due to blank contamination.

6.1.5 Deuterated Monitoring Compounds / Surrogates

Surrogates recoveries were reviewed and found to be within acceptance criteria. No SVOC data were qualified due to poor surrogate recovery.

6.1.6 Laboratory Control Samples

LCS data were reviewed and found to be within acceptance criteria. No SVOC data were qualified due to poor LCS recovery.

6.1.7 Matrix Spike / Matrix Spike Duplicates

Hexachlorocyclopentadiene and 2,4-dinitrophenol recovered below 10 percent in the MS/MSD performed on sample SM140SB03052306 and hexachlorocyclopentadiene, 2,4-dinitrophenol, and acenaphthylene recovered below 10 percent in the MS/MSD performed on sample C-SD-03. Associated results for these compounds in the native samples were rejected "R" due to extremely poor MS/MSD recoveries.

4,6-dinitro-2-methylphenol recovered below laboratory control limits but above 10 percent in the MS/MSD performed on sample SM140SB03052306; therefore the associated result for this compound in the native sample was qualified as "UJ", not detected above an estimated reporting limit.

All other MS/MSD recoveries and RPDs were within acceptance criteria.

6.1.8 Internal Standards

Internal standard data were reviewed and found to be within acceptance criteria. No SVOC data were qualified due to poor internal standard recovery.

6.1.9 Field Precision

Field duplicate data were reviewed to assess precision. Bis(2-ethylhexyl)phthalate in samples SM138SB03052306 and SM140SB03052306 and their field duplicates, SM138FD03052306 and SM140FD03052306, respectively exhibited precision outside acceptance criteria at 68.1% and 112% relative percent difference (RPD). Bis(2-ethylhexyl)phthalate for both the normal samples and the field duplicates were qualified as "J" estimated.

6.1.10 Completeness and Conclusions

A total of 5 SVOC results were rejected due to extremely poor matrix spike recovery as discussed above. Out of a total of 2,168 analytical SVOC results this gives the SVOC portion of the project data set a completeness of 99.8% – achieving the project completeness goal of 90%. With the exception of a single acenaphthylene result the compounds that were rejected are not considered to be primary constituents of concern at the site.

Multiple analytical runs resulted in several samples having multiple results for some compounds. The most valid of these results were used as the valid data point and the lesser valid results were excluded as "R-RE" as part of the data reduction process. These excluded results are listed in **Table 7-1** but since valid data points exist for these results these exclusions do not represent actual data rejections. A list of all SVOC data qualified during the data validation is presented in **Table 7-1**.

6.2 Low-Level PAHs

In addition to the full base-neutral and acid SVOCs list, all water and sediment samples were also analyzed separately for low-level PAHs by GC/MS operated in SIM mode.

6.2.1 Preservation and Holding Times

Sample receipt conditions and dates and times of collection, extraction, and analysis were reviewed to determine if they achieved method requirements. All sample receipt conditions and holding times were found to be within acceptance criteria. No PAH data were qualified due to non-compliant sample receipt condition or holding times.

6.2.2 GC/MS Tune / Instrument Performance Check

GC/MS tune/instrument performance check data were reviewed and found to be within acceptance criteria. No PAH data were qualified due to poor GC/MS tune.

6.2.3 Calibrations

Initial calibration curves and continuing calibration verification standards were reviewed and found to be within acceptance criteria. No PAH data were qualified due to poor calibration.

6.2.4 Blanks

Blank data were reviewed to assess potential contamination from non-site sources. No target analytes were detected in any method blanks or equipment rinsate blanks so no PAH data were qualified due to blank contamination.

6.2.5 Deuterated Monitoring Compounds / Surrogates

Surrogates recoveries were reviewed and found to be within acceptance criteria. No PAH data were qualified due to poor surrogate recovery.

6.2.6 Laboratory Control Samples

LCS data were reviewed and found to be within acceptance criteria. No PAH data were qualified due to poor LCS recovery.

6.2.7 Matrix Spike / Matrix Spike Duplicates

MS/MSD data were reviewed to assess potential matrix effects and also laboratory precision and were found to be within acceptance criteria; therefore no PAH data were qualified due to poor MS/MSD accuracy or precision.

6.2.8 Internal Standards

Internal standard data were reviewed and found to be within acceptance criteria. No PAH data were qualified due to poor internal standard recovery.

6.2.9 Field Precision

Field duplicate data were reviewed to assess precision. No PAH data were qualified due to field duplicate imprecision.

6.2.10 Completeness and Conclusions

No low-level PAH analysis by 8270-SIM were qualified due to QC issues giving the PAH SIM data set a completeness of 100 percent.

6.3 Total and Dissolved Metals

Ten sediment samples, five water samples, and 20 soil samples were collected and analyzed by ASL for total metals. Four water samples were collected and analyzed by ASL for dissolved metals.

6.3.1 Preservation and Holding Times

Sample receipt conditions and dates and times of analysis were reviewed to determine if they achieved method requirements. All sample receipt conditions and holding times were found to be within acceptance criteria; therefore no metals data were qualified due to non-compliant sample receipt condition or holding times.

6.3.2 Serial Dilution

Serial dilution data were reviewed to assess potential matrix effects. Serial dilutions for chromium, cobalt, manganese, sodium, and lead exhibited percent differences outside acceptance criteria indicating a potential matrix effect. Consequently, 6 metals results were qualified as "J" estimated due to serial dilution imprecision and are indicated with a validation reason of "SD" in **Table 7-1**.

6.3.3 Calibrations

Initial calibration curves and continuing calibration verification standards were reviewed and found to be within acceptance criteria. No metals data were qualified due to poor calibration.

6.3.4 Blanks

Aluminum, antimony, and silver were detected in initial and/or continuing calibration blanks associated with water samples. Consequently, 15 low-level detections for these metals were qualified as "U", not detected above the reported concentration and are indicated with a validation reason of "CB" in **Table 7-1**.

Arsenic was detected in the method blank associated with 6 water samples. Consequently, 1 associated low-level result for arsenic was qualified as "U", not detected above the reported concentration and 5 associated results for arsenic were qualified as "JH", estimated with a high bias. These qualified results are indicated with a validation reason of "MB" in **Table 7-1**.

6.3.5 Laboratory Control Samples

LCS data were reviewed and found to be within acceptance criteria. No metals data were qualified due to poor LCS recovery.

6.3.6 Matrix Spike / Matrix Spike Duplicates

MS/MSD data were reviewed to assess potential matrix effects and also laboratory precision.

Selenium recovered below 30 percent in the MS/MSD performed on sample SM140SB03052306DL, but the selenium recovery in the associated LCS was within

acceptance criteria. The selenium non-detect result in the native sample was rejected "R" and is indicated with a validation reason of "MS" in **Table 7-1**.

Antimony and cadmium recovered below laboratory acceptance criteria but above 30 percent in MS/MSDs associated with 2 soil samples and 1 sediment sample. One associated cadmium detection and 2 antimony detections were qualified as "JL", estimated with a low bias and one associated antimony non-detect result was qualified as "UJ", not detected above an estimated reporting limit. These qualified results are indicated with a validation reason of "MS" in **Table 7-1**.

Barium, chromium, potassium, and vanadium were recovered above laboratory acceptance criteria in MS/MSDs associated with 3 soil samples. Seven associated results for these metals were qualified as "JH", estimated with a high bias and are indicated with a validation reason of "MS" in **Table 7-1**.

Barium, calcium, manganese, nickel, lead, and zinc exhibited relative percent differences (RPDs) outside acceptance criteria in the MS/MSD performed on sample SM138SB01052306. Consequently, results for these metals in the native sample were qualified as "J" estimated due to MS/MSD imprecision and are indicated with a validation reason of "MD" in **Table 7-1**.

6.3.7 Field Duplicate Precision

Field duplicate data were reviewed to assess field sampling precision. Aluminum, iron, lead, and zinc exhibited RPDs outside acceptance criteria in a water field duplicate sample and barium, cadmium, calcium, cobalt, iron, lead, mercury, and zinc exhibited RPDs outside acceptance criteria in two soil field duplicates. These RPD exceedances resulted in the qualification of 7 metals results in water samples and 19 metals results in soil samples as "J" estimated and are indicated with a validation reason of "FD" in **Table 7-1**.

6.3.8 Completeness and Conclusions

Out of 822 metals results by 6010B only single selenium result was rejected, giving the 6010B metals portion of the data set a completeness of 99.88%.

A list of all metals data qualified during the data validation is presented in **Table 7-1**.

6.4 Total Organic Carbon

Ten sediment samples were collected and analyzed by Kemron for TOC.

6.4.1 Preservation and Holding Times

Sample receipt conditions and dates and times of analysis were reviewed to determine if they achieved method requirements. All samples were properly preserved and analyzed within the required holding times. No TOC data were qualified due to preservation or holding time.

6.4.2 Calibrations

Initial calibration curves and continuing calibration verification standards were reviewed and found to be within acceptance criteria. No TOC data were qualified due to poor calibration.

6.4.3 Blanks

Blank data were reviewed to assess potential contamination from non-site sources. No TOC was detected in any blank samples; therefore, no TOC data were qualified.

6.4.4 Laboratory Control Samples

LCS data were reviewed and found to be within acceptance criteria. No TOC data were qualified due to poor LCS recovery.

6.4.5 Matrix Spike / Matrix Spike Duplicates

MS/MSD data were reviewed and found to be within acceptance criteria. No TOC data were qualified due to poor MS/MSD recovery or precision.

6.4.6 Field Precision

Field duplicate data were reviewed and exhibited acceptable precision. No TOC data were qualified due to field duplicate imprecision.

6.4.7 Completeness and Conclusions

No TOC data were rejected or otherwise qualified during the data validation process giving the TOC portion of the data set a completeness of 100%. No data validation flags were applied to any TOC data points and the data can be used as reported by the laboratory.

6.5 IDW Analysis – Paint Filter

One solid IDW sample was collected and analyzed by Kemron for paint filter / free liquids analysis by SW-846 method 9095. All method-specified QC acceptance criteria was achieved and no results were qualified during validation.

6.6 IDW Analysis - TPH

One solid IDW sample and one liquid waste IDW sample were collected and analyzed by Kemron for TPH by TCEQ method TX1005.

6.6.1 Preservation and Holding Times

Sample receipt conditions and dates and times of analysis were reviewed to determine if they achieved method requirements. All samples were properly preserved and analyzed within the required holding times. No TPH data were qualified due to preservation or holding time.

6.6.2 Blanks

TPH was not detected in any blanks at levels that would have impacted analytical results.

6.6.3 Deuterated Monitoring Compounds / Surrogates

Surrogates recoveries were reviewed and found to be within acceptance criteria. No GRO or DRO data were qualified due to poor surrogate recovery.

6.6.4 Laboratory Control Samples

LCS data were reviewed and found to be within acceptance criteria. No GRO or DRO data were qualified due to poor LCS recovery.

6.6.5 Matrix Spike / Matrix Spike Duplicates

No project-specific MS/MSDs were analyzed in association with the GRO/DRO analyses.

6.6.6 Field Precision

No field duplicates were analyzed in association with the GRO/DRO analyses.

6.6.7 Calibrations

Initial calibration curves were reviewed and found to be within acceptance criteria; however TPH was recovered below criteria in a continuing calibration verification standard which result in the qualification of the TPH results for sample IWSB01052406 as "UJ", not detected above an estimated reporting limit.

6.6.8 Completeness and Conclusions

No TPH data were rejected giving the DRO and GRO portion of the data set a completeness of 100%. The only QC issue encountered that resulted in data qualification was a low CCV recovery which resulted in the qualification of the TPH non-detect results in a single sample as "UJ". All other QC measures were within acceptance criteria.

A list of the TPH data qualified during the data validation is presented in **Table 7-1**.

6.7 IDW Analysis – TCLP Analyses

One solid IDW sample and one liquid IDW samples were collected and analyzed by Kemron for waste characterization analyses. The solid sample was analyzed for TCLP VOCs, TCLP SVOCs, TCLP Pesticides, TCLP Herbicides, and TCLP Metals. The liquid sample was analyzed for total VOCs, SVOCs, pesticides, herbicides, and metals. The IDW TCLP data underwent a level II review that included the measures listed below.

6.7.1 Preservation and Holding Times

Sample receipt conditions and dates and times of analysis were reviewed to determine if they achieved method requirements. All samples were properly preserved and analyzed within the required holding times with the exception of the liquid IDW sample which was reextracted slightly outside of holding time due to a LCS failure which is detailed in **Section**

6.7.3. Consequently, the pyridine non-detect result for the IDW sample was qualified as "UJ", not detected above an estimated reporting limit.

6.7.2 Blanks

Blank data were reviewed to assess potential contamination from non-site sources. No target analytes were detected in any blank samples at concentrations that would impact any sample results; therefore, no IDW sample data were qualified due to blank contamination.

6.7.3 Laboratory Control Samples

LCS data were reviewed and found to be within acceptance criteria with the exception of pyridine, which was not recovered in the initial analysis of the LCS associated with the liquid IDW sample. The IDW sample and the liquid LCS were reextracted and reanalyzed again with failing recoveries for pyridine. The liquid IDW sample and LCS were reextracted slightly outside of holding time by a different extraction method and reanalyzed a third time with acceptable recoveries so no data gap resulted. The initial pyridine result was excluded as "R" with a validation reason of "RE" in **Table 7-1** to indicate it was reanalyzed successfully. All results from the second analyses were excluded as "R-RE" and the pyridine result from the third analysis was used and qualified as "UJ" detailed in **Section 6.7.1**.

6.7.4 Matrix Spike / Matrix Spike Duplicates

No project-specific MS/MSDs were analyzed in association with the TCLP metals analyses.

6.7.5 Field Precision

No field duplicates were analyzed in association with the TCLP metals analyses.

6.7.6 Completeness and Conclusions

No IDW TCLP/total data were rejected due to QC failures giving the IDW TCLP portion of the data set a completeness of 100%. The only QC issue encountered was a LCS failure for pyridine associated with the liquid IDW which was resolved but resulted in a holding time exceedance which caused the liquid IDW pyridine result to be qualified as "UJ".

6.8 Final Conclusions

Overall, the quality of the analytical data was found to be within the QC limits established by the project DQOs, the analytical methods, and the guidelines presented in USEPA's *National Functional Guidelines.*

Six non-detect results were rejected due to extremely poor MS/MSD recovery – 1 selenium result and 2 SVOC results in sample SM140SB03052306, and 3 SVOC results in sample C-SD-03. Other MS/MSD data and LCS data suggested that these poor MS/MSD recoveries were isolated occurrences.

The project completeness goal was achieved for the overall data set and for each individual analytical method and sample matrix as well.

Aside from the six rejected data points discussed above the other QC issues encountered were relatively minor and included the following:

- Minor blank contamination with metals
- Low recovery in one CCV for TPH
- One extraction holding time exceedance for a single pyridine result in an IDW sample
- Minor serial dilution exceedance for chromium, cobalt, manganese, sodium, and lead
- Field duplicate imprecision in soil samples due to soil heterogeneity and isolated imprecision in water samples
- Minor recoveries and RPDs outside criteria in soil MS/MSDs

All analytical results qualified during the data quality review are listed in **Table 1**. All sample results, with the exception of those qualified as "R", may be used to support project decisions.

6.9 Assertions

I have performed and/or overseen the review of the analytical data submitted in support of the State Marine Superfund Site Supplemental RI as discussed in this DQE report. The results of the review indicate that the data are usable as qualified during the validation and shown in the "Qualified Result" column in **Table 7-1**.

John Ynfante 07/12/06

John Ynfante Date

RAC 2 Program Chemist

7. Qualified Data Table

A summary of all data qualified during the data validation process is listed in **Table 7-1** below.

TABLE 7-1
Qualified Data Table
State Marine Superfund Site, Port Arthur, TX

SDG	Sample ID	Parameter	Initial Result	Qualified Result	Units	Validation Reason
F1890	MW116BGW01053106	Aluminum	82.3 B	82.3 U	UG/L	CB
F1890	MW116BGW01053106	Antimony	7.08 B	7.08 U	UG/L	CB
F1890	MW136GW01053106	Antimony	3.44 B	3.44 U	UG/L	CB
F1890	MW137FD01053106	Antimony	3.6 B	3.6 U	UG/L	CB
F1890	MW136GW01053106	Silver	5.12 B	5.12 U	UG/L	CB
F1890	MW137FD01053106	Silver	3.36 B	3.36 U	UG/L	CB
F1890	MW137GW01053106	Silver	2.35 B	2.35 U	UG/L	CB
F1890	MW137FD01053106	Aluminum	4790 =	4790 J	UG/L	FD
F1890	MW137GW01053106	Aluminum	866 =	866 J	UG/L	FD
L0605548	SM138FD03052306	Barium	74 =	74 J	mg/kg	FD
L0605548	SM138SB03052306	Barium	49.9 =	49.9 J	mg/kg	FD
L0605548	SM138FD03052306	Calcium	4890 =	4890 J	mg/kg	FD
L0605548	SM138SB03052306	Calcium	1760 =	1760 J	mg/kg	FD
L0605548	SM140FD03052306	Calcium	2330 =	2330 J	mg/kg	FD
L0605548	SM140SB03052306	Calcium	4250 =	4250 J	mg/kg	FD
L0605548	SM140FD03052306	Cadmium	0.635 =	0.635 J	mg/kg	FD
L0605548	SM140FD03052306	Cobalt	7.1 =	7.1 J	mg/kg	FD
L0605548	SM140SB03052306	Cobalt	7.36 =	7.36 J	mg/kg	FD
F1890	MW137FD01053106	Iron	5910 =	5910 J	UG/L	FD
F1890	MW137GW01053106	Iron	1500 =	1500 J	UG/L	FD
L0605548	SM140FD03052306	Iron	14100 =	14100 J	mg/kg	FD
L0605548	SM140SB03052306	Iron	22400 =	22400 J	mg/kg	FD
L0605548	SM140SB03052306	Mercury	0.532 =	0.532 J	mg/kg	FD
F1890	MW137FD01053106	Lead	18.5 =	18.5 J	UG/L	FD

TABLE 7-1
Qualified Data Table
State Marine Superfund Site, Port Arthur, TX

SDG	Sample ID	Parameter	Initial Result	Qualified Result	Units	Validation Reason
L0605548	SM138FD03052306	Lead	23.7 =	23.7 J	mg/kg	FD
L0605548	SM138SB03052306	Lead	9.68 =	9.68 J	mg/kg	FD
L0605548	SM140FD03052306	Lead	42.5 =	42.5 J	mg/kg	FD
L0605548	SM140SB03052306	Lead	75.6 =	75.6 J	mg/kg	FD
F1890	MW137FD01053106	Zinc	135 =	135 J	UG/L	FD
F1890	MW137GW01053106	Zinc	70.9 =	70.9 J	UG/L	FD
L0605548	SM138FD03052306	Zinc	60 =	60 J	mg/kg	FD
L0605548	SM138SB03052306	Zinc	37.8 =	37.8 J	mg/kg	FD
F1890	MW116BGW01053106	Arsenic	12.7 =	12.7 JH	UG/L	MB
F1890	MW136GW01053106	Arsenic	22.3 =	22.3 JH	UG/L	MB
F1890	MW137FD01053106	Arsenic	17.2 =	17.2 JH	UG/L	MB
F1890	MW137GW01053106	Arsenic	22.7 =	22.7 JH	UG/L	MB
L0605548	SM138SB01052306	Barium	301 =	301 J	mg/kg	MD
L0605548	SM138SB01052306	Calcium	33000 =	33000 J	mg/kg	MD
L0605548	SM138SB01052306	Manganese	134 =	134 J	mg/kg	MD
L0605548	SM138SB01052306	Nickel	11.4 =	11.4 J	mg/kg	MD
L0605548	SM138SB01052306	Lead	59.7 =	59.7 J	mg/kg	MD
L0605548	SM138SB01052306	Zinc	287 =	287 J	mg/kg	MD
L0605548	SM140SB03052306	Antimony	0.626 U	0.626 UJ	mg/kg	MS
L0605548	SM138SB01052306	Antimony	1.84 J	1.84 JL	mg/kg	MS
L0606267	C-SD-03	Antimony	0.237 =	0.237 JL	mg/kg	MS
L0605548	SM140SB03052306	Barium	59.6 =	59.6 JH	mg/kg	MS
L0605548	SM140SB03052306	Chromium, Total	12.3 =	12.3 JH	mg/kg	MS
L0605548	SM140SB03052306	Potassium	1670 =	1670 JH	mg/kg	MS
L0606267	C-SD-03	Potassium	3200 =	3200 JH	mg/kg	MS
L0605548	SM140SB03052306DL	Selenium	6.26 U	6.26 R	mg/kg	MS
L0605548	SM140SB03052306	Vanadium	20.1 =	20.1 JH	mg/kg	MS
L0605548	SM138SB01052306	Vanadium	21.3 =	21.3 JH	mg/kg	MS
L0606267	C-SD-03	Vanadium	30.2 =	30.2 JH	mg/kg	MS
L0605548	SM140SB03052306	Cadmium	1.13 =	1.13 JL	mg/kg	MS, FD

TABLE 7-1
Qualified Data Table
State Marine Superfund Site, Port Arthur, TX

SDG	Sample ID	Parameter	Initial Result	Qualified Result	Units	Validation Reason
L0605548	SM140SB02052306	Chromium, Total	20.9 =	20.9 J	mg/kg	SD
L0605548	SM140SB02052306	Cobalt	6.64 =	6.64 J	mg/kg	SD
L0605548	SM140SB02052306	Manganese	191 =	191 J	mg/kg	SD
L0605576	SM142SB01052406	Manganese	299 =	299 J	mg/kg	SD
F1890	MW136GW01053106	Sodium	1720000 =	1720000 J	UG/L	SD
L0605548	SM140SB02052306	Lead	120 =	120 J	mg/kg	SD
F1890	MW116BGW01053106	Aluminum	52.4 B	52.4 U	UG/L	CB
F1890	MW136GW01053106	Aluminum	43.8 B	43.8 U	UG/L	CB
F1890	MW137FD01053106	Aluminum	62.3 B	62.3 U	UG/L	CB
F1890	MW137GW01053106	Aluminum	42.2 B	42.2 U	UG/L	CB
F1890	MW116BGW01053106	Antimony	3.24 B	3.24 U	UG/L	CB
F1890	MW136GW01053106	Silver	2.59 B	2.59 U	UG/L	CB
F1890	MW137FD01053106	Silver	2.77 B	2.77 U	UG/L	CB
F1890	MW137GW01053106	Silver	1.55 B	1.55 U	UG/L	CB
F1890	MW116BGW01053106	Arsenic	9.32 B	9.32 U	UG/L	MB
F1890	MW136GW01053106	Arsenic	14.1 =	14.1 JH	UG/L	MB
F1890	MW136GW01053106	Sodium	1550000 =	1550000 J	UG/L	SD
L0605576	IWSB01052406	Petroleum hydrocarbons C12-C28	35.8 U	35.8 UJ	mg/kg	CC
L0605576	IWSB01052406	Petroleum hydrocarbons C28-C35	35.8 U	35.8 UJ	mg/kg	CC
L0605576	IWSB01052406	Petroleum hydrocarbons C6-C12	35.8 U	35.8 UJ	mg/kg	CC
L0605548	SM138FD03052306	bis(2-ETHYLHEXYL) PHTHALATE	998 =	998 J	ug/kg	FD
L0605548	SM138SB03052306	bis(2-ETHYLHEXYL) PHTHALATE	491 =	491 J	ug/kg	FD
L0605548	SM140FD03052306	bis(2-ETHYLHEXYL) PHTHALATE	491 =	491 J	ug/kg	FD
L0606049	IWGW01053106RE1	Pyridine	291 U	291 UJ	ug/L	HT
L0605548	SM140SB03052306	2,4-DINITROPHENOL	508 U	508 R	ug/kg	MS
L0606267	C-SD-03	2,4-DINITROPHENOL	792 U	792 R	ug/kg	MS
L0605548	SM140SB03052306	4,6-DINITRO-2-METHYLPHENOL	508 U	508 UJ	ug/kg	MS
L0606267	C-SD-03	ACENAPHTHYLENE	5.96 U	5.96 R	ug/kg	MS
L0605548	SM140SB03052306	HEXACHLOROCYCLOPENTADIENE	127 U	127 R	ug/kg	MS
L0606267	C-SD-03	HEXACHLOROCYCLOPENTADIENE	198 U	198 R	ug/kg	MS

TABLE 7-1
Qualified Data Table
State Marine Superfund Site, Port Arthur, TX

SDG	Sample ID	Parameter	Initial Result	Qualified Result	Units	Validation Reason
L0605548	SM138SB02052306RE	1,2,4,5-TETRACHLOROBENZENE	1420 U	1420 R	ug/kg	RE
L0605548	SM136SB01052206	1,2,4,5-TETRACHLOROBENZENE	1060 U	1060 R	ug/kg	RE
L0605576	SM141SB01052406	1,2,4,5-TETRACHLOROBENZENE	103 U	103 R	ug/kg	RE
L0606049	IWGW01053106RE	1,4-Dichlorobenzene	26 U	26 R	ug/L	RE
L0605548	SM138SB02052306	2,4,5-TRICHLOROPHENOL	725 U	725 R	ug/kg	RE
L0605548	SM136SB01052206	2,4,5-TRICHLOROPHENOL	1060 U	1060 R	ug/kg	RE
L0605576	SM141SB01052406	2,4,5-TRICHLOROPHENOL	103 U	103 R	ug/kg	RE
L0606049	IWGW01053106RE	2,4,5-TRICHLOROPHENOL	26 U	26 R	ug/L	RE
L0605548	SM138SB02052306	2,4,6-TRICHLOROPHENOL	725 U	725 R	ug/kg	RE
L0605548	SM136SB01052206	2,4,6-TRICHLOROPHENOL	1060 U	1060 R	ug/kg	RE
L0605576	SM141SB01052406	2,4,6-TRICHLOROPHENOL	103 U	103 R	ug/kg	RE
L0606049	IWGW01053106RE	2,4,6-TRICHLOROPHENOL	26 U	26 R	ug/L	RE
L0605548	SM138SB02052306	2,4-DICHLOROPHENOL	725 U	725 R	ug/kg	RE
L0605548	SM136SB01052206	2,4-DICHLOROPHENOL	1060 U	1060 R	ug/kg	RE
L0605576	SM141SB01052406	2,4-DICHLOROPHENOL	103 U	103 R	ug/kg	RE
L0605548	SM138SB02052306	2,4-DIMETHYLPHENOL	725 U	725 R	ug/kg	RE
L0605548	SM136SB01052206	2,4-DIMETHYLPHENOL	1060 U	1060 R	ug/kg	RE
L0605576	SM141SB01052406	2,4-DIMETHYLPHENOL	103 U	103 R	ug/kg	RE
L0605548	SM138SB02052306	2,4-DINITROPHENOL	2900 U	2900 R	ug/kg	RE
L0605548	SM136SB01052206	2,4-DINITROPHENOL	4230 U	4230 R	ug/kg	RE
L0605576	SM141SB01052406	2,4-DINITROPHENOL	410 U	410 R	ug/kg	RE
L0605548	SM138SB02052306RE	2,4-DINITROTOLUENE	1420 U	1420 R	ug/kg	RE
L0605548	SM136SB01052206	2,4-DINITROTOLUENE	1060 U	1060 R	ug/kg	RE
L0605576	SM141SB01052406	2,4-DINITROTOLUENE	103 U	103 R	ug/kg	RE
L0606049	IWGW01053106RE	2,4-DINITROTOLUENE	26 U	26 R	ug/L	RE
L0605548	SM138SB02052306RE	2,6-DINITROTOLUENE	1420 U	1420 R	ug/kg	RE
L0605548	SM136SB01052206	2,6-DINITROTOLUENE	1060 U	1060 R	ug/kg	RE
L0605576	SM141SB01052406	2,6-DINITROTOLUENE	103 U	103 R	ug/kg	RE
L0605548	SM138SB02052306RE	2-CHLORONAPHTHALENE	1420 U	1420 R	ug/kg	RE
L0605548	SM136SB01052206	2-CHLORONAPHTHALENE	1060 U	1060 R	ug/kg	RE

TABLE 7-1
Qualified Data Table
State Marine Superfund Site, Port Arthur, TX

SDG	Sample ID	Parameter	Initial Result	Qualified Result	Units	Validation Reason
L0605576	SM141SB01052406	2-CHLORONAPHTHALENE	103 U	103 R	ug/kg	RE
L0605548	SM138SB02052306	2-CHLOROPHENOL	725 U	725 R	ug/kg	RE
L0605548	SM136SB01052206	2-CHLOROPHENOL	1060 U	1060 R	ug/kg	RE
L0605576	SM141SB01052406	2-CHLOROPHENOL	103 U	103 R	ug/kg	RE
L0605548	SM138SB02052306RE	2-METHYLNAPHTHALENE	1420 U	1420 R	ug/kg	RE
L0605548	SM136SB01052206	2-METHYLNAPHTHALENE	1060 U	1060 R	ug/kg	RE
L0605576	SM141SB01052406	2-METHYLNAPHTHALENE	103 U	103 R	ug/kg	RE
L0605548	SM138SB02052306	2-METHYLPHENOL (o-CRESOL)	725 U	725 R	ug/kg	RE
L0605548	SM136SB01052206	2-METHYLPHENOL (o-CRESOL)	1060 U	1060 R	ug/kg	RE
L0605576	SM141SB01052406	2-METHYLPHENOL (o-CRESOL)	103 U	103 R	ug/kg	RE
L0606049	IWGW01053106RE	2-METHYLPHENOL (o-CRESOL)	26 U	26 R	ug/L	RE
L0605548	SM138SB02052306RE	2-NITROANILINE	5670 U	5670 R	ug/kg	RE
L0605548	SM136SB01052206	2-NITROANILINE	4230 U	4230 R	ug/kg	RE
L0605576	SM141SB01052406	2-NITROANILINE	410 U	410 R	ug/kg	RE
L0605548	SM138SB02052306	2-NITROPHENOL	725 U	725 R	ug/kg	RE
L0605548	SM136SB01052206	2-NITROPHENOL	1060 U	1060 R	ug/kg	RE
L0605576	SM141SB01052406	2-NITROPHENOL	103 U	103 R	ug/kg	RE
L0605548	SM138SB02052306RE	3,3'-DICHLOROBENZIDINE	2840 U	2840 R	ug/kg	RE
L0605548	SM136SB01052206	3,3'-DICHLOROBENZIDINE	2120 U	2120 R	ug/kg	RE
L0605576	SM141SB01052406	3,3'-DICHLOROBENZIDINE	205 U	205 R	ug/kg	RE
L0605548	SM138SB02052306RE	3-NITROANILINE	5670 U	5670 R	ug/kg	RE
L0605548	SM136SB01052206	3-NITROANILINE	4230 U	4230 R	ug/kg	RE
L0605576	SM141SB01052406	3-NITROANILINE	410 U	410 R	ug/kg	RE
L0605548	SM138SB02052306	4,6-DINITRO-2-METHYLPHENOL	2900 U	2900 R	ug/kg	RE
L0605548	SM136SB01052206	4,6-DINITRO-2-METHYLPHENOL	4230 U	4230 R	ug/kg	RE
L0605576	SM141SB01052406	4,6-DINITRO-2-METHYLPHENOL	410 U	410 R	ug/kg	RE
L0605548	SM138SB02052306RE	4-BROMOPHENYL PHENYL ETHER	1420 U	1420 R	ug/kg	RE
L0605548	SM136SB01052206	4-BROMOPHENYL PHENYL ETHER	1060 U	1060 R	ug/kg	RE
L0605576	SM141SB01052406	4-BROMOPHENYL PHENYL ETHER	103 U	103 R	ug/kg	RE
L0605548	SM138SB02052306	4-CHLORO-3-METHYLPHENOL	725 U	725 R	ug/kg	RE

TABLE 7-1
Qualified Data Table
State Marine Superfund Site, Port Arthur, TX

SDG	Sample ID	Parameter	Initial Result	Qualified Result	Units	Validation Reason
L0605548	SM136SB01052206	4-CHLORO-3-METHYLPHENOL	1060 U	1060 R	ug/kg	RE
L0605576	SM141SB01052406	4-CHLORO-3-METHYLPHENOL	103 U	103 R	ug/kg	RE
L0605548	SM138SB02052306RE	4-CHLOROANILINE	1420 U	1420 R	ug/kg	RE
L0605548	SM136SB01052206	4-CHLOROANILINE	1060 U	1060 R	ug/kg	RE
L0605576	SM141SB01052406	4-CHLOROANILINE	103 U	103 R	ug/kg	RE
L0605548	SM138SB02052306RE	4-CHLOROPHENYL PHENYL ETHER	1420 U	1420 R	ug/kg	RE
L0605548	SM136SB01052206	4-CHLOROPHENYL PHENYL ETHER	1060 U	1060 R	ug/kg	RE
L0605576	SM141SB01052406	4-CHLOROPHENYL PHENYL ETHER	103 U	103 R	ug/kg	RE
L0605548	SM138SB02052306RE	4-NITROANILINE	5670 U	5670 R	ug/kg	RE
L0605548	SM136SB01052206	4-NITROANILINE	4230 U	4230 R	ug/kg	RE
L0605576	SM141SB01052406	4-NITROANILINE	410 U	410 R	ug/kg	RE
L0605548	SM138SB02052306	4-NITROPHENOL	2900 U	2900 R	ug/kg	RE
L0605548	SM136SB01052206	4-NITROPHENOL	4230 U	4230 R	ug/kg	RE
L0605576	SM141SB01052406	4-NITROPHENOL	410 U	410 R	ug/kg	RE
F1890	MW116BGW01053106	ACENAPHTHENE	1.84 J	1.84 R	UG/L	RE
F1890	MW136GW01053106	ACENAPHTHENE	0.656 U	0.656 R	UG/L	RE
F1890	MW137FD01053106	ACENAPHTHENE	0.597 U	0.597 R	UG/L	RE
F1890	MW137GW01053106	ACENAPHTHENE	0.545 U	0.545 R	UG/L	RE
L0605548	SM138SB02052306RE	ACENAPHTHENE	1420 U	1420 R	ug/kg	RE
L0605548	SM136SB01052206	ACENAPHTHENE	1060 U	1060 R	ug/kg	RE
L0605576	SM141SB01052406	ACENAPHTHENE	103 U	103 R	ug/kg	RE
F1890	MW116BGW01053106	ACENAPHTHYLENE	0.72 U	0.72 R	UG/L	RE
F1890	MW136GW01053106	ACENAPHTHYLENE	0.811 U	0.811 R	UG/L	RE
F1890	MW137FD01053106	ACENAPHTHYLENE	0.738 U	0.738 R	UG/L	RE
F1890	MW137GW01053106	ACENAPHTHYLENE	0.674 U	0.674 R	UG/L	RE
L0605548	SM138SB02052306RE	ACENAPHTHYLENE	1420 U	1420 R	ug/kg	RE
L0605548	SM136SB01052206	ACENAPHTHYLENE	1060 U	1060 R	ug/kg	RE
L0605576	SM141SB01052406	ACENAPHTHYLENE	103 U	103 R	ug/kg	RE
L0605548	SM138SB02052306RE	ACETOPHENONE	1420 U	1420 R	ug/kg	RE
L0605548	SM136SB01052206RE	ACETOPHENONE	950 U	950 R	ug/kg	RE

TABLE 7-1
Qualified Data Table
State Marine Superfund Site, Port Arthur, TX

SDG	Sample ID	Parameter	Initial Result	Qualified Result	Units	Validation Reason
L0605576	SM141SB01052406	ACETOPHENONE	103 U	103 R	ug/kg	RE
F1890	MW116BGW01053106	ANTHRACENE	0.697 U	0.697 R	UG/L	RE
F1890	MW136GW01053106	ANTHRACENE	0.785 U	0.785 R	UG/L	RE
F1890	MW137FD01053106	ANTHRACENE	0.714 U	0.714 R	UG/L	RE
F1890	MW137GW01053106	ANTHRACENE	0.652 U	0.652 R	UG/L	RE
L0605548	SM138SB02052306RE	ANTHRACENE	1420 U	1420 R	ug/kg	RE
L0605548	SM136SB01052206	ANTHRACENE	1060 U	1060 R	ug/kg	RE
L0605576	SM141SB01052406	ANTHRACENE	103 U	103 R	ug/kg	RE
L0605548	SM138SB02052306RE	ATRAZINE	1420 U	1420 R	ug/kg	RE
L0605548	SM136SB01052206	ATRAZINE	971 U	971 R	ug/kg	RE
L0605576	SM141SB01052406	ATRAZINE	103 U	103 R	ug/kg	RE
L0605548	SM138SB02052306RE	Benzaldehyde	1420 U	1420 R	ug/kg	RE
L0605548	SM136SB01052206	Benzaldehyde	971 U	971 R	ug/kg	RE
L0605576	SM141SB01052406	Benzaldehyde	103 U	103 R	ug/kg	RE
F1890	MW116BGW01053106	BENZO(a)ANTHRACENE	0.563 U	0.563 R	UG/L	RE
F1890	MW136GW01053106	BENZO(a)ANTHRACENE	0.633 U	0.633 R	UG/L	RE
F1890	MW137FD01053106	BENZO(a)ANTHRACENE	0.576 U	0.576 R	UG/L	RE
F1890	MW137GW01053106	BENZO(a)ANTHRACENE	0.526 U	0.526 R	UG/L	RE
L0605548	SM138SB02052306RE	BENZO(a)ANTHRACENE	1420 U	1420 R	ug/kg	RE
L0605548	SM136SB01052206	BENZO(a)ANTHRACENE	1060 U	1060 R	ug/kg	RE
L0605576	SM141SB01052406	BENZO(a)ANTHRACENE	103 U	103 R	ug/kg	RE
F1890	MW116BGW01053106	BENZO(a)PYRENE	0.66 U	0.66 R	UG/L	RE
F1890	MW136GW01053106	BENZO(a)PYRENE	0.743 U	0.743 R	UG/L	RE
F1890	MW137FD01053106	BENZO(a)PYRENE	0.676 U	0.676 R	UG/L	RE
F1890	MW137GW01053106	BENZO(a)PYRENE	0.618 U	0.618 R	UG/L	RE
L0605548	SM138SB02052306RE	BENZO(a)PYRENE	1420 U	1420 R	ug/kg	RE
L0605548	SM136SB01052206	BENZO(a)PYRENE	1060 U	1060 R	ug/kg	RE
L0605576	SM141SB01052406	BENZO(a)PYRENE	103 U	103 R	ug/kg	RE
F1890	MW116BGW01053106	BENZO(b)FLUORANTHENE	0.702 U	0.702 R	UG/L	RE
F1890	MW136GW01053106	BENZO(b)FLUORANTHENE	0.791 U	0.791 R	UG/L	RE

TABLE 7-1
Qualified Data Table
State Marine Superfund Site, Port Arthur, TX

SDG	Sample ID	Parameter	Initial Result	Qualified Result	Units	Validation Reason
F1890	MW137FD01053106	BENZO(b)FLUORANTHENE	0.719 U	0.719 R	UG/L	RE
F1890	MW137GW01053106	BENZO(b)FLUORANTHENE	0.657 U	0.657 R	UG/L	RE
L0605548	SM138SB02052306RE	BENZO(b)FLUORANTHENE	1420 U	1420 R	ug/kg	RE
L0605548	SM136SB01052206	BENZO(b)FLUORANTHENE	1060 U	1060 R	ug/kg	RE
L0605576	SM141SB01052406	BENZO(b)FLUORANTHENE	103 U	103 R	ug/kg	RE
F1890	MW116BGW01053106	BENZO(g,h,i)PERYLENE	0.615 U	0.615 R	UG/L	RE
F1890	MW136GW01053106	BENZO(g,h,i)PERYLENE	0.692 U	0.692 R	UG/L	RE
F1890	MW137FD01053106	BENZO(g,h,i)PERYLENE	0.63 U	0.63 R	UG/L	RE
F1890	MW137GW01053106	BENZO(g,h,i)PERYLENE	0.575 U	0.575 R	UG/L	RE
L0605548	SM138SB02052306RE	BENZO(g,h,i)PERYLENE	1420 U	1420 R	ug/kg	RE
L0605548	SM136SB01052206	BENZO(g,h,i)PERYLENE	1060 U	1060 R	ug/kg	RE
L0605576	SM141SB01052406	BENZO(g,h,i)PERYLENE	103 U	103 R	ug/kg	RE
F1890	MW116BGW01053106	BENZO(k)FLUORANTHENE	0.736 U	0.736 R	UG/L	RE
F1890	MW136GW01053106	BENZO(k)FLUORANTHENE	0.828 U	0.828 R	UG/L	RE
F1890	MW137FD01053106	BENZO(k)FLUORANTHENE	0.753 U	0.753 R	UG/L	RE
F1890	MW137GW01053106	BENZO(k)FLUORANTHENE	0.688 U	0.688 R	UG/L	RE
L0605548	SM138SB02052306RE	BENZO(k)FLUORANTHENE	1420 U	1420 R	ug/kg	RE
L0605548	SM136SB01052206	BENZO(k)FLUORANTHENE	1060 U	1060 R	ug/kg	RE
L0605576	SM141SB01052406	BENZO(k)FLUORANTHENE	103 U	103 R	ug/kg	RE
L0605548	SM138SB02052306RE	BENZYL BUTYL PHTHALATE	1420 U	1420 R	ug/kg	RE
L0605548	SM136SB01052206	BENZYL BUTYL PHTHALATE	1060 U	1060 R	ug/kg	RE
L0605576	SM141SB01052406	BENZYL BUTYL PHTHALATE	103 U	103 R	ug/kg	RE
L0605548	SM138SB02052306RE	BIPHENYL (DIPHENYL)	1440 U	1440 R	ug/kg	RE
L0605548	SM136SB01052206	BIPHENYL (DIPHENYL)	971 U	971 R	ug/kg	RE
L0605576	SM141SB01052406	BIPHENYL (DIPHENYL)	103 U	103 R	ug/kg	RE
L0605548	SM138SB02052306RE	bis(2-CHLOROETHOXY) METHANE	1420 U	1420 R	ug/kg	RE
L0605548	SM136SB01052206	bis(2-CHLOROETHOXY) METHANE	1060 U	1060 R	ug/kg	RE
L0605576	SM141SB01052406	bis(2-CHLOROETHOXY) METHANE	103 U	103 R	ug/kg	RE
L0605548	SM138SB02052306RE	bis(2-CHLOROETHYL) ETHER	1420 U	1420 R	ug/kg	RE
L0605548	SM136SB01052206	bis(2-CHLOROETHYL) ETHER	1060 U	1060 R	ug/kg	RE

TABLE 7-1
Qualified Data Table
State Marine Superfund Site, Port Arthur, TX

SDG	Sample ID	Parameter	Initial Result	Qualified Result	Units	Validation Reason
L0605576	SM141SB01052406	bis(2-CHLOROETHYL) ETHER	103 U	103 R	ug/kg	RE
L0605548	SM138SB02052306RE	bis(2-Chloroisopropyl) ether	1420 U	1420 R	ug/kg	RE
L0605548	SM136SB01052206	bis(2-Chloroisopropyl) ether	1060 U	1060 R	ug/kg	RE
L0605576	SM141SB01052406	bis(2-Chloroisopropyl) ether	103 U	103 R	ug/kg	RE
L0605548	SM138SB02052306RE	bis(2-ETHYLHEXYL) PHTHALATE	33800 =	33800 R	ug/kg	RE
L0605548	SM136SB01052206	bis(2-ETHYLHEXYL) PHTHALATE	1060 U	1060 R	ug/kg	RE
L0605576	SM141SB01052406	bis(2-ETHYLHEXYL) PHTHALATE	103 U	103 R	ug/kg	RE
L0605548	SM138SB02052306RE	CAPROLACTAM	1420 U	1420 R	ug/kg	RE
L0605548	SM136SB01052206	CAPROLACTAM	971 U	971 R	ug/kg	RE
L0605576	SM141SB01052406	CAPROLACTAM	103 U	103 R	ug/kg	RE
L0605548	SM138SB02052306RE	CARBAZOLE	1420 U	1420 R	ug/kg	RE
L0605548	SM136SB01052206	CARBAZOLE	1060 U	1060 R	ug/kg	RE
L0605576	SM141SB01052406	CARBAZOLE	103 U	103 R	ug/kg	RE
F1890	MW116BGW01053106	CHRYSENE	0.646 U	0.646 R	UG/L	RE
F1890	MW136GW01053106	CHRYSENE	0.727 U	0.727 R	UG/L	RE
F1890	MW137FD01053106	CHRYSENE	0.661 U	0.661 R	UG/L	RE
F1890	MW137GW01053106	CHRYSENE	0.604 U	0.604 R	UG/L	RE
L0605548	SM138SB02052306RE	CHRYSENE	1420 U	1420 R	ug/kg	RE
L0605548	SM136SB01052206	CHRYSENE	1060 U	1060 R	ug/kg	RE
L0605576	SM141SB01052406	CHRYSENE	103 U	103 R	ug/kg	RE
L0605548	SM138SB02052306	cresols, m & p	725 U	725 R	ug/kg	RE
L0605548	SM136SB01052206	cresols, m & p	1060 U	1060 R	ug/kg	RE
L0605576	SM141SB01052406	cresols, m & p	103 U	103 R	ug/kg	RE
L0606049	IWGW01053106RE	cresols, m & p	26 U	26 R	ug/L	RE
F1890	MW116BGW01053106	DIBENZ(a,h)ANTHRACENE	0.626 U	0.626 R	UG/L	RE
F1890	MW136GW01053106	DIBENZ(a,h)ANTHRACENE	0.704 U	0.704 R	UG/L	RE
F1890	MW137FD01053106	DIBENZ(a,h)ANTHRACENE	0.641 U	0.641 R	UG/L	RE
F1890	MW137GW01053106	DIBENZ(a,h)ANTHRACENE	0.585 U	0.585 R	UG/L	RE
L0605548	SM138SB02052306RE	DIBENZ(a,h)ANTHRACENE	1420 U	1420 R	ug/kg	RE
L0605548	SM136SB01052206	DIBENZ(a,h)ANTHRACENE	1060 U	1060 R	ug/kg	RE

TABLE 7-1
Qualified Data Table
State Marine Superfund Site, Port Arthur, TX

SDG	Sample ID	Parameter	Initial Result	Qualified Result	Units	Validation Reason
L0605576	SM141SB01052406	DIBENZ(a,h)ANTHRACENE	103 U	103 R	ug/kg	RE
L0605548	SM138SB02052306RE	DIBENZOFURAN	1420 U	1420 R	ug/kg	RE
L0605548	SM136SB01052206	DIBENZOFURAN	1060 U	1060 R	ug/kg	RE
L0605576	SM141SB01052406	DIBENZOFURAN	103 U	103 R	ug/kg	RE
L0605548	SM138SB02052306RE	DIETHYL PHTHALATE	1420 U	1420 R	ug/kg	RE
L0605548	SM136SB01052206	DIETHYL PHTHALATE	1060 U	1060 R	ug/kg	RE
L0605576	SM141SB01052406	DIETHYL PHTHALATE	103 U	103 R	ug/kg	RE
L0605548	SM138SB02052306RE	DIMETHYL PHTHALATE	1420 U	1420 R	ug/kg	RE
L0605548	SM136SB01052206	DIMETHYL PHTHALATE	1060 U	1060 R	ug/kg	RE
L0605576	SM141SB01052406	DIMETHYL PHTHALATE	103 U	103 R	ug/kg	RE
L0605548	SM138SB02052306RE	DI-n-BUTYL PHTHALATE	1420 U	1420 R	ug/kg	RE
L0605548	SM136SB01052206	DI-n-BUTYL PHTHALATE	1060 U	1060 R	ug/kg	RE
L0605576	SM141SB01052406	DI-n-BUTYL PHTHALATE	103 U	103 R	ug/kg	RE
L0605548	SM138SB02052306RE	DI-n-OCTYLPHTHALATE	1420 U	1420 R	ug/kg	RE
L0605548	SM136SB01052206	DI-n-OCTYLPHTHALATE	1060 U	1060 R	ug/kg	RE
L0605576	SM141SB01052406	DI-n-OCTYLPHTHALATE	103 U	103 R	ug/kg	RE
F1890	MW116BGW01053106	FLUORANTHENE	0.697 U	0.697 R	UG/L	RE
F1890	MW136GW01053106	FLUORANTHENE	0.784 U	0.784 R	UG/L	RE
F1890	MW137FD01053106	FLUORANTHENE	0.713 U	0.713 R	UG/L	RE
F1890	MW137GW01053106	FLUORANTHENE	0.652 U	0.652 R	UG/L	RE
L0605548	SM138SB02052306RE	FLUORANTHENE	1420 U	1420 R	ug/kg	RE
L0605548	SM136SB01052206	FLUORANTHENE	1060 U	1060 R	ug/kg	RE
L0605576	SM141SB01052406	FLUORANTHENE	103 U	103 R	ug/kg	RE
F1890	MW116BGW01053106	FLUORENE	0.6 U	0.6 R	UG/L	RE
F1890	MW136GW01053106	FLUORENE	0.675 U	0.675 R	UG/L	RE
F1890	MW137FD01053106	FLUORENE	0.614 U	0.614 R	UG/L	RE
F1890	MW137GW01053106	FLUORENE	0.561 U	0.561 R	UG/L	RE
L0605548	SM138SB02052306RE	FLUORENE	1420 U	1420 R	ug/kg	RE
L0605548	SM136SB01052206	FLUORENE	1060 U	1060 R	ug/kg	RE
L0605576	SM141SB01052406	FLUORENE	103 U	103 R	ug/kg	RE

TABLE 7-1
Qualified Data Table
State Marine Superfund Site, Port Arthur, TX

SDG	Sample ID	Parameter	Initial Result	Qualified Result	Units	Validation Reason
L0605548	SM138SB02052306RE	HEXACHLOROBENZENE	1420 U	1420 R	ug/kg	RE
L0605548	SM136SB01052206	HEXACHLOROBENZENE	1060 U	1060 R	ug/kg	RE
L0605576	SM141SB01052406	HEXACHLOROBENZENE	103 U	103 R	ug/kg	RE
L0606049	IWGW01053106RE	HEXACHLOROBENZENE	26 U	26 R	ug/L	RE
L0605548	SM138SB02052306RE	HEXACHLOROBUTADIENE	1420 U	1420 R	ug/kg	RE
L0605548	SM136SB01052206	HEXACHLOROBUTADIENE	1060 U	1060 R	ug/kg	RE
L0605576	SM141SB01052406	HEXACHLOROBUTADIENE	103 U	103 R	ug/kg	RE
L0606049	IWGW01053106RE	HEXACHLOROBUTADIENE	26 U	26 R	ug/L	RE
L0605548	SM138SB02052306RE	HEXACHLOROCYCLOPENTADIENE	1420 U	1420 R	ug/kg	RE
L0605548	SM136SB01052206	HEXACHLOROCYCLOPENTADIENE	1060 U	1060 R	ug/kg	RE
L0605576	SM141SB01052406	HEXACHLOROCYCLOPENTADIENE	103 U	103 R	ug/kg	RE
L0605548	SM138SB02052306RE	HEXACHLOROETHANE	1420 U	1420 R	ug/kg	RE
L0605548	SM136SB01052206	HEXACHLOROETHANE	1060 U	1060 R	ug/kg	RE
L0605576	SM141SB01052406	HEXACHLOROETHANE	103 U	103 R	ug/kg	RE
L0606049	IWGW01053106RE	HEXACHLOROETHANE	26 U	26 R	ug/L	RE
F1890	MW116BGW01053106	INDENO(1,2,3-c,d)PYRENE	0.747 U	0.747 R	UG/L	RE
F1890	MW136GW01053106	INDENO(1,2,3-c,d)PYRENE	0.841 U	0.841 R	UG/L	RE
F1890	MW137FD01053106	INDENO(1,2,3-c,d)PYRENE	0.765 U	0.765 R	UG/L	RE
F1890	MW137GW01053106	INDENO(1,2,3-c,d)PYRENE	0.699 U	0.699 R	UG/L	RE
L0605548	SM138SB02052306RE	INDENO(1,2,3-c,d)PYRENE	1420 U	1420 R	ug/kg	RE
L0605548	SM136SB01052206	INDENO(1,2,3-c,d)PYRENE	1060 U	1060 R	ug/kg	RE
L0605576	SM141SB01052406	INDENO(1,2,3-c,d)PYRENE	103 U	103 R	ug/kg	RE
L0605548	SM138SB02052306RE	ISOPHORONE	1420 U	1420 R	ug/kg	RE
L0605548	SM136SB01052206	ISOPHORONE	1060 U	1060 R	ug/kg	RE
L0605576	SM141SB01052406	ISOPHORONE	103 U	103 R	ug/kg	RE
F1890	MW116BGW01053106	NAPHTHALENE	0.709 U	0.709 R	UG/L	RE
F1890	MW136GW01053106	NAPHTHALENE	0.798 U	0.798 R	UG/L	RE
F1890	MW137FD01053106	NAPHTHALENE	0.726 U	0.726 R	UG/L	RE
F1890	MW137GW01053106	NAPHTHALENE	0.663 U	0.663 R	UG/L	RE
L0605548	SM138SB02052306RE	NAPHTHALENE	1420 U	1420 R	ug/kg	RE

TABLE 7-1
Qualified Data Table
State Marine Superfund Site, Port Arthur, TX

SDG	Sample ID	Parameter	Initial Result	Qualified Result	Units	Validation Reason
L0605548	SM136SB01052206	NAPHTHALENE	1060 U	1060 R	ug/kg	RE
L0605576	SM141SB01052406	NAPHTHALENE	103 U	103 R	ug/kg	RE
L0605548	SM138SB02052306RE	NITROBENZENE	1420 U	1420 R	ug/kg	RE
L0605548	SM136SB01052206	NITROBENZENE	1060 U	1060 R	ug/kg	RE
L0605576	SM141SB01052406	NITROBENZENE	103 U	103 R	ug/kg	RE
L0606049	IWGW01053106RE	NITROBENZENE	26 U	26 R	ug/L	RE
L0605548	SM138SB02052306RE	N-NITROSODI-n-PROPYLAMINE	1420 U	1420 R	ug/kg	RE
L0605548	SM136SB01052206	N-NITROSODI-n-PROPYLAMINE	1060 U	1060 R	ug/kg	RE
L0605576	SM141SB01052406	N-NITROSODI-n-PROPYLAMINE	103 U	103 R	ug/kg	RE
L0605548	SM138SB02052306RE	N-NITROSODIPHENYLAMINE	1420 U	1420 R	ug/kg	RE
L0605548	SM136SB01052206	N-NITROSODIPHENYLAMINE	1060 U	1060 R	ug/kg	RE
L0605576	SM141SB01052406	N-NITROSODIPHENYLAMINE	103 U	103 R	ug/kg	RE
L0605548	SM138SB02052306	PCP	2900 U	2900 R	ug/kg	RE
L0605548	SM136SB01052206	PCP	4230 U	4230 R	ug/kg	RE
L0605576	SM141SB01052406	PCP	410 U	410 R	ug/kg	RE
L0606049	IWGW01053106RE	PCP	26 U	26 R	ug/L	RE
F1890	MW116BGW01053106	PHENANTHRENE	0.67 U	0.67 R	UG/L	RE
F1890	MW136GW01053106	PHENANTHRENE	0.754 U	0.754 R	UG/L	RE
F1890	MW137FD01053106	PHENANTHRENE	0.686 U	0.686 R	UG/L	RE
F1890	MW137GW01053106	PHENANTHRENE	0.627 U	0.627 R	UG/L	RE
L0605548	SM138SB02052306RE	PHENANTHRENE	1420 U	1420 R	ug/kg	RE
L0605548	SM136SB01052206	PHENANTHRENE	1060 U	1060 R	ug/kg	RE
L0605576	SM141SB01052406	PHENANTHRENE	103 U	103 R	ug/kg	RE
L0605548	SM138SB02052306	PHENOL	725 U	725 R	ug/kg	RE
L0605548	SM136SB01052206	PHENOL	1060 U	1060 R	ug/kg	RE
L0605576	SM141SB01052406	PHENOL	103 U	103 R	ug/kg	RE
F1890	MW116BGW01053106	PYRENE	0.557 U	0.557 R	UG/L	RE
F1890	MW136GW01053106	PYRENE	0.627 U	0.627 R	UG/L	RE
F1890	MW137FD01053106	PYRENE	0.57 U	0.57 R	UG/L	RE
F1890	MW137GW01053106	PYRENE	0.521 U	0.521 R	UG/L	RE

TABLE 7-1
Qualified Data Table
State Marine Superfund Site, Port Arthur, TX

SDG	Sample ID	Parameter	Initial Result	Qualified Result	Units	Validation Reason
L0605548	SM138SB02052306RE	PYRENE	1420 U	1420 R	ug/kg	RE
L0605548	SM136SB01052206	PYRENE	1060 U	1060 R	ug/kg	RE
L0605576	SM141SB01052406	PYRENE	103 U	103 R	ug/kg	RE
L0606049	IWGW01053106	Pyridine	260 U	260 R	ug/L	RE
L0606049	IWGW01053106RE	Pyridine	260 U	260 R	ug/L	RE

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Appendix B

Soil Boring Logs and Monitor Well Completion Diagrams

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CH2MHILL	PROJECT NUMBER	BORING NUMBER SM136/MW136	SHEET 1 OF 1

SOIL BORING LOG

PROJECT: State Marine LOCATION: Port Arthur, TX
ELEVATION: TBD DRILLING CONTRACTOR: QRI
DRILLING METHOD AND EQUIPMENT USED: Geoprobe
WATER LEVELS: TBD START: 5/22/06 END: 05/22/06 LOGGER: M. Harris/HOU

DEPTH BELOW SURFACE (FT)	INTERVAL (FT)	RECOVERY (FT)	#/TYPE	STANDARD PENETRATION TEST RESULTS 6"-6"-6"-6" (N)	CORE DESCRIPTION: SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY.	COMMENTS: DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS, AND INSTRUMENTATION.
0	0-4	20"			6"-~~18'~~ 20': Fill, glass, gravels, wood. Dark Gray clay with gravel matrix. Oily stain near top	PID: Near top 107.5 ppm Near Bottom 40.1 ppm Collected sample: SM136SB01052206 @0805 6"-20"
4	4-8	9"			20" 4' ~~12'-4'~~: No Recovery 4'-7.1 No Recovery 7.1'-8': Fill toward top, containing, glass, clay, gravels grading to clayey silt with sand. Dark gray, possibly organic. Saturated	PID: 7.4 ppm water was encountered between 4-8'.
8	8-12	0 No Recovery				
12	12-16	0 No Recovery			NO RECOVERY NO Recovery	
16					After getting no recovery a larger core barrel was tried. With ~~no~~ still no recovery. Hollow stem auger was then tried, however this method did not work either. Decision was made to just set the well without sampling.	

CH2MHILL

PROJECT NUMBER	BORING NUMBER	SHEET
	SM137/MW137	1 OF 1

SOIL BORING LOG

PROJECT: State Marine RIEPA LOCATION: Port Arthur TX
ELEVATION: TBD DRILLING CONTRACTOR: GRI
DRILLING METHOD AND EQUIPMENT USED: 2" Diameter, 4 foot length Geoprobe
WATER LEVELS: START: 05/23/06 END: 05/23/06 LOGGER: M. Harris

DEPTH BELOW SURFACE (FT)	INTERVAL (FT)	RECOVERY (FT)	#/TYPE	STANDARD PENETRATION TEST RESULTS 6"-6"-6"-6" (N)	CORE DESCRIPTION: SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY.	COMMENTS: DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS, AND INSTRUMENTATION.
0					0-1.5 feet, No Recovery 1.5-4 feet, Clay: Brown to dark gray, damp, soft pieces of glass & debris	Sampled @ 0920 Sample ID: SM137SB01052306 represents 2-4 feet Bgs.
	0-4	2.5'				
4					4-7 No Recovery 4-8 Fill: clayey silt, dark gray, saturated, lot of broken glass, brick fragments	collected sample @ 0925 Sample ID: SM137SB02052306 sample from 7'-8'.
	4-8	1'				
8						
	8-12	0			No Recovery	
12						
					From Between ~~5-10~~ 0-5 feet material coming up from HSA had 60ppm. Forgot to get PID reading while doing geoprobe. From 5-10 feet 1ppm from material coming up HSA	

Used HSA to install Monitor well. Didn't try to sample. After installation the client Carlos Sanchez requested that geoprobe be used to try to get sample. Geoprobe was used to collect these samples.

CH2MHILL

PROJECT NUMBER	BORING NUMBER	SHEET 1 OF 2
	SM138	

SOIL BORING LOG

PROJECT: State Marine RI/EPA LOCATION: Port Arthur, TX
ELEVATION: NA DRILLING CONTRACTOR: GRI
DRILLING METHOD AND EQUIPMENT USED: split spoon, 2nd core Barrel X 3" Diameter
WATER LEVELS: NA START: 05/23/06 END: 05/23/06 LOGGER: M. Harris

DEPTH BELOW SURFACE (FT)	INTERVAL (FT)	RECOVERY (FT)	#/TYPE	STANDARD PENETRATION TEST RESULTS 6"-6"-6" (N)	CORE DESCRIPTION: SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY.	COMMENTS: DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS, AND INSTRUMENTATION.
0					Fill: light brown from 0-9" unconsolidated dry silty sand with large gravels (limestone)	Collected sample @ 1120
	0-2	2'			9"-2' - Dark brown to gray clay, firm, dry with glass shards & debris	Sample ID SM138SB01052306 sample from 0-2 feet 0ppm
2					Fill - waste, trash, plastics, Dark gray clay, Dry	0ppm - originally collected sample SM138SB02052306, but discarded, 11.5 feet to 12 feet more representative of ~~waste~~ Material in waste.
	2-4	6"				
4					Hit Refusal @ 1st hole, moved over. continued from 4 feet	
	4-6	1'			5-6 feet: WASTE: Gravely sandy clay with waste, Railroad tie piece, smelled strong, first sign of water.	
6					WASTE: Gravels with waste, wet, Black waste & finer grained material, gravels were light tan, also material contained cloth material & plastics	
	6-8	6"				
8					waste: clayey silt with gravel: Black, saturated ~~with large >2" gravels~~, wood, plastic debris, rubber, trash	~~sampled @ 1210 SM138SB02052306~~ 0ppm ~~from depth of 11.5 to 12 feet~~
	8-10	6"				
10					clayey silt, black, saturated with large >2" gravels, wood, plastic debris	Sampled @ 1210 Sample ID: SM138SB02052306 @ a depth of 11.5 to 12 feet 0ppm
		6"				
12						

CH2MHILL

PROJECT NUMBER	BORING NUMBER	SHEET
	SM138	2 OF 2

SOIL BORING LOG

PROJECT: State Marine R2/EPA LOCATION: Port Arthur
ELEVATION: NA DRILLING CONTRACTOR: GRI
DRILLING METHOD AND EQUIPMENT USED: Split spoon 2 foot X 3" Diameter
WATER LEVELS: NA START: 05/23/06 END: 05/23/06 LOGGER: M. Harris

DEPTH BELOW SURFACE (FT)	INTERVAL (FT)	RECOVERY (FT)	#/TYPE	STANDARD PENETRATION TEST RESULTS 6"-6"-6" (N)	CORE DESCRIPTION: SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY.	COMMENTS: DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS, AND INSTRUMENTATION.
12						
	12-14	0			Nothing Recovered But water	~~SK~~
14						
	14-16	6"			Recovery was mainly large piece of wood, probably a railroad tie, strong odor.	9ppm
16						
	16-18	2'			waste: upper portion, woody material grades to dark gray clay with gravel chunks, wood, string, landfill debris, saturated	0ppm
18						
	18-20	1'			waste: Still in landfill material, silty clay, saturated, dark gray, wood debris, plastic, glass	0ppm
20						
	20-22	2'		[CH]	20-21 feet still waste, wood debris 21-22 feet, transition from landfill, silty clay, dark gray wet, soft. Definitely represents material below waste.	→10ppm →10ppm sampled @ 1255 SM138SB03052306 SM138FD03052306@1300 from depth 20-22 feet
22						

CH2MHILL

PROJECT NUMBER	BORING NUMBER	SHEET OF
	SM139	1 OF 1

SOIL BORING LOG

PROJECT: State Marine RI/FFS LOCATION: Port Arthur, TX
ELEVATION: NA DRILLING CONTRACTOR:
DRILLING METHOD AND EQUIPMENT USED: Split spoon, 2ft length x 3" diameter
WATER LEVELS: NA START: 05/23/06 END: 05/23/06 LOGGER: N. Harris

DEPTH BELOW SURFACE (FT)	INTERVAL (FT)	RECOVERY (FT)	#/TYPE	STANDARD PENETRATION TEST RESULTS 6"-6"-6" (N)	CORE DESCRIPTION: SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY.	COMMENTS: DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS, AND INSTRUMENTATION.
0	0-2	2'			Fill - Brown, clay with sand + silt. Stiff, dry, debris, glass, organics, grass, shells	0 ppm collected sample @ 1405 SM139SB01052306
2	2-4	1'			~~3-4 feet~~ 3-3.5 feet fill - 3.5-4 feet Black silty sandy clay with debris, glass, wood plastic, in waste.	3ppm
4	4-6	1'			5-6 feet - waste, Black, sandy clay, wet, soft with debris, glass, wood plastic	0 ppm collected sample @ 1425 SM139SB02052306
6	6-8	2'		[CH]	silty clay, dark gray, wet, soft, some sand present, No sign of waste, looks to be below waste	~10ppm sample ID SM139SB03052306 @1440 I feel certain this is below waste, but would like confirmation by going a few feet deeper to confirm
8	8-10	0			No Recovery	
10	10-12	3"		[CL]	clay, dark gray, wet, soft, No signs of waste.	0ppm - confirmed that 6-8 feet was below waste so 6-8 feet was sampled Not enough in 10-12 interval to sample
12						

CH2MHILL

PROJECT NUMBER

BORING NUMBER SM140 SHEET 1 OF 2

SOIL BORING LOG

PROJECT: State Marine RI/EPA LOCATION: Port Arthur, TX
ELEVATION: NA DRILLING CONTRACTOR: QRI
DRILLING METHOD AND EQUIPMENT USED: Splitspoon, 2' sections with 3" Diameter
WATER LEVELS: NA START: 05/23/06 END: 05/23/06 LOGGER: M. Harris

DEPTH BELOW SURFACE (FT)	INTERVAL (FT)	RECOVERY (FT)	#/TYPE	STANDARD PENETRATION TEST RESULTS 6"-6"-6"-6" (N)	CORE DESCRIPTION: SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY.	COMMENTS: DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS, AND INSTRUMENTATION.
0	0-2	1.5'			Fill - Dark Brown, silty sandy clay, with shell fragments, waste debris including plastics, soil is firm	Collected sample @ 1520 Sample ID: SM140SB01052306 from 0.5 to 2 feet 0ppm
2	2-4	1.5'			2 feet to 2.5: Fill, Brown clay, dry 2.5 feet to 3 feet; Fill, Black to dark gray clay, Moist, with lots of debris including brick fragments, glass, plastic, wood.	0ppm
4	4-6	2'			Fill: Dark gray, firm, damp, with lenses of glass + debris, wood, cardboard. Lot of glass	0ppm
6	6-8	6"			7.5 to 8 feet; Waste Material, dark Black clay w/ rubber, plastic, glass, wood.	collected sample @ 1540 Sample ID: SM140SB02052306 collected Between 4.5 to 8'. 0ppm.
8					No Recovery	
10					No Recovery; Just a piece of trash	
12						

CH2MHILL

PROJECT NUMBER	BORING NUMBER	SHEET
	SM140	2 OF 2

SOIL BORING LOG

PROJECT: State Marine RI/EPA LOCATION: Port Arthur, TX
ELEVATION: NA DRILLING CONTRACTOR: CORE
DRILLING METHOD AND EQUIPMENT USED: Splitspoon, 2 foot long by 3" Diameter
WATER LEVELS: NA START: 05/23/06 END: 05/23/06 LOGGER: M. Harris

DEPTH BELOW SURFACE (FT)	INTERVAL (FT)	RECOVERY (FT)	#/TYPE	STANDARD PENETRATION TEST RESULTS 6"-6"-6"-6" (N)	CORE DESCRIPTION: SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY.	COMMENTS: DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS, AND INSTRUMENTATION.
12					No Recovery, Just a piece of trash.	
	12-14	0				
14					No Recovery, piece of trash	
	14-16	0				
16					No Recovery, Just piece of trash. Appear to still be in Landfill Material.	
	16-18	0				
18					waste	
	18-20	1'		CL	Clay - gray with trash, soft, wet (saturated) sloppy, pieces of plastic, glass.	0 ppm
20					20-21.5: waste - gray clay, saturated, soft with plastic, rubber, glass, wood	0 ppm
	20-22	2'		[CH]	21.5-22: silty clay, gray, soft, saturated, This section of soil appears to be below waste. You can see the transition from waste to silty clay dredged material	Collected sample @ 1635 SM140SB03052306 Field Dup collected @ 1640 sample ID: SM140FD03052306 rep these represent material between 21.5 to 22 feet.
22						

CH2MHILL

PROJECT NUMBER	BORING NUMBER	SHEET
	SM141	1 OF 1

SOIL BORING LOG

PROJECT: State Marine RI/FSA LOCATION: Port Arthur, TX
ELEVATION: NA DRILLING CONTRACTOR: CRZ
DRILLING METHOD AND EQUIPMENT USED: split spoon, 2' length x 3" diameter
WATER LEVELS: ~~N/A~~ START: 05/24/06 END: 05/24/06 LOGGER: M. Harris

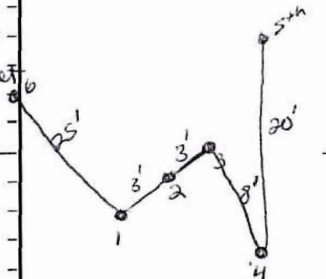
DEPTH BELOW SURFACE (FT)	INTERVAL (FT)	RECOVERY (FT)	#/TYPE	STANDARD PENETRATION TEST RESULTS 6"-6"-6"-6" (N)	CORE DESCRIPTION: SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY.	COMMENTS: DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS, AND INSTRUMENTATION.
0	0-2	2'			Fill 0-1 foot, Brown clay, dry with silt, sand & gravels- grades to clay, ~~tan in color~~, Brown, some waste, glass w/ sand lenses ~1 inch in thickness	sampled @ 0750 SM141SB01052406 0-2 feet 6ppm
2	2-4	2'			Fill: Brown clay with 3 inch fine sand brise, firm, moist, some waste, glass, gravels, organic material, roots @	@ Top - 0ppm Bottom - 16ppm
4	4-6	2'			4-5 feet Fill: clay, moist, brown, firm, with gravels & glass. 5-6 feet - Waste, Black, sandy clay with glass, plastic & gravels	~~16ppm~~ 0ppm Top (4-5') 16ppm Bottom (5-6') sampled 5-6 feet SM141SB02052406 @ 0815
6	6-8	2'		[CL]	6-6.6 Waste, Brown clay with sand & gravels, plastic, wood, glass. 6.6-8' clay, dark gray, soft Bottom plug contains clayey fine sand	~5ppm sampled 6.6-8' SM141SB03052406 @ 0825 Field Dup ID: SM141FD03052406 @ 0825
8						

CH2MHILL

PROJECT NUMBER	BORING NUMBER	SHEET 1 OF 1
	SM142	

SOIL BORING LOG

PROJECT: State Marine RI/FFS LOCATION: Port Arthur, TX
ELEVATION: NA DRILLING CONTRACTOR: GRI
DRILLING METHOD AND EQUIPMENT USED: Split spoon: 2 foot x 3" Diameter
WATER LEVELS: NA START: 05/24/06 END: 05/24/06 LOGGER: M. Harris

DEPTH BELOW SURFACE (FT)	INTERVAL (FT)	RECOVERY (FT)	#/TYPE	STANDARD PENETRATION TEST RESULTS 6"-6"-6" (N)	CORE DESCRIPTION: SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY.	COMMENTS: DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS, AND INSTRUMENTATION.
0	0-2	1			0-1 feet; Fill - sandy clay with glass, gravel, dry, plastic & roots	0ppm sampled @ 0920 SM142 SB01 052406
2	2-4	3"			Fill: clay, Brown, with trash, plastics, wood, roots, gravels.	0ppm
4	4-6	1'			5-6 feet Waste; clay, dark brown, dry, waste material, ~~rocks~~ looks like rail road tie, very, very strong odor foam, plastic, one part smells like spray paint bit is green color	242 ppm took sample @ 0945 SM142 SB02 052406 from 5-6 feet.
6					hit refusal @ 7 feet Moved over hit refusal @ 4 feet Moved over, hit refusal @ 7 feet Moved north, hit refusal @ 3 feet Moved over hit refusal @ 5' Moved, hit refusal @ 5' Call to stop because we can't get past some very large metal or wood objects. unable to collect SM142SB03052406	 Diagram of Borings that were attempted

CH2MHILL

PROJECT NUMBER	WELL NUMBER		
344479	MW136	SHEET 1	OF 1

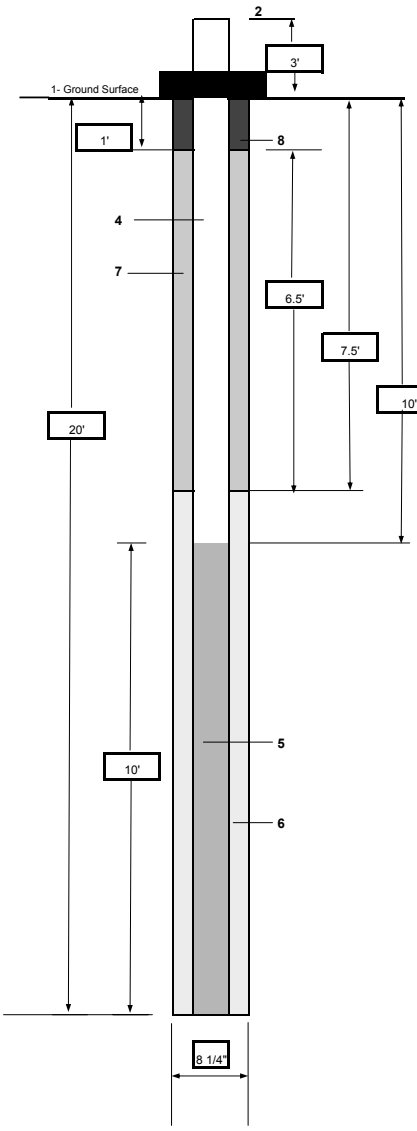
WELL COMPLETION DIAGRAM

PROJECT : State Marine Superfund Site Supplemental RI — LOCATION : Port Arthur, Texas

NORTHING: 13933017.7 — EASTING: 3595694.5 — ELEVATION: 9.58 — WATER LEVEL: 3.52 (5/31/06)

DRILLING METHOD & EQUIPMENT: Hollow Stem Auger — DRILLING CONTRACTOR : QRI/Mack Maginnis

START: 05/22/2006 — END: 05/22/2006 — LOGGER: Meredith Harris



1- Ground elevation at well: To Be Determined

2- Top of casing elevation: To Be Determined

3- Wellhead/protection cover description: 5' long by 4" square aluminum above ground surface protector, with lock, set two feet into the ground and cemented into place.

4- Diameter/type of well casing: 2-inch diameter, schedule 40, polyvinyl chloride

5- Type/slot size of screen: 2-inch diameter, schedule 40, polyvinyl chloride, 0.010-inch slots

6- Type screen filter: Silica Sand
a) Quantity used: 8 1/4 bags (50 lbs) size: 20/40

7- Type of seal: Medium Bentonite Chips, hydrated
a) Quantity used: 1 bag

8- Grout: Cement, poured at surface during well pad construction.

9- Development method: Surging, Overpumping

10- Development time: 2 hours

11- Estimated volume of water purged: Approximately 19 gallons

12- Comments: Well pad is concrete, 3' by 3' square. Four protective bollards placed at corners of well pad. Bollards are set in concrete 2' into ground. Bollards and protective surface cover are painted yellow.

All measurements are from ground surface.

Not To Scale.

CH2MHILL

PROJECT NUMBER	WELL NUMBER		
344479	MW137	SHEET 1	OF 1

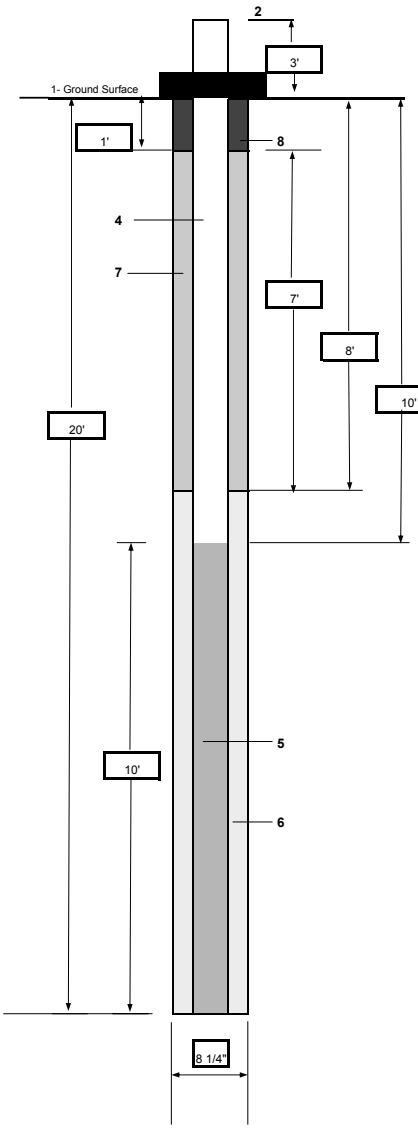
WELL COMPLETION DIAGRAM

PROJECT : State Marine Superfund Site Supplemental RI — LOCATION : Port Arthur, Texas

NORTHING: 13932827.9 — EASTING: 3595615.9 — ELEVATION: 10.05 — WATER LEVEL: 2.77 (5/31/06)

DRILLING METHOD & EQUIPMENT: Hollow Stem Auger — DRILLING CONTRACTOR : QRI/Mack Maginnis

START: 05/23/2006 — END: 05/23/2006 — LOGGER: Meredith Harris



1- Ground elevation at well: To Be Determined

2- Top of casing elevation: To Be Determined

3- Wellhead/protection cover description: 5' long by 4" square aluminum above ground surface protector, with lock, set two feet into the ground and cemented into place.

4- Diameter/type of well casing: 2-inch diameter, schedule 40, polyvinyl chloride

5- Type/slot size of screen: 2-inch diameter, schedule 40, polyvinyl chloride, 0.010-inch slots

6- Type screen filter: Silica Sand

a) Quantity used: 8 1/4 bags (50 lbs) size: 20/40

7- Type of seal: Medium Bentonite Chips, hydrated

a) Quantity used: 1 bag

8- Grout: Cement, poured at surface during well pad construction.

9- Development method: Surging, Overpumping

10- Development time: 3 hours

11- Estimated volume of water purged: Approximately 10.5 gallons

12- Comments: Well pad is concrete, 3' by 3' square. Four protective bollards placed at corners of well pad. Bollards are set in concrete 2' into ground. Bollards and protective surface cover are painted yellow.

All measurements are from ground surface.

Not To Scale.

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Appendix C

Laboratory Analytical Data Reports

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Please find Appendix C on accompanying Compact Disks.

Appendix C

Laboratory Analytical Data Reports

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PBS&J

Environmental Toxicology Laboratory
888 West Sam Houston Parkway South
Suite 110
Houston, Texas 77042

Tel: (713) 977-1500
Fax: (713) 977-9233

Analysis Request and Chain of Custody Record
Please indicate type of test required

214715

	C. dubia (Waterflea)	D. pulex (Waterflea)	P. promelas (Fathead minnow)	M. bahia (Opossum shrimp)	M. beryllina (Inland silverside)				
Client Name: [illegible]									
Contact Name: [illegible] Tel: [illegible]	☐ 24hr	☐ 24 hr	☐ 24 hr	☐ 24 hr	☐ 24 hr	☐	☐	☐	☐
P.O. Number:	☐ 48 hr	☐ 48 hr	☐ 48 hr	☐ 48 hr	☐ 48 hr	☐	☐	☐	☐
Project Name: State Mo[illegible]	☐ 7 day	☐ 7 day	☐ 7 day	☐ 7 day	☐ 7 day	☐	☐	☐	☐
PBS&J Job No:	☐	☐	☐	☐	☐	☐	☐	☐	☐

Special Instructions/comments:

Sample Location/ID& outfall	Sample Type (Effluent, receiving water, sediment, etc.)	Sample Date		Sample Time (Military)		PBS&J Use Only			
						Containers Received		Temperature	
		From	To	From	To	Number	Tot. Vol.	°C	Init.
1 H	SED	6/9/06		1015					
2 I	SED	6/9/06		1145					
3									
4									
5									
6									
7									

Sampled by: Rob Pr[illegible] (Print Name) [illegible] (Signature)

Samples received in good condition ☐ Yes ☐ No

Relinquished by:	Date:	Time:	Received by:	Date:	Time:
1 [illegible]	6/9/06	1625	[illegible]	6/9/06	1625
2					
3					
PBS&J Use Only: Received at PBS&J Laboratory:				All PBS&J Std Terms and Conditions Apply	

White Copy - Original Yellow Copy - Lab Pink Copy - Client

PBS&J

Environmental Toxicology Laboratory
888 West Sam Houston Parkway South
Suite 110
Houston, Texas 77042

Tel: (713) 977-1500
Fax: (713) 977-9233

Analysis Request and Chain of Custody Record

Please indicate type of test required

	C. dubia (Waterflea)	D. pulex (Waterflea)	P. promelas (Fathead minnow)	M. bahia (opossum shrimp)	M. beryllina (Inland silverside)	Luminescent bacteria			
Client Name: CH2M HILL									
Contact Name: Chris McCarthy Tel: 281-513-6370	☐ 24 hr	☐ 24 hr	☐ 24 hr	☐ 24 hr	☐ 24 hr	☐	☐	☐	☐
P.O. Number:	☐ 48 hr	☐ 48 hr	☐ 48 hr	☐ 48 hr	☐ 48 hr	☐	☐	☐	☐
Project Name: State Marine	☐ 7 day	☐ 7 day	☐ 7 day	☐ 7 day	☐ 7 day	☐	☐	☐	☐
PBS&J Job No:	☐	☐	☐	☐	☐	X	☐	☐	☐

Special Instructions/comments:

	Sample Location/ID& outfall	Sample Type (Effluent, receiving water, Sediment, etc.)	Sample Date (mm/dd/yy) From	Sample Date (mm/dd/yy) To	Sample Time (Military) From	Sample Time (Military) To	PBS&J Use Only: Containers Received Number	Containers Received Tot. Vol.	Temperature °C	Temperature Init.
1	A	Sed		06-08-06	1100					
2	B	Sed		06-08-06	1205					
3	C	Sed		06-08-06	1530					
4	D	Sed		06-08-06	1640					
5	E	Sed		06-08-06	1420					
6	F	Sed		06-08-06	1725					
7	G	Sed		06-09-06	1050					

Sampled by: Rob Pitt (Print Name) Robert Pitt (Signature)

Samples received in good condition ☐ Yes ☐ No

	Relinquished by:	Date:	Time:	Received by:	Date:	Time:
1	Robert Pitt	6/9/06	1625	[illegible]	6/9/06	1625
2						
3						

PBS&J Use Only: Received at PBS&J Laboratory:

All PBS&J Std Terms and Conditions Apply

CH2M HILL
Applied Sciences Laboratory
2300 NW Walnut Blvd
Corvallis, OR
97330-3538
P.O. Box 428
Corvallis, OR
97339-0428
Tel 541.752.4271
Fax 541.752.0276

CH2MHILL
Applied Sciences Laboratory

June 13, 2006

State Marine

344479.F1.01

RE: Laboratory Report for State Marine
Applied Sciences Laboratory Reference No. F1890

John Ynfante/HOU:

On June 02, 2006, CH2M HILL Applied Sciences Laboratory received six samples with a request for analysis of selected parameters. All analyses were performed by CH2M HILL unless otherwise indicated below.

The analytical results and associated quality control data are enclosed. Any unusual difficulties encountered during the analysis of your samples are discussed in the case narrative. This data package meets standards requested by client and is not intended or implied to meet any other standard.

CH2M HILL Applied Sciences Laboratory appreciates your business and looks forward to serving your analytical needs again. If you should have any questions concerning the data, or if you need additional information, please call Kathy McKinley at (541) 758-0235, extension 3144.

Sincerely,

Kathy McKinley

Kathy McKinley
Analytical Manager

Enclosures

CLIENT SAMPLE CROSS-REFERENCE

CH2M HILL Applied Sciences Laboratory Reference No. F1890

Sample ID	Client Sample ID	Date Collected	Time Collected
F189001	MW137FD01053106	05/31/2006	19:50
F189002	MW137GW01053106	05/31/2006	19:50
F189003	MW116B-GW01053106	05/31/2006	13:30
F189004	MW136GW01053106	05/31/2006	20:25
F189005MS	MW136MS01053106	05/31/2006	20:25
F189006MSD	MW136MSD01053106	05/31/2006	20:25

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CH2M HILL Laboratory Reference No. F1890

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QC Summary 65

Metals Analysis by Method SW6000/7000 82
Sample Data Summary 85
QC Summary 101

Chain of Custody/Shipping Documents 145

006135

Applied Sciences Laboratory

Organic CLP and CLP Like Data Qualifiers

U — The analyte was analyzed for, but not detected above the reported sample quantitation limit.

J — The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.

UJ — The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.

N — The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification".

NJ — The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.

P — The primary and confirmation analyte result recoveries do not match.

E — The analyte was positively identified; the associated numerical value exceeded the instrument calibration range.

R — The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified.

Inorganic CLP and CLP Like Data Qualifiers

U — The analyte was analyzed for, but not detected above the reported sample quantitation limit.

B — The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.

UJ — The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.

E — The analyte was positively identified; the associated numerical value exceeded the instrument calibration range.

N — The matrix spike/matrix spike duplicate recovery for the analyte is outside of acceptance criteria—qualifier is applied to the native sample only.

R — The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified.

SEMIVOLATILES ORGANICS ANALYSIS BY METHOD SW8270

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CASE NARRATIVE
SEMI-VOLATILE ORGANICS ANALYSIS BY METHOD SW8270C

Analytical Method: SW8270C

Batch No.: F1890

Lab Name: CH2M HILL Applied Sciences Lab

Contract #.: 34479.F1.01

Project: State Marine

I. Holding Times:
All acceptance criteria were met.

II. Analysis:

A. Calibration:
All acceptance criteria were met.

B. Blanks:
All acceptance criteria were met.

C. Matrix Spike/Matrix Spike Duplicate Sample(s):
RPDs for bis(2-chloroisopropyl) ether, 20.8%, hexachloroethane, 22.9%, hexachlorobutadiene, 27.9%, 2-methylnaphthalene, 22.9%, hexachlorocyclopentadiene, 37.7%, 4-chlorophenyl phenyl ether, 22.0%, 4,6-dinitro-2-methyl phenol, 20.4%, 4-bromophenyl phenyl ether, 30.0%, hexachlorobenzene, 29.7%, pentachlorophenol, 26.7%, pyrene, 20.5%, di-n-octylphthalate, 20.1%, benzo(b)fluoroanthene, 20.8%, benzo(k)fluoroanthene, 20.5%, and benzo(a)pyrene, 21.2%, between samples MW136MS01053106 (F189005MS) and MW136MSD01053106 (F189006MSD) exceeded acceptance criteria, 20%.

D. Internal Standards:
All acceptance criteria were met.

E. Surrogate Standards:
All acceptance criteria were met.

F. DFTPP Tune Verification:
All acceptance criteria were met.

G. Laboratory Control Spike(LCS)
All acceptance criteria were met.

H. Analytical Exceptions:
All acceptance criteria were met.

I. Other:
None.

III. Documentation Exceptions:
None

V. I certify that this data package is in compliance with the terms and conditions agreed to by the client and CH2M HILL, both technically and for completeness, except for the conditions detailed above. Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or designee, as verified by the following signature.

Reported by: _____ Date: 9 Jun 2006

Reviewed by: JBHeathman Date: 6/09/06

006139

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SAMPLE DATA
SUMMARY

006141

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1C

SEMI-VOLATILE ORGANICS ANALYSIS DATA SHEET

Field Sample ID:

MW137FD01053106

SDG No.: F1890

Analysis Method: SW8270

Matrix: WATER pH:

Sample wt/vol: (G/ML) 886.2 ML

Level: (LOW/MED) LOW

Percent Moisture: 100 Decanted: N

Extraction Method: SW3510 Cleanup - GPC: N

Concentrated Extract Volume: (ML) 1

Injection Volume: (UL) 1

Instrument: MSC

Lab Name: CH2M HILL/LAB/CVO

Lab Sample ID: F189001

Lab File ID: 189001.D

Date Received: 06/02/06

Date Extracted: 06/05/06

Date Analyzed: 06/06/06

Dilution Factor: 1

CONCENTRATION UNITS: ug/L

CAS NO.	COMPOUND	MDL	PQL	RESULT	Q
108-95-2	Phenol	3.77	11.3	3.77	U
111-44-4	bis(2-Chloroethyl)ether	0.776	11.3	0.776	U
95-57-8	2-Chlorophenol	2.70	11.3	2.70	U
95-48-7	2-Methylphenol	3.48	11.3	3.48	U
108-60-1	Bis(2-chloroisopropyl) Ether	0.800	11.3	0.800	U
108-39-4/1	m,p-Cresol	3.46	11.3	3.46	U
621-64-7	N-Nitroso-di-n-propylamine	0.625	11.3	0.625	U
67-72-1	Hexachloroethane	1.02	11.3	1.02	U
98-95-3	Nitrobenzene	0.821	11.3	0.821	U
78-59-1	Isophorone	0.699	11.3	0.699	U
88-75-5	2-Nitrophenol	3.21	11.3	3.21	U
105-67-9	2,4-Dimethylphenol	3.49	11.3	3.49	U
111-91-1	bis(2-Chloroethoxy)methane	0.619	11.3	0.619	U
120-83-2	2,4-Dichlorophenol	3.06	11.3	3.06	U
91-20-3	Naphthalene	0.726	11.3	0.726	U
106-47-8	4-Chloroaniline	2.65	11.3	2.65	U
87-68-3	Hexachlorobutadiene	0.986	11.3	0.986	U
59-50-7	4-Chloro-3-Methyl Phenol	2.66	11.3	2.66	U
91-57-6	2-Methylnaphthalene	0.793	11.3	0.793	U
77-47-4	Hexachlorocyclopentadiene	0.591	11.3	0.591	U
88-06-2	2,4,6-Trichlorophenol	3.21	11.3	3.21	U
95-95-4	2,4,5-Trichlorophenol	2.83	28.2	2.83	U
91-58-7	2-Chloronaphthalene	0.714	11.3	0.714	U
88-74-4	2-Nitroaniline	0.559	28.2	0.559	U
131-11-3	Dimethylphthalate	0.577	11.3	0.577	U
208-96-8	Acenaphthylene	0.738	11.3	0.738	U
606-20-2	2,6-Dinitrotoluene	0.564	11.3	0.564	U
83-32-9	Acenaphthene	0.597	11.3	0.597	U
51-28-5	2,4-Dinitrophenol	3.00	28.2	3.00	U
100-02-7	4-Nitrophenol	3.59	11.3	3.59	U
121-14-2	2,4-Dinitrotoluene	0.725	11.3	0.725	U
132-64-9	Dibenzofuran	0.646	11.3	0.646	U
84-66-2	Diethylphthalate	0.602	11.3	4.28	J
99-09-2	3-Nitroaniline	0.638	28.2	0.638	U

1C

SEMI-VOLATILE ORGANICS ANALYSIS DATA SHEET

Field Sample ID: **MW137FD01053106**

SDG No.: F1890

Analysis Method: SW8270

Matrix: WATER pH:

Sample wt/vol: (G/ML) 886.2 ML

Level: (LOW/MED) LOW

Percent Moisture: 100 Decanted: N

Extraction Method: SW3510 Cleanup - GPC: N

Concentrated Extract Volume: (ML) 1

Injection Volume: (UL) 1

Instrument: MSC

Lab Name: CH2M HILL/LAB/CVO

Lab Sample ID: F189001

Lab File ID: 189001.D

Date Received: 06/02/06

Date Extracted: 06/05/06

Date Analyzed: 06/06/06

Dilution Factor: 1

CONCENTRATION UNITS: ug/L

CAS NO.	COMPOUND	MDL	PQL	RESULT	Q
86-73-7	Fluorene	0.614	11.3	0.614	U
7005-72-3	4-Chlorophenyl phenyl ether	0.653	11.3	0.653	U
100-01-6	4-Nitroaniline	0.642	28.2	0.642	U
534-52-1	4,6-Dinitro-2-Methyl Phenol	2.74	28.2	2.74	U
86-30-6	N-Nitrosodiphenylamine	0.625	11.3	0.625	U
101-55-3	4-Bromophenyl phenyl ether	0.631	11.3	0.631	U
118-74-1	Hexachlorobenzene	0.660	11.3	0.660	U
87-86-5	Pentachlorophenol	3.26	11.3	3.26	U
85-01-8	Phenanthrene	0.686	11.3	0.686	U
120-12-7	Anthracene	0.714	11.3	0.714	U
86-74-8	Carbazole	0.682	11.3	0.682	U
84-74-2	Di-n-butylphthalate	0.643	11.3	0.643	U
206-44-0	Fluoranthene	0.713	11.3	0.713	U
129-00-0	Pyrene	0.570	11.3	0.570	U
85-68-7	Butylbenzylphthalate	0.567	6.77	0.567	U
56-55-3	Benzo(a)anthracene	0.576	11.3	0.576	U
91-94-1	3,3'-Dichlorobenzidine	0.701	11.3	0.701	U
218-01-9	Chrysene	0.661	11.3	0.661	U
117-81-7	bis(2-Ethylhexyl)phthalate	1.15	11.3	1.15	U
117-84-0	Di-n-octylphthalate	0.791	11.3	0.791	U
205-99-2	Benzo(b)fluoroanthene	0.719	11.3	0.719	U
207-08-9	Benzo(k)fluoranthene	0.753	11.3	0.753	U
50-32-8	Benzo(a)pyrene	0.676	11.3	0.676	U
193-39-5	Indeno(1,2,3-c,d)pyrene	0.765	11.3	0.765	U
53-70-3	Dibenzo(a,h)anthracene	0.641	11.3	0.641	U
191-24-2	Benzo(g,h,i)perylene	0.630	11.3	0.630	U

1C

SEMI-VOLATILE ORGANICS ANALYSIS DATA SHEET

Field Sample ID: **MW137GW01053106**

SDG No.: F1890

Analysis Method: SW8270

Matrix: WATER pH:

Sample wt/vol: (G/ML) 970.3 ML

Level: (LOW/MED) LOW

Percent Moisture: 100 Decanted: N

Extraction Method: SW3510 Cleanup - GPC: N

Concentrated Extract Volume: (ML) 1

Injection Volume: (UL) 1

Instrument: MSC

Lab Name: CH2M HILL/LAB/CVO

Lab Sample ID: F189002

Lab File ID: 189002.D

Date Received: 06/02/06

Date Extracted: 06/05/06

Date Analyzed: 06/06/06

Dilution Factor: 1

CONCENTRATION UNITS: ug/L

CAS NO.	COMPOUND	MDL	PQL	RESULT	Q
108-95-2	Phenol	3.45	10.3	3.45	U
111-44-4	bis(2-Chloroethyl)ether	0.708	10.3	0.708	U
95-57-8	2-Chlorophenol	2.47	10.3	2.47	U
95-48-7	2-Methylphenol	3.18	10.3	3.18	U
108-60-1	Bis(2-chloroisopropyl) Ether	0.730	10.3	0.730	U
108-39-4/1	m,p-Cresol	3.16	10.3	3.16	U
621-64-7	N-Nitroso-di-n-propylamine	0.571	10.3	0.571	U
67-72-1	Hexachloroethane	0.929	10.3	0.929	U
98-95-3	Nitrobenzene	0.750	10.3	0.750	U
78-59-1	Isophorone	0.639	10.3	0.639	U
88-75-5	2-Nitrophenol	2.93	10.3	2.93	U
105-67-9	2,4-Dimethylphenol	3.19	10.3	3.19	U
111-91-1	bis(2-Chloroethoxy)methane	0.566	10.3	0.566	U
120-83-2	2,4-Dichlorophenol	2.79	10.3	2.79	U
91-20-3	Naphthalene	0.663	10.3	0.663	U
106-47-8	4-Chloroaniline	2.42	10.3	2.42	U
87-68-3	Hexachlorobutadiene	0.901	10.3	0.901	U
59-50-7	4-Chloro-3-Methyl Phenol	2.43	10.3	2.43	U
91-57-6	2-Methylnaphthalene	0.724	10.3	0.724	U
77-47-4	Hexachlorocyclopentadiene	0.540	10.3	0.540	U
88-06-2	2,4,6-Trichlorophenol	2.93	10.3	2.93	U
95-95-4	2,4,5-Trichlorophenol	2.58	25.8	2.58	U
91-58-7	2-Chloronaphthalene	0.652	10.3	0.652	U
88-74-4	2-Nitroaniline	0.511	25.8	0.511	U
131-11-3	Dimethylphthalate	0.527	10.3	0.527	U
208-96-8	Acenaphthylene	0.674	10.3	0.674	U
606-20-2	2,6-Dinitrotoluene	0.515	10.3	0.515	U
83-32-9	Acenaphthene	0.545	10.3	0.545	U
51-28-5	2,4-Dinitrophenol	2.74	25.8	2.74	U
100-02-7	4-Nitrophenol	3.28	10.3	3.28	U
121-14-2	2,4-Dinitrotoluene	0.662	10.3	0.662	U
132-64-9	Dibenzofuran	0.590	10.3	0.590	U
84-66-2	Diethylphthalate	0.550	10.3	2.21	J
99-09-2	3-Nitroaniline	0.583	25.8	0.583	U

1C

SEMI-VOLATILE ORGANICS ANALYSIS DATA SHEET

Field Sample ID: **MW137GW01053106**

SDG No.: F1890

Analysis Method: SW8270

Matrix: WATER pH:

Sample wt/vol: (G/ML) 970.3 ML

Level: (LOW/MED) LOW

Percent Moisture: 100 Decanted: N

Extraction Method: SW3510 Cleanup - GPC: N

Concentrated Extract Volume: (ML) 1

Injection Volume: (UL) 1

Instrument: MSC

Lab Name: CH2M HILL/LAB/CVO

Lab Sample ID: F189002

Lab File ID: 189002.D

Date Received: 06/02/06

Date Extracted: 06/05/06

Date Analyzed: 06/06/06

Dilution Factor: 1

CONCENTRATION UNITS: ug/L

CAS NO.	COMPOUND	MDL	PQL	RESULT	Q
86-73-7	Fluorene	0.561	10.3	0.561	U
7005-72-3	4-Chlorophenyl phenyl ether	0.596	10.3	0.596	U
100-01-6	4-Nitroaniline	0.586	25.8	0.586	U
534-52-1	4,6-Dinitro-2-Methyl Phenol	2.51	25.8	2.51	U
86-30-6	N-Nitrosodiphenylamine	0.571	10.3	0.571	U
101-55-3	4-Bromophenyl phenyl ether	0.577	10.3	0.577	U
118-74-1	Hexachlorobenzene	0.603	10.3	0.603	U
87-86-5	Pentachlorophenol	2.98	10.3	2.98	U
85-01-8	Phenanthrene	0.627	10.3	0.627	U
120-12-7	Anthracene	0.652	10.3	0.652	U
86-74-8	Carbazole	0.623	10.3	0.623	U
84-74-2	Di-n-butylphthalate	0.588	10.3	0.588	U
206-44-0	Fluoranthene	0.652	10.3	0.652	U
129-00-0	Pyrene	0.521	10.3	0.521	U
85-68-7	Butylbenzylphthalate	0.518	6.18	0.518	U
56-55-3	Benzo(a)anthracene	0.526	10.3	0.526	U
91-94-1	3,3'-Dichlorobenzidine	0.640	10.3	0.640	U
218-01-9	Chrysene	0.604	10.3	0.604	U
117-81-7	bis(2-Ethylhexyl)phthalate	1.05	10.3	1.05	U
117-84-0	Di-n-octylphthalate	0.722	10.3	0.722	U
205-99-2	Benzo(b)fluoroanthene	0.657	10.3	0.657	U
207-08-9	Benzo(k)fluoranthene	0.688	10.3	0.688	U
50-32-8	Benzo(a)pyrene	0.618	10.3	0.618	U
193-39-5	Indeno(1,2,3-c,d)pyrene	0.699	10.3	0.699	U
53-70-3	Dibenzo(a,h)anthracene	0.585	10.3	0.585	U
191-24-2	Benzo(g,h,i)perylene	0.575	10.3	0.575	U

SEMI-VOLATILE ORGANICS ANALYSIS DATA SHEET

Field Sample ID: **MW116B-GW01053106**

SDG No.: F1890
Analysis Method: SW8270
Matrix: WATER pH:
Sample wt/vol: (G/ML) 907.5 ML
Level: (LOW/MED) LOW
Percent Moisture: 100 Decanted: N
Extraction Method: SW3510 Cleanup - GPC: N
Concentrated Extract Volume: (ML) 1
Injection Volume: (UL) 1
Instrument: MSC

Lab Name: CH2M HILL/LAB/CVO
Lab Sample ID: F189003
Lab File ID: 189003.D
Date Received: 06/02/06
Date Extracted: 06/05/06
Date Analyzed: 06/06/06
Dilution Factor: 1
CONCENTRATION UNITS: ug/L

CAS NO.	COMPOUND	MDL	PQL	RESULT	Q
108-95-2	Phenol	3.68	11.0	3.68	U
111-44-4	bis(2-Chloroethyl)ether	0.757	11.0	0.757	U
95-57-8	2-Chlorophenol	2.64	11.0	2.64	U
95-48-7	2-Methylphenol	3.40	11.0	3.40	U
108-60-1	Bis(2-chloroisopropyl) Ether	0.781	11.0	0.781	U
108-39-4/1	m,p-Cresol	3.38	11.0	3.38	U
621-64-7	N-Nitroso-di-n-propylamine	0.610	11.0	0.610	U
67-72-1	Hexachloroethane	0.994	11.0	0.994	U
98-95-3	Nitrobenzene	0.802	11.0	0.802	U
78-59-1	Isophorone	0.683	11.0	0.683	U
88-75-5	2-Nitrophenol	3.13	11.0	3.13	U
105-67-9	2,4-Dimethylphenol	3.41	11.0	3.41	U
111-91-1	bis(2-Chloroethoxy)methane	0.605	11.0	0.605	U
120-83-2	2,4-Dichlorophenol	2.99	11.0	2.99	U
91-20-3	Naphthalene	0.709	11.0	0.709	U
106-47-8	4-Chloroaniline	2.59	11.0	2.59	U
87-68-3	Hexachlorobutadiene	0.963	11.0	0.963	U
59-50-7	4-Chloro-3-Methyl Phenol	2.60	11.0	2.60	U
91-57-6	2-Methylnaphthalene	0.774	11.0	0.774	U
77-47-4	Hexachlorocyclopentadiene	0.578	11.0	0.578	U
88-06-2	2,4,6-Trichlorophenol	3.13	11.0	3.13	U
95-95-4	2,4,5-Trichlorophenol	2.76	27.5	2.76	U
91-58-7	2-Chloronaphthalene	0.697	11.0	0.697	U
88-74-4	2-Nitroaniline	0.546	27.5	0.546	U
131-11-3	Dimethylphthalate	0.563	11.0	0.563	U
208-96-8	Acenaphthylene	0.720	11.0	0.720	U
606-20-2	2,6-Dinitrotoluene	0.551	11.0	0.551	U
83-32-9	Acenaphthene	0.583	11.0	1.84	J
51-28-5	2,4-Dinitrophenol	2.93	27.5	2.93	U
100-02-7	4-Nitrophenol	3.51	11.0	3.51	U
121-14-2	2,4-Dinitrotoluene	0.708	11.0	0.708	U
132-64-9	Dibenzofuran	0.631	11.0	0.631	U
84-66-2	Diethylphthalate	0.588	11.0	1.83	J
99-09-2	3-Nitroaniline	0.623	27.5	0.623	U

006147

SEMI-VOLATILE ORGANICS ANALYSIS DATA SHEET

Field Sample ID:
MW116B-GW01053106

SDG No.: F1890
Analysis Method: SW8270
Matrix: WATER pH:
Sample wt/vol: (G/ML) 907.5 ML
Level: (LOW/MED) LOW
Percent Moisture: 100 Decanted: N
Extraction Method: SW3510 Cleanup - GPC: N
Concentrated Extract Volume: (ML) 1
Injection Volume: (UL) 1
Instrument: MSC

Lab Name: CH2M HILL/LAB/CVO
Lab Sample ID: F189003
Lab File ID: 189003.D
Date Received: 06/02/06
Date Extracted: 06/05/06
Date Analyzed: 06/06/06
Dilution Factor: 1
CONCENTRATION UNITS: ug/L

CAS NO.	COMPOUND	MDL	PQL	RESULT	Q
86-73-7	Fluorene	0.600	11.0	0.600	U
7005-72-3	4-Chlorophenyl phenyl ether	0.638	11.0	0.638	U
100-01-6	4-Nitroaniline	0.627	27.5	0.627	U
534-52-1	4,6-Dinitro-2-Methyl Phenol	2.68	27.5	2.68	U
86-30-6	N-Nitrosodiphenylamine	0.610	11.0	0.610	U
101-55-3	4-Bromophenyl phenyl ether	0.616	11.0	0.616	U
118-74-1	Hexachlorobenzene	0.645	11.0	0.645	U
87-86-5	Pentachlorophenol	3.18	11.0	3.18	U
85-01-8	Phenanthrene	0.670	11.0	0.670	U
120-12-7	Anthracene	0.697	11.0	0.697	U
86-74-8	Carbazole	0.666	11.0	0.666	U
84-74-2	Di-n-butylphthalate	0.628	11.0	0.628	U
206-44-0	Fluoranthene	0.697	11.0	0.697	U
129-00-0	Pyrene	0.557	11.0	0.557	U
85-68-7	Butylbenzylphthalate	0.553	6.61	0.553	U
56-55-3	Benzo(a)anthracene	0.563	11.0	0.563	U
91-94-1	3,3'-Dichlorobenzidine	0.685	11.0	0.685	U
218-01-9	Chrysene	0.646	11.0	0.646	U
117-81-7	bis(2-Ethylhexyl)phthalate	1.13	11.0	1.13	U
117-84-0	Di-n-octylphthalate	0.772	11.0	0.772	U
205-99-2	Benzo(b)fluoroanthene	0.702	11.0	0.702	U
207-08-9	Benzo(k)fluoranthene	0.736	11.0	0.736	U
50-32-8	Benzo(a)pyrene	0.660	11.0	0.660	U
193-39-5	Indeno(1,2,3-c,d)pyrene	0.747	11.0	0.747	U
53-70-3	Dibenzo(a,h)anthracene	0.626	11.0	0.626	U
191-24-2	Benzo(g,h,i)perylene	0.615	11.0	0.615	U

1C

SEMI-VOLATILE ORGANICS ANALYSIS DATA SHEET

Field Sample ID: **MW136GW01053106**

SDG No.: F1890

Analysis Method: SW8270

Matrix: WATER pH:

Sample wt/vol: (G/ML) 806.3 ML

Level: (LOW/MED) LOW

Percent Moisture: 100 Decanted: N

Extraction Method: SW3510 Cleanup - GPC: N

Concentrated Extract Volume: (ML) 1

Injection Volume: (UL) 1

Instrument: MSC

Lab Name: CH2M HILL/LAB/CVO

Lab Sample ID: F189004

Lab File ID: 189004.D

Date Received: 06/02/06

Date Extracted: 06/05/06

Date Analyzed: 06/06/06

Dilution Factor: 1

CONCENTRATION UNITS: ug/L

CAS NO.	COMPOUND	MDL	PQL	RESULT	Q
108-95-2	Phenol	4.15	12.4	4.15	U
111-44-4	bis(2-Chloroethyl)ether	0.853	12.4	0.853	U
95-57-8	2-Chlorophenol	2.97	12.4	2.97	U
95-48-7	2-Methylphenol	3.83	12.4	3.83	U
108-60-1	Bis(2-chloroisopropyl) Ether	0.879	12.4	0.879	U
108-39-4/1	m,p-Cresol	3.80	12.4	3.80	U
621-64-7	N-Nitroso-di-n-propylamine	0.687	12.4	0.687	U
67-72-1	Hexachloroethane	1.12	12.4	1.12	U
98-95-3	Nitrobenzene	0.902	12.4	0.902	U
78-59-1	Isophorone	0.769	12.4	0.769	U
88-75-5	2-Nitrophenol	3.52	12.4	3.52	U
105-67-9	2,4-Dimethylphenol	3.84	12.4	3.84	U
111-91-1	bis(2-Chloroethoxy)methane	0.681	12.4	0.681	U
120-83-2	2,4-Dichlorophenol	3.36	12.4	3.36	U
91-20-3	Naphthalene	0.798	12.4	0.798	U
106-47-8	4-Chloroaniline	2.92	12.4	2.92	U
87-68-3	Hexachlorobutadiene	1.08	12.4	1.08	U
59-50-7	4-Chloro-3-Methyl Phenol	2.92	12.4	2.92	U
91-57-6	2-Methylnaphthalene	0.871	12.4	0.871	U
77-47-4	Hexachlorocyclopentadiene	0.650	12.4	0.650	U
88-06-2	2,4,6-Trichlorophenol	3.52	12.4	3.52	U
95-95-4	2,4,5-Trichlorophenol	3.11	31.0	3.11	U
91-58-7	2-Chloronaphthalene	0.785	12.4	0.785	U
88-74-4	2-Nitroaniline	0.615	31.0	0.615	U
131-11-3	Dimethylphthalate	0.634	12.4	0.634	U
208-96-8	Acenaphthylene	0.811	12.4	0.811	U
606-20-2	2,6-Dinitrotoluene	0.620	12.4	0.620	U
83-32-9	Acenaphthene	0.656	12.4	0.656	U
51-28-5	2,4-Dinitrophenol	3.30	31.0	3.30	U
100-02-7	4-Nitrophenol	3.95	12.4	3.95	U
121-14-2	2,4-Dinitrotoluene	0.797	12.4	0.797	U
132-64-9	Dibenzofuran	0.711	12.4	0.711	U
84-66-2	Diethylphthalate	0.662	12.4	2.82	J
99-09-2	3-Nitroaniline	0.702	31.0	0.702	U

006149

1C

SEMI-VOLATILE ORGANICS ANALYSIS DATA SHEET

Field Sample ID: **MW136GW01053106**

SDG No.: F1890

Analysis Method: SW8270

Matrix: WATER pH:

Sample wt/vol: (G/ML) 806.3 ML

Level: (LOW/MED) LOW

Percent Moisture: 100 Decanted: N

Extraction Method: SW3510 Cleanup - GPC: N

Concentrated Extract Volume: (ML) 1

Injection Volume: (UL) 1

Instrument: MSC

Lab Name: CH2M HILL/LAB/CVO

Lab Sample ID: F189004

Lab File ID: 189004.D

Date Received: 06/02/06

Date Extracted: 06/05/06

Date Analyzed: 06/06/06

Dilution Factor: 1

CONCENTRATION UNITS: ug/L

CAS NO.	COMPOUND	MDL	PQL	RESULT	Q
86-73-7	Fluorene	0.675	12.4	0.675	U
7005-72-3	4-Chlorophenyl phenyl ether	0.718	12.4	0.718	U
100-01-6	4-Nitroaniline	0.705	31.0	0.705	U
534-52-1	4,6-Dinitro-2-Methyl Phenol	3.02	31.0	3.02	U
86-30-6	N-Nitrosodiphenylamine	0.687	12.4	0.687	U
101-55-3	4-Bromophenyl phenyl ether	0.694	12.4	0.694	U
118-74-1	Hexachlorobenzene	0.726	12.4	0.726	U
87-86-5	Pentachlorophenol	3.58	12.4	3.58	U
85-01-8	Phenanthrene	0.754	12.4	0.754	U
120-12-7	Anthracene	0.785	12.4	0.785	U
86-74-8	Carbazole	0.750	12.4	0.750	U
84-74-2	Di-n-butylphthalate	0.707	12.4	0.707	U
206-44-0	Fluoranthene	0.784	12.4	0.784	U
129-00-0	Pyrene	0.627	12.4	0.627	U
85-68-7	Butylbenzylphthalate	0.623	7.44	0.623	U
56-55-3	Benzo(a)anthracene	0.633	12.4	0.633	U
91-94-1	3,3'-Dichlorobenzidine	0.770	12.4	0.770	U
218-01-9	Chrysene	0.727	12.4	0.727	U
117-81-7	bis(2-Ethylhexyl)phthalate	1.27	12.4	1.27	U
117-84-0	Di-n-octylphthalate	0.869	12.4	0.869	U
205-99-2	Benzo(b)fluoroanthene	0.791	12.4	0.791	U
207-08-9	Benzo(k)fluoranthene	0.828	12.4	0.828	U
50-32-8	Benzo(a)pyrene	0.743	12.4	0.743	U
193-39-5	Indeno(1,2,3-c,d)pyrene	0.841	12.4	0.841	U
53-70-3	Dibenzo(a,h)anthracene	0.704	12.4	0.704	U
191-24-2	Benzo(g,h,i)perylene	0.692	12.4	0.692	U

1C

SEMI-VOLATILE ORGANICS ANALYSIS DATA SHEET

Field Sample ID: **MW136MS01053106**

SDG No.: F1890

Analysis Method: SW8270

Matrix: WATER pH:

Sample wt/vol: (G/ML) 867 ML

Level: (LOW/MED) LOW

Percent Moisture: 100 Decanted: N

Extraction Method: SW3510 Cleanup - GPC: N

Concentrated Extract Volume: (ML) 1

Injection Volume: (UL) 1

Instrument: MSC

Lab Name: CH2M HILL/LAB/CVO

Lab Sample ID: F189005MS

Lab File ID: 189005MS.D

Date Received: 06/02/06

Date Extracted: 06/05/06

Date Analyzed: 06/06/06

Dilution Factor: 1

CONCENTRATION UNITS: ug/L

CAS NO.	COMPOUND	MDL	PQL	RESULT	Q
108-95-2	Phenol	3.86	11.5	30.8	
111-44-4	bis(2-Chloroethyl)ether	0.793	11.5	65.4	
95-57-8	2-Chlorophenol	2.76	11.5	59.6	
95-48-7	2-Methylphenol	3.56	11.5	59.8	
108-60-1	Bis(2-chloroisopropyl) Ether	0.817	11.5	65.3	
108-39-4/1	m,p-Cresol	3.53	11.5	59.5	
621-64-7	N-Nitroso-di-n-propylamine	0.639	11.5	77.2	
67-72-1	Hexachloroethane	1.04	11.5	57.5	
98-95-3	Nitrobenzene	0.839	11.5	68.4	
78-59-1	Isophorone	0.715	11.5	79.0	
88-75-5	2-Nitrophenol	3.28	11.5	72.6	
105-67-9	2,4-Dimethylphenol	3.57	11.5	68.2	
111-91-1	bis(2-Chloroethoxy)methane	0.633	11.5	76.7	
120-83-2	2,4-Dichlorophenol	3.13	11.5	79.2	
91-20-3	Naphthalene	0.742	11.5	68.8	
106-47-8	4-Chloroaniline	2.71	11.5	77.1	
87-68-3	Hexachlorobutadiene	1.01	11.5	61.7	
59-50-7	4-Chloro-3-Methyl Phenol	2.72	11.5	74.9	
91-57-6	2-Methylnaphthalene	0.810	11.5	74.4	
77-47-4	Hexachlorocyclopentadiene	0.604	11.5	67.9	
88-06-2	2,4,6-Trichlorophenol	3.28	11.5	82.4	
95-95-4	2,4,5-Trichlorophenol	2.89	28.8	85.1	
91-58-7	2-Chloronaphthalene	0.730	11.5	75.2	
88-74-4	2-Nitroaniline	0.572	28.8	99.9	
131-11-3	Dimethylphthalate	0.590	11.5	86.7	
208-96-8	Acenaphthylene	0.754	11.5	89.8	
606-20-2	2,6-Dinitrotoluene	0.577	11.5	95.5	
83-32-9	Acenaphthene	0.610	11.5	80.3	
51-28-5	2,4-Dinitrophenol	3.07	28.8	110	
100-02-7	4-Nitrophenol	3.67	11.5	38.7	
121-14-2	2,4-Dinitrotoluene	0.741	11.5	97.9	
132-64-9	Dibenzofuran	0.661	11.5	80.3	
84-66-2	Diethylphthalate	0.615	11.5	84.9	
99-09-2	3-Nitroaniline	0.652	28.8	97.6	

1C

SEMI-VOLATILE ORGANICS ANALYSIS DATA SHEET

Field Sample ID: **MW136MS01053106**

SDG No.: F1890

Analysis Method: SW8270

Matrix: WATER pH:

Sample wt/vol: (G/ML) 867 ML

Level: (LOW/MED) LOW

Percent Moisture: 100 Decanted: N

Extraction Method: SW3510 Cleanup - GPC: N

Concentrated Extract Volume: (ML) 1

Injection Volume: (UL) 1

Instrument: MSC

Lab Name: CH2M HILL/LAB/CVO

Lab Sample ID: F189005MS

Lab File ID: 189005MS.D

Date Received: 06/02/06

Date Extracted: 06/05/06

Date Analyzed: 06/06/06

Dilution Factor: 1

CONCENTRATION UNITS: ug/L

CAS NO.	COMPOUND	MDL	PQL	RESULT	Q
86-73-7	Fluorene	0.628	11.5	83.3	
7005-72-3	4-Chlorophenyl phenyl ether	0.667	11.5	81.3	
100-01-6	4-Nitroaniline	0.656	28.8	95.1	
534-52-1	4,6-Dinitro-2-Methyl Phenol	2.80	28.8	87.4	
86-30-6	N-Nitrosodiphenylamine	0.639	11.5	74.1	
101-55-3	4-Bromophenyl phenyl ether	0.645	11.5	85.4	
118-74-1	Hexachlorobenzene	0.675	11.5	88.9	
87-86-5	Pentachlorophenol	3.33	11.5	108	
85-01-8	Phenanthrene	0.701	11.5	73.9	
120-12-7	Anthracene	0.730	11.5	76.9	
86-74-8	Carbazole	0.697	11.5	76.9	
84-74-2	Di-n-butylphthalate	0.658	11.5	74.4	
206-44-0	Fluoranthene	0.729	11.5	75.2	
129-00-0	Pyrene	0.583	11.5	86.8	
85-68-7	Butylbenzylphthalate	0.579	6.92	89.5	
56-55-3	Benzo(a)anthracene	0.589	11.5	85.1	
91-94-1	3,3'-Dichlorobenzidine	0.716	11.5	28.0	
218-01-9	Chrysene	0.676	11.5	81.5	
117-81-7	bis(2-Ethylhexyl)phthalate	1.18	11.5	84.0	
117-84-0	Di-n-octylphthalate	0.808	11.5	85.3	
205-99-2	Benzo(b)fluoroanthene	0.735	11.5	82.4	
207-08-9	Benzo(k)fluoranthene	0.770	11.5	77.5	
50-32-8	Benzo(a)pyrene	0.691	11.5	85.5	
193-39-5	Indeno(1,2,3-c,d)pyrene	0.782	11.5	77.8	
53-70-3	Dibenzo(a,h)anthracene	0.655	11.5	77.2	
191-24-2	Benzo(g,h,i)perylene	0.643	11.5	77.2	

1C

SEMI-VOLATILE ORGANICS ANALYSIS DATA SHEET

Field Sample ID: **MW136MSD01053106**

SDG No.: F1890

Analysis Method: SW8270

Matrix: WATER pH:

Sample wt/vol: (G/ML) 868.3 ML

Level: (LOW/MED) LOW

Percent Moisture: 100 Decanted: N

Extraction Method: SW3510 Cleanup - GPC: N

Concentrated Extract Volume: (ML) 1

Injection Volume: (UL) 1

Instrument: MSC

Lab Name: CH2M HILL/LAB/CVO

Lab Sample ID: F189006MSD

Lab File ID: 189006SD.D

Date Received: 06/02/06

Date Extracted: 06/05/06

Date Analyzed: 06/06/06

Dilution Factor: 1

CONCENTRATION UNITS: ug/L

CAS NO.	COMPOUND	MDL	PQL	RESULT	Q
108-95-2	Phenol	3.85	11.5	26.0	
111-44-4	bis(2-Chloroethyl)ether	0.792	11.5	59.2	
95-57-8	2-Chlorophenol	2.76	11.5	52.1	
95-48-7	2-Methylphenol	3.56	11.5	53.3	
108-60-1	Bis(2-chloroisopropyl) Ether	0.816	11.5	53.0	
108-39-4/1	m,p-Cresol	3.53	11.5	51.4	
621-64-7	N-Nitroso-di-n-propylamine	0.638	11.5	63.7	
67-72-1	Hexachloroethane	1.04	11.5	45.7	
98-95-3	Nitrobenzene	0.838	11.5	58.5	
78-59-1	Isophorone	0.714	11.5	66.5	
88-75-5	2-Nitrophenol	3.27	11.5	63.4	
105-67-9	2,4-Dimethylphenol	3.57	11.5	62.2	
111-91-1	bis(2-Chloroethoxy)methane	0.632	11.5	64.8	
120-83-2	2,4-Dichlorophenol	3.12	11.5	68.5	
91-20-3	Naphthalene	0.741	11.5	57.2	
106-47-8	4-Chloroaniline	2.71	11.5	72.1	
87-68-3	Hexachlorobutadiene	1.01	11.5	46.6	
59-50-7	4-Chloro-3-Methyl Phenol	2.72	11.5	67.9	
91-57-6	2-Methylnaphthalene	0.809	11.5	59.1	
77-47-4	Hexachlorocyclopentadiene	0.604	11.5	46.3	
88-06-2	2,4,6-Trichlorophenol	3.27	11.5	70.0	
95-95-4	2,4,5-Trichlorophenol	2.88	28.8	73.8	
91-58-7	2-Chloronaphthalene	0.729	11.5	61.7	
88-74-4	2-Nitroaniline	0.571	28.8	90.0	
131-11-3	Dimethylphthalate	0.589	11.5	78.6	
208-96-8	Acenaphthylene	0.753	11.5	77.4	
606-20-2	2,6-Dinitrotoluene	0.576	11.5	84.5	
83-32-9	Acenaphthene	0.609	11.5	68.5	
51-28-5	2,4-Dinitrophenol	3.07	28.8	94.5	
100-02-7	4-Nitrophenol	3.67	11.5	35.6	
121-14-2	2,4-Dinitrotoluene	0.740	11.5	87.4	
132-64-9	Dibenzofuran	0.660	11.5	67.9	
84-66-2	Diethylphthalate	0.615	11.5	77.4	
99-09-2	3-Nitroaniline	0.652	28.8	91.5	

1C

SEMI-VOLATILE ORGANICS ANALYSIS DATA SHEET

Field Sample ID: **MW136MSD01053106**

SDG No.: F1890

Analysis Method: SW8270

Matrix: WATER pH:

Sample wt/vol: (G/ML) 868.3 ML

Level: (LOW/MED) LOW

Percent Moisture: 100 Decanted: N

Extraction Method: SW3510 Cleanup - GPC: N

Concentrated Extract Volume: (ML) 1

Injection Volume: (UL) 1

Instrument: MSC

Lab Name: CH2M HILL/LAB/CVO

Lab Sample ID: F189006MSD

Lab File ID: 189006SD.D

Date Received: 06/02/06

Date Extracted: 06/05/06

Date Analyzed: 06/06/06

Dilution Factor: 1

CONCENTRATION UNITS: ug/L

CAS NO.	COMPOUND	MDL	PQL	RESULT	Q
86-73-7	Fluorene	0.627	11.5	72.0	
7005-72-3	4-Chlorophenyl phenyl ether	0.666	11.5	65.2	
100-01-6	4-Nitroaniline	0.655	28.8	94.8	
534-52-1	4,6-Dinitro-2-Methyl Phenol	2.80	28.8	71.2	
86-30-6	N-Nitrosodiphenylamine	0.638	11.5	63.0	
101-55-3	4-Bromophenyl phenyl ether	0.644	11.5	63.1	
118-74-1	Hexachlorobenzene	0.674	11.5	65.8	
87-86-5	Pentachlorophenol	3.33	11.5	82.6	
85-01-8	Phenanthrene	0.700	11.5	62.8	
120-12-7	Anthracene	0.729	11.5	65.0	
86-74-8	Carbazole	0.696	11.5	72.2	
84-74-2	Di-n-butylphthalate	0.657	11.5	63.7	
206-44-0	Fluoranthene	0.728	11.5	65.8	
129-00-0	Pyrene	0.582	11.5	70.6	
85-68-7	Butylbenzylphthalate	0.578	6.91	74.6	
56-55-3	Benzo(a)anthracene	0.588	11.5	69.8	
91-94-1	3,3'-Dichlorobenzidine	0.715	11.5	29.1	
218-01-9	Chrysene	0.675	11.5	68.4	
117-81-7	bis(2-Ethylhexyl)phthalate	1.18	11.5	73.4	
117-84-0	Di-n-octylphthalate	0.807	11.5	69.7	
205-99-2	Benzo(b)fluoroanthene	0.734	11.5	66.9	
207-08-9	Benzo(k)fluoranthene	0.769	11.5	63.0	
50-32-8	Benzo(a)pyrene	0.690	11.5	69.1	
193-39-5	Indeno(1,2,3-c,d)pyrene	0.781	11.5	64.0	
53-70-3	Dibenzo(a,h)anthracene	0.654	11.5	63.4	
191-24-2	Benzo(g,h,i)perylene	0.643	11.5	64.5	

1C

SEMI-VOLATILE ORGANICS ANALYSIS DATA SHEET

Field Sample ID: **WB1-0605**

SDG No.: F1890

Analysis Method: SW8270

Matrix: WATER pH:

Sample wt/vol: (G/ML) 1000 ML

Level: (LOW/MED) LOW

Percent Moisture: 100 Decanted: N

Extraction Method: SW3510 Cleanup - GPC: N

Concentrated Extract Volume: (ML) 1

Injection Volume: (UL) 1

Instrument: MSC

Lab Name: CH2M HILL/LAB/CVO

Lab Sample ID: WB1-0605

Lab File ID: WB1-0605.D

Date Received: / /

Date Extracted: 06/05/06

Date Analyzed: 06/07/06

Dilution Factor: 1

CONCENTRATION UNITS: ug/L

CAS NO.	COMPOUND	MDL	PQL	RESULT	Q
108-95-2	Phenol	3.34	10.0	3.34	U
111-44-4	bis(2-Chloroethyl)ether	0.687	10.0	0.687	U
95-57-8	2-Chlorophenol	2.40	10.0	2.40	U
95-48-7	2-Methylphenol	3.09	10.0	3.09	U
108-60-1	Bis(2-chloroisopropyl) Ether	0.709	10.0	0.709	U
108-39-4/1	m,p-Cresol	3.06	10.0	3.06	U
621-64-7	N-Nitroso-di-n-propylamine	0.554	10.0	0.554	U
67-72-1	Hexachloroethane	0.902	10.0	0.902	U
98-95-3	Nitrobenzene	0.728	10.0	0.728	U
78-59-1	Isophorone	0.620	10.0	0.620	U
88-75-5	2-Nitrophenol	2.84	10.0	2.84	U
105-67-9	2,4-Dimethylphenol	3.10	10.0	3.10	U
111-91-1	bis(2-Chloroethoxy)methane	0.549	10.0	0.549	U
120-83-2	2,4-Dichlorophenol	2.71	10.0	2.71	U
91-20-3	Naphthalene	0.643	10.0	0.643	U
106-47-8	4-Chloroaniline	2.35	10.0	2.35	U
87-68-3	Hexachlorobutadiene	0.874	10.0	0.874	U
59-50-7	4-Chloro-3-Methyl Phenol	2.36	10.0	2.36	U
91-57-6	2-Methylnaphthalene	0.702	10.0	0.702	U
77-47-4	Hexachlorocyclopentadiene	0.524	10.0	0.524	U
88-06-2	2,4,6-Trichlorophenol	2.84	10.0	2.84	U
95-95-4	2,4,5-Trichlorophenol	2.50	25.0	2.50	U
91-58-7	2-Chloronaphthalene	0.633	10.0	0.633	U
88-74-4	2-Nitroaniline	0.496	25.0	0.496	U
131-11-3	Dimethylphthalate	0.511	10.0	0.511	U
208-96-8	Acenaphthylene	0.654	10.0	0.654	U
606-20-2	2,6-Dinitrotoluene	0.500	10.0	0.500	U
83-32-9	Acenaphthene	0.529	10.0	0.529	U
51-28-5	2,4-Dinitrophenol	2.66	25.0	2.66	U
100-02-7	4-Nitrophenol	3.18	10.0	3.18	U
121-14-2	2,4-Dinitrotoluene	0.643	10.0	0.643	U
132-64-9	Dibenzofuran	0.573	10.0	0.573	U
84-66-2	Diethylphthalate	0.534	10.0	0.534	U
99-09-2	3-Nitroaniline	0.566	25.0	0.566	U

1C

SEMI-VOLATILE ORGANICS ANALYSIS DATA SHEET

Field Sample ID: **WB1-0605**

SDG No.: F1890

Analysis Method: SW8270

Matrix: WATER pH:

Sample wt/vol: (G/ML) 1000 ML

Level: (LOW/MED) LOW

Percent Moisture: 100 Decanted: N

Extraction Method: SW3510 Cleanup - GPC: N

Concentrated Extract Volume: (ML) 1

Injection Volume: (UL) 1

Instrument: MSC

Lab Name: CH2M HILL/LAB/CVO

Lab Sample ID: WB1-0605

Lab File ID: WB1-0605.D

Date Received: / /

Date Extracted: 06/05/06

Date Analyzed: 06/07/06

Dilution Factor: 1

CONCENTRATION UNITS: ug/L

CAS NO.	COMPOUND	MDL	PQL	RESULT	Q
86-73-7	Fluorene	0.544	10.0	0.544	U
7005-72-3	4-Chlorophenyl phenyl ether	0.579	10.0	0.579	U
100-01-6	4-Nitroaniline	0.569	25.0	0.569	U
534-52-1	4,6-Dinitro-2-Methyl Phenol	2.43	25.0	2.43	U
86-30-6	N-Nitrosodiphenylamine	0.554	10.0	0.554	U
101-55-3	4-Bromophenyl phenyl ether	0.559	10.0	0.559	U
118-74-1	Hexachlorobenzene	0.585	10.0	0.585	U
87-86-5	Pentachlorophenol	2.89	10.0	2.89	U
85-01-8	Phenanthrene	0.608	10.0	0.608	U
120-12-7	Anthracene	0.633	10.0	0.633	U
86-74-8	Carbazole	0.604	10.0	0.604	U
84-74-2	Di-n-butylphthalate	0.570	10.0	0.570	U
206-44-0	Fluoranthene	0.632	10.0	0.632	U
129-00-0	Pyrene	0.506	10.0	0.506	U
85-68-7	Butylbenzylphthalate	0.502	6.00	0.502	U
56-55-3	Benzo(a)anthracene	0.511	10.0	0.511	U
91-94-1	3,3'-Dichlorobenzidine	0.621	10.0	0.621	U
218-01-9	Chrysene	0.586	10.0	0.586	U
117-81-7	bis(2-Ethylhexyl)phthalate	1.02	10.0	1.02	U
117-84-0	Di-n-octylphthalate	0.701	10.0	0.701	U
205-99-2	Benzo(b)fluoroanthene	0.637	10.0	0.637	U
207-08-9	Benzo(k)fluoranthene	0.668	10.0	0.668	U
50-32-8	Benzo(a)pyrene	0.599	10.0	0.599	U
193-39-5	Indeno(1,2,3-c,d)pyrene	0.678	10.0	0.678	U
53-70-3	Dibenzo(a,h)anthracene	0.568	10.0	0.568	U
191-24-2	Benzo(g,h,i)perylene	0.558	10.0	0.558	U

006156

QC DATA SUMMARY

006157

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2C

WATER SEMI-VOLATILE SURROGATE RECOVERY

SDG No.: F1890 Lab Name: CH2M HILL/LAB/CVO

Analysis Method: SW8270

GC Column: ZB-5MS ID: 0.25 (mm) Instrument Name: MSC

	FIELD/QC SAMPLE ID	S1	S2	S3	S4	S5	S6	S7	S8	S9	S10	S11	S12	# OUT
1	BS1W0605	51	34	88	102	122	113							
2	MW137FD01053106	47	31	102	106	117	111							
3	MW137GW01053106	49	35	104	104	121	112							
4	MW116B-GW01053106	47	32	91	100	122	114							
5	MW136GW01053106	45	33	83	93	108	97							
6	MW136MS01053106	49	37	87	95	121	113							
7	MW136MSD01053106	42	31	74	77	107	88							
8	WB1-0605	45	27	83	91	97	104							

* Values outside of QC limits

D Surrogate diluted out

		QC LIMITS
S1:	2-Fluorophenol	(21-115)
S2:	Phenol-d5	(5-115)
S3:	Nitrobenzene-d5	(35-114)
S4:	2-Fluorobiphenyl	(43-116)
S5:	2,4,6-Tribromophenol	(5-123)
S6:	Terphenyl-d14	(33-141)

006159

3C

WATER SEMI-VOLATILE MATRIX SPIKE/MATRIX SPIKE

SDG No.: F1890 Lab Name: CH2M HILL/LAB/CVO

Analysis Method: SW8270

GC Column: ZB-5MS ID: 0.25 (mm) Instrument Name: MSC

Parent Sample ID: MW136GW01053106

Matrix Spike ID: MW136MS01053106

Matrix Spike Duplicate ID: MW136MSD01053106

Analyte	Sample Result ug/L	MS Spike Added	MS Result ug/L	MS %R	MSD Spike Added	MSD Result ug/L	MSD %R	%RPD	QC Limits %RPD	QC Limits %R	Q
Phenol		92.3	30.8	33	92.1	26.0	28	16.9	20	25-125	
bis(2-Chloroethyl)ether		92.3	65.4	71	92.1	59.2	64	9.86	20	44-125	
2-Chlorophenol		92.3	59.6	65	92.1	52.1	57	13.3	20	41-125	
2-Methylphenol		92.3	59.8	65	92.1	53.3	58	11.4	20	25-125	
Bis(2-chloroisopropyl) Ethe		92.3	65.3	71	92.1	53.0	57	20.8	20	36-166	*
m,p-Cresol		92.3	59.5	65	92.1	51.4	56	14.7	20	33-125	
N-Nitroso-di-n-propylamine		92.3	77.2	84	92.1	63.7	69	19.2	20	37-125	
Hexachloroethane		92.3	57.5	62	92.1	45.7	50	22.9	20	25-153	*
Nitrobenzene		92.3	68.4	74	92.1	58.5	64	15.5	20	46-133	
Isophorone		92.3	79.0	86	92.1	66.5	72	17.1	20	26-175	
2-Nitrophenol		92.3	72.6	79	92.1	63.4	69	13.5	20	44-125	
2,4-Dimethylphenol		92.3	68.2	74	92.1	62.2	68	9.15	20	45-139	
bis(2-Chloroethoxy)methane		92.3	76.7	83	92.1	64.8	70	16.8	20	49-125	
2,4-Dichlorophenol		92.3	79.2	86	92.1	68.5	74	14.4	20	46-125	
Naphthalene		92.3	68.8	75	92.1	57.2	62	18.2	20	50-125	
4-Chloroaniline		92.3	77.1	84	92.1	72.1	78	6.72	20	45-136	
Hexachlorobutadiene		92.3	61.7	67	92.1	46.6	51	27.9	20	25-125	*
4-Chloro-3-Methyl Phenol		92.3	74.9	81	92.1	67.9	74	9.75	20	44-125	
2-Methylnaphthalene		92.3	74.4	81	92.1	59.1	64	22.9	20	41-125	*
Hexachlorocyclopentadiene		92.3	67.9	74	92.1	46.3	50	37.7	20	41-125	*
2,4,6-Trichlorophenol		92.3	82.4	89	92.1	70.0	76	16.3	20	39-128	
2,4,5-Trichlorophenol		92.3	85.1	92	92.1	73.8	80	14.1	20	25-175	
2-Chloronaphthalene		92.3	75.2	82	92.1	61.7	67	19.8	20	60-125	
2-Nitroaniline		92.3	99.9	108	92.1	90.0	98	10.4	20	50-125	
Dimethylphthalate		92.3	86.7	94	92.1	78.6	85	9.77	20	25-175	
Acenaphthylene		92.3	89.8	97	92.1	77.4	84	14.8	20	47-125	
2,6-Dinitrotoluene		92.3	95.5	104	92.1	84.5	92	12.2	20	51-125	
Acenaphthene		92.3	80.3	87	92.1	68.5	74	15.9	20	49-125	
2,4-Dinitrophenol		92.3	110	119	92.1	94.5	103	15.0	20	30-151	
4-Nitrophenol		92.3	38.7	42	92.1	35.6	39	8.46	20	25-131	
2,4-Dinitrotoluene		92.3	97.9	106	92.1	87.4	95	11.3	20	39-139	
Dibenzofuran		92.3	80.3	87	92.1	67.9	74	16.7	20	52-125	

* Values outside of QC limits

Comments:

3C

WATER SEMI-VOLATILE MATRIX SPIKE/MATRIX SPIKE

SDG No.: F1890 Lab Name: CH2M HILL/LAB/CVO

Analysis Method: SW8270

GC Column: ZB-5MS ID: 0.25 (mm) Instrument Name: MSC

Parent Sample ID: MW136GW01053106

Matrix Spike ID: MW136MS01053106

Matrix Spike Duplicate ID: MW136MSD01053106

Analyte	Sample Result ug/L	MS Spike Added	MS Result ug/L	MS %R	MSD Spike Added	MSD Result ug/L	MSD %R	%RPD	QC Limits %RPD	QC Limits %R	Q
Diethylphthalate	2.82	92.3	84.9	89	92.1	77.4	81	9.15	20	37-125	
3-Nitroaniline		92.3	97.6	106	92.1	91.5	99	6.50	20	51-125	
Fluorene		92.3	83.3	90	92.1	72.0	78	14.6	20	48-139	
4-Chlorophenyl phenyl ether		92.3	81.3	88	92.1	65.2	71	22.0	20	51-132	*
4-Nitroaniline		92.3	95.1	103	92.1	94.8	103	0.34	20	40-143	
4,6-Dinitro-2-Methyl Phenol		92.3	87.4	95	92.1	71.2	77	20.4	20	26-134	*
N-Nitrosodiphenylamine		92.3	74.1	80	92.1	63.0	68	16.2	20	27-125	
4-Bromophenyl phenyl ether		92.3	85.4	93	92.1	63.1	69	30.0	20	53-127	*
Hexachlorobenzene		92.3	88.9	96	92.1	65.8	71	29.7	20	46-133	*
Pentachlorophenol		92.3	108	117	92.1	82.6	90	26.7	20	28-136	*
Phenanthrene		92.3	73.9	80	92.1	62.8	68	16.3	20	54-125	
Anthracene		92.3	76.9	83	92.1	65.0	71	16.7	20	45-165	
Carbazole		92.3	76.9	83	92.1	72.2	78	6.29	20	25-125	
Di-n-butylphthalate		92.3	74.4	81	92.1	63.7	69	15.4	20	34-126	
Fluoranthene		92.3	75.2	82	92.1	65.8	71	13.4	20	47-125	
Pyrene		92.3	86.8	94	92.1	70.6	77	20.5	20	47-136	*
Butylbenzylphthalate		92.3	89.5	97	92.1	74.6	81	18.1	20	26-125	
Benzo(a)anthracene		92.3	85.1	92	92.1	69.8	76	19.7	20	51-133	
3,3'-Dichlorobenzidine		92.3	28.0	30	92.1	29.1	32	3.92	20	29-175	
Chrysene		92.3	81.5	88	92.1	68.4	74	17.4	20	55-133	
bis(2-Ethylhexyl)phthalate		92.3	84.0	91	92.1	73.4	80	13.4	20	33-129	
Di-n-octylphthalate		92.3	85.3	92	92.1	69.7	76	20.1	20	38-127	*
Benzo(b)fluoroanthene		92.3	82.4	89	92.1	66.9	73	20.8	20	37-125	*
Benzo(k)fluoranthene		92.3	77.5	84	92.1	63.0	68	20.5	20	25-125	*
Benzo(a)pyrene		92.3	85.5	93	92.1	69.1	75	21.2	20	41-125	*
Indeno(1,2,3-c,d)pyrene		92.3	77.8	84	92.1	64.0	69	19.4	20	27-160	
Dibenzo(a,h)anthracene		92.3	77.2	84	92.1	63.4	69	19.7	20	50-125	
Benzo(g,h,i)perylene		92.3	77.2	84	92.1	64.5	70	17.8	20	34-149	

* Values outside of QC limits

Comments:

3D

WATER SEMI-VOLATILE BLANK SPIKE RECOVERY

SDG No.: F1890 Lab Name: CH2M HILL/LAB/CVO

Analysis Method: SW8270 Blank Spike ID: BS1W0605

GC Column: ZB-5MS ID: 0.25 (mm) Instrument Name: MSC

Analyte	Spike Added	BS Result ug/L	%R	QC Limits %R	Q
Phenol	80	24.8	31	25-125	
bis(2-Chloroethyl)ether	80	62.4	78	44-125	
2-Chlorophenol	80	52.8	66	41-125	
2-Methylphenol	80	50.0	63	25-125	
Bis(2-chloroisopropyl) Ethe	80	59.3	74	36-166	
m,p-Cresol	80	49.1	61	33-125	
N-Nitroso-di-n-propylamine	80	66.3	83	37-125	
Hexachloroethane	80	52.7	66	25-153	
Nitrobenzene	80	60.7	76	46-133	
Isophorone	80	67.0	84	26-175	
2-Nitrophenol	80	62.8	78	44-125	
2,4-Dimethylphenol	80	57.8	72	45-139	
bis(2-Chloroethoxy)methane	80	66.4	83	49-125	
2,4-Dichlorophenol	80	66.1	83	46-125	
Naphthalene	80	60.5	76	50-125	
4-Chloroaniline	80	65.6	82	45-136	
Hexachlorobutadiene	80	54.8	68	25-125	
4-Chloro-3-Methyl Phenol	80	68.8	86	44-125	
2-Methylnaphthalene	80	65.1	81	41-125	
Hexachlorocyclopentadiene	80	44.5	56	41-125	
2,4,6-Trichlorophenol	80	70.7	88	39-128	
2,4,5-Trichlorophenol	80	69.0	86	25-175	
2-Chloronaphthalene	80	69.5	87	60-125	
2-Nitroaniline	80	86.2	108	50-125	
Dimethylphthalate	80	78.0	97	25-175	
Acenaphthylene	80	82.9	104	47-125	
2,6-Dinitrotoluene	80	86.4	108	51-125	
Acenaphthene	80	75.5	94	49-125	
2,4-Dinitrophenol	80	88.6	111	30-151	
4-Nitrophenol	80	29.9	37	25-131	
2,4-Dinitrotoluene	80	88.3	110	39-139	
Dibenzofuran	80	74.8	93	52-125	
Diethylphthalate	80	80.0	100	37-125	
3-Nitroaniline	80	87.8	110	51-125	

* Values outside of QC limits

Comments:

WATER SEMI-VOLATILE BLANK SPIKE RECOVERY

SDG No.: F1890 Lab Name: CH2M HILL/LAB/CVO

Analysis Method: SW8270 Blank Spike ID: BS1W0605

GC Column: ZB-5MS ID: 0.25 (mm) Instrument Name: MSC

Analyte	Spike Added	BS Result ug/L	%R	QC Limits %R	Q
Fluorene	80	77.3	97	48-139	
4-Chlorophenyl phenyl ether	80	74.3	93	51-132	
4-Nitroaniline	80	87.0	109	40-143	
4,6-Dinitro-2-Methyl Phenol	80	73.4	92	26-134	
N-Nitrosodiphenylamine	80	68.7	86	27-125	
4-Bromophenyl phenyl ether	80	76.5	96	53-127	
Hexachlorobenzene	80	80.1	100	46-133	
Pentachlorophenol	80	93.5	117	28-136	
Phenanthrene	80	69.3	87	54-125	
Anthracene	80	72.1	90	45-165	
Carbazole	80	71.9	90	25-125	
Di-n-butylphthalate	80	70.5	88	34-126	
Fluoranthene	80	71.9	90	47-125	
Pyrene	80	79.5	99	47-136	
Butylbenzylphthalate	80	82.7	103	26-125	
Benzo(a)anthracene	80	77.8	97	51-133	
3,3'-Dichlorobenzidine	80	87.5	109	29-175	
Chrysene	80	77.0	96	55-133	
bis(2-Ethylhexyl)phthalate	80	77.3	97	33-129	
Di-n-octylphthalate	80	74.2	93	38-127	
Benzo(b)fluoroanthene	80	72.6	91	37-125	
Benzo(k)fluoranthene	80	73.0	91	25-125	
Benzo(a)pyrene	80	77.1	96	41-125	
Indeno(1,2,3-c,d)pyrene	80	74.9	94	27-160	
Dibenzo(a,h)anthracene	80	73.7	92	50-125	
Benzo(g,h,i)perylene	80	75.3	94	34-149	

* Values outside of QC limits

Comments:

WATER SEMI-VOLATILE METHOD BLANK SUMMARY

Field Sample ID: WB1-0605

SDG No.: F1890
Lab Name: CH2M HILL/LAB/CVO
Analysis Method: SW8270
Lab Sample ID: WB1-0605
Lab File ID: WB1-0605.D
Date Extracted: 06/05/06
Matrix: (Soil/Water) WATER
Date Analyzed: 06/07/06
Level: (low/med) LOW
Time Analyzed: 1053
Instrument: MSC

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS, AND MSD:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	BS1W0605	BS1W0605	BS1W0605.D	1658
02	MW137FD01053106	F189001	189001.D	1816
03	MW137GW01053106	F189002	189002.D	1855
04	MW116B-GW01053106	F189003	189003.D	1934
05	MW136GW01053106	F189004	189004.D	2013
06	MW136MS01053106	F189005MS	189005MS.D	2052
07	MW136MSD01053106	F189006MSD	189006SD.D	2131

COMMENTS: _____

5B

SEMI-VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

SDG No.: F1890 Lab Name: CH2M HILL/LAB/CVO

Analysis Method: SW8270 DFTPP Injection Date: 05/24/06

Lab File ID: T1-0524R.D DFTPP Injection Time: 1927

Instrument ID: MSC

Mass	Ion Abundance Criteria	% Relative		Q
51	30% to 60% of mass 198	42153	(33.4)	
68	less than 2% of mass 69	339	(0.8)	
69	mass 69 relative abundance	42001	(100.0)	
70	less than 2% of mass 69	217	(0.5)	
127	40% to 60% of mass 198	52175	(41.3)	
197	less than 1% of mass 198	520	(0.4)	
198	base peak, 100% relative abundance	126227	(100.0)	
199	5% to 9% of mass 198	8702	(6.9)	
275	10% to 30% of mass 198	29718	(23.5)	
365	greater than 1% of mass 198	3159	(2.5)	
441	present, but less than mass 443	8881	(75.0)	
442	greater than 40% of mass 198	59733	(47.3)	
443	17% to 23% of mass 442	11839	(19.8)	

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE NO.	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	Level 1	Level 1	LEVEL1.D	05/24/06	1945
02	Level 3	Level 3	LEVEL3.D	05/24/06	2103
03	Level 5	Level 5	LEVEL5.D	05/24/06	2220
04	Level 2	Level 2	LEVEL2R.D	05/25/06	0017
05	Level 4	Level 4	LEVEL4R.D	05/25/06	0134
06	Level 6	Level 6	LEVEL6R.D	05/25/06	0251

5B

SEMI-VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK

DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

SDG No.: F1890 Lab Name: CH2M HILL/LAB/CVO

Analysis Method: SW8270 DFTPP Injection Date: 05/25/06

Lab File ID: T1-0525.D DFTPP Injection Time: 1152

Instrument ID: MSC

Mass	Ion Abundance Criteria	% Relative		Q
51	30% to 60% of mass 198	61872	(31.7)	
68	less than 2% of mass 69	1042	(1.6)	
69	mass 69 relative abundance	64770	(100.0)	
70	less than 2% of mass 69	437	(0.7)	
127	40% to 60% of mass 198	82888	(42.5)	
197	less than 1% of mass 198	0	(0.0)	
198	base peak, 100% relative abundance	195117	(100.0)	
199	5% to 9% of mass 198	13552	(6.9)	
275	10% to 30% of mass 198	46944	(24.1)	
365	greater than 1% of mass 198	5200	(2.7)	
441	present, but less than mass 443	14979	(75.3)	
442	greater than 40% of mass 198	101565	(52.1)	
443	17% to 23% of mass 442	19897	(19.6)	

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE NO.	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	CV1-0525	CV1-0525	CV1-0525.D	05/25/06	1210
02	ICV-0525	ICV-0525	ICV20525.D	05/25/06	1328

006166

5B

SEMI-VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK

DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

SDG No.: F1890 Lab Name: CH2M HILL/LAB/CVO

Analysis Method: SW8270 DFTPP Injection Date: 06/06/06

Lab File ID: T1-0606.D DFTPP Injection Time: 1522

Instrument ID: MSC

Mass	Ion Abundance Criteria	% Relative		Q
51	30% to 60% of mass 198	16130	(38.4)	
68	less than 2% of mass 69	245	(1.5)	
69	mass 69 relative abundance	16088	(100.0)	
70	less than 2% of mass 69	0	(0.0)	
127	40% to 60% of mass 198	19205	(45.8)	
197	less than 1% of mass 198	0	(0.0)	
198	base peak, 100% relative abundance	41978	(100.0)	
199	5% to 9% of mass 198	2887	(6.9)	
275	10% to 30% of mass 198	9818	(23.4)	
365	greater than 1% of mass 198	1125	(2.7)	
441	present, but less than mass 443	3100	(69.1)	
442	greater than 40% of mass 198	22712	(54.1)	
443	17% to 23% of mass 442	4487	(19.8)	

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE NO.	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	CV1-0606	CV1-0606	CV1-0606.D	06/06/06	1540
02	BS1W0605	BS1W0605	BS1W0605.D	06/06/06	1658
03	MW137FD01053106	F189001	189001.D	06/06/06	1816
04	MW137GW01053106	F189002	189002.D	06/06/06	1855
05	MW116B-GW01053106	F189003	189003.D	06/06/06	1934
06	MW136GW01053106	F189004	189004.D	06/06/06	2013
07	MW136MS01053106	F189005MS	189005MS.D	06/06/06	2052
08	MW136MSD01053106	F189006MSD	189006SD.D	06/06/06	2131

5B

SEMI-VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK

DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

SDG No.: F1890

Lab Name: CH2M HILL/LAB/CVO

Analysis Method: SW8270

DFTPP Injection Date: 06/07/06

Lab File ID: T1-0607.D

DFTPP Injection Time: 0959

Instrument ID: MSC

Mass	Ion Abundance Criteria	% Relative		Q
51	30% to 60% of mass 198	9648	(37.3)	
68	less than 2% of mass 69	181	(1.9)	
69	mass 69 relative abundance	9722	(100.0)	
70	less than 2% of mass 69	0	(0.0)	
127	40% to 60% of mass 198	11272	(43.5)	
197	less than 1% of mass 198	39	(0.2)	
198	base peak, 100% relative abundance	25892	(100.0)	
199	5% to 9% of mass 198	1802	(7.0)	
275	10% to 30% of mass 198	6448	(24.9)	
365	greater than 1% of mass 198	674	(2.6)	
441	present, but less than mass 443	2350	(77.3)	
442	greater than 40% of mass 198	15638	(60.4)	
443	17% to 23% of mass 442	3042	(19.5)	

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE NO.	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	CV1-0607	CV1-0607	CV1-0607.D	06/07/06	1015
02	WB1-0605	WB1-0605	WB1-0605.D	06/07/06	1053

6C

SEMI-VOLATILE ORGANICS INITIAL CALIBRATION DATA

SDG No.: F1890 Lab Name: CH2M HILL/LAB/CVO

Analysis Method: SW8270 Calibration Date(s): 05/24/06 05/25/06

Instrument Name: MSC Calibration Times: 1945 0251

GC Column: ZB-5MS ID: 0.25 (mm) Concentration Units: mg/L

ICAL Sample IDs:	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
ICAL File IDs:	LEVEL1.D	LEVEL2R.D	LEVEL3.D	LEVEL4R.D	LEVEL5.D	LEVEL6R.D

Compound	Std 1	RF 1	Std 2	RF 2	Std 3	RF 3	Std 4	RF 4	Std 5	RF 5	Std 6	RF 6
2-Fluorophenol	5	1.146	20	1.058	50	1.169	80	1.203	120	1.147	160	1.120
Phenol-d5	5	1.565	20	1.321	50	1.420	80	1.484	120	1.418	160	1.418
Phenol#	5	1.860	20	1.549	50	1.626	80	1.666	120	1.570	160	1.539
bis(2-Chloroethyl)ether	5	1.467	20	1.261	50	1.250	80	1.340	120	1.241	160	1.275
2-Chlorophenol	5	1.433	20	1.196	50	1.248	80	1.269	120	1.181	160	1.142
2-Methylphenol	5	1.149	20	0.992	50	0.946	80	0.960	120	0.913	160	0.900
Bis(2-chloroisopropyl) Ethe	5	2.190	20	1.851	50	1.792	80	1.968	120	1.851	160	1.837
m,p-Cresol	5	1.718	20	1.365	50	1.372	80	1.463	120	1.356	160	1.365
N-Nitroso-di-n-propylamine*	5	1.036	20	0.883	50	0.911	80	0.992	120	0.919	160	0.931
Hexachloroethane	5	0.605	20	0.529	50	0.527	80	0.541	120	0.525	160	0.508
Nitrobenzene-d5	5	0.359	20	0.307	50	0.331	80	0.344	120	0.332	160	0.322
Nitrobenzene	5	0.407	20	0.343	50	0.353	80	0.360	120	0.343	160	0.327
Isophorone	5	0.695	20	0.593	50	0.624	80	0.643	120	0.608	160	0.597
2-Nitrophenol#	5	0.185	20	0.155	50	0.169	80	0.160	120	0.149	160	0.141
2,4-Dimethylphenol	5	0.367	20	0.293	50	0.319	80	0.317	120	0.298	160	0.286
bis(2-Chloroethoxy)methane	5	0.440	20	0.370	50	0.372	80	0.385	120	0.361	160	0.345
2,4-Dichlorophenol#	5	0.317	20	0.266	50	0.278	80	0.279	120	0.264	160	0.261
Naphthalene	5	0.945	20	0.799	50	0.809	80	0.776	120	0.735	160	0.698
4-Chloroaniline	5	0.363	20	0.319	50	0.306	80	0.321	120	0.289	160	0.280
Hexachlorobutadiene#	5	0.234	20	0.192	50	0.194	80	0.184	120	0.179	160	0.170
4-Chloro-3-Methyl Phenol#	5	0.370	20	0.304	50	0.324	80	0.362	120	0.368	160	0.373
2-Methylnaphthalene	5	0.712	20	0.599	50	0.607	80	0.599	120	0.559	160	0.545
Hexachlorocyclopentadiene*	5	0.262	20	0.272	50	0.297	80	0.350	120	0.339	160	0.352
2,4,6-Trichlorophenol#	5	0.365	20	0.310	50	0.344	80	0.338	120	0.338	160	0.329
2,4,5-Trichlorophenol	5	0.400	20	0.336	50	0.367	80	0.354	120	0.356	160	0.349
2-Fluorobiphenyl	5	1.228	20	1.065	50	1.063	80	1.044	120	0.968	160	0.930
2-Chloronaphthalene	5	1.146	20	1.012	50	1.004	80	0.985	120	0.923	160	0.880
2-Nitroaniline	5	0.308	20	0.267	50	0.300	80	0.305	120	0.312	160	0.307
Dimethylphthalate	5	1.221	20	1.087	50	1.106	80	1.098	120	1.059	160	1.012
Acenaphthylene	5	1.452	20	1.376	50	1.322	80	1.335	120	1.230	160	1.190

* SPCCs # CCCs

SEMI-VOLATILE ORGANICS INITIAL CALIBRATION DATA

SDG No.: F1890 Lab Name: CH2M HILL/LAB/CVO

Analysis Method: SW8270 Calibration Date(s): 05/24/06 05/25/06

Instrument Name: MSC Calibration Times: 1945 0251

GC Column: ZB-5MS ID: 0.25 (mm) Concentration Units: mg/L

ICAL Sample IDs:	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
ICAL File IDs:	LEVEL1.D	LEVEL2R.D	LEVEL3.D	LEVEL4R.D	LEVEL5.D	LEVEL6R.D

Compound	Std 1	RF 1	Std 2	RF 2	Std 3	RF 3	Std 4	RF 4	Std 5	RF 5	Std 6	RF 6
2,6-Dinitrotoluene	5	0.237	20	0.216	50	0.238	80	0.246	120	0.245	160	0.243
Acenaphthene#	5	1.010	20	0.905	50	0.914	80	0.882	120	0.823	160	0.788
2,4-Dinitrophenol*	5	0.071	20	0.070	50	0.136	80	0.128	120	0.169	160	0.174
4-Nitrophenol*	5	0.194	20	0.167	50	0.218	80	0.196	120	0.232	160	0.236
2,4-Dinitrotoluene	5	0.305	20	0.291	50	0.325	80	0.328	120	0.335	160	0.335
Dibenzofuran	5	1.600	20	1.399	50	1.418	80	1.332	120	1.259	160	1.214
Diethylphthalate	5	1.149	20	1.043	50	1.081	80	1.064	120	1.035	160	0.992
3-Nitroaniline	5	0.249	20	0.228	50	0.255	80	0.249	120	0.259	160	0.257
Fluorene	5	1.200	20	1.068	50	1.067	80	0.971	120	0.936	160	0.914
4-Chlorophenyl phenyl ether	5	0.640	20	0.546	50	0.545	80	0.525	120	0.512	160	0.508
4-Nitroaniline	5	0.250	20	0.232	50	0.267	80	0.246	120	0.261	160	0.257
4,6-Dinitro-2-Methyl Phenol	5	0.078	20	0.069	50	0.112	80	0.113	120	0.129	160	0.130
N-Nitrosodiphenylamine#	5	0.511	20	0.455	50	0.459	80	0.458	120	0.428	160	0.417
2,4,6-Tribromophenol	5	0.068	20	0.058	50	0.066	80	0.069	120	0.069	160	0.075
4-Bromophenyl phenyl ether	5	0.185	20	0.163	50	0.164	80	0.173	120	0.165	160	0.168
Hexachlorobenzene	5	0.216	20	0.183	50	0.186	80	0.195	120	0.187	160	0.193
Pentachlorophenol#	5	0.078	20	0.066	50	0.115	80	0.114	120	0.130	160	0.139
Phenanthrene	5	1.046	20	0.928	50	0.943	80	0.904	120	0.848	160	0.822
Anthracene	5	0.995	20	0.921	50	0.921	80	0.909	120	0.844	160	0.819
Carbazole	5	0.950	20	0.858	50	0.897	80	0.863	120	0.816	160	0.799
Di-n-butylphthalate	5	1.068	20	1.037	50	1.081	80	1.088	120	1.015	160	0.964
Fluoranthene#	5	1.152	20	1.027	50	1.088	80	1.056	120	1.007	160	0.989
Pyrene	5	1.167	20	1.073	50	1.053	80	1.064	120	1.068	160	1.056
Terphenyl-d14	5	0.775	20	0.700	50	0.692	80	0.717	120	0.728	160	0.746
Butylbenzylphthalate	5	0.442	20	0.436	50	0.465	80	0.498	120	0.488	160	0.480
Benzo(a)anthracene	5	1.134	20	1.015	50	1.049	80	1.035	120	1.017	160	1.006
3,3'-Dichlorobenzidine	5	0.303	20	0.271	50	0.320	80	0.334	120	0.348	160	0.368
Chrysene	5	1.040	20	0.959	50	0.973	80	0.950	120	0.937	160	0.930
bis(2-Ethylhexyl)phthalate	5	0.586	20	0.575	50	0.601	80	0.610	120	0.568	160	0.549
Di-n-octylphthalate#	5	0.923	20	0.962	50	1.136	80	1.166	120	1.122	160	1.085

* SPCCs # CCCs

6C

SEMI-VOLATILE ORGANICS INITIAL CALIBRATION DATA

SDG No.: F1890 Lab Name: CH2M HILL/LAB/CVO

Analysis Method: SW8270 Calibration Date(s): 05/24/06 05/25/06

Instrument Name: MSC Calibration Times: 1945 0251

GC Column: ZB-5MS ID: 0.25 (mm) Concentration Units: mg/L

ICAL Sample IDs:	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
ICAL File IDs:	LEVEL1.D	LEVEL2R.D	LEVEL3.D	LEVEL4R.D	LEVEL5.D	LEVEL6R.D

Compound	Std 1	RF 1	Std 2	RF 2	Std 3	RF 3	Std 4	RF 4	Std 5	RF 5	Std 6	RF 6
Benzo(b)fluoroanthene	5	1.036	20	1.007	50	1.110	80	1.044	120	1.055	160	1.011
Benzo(k)fluoranthene	5	1.029	20	0.983	50	1.094	80	1.058	120	1.015	160	0.995
Benzo(a)pyrene#	5	0.899	20	0.896	50	0.973	80	0.952	120	0.941	160	0.926
Indeno(1,2,3-c,d)pyrene	5	1.108	20	1.053	50	1.226	80	1.175	120	1.202	160	1.141
Dibenzo(a,h)anthracene	5	0.946	20	0.892	50	1.028	80	0.976	120	1.002	160	0.947
Benzo(g,h,i)perylene	5	0.950	20	0.915	50	1.053	80	1.005	120	1.038	160	0.968

* SPCCs # CCCs

6C

SEMI-VOLATILE ORGANICS INITIAL CALIBRATION DATA

SDG No.: F1890 Lab Name: CH2M HILL/LAB/CVO

Analysis Method: SW8270 Calibration Date(s): 05/24/06 05/25/06

Instrument Name: MSC Calibration Times: 1945 0251

GC Column: ZB-5MS ID: 0.25 (mm) Concentration Units: mg/L

Analyte	Curve Type	Avg. RF	%RSD	Mean %RSD	r	COD	Q
2-Fluorophenol	AVG	1.140	4.31	8.27			
Phenol-d5	AVG	1.438	5.67	8.27			
Phenol#	AVG	1.635	7.36	8.27			
bis(2-Chloroethyl)ether	AVG	1.306	6.62	8.27			
2-Chlorophenol	AVG	1.245	8.29	8.27			
2-Methylphenol	AVG	0.977	9.25	8.27			
Bis(2-chloroisopropyl) Ethe	AVG	1.915	7.67	8.27			
m,p-Cresol	AVG	1.440	9.85	8.27			
N-Nitroso-di-n-propylamine*	AVG	0.945	6.04	8.27			
Hexachloroethane	AVG	0.539	6.30	8.27			
Nitrobenzene-d5	AVG	0.332	5.46	8.27			
Nitrobenzene	AVG	0.356	7.77	8.27			
Isophorone	AVG	0.627	6.13	8.27			
2-Nitrophenol#	AVG	0.160	9.86	8.27			
2,4-Dimethylphenol	AVG	0.313	9.33	8.27			
bis(2-Chloroethoxy)methane	AVG	0.379	8.59	8.27			
2,4-Dichlorophenol#	AVG	0.277	7.59	8.27			
Naphthalene	AVG	0.794	10.72	8.27			
4-Chloroaniline	AVG	0.313	9.40	8.27			
Hexachlorobutadiene#	AVG	0.192	11.58	8.27			
4-Chloro-3-Methyl Phenol#	AVG	0.350	8.30	8.27			
2-Methylnaphthalene	AVG	0.603	9.76	8.27			
Hexachlorocyclopentadiene*	AVG	0.312	12.86	8.27			
2,4,6-Trichlorophenol#	AVG	0.337	5.30	8.27			
2,4,5-Trichlorophenol	AVG	0.360	5.99	8.27			
2-Fluorobiphenyl	AVG	1.050	9.83	8.27			
2-Chloronaphthalene	AVG	0.992	9.21	8.27			
2-Nitroaniline	AVG	0.300	5.56	8.27			
Dimethylphthalate	AVG	1.097	6.34	8.27			
Acenaphthylene	AVG	1.318	7.27	8.27			
2,6-Dinitrotoluene	AVG	0.237	4.73	8.27			
Acenaphthene#	AVG	0.887	8.75	8.27			

* SPCCs # CCCs

SEMI-VOLATILE ORGANICS INITIAL CALIBRATION DATA

SDG No.: F1890 Lab Name: CH2M HILL/LAB/CVO

Analysis Method: SW8270 Calibration Date(s): 05/24/06 05/25/06

Instrument Name: MSC Calibration Times: 1945 0251

GC Column: ZB-5MS ID: 0.25 (mm) Concentration Units: mg/L

Analyte	Curve Type	Avg. RF	%RSD	Mean %RSD	r	COD	Q
2,4-Dinitrophenol*	QUAD	0.125				0.996	
4-Nitrophenol*	AVG	0.207	12.78	8.27			
2,4-Dinitrotoluene	AVG	0.320	5.60	8.27			
Dibenzofuran	AVG	1.370	9.99	8.27			
Diethylphthalate	AVG	1.061	4.96	8.27			
3-Nitroaniline	AVG	0.249	4.59	8.27			
Fluorene	AVG	1.026	10.45	8.27			
4-Chlorophenyl phenyl ether	AVG	0.546	8.90	8.27			
4-Nitroaniline	AVG	0.252	5.01	8.27			
4,6-Dinitro-2-Methyl Phenol	LINR	0.105			0.997		
N-Nitrosodiphenylamine#	AVG	0.455	7.18	8.27			
2,4,6-Tribromophenol	AVG	0.068	8.05	8.27			
4-Bromophenyl phenyl ether	AVG	0.170	4.82	8.27			
Hexachlorobenzene	AVG	0.193	6.26	8.27			
Pentachlorophenol#	QUAD	0.107				0.999	
Phenanthrene	AVG	0.915	8.65	8.27			
Anthracene	AVG	0.901	6.98	8.27			
Carbazole	AVG	0.864	6.34	8.27			
Di-n-butylphthalate	AVG	1.042	4.53	8.27			
Fluoranthene#	AVG	1.053	5.70	8.27			
Pyrene	AVG	1.080	3.98	8.27			
Terphenyl-d14	AVG	0.726	4.24	8.27			
Butylbenzylphthalate	AVG	0.468	5.37	8.27			
Benzo(a)anthracene	AVG	1.043	4.55	8.27			
3,3'-Dichlorobenzidine	AVG	0.324	10.65	8.27			
Chrysene	AVG	0.965	4.13	8.27			
bis(2-Ethylhexyl)phthalate	AVG	0.581	3.83	8.27			
Di-n-octylphthalate#	AVG	1.066	9.36	8.27			
Benzo(b)fluoroanthene	AVG	1.044	3.57	8.27			
Benzo(k)fluoranthene	AVG	1.029	4.04	8.27			
Benzo(a)pyrene#	AVG	0.931	3.23	8.27			
Indeno(1,2,3-c,d)pyrene	AVG	1.151	5.56	8.27			

* SPCCs # CCCs

6C

SEMI-VOLATILE ORGANICS INITIAL CALIBRATION DATA

SDG No.: F1890 Lab Name: CH2M HILL/LAB/CVO

Analysis Method: SW8270 Calibration Date(s): 05/24/06 05/25/06

Instrument Name: MSC Calibration Times: 1945 0251

GC Column: ZB-5MS ID: 0.25 (mm) Concentration Units: mg/L

Analyte	Curve Type	Avg. RF	%RSD	Mean %RSD	r	COD	Q
Dibenzo(a,h)anthracene	AVG	0.965	4.98	8.27			
Benzo(g,h,i)perylene	AVG	0.988	5.40	8.27			

* SPCCs # CCCs

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FORM VI (Part 2) SVOC

006174

7B

SEMI-VOLATILE CONTINUING CALIBRATION CHECK

SDG No.: F1890

Analysis Method: SW8270 Lab Name: CH2M HILL/LAB/CVO

Instrument ID: MSC Calibration Date/Time: 05/25/06 1328

Lab File ID: ICV20525.D Init. Calib. Date(s): 05/24/06 05/25/06

EPA Sample No: ICV-0525 Init. Calib. Time(s): 1945 0251

Heat Purge:(Y/N) N GC Column: ZB-5MS ID: 0.25 (mm)

COMPOUND	EXPECTED mg/L	FOUND mg/L	RRF	MIN RRF	%D	MAX %D	Q
Phenol#	80.0	84.3	1.723	0.050	5.36	25	
bis(2-Chloroethyl)ether	80.0	78.6	1.284	0.050	-1.71	30	
2-Chlorophenol	80.0	78.1	1.215	0.050	-2.38	30	
2-Methylphenol	80.0	76.5	0.934	0.050	-4.41	30	
Bis(2-chloroisopropyl) Ethe	80.0	81.4	1.948	0.050	1.73	30	
m,p-Cresol	80.0	80.2	1.444	0.050	0.28	30	
N-Nitroso-di-n-propylamine*	80.0	79.1	0.935	0.050	-1.10	30	
Hexachloroethane	80.0	79.8	0.538	0.050	-0.23	30	
Nitrobenzene	80.0	82.9	0.368	0.050	3.56	30	
Isophorone	80.0	72.5	0.568	0.050	-9.36	30	
2-Nitrophenol#	80.0	76.2	0.152	0.050	-4.80	25	
2,4-Dimethylphenol	80.0	78.6	0.308	0.050	-1.80	30	
bis(2-Chloroethoxy)methane	80.0	78.5	0.372	0.050	-1.83	30	
2,4-Dichlorophenol#	80.0	79.4	0.275	0.050	-0.78	25	
Naphthalene	80.0	81.3	0.807	0.050	1.67	30	
4-Chloroaniline	80.0	84.8	0.331	0.050	5.96	30	
Hexachlorobutadiene#	80.0	69.9	0.168	0.050	-12.62	25	
4-Chloro-3-Methyl Phenol#	80.0	82.4	0.361	0.050	3.03	25	
2-Methylnaphthalene	80.0	79.1	0.597	0.050	-1.14	30	
Hexachlorocyclopentadiene*	80.0	64.6	0.252	0.050	-19.23	30	
2,4,6-Trichlorophenol#	80.0	79.5	0.335	0.050	-0.67	25	
2,4,5-Trichlorophenol	80.0	79.4	0.358	0.050	-0.76	30	
2-Chloronaphthalene	80.0	78.0	0.967	0.050	-2.50	30	
2-Nitroaniline	80.0	89.2	0.334	0.050	11.5	30	
Dimethylphthalate	80.0	81.2	1.114	0.050	1.54	30	
Acenaphthylene	80.0	89.7	1.478	0.050	12.2	30	
2,6-Dinitrotoluene	80.0	86.8	0.258	0.050	8.56	30	
Acenaphthene#	80.0	81.6	0.904	0.050	1.95	25	
2,4-Dinitrophenol*	80.0	81.8	0.146	0.050	2.25	30	
4-Nitrophenol*	80.0	88.7	0.230	0.050	10.8	30	
2,4-Dinitrotoluene	80.0	87.6	0.351	0.050	9.52	30	
Dibenzofuran	80.0	78.3	1.342	0.050	-2.09	30	
Diethylphthalate	80.0	80.3	1.064	0.050	0.33	30	
3-Nitroaniline	80.0	89.2	0.278	0.050	11.5	30	
Fluorene	80.0	80.9	1.038	0.050	1.15	30	
4-Chlorophenyl phenyl ether	80.0	79.5	0.543	0.050	-0.61	30	
4-Nitroaniline	80.0	89.8	0.283	0.050	12.3	30	

Mean Absolute %D: 4.7

* SPCCs # CCCs

7B

SEMI-VOLATILE CONTINUING CALIBRATION CHECK

SDG No.: F1890

Analysis Method: SW8270

Lab Name: CH2M HILL/LAB/CVO

Instrument ID: MSC

Calibration Date/Time: 05/25/06 1328

Lab File ID: ICV20525.D

Init. Calib. Date(s): 05/24/06 05/25/06

EPA Sample No: ICV-0525

Init. Calib. Time(s): 1945 0251

Heat Purge:(Y/N) N

GC Column: ZB-5MS ID: 0.25 (mm)

COMPOUND	EXPECTED mg/L	FOUND mg/L	RRF	MIN RRF	%D	MAX %D	Q
4,6-Dinitro-2-Methyl Phenol	80.0	78.1	0.120	0.050	-2.37	30	
N-Nitrosodiphenylamine#	80.0	75.4	0.429	0.050	-5.79	25	
4-Bromophenyl phenyl ether	80.0	97.6	0.207	0.050	22.0	30	
Hexachlorobenzene	80.0	83.3	0.201	0.050	4.15	30	
Pentachlorophenol#	80.0	86.9	0.130	0.050	8.63	25	
Phenanthrene	80.0	80.9	0.925	0.050	1.10	30	
Anthracene	80.0	80.8	0.910	0.050	0.99	30	
Carbazole	80.0	93.0	1.004	0.050	16.2	30	
Di-n-butylphthalate	80.0	81.1	1.057	0.050	1.43	30	
Fluoranthene#	80.0	83.8	1.103	0.050	4.74	25	
Pyrene	80.0	77.9	1.052	0.050	-2.58	30	
Butylbenzylphthalate	80.0	80.9	0.474	0.050	1.15	30	
Benzo(a)anthracene	80.0	80.1	1.044	0.050	0.10	30	
3,3'-Dichlorobenzidine	80.0	96.4	0.390	0.050	20.5	30	
Chrysene	80.0	79.7	0.962	0.050	-0.33	30	
bis(2-Ethylhexyl)phthalate	80.0	77.6	0.564	0.050	-3.02	30	
Di-n-octylphthalate#	80.0	79.1	1.053	0.050	-1.17	25	
Benzo(b)fluoroanthene	80.0	79.4	1.036	0.050	-0.74	30	
Benzo(k)fluoranthene	80.0	74.1	0.953	0.050	-7.33	30	
Benzo(a)pyrene#	80.0	83.3	0.970	0.050	4.16	25	
Indeno(1,2,3-c,d)pyrene	80.0	83.6	1.202	0.050	4.48	30	
Dibenzo(a,h)anthracene	80.0	80.2	0.968	0.050	0.27	30	
Benzo(g,h,i)perylene	80.0	82.0	1.013	0.050	2.52	30	

Mean Absolute %D: 4.7

* SPCCs # CCCs

006176

7B

SEMI-VOLATILE CONTINUING CALIBRATION CHECK

SDG No.: F1890

Analysis Method: SW8270

Lab Name: CH2M HILL/LAB/CVO

Instrument ID: MSC

Calibration Date/Time: 05/25/06 1210

Lab File ID: CV1-0525.D

Init. Calib. Date(s): 05/24/06 05/25/06

EPA Sample No: CV1-0525

Init. Calib. Time(s): 1945 0251

Heat Purge:(Y/N) N

GC Column: ZB-5MS ID: 0.25 (mm)

COMPOUND	EXPECTED mg/L	FOUND mg/L	RRF	MIN RRF	%D	MAX %D	Q
2-Fluorophenol	50.0	53.0	1.209	0.050	6.01	30	
Phenol-d5	50.0	55.4	1.592	0.050	10.8	30	
Phenol#	50.0	54.2	1.773	0.050	8.43	20	
bis(2-Chloroethyl)ether	50.0	58.7	1.533	0.050	17.4	30	
2-Chlorophenol	50.0	53.4	1.330	0.050	6.83	30	
2-Methylphenol	50.0	51.1	0.998	0.050	2.20	30	
Bis(2-chloroisopropyl) Ethe	50.0	52.6	2.013	0.050	5.12	30	
m,p-Cresol	50.0	54.3	1.564	0.050	8.60	30	
N-Nitroso-di-n-propylamine*	50.0	54.4	1.029	0.050	8.84	30	
Hexachloroethane	50.0	51.1	0.551	0.050	2.14	30	
Nitrobenzene-d5	50.0	54.7	0.364	0.050	9.38	30	
Nitrobenzene	50.0	52.6	0.374	0.050	5.20	30	
Isophorone	50.0	53.9	0.676	0.050	7.82	30	
2-Nitrophenol#	50.0	53.1	0.169	0.050	6.12	20	
2,4-Dimethylphenol	50.0	53.2	0.333	0.050	6.34	30	
bis(2-Chloroethoxy)methane	50.0	53.4	0.405	0.050	6.76	30	
2,4-Dichlorophenol#	50.0	53.7	0.298	0.050	7.40	20	
Naphthalene	50.0	50.7	0.804	0.050	1.34	30	
4-Chloroaniline	50.0	50.5	0.316	0.050	0.99	30	
Hexachlorobutadiene#	50.0	48.9	0.188	0.050	-2.21	20	
4-Chloro-3-Methyl Phenol#	50.0	54.9	0.384	0.050	9.84	20	
2-Methylnaphthalene	50.0	52.7	0.636	0.050	5.33	30	
Hexachlorocyclopentadiene*	50.0	49.0	0.306	0.050	-2.08	30	
2,4,6-Trichlorophenol#	50.0	52.8	0.357	0.050	5.69	20	
2,4,5-Trichlorophenol	50.0	52.7	0.380	0.050	5.44	30	
2-Fluorobiphenyl	50.0	51.4	1.078	0.050	2.72	30	
2-Chloronaphthalene	50.0	51.3	1.018	0.050	2.64	30	
2-Nitroaniline	50.0	54.8	0.329	0.050	9.67	30	
Dimethylphthalate	50.0	52.7	1.157	0.050	5.46	30	
Acenaphthylene	50.0	50.8	1.338	0.050	1.55	30	
2,6-Dinitrotoluene	50.0	55.0	0.261	0.050	9.94	30	
Acenaphthene#	50.0	51.3	0.909	0.050	2.53	20	
2,4-Dinitrophenol*	50.0	61.4	0.162	0.050	22.7	30	
4-Nitrophenol*	50.0	59.1	0.245	0.050	18.2	30	
2,4-Dinitrotoluene	50.0	56.8	0.363	0.050	13.5	30	
Dibenzofuran	50.0	51.3	1.404	0.050	2.49	30	
Diethylphthalate	50.0	53.8	1.141	0.050	7.60	30	

Mean Absolute %D: 6.0

* SPCCs # CCCs

006177

7B

SEMI-VOLATILE CONTINUING CALIBRATION CHECK

SDG No.: F1890

Analysis Method: SW8270 Lab Name: CH2M HILL/LAB/CVO

Instrument ID: MSC Calibration Date/Time: 05/25/06 1210

Lab File ID: CV1-0525.D Init. Calib. Date(s): 05/24/06 05/25/06

EPA Sample No: CV1-0525 Init. Calib. Time(s): 1945 0251

Heat Purge:(Y/N) N GC Column: ZB-5MS ID: 0.25 (mm)

COMPOUND	EXPECTED mg/L	FOUND mg/L	RRF	MIN RRF	%D	MAX %D	Q
3-Nitroaniline	50.0	55.5	0.277	0.050	11.0	30	
Fluorene	50.0	51.0	1.046	0.050	1.97	30	
4-Chlorophenyl phenyl ether	50.0	50.8	0.555	0.050	1.59	30	
4-Nitroaniline	50.0	55.0	0.277	0.050	10.1	30	
4,6-Dinitro-2-Methyl Phenol	50.0	54.6	0.128	0.050	9.20	30	
N-Nitrosodiphenylamine#	50.0	51.7	0.470	0.050	3.37	20	
2,4,6-Tribromophenol	50.0	57.0	0.077	0.050	14.0	30	
4-Bromophenyl phenyl ether	50.0	52.3	0.178	0.050	4.65	30	
Hexachlorobenzene	50.0	52.7	0.204	0.050	5.47	30	
Pentachlorophenol#	50.0	59.5	0.132	0.050	19.0	20	
Phenanthrene	50.0	49.8	0.911	0.050	-0.43	30	
Anthracene	50.0	50.9	0.918	0.050	1.87	30	
Carbazole	50.0	52.1	0.900	0.050	4.18	30	
Di-n-butylphthalate	50.0	54.2	1.130	0.050	8.47	30	
Fluoranthene#	50.0	51.2	1.078	0.050	2.39	20	
Pyrene	50.0	49.7	1.073	0.050	-0.71	30	
Terphenyl-d14	50.0	50.5	0.733	0.050	0.95	30	
Butylbenzylphthalate	50.0	54.2	0.508	0.050	8.46	30	
Benzo(a)anthracene	50.0	49.6	1.034	0.050	-0.78	30	
3,3'-Dichlorobenzidine	50.0	53.4	0.346	0.050	6.71	30	
Chrysene	50.0	48.7	0.939	0.050	-2.63	30	
bis(2-Ethylhexyl)phthalate	50.0	52.5	0.611	0.050	5.08	30	
Di-n-octylphthalate#	50.0	55.8	1.189	0.050	11.5	20	
Benzo(b)fluoroanthene	50.0	50.2	1.049	0.050	0.47	30	
Benzo(k)fluoranthene	50.0	50.1	1.031	0.050	0.25	30	
Benzo(a)pyrene#	50.0	50.4	0.938	0.050	0.71	20	
Indeno(1,2,3-c,d)pyrene	50.0	51.2	1.179	0.050	2.41	30	
Dibenzo(a,h)anthracene	50.0	51.0	0.984	0.050	2.02	30	
Benzo(g,h,i)perylene	50.0	51.0	1.008	0.050	1.97	30	

* SPCCs # CCCs

Mean Absolute %D: 6.0

006178

7B

SEMI-VOLATILE CONTINUING CALIBRATION CHECK

SDG No.: F1890

Analysis Method: SW8270

Lab Name: CH2M HILL/LAB/CVO

Instrument ID: MSC

Calibration Date/Time: 06/06/06 1540

Lab File ID: CV1-0606.D

Init. Calib. Date(s): 05/24/06 05/25/06

EPA Sample No: CV1-0606

Init. Calib. Time(s): 1945 0251

Heat Purge:(Y/N) N

GC Column: ZB-5MS ID: 0.25 (mm)

COMPOUND	EXPECTED mg/L	FOUND mg/L	RRF	MIN RRF	%D	MAX %D	Q
2-Fluorophenol	50.0	52.0	1.186	0.050	4.00	30	
Phenol-d5	50.0	50.8	1.462	0.050	1.68	30	
Phenol#	50.0	50.0	1.635	0.050	-0.03	20	
bis(2-Chloroethyl)ether	50.0	49.9	1.304	0.050	-0.16	30	
2-Chlorophenol	50.0	51.2	1.273	0.050	2.29	30	
2-Methylphenol	50.0	47.4	0.926	0.050	-5.21	30	
Bis(2-chloroisopropyl) Ethe	50.0	48.0	1.838	0.050	-4.02	30	
m,p-Cresol	50.0	49.6	1.430	0.050	-0.73	30	
N-Nitroso-di-n-propylamine*	50.0	48.6	0.919	0.050	-2.82	30	
Hexachloroethane	50.0	49.7	0.536	0.050	-0.64	30	
Nitrobenzene-d5	50.0	52.1	0.346	0.050	4.20	30	
Nitrobenzene	50.0	52.3	0.372	0.050	4.54	30	
Isophorone	50.0	52.5	0.657	0.050	4.90	30	
2-Nitrophenol#	50.0	54.4	0.174	0.050	8.73	20	
2,4-Dimethylphenol	50.0	54.0	0.339	0.050	8.06	30	
bis(2-Chloroethoxy)methane	50.0	51.7	0.392	0.050	3.45	30	
2,4-Dichlorophenol#	50.0	56.0	0.311	0.050	12.1	20	
Naphthalene	50.0	51.9	0.824	0.050	3.76	30	
4-Chloroaniline	50.0	52.6	0.329	0.050	5.16	30	
Hexachlorobutadiene#	50.0	49.5	0.190	0.050	-1.00	20	
4-Chloro-3-Methyl Phenol#	50.0	50.4	0.353	0.050	0.84	20	
2-Methylnaphthalene	50.0	53.4	0.645	0.050	6.85	30	
Hexachlorocyclopentadiene*	50.0	53.6	0.334	0.050	7.17	30	
2,4,6-Trichlorophenol#	50.0	51.4	0.347	0.050	2.82	20	
2,4,5-Trichlorophenol	50.0	52.7	0.380	0.050	5.44	30	
2-Fluorobiphenyl	50.0	52.1	1.095	0.050	4.27	30	
2-Chloronaphthalene	50.0	51.4	1.020	0.050	2.84	30	
2-Nitroaniline	50.0	53.3	0.320	0.050	6.69	30	
Dimethylphthalate	50.0	52.1	1.144	0.050	4.27	30	
Acenaphthylene	50.0	54.7	1.442	0.050	9.40	30	
2,6-Dinitrotoluene	50.0	54.4	0.258	0.050	8.86	30	
Acenaphthene#	50.0	51.6	0.916	0.050	3.28	20	
2,4-Dinitrophenol*	50.0	58.3	0.152	0.050	16.6	30	
4-Nitrophenol*	50.0	55.2	0.229	0.050	10.3	30	
2,4-Dinitrotoluene	50.0	55.9	0.358	0.050	11.8	30	
Dibenzofuran	50.0	52.2	1.431	0.050	4.43	30	
Diethylphthalate	50.0	57.5	1.219	0.050	15.0	30	

* SPCCs # CCCs

Mean Absolute %D: 5.4

006179

7B

SEMI-VOLATILE CONTINUING CALIBRATION CHECK

SDG No.: F1890

Analysis Method: SW8270 Lab Name: CH2M HILL/LAB/CVO

Instrument ID: MSC Calibration Date/Time: 06/06/06 1540

Lab File ID: CV1-0606.D Init. Calib. Date(s): 05/24/06 05/25/06

EPA Sample No: CV1-0606 Init. Calib. Time(s): 1945 0251

Heat Purge:(Y/N) N GC Column: ZB-5MS ID: 0.25 (mm)

COMPOUND	EXPECTED mg/L	FOUND mg/L	RRF	MIN RRF	%D	MAX %D	Q
3-Nitroaniline	50.0	54.8	0.273	0.050	9.62	30	
Fluorene	50.0	51.3	1.052	0.050	2.54	30	
4-Chlorophenyl phenyl ether	50.0	49.6	0.542	0.050	-0.72	30	
4-Nitroaniline	50.0	55.0	0.277	0.050	9.98	30	
4,6-Dinitro-2-Methyl Phenol	50.0	53.6	0.125	0.050	7.24	30	
N-Nitrosodiphenylamine#	50.0	50.9	0.463	0.050	1.85	20	
2,4,6-Tribromophenol	50.0	59.1	0.080	0.050	18.2	30	
4-Bromophenyl phenyl ether	50.0	53.6	0.182	0.050	7.27	30	
Hexachlorobenzene	50.0	55.6	0.215	0.050	11.2	30	
Pentachlorophenol#	50.0	59.3	0.131	0.050	18.6	20	
Phenanthrene	50.0	51.7	0.946	0.050	3.39	30	
Anthracene	50.0	53.6	0.966	0.050	7.14	30	
Carbazole	50.0	53.4	0.922	0.050	6.70	30	
Di-n-butylphthalate	50.0	53.3	1.112	0.050	6.66	30	
Fluoranthene#	50.0	52.1	1.098	0.050	4.25	20	
Pyrene	50.0	49.5	1.068	0.050	-1.10	30	
Terphenyl-d14	50.0	51.5	0.748	0.050	3.00	30	
Butylbenzylphthalate	50.0	53.5	0.501	0.050	7.06	30	
Benzo(a)anthracene	50.0	48.8	1.017	0.050	-2.44	30	
3,3'-Dichlorobenzidine	50.0	51.7	0.335	0.050	3.30	30	
Chrysene	50.0	47.9	0.924	0.050	-4.23	30	
bis(2-Ethylhexyl)phthalate	50.0	53.0	0.616	0.050	5.93	30	
Di-n-octylphthalate#	50.0	54.6	1.163	0.050	9.15	20	
Benzo(b)fluoroanthene	50.0	48.9	1.020	0.050	-2.25	30	
Benzo(k)fluoranthene	50.0	50.6	1.040	0.050	1.10	30	
Benzo(a)pyrene#	50.0	50.0	0.931	0.050	0.01	20	
Indeno(1,2,3-c,d)pyrene	50.0	49.0	1.127	0.050	-2.09	30	
Dibenzo(a,h)anthracene	50.0	48.2	0.931	0.050	-3.53	30	
Benzo(g,h,i)perylene	50.0	48.7	0.961	0.050	-2.71	30	

* SPCCs # CCCs

Mean Absolute %D: 5.4

006180

7B

SEMI-VOLATILE CONTINUING CALIBRATION CHECK

SDG No.: F1890

Analysis Method: SW8270

Lab Name: CH2M HILL/LAB/CVO

Instrument ID: MSC

Calibration Date/Time: 06/07/06 1015

Lab File ID: CV1-0607.D

Init. Calib. Date(s): 05/24/06 05/25/06

EPA Sample No: CV1-0607

Init. Calib. Time(s): 1945 0251

Heat Purge:(Y/N) N

GC Column: ZB-5MS ID: 0.25 (mm)

COMPOUND	EXPECTED mg/L	FOUND mg/L	RRF	MIN RRF	%D	MAX %D	Q
2-Fluorophenol	50.0	51.2	1.167	0.050	2.29	30	
Phenol-d5	50.0	48.8	1.404	0.050	-2.37	30	
Phenol#	50.0	48.7	1.591	0.050	-2.71	20	
bis(2-Chloroethyl)ether	50.0	47.7	1.245	0.050	-4.67	30	
2-Chlorophenol	50.0	48.9	1.217	0.050	-2.23	30	
2-Methylphenol	50.0	46.1	0.901	0.050	-7.75	30	
Bis(2-chloroisopropyl) Ethe	50.0	45.1	1.728	0.050	-9.75	30	
m,p-Cresol	50.0	48.3	1.391	0.050	-3.43	30	
N-Nitroso-di-n-propylamine*	50.0	45.2	0.854	0.050	-9.64	30	
Hexachloroethane	50.0	47.8	0.516	0.050	-4.38	30	
Nitrobenzene-d5	50.0	51.3	0.341	0.050	2.63	30	
Nitrobenzene	50.0	51.3	0.365	0.050	2.66	30	
Isophorone	50.0	51.0	0.639	0.050	1.90	30	
2-Nitrophenol#	50.0	54.3	0.173	0.050	8.51	20	
2,4-Dimethylphenol	50.0	53.3	0.334	0.050	6.61	30	
bis(2-Chloroethoxy)methane	50.0	50.4	0.382	0.050	0.72	30	
2,4-Dichlorophenol#	50.0	54.4	0.302	0.050	8.84	20	
Naphthalene	50.0	52.0	0.826	0.050	4.06	30	
4-Chloroaniline	50.0	51.3	0.321	0.050	2.68	30	
Hexachlorobutadiene#	50.0	48.4	0.186	0.050	-3.23	20	
4-Chloro-3-Methyl Phenol#	50.0	43.5	0.304	0.050	-13.01	20	
2-Methylnaphthalene	50.0	52.4	0.632	0.050	4.76	30	
Hexachlorocyclopentadiene*	50.0	46.5	0.290	0.050	-6.93	30	
2,4,6-Trichlorophenol#	50.0	49.8	0.336	0.050	-0.38	20	
2,4,5-Trichlorophenol	50.0	49.6	0.357	0.050	-0.84	30	
2-Fluorobiphenyl	50.0	52.0	1.092	0.050	4.00	30	
2-Chloronaphthalene	50.0	50.7	1.005	0.050	1.37	30	
2-Nitroaniline	50.0	52.7	0.316	0.050	5.31	30	
Dimethylphthalate	50.0	51.3	1.125	0.050	2.55	30	
Acenaphthylene	50.0	55.0	1.449	0.050	9.94	30	
2,6-Dinitrotoluene	50.0	52.9	0.251	0.050	5.79	30	
Acenaphthene#	50.0	52.0	0.922	0.050	3.94	20	
2,4-Dinitrophenol*	50.0	50.8	0.128	0.050	1.67	30	
4-Nitrophenol*	50.0	51.2	0.212	0.050	2.40	30	
2,4-Dinitrotoluene	50.0	54.6	0.349	0.050	9.11	30	
Dibenzofuran	50.0	52.5	1.440	0.050	5.09	30	
Diethylphthalate	50.0	51.0	1.082	0.050	1.97	30	

* SPCCs # CCCs

Mean Absolute %D: 4.9

7B

SEMI-VOLATILE CONTINUING CALIBRATION CHECK

SDG No.: F1890

Analysis Method: SW8270

Lab Name: CH2M HILL/LAB/CVO

Instrument ID: MSC

Calibration Date/Time: 06/07/06 1015

Lab File ID: CV1-0607.D

Init. Calib. Date(s): 05/24/06 05/25/06

EPA Sample No: CV1-0607

Init. Calib. Time(s): 1945 0251

Heat Purge:(Y/N) N

GC Column: ZB-5MS ID: 0.25 (mm)

COMPOUND	EXPECTED mg/L	FOUND mg/L	RRF	MIN RRF	%D	MAX %D	Q
3-Nitroaniline	50.0	53.3	0.266	0.050	6.63	30	
Fluorene	50.0	52.1	1.068	0.050	4.10	30	
4-Chlorophenyl phenyl ether	50.0	49.2	0.537	0.050	-1.61	30	
4-Nitroaniline	50.0	55.7	0.281	0.050	11.3	30	
4,6-Dinitro-2-Methyl Phenol	50.0	47.2	0.108	0.050	-5.70	30	
N-Nitrosodiphenylamine#	50.0	51.8	0.472	0.050	3.67	20	
2,4,6-Tribromophenol	50.0	59.7	0.081	0.050	19.5	30	
4-Bromophenyl phenyl ether	50.0	52.5	0.178	0.050	4.97	30	
Hexachlorobenzene	50.0	55.5	0.215	0.050	10.9	30	
Pentachlorophenol#	50.0	49.0	0.105	0.050	-2.11	20	
Phenanthrene	50.0	52.3	0.956	0.050	4.50	30	
Anthracene	50.0	53.8	0.969	0.050	7.52	30	
Carbazole	50.0	54.6	0.943	0.050	9.14	30	
Di-n-butylphthalate	50.0	51.9	1.082	0.050	3.82	30	
Fluoranthene#	50.0	52.8	1.113	0.050	5.64	20	
Pyrene	50.0	46.8	1.011	0.050	-6.46	30	
Terphenyl-d14	50.0	47.5	0.690	0.050	-5.07	30	
Butylbenzylphthalate	50.0	50.1	0.469	0.050	0.22	30	
Benzo(a)anthracene	50.0	47.6	0.992	0.050	-4.87	30	
3,3'-Dichlorobenzidine	50.0	51.1	0.331	0.050	2.27	30	
Chrysene	50.0	48.4	0.933	0.050	-3.28	30	
bis(2-Ethylhexyl)phthalate	50.0	51.5	0.599	0.050	3.00	30	
Di-n-octylphthalate#	50.0	49.1	1.046	0.050	-1.85	20	
Benzo(b)fluoroanthene	50.0	48.6	1.014	0.050	-2.86	30	
Benzo(k)fluoranthene	50.0	47.5	0.977	0.050	-5.04	30	
Benzo(a)pyrene#	50.0	48.6	0.905	0.050	-2.78	20	
Indeno(1,2,3-c,d)pyrene	50.0	47.7	1.097	0.050	-4.69	30	
Dibenzo(a,h)anthracene	50.0	46.7	0.900	0.050	-6.71	30	
Benzo(g,h,i)perylene	50.0	47.5	0.938	0.050	-5.11	30	

* SPCCs # CCCs

Mean Absolute %D: 4.9

8B

SEMI-VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

SDG No.: F1890

Analysis Method: SW8270 Lab Name: CH2M HILL/LAB/CVO

Lab Sample ID: CV1-0525 Date Analyzed: 05/25/06

Lab File ID: CV1-0525.D Time Analyzed: 1210

Instrument Name: MSC Heat Purge: (Y/N)

GC Column: ZB-5MS ID: 0.25 (mm)

		IS1		IS2		IS3	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	Reference Cal	127738	7.37	506618	9.1	310927	12.45
	Upper Limit	255476	7.87	1013236	9.6	621854	12.95
	Lower Limit	63869	6.87	253309	8.6	155464	11.95
Field Sample ID	Lab Sample ID						
ICV-0525	ICV-0525	111154	7.37	445166	9.1	274475	12.45

IS1: 1,4-Dichlorobenzene-d4 IS4: Phenanthrene-d10

IS2: Naphthalene-d8 IS5: Chrysene-d12

IS3: Acenaphthene-d10 IS6: Perylene-d12

AREA UPPER LIMIT = + 100% of Internal Standard Area
AREA LOWER LIMIT = - 50% of Internal Standard Area
RT UPPER LIMIT = + 0.50 of Internal Standard RT
RT LOWER LIMIT = - 0.50 of Internal Standard RT

Column used to flag values outside of QC limits with an asterisk

8C

SEMI-VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

SDG No.: F1890

Analysis Method: SW8270 Lab Name: CH2M HILL/LAB/CVO

Lab Sample ID: CV1-0525 Date Analyzed: 05/25/06

Lab File ID: CV1-0525.D Time Analyzed: 1210

Instrument Name: MSC Heat Purge: (Y/N)

GC Column: ZB-5MS ID: 0.25 (mm)

		IS4		IS5		IS6	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	Reference Cal	540854	15.88	559188	22.3	540617	25.52
	Upper Limit	1081708	16.38	1118376	22.8	1081234	26.02
	Lower Limit	270427	15.38	279594	21.8	270309	25.02
Field Sample ID	Lab Sample ID						
ICV-0525	ICV-0525	477583	15.88	507294	22.3	542153	25.52

IS1: 1,4-Dichlorobenzene-d4 IS4: Phenanthrene-d10

IS2: Naphthalene-d8 IS5: Chrysene-d12

IS3: Acenaphthene-d10 IS6: Perylene-d12

AREA UPPER LIMIT = + 100% of Internal Standard Area
AREA LOWER LIMIT = - 50% of Internal Standard Area
RT UPPER LIMIT = + 0.50 of Internal Standard RT
RT LOWER LIMIT = - 0.50 of Internal Standard RT

Column used to flag values outside of QC limits with an asterisk

8B

SEMI-VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

SDG No.: F1890

Analysis Method: SW8270 Lab Name: CH2M HILL/LAB/CVO

Lab Sample ID: CV1-0606 Date Analyzed: 06/06/06

Lab File ID: CV1-0606.D Time Analyzed: 1540

Instrument Name: MSC Heat Purge: (Y/N)

GC Column: ZB-5MS ID: 0.25 (mm)

		IS1		IS2		IS3	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	Reference Cal	133263	7.34	488877	9.05	302988	12.4
	Upper Limit	266526	7.84	977754	9.55	605976	12.9
	Lower Limit	66632	6.84	244439	8.55	151494	11.9
Field Sample ID	Lab Sample ID						
BS1W0605	BS1W0605	165113	7.34	656778	9.05	380514	12.4
MW137FD01053106	F189001	137926	7.34	497264	9.05	306867	12.4
MW137GW01053106	F189002	220980	7.34	825219	9.05	507140	12.4
MW116B-GW01053106	*F189003*	*227760*	7.34	*854847*	*9.05*	*499931*	12.4
MW136GW01053106	F189004	126336	7.34	456461	9.05	272998	12.4
MW136MS01053106	F189005MS	202816	7.34	820196	9.05	505846	12.41
MW136MSD01053106	F189006MSD	116420	7.33	452214	9.05	271404	12.41

IS1: 1,4-Dichlorobenzene-d4 IS4: Phenanthrene-d10

IS2: Naphthalene-d8 IS5: Chrysene-d12

IS3: Acenaphthene-d10 IS6: Perylene-d12

AREA UPPER LIMIT = + 100% of Internal Standard Area
AREA LOWER LIMIT = - 50% of Internal Standard Area
RT UPPER LIMIT = + 0.50 of Internal Standard RT
RT LOWER LIMIT = - 0.50 of Internal Standard RT

Column used to flag values outside of QC limits with an asterisk

8C

SEMI-VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

SDG No.: F1890

Analysis Method: SW8270 Lab Name: CH2M HILL/LAB/CVO

Lab Sample ID: CV1-0606 Date Analyzed: 06/06/06

Lab File ID: CV1-0606.D Time Analyzed: 1540

Instrument Name: MSC Heat Purge: (Y/N)

GC Column: ZB-5MS ID: 0.25 (mm)

		IS4		IS5		IS6	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
Reference Cal		523579	15.82	550722	22.23	538138	25.45
Upper Limit		1047158	16.32	1101444	22.73	1076276	25.95
Lower Limit		261790	15.32	275361	21.73	269069	24.95
Field Sample ID	Lab Sample ID						
BS1W0605	BS1W0605	727973	15.82	655354	22.24	728203	25.46
MW137FD01053106	F189001	607003	15.82	574712	22.23	597256	25.46
MW137GW01053106	F189002	913133	15.82	769732	22.23	797352	25.46
MW116B-GW01053106	*F189003*	*879257*	*15.82*	*691844*	*22.23*	*662933*	*25.46*
MW136GW01053106	F189004	530148	15.82	507321	22.23	522306	25.46
MW136MS01053106	F189005MS	968403	15.82	834470	22.24	852877	25.46
MW136MSD01053106	F189006MSD	545567	15.82	508098	22.23	542237	25.46

IS1: 1,4-Dichlorobenzene-d4 IS4: Phenanthrene-d10

IS2: Naphthalene-d8 IS5: Chrysene-d12

IS3: Acenaphthene-d10 IS6: Perylene-d12

AREA UPPER LIMIT = + 100% of Internal Standard Area
AREA LOWER LIMIT = - 50% of Internal Standard Area
RT UPPER LIMIT = + 0.50 of Internal Standard RT
RT LOWER LIMIT = - 0.50 of Internal Standard RT

Column used to flag values outside of QC limits with an asterisk

8B

SEMI-VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

SDG No.: F1890

Analysis Method: SW8270 Lab Name: CH2M HILL/LAB/CVO

Lab Sample ID: CV1-0607 Date Analyzed: 06/07/06

Lab File ID: CV1-0607.D Time Analyzed: 1015

Instrument Name: MSC Heat Purge: (Y/N)

GC Column: ZB-5MS ID: 0.25 (mm)

		IS1		IS2		IS3	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
Reference Cal		92220	7.33	325074	9.05	198113	12.4
Upper Limit		184440	7.83	650148	9.55	396226	12.9
Lower Limit		46110	6.83	162537	8.55	99057	11.9
Field Sample ID	Lab Sample ID						
WB1-0605	WB1-0605	94414	7.34	329326	9.05	193322	12.4

IS1: 1,4-Dichlorobenzene-d4 IS4: Phenanthrene-d10

IS2: Naphthalene-d8 IS5: Chrysene-d12

IS3: Acenaphthene-d10 IS6: Perylene-d12

AREA UPPER LIMIT = + 100% of Internal Standard Area
AREA LOWER LIMIT = - 50% of Internal Standard Area
RT UPPER LIMIT = + 0.50 of Internal Standard RT
RT LOWER LIMIT = - 0.50 of Internal Standard RT

Column used to flag values outside of QC limits with an asterisk

8C

SEMI-VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

SDG No.: F1890

Analysis Method: SW8270 Lab Name: CH2M HILL/LAB/CVO

Lab Sample ID: CV1-0607 Date Analyzed: 06/07/06

Lab File ID: CV1-0607.D Time Analyzed: 1015

Instrument Name: MSC Heat Purge: (Y/N)

GC Column: ZB-5MS ID: 0.25 (mm)

		IS4		IS5		IS6	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	Reference Cal	338824	15.82	384989	22.23	406504	25.45
	Upper Limit	677648	16.32	769978	22.73	813008	25.95
	Lower Limit	169412	15.32	192495	21.73	203252	24.95
Field Sample ID	Lab Sample ID						
WB1-0605	WB1-0605	372692	15.82	351747	22.23	406978	25.45

IS1: 1,4-Dichlorobenzene-d4

IS2: Naphthalene-d8

IS3: Acenaphthene-d10

IS4: Phenanthrene-d10

IS5: Chrysene-d12

IS6: Perylene-d12

AREA UPPER LIMIT = + 100% of Internal Standard Area
AREA LOWER LIMIT = - 50% of Internal Standard Area
RT UPPER LIMIT = + 0.50 of Internal Standard RT
RT LOWER LIMIT = - 0.50 of Internal Standard RT

Column used to flag values outside of QC limits with an asterisk

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Fax: 541-752-0276

06/08/06

MDL Study Report

Analytical Method: SW8270C
Matrix: Water

Instrument ID: MSC
Concentration Units: ug/L

Analyte	Analysis Date	Amt. Spiked	Replicates 1	2	3	4	5	6	7	8	Std. Dev.	MDL
Phenol	07/16/05	19	5.32	4.31	5.32	5.18	4.75	4.82	7.96	4.98	1.12	3.34
bis(2-Chloroethyl)ether	07/16/05	5	3.24	2.60	3.25	3.28	3.02	3.26	2.99	3.09	0.229	0.687
2-Chlorophenol	07/16/05	19	12.2	9.59	11.4	11.7	10.6	11.1	11.3	11.7	0.800	2.40
2-Methylphenol	07/16/05	19	11.9	8.93	11.2	11.6	10.4	10.8	12.2	11.2	1.03	3.09
bis(2-Chloroisopropyl)ether	07/16/05	5	3.15	2.65	3.22	3.43	3.20	3.29	3.21	3.36	0.236	0.709
m,p-Cresol	07/16/05	19	10.5	7.78	10.2	10.1	9.47	9.68	11.3	10.1	1.02	3.06
N-Nitroso-di-n-propylamine	07/16/05	5	3.14	2.76	3.29	3.35	3.03	3.18	3.14	3.26	0.185	0.554
Hexachloroethane	07/16/05	5	2.99	2.12	2.98	3.02	2.72	2.73	2.84	2.54	0.301	0.902
Nitrobenzene	07/16/05	5	3.23	2.66	3.25	3.30	3.16	3.26	3.39	3.46	0.243	0.728
Isophorone	07/16/05	5	3.09	2.62	3.15	3.14	3.08	3.14	3.22	3.32	0.207	0.620
2-Nitrophenol	07/16/05	19	13.2	9.98	12.1	12.6	11.7	12.1	12.2	12.5	0.948	2.84
2,4-Dimethylphenol	07/16/05	19	14.1	10.8	12.5	12.8	12.2	12.5	13.3	13.8	1.03	3.10
bis(2-Chloroethoxy)methane	07/16/05	5	3.20	2.87	3.32	3.30	3.20	3.19	3.38	3.49	0.183	0.549
2,4-Dichlorophenol	07/16/05	19	12.8	9.89	11.3	11.9	11.2	11.4	12.1	12.5	0.904	2.71
Naphthalene	07/16/05	5	3.20	2.67	3.25	3.25	3.11	3.26	3.35	3.29	0.215	0.643
4-Chloroaniline	07/16/05	5	2.83	2.54	2.72	2.93	2.78	2.82	0.580	2.81	0.784	2.35
Hexachlorobutadiene	07/16/05	5	3.33	2.57	3.49	3.45	3.03	3.22	3.21	3.10	0.292	0.874
4-Chloro-3-Methyl Phenol	07/16/05	19	13.0	10.4	12.2	12.1	11.7	12.0	12.2	12.8	0.787	2.36
2-Methylnaphthalene	07/16/05	5	3.17	2.66	3.33	3.34	3.11	3.20	3.36	3.35	0.234	0.702
Hexachlorocyclopentadiene	07/21/05	5	4.77	4.61	4.91	5.00	4.88	4.74	4.89	4.47	0.175	0.524
2,4,6-Trichlorophenol	07/16/05	19	13.8	11.1	12.4	12.7	11.7	12.0	12.4	10.8	0.948	2.84
2,4,5-Trichlorophenol	07/16/05	19	13.7	10.9	12.4	12.6	11.5	12.1	12.5	11.7	0.835	2.50
2-Chloronaphthalene	07/16/05	5	3.30	2.72	3.31	3.31	3.11	3.24	3.31	3.36	0.211	0.633
2-Nitroaniline	07/16/05	5	2.81	2.57	2.98	2.90	2.66	2.62	2.72	3.00	0.165	0.496
Dimethylphthalate	07/16/05	5	3.66	3.21	3.75	3.66	3.48	3.51	3.61	3.68	0.171	0.511
Acenaphthylene	07/16/05	5	3.98	3.48	4.04	4.19	3.85	3.93	4.00	4.13	0.218	0.654
2,6-Dinitrotoluene	07/16/05	5	3.76	3.43	3.92	3.87	3.55	3.63	3.71	3.82	0.167	0.500
Acenaphthene	07/16/05	5	3.41	3.10	3.56	3.63	3.44	3.55	3.60	3.62	0.177	0.529
2,4-Dinitrophenol	07/16/05	19	9.57	9.42	9.37	9.89	9.84	9.38	10.5	7.46	0.888	2.66
4-Nitrophenol	07/16/05	19	3.12	2.40	3.16	2.92	2.62	2.45	5.22	1.53	1.06	3.18
2,4-Dinitrotoluene	07/16/05	5	3.47	2.85	3.36	3.51	3.43	3.40	3.42	3.49	0.214	0.643
Dibenzofuran	07/16/05	5	3.57	3.12	3.68	3.67	3.40	3.47	3.57	3.68	0.191	0.573
Diethylphthalate	07/16/05	5	3.74	3.32	3.85	3.80	3.58	3.69	3.71	3.87	0.178	0.534
3-Nitroaniline	07/16/05	5	2.73	2.36	2.76	2.81	2.64	2.78	2.40	2.86	0.189	0.566
Fluorene	07/16/05	5	3.93	3.45	3.97	4.01	3.80	3.85	3.86	4.00	0.182	0.544
4-chlorophenyl phenyl ether	07/16/05	5	3.81	3.31	3.83	3.93	3.71	3.79	3.84	3.87	0.193	0.579
4-Nitroaniline	07/16/05	5	2.86	2.27	2.74	2.89	2.64	2.69	2.66	2.72	0.190	0.569
4,6-Dinitro-2-Methyl Phenol	07/16/05	19	13.5	11.9	12.9	13.5	12.4	12.6	13.1	11.1	0.811	2.43
N-Nitrosodiphenylamine	07/16/05	5	3.69	3.28	3.66	3.83	3.44	3.60	3.61	3.82	0.185	0.554
4-bromophenyl Phenyl Ether	07/16/05	5	3.38	3.05	3.43	3.65	3.23	3.49	3.46	3.53	0.187	0.559

JB060608-16:33-F1890-S

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06/08/06

MDL Study Report

Analytical Method: SW8270C
Matrix: Water

Instrument ID: MSC
Concentration Units: ug/L

Analyte	Analysis Date	Amt. Spiked	Replicates 1	2	3	4	5	6	7	8	Std. Dev.	MDL
Hexachlorobenzene	07/16/05	5	3.53	3.24	3.60	3.83	3.29	3.57	3.53	3.70	0.195	0.585
Pentachlorophenol	07/16/05	19	14.6	12.9	13.4	13.5	13.3	13.3	13.2	11.1	0.964	2.89
Phenanthrene	07/16/05	5	3.75	3.36	3.84	3.89	3.46	3.65	3.66	3.93	0.203	0.608
Anthracene	07/16/05	5	3.81	3.36	3.83	3.88	3.52	3.79	3.74	4.03	0.211	0.633
Carbazole	07/16/05	5	3.40	3.04	3.66	3.51	3.13	3.33	3.36	3.48	0.202	0.604
Di-n-butylphthalate	07/16/05	5	3.86	3.60	3.98	4.01	3.59	3.81	3.77	4.12	0.190	0.570
Fluoranthene	07/16/05	5	3.89	3.39	4.01	3.96	3.66	3.77	3.73	4.00	0.211	0.632
Pyrene	07/16/05	5	3.45	3.17	3.69	3.50	3.42	3.38	3.49	3.69	0.169	0.506
Butylbenzylphthalate	07/16/05	5	3.15	2.84	3.37	3.25	3.04	3.00	3.07	3.24	0.168	0.502
Benzo(a)anthracene	07/16/05	5	3.59	3.16	3.71	3.55	3.35	3.42	3.43	3.57	0.170	0.511
3,3'-Dichlorobenzidine	07/16/05	5	3.41	2.86	3.24	3.20	2.96	3.06	2.81	3.21	0.207	0.621
Chrysene	07/16/05	5	3.36	2.94	3.49	3.37	3.25	3.39	3.42	3.60	0.195	0.586
bis(2-Ethylhexyl)phthalate	07/16/05	5	3.27	2.97	3.42	3.53	3.55	3.08	3.15	4.04	0.341	1.02
Di-n-octylphthalate	07/16/05	5	3.50	3.09	3.69	3.62	3.29	3.17	3.14	3.19	0.234	0.701
Benzo(b)fluoroanthene	07/16/05	5	3.71	3.13	3.75	3.76	3.53	3.42	3.46	3.62	0.213	0.637
Benzo(k)fluoranthene	07/16/05	5	1.25	0.990	1.71	1.14	1.15	1.19	1.15	1.43	0.223	0.668
Benzo(a)pyrene	07/16/05	5	3.56	3.22	3.88	3.57	3.45	3.34	3.36	3.54	0.200	0.599
Indeno(1,2,3-c,d)pyrene	07/16/05	5	3.52	2.98	3.70	3.45	3.17	3.51	3.30	3.44	0.226	0.678
Dibenzo(a,h)anthracene	07/16/05	5	3.40	3.01	3.68	3.38	3.36	3.35	3.22	3.43	0.189	0.568
Benzo(g,h,i)perylene	07/16/05	5	3.45	3.13	3.76	3.39	3.27	3.31	3.28	3.44	0.186	0.558

JB060608-16:33-F1890-S

SEMIVOLATILE ORGANICS ANALYSIS BY METHOD SW8270SIM

006191

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CASE NARRATIVE
PAHs BY METHOD SW8270C-SIM

Analytical Method: SW8270C-SIM | Batch No.: F1890

Lab Name: CH2M HILL Applied Sciences Lab | Contract #.: 34479.F1.01

Project: State Marine

I. Holding Times:
All acceptance criteria were met.

II. Analysis:

A. Calibration:
All acceptance criteria were met.

B. Blanks:
All acceptance criteria were met.

C. Matrix Spike/Matrix Spike Duplicate Sample(s):
Naphthalene recovery for sample MW136MSD01053106 (F189006MSD), 49%, did not meet the acceptance criteria, 50-1125%.

D. Internal Standards:
All acceptance criteria were met.

E. Surrogate Standards:
All acceptance criteria were met.

F. DFTPP Tune Verification:
All acceptance criteria were met.

G. Laboratory Control Spike(LCS)
All acceptance criteria were met.

H. Analytical Exceptions:
All acceptance criteria were met.

I. Other:
None.

III. Documentation Exceptions:
None

V. I certify that this data package is in compliance with the terms and conditions agreed to by the client and CH2M HILL, both technically and for completeness, except for the conditions detailed above. Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or designee, as verified by the following signature.

Reported by: _____ Date: 8 June 2006

Reviewed by: _____ Date: June 9, 2006

006193

SAMPLE DATA
SUMMARY

006194

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1C

SEMI-VOLATILE ORGANICS ANALYSIS DATA SHEET

Field Sample ID: **MW137FD01053106**

SDG No.: F1890

Analysis Method: SW8270SIM

Matrix: WATER pH:

Sample wt/vol: (G/ML) 845.4 ML

Level: (LOW/MED) LOW

Percent Moisture: 100 Decanted: N

Extraction Method: SW3510 Cleanup - GPC: N

Concentrated Extract Volume: (ML) 1

Injection Volume: (UL) 3

Instrument: MSV

Lab Name: CH2M HILL/LAB/CVO

Lab Sample ID: F189001

Lab File ID: F189001.D

Date Received: 06/02/06

Date Extracted: 06/02/06

Date Analyzed: 06/06/06

Dilution Factor: 1

CONCENTRATION UNITS: ug/L

CAS NO.	COMPOUND	MDL	PQL	RESULT	Q
91-20-3	Naphthalene	0.00166	0.0296	0.0230	J
208-96-8	Acenaphthylene	0.00126	0.0296	0.00126	U
83-32-9	Acenaphthene	0.00130	0.0296	0.0265	J
86-73-7	Fluorene	0.00127	0.0296	0.0111	J
85-01-8	Phenanthrene	0.00133	0.0296	0.0161	J
120-12-7	Anthracene	0.00123	0.0296	0.00590	J
206-44-0	Fluoranthene	0.00121	0.0296	0.0124	J
129-00-0	Pyrene	0.00129	0.0296	0.0154	J
56-55-3	Benzo(a)anthracene	0.00123	0.0296	0.00350	J
218-01-9	Chrysene	0.00179	0.0296	0.00350	J
205-99-2	Benzo(b)fluoroanthene	0.00142	0.0296	0.00360	J
207-08-9	Benzo(k)fluoranthene	0.00149	0.0296	0.00149	U
50-32-8	Benzo(a)pyrene	0.00136	0.0296	0.00300	J
193-39-5	Indeno(1,2,3-c,d)pyrene	0.00124	0.0296	0.00270	J
53-70-3	Dibenzo(a,h)anthracene	0.00123	0.0296	0.00123	U
191-24-2	Benzo(g,h,i)perylene	0.00160	0.0296	0.00270	J

006196

1C

SEMI-VOLATILE ORGANICS ANALYSIS DATA SHEET

Field Sample ID: **MW137GW01053106**

SDG No.: F1890

Analysis Method: SW8270SIM

Matrix: WATER pH:

Sample wt/vol: (G/ML) 901.4 ML

Level: (LOW/MED) LOW

Percent Moisture: 100 Decanted: N

Extraction Method: SW3510 Cleanup - GPC: N

Concentrated Extract Volume: (ML) 1

Injection Volume: (UL) 3

Instrument: MSV

Lab Name: CH2M HILL/LAB/CVO

Lab Sample ID: F189002

Lab File ID: F189002.D

Date Received: 06/02/06

Date Extracted: 06/02/06

Date Analyzed: 06/06/06

Dilution Factor: 1

CONCENTRATION UNITS: ug/L

CAS NO.	COMPOUND	MDL	PQL	RESULT	Q
91-20-3	Naphthalene	0.00156	0.0277	0.0247	J
208-96-8	Acenaphthylene	0.00118	0.0277	0.00118	U
83-32-9	Acenaphthene	0.00122	0.0277	0.0280	
86-73-7	Fluorene	0.00119	0.0277	0.0108	J
85-01-8	Phenanthrene	0.00125	0.0277	0.0119	J
120-12-7	Anthracene	0.00116	0.0277	0.00420	J
206-44-0	Fluoranthene	0.00114	0.0277	0.00440	J
129-00-0	Pyrene	0.00121	0.0277	0.00790	J
56-55-3	Benzo(a)anthracene	0.00116	0.0277	0.00210	J
218-01-9	Chrysene	0.00168	0.0277	0.00168	U
205-99-2	Benzo(b)fluoroanthene	0.00133	0.0277	0.00133	U
207-08-9	Benzo(k)fluoranthene	0.00140	0.0277	0.00370	J
50-32-8	Benzo(a)pyrene	0.00128	0.0277	0.00370	J
193-39-5	Indeno(1,2,3-c,d)pyrene	0.00116	0.0277	0.00116	U
53-70-3	Dibenzo(a,h)anthracene	0.00116	0.0277	0.00116	U
191-24-2	Benzo(g,h,i)perylene	0.00150	0.0277	0.00150	U

006197

1C

SEMI-VOLATILE ORGANICS ANALYSIS DATA SHEET

Field Sample ID:

MW116B-GW01053106

SDG No.: F1890

Analysis Method: SW8270SIM

Matrix: WATER pH:

Sample wt/vol: (G/ML) 846.4 ML

Level: (LOW/MED) LOW

Percent Moisture: 100 Decanted: N

Extraction Method: SW3510 Cleanup - GPC: N

Concentrated Extract Volume: (ML) 1

Injection Volume: (UL) 3

Instrument: MSV

Lab Name: CH2M HILL/LAB/CVO

Lab Sample ID: F189003

Lab File ID: F189003.D

Date Received: 06/02/06

Date Extracted: 06/02/06

Date Analyzed: 06/06/06

Dilution Factor: 1

CONCENTRATION UNITS: ug/L

CAS NO.	COMPOUND	MDL	PQL	RESULT	Q
91-20-3	Naphthalene	0.00166	0.0295	0.0142	J
208-96-8	Acenaphthylene	0.00126	0.0295	0.0408	
83-32-9	Acenaphthene	0.00130	0.0295	1.12	
86-73-7	Fluorene	0.00127	0.0295	0.0573	
85-01-8	Phenanthrene	0.00133	0.0295	0.00630	J
120-12-7	Anthracene	0.00123	0.0295	0.0199	J
206-44-0	Fluoranthene	0.00121	0.0295	0.532	
129-00-0	Pyrene	0.00129	0.0295	0.297	
56-55-3	Benzo(a)anthracene	0.00123	0.0295	0.00780	J
218-01-9	Chrysene	0.00179	0.0295	0.00460	J
205-99-2	Benzo(b)fluoroanthene	0.00142	0.0295	0.00142	U
207-08-9	Benzo(k)fluoranthene	0.00149	0.0295	0.00149	U
50-32-8	Benzo(a)pyrene	0.00136	0.0295	0.00136	U
193-39-5	Indeno(1,2,3-c,d)pyrene	0.00124	0.0295	0.00124	U
53-70-3	Dibenzo(a,h)anthracene	0.00123	0.0295	0.00123	U
191-24-2	Benzo(g,h,i)perylene	0.00160	0.0295	0.00160	U

006198

1C

SEMI-VOLATILE ORGANICS ANALYSIS DATA SHEET

Field Sample ID: **MW136GW01053106**

SDG No.: F1890

Analysis Method: SW8270SIM

Matrix: WATER pH:

Sample wt/vol: (G/ML) 878.3 ML

Level: (LOW/MED) LOW

Percent Moisture: 100 Decanted: N

Extraction Method: SW3510 Cleanup - GPC: N

Concentrated Extract Volume: (ML) 1

Injection Volume: (UL) 3

Instrument: MSV

Lab Name: CH2M HILL/LAB/CVO

Lab Sample ID: F189004

Lab File ID: F189004.D

Date Received: 06/02/06

Date Extracted: 06/02/06

Date Analyzed: 06/06/06

Dilution Factor: 1

CONCENTRATION UNITS: ug/L

CAS NO.	COMPOUND	MDL	PQL	RESULT	Q
91-20-3	Naphthalene	0.00160	0.0285	0.00850	J
208-96-8	Acenaphthylene	0.00121	0.0285	0.00121	U
83-32-9	Acenaphthene	0.00125	0.0285	0.0114	J
86-73-7	Fluorene	0.00122	0.0285	0.00400	J
85-01-8	Phenanthrene	0.00128	0.0285	0.0102	J
120-12-7	Anthracene	0.00119	0.0285	0.00119	U
206-44-0	Fluoranthene	0.00117	0.0285	0.0101	J
129-00-0	Pyrene	0.00124	0.0285	0.0101	J
56-55-3	Benzo(a)anthracene	0.00119	0.0285	0.00320	J
218-01-9	Chrysene	0.00172	0.0285	0.00330	J
205-99-2	Benzo(b)fluoroanthene	0.00136	0.0285	0.00340	J
207-08-9	Benzo(k)fluoranthene	0.00144	0.0285	0.00150	J
50-32-8	Benzo(a)pyrene	0.00131	0.0285	0.00280	J
193-39-5	Indeno(1,2,3-c,d)pyrene	0.00119	0.0285	0.00180	J
53-70-3	Dibenzo(a,h)anthracene	0.00119	0.0285	0.00119	U
191-24-2	Benzo(g,h,i)perylene	0.00154	0.0285	0.00180	J

006199

1C

SEMI-VOLATILE ORGANICS ANALYSIS DATA SHEET

Field Sample ID:

MW136MS01053106

SDG No.: F1890

Analysis Method: SW8270SIM

Matrix: WATER pH:

Sample wt/vol: (G/ML) 864.7 ML

Level: (LOW/MED) LOW

Percent Moisture: 100 Decanted: N

Extraction Method: SW3510 Cleanup - GPC: N

Concentrated Extract Volume: (ML) 1

Injection Volume: (UL) 3

Instrument: MSV

Lab Name: CH2M HILL/LAB/CVO

Lab Sample ID: F189005MS

Lab File ID: F189005MS.D

Date Received: 06/02/06

Date Extracted: 06/02/06

Date Analyzed: 06/06/06

Dilution Factor: 1

CONCENTRATION UNITS: ug/L

CAS NO.	COMPOUND	MDL	PQL	RESULT	Q
91-20-3	Naphthalene	0.00162	0.0289	0.335	
208-96-8	Acenaphthylene	0.00123	0.0289	0.589	
83-32-9	Acenaphthene	0.00127	0.0289	0.435	
86-73-7	Fluorene	0.00124	0.0289	0.450	
85-01-8	Phenanthrene	0.00130	0.0289	0.474	
120-12-7	Anthracene	0.00121	0.0289	0.534	
206-44-0	Fluoranthene	0.00118	0.0289	0.530	
129-00-0	Pyrene	0.00126	0.0289	0.537	
56-55-3	Benzo(a)anthracene	0.00120	0.0289	0.526	
218-01-9	Chrysene	0.00175	0.0289	0.515	
205-99-2	Benzo(b)fluoroanthene	0.00139	0.0289	0.443	
207-08-9	Benzo(k)fluoranthene	0.00146	0.0289	0.461	
50-32-8	Benzo(a)pyrene	0.00133	0.0289	0.522	
193-39-5	Indeno(1,2,3-c,d)pyrene	0.00121	0.0289	0.438	
53-70-3	Dibenzo(a,h)anthracene	0.00121	0.0289	0.480	
191-24-2	Benzo(g,h,i)perylene	0.00156	0.0289	0.438	

006200

1C

SEMI-VOLATILE ORGANICS ANALYSIS DATA SHEET

Field Sample ID: **MW136MSD01053106**

SDG No.: F1890

Analysis Method: SW8270SIM

Matrix: WATER pH:

Sample wt/vol: (G/ML) 799.6 ML

Level: (LOW/MED) LOW

Percent Moisture: 100 Decanted: N

Extraction Method: SW3510 Cleanup - GPC: N

Concentrated Extract Volume: (ML) 1

Injection Volume: (UL) 3

Instrument: MSV

Lab Name: CH2M HILL/LAB/CVO

Lab Sample ID: F189006MSD

Lab File ID: F189006SD.D

Date Received: 06/02/06

Date Extracted: 06/02/06

Date Analyzed: 06/06/06

Dilution Factor: 1

CONCENTRATION UNITS: ug/L

CAS NO.	COMPOUND	MDL	PQL	RESULT	Q
91-20-3	Naphthalene	0.00176	0.0313	0.312	
208-96-8	Acenaphthylene	0.00133	0.0313	0.535	
83-32-9	Acenaphthene	0.00138	0.0313	0.394	
86-73-7	Fluorene	0.00134	0.0313	0.429	
85-01-8	Phenanthrene	0.00141	0.0313	0.444	
120-12-7	Anthracene	0.00130	0.0313	0.512	
206-44-0	Fluoranthene	0.00128	0.0313	0.493	
129-00-0	Pyrene	0.00136	0.0313	0.500	
56-55-3	Benzo(a)anthracene	0.00130	0.0313	0.494	
218-01-9	Chrysene	0.00189	0.0313	0.482	
205-99-2	Benzo(b)fluoroanthene	0.00150	0.0313	0.415	
207-08-9	Benzo(k)fluoranthene	0.00158	0.0313	0.444	
50-32-8	Benzo(a)pyrene	0.00144	0.0313	0.495	
193-39-5	Indeno(1,2,3-c,d)pyrene	0.00131	0.0313	0.416	
53-70-3	Dibenzo(a,h)anthracene	0.00130	0.0313	0.459	
191-24-2	Benzo(g,h,i)perylene	0.00169	0.0313	0.417	

006201

1C

SEMI-VOLATILE ORGANICS ANALYSIS DATA SHEET

Field Sample ID: **WB2-0602**

SDG No.: F1890

Analysis Method: SW8270SIM

Matrix: WATER pH:

Sample wt/vol: (G/ML) 1000 ML

Level: (LOW/MED) LOW

Percent Moisture: 100 Decanted: N

Extraction Method: SW3510 Cleanup - GPC: N

Concentrated Extract Volume: (ML) 1

Injection Volume: (UL) 3

Instrument: MSV

Lab Name: CH2M HILL/LAB/CVO

Lab Sample ID: WB2-0602

Lab File ID: WB2-0602.D

Date Received: / /

Date Extracted: 06/02/06

Date Analyzed: 06/06/06

Dilution Factor: 1

CONCENTRATION UNITS: ug/L

CAS NO.	COMPOUND	MDL	PQL	RESULT	Q
91-20-3	Naphthalene	0.00140	0.0250	0.00140	U
208-96-8	Acenaphthylene	0.00107	0.0250	0.00107	U
83-32-9	Acenaphthene	0.00110	0.0250	0.00110	U
86-73-7	Fluorene	0.00107	0.0250	0.00107	U
85-01-8	Phenanthrene	0.00113	0.0250	0.00113	U
120-12-7	Anthracene	0.00104	0.0250	0.00104	U
206-44-0	Fluoranthene	0.00102	0.0250	0.00102	U
129-00-0	Pyrene	0.00109	0.0250	0.00109	U
56-55-3	Benzo(a)anthracene	0.00104	0.0250	0.00104	U
218-01-9	Chrysene	0.00151	0.0250	0.00151	U
205-99-2	Benzo(b)fluoroanthene	0.00120	0.0250	0.00120	U
207-08-9	Benzo(k)fluoranthene	0.00126	0.0250	0.00126	U
50-32-8	Benzo(a)pyrene	0.00115	0.0250	0.00115	U
193-39-5	Indeno(1,2,3-c,d)pyrene	0.00105	0.0250	0.00105	U
53-70-3	Dibenzo(a,h)anthracene	0.00104	0.0250	0.00104	U
191-24-2	Benzo(g,h,i)perylene	0.00135	0.0250	0.00135	U

006202

QC DATA
SUMMARY

006203

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2C

WATER SEMI-VOLATILE SURROGATE RECOVERY

SDG No.: F1890 Lab Name: CH2M HILL/LAB/CVO

Analysis Method: SW8270SIM

GC Column: ZB-5MS ID: 0.25 (mm) Instrument Name: MSV

	FIELD/QC SAMPLE ID	S1	S2	S3	S4	S5	S6	S7	S8	S9	S10	S11	S12	# OUT
1	WB2-0602	81												
2	BS2W0602	79												
3	MW137FD01053106	86												
4	MW137GW01053106	86												
5	MW116B-GW01053106	80												
6	MW136GW01053106	76												
7	MW136MS01053106	89												
8	MW136MSD01053106	77												

* Values outside of QC limits

D Surrogate diluted out

QC LIMITS

S1: Terphenyl-d14 (33-141)

006205

3C

WATER SEMI-VOLATILE MATRIX SPIKE/MATRIX SPIKE

SDG No.: F1890 Lab Name: CH2M HILL/LAB/CVO

Analysis Method: SW8270SIM

GC Column: ZB-5MS ID: 0.25 (mm) Instrument Name: MSV

Parent Sample ID: Matrix Spike ID: Matrix Spike Duplicate ID:

MW136GW01053106 MW136MS01053106 MW136MSD01053106

Analyte	Sample Result ug/L	MS Spike Added	MS Result ug/L	MS %R	MSD Spike Added	MSD Result ug/L	MSD %R	%RPD	QC Limits %RPD	QC Limits %R	Q
Benzo(b)fluoroanthene	0.00340	0.578	0.443	76	0.625	0.415	66	6.34	20	37-125	
Benzo(k)fluoranthene	0.00150	0.578	0.461	79	0.625	0.444	71	3.65	20	25-125	
Benzo(a)pyrene	0.00280	0.578	0.522	90	0.625	0.495	79	5.33	20	41-125	
Indeno(1,2,3-c,d)pyrene	0.00180	0.578	0.438	75	0.625	0.416	66	5.08	20	27-160	
Dibenzo(a,h)anthracene		0.578	0.480	83	0.625	0.459	73	4.41	20	50-125	
Benzo(g,h,i)perylene	0.00180	0.578	0.438	75	0.625	0.417	66	5.08	20	34-149	
Naphthalene	0.00850	0.578	0.335	57	0.625	0.312	49	7.20	20	50-125	*
Acenaphthylene		0.578	0.589	102	0.625	0.535	86	9.52	20	47-125	
Acenaphthene	0.0114	0.578	0.435	73	0.625	0.394	61	9.82	20	49-125	
Fluorene	0.00400	0.578	0.450	77	0.625	0.429	68	4.81	20	48-139	
Phenanthrene	0.0102	0.578	0.474	80	0.625	0.444	69	6.57	20	54-125	
Anthracene		0.578	0.534	92	0.625	0.512	82	4.13	20	45-165	
Fluoranthene	0.0101	0.578	0.530	90	0.625	0.493	77	7.20	20	47-125	
Pyrene	0.0101	0.578	0.537	91	0.625	0.500	78	7.04	20	47-136	
Benzo(a)anthracene	0.00320	0.578	0.526	90	0.625	0.494	78	6.43	20	51-133	
Chrysene	0.00330	0.578	0.515	88	0.625	0.482	77	6.61	20	55-133	

* Values outside of QC limits

Comments:

3D

WATER SEMI-VOLATILE BLANK SPIKE RECOVERY

SDG No.: F1890 Lab Name: CH2M HILL/LAB/CVO

Analysis Method: SW8270SIM Blank Spike ID: BS2W0602

GC Column: ZB-5MS ID: 0.25 (mm) Instrument Name: MSV

Analyte	Spike Added	BS Result ug/L	%R	QC Limits %R	Q
Benzo(b)fluoroanthene	0.5	0.356	71	37-125	
Benzo(k)fluoranthene	0.5	0.380	76	25-125	
Benzo(a)pyrene	0.5	0.421	84	41-125	
Indeno(1,2,3-c,d)pyrene	0.5	0.352	70	27-160	
Dibenzo(a,h)anthracene	0.5	0.388	78	50-125	
Benzo(g,h,i)perylene	0.5	0.352	70	34-149	
Naphthalene	0.5	0.260	52	50-125	
Acenaphthylene	0.5	0.416	83	47-125	
Acenaphthene	0.5	0.302	60	49-125	
Fluorene	0.5	0.321	64	48-139	
Phenanthrene	0.5	0.337	67	54-125	
Anthracene	0.5	0.390	78	45-165	
Fluoranthene	0.5	0.400	80	47-125	
Pyrene	0.5	0.403	81	47-136	
Benzo(a)anthracene	0.5	0.403	81	51-133	
Chrysene	0.5	0.400	80	55-133	

* Values outside of QC limits

Comments:

4B

WATER SEMI-VOLATILE METHOD BLANK SUMMARY

Field Sample ID: WB2-0602

SDG No.: F1890

Analysis Method: SW8270SIM

Lab File ID: WB2-0602.D

Matrix: (Soil/Water) WATER

Level: (low/med) LOW

Instrument: MSV

Lab Name: CH2M HILL/LAB/CVO

Lab Sample ID: WB2-0602

Date Extracted: 06/02/06

Date Analyzed: 06/06/06

Time Analyzed: 1232

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS, AND MSD:

	CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	BS2W0602	BS2W0602	BS2W0602.D	1302
02	MW137FD01053106	F189001	F189001.D	1400
03	MW137GW01053106	F189002	F189002.D	1430
04	MW116B-GW01053106	F189003	F189003.D	1459
05	MW136GW01053106	F189004	F189004.D	1529
06	MW136MS01053106	F189005MS	F189005MS.D	1558
07	MW136MSD01053106	F189006MSD	F189006SD.D	1628

COMMENTS: _____

5B

SEMI-VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK

DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

SDG No.: F1890 Lab Name: CH2M HILL/LAB/CVO

Analysis Method: SW8270SIM DFTPP Injection Date: 06/01/06

Lab File ID: T1-0601.D DFTPP Injection Time: 1047

Instrument ID: MSV

Mass	Ion Abundance Criteria	% Relative		Q
51	30-60% of mass 198	106924	(34.0)	
68	less than 2% of mass 69	1862	(1.6)	
69	present	114539	(100.0)	
70	less than 2% of mass 69	586	(0.5)	
127	40-60% of mass 198	136420	(43.4)	
197	less than 1% of mass 198	1596	(0.5)	
198	base peak, 100% relative abundance	314140	(100.0)	
199	5-9% of mass 198	20959	(6.7)	
275	10-30% of mass 198	82200	(26.2)	
365	greater than 1% of mass 198	8050	(2.6)	
441	present, but 0-100% of mass 443	34413	(76.1)	
442	greater than 40% of mass 198	229355	(73.0)	
443	17-23% of mass 442	45198	(19.7)	

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE NO.	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	Level 1	Level 1	Level 1.D	06/01/06	1101
02	Level 2	Level 2	Level 2.D	06/01/06	1130
03	Level 3	Level 3	Level 3.D	06/01/06	1214
04	Level 4	Level 4	Level 4.D	06/01/06	1243
05	Level 5	Level 5	Level 5.D	06/01/06	1312
06	Level 6	Level 6	Level 6.D	06/01/06	1342
07	Level 7	Level 7	Level 7.D	06/01/06	1411
08	ICV-0601	ICV-0601	ICV2-0601.D	06/01/06	1510

006209

SEMI-VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

SDG No.: F1890 Lab Name: CH2M HILL/LAB/CVO

Analysis Method: SW8270SIM DFTPP Injection Date: 06/06/06

Lab File ID: T2-0606.D DFTPP Injection Time: 1148

Instrument ID: MSV

Mass	Ion Abundance Criteria	% Relative		Q
51	30-60% of mass 198	52949	(34.3)	
68	less than 2% of mass 69	1111	(1.9)	
69	present	57312	(100.0)	
70	less than 2% of mass 69	640	(1.1)	
127	40-60% of mass 198	67413	(43.6)	
197	less than 1% of mass 198	526	(0.3)	
198	base peak, 100% relative abundance	154506	(100.0)	
199	5-9% of mass 198	10297	(6.7)	
275	10-30% of mass 198	41410	(26.8)	
365	greater than 1% of mass 198	4123	(2.7)	
441	present, but 0-100% of mass 443	16493	(75.0)	
442	greater than 40% of mass 198	111946	(72.5)	
443	17-23% of mass 442	21984	(19.6)	

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE NO.	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	CV1-0606	CV1-0606	CV1-0606.D	06/06/06	1203
02	WB2-0602	WB2-0602	WB2-0602.D	06/06/06	1232
03	BS2W0602	BS2W0602	BS2W0602.D	06/06/06	1302
04	MW137FD01053106	F189001	F189001.D	06/06/06	1400
05	MW137GW01053106	F189002	F189002.D	06/06/06	1430
06	MW116B-GW01053106	F189003	F189003.D	06/06/06	1459
07	MW136GW01053106	F189004	F189004.D	06/06/06	1529
08	MW136MS01053106	F189005MS	F189005MS.D	06/06/06	1558
09	MW136MSD01053106	F189006MSD	F189006SD.D	06/06/06	1628

006210

6C

SEMI-VOLATILE ORGANICS INITIAL CALIBRATION DATA

SDG No.: F1890 Lab Name: CH2M HILL/LAB/CVO

Analysis Method: SW8270SIM Calibration Date(s): 06/01/06 06/01/06

Instrument Name: MSV Calibration Times: 1101 1411

GC Column: ZB-5MS ID: 0.25 (mm) Concentration Units: ug/L

ICAL Sample IDs:	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
ICAL File IDs:	Level 1.D	Level 2.D	Level 3.D	Level 4.D	Level 5.D	Level 6.D

Compound	Std 1	RF 1	Std 2	RF 2	Std 3	RF 3	Std 4	RF 4	Std 5	RF 5	Std 6	RF 6
Naphthalene	10	0.846	50	0.790	100	0.808	250	0.814	500	0.816	1000	0.816
Acenaphthylene	10	1.003	50	0.988	100	1.052	250	1.137	500	1.197	1000	1.227
Acenaphthene#	10	0.866	50	0.831	100	0.848	250	0.866	500	0.894	1000	0.910
Fluorene	10	0.991	50	0.963	100	0.980	250	1.007	500	1.028	1000	1.041
Phenanthrene	10	0.885	50	0.856	100	0.875	250	0.886	500	0.893	1000	0.905
Anthracene	10	0.686	50	0.679	100	0.716	250	0.761	500	0.787	1000	0.822
Fluoranthene#	10	0.992	50	0.961	100	1.024	250	1.076	500	1.100	1000	1.125
Pyrene	10	1.026	50	0.995	100	1.048	250	1.103	500	1.125	1000	1.150
Terphenyl-d14	2.08	0.886	10.4	0.729	20.8	0.751	52	0.770	104	0.793	208	0.807
Benzo(a)anthracene	10	0.906	50	0.847	100	0.864	250	0.882	500	0.890	1000	0.915
Chrysene	10	0.897	50	0.867	100	0.888	250	0.898	500	0.894	1000	0.905
Benzo(b)fluoroanthene	10	0.982	50	0.957	100	0.988	250	1.007	500	1.051	1000	1.088
Benzo(k)fluoranthene	10	0.887	50	0.886	100	0.931	250	0.979	500	1.009	1000	1.052
Benzo(a)pyrene#	10	0.763	50	0.747	100	0.774	250	0.819	500	0.850	1000	0.890
Indeno(1,2,3-c,d)pyrene	10	1.077	50	1.041	100	1.066	250	1.139	500	1.185	1000	1.230
Dibenzo(a,h)anthracene	10	0.881	50	0.861	100	0.873	250	0.942	500	0.984	1000	1.023
Benzo(g,h,i)perylene	10	1.077	50	1.041	100	1.066	250	1.139	500	1.185	1000	1.230

* SPCCs # CCCs

6C

SEMI-VOLATILE ORGANICS INITIAL CALIBRATION DATA

SDG No.: F1890 Lab Name: CH2M HILL/LAB/CVO

Analysis Method: SW8270SIM Calibration Date(s): 06/01/06 06/01/06

Instrument Name: MSV Calibration Times: 1101 1411

GC Column: ZB-5MS ID: 0.25 (mm) Concentration Units: ug/L

ICAL Sample IDs: Level 7

ICAL File IDs: Level 7.D

Compound	Std 7	RF 7	Std 8	RF 8	Std 9	RF 9						
Naphthalene	2000	0.800										
Acenaphthylene	2000	1.240										
Acenaphthene#	2000	0.920										
Fluorene	2000	1.048										
Phenanthrene	2000	0.904										
Anthracene	2000	0.828										
Fluoranthene#	2000	1.140										
Pyrene	2000	1.159										
Terphenyl-d14	416	0.832										
Benzo(a)anthracene	2000	0.919										
Chrysene	2000	0.902										
Benzo(b)fluoroanthene	2000	1.360										
Benzo(k)fluoranthene	2000	1.299										
Benzo(a)pyrene#	2000	1.071										
Indeno(1,2,3-c,d)pyrene	2000	1.540										
Dibenzo(a,h)anthracene	2000	1.300										
Benzo(g,h,i)perylene	2000	1.536										

* SPCCs # CCCs

6C

SEMI-VOLATILE ORGANICS INITIAL CALIBRATION DATA

SDG No.: F1890 Lab Name: CH2M HILL/LAB/CVO

Analysis Method: SW8270SIM Calibration Date(s): 06/01/06 06/01/06

Instrument Name: MSV Calibration Times: 1101 1411

GC Column: ZB-5MS ID: 0.25 (mm) Concentration Units: ug/L

Analyte	Curve Type	Avg. RF	%RSD	Mean %RSD	r	COD	Q
Naphthalene	AVG	0.813	2.14	8.17			
Acenaphthylene	AVG	1.121	9.48	8.17			
Acenaphthene#	AVG	0.876	3.75	8.17			
Fluorene	AVG	1.008	3.17	8.17			
Phenanthrene	AVG	0.886	1.95	8.17			
Anthracene	AVG	0.754	8.20	8.17			
Fluoranthene#	AVG	1.060	6.49	8.17			
Pyrene	AVG	1.086	5.91	8.17			
Terphenyl-d14	AVG	0.795	6.63	8.17			
Benzo(a)anthracene	AVG	0.889	3.01	8.17			
Chrysene	AVG	0.893	1.45	8.17			
Benzo(b)fluoroanthene	AVG	1.062	13.09	8.17			
Benzo(k)fluoranthene	AVG	1.006	14.23	8.17			
Benzo(a)pyrene#	AVG	0.845	13.26	8.17			
Indeno(1,2,3-c,d)pyrene	AVG	1.183	14.52	8.17			
Dibenzo(a,h)anthracene	QUAD	0.981				1.000	
Benzo(g,h,i)perylene	AVG	1.182	14.41	8.17			

* SPCCs # CCCs

7B

SEMI-VOLATILE CONTINUING CALIBRATION CHECK

SDG No.: F1890

Analysis Method: SW8270SIM

Lab Name: CH2M HILL/LAB/CVO

Instrument ID: MSV

Calibration Date/Time: 06/01/06 1510

Lab File ID: ICV2-0601.D

Init. Calib. Date(s): 06/01/06 06/01/06

EPA Sample No: ICV-0601

Init. Calib. Time(s): 1101 1411

Heat Purge:(Y/N) N

GC Column: ZB-5MS ID: 0.25 (mm)

COMPOUND	EXPECTED ug/L	FOUND ug/L	RRF	MIN RRF	%D	MAX %D	Q
Naphthalene	500	384	0.625	0.700	-23.15	25	
Acenaphthylene	500	605	1.357	1.300	21.1	25	
Acenaphthene#	500	469	0.822	0.800	-6.22	25	
Fluorene	500	450	0.907	0.900	-10.01	25	
Phenanthrene	500	471	0.834	0.700	-5.88	25	
Anthracene	500	516	0.779	0.700	3.26	25	
Fluoranthene#	500	490	1.038	0.600	-2.10	25	
Pyrene	500	497	1.079	0.600	-0.66	25	
Benzo(a)anthracene	500	497	0.883	0.800	-0.65	25	
Chrysene	500	493	0.880	0.700	-1.42	25	
Benzo(b)fluoroanthene	500	452	0.961	0.700	-9.53	25	
Benzo(k)fluoranthene	500	469	0.943	0.700	-6.25	25	
Benzo(a)pyrene#	500	515	0.870	0.700	2.98	25	
Indeno(1,2,3-c,d)pyrene	500	440	1.040	0.500	-12.03	25	
Dibenzo(a,h)anthracene	500	481	0.891	0.400	-3.83	25	
Benzo(g,h,i)perylene	500	440	1.040	0.500	-11.99	25	

* SPCCs # CCCs

Mean Absolute %D: 7.1

006214

7B

SEMI-VOLATILE CONTINUING CALIBRATION CHECK

SDG No.: F1890

Analysis Method: SW8270SIM

Lab Name: CH2M HILL/LAB/CVO

Instrument ID: MSV

Calibration Date/Time: 06/06/06 1203

Lab File ID: CV1-0606.D

Init. Calib. Date(s): 06/01/06 06/01/06

EPA Sample No: CV1-0606

Init. Calib. Time(s): 1101 1411

Heat Purge:(Y/N) N

GC Column: ZB-5MS ID: 0.25 (mm)

COMPOUND	EXPECTED ug/L	FOUND ug/L	RRF	MIN RRF	%D	MAX %D	Q
Naphthalene	500	499	0.812	0.700	-0.16	25	
Acenaphthylene	500	553	1.240	1.300	10.7	25	
Acenaphthene#	500	501	0.878	0.800	0.18	20	
Fluorene	500	494	0.997	0.900	-1.15	25	
Phenanthrene	500	498	0.883	0.700	-0.35	25	
Anthracene	500	514	0.776	0.700	2.87	25	
Fluoranthene#	500	535	1.134	0.600	7.03	20	
Pyrene	500	537	1.167	0.600	7.39	25	
Terphenyl-d14	104	104	0.795	0.100	-0.03	25	
Benzo(a)anthracene	500	504	0.897	0.800	0.84	25	
Chrysene	500	508	0.906	0.700	1.50	25	
Benzo(b)fluoroanthene	500	474	1.006	0.700	-5.28	25	
Benzo(k)fluoranthene	500	482	0.970	0.700	-3.60	25	
Benzo(a)pyrene#	500	492	0.831	0.700	-1.67	20	
Indeno(1,2,3-c,d)pyrene	500	490	1.159	0.500	-2.02	25	
Dibenzo(a,h)anthracene	500	508	0.946	0.400	1.55	25	
Benzo(g,h,i)perylene	500	490	1.159	0.500	-1.97	25	

* SPCCs # CCCs

Mean Absolute %D: 2.7

006215

8B

SEMI-VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

SDG No.: F1890

Analysis Method: SW8270SIM

Lab Name: CH2M HILL/LAB/CVO

Lab Sample ID: Level 4

Date Analyzed: 06/01/06

Lab File ID: Level 4.D

Time Analyzed: 1243

Instrument Name: MSV

Heat Purge: (Y/N)

GC Column: ZB-5MS ID: 0.25 (mm)

		IS1		IS2		IS3	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
Reference Cal		168111	9.19	95641	11.58	175946	13.49
Upper Limit		336222	9.69	191282	12.08	351892	13.99
Lower Limit		84056	8.69	47821	11.08	87973	12.99
Field Sample ID	Lab Sample ID						
ICV-0601	ICV-0601	145618	9.21	69553	11.58	122964	13.49

IS1: Naphthalene-d8

IS2: Acenaphthene-d10

IS3: Phenanthrene-d10

IS4: Chrysene-d12

IS5: Perylene-d12

IS6:

AREA UPPER LIMIT = + 100% of Internal Standard Area
AREA LOWER LIMIT = - 50% of Internal Standard Area
RT UPPER LIMIT = + 0.50 of Internal Standard RT
RT LOWER LIMIT = - 0.50 of Internal Standard RT

Column used to flag values outside of QC limits with an asterisk

8C

SEMI-VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

SDG No.: F1890

Analysis Method: SW8270SIM

Lab Name: CH2M HILL/LAB/CVO

Lab Sample ID: Level 4

Date Analyzed: 06/01/06

Lab File ID: Level 4.D

Time Analyzed: 1243

Instrument Name: MSV

Heat Purge: (Y/N)

GC Column: ZB-5MS ID: 0.25 (mm)

		IS4		IS5		IS6	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	Reference Cal	194051	16.83	185758	19.18		
	Upper Limit	388102	17.33	371516	19.68		
	Lower Limit	97026	16.33	92879	18.68		
Field Sample ID	Lab Sample ID						
ICV-0601	ICV-0601	134411	16.83	129400	19.18		

IS1: Naphthalene-d8

IS2: Acenaphthene-d10

IS3: Phenanthrene-d10

IS4: Chrysene-d12

IS5: Perylene-d12

IS6:

AREA UPPER LIMIT = + 100% of Internal Standard Area
AREA LOWER LIMIT = - 50% of Internal Standard Area
RT UPPER LIMIT = + 0.50 of Internal Standard RT
RT LOWER LIMIT = - 0.50 of Internal Standard RT

Column used to flag values outside of QC limits with an asterisk

8B

SEMI-VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

SDG No.: F1890

Analysis Method: SW8270SIM

Lab Name: CH2M HILL/LAB/CVO

Lab Sample ID: CV1-0606

Date Analyzed: 06/06/06

Lab File ID: CV1-0606.D

Time Analyzed: 1203

Instrument Name: MSV

Heat Purge: (Y/N)

GC Column: ZB-5MS ID: 0.25 (mm)

		IS1		IS2		IS3	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	Reference Cal	121158	9.19	73651	11.57	134268	13.48
	Upper Limit	242316	9.69	147302	12.07	268536	13.98
	Lower Limit	60579	8.69	36826	11.07	67134	12.98
Field Sample ID	Lab Sample ID						
WB2-0602	WB2-0602	136992	9.19	83829	11.57	157157	13.48
BS2W0602	BS2W0602	172174	9.2	92065	11.57	170127	13.48
MW137FD01053106	F189001	132631	9.2	89143	11.57	163560	13.48
MW137GW01053106	F189002	132157	9.2	87925	11.57	158184	13.48
MW116B-GW01053106	F189003	141228	9.2	95112	11.57	168398	13.48
MW136GW01053106	F189004	132674	9.19	87750	11.57	162495	13.48
MW136MS01053106	F189005MS	154713	9.2	85017	11.57	154019	13.48
MW136MSD01053106	F189006MSD	177523	9.18	95106	11.57	177167	13.48

IS1: Naphthalene-d8

IS2: Acenaphthene-d10

IS3: Phenanthrene-d10

IS4: Chrysene-d12

IS5: Perylene-d12

IS6:

AREA UPPER LIMIT = + 100% of Internal Standard Area
AREA LOWER LIMIT = - 50% of Internal Standard Area
RT UPPER LIMIT = + 0.50 of Internal Standard RT
RT LOWER LIMIT = - 0.50 of Internal Standard RT

Column used to flag values outside of QC limits with an asterisk

8C

SEMI-VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

SDG No.: F1890

Analysis Method: SW8270SIM

Lab Name: CH2M HILL/LAB/CVO

Lab Sample ID: CV1-0606

Date Analyzed: 06/06/06

Lab File ID: CV1-0606.D

Time Analyzed: 1203

Instrument Name: MSV

Heat Purge: (Y/N)

GC Column: ZB-5MS ID: 0.25 (mm)

		IS4		IS5		IS6	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
Reference Cal		147380	16.81	144619	19.16		
Upper Limit		294760	17.31	289238	19.66		
Lower Limit		73690	16.31	72310	18.66		
Field Sample ID	Lab Sample ID						
WB2-0602	WB2-0602	167290	16.81	171273	19.16		
BS2W0602	BS2W0602	188827	16.82	186709	19.16		
MW137FD01053106	F189001	176423	16.81	178986	19.16		
MW137GW01053106	F189002	163374	16.82	152564	19.16		
MW116B-GW01053106	F189003	179109	16.81	182175	19.16		
MW136GW01053106	F189004	167680	16.82	172251	19.16		
MW136MS01053106	F189005MS	164748	16.82	172166	19.16		
MW136MSD01053106	F189006MSD	185514	16.81	191252	19.16		

IS1: Naphthalene-d8

IS2: Acenaphthene-d10

IS3: Phenanthrene-d10

IS4: Chrysene-d12

IS5: Perylene-d12

IS6:

AREA UPPER LIMIT = + 100% of Internal Standard Area
AREA LOWER LIMIT = - 50% of Internal Standard Area
RT UPPER LIMIT = + 0.50 of Internal Standard RT
RT LOWER LIMIT = - 0.50 of Internal Standard RT

Column used to flag values outside of QC limits with an asterisk

CH2MHILL
Applied Sciences Laboratory

CH2M HILL
Applied Sciences Labortory (ASL)
2300 NW Walnut Blvd.
P.O. Box 428
Corvallis, OR 97330-0428
Telephone: 541-752-4271
Fax: 541-752-0276

06/08/06

MDL Study Report

Analytical Method: SW8270SIM
Matrix: Water

Instrument ID: MSV
Concentration Units: ug/L

Analyte	Analysis Date	Amt. Spiked	Replicates 1	2	3	4	5	6	7	8	Std. Dev.	MDL
Naphthalene	12/01/05	0.01	0.00673	0.00606	0.00621	0.00543	0.00605	0.00602	0.00661	0.00686	0.000468	0.00140
Acenaphthylene	12/01/05	0.01	0.00620	0.00560	0.00591	0.00524	0.00554	0.00542	0.00594	0.00618	0.000356	0.00107
Acenaphthene	12/01/05	0.01	0.00587	0.00531	0.00556	0.00495	0.00520	0.00511	0.00571	0.00594	0.000367	0.00110
Fluorene	12/01/05	0.01	0.00612	0.00559	0.00589	0.00522	0.00553	0.00556	0.00600	0.00629	0.000358	0.00107
Phenanthrene	12/01/05	0.01	0.00608	0.00579	0.00605	0.00528	0.00564	0.00578	0.00647	0.00626	0.000375	0.00113
Anthracene	12/01/05	0.01	0.00647	0.00566	0.00591	0.00532	0.00561	0.00561	0.00591	0.00603	0.000348	0.00104
Fluoranthene	12/01/05	0.01	0.00655	0.00621	0.00647	0.00592	0.00618	0.00619	0.00661	0.00702	0.000341	0.00102
Pyrene	12/01/05	0.01	0.00623	0.00591	0.00609	0.00561	0.00580	0.00582	0.00623	0.00678	0.000364	0.00109
Benzo(a)anthracene	12/01/05	0.01	0.00675	0.00643	0.00672	0.00599	0.00651	0.00657	0.00672	0.00722	0.000347	0.00104
Chrysene	12/01/05	0.01	0.00592	0.00568	0.00569	0.00520	0.00565	0.00573	0.00609	0.00694	0.000504	0.00151
Benzo(b)fluoroanthene	12/01/05	0.01	0.00554	0.00435	0.00543	0.00512	0.00516	0.00523	0.00530	0.00566	0.000400	0.00120
Benzo(k)fluoranthene	12/01/05	0.01	0.00534	0.00507	0.00508	0.00507	0.00552	0.00527	0.00455	0.00425	0.000420	0.00126
Benzo(a)pyrene	12/01/05	0.01	0.0209	0.0210	0.0208	0.0202	0.0211	0.0212	0.0213	0.0215	0.000384	0.00115
Indeno(1,2,3-c,d)pyrene	12/01/05	0.01	0.0260	0.0255	0.0261	0.0258	0.0261	0.0259	0.0261	0.0267	0.000350	0.00105
Dibenzo(a,h)anthracene	12/01/05	0.01	0.0331	0.0328	0.0334	0.0331	0.0336	0.0333	0.0332	0.0339	0.000348	0.00104
Benzo(g,h,i)perylene	12/01/05	0.01	0.0162	0.0157	0.0161	0.0154	0.0160	0.0160	0.0159	0.0170	0.000450	0.00135

JB060608-17:06-F1890-SI

METALS BY SW6000/7000

006221

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CASE NARRATIVE
METALS

Analytical Method: SW6000/7000 SDG#: F1890

Lab Name: CH2M HILL Applied Science Laboratories Project #.: 344479.F1.01

Project Name: State Marine Prime Contractor.:

I. Holding Times:
All holding times were met.

II. Method:
Preparation: SW-846 3010
Analysis: SW-846 6000/7000

III. Digestion Exceptions:
None

IV. Analysis:

A. Calibration:
All acceptance criteria were met.

B. Blanks:
All acceptance criteria were met.

C. ICP Interference Check Samples:
All acceptance criteria were met.

D. Matrix Spike/Matrix Spike Duplicate Sample(s):
Total: The matrix spike/matrix spike duplicate recoveries of aluminum, iron, potassium and sodium were outside acceptance criteria because the analyte concentration in the sample was significantly higher than the added spike concentration. Matrix spike recovery for thallium (76.2%) did not meet acceptance criteria (80-120%).
Dissolved: The matrix spike/matrix spike duplicate recoveries of calcium, manganese, potassium and sodium were outside acceptance criteria because the analyte concentration in the sample was significantly higher than the added spike concentration. Matrix spike duplicate recovery for thallium (79.8%) did not meet acceptance criteria (80-120%). Matrix spike/matrix spike duplicate recoveries for selenium (132/130%) did not meet acceptance criteria (80-120%).

E. Laboratory Control Spike(LCS):
All acceptance criteria were met.

F. Serial Dilution:
Total: All acceptance criteria were met.
Dissolved: Serial dilution test for sodium exceeded acceptance criteria.

G. Other:
The reporting limit for selenium is raised from 5ppb to 10ppb due to the current method detection limit (MDL). A lower selenium reporting limit for these samples is not available by ICPMS because the high sodium concentrations would require high dilutions. Some "dissolved" results are greater than "total" results.

V. Documentation Exceptions:
None

006223

VI. I certify that this data package is in compliance with the terms and conditions agreed to by the client and CH2M HILL, both technically and for completeness, except for the conditions detailed above. Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or designee, as verified by the following signature.

Prepared by: _____ Date: 6-12-06

Reviewed by: _____ Date: 6-12-06

006224

SAMPLE DATA SUMMARY

006225

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U.S. EPA - CLP

1A

INORGANICS ANALYSIS DATA SHEET

Field Sample ID:

MW137FD01053106

SDG No.: F1890

Lab Name: CH2M HILL/LAB/CVO

Matrix: (soil/water) WATER

Lab Sample ID: F189001

Level: (low/med) LOW

Date Received: 06/02/06

% Moisture: 100

Concentration Units: UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	4790			P
7440-36-0	Antimony	3.60	B		P
7440-38-2	Arsenic	17.2			P
7440-39-3	Barium	517			P
7440-41-7	Beryllium	0.580	B		P
7440-43-9	Cadmium	0.457	B		P
7440-70-2	Calcium	129000			P
7440-47-3	Chromium	5.09	B		P
7440-48-4	Cobalt	7.95	B		P
7440-50-8	Copper	16.7	B		P
7439-89-6	Iron	5910			P
7439-92-1	Lead	18.5			P
7439-95-4	Magnesium	211000			P
7439-96-5	Manganese	5290			P
7439-97-6	Mercury	0.0355	B		CV
7440-02-0	Nickel	20.0	B		P
7440-09-7	Potassium	64000	B		P
7782-49-2	Selenium	10.0	U		P
7440-22-4	Silver	3.36	B		P
7440-23-5	Sodium	1390000			P
7440-28-0	Thallium	10.0	U		P
7440-62-2	Vanadium	16.7	B		P
7440-66-6	Zinc	135			P

Color Before: _____ Clarity Before: _____ Texture: _____

Color After: _____ Clarity After: _____ Artifacts: _____

Comments: _____

U.S. EPA - CLP
1A
INORGANICS ANALYSIS DATA SHEET

Field Sample ID:
MW137FD01053106

SDG No.: F1890
Lab Name: CH2M HILL/LAB/CVO
Matrix: (soil/water) WATER
Lab Sample ID: F189001F
Level: (low/med) LOW
Date Received: 06/02/06
% Moisture: 100
Concentration Units: UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	62.3	B		P
7440-36-0	Antimony	60.0	U		P
7440-38-2	Arsenic	10.0	U		P
7440-39-3	Barium	579			P
7440-41-7	Beryllium	5.00	U		P
7440-43-9	Cadmium	0.714	B		P
7440-70-2	Calcium	163000			P
7440-47-3	Chromium	10.0	U		P
7440-48-4	Cobalt	4.79	B		P
7440-50-8	Copper	5.10	B		P
7439-89-6	Iron	996			P
7439-92-1	Lead	2.37	B		P
7439-95-4	Magnesium	257000			P
7439-96-5	Manganese	7230			P
7439-97-6	Mercury	0.200	U		CV
7440-02-0	Nickel	14.5	B		P
7440-09-7	Potassium	54300	B		P
7782-49-2	Selenium	10.0	U		P
7440-22-4	Silver	2.77	B		P
7440-23-5	Sodium	1290000			P
7440-28-0	Thallium	10.0	U		P
7440-62-2	Vanadium	5.20	B		P
7440-66-6	Zinc	72.0			P

Color Before: _____ Clarity Before: _____ Texture: _____

Color After: _____ Clarity After: _____ Artifacts: _____

Comments: _____

006228

U.S. EPA - CLP
1A
INORGANICS ANALYSIS DATA SHEET

Field Sample ID: MW137GW01053106

SDG No.: F1890
Lab Name: CH2M HILL/LAB/CVO
Matrix: (soil/water) WATER
Lab Sample ID: F189002
Level: (low/med) LOW
Date Received: 06/02/06
% Moisture: 100
Concentration Units: UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	866			P
7440-36-0	Antimony	60.0	U		P
7440-38-2	Arsenic	22.7			P
7440-39-3	Barium	573			P
7440-41-7	Beryllium	5.00	U		P
7440-43-9	Cadmium	5.00	U		P
7440-70-2	Calcium	137000			P
7440-47-3	Chromium	10.0	U		P
7440-48-4	Cobalt	4.94	B		P
7440-50-8	Copper	25.0	U		P
7439-89-6	Iron	1500			P
7439-92-1	Lead	2.47	B		P
7439-95-4	Magnesium	230000			P
7439-96-5	Manganese	5510			P
7439-97-6	Mercury	0.200	U		CV
7440-02-0	Nickel	14.0	B		P
7440-09-7	Potassium	65400	B		P
7782-49-2	Selenium	10.0	U		P
7440-22-4	Silver	2.35	B		P
7440-23-5	Sodium	1420000			P
7440-28-0	Thallium	10.0	U		P
7440-62-2	Vanadium	7.73	B		P
7440-66-6	Zinc	70.9			P

Color Before: _____ Clarity Before: _____ Texture: _____

Color After: _____ Clarity After: _____ Artifacts: _____

Comments: _____

U.S. EPA - CLP
1A
INORGANICS ANALYSIS DATA SHEET

Field Sample ID: MW137GW01053106

SDG No.: F1890
Lab Name: CH2M HILL/LAB/CVO
Matrix: (soil/water) WATER
Lab Sample ID: F189002F
Level: (low/med) LOW
Date Received: 06/02/06
% Moisture: 100
Concentration Units: UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	42.2	B		P
7440-36-0	Antimony	60.0	U		P
7440-38-2	Arsenic	10.0	U		P
7440-39-3	Barium	557			P
7440-41-7	Beryllium	5.00	U		P
7440-43-9	Cadmium	0.365	B		P
7440-70-2	Calcium	146000			P
7440-47-3	Chromium	10.0	U		P
7440-48-4	Cobalt	4.91	B		P
7440-50-8	Copper	2.35	B		P
7439-89-6	Iron	752			P
7439-92-1	Lead	3.00	U		P
7439-95-4	Magnesium	239000			P
7439-96-5	Manganese	6350			P
7439-97-6	Mercury	0.200	U		CV
7440-02-0	Nickel	14.6	B		P
7440-09-7	Potassium	59100	B		P
7782-49-2	Selenium	10.0	U		P
7440-22-4	Silver	1.55	B		P
7440-23-5	Sodium	1290000			P
7440-28-0	Thallium	10.0	U		P
7440-62-2	Vanadium	4.59	B		P
7440-66-6	Zinc	72.8			P

Color Before: _____ Clarity Before: _____ Texture: _____

Color After: _____ Clarity After: _____ Artifacts: _____

Comments: _____

U.S. EPA - CLP
1A
INORGANICS ANALYSIS DATA SHEET

Field Sample ID:
MW116B-GW01053106

SDG No.: F1890
Lab Name: CH2M HILL/LAB/CVO
Matrix: (soil/water) WATER
Lab Sample ID: F189003
Level: (low/med) LOW
Date Received: 06/02/06
% Moisture: 100
Concentration Units: UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	82.3	B		P
7440-36-0	Antimony	7.08	B		P
7440-38-2	Arsenic	12.7			P
7440-39-3	Barium	555			P
7440-41-7	Beryllium	5.00	U		P
7440-43-9	Cadmium	5.00	U		P
7440-70-2	Calcium	201000			P
7440-47-3	Chromium	3.97	B		P
7440-48-4	Cobalt	50.0	U		P
7440-50-8	Copper	25.0	U		P
7439-89-6	Iron	2030			P
7439-92-1	Lead	2.26	B		P
7439-95-4	Magnesium	101000			P
7439-96-5	Manganese	1400			P
7439-97-6	Mercury	0.200	U		CV
7440-02-0	Nickel	164			P
7440-09-7	Potassium	39500	B		P
7782-49-2	Selenium	10.0	U		P
7440-22-4	Silver	10.0	U		P
7440-23-5	Sodium	591000			P
7440-28-0	Thallium	10.0	U		P
7440-62-2	Vanadium	1.87	B		P
7440-66-6	Zinc	48.1			P

Color Before: _____ Clarity Before: _____ Texture: _____

Color After: _____ Clarity After: _____ Artifacts: _____

Comments: _____

U.S. EPA - CLP
1A
INORGANICS ANALYSIS DATA SHEET

Field Sample ID: MW116B-GW01053106

SDG No.: F1890
Matrix: (soil/water) WATER
Level: (low/med) LOW
% Moisture: 100

Lab Name: CH2M HILL/LAB/CVO
Lab Sample ID: F189003F
Date Received: 06/02/06
Concentration Units: UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	52.4	B		P
7440-36-0	Antimony	3.24	B		P
7440-38-2	Arsenic	9.32	B		P
7440-39-3	Barium	543			P
7440-41-7	Beryllium	5.00	U		P
7440-43-9	Cadmium	5.00	U		P
7440-70-2	Calcium	203000			P
7440-47-3	Chromium	10.0	U		P
7440-48-4	Cobalt	50.0	U		P
7440-50-8	Copper	25.0	U		P
7439-89-6	Iron	981			P
7439-92-1	Lead	2.49	B		P
7439-95-4	Magnesium	93700			P
7439-96-5	Manganese	1310			P
7439-97-6	Mercury	0.200	U		CV
7440-02-0	Nickel	170			P
7440-09-7	Potassium	39200	B		P
7782-49-2	Selenium	9.41	B		P
7440-22-4	Silver	10.0	U		P
7440-23-5	Sodium	521000			P
7440-28-0	Thallium	10.0	U		P
7440-62-2	Vanadium	1.69	B		P
7440-66-6	Zinc	36.2			P

Color Before: _____ Clarity Before: _____ Texture: _____

Color After: _____ Clarity After: _____ Artifacts: _____

Comments: _____

006232

U.S. EPA - CLP
1A
INORGANICS ANALYSIS DATA SHEET

Field Sample ID:
MW136GW01053106

SDG No.: F1890
Matrix: (soil/water) WATER
Level: (low/med) LOW
% Moisture: 100

Lab Name: CH2M HILL/LAB/CVO
Lab Sample ID: F189004
Date Received: 06/02/06
Concentration Units: UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	12500			P
7440-36-0	Antimony	3.44	B		P
7440-38-2	Arsenic	22.3			P
7440-39-3	Barium	1220			P
7440-41-7	Beryllium	0.684	B		P
7440-43-9	Cadmium	1.22	B		P
7440-70-2	Calcium	198000			P
7440-47-3	Chromium	14.5			P
7440-48-4	Cobalt	5.87	B		P
7440-50-8	Copper	31.4			P
7439-89-6	Iron	35800			P
7439-92-1	Lead	71.0			P
7439-95-4	Magnesium	317000			P
7439-96-5	Manganese	8390			P
7439-97-6	Mercury	0.0455	B		CV
7440-02-0	Nickel	13.6	B		P
7440-09-7	Potassium	63400	B		P
7782-49-2	Selenium	10.0	U	N	P
7440-22-4	Silver	5.12	B		P
7440-23-5	Sodium	1720000			P
7440-28-0	Thallium	10.0	U	N	P
7440-62-2	Vanadium	24.6	B		P
7440-66-6	Zinc	258			P

Color Before: _____ Clarity Before: _____ Texture: _____
Color After: _____ Clarity After: _____ Artifacts: _____

Comments: _____

JG060612-07:38-F1890-M

FORM I - INORG

006233

U.S. EPA - CLP
1A
INORGANICS ANALYSIS DATA SHEET

Field Sample ID: MW136GW01053106

SDG No.: F1890
Lab Name: CH2M HILL/LAB/CVO
Matrix: (soil/water) WATER
Lab Sample ID: F189004F
Level: (low/med) LOW
Date Received: 06/02/06
% Moisture: 100
Concentration Units: UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	43.8	B		P
7440-36-0	Antimony	60.0	U		P
7440-38-2	Arsenic	14.1			P
7440-39-3	Barium	1250			P
7440-41-7	Beryllium	5.00	U		P
7440-43-9	Cadmium	0.447	B		P
7440-70-2	Calcium	189000			P
7440-47-3	Chromium	10.0	U		P
7440-48-4	Cobalt	1.65	B		P
7440-50-8	Copper	25.0	U		P
7439-89-6	Iron	27800			P
7439-92-1	Lead	3.00	U		P
7439-95-4	Magnesium	300000			P
7439-96-5	Manganese	7680			P
7439-97-6	Mercury	0.200	U		CV
7440-02-0	Nickel	7.41	B		P
7440-09-7	Potassium	60400	B		P
7782-49-2	Selenium	10.0	U	N	P
7440-22-4	Silver	2.59	B		P
7440-23-5	Sodium	1550000			P
7440-28-0	Thallium	10.0	U	N	P
7440-62-2	Vanadium	50.0	U		P
7440-66-6	Zinc	34.8			P

Color Before: _____ Clarity Before: _____ Texture: _____

Color After: _____ Clarity After: _____ Artifacts: _____

Comments: _____

006234

U.S. EPA - CLP
1A
INORGANICS ANALYSIS DATA SHEET

Field Sample ID:
MW136MS01053106

SDG No.: F1890
Lab Name: CH2M HILL/LAB/CVO
Matrix: (soil/water) WATER
Lab Sample ID: F189005MS
Level: (low/med) LOW
Date Received: 06/02/06
% Moisture: 100
Concentration Units: UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	21600			P
7440-36-0	Antimony	993			P
7440-38-2	Arsenic	1050			P
7440-39-3	Barium	2100			P
7440-41-7	Beryllium	1030			P
7440-43-9	Cadmium	922			P
7440-70-2	Calcium	207000			P
7440-47-3	Chromium	971			P
7440-48-4	Cobalt	889			P
7440-50-8	Copper	1050			P
7439-89-6	Iron	38300			P
7439-92-1	Lead	922			P
7439-95-4	Magnesium	327000			P
7439-96-5	Manganese	9220			P
7439-97-6	Mercury	1.07			CV
7440-02-0	Nickel	925			P
7440-09-7	Potassium	76900	B		P
7782-49-2	Selenium	990			P
7440-22-4	Silver	420			P
7440-23-5	Sodium	1720000			P
7440-28-0	Thallium	762			P
7440-62-2	Vanadium	1040			P
7440-66-6	Zinc	1250			P

Color Before: _____ Clarity Before: _____ Texture: _____

Color After: _____ Clarity After: _____ Artifacts: _____

Comments: _____

006235

U.S. EPA - CLP
1A
INORGANICS ANALYSIS DATA SHEET

Field Sample ID:
MW136MS01053106

SDG No.: F1890
Lab Name: CH2M HILL/LAB/CVO
Matrix: (soil/water) WATER
Lab Sample ID: F189005MSF
Level: (low/med) LOW
Date Received: 06/02/06
% Moisture: 100
Concentration Units: UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	971			P
7440-36-0	Antimony	1000			P
7440-38-2	Arsenic	1130			P
7440-39-3	Barium	2090			P
7440-41-7	Beryllium	1030			P
7440-43-9	Cadmium	916			P
7440-70-2	Calcium	186000			P
7440-47-3	Chromium	963			P
7440-48-4	Cobalt	867			P
7440-50-8	Copper	993			P
7439-89-6	Iron	27300			P
7439-92-1	Lead	853			P
7439-95-4	Magnesium	286000			P
7439-96-5	Manganese	8230			P
7439-97-6	Mercury	0.992			CV
7440-02-0	Nickel	903			P
7440-09-7	Potassium	334000	B		P
7782-49-2	Selenium	1320			P
7440-22-4	Silver	478			P
7440-23-5	Sodium	4010000			P
7440-28-0	Thallium	822			P
7440-62-2	Vanadium	1020			P
7440-66-6	Zinc	1000			P

Color Before: _____ Clarity Before: _____ Texture: _____

Color After: _____ Clarity After: _____ Artifacts: _____

Comments: _____

006236

U.S. EPA - CLP
1A
INORGANICS ANALYSIS DATA SHEET

Field Sample ID:
MW136MSD01053106

SDG No.: F1890
Lab Name: CH2M HILL/LAB/CVO
Matrix: (soil/water) WATER
Lab Sample ID: F189006MSD
Level: (low/med) LOW
Date Received: 06/02/06
% Moisture: 100
Concentration Units: UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	22800			P
7440-36-0	Antimony	1070			P
7440-38-2	Arsenic	1130			P
7440-39-3	Barium	2200			P
7440-41-7	Beryllium	1040			P
7440-43-9	Cadmium	964			P
7440-70-2	Calcium	209000			P
7440-47-3	Chromium	1020			P
7440-48-4	Cobalt	931			P
7440-50-8	Copper	1100			P
7439-89-6	Iron	38600			P
7439-92-1	Lead	989			P
7439-95-4	Magnesium	327000			P
7439-96-5	Manganese	9260			P
7439-97-6	Mercury	1.07			CV
7440-02-0	Nickel	989			P
7440-09-7	Potassium	80600	B		P
7782-49-2	Selenium	1080			P
7440-22-4	Silver	453			P
7440-23-5	Sodium	1680000			P
7440-28-0	Thallium	827			P
7440-62-2	Vanadium	1090			P
7440-66-6	Zinc	1310			P

Color Before: _____ Clarity Before: _____ Texture: _____
Color After: _____ Clarity After: _____ Artifacts: _____
Comments: _____

006237

U.S. EPA - CLP
1A
INORGANICS ANALYSIS DATA SHEET

Field Sample ID: MW136MSD01053106

SDG No.: F1890
Lab Name: CH2M HILL/LAB/CVO
Matrix: (soil/water) WATER
Lab Sample ID: F189006MSDF
Level: (low/med) LOW
Date Received: 06/02/06
% Moisture: 100
Concentration Units: UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	987			P
7440-36-0	Antimony	978			P
7440-38-2	Arsenic	1100			P
7440-39-3	Barium	2060			P
7440-41-7	Beryllium	1010			P
7440-43-9	Cadmium	893			P
7440-70-2	Calcium	176000			P
7440-47-3	Chromium	947			P
7440-48-4	Cobalt	854			P
7440-50-8	Copper	993			P
7439-89-6	Iron	26600			P
7439-92-1	Lead	832			P
7439-95-4	Magnesium	274000			P
7439-96-5	Manganese	8030			P
7439-97-6	Mercury	1.04			CV
7440-02-0	Nickel	886			P
7440-09-7	Potassium	333000	B		P
7782-49-2	Selenium	1300			P
7440-22-4	Silver	471			P
7440-23-5	Sodium	4110000			P
7440-28-0	Thallium	798			P
7440-62-2	Vanadium	1010			P
7440-66-6	Zinc	982			P

Color Before: _____ Clarity Before: _____ Texture: _____

Color After: _____ Clarity After: _____ Artifacts: _____

Comments: _____

U.S. EPA - CLP
1A
INORGANICS ANALYSIS DATA SHEET

Field Sample ID: WB1-0605

SDG No.: F1890
Lab Name: CH2M HILL/LAB/CVO
Matrix: (soil/water) WATER
Lab Sample ID: WB1-0605
Level: (low/med) LOW
Date Received: / /
% Moisture: 100
Concentration Units: UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	200	U		P
7440-36-0	Antimony	60.0	U		P
7440-38-2	Arsenic	8.52	B		P
7440-39-3	Barium	200	U		P
7440-41-7	Beryllium	5.00	U		P
7440-43-9	Cadmium	5.00	U		P
7440-70-2	Calcium	22.2	B		P
7440-47-3	Chromium	10.0	U		P
7440-48-4	Cobalt	50.0	U		P
7440-50-8	Copper	25.0	U		P
7439-89-6	Iron	100	U		P
7439-92-1	Lead	3.00	U		P
7439-95-4	Magnesium	5000	U		P
7439-96-5	Manganese	0.196	B		P
7440-02-0	Nickel	40.0	U		P
7440-09-7	Potassium	5000	U		P
7782-49-2	Selenium	10.0	U		P
7440-22-4	Silver	10.0	U		P
7440-23-5	Sodium	376	B		P
7440-28-0	Thallium	10.0	U		P
7440-62-2	Vanadium	50.0	U		P
7440-66-6	Zinc	2.92	B		P

Color Before: _____ Clarity Before: _____ Texture: _____

Color After: _____ Clarity After: _____ Artifacts: _____

Comments: _____

U.S. EPA - CLP

1A

INORGANICS ANALYSIS DATA SHEET

Field Sample ID: WB1-0606

SDG No.: F1890

Lab Name: CH2M HILL/LAB/CVO

Matrix: (soil/water) WATER

Lab Sample ID: WB1-0606

Level: (low/med) LOW

Date Received: / /

% Moisture: 100

Concentration Units: UG/L

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.200	U		CV

Color Before: _____ Clarity Before: _____ Texture: _____

Color After: _____ Clarity After: _____ Artifacts: _____

Comments: _____

U.S. EPA - CLP

1A

INORGANICS ANALYSIS DATA SHEET

Field Sample ID: WB1-0609

SDG No.: F1890

Lab Name: CH2M HILL/LAB/CVO

Matrix: (soil/water) WATER

Lab Sample ID: WB1-0609

Level: (low/med) LOW

Date Received: / /

% Moisture: 100

Concentration Units: UG/L

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.200	U		CV

Color Before: _____ Clarity Before: _____ Texture: _____

Color After: _____ Clarity After: _____ Artifacts: _____

Comments: _____

QC SUMMARY

006242

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U.S. EPA - CLP

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: CH2M HILL/LAB/CVO Contract: N/A

Lab Code: CVO Case No.: F1890 SAS No.: F1890 SDG No.: F1890

Initial Calibration Source: 060606ICP

Concentration Units: ug/L

2nd Source/ICV ID: ICV-0606 CCV1 ID: CV3-0606 CCV2 ID: CV4-0606 CCV3 ID: CV5-0606

	Initial Calibration			Continuing Calibration							
Analyte	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	Found	%R(1)	M
Aluminum	20000	19800	99	20000	20100	101	19900	100	20300	102	P
Antimony	1000	1020	102	1000	1040	104	1020	102	1020	102	P
Arsenic	1000	984	98	1000	991	99	970	97	973	97	P
Barium	1000	937	94	1000	954	95	936	94	932	93	P
Beryllium	1000	996	100	1000	1000	100	999	100	993	99	P
Cadmium	1000	965	97	1000	980	98	964	96	957	96	P
Calcium	50000	48800	98	50000	48800	98	48900	98	49100	98	P
Chromium	1000	975	98	1000	996	100	976	98	970	97	P
Cobalt	1000	972	97	1000	987	99	972	97	960	96	P
Copper	1000	987	99	1000	1000	100	976	98	985	99	P
Iron	50000	49000	98	50000	49000	98	49000	98	49000	98	P
Lead	1000	984	98	1000	997	100	979	98	976	98	P
Magnesium	50000	50200	100	50000	49800	100	50100	100	50400	101	P
Manganese	1000	973	97	1000	975	98	970	97	970	97	P
Nickel	1000	958	96	1000	974	97	955	96	949	95	P
Selenium	1000	967	97	1000	969	97	968	97	964	96	P
Silver	1000	964	96	1000	984	98	963	96	962	96	P
Thallium	1000	957	96	1000	991	99	958	96	969	97	P
Vanadium	1000	983	98	1000	1010	101	989	99	985	99	P
Zinc	1000	974	97	1000	999	100	978	98	968	97	P

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

SW846 Control Limits: Mercury and GFAA 80-120; ICP 90-110; Cyanide 85-115

U.S. EPA - CLP

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: CH2M HILL/LAB/CVO Contract: N/A

Lab Code: CVO Case No.: F1890 SAS No.: F1890 SDG No.: F1890

Initial Calibration Source: 060806n

Concentration Units: ug/L

2nd Source/ICV ID: ICV-0608 CCV1 ID: CV1-0608 CCV2 ID: CCV3 ID:

Initial Calibration				Continuing Calibration							
Analyte	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	Found	%R(1)	M
Sodium	50000	50300	101	50000	48900	98					P

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

SW846 Control Limits: Mercury and GFAA 80-120; ICP 90-110; Cyanide 85-115

U.S. EPA - CLP

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: CH2M HILL/LAB/CVO Contract: N/A

Lab Code: CVO Case No.: F1890 SAS No.: F1890 SDG No.: F1890

Initial Calibration Source: 060806k

Concentration Units: ug/L

2nd Source/ICV ID: ICV-0608k CCV1 ID: CV1-0608k CCV2 ID: CCV3 ID:

Initial Calibration				Continuing Calibration							
Analyte	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	Found	%R(1)	M
Potassium	1000	1030	103	1000	1030	103					P

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

SW846 Control Limits: Mercury and GFAA 80-120; ICP 90-110; Cyanide 85-115

U.S. EPA - CLP

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: CH2M HILL/LAB/CVO Contract: N/A

Lab Code: CVO Case No.: F1890 SAS No.: F1890 SDG No.: F1890

Initial Calibration Source: 060906ICP

Concentration Units: ug/L

2nd Source/ICV ID: ICV-0609 CCV1 ID: CV1-0609 CCV2 ID: CCV3 ID:

Initial Calibration				Continuing Calibration							
Analyte	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	Found	%R(1)	M
Aluminum	20000	20200	101	20000	19400	97					P
Antimony	1000	1100	110	1000	1010	101					P
Arsenic	1000	976	98	1000	950	95					P
Barium	1000	950	95	1000	941	94					P
Beryllium	1000	980	98	1000	991	99					P
Cadmium	1000	985	99	1000	952	95					P
Calcium	50000	49800	100	50000	49000	98					P
Chromium	1000	994	99	1000	967	97					P
Cobalt	1000	945	95	1000	955	96					P
Copper	1000	1000	100	1000	974	97					P
Iron	50000	51600	103	50000	49400	99					P
Lead	1000	978	98	1000	966	97					P
Magnesium	50000	50600	101	50000	48600	97					P
Manganese	1000	963	96	1000	964	96					P
Nickel	1000	953	95	1000	937	94					P
Selenium	1000	942	94	1000	951	95					P
Silver	1000	992	99	1000	964	96					P
Sodium	50000	49200	98	50000	48900	98					P
Thallium	1000	1000	100	1000	952	95					P
Vanadium	1000	1020	102	1000	981	98					P
Zinc	1000	995	100	1000	966	97					P

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

SW846 Control Limits: Mercury and GFAA 80-120; ICP 90-110; Cyanide 85-115

006247

U.S. EPA - CLP

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: CH2M HILL/LAB/CVO Contract: N/A

Lab Code: CVO Case No.: F1890 SAS No.: F1890 SDG No.: F1890

Initial Calibration Source: 060906n

Concentration Units: ug/L

2nd Source/ICV ID: ICV-0609n CCV1 ID: CV1-0609n CCV2 ID: CCV3 ID:

Initial Calibration				Continuing Calibration							
Analyte	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	Found	%R(1)	M
Sodium	50000	50300	101	50000	49400	99					P

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

SW846 Control Limits: Mercury and GFAA 80-120; ICP 90-110; Cyanide 85-115

U.S. EPA - CLP

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: CH2M HILL/LAB/CVO Contract: N/A

Lab Code: CVO Case No.: F1890 SAS No.: F1890 SDG No.: F1890

Initial Calibration Source: 060906k

Concentration Units: ug/L

2nd Source/ICV ID: ICV-0609k CCV1 ID: CV1-0609k CCV2 ID: CCV3 ID:

Initial Calibration				Continuing Calibration							
Analyte	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	Found	%R(1)	M
Potassium	1000	1040	104	1000	1030	103					P

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

SW846 Control Limits: Mercury and GFAA 80-120; ICP 90-110; Cyanide 85-115

U.S. EPA - CLP

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: CH2M HILL/LAB/CVO Contract: N/A

Lab Code: CVO Case No.: F1890 SAS No.: F1890 SDG No.: F1890

Initial Calibration Source: 060706HG

Concentration Units: ug/L

2nd Source/ICV ID: ICV-0607 CCV1 ID: CV1-0607 CCV2 ID: CCV3 ID:

Initial Calibration				Continuing Calibration							
Analyte	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	Found	%R(1)	M
Mercury	1.00	0.980	98	1.00	1.02	102					CV

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

SW846 Control Limits: Mercury and GFAA 80-120; ICP 90-110; Cyanide 85-115

U.S. EPA - CLP

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: CH2M HILL/LAB/CVO Contract: N/A

Lab Code: CVO Case No.: F1890 SAS No.: F1890 SDG No.: F1890

Initial Calibration Source: 060906HG

Concentration Units: ug/L

2nd Source/ICV ID: ICV-0609 CCV1 ID: CV1-0609 CCV2 ID: CCV3 ID:

Initial Calibration				Continuing Calibration							
Analyte	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	Found	%R(1)	M
Mercury	1.00	0.980	98	1.00	1.08	108					CV

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

SW846 Control Limits: Mercury and GFAA 80-120; ICP 90-110; Cyanide 85-115

U.S. EPA - CLP

3

BLANKS

Lab Name: CH2M HILL/LAB/CVO Contract: N/A

Lab Code: CVO Case No.: F1890 SAS No.: F1890 SDG No.: F1890

Concentration Units: UG/L

ICB ID: ICB-0606 CCB1 ID: CB3-0606 CCB2 ID: CB4-0606 CCB3 ID: CB5-0606

Analyte	Method	Initial Calib. Blank	Continuing Calibration Blank			M
			1	2	3	
Aluminum	SW6010	10.8B	9.11B	9.26B	200U	P
Antimony	SW6010	60.0U	60.0U	4.11B	60.0U	P
Arsenic	SW6010	10.0U	12.0	10.0U	10.0U	P
Barium	SW6010	200U	200U	200U	200U	P
Beryllium	SW6010	5.00U	5.00U	5.00U	5.00U	P
Cadmium	SW6010	5.00U	5.00U	5.00U	5.00U	P
Calcium	SW6010	5000U	5000U	5000U	5000U	P
Chromium	SW6010	10.0U	10.0U	10.0U	10.0U	P
Cobalt	SW6010	50.0U	50.0U	50.0U	50.0U	P
Copper	SW6010	25.0U	25.0U	25.0U	25.0U	P
Iron	SW6010	100U	11.1B	10.3B	12.2B	P
Lead	SW6010	3.00U	3.00U	3.00U	3.00U	P
Magnesium	SW6010	5000U	5000U	5000U	5000U	P
Manganese	SW6010	15.0U	15.0U	0.0649B	15.0U	P
Nickel	SW6010	40.0U	40.0U	40.0U	40.0U	P
Selenium	SW6010	10.0U	10.0U	10.0U	10.0U	P
Silver	SW6010	10.0U	10.0U	10.0U	10.0U	P
Thallium	SW6010	10.0U	10.0U	10.0U	10.0U	P
Vanadium	SW6010	50.0U	50.0U	50.0U	50.0U	P
Zinc	SW6010	20.0U	20.0U	20.0U	20.0U	P

Comments:

006252

U.S. EPA - CLP

3

BLANKS

Lab Name: CH2M HILL/LAB/CVO Contract: N/A

Lab Code: CVO Case No.: F1890 SAS No.: F1890 SDG No.: F1890

Concentration Units: UG/L

ICB ID: ICB-0608 CCB1 ID: CB1-0608 CCB2 ID: CCB3 ID:

Analyte	Method	Initial Calib. Blank	Continuing Calibration Blank			
			1	2	3	M
Sodium	SW6010	549B	404B			P

Comments:

JG060612-07:38-F1890-M

FORM III - INORG

006253

U.S. EPA - CLP

3

BLANKS

Lab Name: CH2M HILL/LAB/CVO Contract: N/A

Lab Code: CVO Case No.: F1890 SAS No.: F1890 SDG No.: F1890

Concentration Units: UG/L

ICB ID: ICB-0608K CCB1 ID: CB1-0608K CCB2 ID: CCB3 ID:

Analyte	Method	Initial Calib. Blank	Continuing Calibration Blank			M
			1	2	3	
Potassium	SW6010	5000U	5000U			P

Comments:

006254

U.S. EPA - CLP

3

BLANKS

Lab Name: CH2M HILL/LAB/CVO Contract: N/A

Lab Code: CVO Case No.: F1890 SAS No.: F1890 SDG No.: F1890

Concentration Units: UG/L

ICB ID: ICB-0609 CCB1 ID: CB1-0609 CCB2 ID: CCB3 ID:

Analyte	Method	Initial Calib. Blank	Continuing Calibration Blank			
			1	2	3	M
Aluminum	SW6010	14.4B	200U			P
Antimony	SW6010	60.0U	60.0U			P
Arsenic	SW6010	10.0U	10.0U			P
Barium	SW6010	200U	200U			P
Beryllium	SW6010	5.00U	5.00U			P
Cadmium	SW6010	5.00U	5.00U			P
Calcium	SW6010	5000U	5000U			P
Chromium	SW6010	10.0U	10.0U			P
Cobalt	SW6010	50.0U	50.0U			P
Copper	SW6010	25.0U	25.0U			P
Iron	SW6010	100U	9.02B			P
Lead	SW6010	3.00U	3.00U			P
Magnesium	SW6010	5000U	5000U			P
Manganese	SW6010	15.0U	0.0680B			P
Nickel	SW6010	40.0U	40.0U			P
Selenium	SW6010	10.0U	10.0U			P
Silver	SW6010	10.0U	1.23B			P
Sodium	SW6010	295B	433B			P
Thallium	SW6010	10.0U	10.0U			P
Vanadium	SW6010	50.0U	50.0U			P
Zinc	SW6010	20.0U	20.0U			P

Comments:

006255

U.S. EPA - CLP

3

BLANKS

Lab Name: CH2M HILL/LAB/CVO Contract: N/A

Lab Code: CVO Case No.: F1890 SAS No.: F1890 SDG No.: F1890

Concentration Units: UG/L

ICB ID: ICB-0609n CCB1 ID: CB1-0609n CCB2 ID: CCB3 ID:

Analyte	Method	Initial Calib. Blank	Continuing Calibration Blank			M
			1	2	3	
Sodium	SW6010	480B	419B			P

Comments:

006256

U.S. EPA - CLP

3

BLANKS

Lab Name: CH2M HILL/LAB/CVO Contract: N/A

Lab Code: CVO Case No.: F1890 SAS No.: F1890 SDG No.: F1890

Concentration Units: UG/L

ICB ID: ICB-0609k CCB1 ID: CB1-0609k CCB2 ID: CCB3 ID:

Analyte	Method	Initial Calib. Blank	Continuing Calibration Blank			M
			1	2	3	
Potassium	SW6010	5000U	5000U			P

Comments:

006257

U.S. EPA - CLP

3

BLANKS

Lab Name: CH2M HILL/LAB/CVO Contract: N/A

Lab Code: CVO Case No.: F1890 SAS No.: F1890 SDG No.: F1890

Concentration Units: UG/L

ICB ID: ICB-0607 CCB1 ID: CB1-0607 CCB2 ID: CCB3 ID:

Analyte	Method	Initial Calib. Blank	Continuing Calibration Blank			M
			1	2	3	
Mercury	SW7470	0.200U	0.200U			CV

Comments:

006258

U.S. EPA - CLP

3

BLANKS

Lab Name: CH2M HILL/LAB/CVO Contract: N/A

Lab Code: CVO Case No.: F1890 SAS No.: F1890 SDG No.: F1890

Concentration Units: UG/L

ICB ID: ICB-0609 CCB1 ID: CB1-0609 CCB2 ID: CCB3 ID:

Analyte	Method	Initial Calib. Blank	Continuing Calibration Blank			M
			1	2	3	
Mercury	SW7470	0.200U	0.200U			CV

Comments:

006259

4

INTERFERENCE CHECK SAMPLE

Lab Name: CH2M HILL/LAB/CVO Contract: N/A

Lab Code: CVO Case No.: F1890 SAS No.: F1890 SDG No.: F1890

Instrument ID: OP3000 ICS Source: 2-MW-42-15 & 38-11

Initial Calibration Source: 060606ICP Concentration Units: ug/L

Analyte	True Value Sol. A	True Value Sol. AB	Initial Found Sol. A	Initial Found Sol. AB	Initial Found %R	Final Found Sol. A	Final Found Sol. AB	Final Found %R
Aluminum	500000	500000	494000	487000	97	494000	501000	100
Antimony		600		613	102		631	105
Arsenic		100		106	106		99	99
Barium		500		458	92		464	93
Beryllium		500		516	103		522	104
Cadmium		1000		897	90		915	92
Calcium	500000	500000	459000	452000	90	456000	462000	92
Chromium		500		467	93		476	95
Cobalt		500		426	85		431	86
Copper		500		472	94		486	97
Iron	200000	200000	171000	169000	85	168000	171000	86
Lead		50		41.2	82		42.3	85
Magnesium	500000	500000	495000	488000	98	492000	499000	100
Manganese		500		463	93		469	94
Nickel		1000		871	87		887	89
Selenium		1000		968	97		985	99
Silver		200		200	100		203	102
Thallium		100		83.9	84		95	95
Vanadium		500		486	97		497	99
Zinc		1000		954	95		975	98

U.S. EPA - CLP

4

INTERFERENCE CHECK SAMPLE

Lab Name: CH2M HILL/LAB/CVO Contract: N/A

Lab Code: CVO Case No.: F1890 SAS No.: F1890 SDG No.: F1890

Instrument ID: OP3000 ICS Source: 2-MW-42-15 & 38-11

Initial Calibration Source: 060906ICP Concentration Units: ug/L

Analyte	True Value Sol. A	True Value Sol. AB	Initial Found Sol. A	Initial Found Sol. AB	Initial Found %R	Final Found Sol. A	Final Found Sol. AB	Final Found %R
Aluminum	500000	500000	490000	488000	98	487000	494000	99
Antimony		600		660	110		630	105
Arsenic		100		102	102		104	104
Barium		500		475	95		483	97
Beryllium		500		518	104		517	103
Cadmium		1000		937	94		936	94
Calcium	500000	500000	467000	464000	93	460000	467000	93
Chromium		500		486	97		488	98
Cobalt		500		431	86		440	88
Copper		500		492	98		493	99
Iron	200000	200000	176000	175000	88	170000	173000	87
Lead		50		42.6	85		41.5	83
Magnesium	500000	500000	494000	492000	98	487000	493000	99
Manganese		500		470	94		476	95
Nickel		1000		898	90		905	91
Selenium		1000		999	100		1000	100
Silver		200		212	106		214	107
Thallium		100		90.1	90		82.1	82
Vanadium		500		507	101		505	101
Zinc		1000		995	100		996	100

U.S. EPA - CLP

5A

MATRIX SPIKE/MATRIX SPIKE DUPLICATE SAMPLE RECOVERY

Lab Name: CH2M HILL/LAB/CVO Contract: N/A SDG No.: F1890

Lab Code: CVO SAS No.: F1890 Native Sample ID: MW136GW01053106

Matrix: Water Case No.: F1890 MS Sample ID: MW136MS01053106

Level: LOW MSD Sample ID: MW136MSD01053106

Concentration Units: UG/L

Analyte	Method	Sample Result	MS Spike Added	MS Result	MS %R	MSD Spike Added	MSD Result	MSD %R	%RPD	QC Limits %R	QC Limits %RPD	Q	M
Aluminum	SW6010	12500	1000	21600	0	1000	22800	0	5.40	80-120	20		P
Antimony	SW6010	3.44B	1000	993	99.0	1000	1070	107	7.50	80-120	20		P
Arsenic	SW6010	22.3	1000	1050	103	1000	1130	111	7.30	80-120	20		P
Barium	SW6010	1220	1000	2100	88.0	1000	2200	98.0	4.70	80-120	20		P
Beryllium	SW6010	0.684B	1000	1030	103	1000	1040	104	1.00	80-120	20		P
Cadmium	SW6010	1.22B	1000	922	92.1	1000	964	96.3	4.50	80-120	20		P
Calcium	SW6010	198000	10000	207000	90.0	10000	209000	110	1.00	80-120	20		P
Chromium	SW6010	14.5	1000	971	95.7	1000	1020	101	4.90	80-120	20		P
Cobalt	SW6010	5.87B	1000	889	88.3	1000	931	92.5	4.60	80-120	20		P
Copper	SW6010	31.4	1000	1050	102	1000	1100	107	4.70	80-120	20		P
Iron	SW6010	35800	1000	38300	0	1000	38600	0	0.80	80-120	20		P
Lead	SW6010	71.0	1000	922	85.1	1000	989	91.8	7.00	80-120	20		P
Magnesium	SW6010	317000	10000	327000	100	10000	327000	100	0.00	80-120	20		P
Manganese	SW6010	8390	1000	9220	83.0	1000	9260	87.0	0.40	80-120	20		P
Mercury	SW7470	0.0455B	1	1.07	103	1	1.07	103	0.10	75-125	20		CV
Nickel	SW6010	13.6B	1000	925	91.1	1000	989	97.5	6.70	80-120	20		P
Potassium	SW6010	63400	10000	76900	135	10000	80600	172	4.70	80-120	20		P
Selenium	SW6010	10.0U	1000	990	99.0	1000	1080	108	8.70	80-120	20		P
Silver	SW6010	5.12B	500	420	83.0	500	453	89.6	7.60	80-120	20		P
Sodium	SW6010	1720000	10000	1720000	0.0	10000	1680000	0	2.40	80-120	20		P
Thallium	SW6010	10.0U	1000	762	76.2	1000	827	82.7	8.20	80-120	20	N	P
Vanadium	SW6010	24.6B	1000	1040	102	1000	1090	107	4.70	80-120	20		P
Zinc	SW6010	258	1000	1250	99.2	1000	1310	105	4.70	80-120	20		P

Comments:

Total Metals

Result values >MDL in the native sample are used in the MS/MSD recovery calculation.

U.S. EPA - CLP

5A

MATRIX SPIKE/MATRIX SPIKE DUPLICATE SAMPLE RECOVERY

Lab Name: CH2M HILL/LAB/CVO Contract: N/A SDG No.: F1890

Lab Code: CVO SAS No.: F1890 Native Sample ID: MW136GW01053106

Matrix: Water Case No.: F1890 MS Sample ID: MW136MS01053106

Level: LOW MSD Sample ID: MW136MSD01053106

Concentration Units: UG/L

Analyte	Method	Sample Result	MS Spike Added	MS Result	MS %R	MSD Spike Added	MSD Result	MSD %R	%RPD	QC Limits %R	QC Limits %RPD	Q	M
Aluminum	SW6010	43.8B	1000	971	92.7	1000	987	94.3	1.60	80-120	20		P
Antimony	SW6010	60.0U	1000	1000	100	1000	978	97.8	2.20	80-120	20		P
Arsenic	SW6010	14.1	1000	1130	112	1000	1100	109	2.70	80-120	20		P
Barium	SW6010	1250	1000	2090	84.0	1000	2060	81.0	1.50	80-120	20		P
Beryllium	SW6010	5.00U	1000	1030	103	1000	1010	101	2.00	80-120	20		P
Cadmium	SW6010	0.447B	1000	916	91.6	1000	893	89.3	2.50	80-120	20		P
Calcium	SW6010	189000	10000	186000	0	10000	176000	0	5.50	80-120	20		P
Chromium	SW6010	10.0U	1000	963	96.3	1000	947	94.7	1.70	80-120	20		P
Cobalt	SW6010	1.65B	1000	867	86.5	1000	854	85.2	1.50	80-120	20		P
Copper	SW6010	25.0U	1000	993	99.3	1000	993	99.3	0.00	80-120	20		P
Iron	SW6010	27800	1000	27300	0	1000	26600	0	2.60	80-120	20		P
Lead	SW6010	3.00U	1000	853	85.3	1000	832	83.2	2.50	80-120	20		P
Magnesium	SW6010	300000	10000	286000	0	10000	274000	0	4.30	80-120	20		P
Manganese	SW6010	7680	1000	8230	55.0	1000	8030	35.0	2.50	80-120	20		P
Mercury	SW7470	0.200U	1	0.992	96.3	1	1.04	101	4.30	75-125	20		CV
Nickel	SW6010	7.41B	1000	903	89.6	1000	886	87.9	1.90	80-120	20		P
Potassium	SW6010	60400	10000	334000	0	10000	333000	0	0.30	80-120	20		P
Selenium	SW6010	10.0U	1000	1320	132	1000	1300	130	1.50	80-120	20	N	P
Silver	SW6010	2.59B	500	478	95.1	500	471	93.7	1.50	80-120	20		P
Sodium	SW6010	1550000	25000	4010000	0	25000	4110000	0	2.50	80-120	20		P
Thallium	SW6010	10.0U	1000	822	82.2	1000	798	79.8	3.00	80-120	20	N	P
Vanadium	SW6010	50.0U	1000	1020	102	1000	1010	101	1.00	80-120	20		P
Zinc	SW6010	34.8	1000	1000	96.5	1000	982	94.7	1.80	80-120	20		P

Comments:

Dissolved Metals

Result values >MDL in the native sample are used in the MS/MSD recovery calculation.

U.S. EPA - CLP

7

LABORATORY CONTROL SAMPLE

Lab Name: CH2M HILL/LAB/CVO Contract: N/A

Lab Code: CVO Case No.: F1890 SAS No.: F1890 SDG No.: F1890

Solid LCS Source:

Aqueous LCS Source: BS1W0605

Analyte	Method	Aqueous (ug/L) True	Found	%R	Solid (mg/Kg) True	Found	%R	Limits	C
Aluminum	SW6010	1000	1030	103				80-120	
Antimony	SW6010	1000	1030	103				80-120	
Arsenic	SW6010	1000	1040	104				80-120	
Barium	SW6010	1000	982	98.2				80-120	
Beryllium	SW6010	1000	1030	103				80-120	
Cadmium	SW6010	1000	995	99.5				80-120	
Calcium	SW6010	10000	10000	100				80-120	
Chromium	SW6010	1000	991	99.1				80-120	
Cobalt	SW6010	1000	971	97.1				80-120	
Copper	SW6010	1000	958	95.8				80-120	
Iron	SW6010	1000	1050	105				80-120	
Lead	SW6010	1000	992	99.2				80-120	
Magnesium	SW6010	10000	10300	103				80-120	
Manganese	SW6010	1000	1000	100				80-120	
Nickel	SW6010	1000	958	95.8				80-120	
Selenium	SW6010	1000	1030	103				80-120	
Silver	SW6010	500	488	97.6				80-120	
Thallium	SW6010	1000	994	99.4				80-120	
Vanadium	SW6010	1000	1020	102				80-120	
Zinc	SW6010	1000	1000	100				80-120	

Comments:

U.S. EPA - CLP

7

LABORATORY CONTROL SAMPLE

Lab Name: CH2M HILL/LAB/CVO Contract: N/A

Lab Code: CVO Case No.: F1890 SAS No.: F1890 SDG No.: F1890

Solid LCS Source:

Aqueous LCS Source: BS1W0605

Analyte	Method	Aqueous (ug/L) True	Found	%R	Solid (mg/Kg) True	Found	%R	Limits	C
Sodium	SW6010	10000	9510	95.1				80-120	

Comments:

U.S. EPA - CLP

7

LABORATORY CONTROL SAMPLE

Lab Name: CH2M HILL/LAB/CVO Contract: N/A

Lab Code: CVO Case No.: F1890 SAS No.: F1890 SDG No.: F1890

Solid LCS Source:

Aqueous LCS Source: BS1W0605

Analyte	Method	Aqueous (ug/L) True	Found	%R	Solid (mg/Kg) True	Found	%R	Limits	C
Potassium	SW6010	10000	10900	109				80-120	

Comments:

006266

U.S. EPA - CLP

7

LABORATORY CONTROL SAMPLE

Lab Name: CH2M HILL/LAB/CVO Contract: N/A

Lab Code: CVO Case No.: F1890 SAS No.: F1890 SDG No.: F1890

Solid LCS Source:

Aqueous LCS Source: BS1W0606

Analyte	Method	Aqueous (ug/L) True	Found	%R	Solid (mg/Kg) True	Found	%R	Limits	C
Mercury	SW7470	1.00	1.00	100				80-120	

Comments:

U.S. EPA - CLP

7

LABORATORY CONTROL SAMPLE

Lab Name: CH2M HILL/LAB/CVO Contract: N/A

Lab Code: CVO Case No.: F1890 SAS No.: F1890 SDG No.: F1890

Solid LCS Source:

Aqueous LCS Source: BS1W0609

Analyte	Method	Aqueous (ug/L) True	Found	%R	Solid (mg/Kg) True	Found	%R	Limits	C
Mercury	SW7470	1.00	0.980	98.0				80-120	

Comments:

U.S. EPA - CLP

9

ICP SERIAL DILUTIONS

EPA SAMPLE NO.
MW136GW01053106DL

Lab Name: CH2M HILL/LAB/CVO Contract: N/A

Lab Code: CVO Case No.: F1749 SAS No.: F1749 SDG No.: F1749

Matrix: Water Concentration Units: ug/L

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Difference	Q	M
Aluminum	12500		11600		7.2		P
Antimony	3.44	B	300	U			P
Arsenic	22.3		50.0	U			P
Barium	1220		1270		4.1		P
Beryllium	0.684	B	25.0	U			P
Cadmium	1.22	B	25.0	U			P
Calcium	198000		209000		5.6		P
Chromium	14.5		13.8	B	4.8		P
Cobalt	5.87	B	250	U			P
Copper	31.4		25.8	B	17.8		P
Iron	35800		38100		6.4		P
Lead	71.0		78.7		10.8		P
Magnesium	317000		332000		4.7		P
Manganese	8390		8920		6.3		P
Nickel	13.6	B	200	U			P
Potassium	63400	B	85500	B	34.9		P
Selenium	10.0	U	50.0	U			P
Silver	5.12	B	4.60	B	10.2		P
Sodium	1720000		1850000		7.6		P
Thallium	10.0	U	50.0	U			P
Vanadium	24.6	B	22.8	B	7.3		P
Zinc	258		277		7.4		P

Comments:
Total Metals
10% Criteria does not apply if undiluted sample result is <25 times the MDL for GFAA analyses or <50 times the MDL for ICP.

006269

U.S. EPA - CLP

9

ICP SERIAL DILUTIONS

EPA SAMPLE NO.
MW136GW01053106DL

Lab Name: CH2M HILL/LAB/CVO Contract: N/A

Lab Code: CVO Case No.: F1749 SAS No.: F1749 SDG No.: F1749

Matrix: Water Concentration Units: ug/L

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Difference	Q	M
Aluminum	43.8	B	211		382		P
Antimony	60.0	U	300	U			P
Arsenic	14.1		50.0	U			P
Barium	1250		1350		8.0		P
Beryllium	5.00	U	0.516	B			P
Cadmium	0.447	B	25.0	U			P
Calcium	189000		203000		7.4		P
Chromium	10.0	U	50.0	U			P
Cobalt	1.65	B	250	U			P
Copper	25.0	U	125	U			P
Iron	27800		29600		6.5		P
Lead	5.00	U	2.86	B			P
Magnesium	300000		318000		6.0		P
Manganese	7680		8180		6.5		P
Nickel	7.41	B	200	U			P
Potassium	60400	B	61800	B	2.3		P
Selenium	10.0	U	50.0	U			P
Silver	2.59	B	50.0	U			P
Sodium	1550000		1750000		12.9	E	P
Thallium	10.0	U	50.0	U			P
Vanadium	50.0	U	250	U			P
Zinc	34.8		43.6		25.3		P

Comments:
Dissolved Metals
10% Criteria does not apply if undiluted sample result is <25 times the MDL for GFAA analyses or <50 times the MDL for ICP.

006270

U.S. EPA - CLP

10

INSTRUMENT DETECTION LIMITS

Lab Name: CH2M HILL/LAB/CVO Contract: N/A

Lab Code: CVO Case No.: F1890 SAS No.: F1890 SDG No.: F1890

ICP ID Number: OP3000 Concentration Units: ug/L

ICPMS ID Number: NA

Mercury ID Number: PS200

Analyte	Method	Wavelength (nm)	Background	MDL	RL	M
Aluminum	SW6010	308	+0.019, -0.037	8.79	200	P
Antimony	SW6010	206	+0.013, -0.012	2.94	60.0	P
Arsenic	SW6010	188	+0.034, -0.012	7.38	10.0	P
Barium	SW6010	233	-0.025	0.637	200	P
Beryllium	SW6010	313	0.020	0.0635	5.00	P
Cadmium	SW6010	226	+0.021, -0.028	0.351	5.00	P
Calcium	SW6010	315	+0.039	12.8	5000	P
Chromium	SW6010	267	+0.025, -0.057	0.842	10.0	P
Cobalt	SW6010	228	+0.021, -0.027	0.332	50.0	P
Copper	SW6010	324	+0.020, -0.049	2.27	25.0	P
Iron	SW6010	259	+0.023, -0.024	8.27	100	P
Lead	SW6010	220	+0.013, -0.020	1.52	3.00	P
Magnesium	SW6010	279	+0.026, -0.051	6.60	5000	P
Manganese	SW6010	257	+0.023, -0.023	0.0586	15.0	P
Nickel	SW6010	232	+0.057, -0.028	4.39	40.0	P
Potassium	SW6010	766	+0.165	8.68	5000	P
Selenium	SW6010	196	-0.018	8.77	10.0	P
Silver	SW6010	328	+0.031, -0.039	0.777	10.0	P
Sodium	SW6010	330	+0.081, -0.030	177	5000	P
Thallium	SW6010	190	+0.024	4.34	10.0	P
Vanadium	SW6010	292	+0.027, -0.036	0.710	50.0	P
Zinc	SW6010	213	+0.038	1.59	20.0	P

Comments:

006271

U.S. EPA - CLP

10

INSTRUMENT DETECTION LIMITS

Lab Name: CH2M HILL/LAB/CVO Contract: N/A

Lab Code: CVO Case No.: F1890 SAS No.: F1890 SDG No.: F1890

ICP ID Number: OP3000 Concentration Units: ug/L

ICPMS ID Number: NA

Mercury ID Number: PS200

Analyte	Method	Wavelength (nm)	Background	MDL	RL	M
Mercury	SW7470	254	NA	0.0347	0.200	CV

Comments:

006272

U.S. EPA - CLP

11

ICP INTERELEMENT CORRECTION FACTORS (ANNUALLY)

Lab Name: CH2M HILL/LAB/CVO Contract: N/A

Lab Code: CVO Case No.: F1890 SAS No.: F1890 SDG No.: F1890

ICP ID Number: OP3000 Date: 06/06/06

Analyte	Method	Wave-length (nm)	Interelement Correction Factors for: Al	Ca	Fe	Mg
Aluminum	SW6010	308	0	0.02880	0	0.04100
Antimony	SW6010	206	-0.00227	0.00900	0.02730	-0.00400
Arsenic	SW6010	188	0.01733	0.0397	-0.048	-0.003
Barium	SW6010	233	0	0	0.01530	0
Beryllium	SW6010	313	0	0	0	0
Cadmium	SW6010	226	0	0	0.03688	0
Calcium	SW6010	315	0	0	0.23390	0.09310
Chromium	SW6010	267	00268	0	-0.01839	-0.00381
Cobalt	SW6010	228	-0.00200	0	0.00470	0
Copper	SW6010	324	0	0.00207	-0.03	-0.0039
Iron	SW6010	259	0	0	0	0
Lead	SW6010	220	-0.1342	-0.00647	0.01311	0.00301
Magnesium	SW6010	279	0	0	0.10175	0
Manganese	SW6010	257	0	0	-0.00580	0.01750
Nickel	SW6010	232	-0.00149	0	0.4342	0
Potassium	SW6010	766	0	0	0	0
Selenium	SW6010	196	0	-0.0094	0.34	0.01348
Silver	SW6010	328	0	0	-0.28100	0
Sodium	SW6010	330	0	0	0	-0.34060
Thallium	SW6010	190	0	0.006	-0.078	-0.00842
Vanadium	SW6010	292	-0.00780	0	0.05820	-0.00590
Zinc	SW6010	213	0	0.02686	0.1202	0

Comments:

U.S. EPA - CLP

12

ICP LINEAR RANGES (QUARTERLY)

Lab Name: CH2M HILL/LAB/CVO Contract: N/A

Lab Code: CVO Case No.: F1890 SAS No.: F1890 SDG No.: F1890

ICP ID Number: OP3000 Date: 03/09/06

Analyte	Method	Integ. Time (Sec.)	Concentration (ug/L)	M
Aluminum	SW6010	Auto	500000	P
Antimony	SW6010	Auto	20000	P
Arsenic	SW6010	Auto	20000	P
Barium	SW6010	Auto	20000	P
Beryllium	SW6010	Auto	10000	P
Cadmium	SW6010	Auto	20000	P
Calcium	SW6010	Auto	500000	P
Chromium	SW6010	Auto	20000	P
Cobalt	SW6010	Auto	20000	P
Copper	SW6010	Auto	20000	P
Iron	SW6010	Auto	200000	P
Lead	SW6010	Auto	20000	P
Magnesium	SW6010	Auto	500000	P
Manganese	SW6010	Auto	20000	P
Nickel	SW6010	Auto	20000	P
Potassium	SW6010	Auto	10000	P
Selenium	SW6010	Auto	20000	P
Silver	SW6010	Auto	10000	P
Sodium	SW6010	Auto	100000	P
Thallium	SW6010	Auto	20000	P
Vanadium	SW6010	Auto	20000	P
Zinc	SW6010	Auto	20000	P

Comments:

U.S. EPA - CLP

13

PREPARATION LOG

Lab Name: CH2M HILL/LAB/CVO Contract: N/A

Lab Code: CVO Case No.: F1890 SAS No.: F1890 SDG No.: F1890

Method Code: P

EPA Sample ID	Preparation Date	Weight (gram)	Volume (mL)
BS1W0605	06/05/06	NA	50.0
MW116B-GW01053106	06/05/06	NA	50.0
MW116B-GW01053106	06/05/06	NA	50.0
MW136GW01053106	06/05/06	NA	50.0
MW136GW01053106	06/05/06	NA	50.0
MW136MS01053106	06/05/06	NA	50.0
MW136MS01053106	06/05/06	NA	50.0
MW136MSD01053106	06/05/06	NA	50.0
MW136MSD01053106	06/05/06	NA	50.0
MW137FD01053106	06/05/06	NA	50.0
MW137FD01053106	06/05/06	NA	50.0
MW137GW01053106	06/05/06	NA	50.0
MW137GW01053106	06/05/06	NA	50.0
WB1-0605	06/05/06	NA	50.0

Comments:

U.S. EPA - CLP

13

PREPARATION LOG

Lab Name: CH2M HILL/LAB/CVO Contract: N/A

Lab Code: CVO Case No.: F1890 SAS No.: F1890 SDG No.: F1890

Method Code: CV

EPA Sample ID	Preparation Date	Weight (gram)	Volume (mL)
BS1W0606	06/06/06	NA	50.0
MW116B-GW01053106	06/06/06	NA	50.0
MW136GW01053106	06/06/06	NA	50.0
MW136MS01053106	06/06/06	NA	50.0
MW136MSD01053106	06/06/06	NA	50.0
MW137FD01053106	06/06/06	NA	50.0
MW137GW01053106	06/06/06	NA	50.0
WB1-0606	06/06/06	NA	50.0

Comments:

U.S. EPA - CLP

13

PREPARATION LOG

Lab Name: CH2M HILL/LAB/CVO Contract: N/A

Lab Code: CVO Case No.: F1890 SAS No.: F1890 SDG No.: F1890

Method Code: CV

EPA Sample ID	Preparation Date	Weight (gram)	Volume (mL)
BS1W0609	06/09/06	NA	50.0
MW116B-GW01053106	06/09/06	NA	50.0
MW136GW01053106	06/09/06	NA	50.0
MW136MS01053106	06/09/06	NA	50.0
MW136MSD01053106	06/09/06	NA	50.0
MW137FD01053106	06/09/06	NA	50.0
MW137GW01053106	06/09/06	NA	50.0
WB1-0609	06/09/06	NA	50.0

Comments:

14

ANALYSIS RUN LOG

Lab Name: CH2M HILL/LAB/CVO Contract: N/A

Lab Code: CVO Case No.: F1890 SAS No.: F1890 SDG No.: F1890

Instrument Name: OP3000 Method: SW6010

	FIELD SAMPLE ID	LAB SAMPLE ID	DF	DATE ANALYZED	TIME ANALYZED
1	CAL BLANK	CAL BLANK	1	06/06/06	1332
2	CAL 1	CAL 1	1	06/06/06	1334
3	CAL 2	CAL 2	1	06/06/06	1337
4	CAL 3	CAL 3	1	06/06/06	1341
5	CAL 4	CAL 4	1	06/06/06	1345
6	CAL 5	CAL 5	1	06/06/06	1349
7	ICV-0606	ICV-0606	1	06/06/06	1353
8	ICV-0606	ICV-0606	1	06/06/06	1357
9	ICB-0606	ICB-0606	1	06/06/06	1401
10	ICSA	ICSA	1	06/06/06	1413
11	ICSAB	ICSAB	1	06/06/06	1417
12	CV3-0606	CV3-0606	1	06/06/06	1725
13	CV3-0606	CV3-0606	1	06/06/06	1729
14	CB3-0606	CB3-0606	1	06/06/06	1732
15	WB1-0605	WB1-0605	1	06/06/06	1811
16	BS1W0605	BS1W0605	1	06/06/06	1815
17	MW137FD01053106	F189001	1	06/06/06	1820
18	CV4-0606	CV4-0606	1	06/06/06	1824
19	CV4-0606	CV4-0606	1	06/06/06	1828
20	CB4-0606	CB4-0606	1	06/06/06	1832
21	MW137GW01053106	F189002	1	06/06/06	1836
22	MW116B-GW01053106	F189003	1	06/06/06	1840
23	MW136GW01053106	F189004	1	06/06/06	1844
24	MW136GW01053106DL	F189004DL	5	06/06/06	1848
25	MW136MS01053106	F189005MS	1	06/06/06	1856
26	MW136MSD01053106	F189006MSD	1	06/06/06	1901
27	CV5-0606	CV5-0606	1	06/06/06	1921
28	CV5-0606	CV5-0606	1	06/06/06	1925
29	CB5-0606	CB5-0606	1	06/06/06	1929
30	ICSA	ICSA	1	06/06/06	2158
31	ICSAB	ICSAB	1	06/06/06	2203

COMMENTS: _____

006278

U.S. EPA - CLP

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ANALYSIS RUN LOG

Lab Name: CH2M HILL/LAB/CVO Contract: N/A

Lab Code: CVO Case No.: F1890 SAS No.: F1890 SDG No.: F1890

Instrument Name: OP3000 Method: SW6010

	FIELD SAMPLE ID	LAB SAMPLE ID	DF	DATE ANALYZED	TIME ANALYZED
1	CAL BLANK	CAL BLANK	1	06/08/06	0907
2	CAL 1	CAL 1	1	06/08/06	0909
3	CAL 2	CAL 2	1	06/08/06	0910
4	CAL 3	CAL 3	1	06/08/06	0912
5	ICV-0608k	ICV-0608k	1	06/08/06	0916
6	ICB-0608k	ICB-0608k	1	06/08/06	0918
7	WB1-0605	WB1-0605	1	06/08/06	0920
8	BS1W0605	BS1W0605	100	06/08/06	0921
9	MW116B-GW01053106	F189003	500	06/08/06	0927
10	MW137FD01053106	F189001	500	06/08/06	0936
11	MW137GW01053106	F189002	200	06/08/06	0938
12	MW136GW01053106	F189004	500	06/08/06	0944
13	MW136GW01053106DL	F189004DL	2500	06/08/06	0947
14	MW136MS01053106	F189005MS	500	06/08/06	0950
15	MW136MSD01053106	F189006MSD	500	06/08/06	0952
16	CV1-0608k	CV1-0608k	1	06/08/06	0956
17	CB1-0608k	CB1-0608k	1	06/08/06	0957

COMMENTS: _____

006279

U.S. EPA - CLP

14

ANALYSIS RUN LOG

Lab Name: CH2M HILL/LAB/CVO Contract: N/A

Lab Code: CVO Case No.: F1890 SAS No.: F1890 SDG No.: F1890

Instrument Name: OP3000 Method: SW6010

	FIELD SAMPLE ID	LAB SAMPLE ID	DF	DATE ANALYZED	TIME ANALYZED
1	CAL BLANK	CAL BLANK	1	06/08/06	1002
2	CAL 3	CAL 3	1	06/08/06	1004
3	CAL 4	CAL 4	1	06/08/06	1007
4	CAL 5	CAL 5	1	06/08/06	1010
5	ICV-0608	ICV-0608	1	06/08/06	1013
6	ICB-0608	ICB-0608	1	06/08/06	1016
7	WB1-0605	WB1-0605	1	06/08/06	1018
8	BS1W0605	BS1W0605	1	06/08/06	1021
9	MW137FD01053106	F189001	100	06/08/06	1024
10	MW137GW01053106	F189002	100	06/08/06	1027
11	MW116B-GW01053106	F189003	20	06/08/06	1030
12	MW136GW01053106	F189004	100	06/08/06	1032
13	MW136GW01053106DL	F189004DL	500	06/08/06	1035
14	MW136MS01053106	F189005MS	100	06/08/06	1041
15	MW136MSD01053106	F189006MSD	100	06/08/06	1044
16	CV1-0608	CV1-0608	1	06/08/06	1047
17	CB1-0608	CB1-0608	1	06/08/06	1049

COMMENTS: _____

U.S. EPA - CLP

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ANALYSIS RUN LOG

Lab Name: CH2M HILL/LAB/CVO Contract: N/A

Lab Code: CVO Case No.: F1890 SAS No.: F1890 SDG No.: F1890

Instrument Name: OP3000 Method: SW6010

	FIELD SAMPLE ID	LAB SAMPLE ID	DF	DATE ANALYZED	TIME ANALYZED
1	CAL BLANK	CAL BLANK	1	06/09/06	1022
2	CAL 1	CAL 1	1	06/09/06	1026
3	CAL 2	CAL 2	1	06/09/06	1028
4	CAL 3	CAL 3	1	06/09/06	1031
5	CAL 4	CAL 4	1	06/09/06	1034
6	CAL 5	CAL 5	1	06/09/06	1037
7	ICV-0609	ICV-0609	1	06/09/06	1041
8	ICV-0609	ICV-0609	1	06/09/06	1045
9	ICB-0609	ICB-0609	1	06/09/06	1049
10	ICSA	ICSA	1	06/09/06	1053
11	ICSAB	ICSAB	1	06/09/06	1058
12	MW137FD01053106	F189001F	1	06/09/06	1105
13	MW137GW01053106	F189002F	1	06/09/06	1109
14	MW116B-GW01053106	F189003F	1	06/09/06	1114
15	MW136GW01053106	F189004F	1	06/09/06	1118
16	MW136GW01053106DLF	F189004DLF	5	06/09/06	1122
17	MW136MS01053106	F189005MSF	1	06/09/06	1126
18	MW136MSD01053106	F189006MSDF	1	06/09/06	1130
19	CV1-0609	CV1-0609	1	06/09/06	1134
20	CV1-0609	CV1-0609	1	06/09/06	1142
21	CB1-0609	CB1-0609	1	06/09/06	1145
22	ICSA	ICSA	1	06/09/06	1150
23	ICSAB	ICSAB	1	06/09/06	1158

COMMENTS: _____

ANALYSIS RUN LOG

Lab Name: CH2M HILL/LAB/CVO Contract: N/A

Lab Code: CVO Case No.: F1890 SAS No.: F1890 SDG No.: F1890

Instrument Name: OP3000 Method: SW6010

	FIELD SAMPLE ID	LAB SAMPLE ID	DF	DATE ANALYZED	TIME ANALYZED
1	CAL BLANK	CAL BLANK	1	06/09/06	1400
2	CAL 1	CAL 1	1	06/09/06	1402
3	CAL 2	CAL 2	1	06/09/06	1404
4	CAL 3	CAL 3	1	06/09/06	1406
5	ICV-0609k	ICV-0609k	1	06/09/06	1408
6	ICB-0609k	ICB-0609k	1	06/09/06	1409
7	MW137FD01053106	F189001F	500	06/09/06	1411
8	MW137GW01053106	F189002F	500	06/09/06	1413
9	MW116B-GW01053106	F189003F	200	06/09/06	1415
10	MW136GW01053106	F189004F	500	06/09/06	1417
11	MW136GW01053106DLF	F189004DLF	2500	06/09/06	1419
12	MW136MS01053106	F189005MSF	500	06/09/06	1421
13	MW136MSD01053106	F189006MSDF	500	06/09/06	1433
14	CV1-0609k	CV1-0609k	1	06/09/06	1435
15	CB1-0609k	CB1-0609k	1	06/09/06	1437

COMMENTS: _____

006282

U.S. EPA - CLP

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ANALYSIS RUN LOG

Lab Name: CH2M HILL/LAB/CVO Contract: N/A

Lab Code: CVO Case No.: F1890 SAS No.: F1890 SDG No.: F1890

Instrument Name: OP3000 Method: SW6010

	FIELD SAMPLE ID	LAB SAMPLE ID	DF	DATE ANALYZED	TIME ANALYZED
1	CAL BLANK	CAL BLANK	1	06/09/06	1304
2	CAL 1	CAL 1	1	06/09/06	1307
3	CAL 2	CAL 2	1	06/09/06	1309
4	CAL 3	CAL 3	1	06/09/06	1312
5	ICV-0609n	ICV-0609n	1	06/09/06	1315
6	ICB-0609n	ICB-0609n	1	06/09/06	1318
7	MW137FD01053106	F189001F	100	06/09/06	1332
8	MW137GW01053106	F189002F	100	06/09/06	1336
9	MW116B-GW01053106	F189003F	20	06/09/06	1338
10	MW136GW01053106	F189004F	100	06/09/06	1341
11	MW136GW01053106DLF	F189004DLF	500	06/09/06	1344
12	MW136MS01053106	F189005MSF	100	06/09/06	1347
13	MW136MSD01053106	F189006MSDF	100	06/09/06	1350
14	CV1-0609n	CV1-0609n	1	06/09/06	1352
15	CB1-0609n	CB1-0609n	1	06/09/06	1355

COMMENTS: _____

006283

ANALYSIS RUN LOG

Lab Name: CH2M HILL/LAB/CVO Contract: N/A

Lab Code: CVO Case No.: F1890 SAS No.: F1890 SDG No.: F1890

Instrument Name: PS200 Method: SW7470

	FIELD SAMPLE ID	LAB SAMPLE ID	DF	DATE ANALYZED	TIME ANALYZED
1	Std1	Std1	1	06/07/06	0920
2	Std2	Std2	1	06/07/06	0924
3	Std3	Std3	1	06/07/06	0929
4	Std4	Std4	1	06/07/06	0935
5	Std5	Std5	1	06/07/06	0941
6	Std6	Std6	1	06/07/06	0948
7	ICV-0607	ICV-0607	1	06/07/06	1014
8	ICB-0607	ICB-0607	1	06/07/06	1020
9	WB1-0606	WB1-0606	1	06/07/06	1024
10	BS1W0606	BS1W0606	1	06/07/06	1029
11	MW137FD01053106	F189001	1	06/07/06	1041
12	MW137GW01053106	F189002	1	06/07/06	1046
13	MW116B-GW01053106	F189003	1	06/07/06	1050
14	MW136GW01053106	F189004	1	06/07/06	1054
15	MW136MS01053106	F189005MS	1	06/07/06	1059
16	MW136MSD01053106	F189006MSD	1	06/07/06	1105
17	CV1-0607	CV1-0607	1	06/07/06	1118
18	CB1-0607	CB1-0607	1	06/07/06	1124

COMMENTS: _____

U.S. EPA - CLP

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ANALYSIS RUN LOG

Lab Name: CH2M HILL/LAB/CVO Contract: N/A

Lab Code: CVO Case No.: F1890 SAS No.: F1890 SDG No.: F1890

Instrument Name: PS200 Method: SW7470

	FIELD SAMPLE ID	LAB SAMPLE ID	DF	DATE ANALYZED	TIME ANALYZED
1	Std1	Std1	1	06/09/06	1304
2	Std2	Std2	1	06/09/06	1308
3	Std3	Std3	1	06/09/06	1313
4	Std4	Std4	1	06/09/06	1319
5	Std5	Std5	1	06/09/06	1326
6	Std6	Std6	1	06/09/06	1332
7	ICV-0609	ICV-0609	1	06/09/06	1346
8	ICB-0609	ICB-0609	1	06/09/06	1352
9	WB1-0609	WB1-0609	1	06/09/06	1356
10	BS1W0609	BS1W0609	1	06/09/06	1401
11	BD1W0609	BD1W0609	1	06/09/06	1407
12	MW137FD01053106	F189001F	1	06/09/06	1414
13	MW137GW01053106	F189002F	1	06/09/06	1418
14	MW116B-GW01053106	F189003F	1	06/09/06	1423
15	MW136GW01053106	F189004F	1	06/09/06	1427
16	MW136MS01053106	F189005MSF	1	06/09/06	1432
17	MW136MSD01053106	F189006MSDF	1	06/09/06	1438
18	CV1-0609	CV1-0609	1	06/09/06	1450
19	CB1-0609	CB1-0609	1	06/09/06	1456

COMMENTS: _____

006285

CH2MHILL
Applied Sciences Group

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06/12/06

MDL Study Report

Matrix: Water

Concentration Units: UG/L

Analyte	Method	Analysis Date	Amt. Spiked	Replicates 1	2	3	4	5	6	7	8	Std. Dev.	MDL	Instrument ID
Aluminum	SW6010	10/07/05	85	65.9	70.2	65.6	63.1	61.3	61.8	63.0	62.6	2.93	8.79	OP3000
Antimony	SW6010	10/07/05	13	15.9	12.8	14.2	14.5	13.0	13.6	13.6	14.3	0.982	2.94	OP3000
Arsenic	SW6010	10/07/05	13	12.9	13.2	14.5	14.7	9.59	11.7	7.55	11.0	2.46	7.38	OP3000
Barium	SW6010	10/07/05	5	5.35	5.02	5.33	4.89	4.88	4.82	4.84	4.97	0.213	0.637	OP3000
Beryllium	SW6010	10/27/05	0.5	0.611	0.592	0.575	0.554	0.585	0.567	0.583	0.545	0.0212	0.0635	OP3000
Cadmium	SW6010	10/07/05	3	3.10	2.93	3.12	3.05	3.04	2.95	3.14	3.30	0.117	0.351	OP3000
Calcium	SW6010	10/07/05	53	62.0	56.1	65.8	59.5	64.7	55.8	57.2	54.6	4.27	12.8	OP3000
Chromium	SW6010	10/07/05	3	3.47	3.31	2.92	2.99	2.54	3.00	3.04	3.21	0.281	0.842	OP3000
Cobalt	SW6010	10/07/05	3	3.04	3.20	3.11	3.06	3.02	2.85	2.93	2.94	0.111	0.332	OP3000
Copper	SW6010	10/07/05	3	5.06	4.49	4.51	3.77	4.01	3.33	2.79	3.29	0.758	2.27	OP3000
Iron	SW6010	10/07/05	23		27.1	30.5	26.6	23.3	23.7	23.4	26.6	2.63	8.27	OP3000
Lead	SW6010	10/07/05	13	14.5	13.1	13.9	14.2	14.3	13.8	13.3	13.4	0.508	1.52	OP3000
Magnesium	SW6010	10/07/05	53	57.2	50.7	52.2	51.2	54.0	50.5	52.7	51.8	2.20	6.60	OP3000
Manganese	SW6010	10/27/05	0.5	0.483	0.511	0.495	0.482	0.444	0.497	0.490	0.493	0.0196	0.0586	OP3000
Mercury	SW7470	10/13/05	0.25	0.221	0.218	0.212	0.218	0.215	0.185	0.206	0.206	0.0116	0.0347	PS200
Nickel	SW6010	10/27/05	25	25.9	24.3	26.6	24.6	22.5	25.0	22.6	25.4	1.46	4.39	OP3000
Potassium	SW6010	10/12/05	50	48.9	50.4	51.8	46.7	51.1	56.1	47.8	51.5	2.90	8.68	OP3000
Selenium	SW6010	10/07/05	46	60.2	58.4	50.6	55.7	55.9	57.0	58.9	57.7	2.92	8.77	OP3000
Silver	SW6010	10/07/05	5	4.62	4.21	4.01	4.36	4.31	4.85	4.39	4.55	0.259	0.777	OP3000
Sodium	SW6010	10/07/05	1100	1240	1260	1250	1140	1210	1350	1210	1250	59.2	177	OP3000
Thallium	SW6010	10/07/05	6	7.33	6.66	6.45	4.29	8.87	8.18	6.32	8.22	1.45	4.34	OP3000
Vanadium	SW6010	10/07/05	3	2.21	2.56	2.80	2.76	3.10	2.87	2.83	2.62	0.237	0.710	OP3000
Zinc	SW6010	10/07/05	3	3.72	4.87	4.59	3.40	4.71	4.76	4.59	4.36	0.532	1.59	OP3000

006286

CHAIN OF CUSTODY/SHIPPING DOCUMENTS

006287

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CHAIN OF CUSTODY

F1890 43 0.1°C

ACCUTEST Laboratories

10165 Harwin Drive, Ste. 150, Houston, TX 77036
TEL. 713-271-4700 FAX: 713-271-4770
www.accutest.com

FED-EX Tracking #	Bottle Order Control #
Accutest Quote #	Accutest Job #

Client / Reporting Information

Company Name	CH2MHill
Address	7600W. Tidwell Rd Ste 600
City / State / Zip	Houston TX 77040
Project Contact / E-mail	John Ynfante
Phone #	713-462-0161
Sampler's Name	Meredith Harris & Victor Martinez

Project Information

Project Name	State Marine RI
Street	
City / State	
Project #	344479.FI.01
Fax #	713-462-0165
Client Purchase Order #	

Requested Analysis

Accutest Sample #	Field ID / Point of Collection	SUMMA # / MEOH Vial #	Collection Date	Collection Time	Sampled By	Matrix	# of bottles	HCl	NaOH	HNO3	H2SO4	NONE	NaHSO4	MEOH	ENCORE	SVOCs	PAH (Sim)	Metals Dissolved	Metals Total								LAB USE ONLY
	~~[illegible]~~																										
	MW 137FD01053106		05/31/06	1950	MHHVM					2						2	2	1	1								1
	MW 137GW01053106		05/31/06	1950	MHHVM											2	2										2

Matrix Codes

DW - Drinking Water
GW - Ground Water
WW - Water
SW - Surface Water
SO - Soil
SL - Sludge
OI - Oil
LIQ - Other Liquid
AIR - Air
SOL - Other Solid
WP - Wipe

Turnaround Time (Business Days)

- ☐ 10 Day *STANDARD*
- ☐ 5 Day *RUSH*
- ☐ 3 Day *EMERGENCY*
- ☐ 2 Day *EMERGENCY*
- ☐ 1 Day *EMERGENCY*
- ☐ Other 14 Day TAT

Approved By: / Date:

Emergency & Rush T/A data available VIA LabLink

Data Deliverable Information

- ☐ Commercial "A"
- ☐ Commercial "B"
- ☐ Reduced Tier 1
- ☐ Full Tier 1
- ☐ TRRP13
- ☐ EDD Format _____

Commercial "A" = Results Only

Comments / Remarks

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Sampler:	Date Time:	Received by:	Relinquished by	Date Time:	Received by:
1 Meredith C Harris	0900 05/01/06	1 Daisy Hubbard 6-2-06 12:30	2		2
Relinquished by: 3	Date Time:	Received by: 3	Relinquished by: 4	Date Time:	Received by: 4
Relinquished by: 5	Date Time:	Received by: 5	Custody Seal #	Preserved where applicable ☐	On Ice ☐ Cooler Temp.

COC No. A 61082

156 Starlite Drive
Marietta, OH 45750

KEMRON
ENVIRONMENTAL SERVICES
CHAIN-OF-CUSTODY RECORD

Phone: 740-373-4071
Fax: 740-373-4835

1.2°C
F1890
2/3

Company Name: CH2M Hill	
Project Contact: John Yntema	Contact Phone #: 713-462-0161
Turn Around Requirements: 14 Day TAT	Location: Houston
Project #: 344479.F1.01	Project Name: State Marine
Sampler (print): Meredith Harris	Signature: Meredith C. Harris

Program: ☐ NPDES ☐ AFCEE ☐ RCRA ☐ USAGE ☐ Other

Sample I.D. No.	Comp*	Grab	Date	Time	Protocol CWA	Protocol SW846	NUMBER OF CONTAINERS	Hold	SVOCs	PAH (sim)	Metals (total)	Metals (Dissolved)	ADDITIONAL REQUIREMENTS
MW116B-GW05315106		X	05/31/06	1330			6		2	2	1	1	3
MW137GW01053106		X	05/31/06	1950			2				1	1	(2)

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Relinquished by: (Signature)	Date	Time	Received by: (Signature)
Meredith C Harris	05/01/06	0900					

Relinquished by: (Signature)	Date	Time	Received for Laboratory by: (Signature)	Date	Time	Cooler Temp in °C	Remarks:
			Daisy Hubbard	6-2-06	12:30		

*Homogenize all composite samples prior to analysis

COC No. A 61082

156 Starlite Drive
Marietta, OH 45750

KEMRON
ENVIRONMENTAL SERVICES
CHAIN-OF-CUSTODY RECORD

Phone: 740-373-4071
Fax: 740-373-4835

0.1°C

F1890 3/3

Company Name: CH2M Hill

Project Contact: John Ynfante | Contact Phone #: 713-462-0161

Turn Around Requirements: 14 Day TAT | Location: Houston

Project #: 344479.FI.01 | Project Name: State Marine

Sampler (print): Meredith Harris | Signature: Meredith Harris

Program: ☐ NPDES ☐ AFCEE ☐ RCRA ☐ USAGE ☐ Other

Sample I.D. No.	Comp*	Grab	Date	Time	Protocol CWA	Protocol SW846	NUMBER OF CONTAINERS	Hold	SVOC	PAHs (Sim)	Metals Total	Metals dissolved	ADDITIONAL REQUIREMENTS
MW136MS@0530106		X	05/31/06	2025			1			1	1	1	MS 5
MW136G-W@0530106		X	05/31/06	2025			6		2	2	1	1	4
MW136MSD@0530106		X	05/31/06	2025			2		1	1			MSD 6

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Relinquished by: (Signature)	Date	Time	Received by: (Signature)
Meredith Harris	06/01/06	0900	Darcy Hubbard				

Relinquished by: (Signature)	Date	Time	Received for Laboratory by: (Signature)	Date	Time	Cooler Temp in °C	Remarks:
			Darcy Hubbard	6-2-06	12:30		

*Homogenize all composite samples prior to analysis

Page 1 of 1

006291

CH2MHILL
Analytical Services

Sample Receipt Record

Batch Number: F1890 Date received: 6-2-06

Client/Project State Marine

VERIFICATION OF SAMPLE CONDITIONS (verify all items) * HD = Client Hand delivered Samples

Observation	YES	NO
Radiological Screening for AFCEE		✓
Were custody seals intact and on the outside of the cooler?	✓	
If yes, Where? Front ✓ Rear ✓ Lt Side ____ Rt Side ____		
Type of packing material: (Ice) Blue Ice Bubble wrap		
Was the Chain of Custody inside the cooler?	✓	
Was the Chain of Custody properly filled out?	✓	
Were the sample containers in good condition?	✓	
Containers supplied by ASL?		✓
Any sample with < 1/2 holding time remaining? If so contact LPM		✓
Was there ice in the cooler? Enter temp. 1.2°C, 0.1, 0.1 C	✓	
All VOCs free of air bubbles ?		NA

VERIFICATION OF SAMPLE PRESERVATION

Sample No	Nutrients pH <2	Metals pH <2	Volatiles pH <2	Cyanides pH >12	TOC pH <2	TOX pH <2	Other (specify)	N/A (soils/unpres)
1		<2						
2								
3		<2						
4								
5								
6								
7								
8								
9								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								
21								
22								
23								
24								
25								
26								
27								

LOGIN AND pH VERIFICATIONS PERFORMED BY

[signature] 6-2-06 13:55
Date/Time

Date/Time

006292

CH2MHILL
Applied Sciences Group

Sample Receipt Exception Report

Sample Batch Number: F1890 **Client /Project** State Marine

	The following exceptions were noted:	Comments (write number of exception description and the impacted sample numbers)
	1. No custody seal as required by project	8) F1890-04 (MW136MS01053104) 05MS 06MSD for dissolved metals received at pH > 2 (not preserved)
	2. No chain-of-custody provided	
	3. Analysis, description, date of collection not provided	
	4. Samples broken or leaking on reciept.	
	5. Temperature of samples inappropriate for analysis requested	Samples F1890-02 for total and dissolved metals received at pH 2.2 (dissolved) and 2.5 (total)
	6. Container inappropriate for analysis requested	
X	7. Inadequate sample volume.	7) One 1-L amber received for F1890-05MS, F1890-06MSD for PAH-SIM, F1890-06MSD for SVOC analysis. No container received for F1890-05MS SVOC analysis. Bottle #2 for of matrix will be used for SVOC MS.
X	8. Preservation inappropriate for analysis requested	
	9. Samples received out of holding time for analysis requrested	
	10. Discrepancies between COC form and container labels.	
	11. Other.	

ACTION TAKEN: 8) Added 1+1 HNO_3 to pH < 2

Originator: Nancy Hubbard Date: 6-2-06

Client was notified on: (Date/Time) 6/2 Client Contact: John Ynfante / HOU

CH2M HILL
Applied Sciences Laboratory
2300 NW Walnut Blvd., Corvallis, OR 97330-3538
P.O. Box 428, Corvallis, OR 97339-0428
Tel 541.752.4271
Fax 541.752.0276

006293

McKinley, Kathy/CVO

From: Ynfante, John/HOU
Sent: Friday, June 02, 2006 2:16 PM
To: McKinley, Kathy/CVO
Subject: RE: State Marine Samples Recd

Thanks Kathy - I'm assuming your log-in person or the metals analyst preserved the samples that were over so that's OK by me.

Also, the sampler mentioned to me that she broke one of the liter bottles but the sample that she sent for the MS/MSD to be performed on should be a relatively clean (and thus hopefully QC-friendly) sample so I'm hoping you won't need anything more than 3 for the normal + MS/MSD.

Thanks for the info. Please e-mail me the results when they become available next week. Have a good weekend!

- John

-----Original Message-----
From: McKinley, Kathy/CVO
Sent: Friday, June 02, 2006 4:04 PM
To: Ynfante, John/HOU
Subject: State Marine Samples Recd

Hi John
Samples recd today. See exception report-don't believe any action necessary.

Kathy

KEMRON REPORT L0605548
PREPARED FOR CH2MHILL, Inc
WORK ID: STATE MARINE SUPERFUND SITE

1.0 Summary Report 3
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1.1.1 Semivolatiles GC/MS Data (8270) 7
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1.2 Metals Data 168
1.2.1 Metals I C P Data 169
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1.3 General Chemistry Data 384
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2.0 Attachments 391

156 Starlite Drive, Marietta, OH 45750 ● TEL 740-373-4071 ● FAX 740-373-4835 ● http://www.kemron.com

Laboratory Report Number: L0605548

Please find enclosed the analytical results for the samples you submitted to KEMRON Environmental Services.

Review and compilation of your report was completed by KEMRON's Sales and Service Team. If you have questions, comments or require further assistance regarding this report, please contact your team member noted in the reviewed box bleow at 800-373-4071. Team member e-mail addresses also appear here for your convenience.

Debra Elliott - Team Leader
delliott@kemron-lab.com

Amanda Fickiesen - Client Services Specialist
afickiesen@kemron-lab.com

Cheryl Koelsch - Team Chemist/Data Specialist
ckoelsch@kemron-lab.com

Annie Bock - Client Services Specialist
abock@kemron-lab.com

Stephanie Mossburg - Team Chemist/Data Specialist
smossburg@kemron-lab.com

Kathy Albertson - Team Chemist/Data Specialist
kalbertson@kemron-lab.com

This report was reviewed on June 12, 2006.

CHERYL KOELSCH - Team Chemist/Data Specialist

I certify that all test results meet all of the requirements of the NELAP standards and other applicable contract terms and conditions. All results for soil samples are reported on a 'dry-weight' basis unless specified otherwise. Analytical results for water and wastes are reported on a 'as received' basis unless specified otherwise. A statement of uncertainty for each analysis is available upon request. This laboratory report shall not be reproduced, except in full, without the written approval of KEMRON Environmental Services.

This report was certified on June 12, 2006.

David Vandenberg - Vice President

FL DOH NELAP ID: E8755
This report contains a total of 405 pages.

Protecting Our Environmental Future

1.0 Summary Report

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LABORATORY REPORT

L0605548

06/12/06 13:00

Submitted By

KEMRON Environmental Services
156 Starlite Drive
Marietta , OH 45750
(740) 373 - 4071

For

Account Name: CH2MHILL, Inc
7600 Tidwell Road
Suite 400
San Antonio, TX 77040
Attention: John Ynfante

Account Number: 2736
Work ID: STATE MARINE RI
Invoice Number: 580607
P.O. Number: 915193

Sample Summary

Client ID	Lab ID	Date Collected	Date Received
SM140SB02052306	L0605548-01	23-MAY-06	24-MAY-06
SM140SB01052306	L0605548-02	23-MAY-06	24-MAY-06
SM138EB01052306	L0605548-03	23-MAY-06	24-MAY-06
SM140FD03052306	L0605548-04	23-MAY-06	24-MAY-06
SM140SB03052306	L0605548-05	23-MAY-06	24-MAY-06
SM140SB03052306 MS	L0605548-06	23-MAY-06	24-MAY-06
SM140SB03052306 MSD	L0605548-07	23-MAY-06	24-MAY-06
SM137SB01052306	L0605548-08	23-MAY-06	24-MAY-06
SM138SB03052306	L0605548-09	23-MAY-06	24-MAY-06
SM138FD03052306	L0605548-10	23-MAY-06	24-MAY-06
SM139SB01052306	L0605548-11	23-MAY-06	24-MAY-06
SM136SB01052206	L0605548-12	22-MAY-06	24-MAY-06
SM139SB02052306	L0605548-13	23-MAY-06	24-MAY-06
SM138SB01052306	L0605548-14	23-MAY-06	24-MAY-06
SM138SB01052306 MS	L0605548-15	23-MAY-06	24-MAY-06
SM138SB01052306 MSD	L0605548-16	23-MAY-06	24-MAY-06
SM137SB02052306	L0605548-17	23-MAY-06	24-MAY-06
SM139SB03052306	L0605548-18	23-MAY-06	24-MAY-06
SM138SB02052306	L0605548-19	23-MAY-06	24-MAY-06

KEMRON ENVIRONMENTAL SERVICES
LOGIN-OEPA

KEMRON Login No.: L0605548

CHAIN OF CUSTODY: The chain of custody number was 61081.

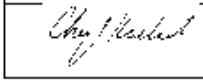
SHIPMENT CONDITIONS: The chain of custody forms were received sealed in a cooler. The cooler temperature was 1 degrees C.

SAMPLE MANAGEMENT: All samples received were intact.

L0605548-17	SM137SB02052306
L0605548-18	SM139SB03052306
L0605548-19	SM138SB02052306
L0605548-16	SM138SB01052306 MSD
L0605548-03	SM138EB01052306
L0605548-04	SM140FD03052306
L0605548-05	SM140SB03052306
L0605548-06	SM140SB03052306 MS
L0605548-01	SM140SB02052306
L0605548-02	SM140SB01052306
L0605548-07	SM140SB03052306 MSD
L0605548-08	SM137SB01052306
L0605548-09	SM138SB03052306
L0605548-10	SM138FD03052306
L0605548-11	SM139SB01052306
L0605548-12	SM136SB01052206
L0605548-13	SM139SB02052306
L0605548-14	SM138SB01052306
L0605548-15	SM138SB01052306 MS

I certify that this data package is in compliance with the terms and conditions agreed to by the client and KEMRON Environmental Services, both technically and for completeness, except for the conditions noted above. Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or designated person, as verified by the following signature.

Approved: 24-MAY-06



1.1 Semivolatiles Data

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1.1.1 Semivolatiles GC/MS Data (8270)

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KEMRON ENVIRONMENTAL SERVICES
GC/MS SEMIVOLATILE ORGANICS

KEMRON Login No.: L0605548

METHOD

Preparation: Soils - SW-846 3545; Waters - SW-846 3510C or 3520C

Analysis: SW-846 8270C

HOLDING TIMES

Sample Preparation: All holding times were met.

Sample Analysis: All holding times were met.

PREPARATION

Sample preparation proceeded normally.

CALIBRATION

Initial Calibration: For all compounds which yielded a %RSD greater than 15%, linear or higher order equations were applied. All acceptance criteria were met.

Alternate Source Standards: All acceptance criteria were met.

Continuing Calibration and Tune: All acceptance criteria were met.

BATCH QA/QC

Method Blank: All acceptance criteria were met.

Laboratory Control Sample: All acceptance criteria were met.

Matrix Spikes: Samples 05 and 14 were chosen by the client for MS/MSD analysis. Samples 06(MS) and 07(MSD) yielded percent recoveries for hexachlorocyclopentadiene, 2,4-dinitrophenol and 4,6-dinitro-2-methylphenol that were below the lower advisory limits. Samples 15 (MS) and 16(MSD) yielded percent recoveries for multiple compounds that were beyond the limits. All other acceptance criteria were met.

SAMPLES

Internal Standards: All acceptance criteria were met.

Surrogates: All surrogates were diluted out of samples 02, 08, 11 and 13-17 due to 20x dilution. Samples 12 and 19 yielded a percent recovery for 2,4,6-tribromophenol that was below the lower acceptance limit. Samples 12 and 19 were re-extracted within holding time and both samples yielded acceptable surrogate recoveries. All other acceptance criteria were met.

Samples: Samples 01, 02, 08, 11-17, 19, 12RE and 19RE were initially analyzed at a dilution due to sample viscosity. All acceptance criteria were met.

Manual Integration Reason Codes

KEMRON laboratory management has identified four general cases with valid reasons supporting the use of manual integration techniques.

Reason #1: Data System Fails to Select Correct Peak
In some cases the chromatography system selects and integrates the ”wrong peak”. In this case the analyst must correct the selection and force the system to integrate the proper peak. Other times the system may miss the peak completely.

Reason #2: Data System Splits the Peak Incorrectly or Integrates a False Peak as a Rider Peak.
This phenomena is common at low concentrations where the signal:noise ratio is low. A single compound (peak) is incorrectly split into multiple peaks or integrated as a main peak with one or more rider peaks resulting in low area counts for the target compound.

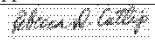
Reason #3: Improperly Integrated Isomers and/or coeluting compounds.
This system often fails to distinguish coeluting compounds and or isomers. The integration areas and concentrations are wrong, and they must be corrected by manual integration. Prime examples are benzo(k)fluoranthene and benzo(b)fluoranthene which are often unresolved and integrated improperly when both are present at low concentrations in standards or samples.

Reason #4: System Establishes Incorrect Baseline
There are numerous situations in chromatography where the system establishes the baseline incorrectly. Some baseline errors will be obvious to the analyst and should be corrected via manual procedures.

Reason #5: Miscellaneous
Other situations involving integration errors may require in-depth review and technical judgment. These cases should be brought to the attention of the laboratory management. If the form of manual integration is not clearly covered by these four cases, then review and approval by the Laboratory Director or the QA/QC Supervisor will be required.

I certify that this data package is in compliance with the terms and conditions agreed to by the client and KEMRON Environmental Services, both technically and for completeness, except for the conditions noted above. Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or designated person, as verified by the following signature.

Analyst: ALT

Approved: 07-JUN-06


LABORATORY REPORT

L0605548

06/12/06 13:00

Submitted By

KEMRON Environmental Services
156 Starlite Drive
Marietta , OH 45750
(740) 373 - 4071

For

Account Name: CH2MHILL, Inc
7600 Tidwell Road
Suite 400
San Antonio, TX 77040
Attention: John Ynfante

Account Number: 2736
Work ID: STATE MARINE RI
Invoice Number: 580607
P.O. Number: 915193

Sample Analysis Summary

Client ID	Lab ID	Method	Dilution	Date Received
SM140SB02052306	L0605548-01	8270C	10	24-MAY-06
SM140SB01052306	L0605548-02	8270C	20	24-MAY-06
SM138EB01052306	L0605548-03	8270C	1	24-MAY-06
SM140FD03052306	L0605548-04	8270C	1	24-MAY-06
SM140SB03052306	L0605548-05	8270C	1	24-MAY-06
SM140SB03052306 MS	L0605548-06	8270C	1	24-MAY-06
SM140SB03052306 MSD	L0605548-07	8270C	1	24-MAY-06
SM137SB01052306	L0605548-08	8270C	20	24-MAY-06
SM138SB03052306	L0605548-09	8270C	1	24-MAY-06
SM138FD03052306	L0605548-10	8270C	1	24-MAY-06
SM139SB01052306	L0605548-11	8270C	20	24-MAY-06
SM136SB01052206	L0605548-12	8270C	10	24-MAY-06
SM136SB01052206	L0605548-12	8270C	10	24-MAY-06
SM139SB02052306	L0605548-13	8270C	2	24-MAY-06
SM138SB01052306	L0605548-14	8270C	20	24-MAY-06
SM138SB01052306 MS	L0605548-15	8270C	20	24-MAY-06
SM138SB01052306 MSD	L0605548-16	8270C	20	24-MAY-06
SM137SB02052306	L0605548-17	8270C	20	24-MAY-06
SM139SB03052306	L0605548-18	8270C	1	24-MAY-06
SM138SB02052306	L0605548-19	8270C	5	24-MAY-06
SM138SB02052306	L0605548-19	8270C	10	24-MAY-06

Report Number: **L0605548**
Report Date : **June 12, 2006**

Sample Number: **L0605548-01**
Client ID: **SM140SB02052306**
Matrix: **Soil**
Workgroup Number: **WG214069**
Collect Date: **05/23/2006 15:40**

PrePrep Method: **NONE**
Prep Method: **3545**
Analytical Method: **8270C**
Analyst: **ALT**
Dilution: **10**
Units: **ug/kg**

Instrument: **HPMS5**
Prep Date: **05/24/2006 13:10**
Cal Date: **05/15/2006 13:30**
Run Date: **05/25/2006 19:56**
File ID: **5M40880**
Percent Solid: **72.9**

Analyte	CAS. Number	Result	Qual	PQL	SQL
Benzaldehyde	100-52-7		U	2260	1130
Phenol	108-95-2		U	2220	1110
Bis(2-Chloroethyl)ether	111-44-4		U	2220	1110
2-Chlorophenol	95-57-8		U	2220	1110
2-Methylphenol	95-48-7		U	2220	1110
Acetophenone	98-86-2		U	2220	1110
bis(2-Chloroisopropyl)ether	108-60-1		U	2220	1110
3-,4-Methylphenol	106-44-5		U	2220	1110
N-Nitroso-di-n-propylamine	621-64-7		U	2220	1110
Hexachloroethane	67-72-1		U	2220	1110
Nitrobenzene	98-95-3		U	2220	1110
Isophorone	78-59-1		U	2220	1110
2-Nitrophenol	88-75-5		U	2220	1110
2,4-Dimethylphenol	105-67-9		U	2220	1110
Bis(2-Chloroethoxy)Methane	111-91-1		U	2220	1110
2,4-Dichlorophenol	120-83-2		U	2220	1110
Naphthalene	91-20-3	2170	J	2220	1110
4-Chloroaniline	106-47-8		U	2220	1110
Hexachlorobutadiene	87-68-3		U	2220	1110
Caprolactam	105-60-2		U	2260	1130
4-Chloro-3-methylphenol	59-50-7		U	2220	1110
2-Methylnaphthalene	91-57-6	2170	J	2220	1110
Hexachlorocyclopentadiene	77-47-4		U	2220	1110
2,4,6-Trichlorophenol	88-06-2		U	2220	1110
2,4,5-Trichlorophenol	95-95-4		U	2220	1110
1,1'-Biphenyl	92-52-4		U	2260	1130
2-Chloronaphthalene	91-58-7		U	2220	1110
2-Nitroaniline	88-74-4		U	11100	4440
Dimethylphthalate	131-11-3		U	2220	1110
Acenaphthylene	208-96-8		U	2220	1110
2,6-Dinitrotoluene	606-20-2		U	2220	1110
3-Nitroaniline	99-09-2		U	11100	4440
Acenaphthene	83-32-9	1480	J	2220	1110
2,4-Dinitrophenol	51-28-5		U	11100	4440
4-Nitrophenol	100-02-7		U	11100	4440
Dibenzofuran	132-64-9	1260	J	2220	1110
2,4-Dinitrotoluene	121-14-2		U	2220	1110
Diethylphthalate	84-66-2		U	2220	1110
4-Chlorophenyl-phenyl ether	7005-72-3		U	2220	1110
Fluorene	86-73-7	2760		2220	1110
4-Nitroaniline	100-01-6		U	11100	4440
4,6-Dinitro-2-methylphenol	534-52-1		U	11100	4440
N-Nitrosodiphenylamine	86-30-6		U	2220	1110
4-Bromophenyl-phenylether	101-55-3		U	2220	1110
Hexachlorobenzene	118-74-1		U	2220	1110
Atrazine	1912-24-9		U	2260	1130
Pentachlorophenol	87-86-5		U	11100	4440
Phenanthrene	85-01-8	10600		2220	1110

Report Number: **L0605548**
Report Date : **June 12, 2006**

Sample Number: **L0605548-01**
Client ID: **SM140SB02052306**
Matrix: **Soil**
Workgroup Number: **WG214069**
Collect Date: **05/23/2006 15:40**

PrePrep Method: **NONE**
Prep Method: **3545**
Analytical Method: **8270C**
Analyst: **ALT**
Dilution: **10**
Units: **ug/kg**

Instrument: **HPMS5**
Prep Date: **05/24/2006 13:10**
Cal Date: **05/15/2006 13:30**
Run Date: **05/25/2006 19:56**
File ID: **5M40880**
Percent Solid: **72.9**

Analyte	CAS. Number	Result	Qual	PQL	SQL
Anthracene	120-12-7	6290		2220	1110
Carbazole	86-74-8	1520	J	2220	1110
Di-N-Butylphthalate	84-74-2		U	2220	1110
Fluoranthene	206-44-0	5460		2220	1110
Pyrene	129-00-0	6300		2220	1110
Butylbenzylphthalate	85-68-7		U	2220	1110
3,3'-Dichlorobenzidine	91-94-1		U	4440	2220
Benzo(a)anthracene	56-55-3	2050	J	2220	1110
Chrysene	218-01-9	4170		2220	1110
bis(2-Ethylhexyl)phthalate	117-81-7	1920	J	2220	1110
Di-n-octylphthalate	117-84-0		U	2220	1110
Benzo(b)fluoranthene	205-99-2	1640	J	2220	1110
Benzo(k)fluoranthene	207-08-9		U	2220	1110
Benzo(a)pyrene	50-32-8	1470	J	2220	1110
Indeno(1,2,3-cd)pyrene	193-39-5		U	2220	1110
Dibenzo(a,h)Anthracene	53-70-3		U	2220	1110
Benzo(g,h,i)Perylene	191-24-2		U	2220	1110
1,2,4,5-Tetrachlorobenzene	95-94-3		U	2220	1110

Surrogate	% Recovery	Lower	Upper	Qual
2-Fluorophenol	43.3	25	121	
Phenol-d5	59.3	24	113	
Nitrobenzene-d5	62.5	23	120	
2-Fluorobiphenyl	71.8	30	115	
2,4,6-Tribromophenol	66.0	19	122	
P-Terphenyl-d14	109	18	137	

J The analyte was positively identified, but the quantitation was below the RL
U Not detected at or above the reporting limit

Report Number: **L0605548**
Report Date : **June 12, 2006**

Sample Number: **L0605548-02**
Client ID: **SM140SB01052306**
Matrix: **Soil**
Workgroup Number: **WG214069**
Collect Date: **05/23/2006 15:20**

PrePrep Method: **NONE**
Prep Method: **3545**
Analytical Method: **8270C**
Analyst: **ALT**
Dilution: **20**
Units: **ug/kg**

Instrument: **HPMS5**
Prep Date: **05/24/2006 13:10**
Cal Date: **05/15/2006 13:30**
Run Date: **05/25/2006 20:28**
File ID: **5M40881**
Percent Solid: **85.9**

Analyte	CAS. Number	Result	Qual	PQL	SQL
Benzaldehyde	100-52-7		U	3840	1920
Phenol	108-95-2		U	3590	1790
Bis(2-Chloroethyl)ether	111-44-4		U	3590	1790
2-Chlorophenol	95-57-8		U	3590	1790
2-Methylphenol	95-48-7		U	3590	1790
Acetophenone	98-86-2		U	3590	1790
bis(2-Chloroisopropyl)ether	108-60-1		U	3590	1790
3-,4-Methylphenol	106-44-5		U	3590	1790
N-Nitroso-di-n-propylamine	621-64-7		U	3590	1790
Hexachloroethane	67-72-1		U	3590	1790
Nitrobenzene	98-95-3		U	3590	1790
Isophorone	78-59-1		U	3590	1790
2-Nitrophenol	88-75-5		U	3590	1790
2,4-Dimethylphenol	105-67-9		U	3590	1790
Bis(2-Chloroethoxy)Methane	111-91-1		U	3590	1790
2,4-Dichlorophenol	120-83-2		U	3590	1790
Naphthalene	91-20-3		U	3590	1790
4-Chloroaniline	106-47-8		U	3590	1790
Hexachlorobutadiene	87-68-3		U	3590	1790
Caprolactam	105-60-2		U	3840	1920
4-Chloro-3-methylphenol	59-50-7		U	3590	1790
2-Methylnaphthalene	91-57-6		U	3590	1790
Hexachlorocyclopentadiene	77-47-4		U	3590	1790
2,4,6-Trichlorophenol	88-06-2		U	3590	1790
2,4,5-Trichlorophenol	95-95-4		U	3590	1790
1,1'-Biphenyl	92-52-4		U	3840	1920
2-Chloronaphthalene	91-58-7		U	3590	1790
2-Nitroaniline	88-74-4		U	17900	7170
Dimethylphthalate	131-11-3		U	3590	1790
Acenaphthylene	208-96-8		U	3590	1790
2,6-Dinitrotoluene	606-20-2		U	3590	1790
3-Nitroaniline	99-09-2		U	17900	7170
Acenaphthene	83-32-9		U	3590	1790
2,4-Dinitrophenol	51-28-5		U	17900	7170
4-Nitrophenol	100-02-7		U	17900	7170
Dibenzofuran	132-64-9		U	3590	1790
2,4-Dinitrotoluene	121-14-2		U	3590	1790
Diethylphthalate	84-66-2		U	3590	1790
4-Chlorophenyl-phenyl ether	7005-72-3		U	3590	1790
Fluorene	86-73-7		U	3590	1790
4-Nitroaniline	100-01-6		U	17900	7170
4,6-Dinitro-2-methylphenol	534-52-1		U	17900	7170
N-Nitrosodiphenylamine	86-30-6		U	3590	1790
4-Bromophenyl-phenylether	101-55-3		U	3590	1790
Hexachlorobenzene	118-74-1		U	3590	1790
Atrazine	1912-24-9		U	3840	1920
Pentachlorophenol	87-86-5		U	17900	7170
Phenanthrene	85-01-8		U	3590	1790

Report Number: **L0605548**
Report Date : **June 12, 2006**

Sample Number: **L0605548-02**
Client ID: **SM140SB01052306**
Matrix: **Soil**
Workgroup Number: **WG214069**
Collect Date: **05/23/2006 15:20**

PrePrep Method: **NONE**
Prep Method: **3545**
Analytical Method: **8270C**
Analyst: **ALT**
Dilution: **20**
Units: **ug/kg**

Instrument: **HPMS5**
Prep Date: **05/24/2006 13:10**
Cal Date: **05/15/2006 13:30**
Run Date: **05/25/2006 20:28**
File ID: **5M40881**
Percent Solid: **85.9**

Analyte	CAS. Number	Result	Qual	PQL	SQL
Anthracene	120-12-7		U	3590	1790
Carbazole	86-74-8		U	3590	1790
Di-N-Butylphthalate	84-74-2		U	3590	1790
Fluoranthene	206-44-0		U	3590	1790
Pyrene	129-00-0		U	3590	1790
Butylbenzylphthalate	85-68-7		U	3590	1790
3,3'-Dichlorobenzidine	91-94-1		U	7170	3590
Benzo(a)anthracene	56-55-3		U	3590	1790
Chrysene	218-01-9		U	3590	1790
bis(2-Ethylhexyl)phthalate	117-81-7		U	3590	1790
Di-n-octylphthalate	117-84-0		U	3590	1790
Benzo(b)fluoranthene	205-99-2		U	3590	1790
Benzo(k)fluoranthene	207-08-9		U	3590	1790
Benzo(a)pyrene	50-32-8		U	3590	1790
Indeno(1,2,3-cd)pyrene	193-39-5		U	3590	1790
Dibenzo(a,h)Anthracene	53-70-3		U	3590	1790
Benzo(g,h,i)Perylene	191-24-2		U	3590	1790
1,2,4,5-Tetrachlorobenzene	95-94-3		U	3590	1790

Surrogate	% Recovery	Lower	Upper	Qual
2-Fluorophenol		25	121	*
Phenol-d5		24	113	*
Nitrobenzene-d5		23	120	*
2-Fluorobiphenyl		30	115	*
2,4,6-Tribromophenol		19	122	*
P-Terphenyl-d14		18	137	*

* Surrogate or spike compound out of range
U Not detected at or above the reporting limit

Report Number: **L0605548**
Report Date : **June 12, 2006**

Sample Number: **L0605548-03**
Client ID: **SM138EB01052306**
Matrix: **Water**
Workgroup Number: **WG214070**
Collect Date: **05/23/2006 13:40**

PrePrep Method: **NONE**
Prep Method: **3510C**
Analytical Method: **8270C**
Analyst: **ALT**
Dilution: **1**
Units: **ug/L**

Instrument: **HPMS5**
Prep Date: **05/25/2006 08:00**
Cal Date: **05/15/2006 13:30**
Run Date: **05/25/2006 17:17**
File ID: **5M40875**

Analyte	CAS. Number	Result	Qual	PQL	SQL
Benzaldehyde	100-52-7		U	5.00	2.50
Phenol	108-95-2		U	5.00	2.50
Bis(2-Chloroethyl)ether	111-44-4		U	5.00	2.50
2-Chlorophenol	95-57-8		U	5.00	2.50
2-Methylphenol	95-48-7		U	5.00	2.50
bis(2-Chloroisopropyl)ether	108-60-1		U	5.00	2.50
Acetophenone	98-86-2		U	5.00	2.50
3-,4-Methylphenol	106-44-5		U	5.00	2.50
N-Nitroso-di-n-propylamine	621-64-7		U	5.00	2.50
Hexachloroethane	67-72-1		U	5.00	2.50
Nitrobenzene	98-95-3		U	5.00	2.50
Isophorone	78-59-1		U	5.00	2.50
2-Nitrophenol	88-75-5		U	5.00	2.50
2,4-Dimethylphenol	105-67-9		U	5.00	2.50
Bis(2-Chloroethoxy)Methane	111-91-1		U	5.00	2.50
2,4-Dichlorophenol	120-83-2		U	5.00	2.50
Naphthalene	91-20-3		U	5.00	2.50
4-Chloroaniline	106-47-8		U	5.00	2.50
Hexachlorobutadiene	87-68-3		U	5.00	2.50
Caprolactam	105-60-2		U	5.00	2.50
4-Chloro-3-methylphenol	59-50-7		U	5.00	2.50
2-Methylnaphthalene	91-57-6		U	5.00	2.50
Hexachlorocyclopentadiene	77-47-4		U	5.00	2.50
2,4,6-Trichlorophenol	88-06-2		U	5.00	2.50
2,4,5-Trichlorophenol	95-95-4		U	5.00	2.50
1,1'-Biphenyl	92-52-4		U	5.00	2.50
2-Chloronaphthalene	91-58-7		U	5.00	2.50
2-Nitroaniline	88-74-4		U	25.0	12.5
Dimethylphthalate	131-11-3		U	5.00	2.50
2,6-Dinitrotoluene	606-20-2		U	5.00	2.50
Acenaphthylene	208-96-8		U	5.00	2.50
3-Nitroaniline	99-09-2		U	25.0	12.5
Acenaphthene	83-32-9		U	5.00	2.50
2,4-Dinitrophenol	51-28-5		U	25.0	12.5
4-Nitrophenol	100-02-7		U	25.0	12.5
Dibenzofuran	132-64-9		U	5.00	2.50
2,4-Dinitrotoluene	121-14-2		U	5.00	2.50
Diethylphthalate	84-66-2		U	5.00	2.50
Fluorene	86-73-7		U	5.00	2.50
4-Chlorophenyl-phenyl ether	7005-72-3		U	5.00	2.50
4-Nitroaniline	100-01-6		U	25.0	12.5
4,6-Dinitro-2-methylphenol	534-52-1		U	25.0	12.5
N-Nitrosodiphenylamine	86-30-6		U	5.00	2.50
4-Bromophenyl-phenylether	101-55-3		U	5.00	2.50
Hexachlorobenzene	118-74-1		U	5.00	2.50
Atrazine	1912-24-9		U	5.00	2.50
Pentachlorophenol	87-86-5		U	25.0	12.5
Phenanthrene	85-01-8		U	5.00	2.50

Report Number: **L0605548**
Report Date : **June 12, 2006**

Sample Number: **L0605548-03**
Client ID: **SM138EB01052306**
Matrix: **Water**
Workgroup Number: **WG214070**
Collect Date: **05/23/2006 13:40**

PrePrep Method: **NONE**
Prep Method: **3510C**
Analytical Method: **8270C**
Analyst: **ALT**
Dilution: **1**
Units: **ug/L**

Instrument: **HPMS5**
Prep Date: **05/25/2006 08:00**
Cal Date: **05/15/2006 13:30**
Run Date: **05/25/2006 17:17**
File ID: **5M40875**

Analyte	CAS. Number	Result	Qual	PQL	SQL
Anthracene	120-12-7		U	5.00	2.50
Carbazole	86-74-8		U	5.00	2.50
Di-N-Butylphthalate	84-74-2		U	5.00	2.50
Fluoranthene	206-44-0		U	5.00	2.50
Pyrene	129-00-0		U	5.00	2.50
Butylbenzylphthalate	85-68-7		U	5.00	2.50
3,3'-Dichlorobenzidine	91-94-1		U	10.0	2.50
Benzo(a)anthracene	56-55-3		U	5.00	2.50
Chrysene	218-01-9		U	5.00	2.50
bis(2-Ethylhexyl)phthalate	117-81-7		U	5.00	2.50
Di-n-octylphthalate	117-84-0		U	5.00	2.50
Benzo(b)fluoranthene	205-99-2		U	5.00	2.50
Benzo(k)fluoranthene	207-08-9		U	5.00	2.50
Benzo(a)pyrene	50-32-8		U	5.00	2.50
Indeno(1,2,3-cd)pyrene	193-39-5		U	5.00	2.50
Dibenzo(a,h)Anthracene	53-70-3		U	5.00	2.50
Benzo(g,h,i)Perylene	191-24-2		U	5.00	2.50
1,2,4,5-Tetrachlorobenzene	95-94-3		U	5.00	2.50

Surrogate	% Recovery	Lower	Upper	Qual
2-Fluorophenol	42.3	21	100	
Phenol-d5	29.8	10	94	
Nitrobenzene-d5	76.4	35	114	
2-Fluorobiphenyl	77.6	43	116	
2,4,6-Tribromophenol	94.4	10	123	
p-Terphenyl-d14	95.1	33	141	

U Not detected at or above the reporting limit

Report Number: **L0605548**
Report Date : **June 12, 2006**

Sample Number: **L0605548-04**
Client ID: **SM140FD03052306**
Matrix: **Soil**
Workgroup Number: **WG214069**
Collect Date: **05/23/2006 16:40**

PrePrep Method: **NONE**
Prep Method: **3545**
Analytical Method: **8270C**
Analyst: **ALT**
Dilution: **1**
Units: **ug/kg**

Instrument: **HPMS5**
Prep Date: **05/24/2006 13:10**
Cal Date: **05/15/2006 13:30**
Run Date: **05/25/2006 19:25**
File ID: **5M40879**
Percent Solid: **66.3**

Analyte	CAS. Number	Result	Qual	PQL	SQL
Benzaldehyde	100-52-7		U	249	125
Phenol	108-95-2		U	248	124
Bis(2-Chloroethyl)ether	111-44-4		U	248	124
2-Chlorophenol	95-57-8		U	248	124
2-Methylphenol	95-48-7		U	248	124
Acetophenone	98-86-2		U	248	124
bis(2-Chloroisopropyl)ether	108-60-1		U	248	124
3-,4-Methylphenol	106-44-5		U	248	124
N-Nitroso-di-n-propylamine	621-64-7		U	248	124
Hexachloroethane	67-72-1		U	248	124
Nitrobenzene	98-95-3		U	248	124
Isophorone	78-59-1		U	248	124
2-Nitrophenol	88-75-5		U	248	124
2,4-Dimethylphenol	105-67-9		U	248	124
Bis(2-Chloroethoxy)Methane	111-91-1		U	248	124
2,4-Dichlorophenol	120-83-2		U	248	124
Naphthalene	91-20-3		U	248	124
4-Chloroaniline	106-47-8		U	248	124
Hexachlorobutadiene	87-68-3		U	248	124
Caprolactam	105-60-2		U	249	125
4-Chloro-3-methylphenol	59-50-7		U	248	124
2-Methylnaphthalene	91-57-6		U	248	124
Hexachlorocyclopentadiene	77-47-4		U	248	124
2,4,6-Trichlorophenol	88-06-2		U	248	124
2,4,5-Trichlorophenol	95-95-4		U	248	124
1,1'-Biphenyl	92-52-4		U	249	125
2-Chloronaphthalene	91-58-7		U	248	124
2-Nitroaniline	88-74-4		U	1240	496
Dimethylphthalate	131-11-3		U	248	124
Acenaphthylene	208-96-8		U	248	124
2,6-Dinitrotoluene	606-20-2		U	248	124
3-Nitroaniline	99-09-2		U	1240	496
Acenaphthene	83-32-9		U	248	124
2,4-Dinitrophenol	51-28-5		U	1240	496
4-Nitrophenol	100-02-7		U	1240	496
Dibenzofuran	132-64-9		U	248	124
2,4-Dinitrotoluene	121-14-2		U	248	124
Diethylphthalate	84-66-2		U	248	124
4-Chlorophenyl-phenyl ether	7005-72-3		U	248	124
Fluorene	86-73-7		U	248	124
4-Nitroaniline	100-01-6		U	1240	496
4,6-Dinitro-2-methylphenol	534-52-1		U	1240	496
N-Nitrosodiphenylamine	86-30-6		U	248	124
4-Bromophenyl-phenylether	101-55-3		U	248	124
Hexachlorobenzene	118-74-1		U	248	124
Atrazine	1912-24-9		U	249	125
Pentachlorophenol	87-86-5		U	1240	496
Phenanthrene	85-01-8		U	248	124

Report Number: **L0605548**
Report Date : **June 12, 2006**

Sample Number: **L0605548-04**
Client ID: **SM140FD03052306**
Matrix: **Soil**
Workgroup Number: **WG214069**
Collect Date: **05/23/2006 16:40**

PrePrep Method: **NONE**
Prep Method: **3545**
Analytical Method: **8270C**
Analyst: **ALT**
Dilution: **1**
Units: **ug/kg**

Instrument: **HPMS5**
Prep Date: **05/24/2006 13:10**
Cal Date: **05/15/2006 13:30**
Run Date: **05/25/2006 19:25**
File ID: **5M40879**
Percent Solid: **66.3**

Analyte	CAS. Number	Result	Qual	PQL	SQL
Anthracene	120-12-7		U	248	124
Carbazole	86-74-8		U	248	124
Di-N-Butylphthalate	84-74-2		U	248	124
Fluoranthene	206-44-0		U	248	124
Pyrene	129-00-0		U	248	124
Butylbenzylphthalate	85-68-7		U	248	124
3,3'-Dichlorobenzidine	91-94-1		U	496	248
Benzo(a)anthracene	56-55-3		U	248	124
Chrysene	218-01-9		U	248	124
bis(2-Ethylhexyl)phthalate	117-81-7	491		248	124
Di-n-octylphthalate	117-84-0		U	248	124
Benzo(b)fluoranthene	205-99-2		U	248	124
Benzo(k)fluoranthene	207-08-9		U	248	124
Benzo(a)pyrene	50-32-8		U	248	124
Indeno(1,2,3-cd)pyrene	193-39-5		U	248	124
Dibenzo(a,h)Anthracene	53-70-3		U	248	124
Benzo(g,h,i)Perylene	191-24-2		U	248	124
1,2,4,5-Tetrachlorobenzene	95-94-3		U	248	124

Surrogate	% Recovery	Lower	Upper	Qual
2-Fluorophenol	61.4	25	121	
Phenol-d5	70.7	24	113	
Nitrobenzene-d5	68.7	23	120	
2-Fluorobiphenyl	58.0	30	115	
2,4,6-Tribromophenol	90.0	19	122	
P-Terphenyl-d14	116	18	137	

U Not detected at or above the reporting limit

Report Number: **L0605548**
Report Date : **June 12, 2006**

Sample Number: **L0605548-05**
Client ID: **SM140SB03052306**
Matrix: **Soil**
Workgroup Number: **WG214069**
Collect Date: **05/23/2006 16:35**

PrePrep Method: **NONE**
Prep Method: **3545**
Analytical Method: **8270C**
Analyst: **ALT**
Dilution: **1**
Units: **ug/kg**

Instrument: **HPMS5**
Prep Date: **05/24/2006 13:10**
Cal Date: **05/15/2006 13:30**
Run Date: **05/25/2006 12:43**
File ID: **5M40868**
Percent Solid: **61.4**

Analyte	CAS. Number	Result	Qual	PQL	SQL
Benzaldehyde	100-52-7		U	269	134
Phenol	108-95-2		U	254	127
Bis(2-Chloroethyl)ether	111-44-4		U	254	127
2-Chlorophenol	95-57-8		U	254	127
2-Methylphenol	95-48-7		U	254	127
Acetophenone	98-86-2		U	254	127
bis(2-Chloroisopropyl)ether	108-60-1		U	254	127
3-,4-Methylphenol	106-44-5		U	254	127
N-Nitroso-di-n-propylamine	621-64-7		U	254	127
Hexachloroethane	67-72-1		U	254	127
Nitrobenzene	98-95-3		U	254	127
Isophorone	78-59-1		U	254	127
2-Nitrophenol	88-75-5		U	254	127
2,4-Dimethylphenol	105-67-9		U	254	127
Bis(2-Chloroethoxy)Methane	111-91-1		U	254	127
2,4-Dichlorophenol	120-83-2		U	254	127
Naphthalene	91-20-3		U	254	127
4-Chloroaniline	106-47-8		U	254	127
Hexachlorobutadiene	87-68-3		U	254	127
Caprolactam	105-60-2		U	269	134
4-Chloro-3-methylphenol	59-50-7		U	254	127
2-Methylnaphthalene	91-57-6		U	254	127
Hexachlorocyclopentadiene	77-47-4		U	254	127
2,4,6-Trichlorophenol	88-06-2		U	254	127
2,4,5-Trichlorophenol	95-95-4		U	254	127
1,1'-Biphenyl	92-52-4		U	269	134
2-Chloronaphthalene	91-58-7		U	254	127
2-Nitroaniline	88-74-4		U	1270	508
Dimethylphthalate	131-11-3		U	254	127
Acenaphthylene	208-96-8		U	254	127
2,6-Dinitrotoluene	606-20-2		U	254	127
3-Nitroaniline	99-09-2		U	1270	508
Acenaphthene	83-32-9		U	254	127
2,4-Dinitrophenol	51-28-5		U	1270	508
4-Nitrophenol	100-02-7		U	1270	508
Dibenzofuran	132-64-9		U	254	127
2,4-Dinitrotoluene	121-14-2		U	254	127
Diethylphthalate	84-66-2		U	254	127
4-Chlorophenyl-phenyl ether	7005-72-3		U	254	127
Fluorene	86-73-7		U	254	127
4-Nitroaniline	100-01-6		U	1270	508
4,6-Dinitro-2-methylphenol	534-52-1		U	1270	508
N-Nitrosodiphenylamine	86-30-6		U	254	127
4-Bromophenyl-phenylether	101-55-3		U	254	127
Hexachlorobenzene	118-74-1		U	254	127
Atrazine	1912-24-9		U	269	134
Pentachlorophenol	87-86-5		U	1270	508
Phenanthrene	85-01-8		U	254	127

Report Number: **L0605548**
Report Date : **June 12, 2006**

Sample Number: **L0605548-05**
Client ID: **SM140SB03052306**
Matrix: **Soil**
Workgroup Number: **WG214069**
Collect Date: **05/23/2006 16:35**

PrePrep Method: **NONE**
Prep Method: **3545**
Analytical Method: **8270C**
Analyst: **ALT**
Dilution: **1**
Units: **ug/kg**

Instrument: **HPMS5**
Prep Date: **05/24/2006 13:10**
Cal Date: **05/15/2006 13:30**
Run Date: **05/25/2006 12:43**
File ID: **5M40868**
Percent Solid: **61.4**

Analyte	CAS. Number	Result	Qual	PQL	SQL
Anthracene	120-12-7		U	254	127
Carbazole	86-74-8		U	254	127
Di-N-Butylphthalate	84-74-2		U	254	127
Fluoranthene	206-44-0		U	254	127
Pyrene	129-00-0		U	254	127
Butylbenzylphthalate	85-68-7		U	254	127
3,3'-Dichlorobenzidine	91-94-1		U	508	254
Benzo(a)anthracene	56-55-3		U	254	127
Chrysene	218-01-9		U	254	127
bis(2-Ethylhexyl)phthalate	117-81-7	138	J	254	127
Di-n-octylphthalate	117-84-0		U	254	127
Benzo(b)fluoranthene	205-99-2		U	254	127
Benzo(k)fluoranthene	207-08-9		U	254	127
Benzo(a)pyrene	50-32-8		U	254	127
Indeno(1,2,3-cd)pyrene	193-39-5		U	254	127
Dibenzo(a,h)Anthracene	53-70-3		U	254	127
Benzo(g,h,i)Perylene	191-24-2		U	254	127
1,2,4,5-Tetrachlorobenzene	95-94-3		U	254	127

Surrogate	% Recovery	Lower	Upper	Qual
2-Fluorophenol	50.5	25	121	
Phenol-d5	58.3	24	113	
Nitrobenzene-d5	54.9	23	120	
2-Fluorobiphenyl	49.5	30	115	
2,4,6-Tribromophenol	88.2	19	122	
P-Terphenyl-d14	108	18	137	

J The analyte was positively identified, but the quantitation was below the RL
U Not detected at or above the reporting limit

Report Number: **L0605548**
Report Date : **June 12, 2006**

Sample Number: **L0605548-06**
Client ID: **SM140SB03052306 MS**
Matrix: **Soil**
Workgroup Number: **WG214069**
Collect Date: **05/23/2006 16:35**

PrePrep Method: **NONE**
Prep Method: **3545**
Analytical Method: **8270C**
Analyst: **ALT**
Dilution: **1**
Units: **ug/kg**

Instrument: **HPMS5**
Prep Date: **05/24/2006 13:10**
Cal Date: **05/15/2006 13:30**
Run Date: **05/25/2006 14:06**
File ID: **5M40869**
Percent Solid: **61.4**

Analyte	CAS. Number	Result	Qual	PQL	SQL
Benzaldehyde	100-52-7		U	269	134
Phenol	108-95-2	2720		244	122
Bis(2-Chloroethyl)ether	111-44-4	2550		244	122
2-Chlorophenol	95-57-8	2430		244	122
2-Methylphenol	95-48-7	2550		244	122
Acetophenone	98-86-2	2670		244	122
bis(2-Chloroisopropyl)ether	108-60-1	2500		244	122
3-,4-Methylphenol	106-44-5	2680		244	122
N-Nitroso-di-n-propylamine	621-64-7	2910		244	122
Hexachloroethane	67-72-1	2040		244	122
Nitrobenzene	98-95-3	2370		244	122
Isophorone	78-59-1	2690		244	122
2-Nitrophenol	88-75-5	2180		244	122
2,4-Dimethylphenol	105-67-9	2490		244	122
Bis(2-Chloroethoxy)Methane	111-91-1	2490		244	122
2,4-Dichlorophenol	120-83-2	2480		244	122
Naphthalene	91-20-3	2290		244	122
4-Chloroaniline	106-47-8	1810		244	122
Hexachlorobutadiene	87-68-3	2080		244	122
Caprolactam	105-60-2		U	269	134
4-Chloro-3-methylphenol	59-50-7	2930		244	122
2-Methylnaphthalene	91-57-6	2200		244	122
Hexachlorocyclopentadiene	77-47-4	270		244	122
2,4,6-Trichlorophenol	88-06-2	2880		244	122
2,4,5-Trichlorophenol	95-95-4	3040		244	122
1,1'-Biphenyl	92-52-4		U	269	134
2-Chloronaphthalene	91-58-7	2430		244	122
2-Nitroaniline	88-74-4	3340		1220	487
Dimethylphthalate	131-11-3	3220		244	122
Acenaphthylene	208-96-8	2250		244	122
2,6-Dinitrotoluene	606-20-2	3280		244	122
3-Nitroaniline	99-09-2	3230		1220	487
Acenaphthene	83-32-9	2540		244	122
2,4-Dinitrophenol	51-28-5		U	1220	487
4-Nitrophenol	100-02-7	2710		1220	487
Dibenzofuran	132-64-9	2630		244	122
2,4-Dinitrotoluene	121-14-2	3610		244	122
Diethylphthalate	84-66-2	3430		244	122
4-Chlorophenyl-phenyl ether	7005-72-3	2610		244	122
Fluorene	86-73-7	2910		244	122
4-Nitroaniline	100-01-6	3880		1220	487
4,6-Dinitro-2-methylphenol	534-52-1	1400		1220	487
N-Nitrosodiphenylamine	86-30-6	3380		244	122
4-Bromophenyl-phenylether	101-55-3	2460		244	122
Hexachlorobenzene	118-74-1	2950		244	122
Atrazine	1912-24-9		U	269	134
Pentachlorophenol	87-86-5	3620		1220	487
Phenanthrene	85-01-8	3110		244	122

Report Number: **L0605548**
Report Date : **June 12, 2006**

Sample Number: **L0605548-06**
Client ID: **SM140SB03052306 MS**
Matrix: **Soil**
Workgroup Number: **WG214069**
Collect Date: **05/23/2006 16:35**

PrePrep Method: **NONE**
Prep Method: **3545**
Analytical Method: **8270C**
Analyst: **ALT**
Dilution: **1**
Units: **ug/kg**

Instrument: **HPMS5**
Prep Date: **05/24/2006 13:10**
Cal Date: **05/15/2006 13:30**
Run Date: **05/25/2006 14:06**
File ID: **5M40869**
Percent Solid: **61.4**

Analyte	CAS. Number	Result	Qual	PQL	SQL
Anthracene	120-12-7	3120		244	122
Carbazole	86-74-8	3670		244	122
Di-N-Butylphthalate	84-74-2	3130		244	122
Fluoranthene	206-44-0	3200		244	122
Pyrene	129-00-0	3040		244	122
Butylbenzylphthalate	85-68-7	3190		244	122
3,3'-Dichlorobenzidine	91-94-1	2740		487	244
Benzo(a)anthracene	56-55-3	3120		244	122
Chrysene	218-01-9	2980		244	122
bis(2-Ethylhexyl)phthalate	117-81-7	3480		244	122
Di-n-octylphthalate	117-84-0	3510		244	122
Benzo(b)fluoranthene	205-99-2	3020		244	122
Benzo(k)fluoranthene	207-08-9	3180		244	122
Benzo(a)pyrene	50-32-8	2960		244	122
Indeno(1,2,3-cd)pyrene	193-39-5	2830		244	122
Dibenzo(a,h)Anthracene	53-70-3	3030		244	122
Benzo(g,h,i)Perylene	191-24-2	2720		244	122
1,2,4,5-Tetrachlorobenzene	95-94-3		U	269	134

Surrogate	% Recovery	Lower	Upper	Qual
2-Fluorophenol	59.1	25	121	
Phenol-d5	68.6	24	113	
Nitrobenzene-d5	63.0	23	120	
2-Fluorobiphenyl	58.2	30	115	
2,4,6-Tribromophenol	98.4	19	122	
P-Terphenyl-d14	96.8	18	137	

U Not detected at or above the reporting limit

Report Number: **L0605548**
Report Date : **June 12, 2006**

Sample Number: **L0605548-07**
Client ID: **SM140SB03052306 MSD**
Matrix: **Soil**
Workgroup Number: **WG214069**
Collect Date: **05/23/2006 16:35**

PrePrep Method: **NONE**
Prep Method: **3545**
Analytical Method: **8270C**
Analyst: **ALT**
Dilution: **1**
Units: **ug/kg**

Instrument: **HPMS5**
Prep Date: **05/24/2006 13:10**
Cal Date: **05/15/2006 13:30**
Run Date: **05/25/2006 14:37**
File ID: **5M40870**
Percent Solid: **61.4**

Analyte	CAS. Number	Result	Qual	PQL	SQL
Benzaldehyde	100-52-7		U	269	134
Phenol	108-95-2	2590		256	128
Bis(2-Chloroethyl)ether	111-44-4	2250		256	128
2-Chlorophenol	95-57-8	2210		256	128
2-Methylphenol	95-48-7	2310		256	128
Acetophenone	98-86-2	2400		256	128
bis(2-Chloroisopropyl)ether	108-60-1	2260		256	128
3-,4-Methylphenol	106-44-5	2450		256	128
N-Nitroso-di-n-propylamine	621-64-7	2620		256	128
Hexachloroethane	67-72-1	1810		256	128
Nitrobenzene	98-95-3	2110		256	128
Isophorone	78-59-1	2370		256	128
2-Nitrophenol	88-75-5	1950		256	128
2,4-Dimethylphenol	105-67-9	2190		256	128
Bis(2-Chloroethoxy)Methane	111-91-1	2210		256	128
2,4-Dichlorophenol	120-83-2	2200		256	128
Naphthalene	91-20-3	2050		256	128
4-Chloroaniline	106-47-8	1760		256	128
Hexachlorobutadiene	87-68-3	1990		256	128
Caprolactam	105-60-2		U	269	134
4-Chloro-3-methylphenol	59-50-7	2570		256	128
2-Methylnaphthalene	91-57-6	2030		256	128
Hexachlorocyclopentadiene	77-47-4	151	J	256	128
2,4,6-Trichlorophenol	88-06-2	2480		256	128
2,4,5-Trichlorophenol	95-95-4	2720		256	128
1,1'-Biphenyl	92-52-4		U	269	134
2-Chloronaphthalene	91-58-7	2230		256	128
2-Nitroaniline	88-74-4	2850		1280	513
Dimethylphthalate	131-11-3	2730		256	128
Acenaphthylene	208-96-8	1960		256	128
2,6-Dinitrotoluene	606-20-2	2850		256	128
3-Nitroaniline	99-09-2	3200		1280	513
Acenaphthene	83-32-9	2250		256	128
2,4-Dinitrophenol	51-28-5		U	1280	513
4-Nitrophenol	100-02-7	3150		1280	513
Dibenzofuran	132-64-9	2370		256	128
2,4-Dinitrotoluene	121-14-2	3340		256	128
Diethylphthalate	84-66-2	3190		256	128
4-Chlorophenyl-phenyl ether	7005-72-3	2340		256	128
Fluorene	86-73-7	2590		256	128
4-Nitroaniline	100-01-6	3910		1280	513
4,6-Dinitro-2-methylphenol	534-52-1	1180	J	1280	513
N-Nitrosodiphenylamine	86-30-6	3220		256	128
4-Bromophenyl-phenylether	101-55-3	2240		256	128
Hexachlorobenzene	118-74-1	2750		256	128
Atrazine	1912-24-9		U	269	134
Pentachlorophenol	87-86-5	3680		1280	513
Phenanthrene	85-01-8	3060		256	128

Report Number: **L0605548**
Report Date : **June 12, 2006**

Sample Number: **L0605548-07**
Client ID: **SM140SB03052306 MSD**
Matrix: **Soil**
Workgroup Number: **WG214069**
Collect Date: **05/23/2006 16:35**

PrePrep Method: **NONE**
Prep Method: **3545**
Analytical Method: **8270C**
Analyst: **ALT**
Dilution: **1**
Units: **ug/kg**

Instrument: **HPMS5**
Prep Date: **05/24/2006 13:10**
Cal Date: **05/15/2006 13:30**
Run Date: **05/25/2006 14:37**
File ID: **5M40870**
Percent Solid: **61.4**

Analyte	CAS. Number	Result	Qual	PQL	SQL
Anthracene	120-12-7	3050		256	128
Carbazole	86-74-8	3720		256	128
Di-N-Butylphthalate	84-74-2	3210		256	128
Fluoranthene	206-44-0	3260		256	128
Pyrene	129-00-0	3150		256	128
Butylbenzylphthalate	85-68-7	3210		256	128
3,3'-Dichlorobenzidine	91-94-1	3000		513	256
Benzo(a)anthracene	56-55-3	3170		256	128
Chrysene	218-01-9	3110		256	128
bis(2-Ethylhexyl)phthalate	117-81-7	3210		256	128
Di-n-octylphthalate	117-84-0	3290		256	128
Benzo(b)fluoranthene	205-99-2	3040		256	128
Benzo(k)fluoranthene	207-08-9	2980		256	128
Benzo(a)pyrene	50-32-8	2820		256	128
Indeno(1,2,3-cd)pyrene	193-39-5	2570		256	128
Dibenzo(a,h)Anthracene	53-70-3	2890		256	128
Benzo(g,h,i)Perylene	191-24-2	2420		256	128
1,2,4,5-Tetrachlorobenzene	95-94-3		U	269	134

Surrogate	% Recovery	Lower	Upper	Qual
2-Fluorophenol	51.6	25	121	
Phenol-d5	60.3	24	113	
Nitrobenzene-d5	53.4	23	120	
2-Fluorobiphenyl	54.6	30	115	
2,4,6-Tribromophenol	89.9	19	122	
P-Terphenyl-d14	96.7	18	137	

J The analyte was positively identified, but the quantitation was below the RL
U Not detected at or above the reporting limit

Report Number: **L0605548**
Report Date : **June 12, 2006**

Sample Number: **L0605548-08**
Client ID: **SM137SB01052306**
Matrix: **Soil**
Workgroup Number: **WG214069**
Collect Date: **05/23/2006 09:20**

PrePrep Method: **NONE**
Prep Method: **3545**
Analytical Method: **8270C**
Analyst: **ALT**
Dilution: **20**
Units: **ug/kg**

Instrument: **HPMS5**
Prep Date: **05/24/2006 13:10**
Cal Date: **05/15/2006 13:30**
Run Date: **05/25/2006 20:59**
File ID: **5M40882**
Percent Solid: **84.3**

Analyte	CAS. Number	Result	Qual	PQL	SQL
Benzaldehyde	100-52-7		U	3920	1960
Phenol	108-95-2		U	3910	1960
Bis(2-Chloroethyl)ether	111-44-4		U	3910	1960
2-Chlorophenol	95-57-8		U	3910	1960
2-Methylphenol	95-48-7		U	3910	1960
Acetophenone	98-86-2		U	3910	1960
bis(2-Chloroisopropyl)ether	108-60-1		U	3910	1960
3-,4-Methylphenol	106-44-5		U	3910	1960
N-Nitroso-di-n-propylamine	621-64-7		U	3910	1960
Hexachloroethane	67-72-1		U	3910	1960
Nitrobenzene	98-95-3		U	3910	1960
Isophorone	78-59-1		U	3910	1960
2-Nitrophenol	88-75-5		U	3910	1960
2,4-Dimethylphenol	105-67-9		U	3910	1960
Bis(2-Chloroethoxy)Methane	111-91-1		U	3910	1960
2,4-Dichlorophenol	120-83-2		U	3910	1960
Naphthalene	91-20-3		U	3910	1960
4-Chloroaniline	106-47-8		U	3910	1960
Hexachlorobutadiene	87-68-3		U	3910	1960
Caprolactam	105-60-2		U	3920	1960
4-Chloro-3-methylphenol	59-50-7		U	3910	1960
2-Methylnaphthalene	91-57-6		U	3910	1960
Hexachlorocyclopentadiene	77-47-4		U	3910	1960
2,4,6-Trichlorophenol	88-06-2		U	3910	1960
2,4,5-Trichlorophenol	95-95-4		U	3910	1960
1,1'-Biphenyl	92-52-4		U	3920	1960
2-Chloronaphthalene	91-58-7		U	3910	1960
2-Nitroaniline	88-74-4		U	19600	7820
Dimethylphthalate	131-11-3		U	3910	1960
Acenaphthylene	208-96-8		U	3910	1960
2,6-Dinitrotoluene	606-20-2		U	3910	1960
3-Nitroaniline	99-09-2		U	19600	7820
Acenaphthene	83-32-9		U	3910	1960
2,4-Dinitrophenol	51-28-5		U	19600	7820
4-Nitrophenol	100-02-7		U	19600	7820
Dibenzofuran	132-64-9		U	3910	1960
2,4-Dinitrotoluene	121-14-2		U	3910	1960
Diethylphthalate	84-66-2		U	3910	1960
4-Chlorophenyl-phenyl ether	7005-72-3		U	3910	1960
Fluorene	86-73-7		U	3910	1960
4-Nitroaniline	100-01-6		U	19600	7820
4,6-Dinitro-2-methylphenol	534-52-1		U	19600	7820
N-Nitrosodiphenylamine	86-30-6		U	3910	1960
4-Bromophenyl-phenylether	101-55-3		U	3910	1960
Hexachlorobenzene	118-74-1		U	3910	1960
Atrazine	1912-24-9		U	3920	1960
Pentachlorophenol	87-86-5		U	19600	7820
Phenanthrene	85-01-8		U	3910	1960

Report Number: **L0605548**
Report Date : **June 12, 2006**

Sample Number: **L0605548-08**
Client ID: **SM137SB01052306**
Matrix: **Soil**
Workgroup Number: **WG214069**
Collect Date: **05/23/2006 09:20**

PrePrep Method: **NONE**
Prep Method: **3545**
Analytical Method: **8270C**
Analyst: **ALT**
Dilution: **20**
Units: **ug/kg**

Instrument: **HPMS5**
Prep Date: **05/24/2006 13:10**
Cal Date: **05/15/2006 13:30**
Run Date: **05/25/2006 20:59**
File ID: **5M40882**
Percent Solid: **84.3**

Analyte	CAS. Number	Result	Qual	PQL	SQL
Anthracene	120-12-7		U	3910	1960
Carbazole	86-74-8		U	3910	1960
Di-N-Butylphthalate	84-74-2		U	3910	1960
Fluoranthene	206-44-0		U	3910	1960
Pyrene	129-00-0		U	3910	1960
Butylbenzylphthalate	85-68-7		U	3910	1960
3,3'-Dichlorobenzidine	91-94-1		U	7820	3910
Benzo(a)anthracene	56-55-3		U	3910	1960
Chrysene	218-01-9		U	3910	1960
bis(2-Ethylhexyl)phthalate	117-81-7		U	3910	1960
Di-n-octylphthalate	117-84-0		U	3910	1960
Benzo(b)fluoranthene	205-99-2		U	3910	1960
Benzo(k)fluoranthene	207-08-9		U	3910	1960
Benzo(a)pyrene	50-32-8		U	3910	1960
Indeno(1,2,3-cd)pyrene	193-39-5		U	3910	1960
Dibenzo(a,h)Anthracene	53-70-3		U	3910	1960
Benzo(g,h,i)Perylene	191-24-2		U	3910	1960
1,2,4,5-Tetrachlorobenzene	95-94-3		U	3910	1960

Surrogate	% Recovery	Lower	Upper	Qual
2-Fluorophenol		25	121	*
Phenol-d5		24	113	*
Nitrobenzene-d5		23	120	*
2-Fluorobiphenyl		30	115	*
2,4,6-Tribromophenol		19	122	*
P-Terphenyl-d14		18	137	*

* Surrogate or spike compound out of range
U Not detected at or above the reporting limit

Report Number: **L0605548**
Report Date : **June 12, 2006**

Sample Number: **L0605548-09**
Client ID: **SM138SB03052306**
Matrix: **Soil**
Workgroup Number: **WG214069**
Collect Date: **05/23/2006 12:55**

PrePrep Method: **NONE**
Prep Method: **3545**
Analytical Method: **8270C**
Analyst: **ALT**
Dilution: **1**
Units: **ug/kg**

Instrument: **HPMS5**
Prep Date: **05/24/2006 13:10**
Cal Date: **05/15/2006 13:30**
Run Date: **05/25/2006 18:21**
File ID: **5M40877**
Percent Solid: **69.7**

Analyte	CAS. Number	Result	Qual	PQL	SQL
Benzaldehyde	100-52-7		U	237	118
Phenol	108-95-2		U	232	116
Bis(2-Chloroethyl)ether	111-44-4		U	232	116
2-Chlorophenol	95-57-8		U	232	116
2-Methylphenol	95-48-7		U	232	116
Acetophenone	98-86-2		U	232	116
bis(2-Chloroisopropyl)ether	108-60-1		U	232	116
3-,4-Methylphenol	106-44-5		U	232	116
N-Nitroso-di-n-propylamine	621-64-7		U	232	116
Hexachloroethane	67-72-1		U	232	116
Nitrobenzene	98-95-3		U	232	116
Isophorone	78-59-1		U	232	116
2-Nitrophenol	88-75-5		U	232	116
2,4-Dimethylphenol	105-67-9		U	232	116
Bis(2-Chloroethoxy)Methane	111-91-1		U	232	116
2,4-Dichlorophenol	120-83-2		U	232	116
Naphthalene	91-20-3		U	232	116
4-Chloroaniline	106-47-8		U	232	116
Hexachlorobutadiene	87-68-3		U	232	116
Caprolactam	105-60-2		U	237	118
4-Chloro-3-methylphenol	59-50-7		U	232	116
2-Methylnaphthalene	91-57-6		U	232	116
Hexachlorocyclopentadiene	77-47-4		U	232	116
2,4,6-Trichlorophenol	88-06-2		U	232	116
2,4,5-Trichlorophenol	95-95-4		U	232	116
1,1'-Biphenyl	92-52-4		U	237	118
2-Chloronaphthalene	91-58-7		U	232	116
2-Nitroaniline	88-74-4		U	1160	463
Dimethylphthalate	131-11-3		U	232	116
Acenaphthylene	208-96-8		U	232	116
2,6-Dinitrotoluene	606-20-2		U	232	116
3-Nitroaniline	99-09-2		U	1160	463
Acenaphthene	83-32-9		U	232	116
2,4-Dinitrophenol	51-28-5		U	1160	463
4-Nitrophenol	100-02-7		U	1160	463
Dibenzofuran	132-64-9		U	232	116
2,4-Dinitrotoluene	121-14-2		U	232	116
Diethylphthalate	84-66-2		U	232	116
4-Chlorophenyl-phenyl ether	7005-72-3		U	232	116
Fluorene	86-73-7		U	232	116
4-Nitroaniline	100-01-6		U	1160	463
4,6-Dinitro-2-methylphenol	534-52-1		U	1160	463
N-Nitrosodiphenylamine	86-30-6		U	232	116
4-Bromophenyl-phenylether	101-55-3		U	232	116
Hexachlorobenzene	118-74-1		U	232	116
Atrazine	1912-24-9		U	237	118
Pentachlorophenol	87-86-5		U	1160	463
Phenanthrene	85-01-8		U	232	116

Report Number: **L0605548**
Report Date : **June 12, 2006**

Sample Number: **L0605548-09**
Client ID: **SM138SB03052306**
Matrix: **Soil**
Workgroup Number: **WG214069**
Collect Date: **05/23/2006 12:55**

PrePrep Method: **NONE**
Prep Method: **3545**
Analytical Method: **8270C**
Analyst: **ALT**
Dilution: **1**
Units: **ug/kg**

Instrument: **HPMS5**
Prep Date: **05/24/2006 13:10**
Cal Date: **05/15/2006 13:30**
Run Date: **05/25/2006 18:21**
File ID: **5M40877**
Percent Solid: **69.7**

Analyte	CAS. Number	Result	Qual	PQL	SQL
Anthracene	120-12-7		U	232	116
Carbazole	86-74-8		U	232	116
Di-N-Butylphthalate	84-74-2		U	232	116
Fluoranthene	206-44-0		U	232	116
Pyrene	129-00-0		U	232	116
Butylbenzylphthalate	85-68-7		U	232	116
3,3'-Dichlorobenzidine	91-94-1		U	463	232
Benzo(a)anthracene	56-55-3		U	232	116
Chrysene	218-01-9		U	232	116
bis(2-Ethylhexyl)phthalate	117-81-7	491		232	116
Di-n-octylphthalate	117-84-0		U	232	116
Benzo(b)fluoranthene	205-99-2		U	232	116
Benzo(k)fluoranthene	207-08-9		U	232	116
Benzo(a)pyrene	50-32-8		U	232	116
Indeno(1,2,3-cd)pyrene	193-39-5		U	232	116
Dibenzo(a,h)Anthracene	53-70-3		U	232	116
Benzo(g,h,i)Perylene	191-24-2		U	232	116
1,2,4,5-Tetrachlorobenzene	95-94-3		U	232	116

Surrogate	% Recovery	Lower	Upper	Qual
2-Fluorophenol	53.9	25	121	
Phenol-d5	61.1	24	113	
Nitrobenzene-d5	58.4	23	120	
2-Fluorobiphenyl	49.0	30	115	
2,4,6-Tribromophenol	75.0	19	122	
P-Terphenyl-d14	93.4	18	137	

U Not detected at or above the reporting limit

Report Number: **L0605548**
Report Date : **June 12, 2006**

Sample Number: **L0605548-10**
Client ID: **SM138FD03052306**
Matrix: **Soil**
Workgroup Number: **WG214069**
Collect Date: **05/23/2006 13:00**

PrePrep Method: **NONE**
Prep Method: **3545**
Analytical Method: **8270C**
Analyst: **ALT**
Dilution: **1**
Units: **ug/kg**

Instrument: **HPMS5**
Prep Date: **05/24/2006 13:10**
Cal Date: **05/15/2006 13:30**
Run Date: **05/25/2006 15:09**
File ID: **5M40871**
Percent Solid: **65.7**

Analyte	CAS. Number	Result	Qual	PQL	SQL
Benzaldehyde	100-52-7		U	251	126
Phenol	108-95-2		U	230	115
Bis(2-Chloroethyl)ether	111-44-4		U	230	115
2-Chlorophenol	95-57-8		U	230	115
2-Methylphenol	95-48-7		U	230	115
Acetophenone	98-86-2		U	230	115
bis(2-Chloroisopropyl)ether	108-60-1		U	230	115
3-,4-Methylphenol	106-44-5		U	230	115
N-Nitroso-di-n-propylamine	621-64-7		U	230	115
Hexachloroethane	67-72-1		U	230	115
Nitrobenzene	98-95-3		U	230	115
Isophorone	78-59-1		U	230	115
2-Nitrophenol	88-75-5		U	230	115
2,4-Dimethylphenol	105-67-9		U	230	115
Bis(2-Chloroethoxy)Methane	111-91-1		U	230	115
2,4-Dichlorophenol	120-83-2		U	230	115
Naphthalene	91-20-3		U	230	115
4-Chloroaniline	106-47-8		U	230	115
Hexachlorobutadiene	87-68-3		U	230	115
Caprolactam	105-60-2		U	251	126
4-Chloro-3-methylphenol	59-50-7		U	230	115
2-Methylnaphthalene	91-57-6		U	230	115
Hexachlorocyclopentadiene	77-47-4		U	230	115
2,4,6-Trichlorophenol	88-06-2		U	230	115
2,4,5-Trichlorophenol	95-95-4		U	230	115
1,1'-Biphenyl	92-52-4		U	251	126
2-Chloronaphthalene	91-58-7		U	230	115
2-Nitroaniline	88-74-4		U	1150	461
Dimethylphthalate	131-11-3		U	230	115
Acenaphthylene	208-96-8		U	230	115
2,6-Dinitrotoluene	606-20-2		U	230	115
3-Nitroaniline	99-09-2		U	1150	461
Acenaphthene	83-32-9		U	230	115
2,4-Dinitrophenol	51-28-5		U	1150	461
4-Nitrophenol	100-02-7		U	1150	461
Dibenzofuran	132-64-9		U	230	115
2,4-Dinitrotoluene	121-14-2		U	230	115
Diethylphthalate	84-66-2		U	230	115
4-Chlorophenyl-phenyl ether	7005-72-3		U	230	115
Fluorene	86-73-7		U	230	115
4-Nitroaniline	100-01-6		U	1150	461
4,6-Dinitro-2-methylphenol	534-52-1		U	1150	461
N-Nitrosodiphenylamine	86-30-6		U	230	115
4-Bromophenyl-phenylether	101-55-3		U	230	115
Hexachlorobenzene	118-74-1		U	230	115
Atrazine	1912-24-9		U	251	126
Pentachlorophenol	87-86-5		U	1150	461
Phenanthrene	85-01-8		U	230	115

Report Number: **L0605548**
Report Date : **June 12, 2006**

Sample Number: **L0605548-10**
Client ID: **SM138FD03052306**
Matrix: **Soil**
Workgroup Number: **WG214069**
Collect Date: **05/23/2006 13:00**

PrePrep Method: **NONE**
Prep Method: **3545**
Analytical Method: **8270C**
Analyst: **ALT**
Dilution: **1**
Units: **ug/kg**

Instrument: **HPMS5**
Prep Date: **05/24/2006 13:10**
Cal Date: **05/15/2006 13:30**
Run Date: **05/25/2006 15:09**
File ID: **5M40871**
Percent Solid: **65.7**

Analyte	CAS. Number	Result	Qual	PQL	SQL
Anthracene	120-12-7		U	230	115
Carbazole	86-74-8		U	230	115
Di-N-Butylphthalate	84-74-2		U	230	115
Fluoranthene	206-44-0		U	230	115
Pyrene	129-00-0		U	230	115
Butylbenzylphthalate	85-68-7		U	230	115
3,3'-Dichlorobenzidine	91-94-1		U	461	230
Benzo(a)anthracene	56-55-3		U	230	115
Chrysene	218-01-9		U	230	115
bis(2-Ethylhexyl)phthalate	117-81-7	998		230	115
Di-n-octylphthalate	117-84-0		U	230	115
Benzo(b)fluoranthene	205-99-2		U	230	115
Benzo(k)fluoranthene	207-08-9		U	230	115
Benzo(a)pyrene	50-32-8		U	230	115
Indeno(1,2,3-cd)pyrene	193-39-5		U	230	115
Dibenzo(a,h)Anthracene	53-70-3		U	230	115
Benzo(g,h,i)Perylene	191-24-2		U	230	115
1,2,4,5-Tetrachlorobenzene	95-94-3		U	230	115

Surrogate	% Recovery	Lower	Upper	Qual
2-Fluorophenol	52.5	25	121	
Phenol-d5	59.1	24	113	
Nitrobenzene-d5	57.3	23	120	
2-Fluorobiphenyl	48.8	30	115	
2,4,6-Tribromophenol	80.2	19	122	
P-Terphenyl-d14	75.1	18	137	

U Not detected at or above the reporting limit

Report Number: **L0605548**
Report Date : **June 12, 2006**

Sample Number: **L0605548-11**
Client ID: **SM139SB01052306**
Matrix: **Soil**
Workgroup Number: **WG214069**
Collect Date: **05/23/2006 14:05**

PrePrep Method: **NONE**
Prep Method: **3545**
Analytical Method: **8270C**
Analyst: **ALT**
Dilution: **20**
Units: **ug/kg**

Instrument: **HPMS5**
Prep Date: **05/24/2006 13:10**
Cal Date: **05/15/2006 13:30**
Run Date: **05/26/2006 20:23**
File ID: **5M40900**
Percent Solid: **86.3**

Analyte	CAS. Number	Result	Qual	PQL	SQL
Benzaldehyde	100-52-7		U	3820	1910
Phenol	108-95-2		U	4150	2080
Bis(2-Chloroethyl)ether	111-44-4		U	4150	2080
2-Chlorophenol	95-57-8		U	4150	2080
2-Methylphenol	95-48-7		U	4150	2080
Acetophenone	98-86-2		U	4150	2080
bis(2-Chloroisopropyl)ether	108-60-1		U	4150	2080
3-,4-Methylphenol	106-44-5		U	4150	2080
N-Nitroso-di-n-propylamine	621-64-7		U	4150	2080
Hexachloroethane	67-72-1		U	4150	2080
Nitrobenzene	98-95-3		U	4150	2080
Isophorone	78-59-1		U	4150	2080
2-Nitrophenol	88-75-5		U	4150	2080
2,4-Dimethylphenol	105-67-9		U	4150	2080
Bis(2-Chloroethoxy)Methane	111-91-1		U	4150	2080
2,4-Dichlorophenol	120-83-2		U	4150	2080
Naphthalene	91-20-3		U	4150	2080
4-Chloroaniline	106-47-8		U	4150	2080
Hexachlorobutadiene	87-68-3		U	4150	2080
Caprolactam	105-60-2		U	3820	1910
4-Chloro-3-methylphenol	59-50-7		U	4150	2080
2-Methylnaphthalene	91-57-6		U	4150	2080
Hexachlorocyclopentadiene	77-47-4		U	4150	2080
2,4,6-Trichlorophenol	88-06-2		U	4150	2080
2,4,5-Trichlorophenol	95-95-4		U	4150	2080
1,1'-Biphenyl	92-52-4		U	3820	1910
2-Chloronaphthalene	91-58-7		U	4150	2080
2-Nitroaniline	88-74-4		U	20800	8310
Dimethylphthalate	131-11-3		U	4150	2080
Acenaphthylene	208-96-8		U	4150	2080
2,6-Dinitrotoluene	606-20-2		U	4150	2080
3-Nitroaniline	99-09-2		U	20800	8310
Acenaphthene	83-32-9		U	4150	2080
2,4-Dinitrophenol	51-28-5		U	20800	8310
4-Nitrophenol	100-02-7		U	20800	8310
Dibenzofuran	132-64-9		U	4150	2080
2,4-Dinitrotoluene	121-14-2		U	4150	2080
Diethylphthalate	84-66-2		U	4150	2080
4-Chlorophenyl-phenyl ether	7005-72-3		U	4150	2080
Fluorene	86-73-7		U	4150	2080
4-Nitroaniline	100-01-6		U	20800	8310
4,6-Dinitro-2-methylphenol	534-52-1		U	20800	8310
N-Nitrosodiphenylamine	86-30-6		U	4150	2080
4-Bromophenyl-phenylether	101-55-3		U	4150	2080
Hexachlorobenzene	118-74-1		U	4150	2080
Atrazine	1912-24-9		U	3820	1910
Pentachlorophenol	87-86-5		U	20800	8310
Phenanthrene	85-01-8		U	4150	2080

Report Number: **L0605548**
Report Date : **June 12, 2006**

Sample Number: **L0605548-11**
Client ID: **SM139SB01052306**
Matrix: **Soil**
Workgroup Number: **WG214069**
Collect Date: **05/23/2006 14:05**

PrePrep Method: **NONE**
Prep Method: **3545**
Analytical Method: **8270C**
Analyst: **ALT**
Dilution: **20**
Units: **ug/kg**

Instrument: **HPMS5**
Prep Date: **05/24/2006 13:10**
Cal Date: **05/15/2006 13:30**
Run Date: **05/26/2006 20:23**
File ID: **5M40900**
Percent Solid: **86.3**

Analyte	CAS. Number	Result	Qual	PQL	SQL
Anthracene	120-12-7		U	4150	2080
Carbazole	86-74-8		U	4150	2080
Di-N-Butylphthalate	84-74-2		U	4150	2080
Fluoranthene	206-44-0		U	4150	2080
Pyrene	129-00-0		U	4150	2080
Butylbenzylphthalate	85-68-7		U	4150	2080
3,3'-Dichlorobenzidine	91-94-1		U	8310	4150
Benzo(a)anthracene	56-55-3		U	4150	2080
Chrysene	218-01-9		U	4150	2080
bis(2-Ethylhexyl)phthalate	117-81-7		U	4150	2080
Di-n-octylphthalate	117-84-0		U	4150	2080
Benzo(b)fluoranthene	205-99-2		U	4150	2080
Benzo(k)fluoranthene	207-08-9		U	4150	2080
Benzo(a)pyrene	50-32-8		U	4150	2080
Indeno(1,2,3-cd)pyrene	193-39-5		U	4150	2080
Dibenzo(a,h)Anthracene	53-70-3		U	4150	2080
Benzo(g,h,i)Perylene	191-24-2		U	4150	2080
1,2,4,5-Tetrachlorobenzene	95-94-3		U	4150	2080

Surrogate	% Recovery	Lower	Upper	Qual
2-Fluorophenol		25	121	*
Phenol-d5		24	113	*
Nitrobenzene-d5		23	120	*
2-Fluorobiphenyl		30	115	*
2,4,6-Tribromophenol		19	122	*
P-Terphenyl-d14		18	137	*

* Surrogate or spike compound out of range
U Not detected at or above the reporting limit

Report Number: **L0605548**
Report Date : **June 12, 2006**

Sample Number: **L0605548-12**
Client ID: **SM136SB01052206**
Matrix: **Soil**
Workgroup Number: **WG214069**
Collect Date: **05/22/2006 08:05**

PrePrep Method: **NONE**
Prep Method: **3545**
Analytical Method: **8270C**
Analyst: **ALT**
Dilution: **10**
Units: **ug/kg**

Instrument: **HPMS5**
Prep Date: **05/24/2006 13:10**
Cal Date: **05/15/2006 13:30**
Run Date: **05/30/2006 20:40**
File ID: **5M40927**
Percent Solid: **84.9**

Analyte	CAS. Number	Result	Qual	PQL	SQL
Benzaldehyde	100-52-7		U	1940	971
Phenol	108-95-2		U	2120	1060
Bis(2-Chloroethyl)ether	111-44-4		U	2120	1060
2-Chlorophenol	95-57-8		U	2120	1060
2-Methylphenol	95-48-7		U	2120	1060
Acetophenone	98-86-2		U	2120	1060
bis(2-Chloroisopropyl)ether	108-60-1		U	2120	1060
3-,4-Methylphenol	106-44-5		U	2120	1060
N-Nitroso-di-n-propylamine	621-64-7		U	2120	1060
Hexachloroethane	67-72-1		U	2120	1060
Nitrobenzene	98-95-3		U	2120	1060
Isophorone	78-59-1		U	2120	1060
2-Nitrophenol	88-75-5		U	2120	1060
2,4-Dimethylphenol	105-67-9		U	2120	1060
Bis(2-Chloroethoxy)Methane	111-91-1		U	2120	1060
2,4-Dichlorophenol	120-83-2		U	2120	1060
Naphthalene	91-20-3		U	2120	1060
4-Chloroaniline	106-47-8		U	2120	1060
Hexachlorobutadiene	87-68-3		U	2120	1060
Caprolactam	105-60-2		U	1940	971
4-Chloro-3-methylphenol	59-50-7		U	2120	1060
2-Methylnaphthalene	91-57-6		U	2120	1060
Hexachlorocyclopentadiene	77-47-4		U	2120	1060
2,4,6-Trichlorophenol	88-06-2		U	2120	1060
2,4,5-Trichlorophenol	95-95-4		U	2120	1060
1,1'-Biphenyl	92-52-4		U	1940	971
2-Chloronaphthalene	91-58-7		U	2120	1060
2-Nitroaniline	88-74-4		U	10600	4230
Dimethylphthalate	131-11-3		U	2120	1060
Acenaphthylene	208-96-8		U	2120	1060
2,6-Dinitrotoluene	606-20-2		U	2120	1060
3-Nitroaniline	99-09-2		U	10600	4230
Acenaphthene	83-32-9		U	2120	1060
2,4-Dinitrophenol	51-28-5		U	10600	4230
4-Nitrophenol	100-02-7		U	10600	4230
Dibenzofuran	132-64-9		U	2120	1060
2,4-Dinitrotoluene	121-14-2		U	2120	1060
Diethylphthalate	84-66-2		U	2120	1060
4-Chlorophenyl-phenyl ether	7005-72-3		U	2120	1060
Fluorene	86-73-7		U	2120	1060
4-Nitroaniline	100-01-6		U	10600	4230
4,6-Dinitro-2-methylphenol	534-52-1		U	10600	4230
N-Nitrosodiphenylamine	86-30-6		U	2120	1060
4-Bromophenyl-phenylether	101-55-3		U	2120	1060
Hexachlorobenzene	118-74-1		U	2120	1060
Atrazine	1912-24-9		U	1940	971
Pentachlorophenol	87-86-5		U	10600	4230
Phenanthrene	85-01-8		U	2120	1060

Report Number: **L0605548**
Report Date : **June 12, 2006**

Sample Number: **L0605548-12**
Client ID: **SM136SB01052206**
Matrix: **Soil**
Workgroup Number: **WG214069**
Collect Date: **05/22/2006 08:05**

PrePrep Method: **NONE**
Prep Method: **3545**
Analytical Method: **8270C**
Analyst: **ALT**
Dilution: **10**
Units: **ug/kg**

Instrument: **HPMS5**
Prep Date: **05/24/2006 13:10**
Cal Date: **05/15/2006 13:30**
Run Date: **05/30/2006 20:40**
File ID: **5M40927**
Percent Solid: **84.9**

Analyte	CAS. Number	Result	Qual	PQL	SQL
Anthracene	120-12-7		U	2120	1060
Carbazole	86-74-8		U	2120	1060
Di-N-Butylphthalate	84-74-2		U	2120	1060
Fluoranthene	206-44-0		U	2120	1060
Pyrene	129-00-0		U	2120	1060
Butylbenzylphthalate	85-68-7		U	2120	1060
3,3'-Dichlorobenzidine	91-94-1		U	4230	2120
Benzo(a)anthracene	56-55-3		U	2120	1060
Chrysene	218-01-9		U	2120	1060
bis(2-Ethylhexyl)phthalate	117-81-7		U	2120	1060
Di-n-octylphthalate	117-84-0		U	2120	1060
Benzo(b)fluoranthene	205-99-2		U	2120	1060
Benzo(k)fluoranthene	207-08-9		U	2120	1060
Benzo(a)pyrene	50-32-8		U	2120	1060
Indeno(1,2,3-cd)pyrene	193-39-5		U	2120	1060
Dibenzo(a,h)Anthracene	53-70-3		U	2120	1060
Benzo(g,h,i)Perylene	191-24-2		U	2120	1060
1,2,4,5-Tetrachlorobenzene	95-94-3		U	2120	1060

Surrogate	% Recovery	Lower	Upper	Qual
2-Fluorophenol	42.5	25	121	
Phenol-d5	59.4	24	113	
Nitrobenzene-d5	62.2	23	120	
2-Fluorobiphenyl	67.7	30	115	
2,4,6-Tribromophenol		19	122	*
P-Terphenyl-d14	59.6	18	137	

* Surrogate or spike compound out of range
U Not detected at or above the reporting limit

Report Number: **L0605548**
Report Date : **June 12, 2006**

Sample Number: **L0605548-12**
Client ID: **SM136SB01052206**
Matrix: **Soil**
Workgroup Number: **WG214500**
Collect Date: **05/22/2006 08:05**
Sample Tag: **RE**

PrePrep Method: **NONE**
Prep Method: **3545**
Analytical Method: **8270C**
Analyst: **ALT**
Dilution: **10**
Units: **ug/kg**

Instrument: **HPMS5**
Prep Date: **06/01/2006 08:30**
Cal Date: **05/15/2006 13:30**
Run Date: **06/02/2006 23:11**
File ID: **5M41006**
Percent Solid: **84.9**

Analyte	CAS. Number	Result	Qual	PQL	SQL
Benzaldehyde	100-52-7		U	1900	950
Phenol	108-95-2		U	1900	950
Bis(2-Chloroethyl)ether	111-44-4		U	1900	950
2-Chlorophenol	95-57-8		U	1900	950
2-Methylphenol	95-48-7		U	1900	950
Acetophenone	98-86-2		U	1900	950
bis(2-Chloroisopropyl)ether	108-60-1		U	1900	950
3-,4-Methylphenol	106-44-5		U	1900	950
N-Nitroso-di-n-propylamine	621-64-7		U	1900	950
Hexachloroethane	67-72-1		U	1900	950
Nitrobenzene	98-95-3		U	1900	950
Isophorone	78-59-1		U	1900	950
2-Nitrophenol	88-75-5		U	1900	950
2,4-Dimethylphenol	105-67-9		U	1900	950
Bis(2-Chloroethoxy)Methane	111-91-1		U	1900	950
2,4-Dichlorophenol	120-83-2		U	1900	950
Naphthalene	91-20-3		U	1900	950
4-Chloroaniline	106-47-8		U	1900	950
Hexachlorobutadiene	87-68-3		U	1900	950
Caprolactam	105-60-2		U	1900	950
4-Chloro-3-methylphenol	59-50-7		U	1900	950
2-Methylnaphthalene	91-57-6		U	1900	950
Hexachlorocyclopentadiene	77-47-4		U	1900	950
2,4,6-Trichlorophenol	88-06-2		U	1900	950
2,4,5-Trichlorophenol	95-95-4		U	1900	950
1,1'-Biphenyl	92-52-4		U	1940	971
2-Chloronaphthalene	91-58-7		U	1900	950
2-Nitroaniline	88-74-4		U	9500	3800
Dimethylphthalate	131-11-3		U	1900	950
Acenaphthylene	208-96-8		U	1900	950
2,6-Dinitrotoluene	606-20-2		U	1900	950
3-Nitroaniline	99-09-2		U	9500	3800
Acenaphthene	83-32-9		U	1900	950
2,4-Dinitrophenol	51-28-5		U	9500	3800
4-Nitrophenol	100-02-7		U	9500	3800
Dibenzofuran	132-64-9		U	1900	950
2,4-Dinitrotoluene	121-14-2		U	1900	950
Diethylphthalate	84-66-2		U	1900	950
4-Chlorophenyl-phenyl ether	7005-72-3		U	1900	950
Fluorene	86-73-7		U	1900	950
4-Nitroaniline	100-01-6		U	9500	3800
4,6-Dinitro-2-methylphenol	534-52-1		U	9500	3800
N-Nitrosodiphenylamine	86-30-6		U	1900	950
4-Bromophenyl-phenylether	101-55-3		U	1900	950
Hexachlorobenzene	118-74-1		U	1900	950
Atrazine	1912-24-9		U	1900	950
Pentachlorophenol	87-86-5		U	9500	3800
Phenanthrene	85-01-8		U	1900	950

Report Number: **L0605548**
Report Date : **June 12, 2006**

Sample Number: **L0605548-12**
Client ID: **SM136SB01052206**
Matrix: **Soil**
Workgroup Number: **WG214500**
Collect Date: **05/22/2006 08:05**
Sample Tag: **RE**

PrePrep Method: **NONE**
Prep Method: **3545**
Analytical Method: **8270C**
Analyst: **ALT**
Dilution: **10**
Units: **ug/kg**

Instrument: **HPMS5**
Prep Date: **06/01/2006 08:30**
Cal Date: **05/15/2006 13:30**
Run Date: **06/02/2006 23:11**
File ID: **5M41006**
Percent Solid: **84.9**

Analyte	CAS. Number	Result	Qual	PQL	SQL
Anthracene	120-12-7		U	1900	950
Carbazole	86-74-8		U	1900	950
Di-N-Butylphthalate	84-74-2		U	1900	950
Fluoranthene	206-44-0		U	1900	950
Pyrene	129-00-0		U	1900	950
Butylbenzylphthalate	85-68-7		U	1900	950
3,3'-Dichlorobenzidine	91-94-1		U	3800	1900
Benzo(a)anthracene	56-55-3		U	1900	950
Chrysene	218-01-9		U	1900	950
bis(2-Ethylhexyl)phthalate	117-81-7		U	1900	950
Di-n-octylphthalate	117-84-0		U	1900	950
Benzo(b)fluoranthene	205-99-2		U	1900	950
Benzo(k)fluoranthene	207-08-9		U	1900	950
Benzo(a)pyrene	50-32-8		U	1900	950
Indeno(1,2,3-cd)pyrene	193-39-5		U	1900	950
Dibenzo(a,h)Anthracene	53-70-3		U	1900	950
Benzo(g,h,i)Perylene	191-24-2		U	1900	950
1,2,4,5-Tetrachlorobenzene	95-94-3		U	1900	950

Surrogate	% Recovery	Lower	Upper	Qual
2-Fluorophenol	39.9	25	121	
Phenol-d5	53.1	24	113	
Nitrobenzene-d5	59.7	23	120	
2-Fluorobiphenyl	65.0	30	115	
2,4,6-Tribromophenol	39.1	19	122	
P-Terphenyl-d14	74.7	18	137	

U Not detected at or above the reporting limit

Report Number: **L0605548**
Report Date : **June 12, 2006**

Sample Number: **L0605548-13**
Client ID: **SM139SB02052306**
Matrix: **Soil**
Workgroup Number: **WG214069**
Collect Date: **05/23/2006 14:25**

PrePrep Method: **NONE**
Prep Method: **3545**
Analytical Method: **8270C**
Analyst: **ALT**
Dilution: **2**
Units: **ug/kg**

Instrument: **HPMS5**
Prep Date: **05/24/2006 13:10**
Cal Date: **05/15/2006 13:30**
Run Date: **05/30/2006 21:12**
File ID: **5M40928**
Percent Solid: **75.9**

Analyte	CAS. Number	Result	Qual	PQL	SQL
Benzaldehyde	100-52-7		U	435	217
Phenol	108-95-2		U	476	238
Bis(2-Chloroethyl)ether	111-44-4		U	476	238
2-Chlorophenol	95-57-8		U	476	238
2-Methylphenol	95-48-7		U	476	238
Acetophenone	98-86-2		U	476	238
bis(2-Chloroisopropyl)ether	108-60-1		U	476	238
3-,4-Methylphenol	106-44-5		U	476	238
N-Nitroso-di-n-propylamine	621-64-7		U	476	238
Hexachloroethane	67-72-1		U	476	238
Nitrobenzene	98-95-3		U	476	238
Isophorone	78-59-1		U	476	238
2-Nitrophenol	88-75-5		U	476	238
2,4-Dimethylphenol	105-67-9		U	476	238
Bis(2-Chloroethoxy)Methane	111-91-1		U	476	238
2,4-Dichlorophenol	120-83-2		U	476	238
Naphthalene	91-20-3		U	476	238
4-Chloroaniline	106-47-8		U	476	238
Hexachlorobutadiene	87-68-3		U	476	238
Caprolactam	105-60-2		U	435	217
4-Chloro-3-methylphenol	59-50-7		U	476	238
2-Methylnaphthalene	91-57-6		U	476	238
Hexachlorocyclopentadiene	77-47-4		U	476	238
2,4,6-Trichlorophenol	88-06-2		U	476	238
2,4,5-Trichlorophenol	95-95-4		U	476	238
1,1'-Biphenyl	92-52-4		U	435	217
2-Chloronaphthalene	91-58-7		U	476	238
2-Nitroaniline	88-74-4		U	2380	952
Dimethylphthalate	131-11-3		U	476	238
Acenaphthylene	208-96-8		U	476	238
2,6-Dinitrotoluene	606-20-2		U	476	238
3-Nitroaniline	99-09-2		U	2380	952
Acenaphthene	83-32-9		U	476	238
2,4-Dinitrophenol	51-28-5		U	2380	952
4-Nitrophenol	100-02-7		U	2380	952
Dibenzofuran	132-64-9		U	476	238
2,4-Dinitrotoluene	121-14-2		U	476	238
Diethylphthalate	84-66-2		U	476	238
4-Chlorophenyl-phenyl ether	7005-72-3		U	476	238
Fluorene	86-73-7		U	476	238
4-Nitroaniline	100-01-6		U	2380	952
4,6-Dinitro-2-methylphenol	534-52-1		U	2380	952
N-Nitrosodiphenylamine	86-30-6		U	476	238
4-Bromophenyl-phenylether	101-55-3		U	476	238
Hexachlorobenzene	118-74-1		U	476	238
Atrazine	1912-24-9		U	435	217
Pentachlorophenol	87-86-5		U	2380	952
Phenanthrene	85-01-8		U	476	238

Report Number: **L0605548**
Report Date : **June 12, 2006**

Sample Number: **L0605548-13**
Client ID: **SM139SB02052306**
Matrix: **Soil**
Workgroup Number: **WG214069**
Collect Date: **05/23/2006 14:25**

PrePrep Method: **NONE**
Prep Method: **3545**
Analytical Method: **8270C**
Analyst: **ALT**
Dilution: **2**
Units: **ug/kg**

Instrument: **HPMS5**
Prep Date: **05/24/2006 13:10**
Cal Date: **05/15/2006 13:30**
Run Date: **05/30/2006 21:12**
File ID: **5M40928**
Percent Solid: **75.9**

Analyte	CAS. Number	Result	Qual	PQL	SQL
Anthracene	120-12-7		U	476	238
Carbazole	86-74-8		U	476	238
Di-N-Butylphthalate	84-74-2		U	476	238
Fluoranthene	206-44-0		U	476	238
Pyrene	129-00-0		U	476	238
Butylbenzylphthalate	85-68-7		U	476	238
3,3'-Dichlorobenzidine	91-94-1		U	952	476
Benzo(a)anthracene	56-55-3		U	476	238
Chrysene	218-01-9		U	476	238
bis(2-Ethylhexyl)phthalate	117-81-7		U	476	238
Di-n-octylphthalate	117-84-0		U	476	238
Benzo(b)fluoranthene	205-99-2		U	476	238
Benzo(k)fluoranthene	207-08-9		U	476	238
Benzo(a)pyrene	50-32-8		U	476	238
Indeno(1,2,3-cd)pyrene	193-39-5		U	476	238
Dibenzo(a,h)Anthracene	53-70-3		U	476	238
Benzo(g,h,i)Perylene	191-24-2		U	476	238
1,2,4,5-Tetrachlorobenzene	95-94-3		U	476	238

Surrogate	% Recovery	Lower	Upper	Qual
2-Fluorophenol	57.0	25	121	
Phenol-d5	66.9	24	113	
Nitrobenzene-d5	49.6	23	120	
2-Fluorobiphenyl	57.6	30	115	
2,4,6-Tribromophenol	31.3	19	122	
P-Terphenyl-d14	64.2	18	137	

U Not detected at or above the reporting limit

Report Number: **L0605548**
Report Date : **June 12, 2006**

Sample Number: **L0605548-14**
Client ID: **SM138SB01052306**
Matrix: **Soil**
Workgroup Number: **WG214069**
Collect Date: **05/23/2006 11:20**

PrePrep Method: **NONE**
Prep Method: **3545**
Analytical Method: **8270C**
Analyst: **ALT**
Dilution: **20**
Units: **ug/kg**

Instrument: **HPMS5**
Prep Date: **05/24/2006 13:10**
Cal Date: **05/15/2006 13:30**
Run Date: **05/26/2006 21:26**
File ID: **5M40902**
Percent Solid: **86.6**

Analyte	CAS. Number	Result	Qual	PQL	SQL
Benzaldehyde	100-52-7		U	3810	1910
Phenol	108-95-2		U	3760	1880
Bis(2-Chloroethyl)ether	111-44-4		U	3760	1880
2-Chlorophenol	95-57-8		U	3760	1880
2-Methylphenol	95-48-7		U	3760	1880
Acetophenone	98-86-2		U	3760	1880
bis(2-Chloroisopropyl)ether	108-60-1		U	3760	1880
3-,4-Methylphenol	106-44-5		U	3760	1880
N-Nitroso-di-n-propylamine	621-64-7		U	3760	1880
Hexachloroethane	67-72-1		U	3760	1880
Nitrobenzene	98-95-3		U	3760	1880
Isophorone	78-59-1		U	3760	1880
2-Nitrophenol	88-75-5		U	3760	1880
2,4-Dimethylphenol	105-67-9		U	3760	1880
Bis(2-Chloroethoxy)Methane	111-91-1		U	3760	1880
2,4-Dichlorophenol	120-83-2		U	3760	1880
Naphthalene	91-20-3		U	3760	1880
4-Chloroaniline	106-47-8		U	3760	1880
Hexachlorobutadiene	87-68-3		U	3760	1880
Caprolactam	105-60-2		U	3810	1910
4-Chloro-3-methylphenol	59-50-7		U	3760	1880
2-Methylnaphthalene	91-57-6		U	3760	1880
Hexachlorocyclopentadiene	77-47-4		U	3760	1880
2,4,6-Trichlorophenol	88-06-2		U	3760	1880
2,4,5-Trichlorophenol	95-95-4		U	3760	1880
1,1'-Biphenyl	92-52-4		U	3810	1910
2-Chloronaphthalene	91-58-7		U	3760	1880
2-Nitroaniline	88-74-4		U	18800	7530
Dimethylphthalate	131-11-3		U	3760	1880
Acenaphthylene	208-96-8		U	3760	1880
2,6-Dinitrotoluene	606-20-2		U	3760	1880
3-Nitroaniline	99-09-2		U	18800	7530
Acenaphthene	83-32-9		U	3760	1880
2,4-Dinitrophenol	51-28-5		U	18800	7530
4-Nitrophenol	100-02-7		U	18800	7530
Dibenzofuran	132-64-9		U	3760	1880
2,4-Dinitrotoluene	121-14-2		U	3760	1880
Diethylphthalate	84-66-2		U	3760	1880
4-Chlorophenyl-phenyl ether	7005-72-3		U	3760	1880
Fluorene	86-73-7		U	3760	1880
4-Nitroaniline	100-01-6		U	18800	7530
4,6-Dinitro-2-methylphenol	534-52-1		U	18800	7530
N-Nitrosodiphenylamine	86-30-6		U	3760	1880
4-Bromophenyl-phenylether	101-55-3		U	3760	1880
Hexachlorobenzene	118-74-1		U	3760	1880
Atrazine	1912-24-9		U	3810	1910
Pentachlorophenol	87-86-5		U	18800	7530
Phenanthrene	85-01-8		U	3760	1880

Report Number: **L0605548**
Report Date : **June 12, 2006**

Sample Number: **L0605548-14**
Client ID: **SM138SB01052306**
Matrix: **Soil**
Workgroup Number: **WG214069**
Collect Date: **05/23/2006 11:20**

PrePrep Method: **NONE**
Prep Method: **3545**
Analytical Method: **8270C**
Analyst: **ALT**
Dilution: **20**
Units: **ug/kg**

Instrument: **HPMS5**
Prep Date: **05/24/2006 13:10**
Cal Date: **05/15/2006 13:30**
Run Date: **05/26/2006 21:26**
File ID: **5M40902**
Percent Solid: **86.6**

Analyte	CAS. Number	Result	Qual	PQL	SQL
Anthracene	120-12-7		U	3760	1880
Carbazole	86-74-8		U	3760	1880
Di-N-Butylphthalate	84-74-2		U	3760	1880
Fluoranthene	206-44-0		U	3760	1880
Pyrene	129-00-0		U	3760	1880
Butylbenzylphthalate	85-68-7		U	3760	1880
3,3'-Dichlorobenzidine	91-94-1		U	7530	3760
Benzo(a)anthracene	56-55-3		U	3760	1880
Chrysene	218-01-9		U	3760	1880
bis(2-Ethylhexyl)phthalate	117-81-7		U	3760	1880
Di-n-octylphthalate	117-84-0		U	3760	1880
Benzo(b)fluoranthene	205-99-2		U	3760	1880
Benzo(k)fluoranthene	207-08-9		U	3760	1880
Benzo(a)pyrene	50-32-8		U	3760	1880
Indeno(1,2,3-cd)pyrene	193-39-5		U	3760	1880
Dibenzo(a,h)Anthracene	53-70-3		U	3760	1880
Benzo(g,h,i)Perylene	191-24-2		U	3760	1880
1,2,4,5-Tetrachlorobenzene	95-94-3		U	3760	1880

Surrogate	% Recovery	Lower	Upper	Qual
2-Fluorophenol		25	121	*
Phenol-d5		24	113	*
Nitrobenzene-d5		23	120	*
2-Fluorobiphenyl		30	115	*
2,4,6-Tribromophenol		19	122	*
P-Terphenyl-d14		18	137	*

* Surrogate or spike compound out of range
U Not detected at or above the reporting limit

Report Number: **L0605548**
Report Date : **June 12, 2006**

Sample Number: **L0605548-15**
Client ID: **SM138SB01052306 MS**
Matrix: **Soil**
Workgroup Number: **WG214069**
Collect Date: **05/23/2006 11:20**

PrePrep Method: **NONE**
Prep Method: **3545**
Analytical Method: **8270C**
Analyst: **ALT**
Dilution: **20**
Units: **ug/kg**

Instrument: **HPMS5**
Prep Date: **05/24/2006 13:10**
Cal Date: **05/15/2006 13:30**
Run Date: **05/26/2006 21:58**
File ID: **5M40903**
Percent Solid: **86.6**

Analyte	CAS. Number	Result	Qual	PQL	SQL
Benzaldehyde	100-52-7		U	3810	1910
Phenol	108-95-2		U	3810	1910
Bis(2-Chloroethyl)ether	111-44-4		U	3810	1910
2-Chlorophenol	95-57-8		U	3810	1910
2-Methylphenol	95-48-7		U	3810	1910
Acetophenone	98-86-2		U	3810	1910
bis(2-Chloroisopropyl)ether	108-60-1	1950	J	3810	1910
3-,4-Methylphenol	106-44-5		U	3810	1910
N-Nitroso-di-n-propylamine	621-64-7	2160	J	3810	1910
Hexachloroethane	67-72-1		U	3810	1910
Nitrobenzene	98-95-3		U	3810	1910
Isophorone	78-59-1	2110	J	3810	1910
2-Nitrophenol	88-75-5		U	3810	1910
2,4-Dimethylphenol	105-67-9		U	3810	1910
Bis(2-Chloroethoxy)Methane	111-91-1	1910	J	3810	1910
2,4-Dichlorophenol	120-83-2		U	3810	1910
Naphthalene	91-20-3		U	3810	1910
4-Chloroaniline	106-47-8		U	3810	1910
Hexachlorobutadiene	87-68-3		U	3810	1910
Caprolactam	105-60-2		U	3810	1910
4-Chloro-3-methylphenol	59-50-7	2040	J	3810	1910
2-Methylnaphthalene	91-57-6	1980	J	3810	1910
Hexachlorocyclopentadiene	77-47-4		U	3810	1910
2,4,6-Trichlorophenol	88-06-2		U	3810	1910
2,4,5-Trichlorophenol	95-95-4		U	3810	1910
1,1'-Biphenyl	92-52-4		U	3810	1910
2-Chloronaphthalene	91-58-7	1990	J	3810	1910
2-Nitroaniline	88-74-4		U	19100	7630
Dimethylphthalate	131-11-3	2190	J	3810	1910
Acenaphthylene	208-96-8	2110	J	3810	1910
2,6-Dinitrotoluene	606-20-2		U	3810	1910
3-Nitroaniline	99-09-2		U	19100	7630
Acenaphthene	83-32-9	2050	J	3810	1910
2,4-Dinitrophenol	51-28-5		U	19100	7630
4-Nitrophenol	100-02-7		U	19100	7630
Dibenzofuran	132-64-9	2060	J	3810	1910
2,4-Dinitrotoluene	121-14-2		U	3810	1910
Diethylphthalate	84-66-2	2310	J	3810	1910
4-Chlorophenyl-phenyl ether	7005-72-3	2000	J	3810	1910
Fluorene	86-73-7	2230	J	3810	1910
4-Nitroaniline	100-01-6		U	19100	7630
4,6-Dinitro-2-methylphenol	534-52-1		U	19100	7630
N-Nitrosodiphenylamine	86-30-6	1980	J	3810	1910
4-Bromophenyl-phenylether	101-55-3	1940	J	3810	1910
Hexachlorobenzene	118-74-1	2150	J	3810	1910
Atrazine	1912-24-9		U	3810	1910
Pentachlorophenol	87-86-5		U	19100	7630
Phenanthrene	85-01-8	2440	J	3810	1910

Report Number: **L0605548**
Report Date : **June 12, 2006**

Sample Number: **L0605548-15**
Client ID: **SM138SB01052306 MS**
Matrix: **Soil**
Workgroup Number: **WG214069**
Collect Date: **05/23/2006 11:20**

PrePrep Method: **NONE**
Prep Method: **3545**
Analytical Method: **8270C**
Analyst: **ALT**
Dilution: **20**
Units: **ug/kg**

Instrument: **HPMS5**
Prep Date: **05/24/2006 13:10**
Cal Date: **05/15/2006 13:30**
Run Date: **05/26/2006 21:58**
File ID: **5M40903**
Percent Solid: **86.6**

Analyte	CAS. Number	Result	Qual	PQL	SQL
Anthracene	120-12-7	2490	J	3810	1910
Carbazole	86-74-8	2460	J	3810	1910
Di-N-Butylphthalate	84-74-2	2430	J	3810	1910
Fluoranthene	206-44-0	2480	J	3810	1910
Pyrene	129-00-0	2700	J	3810	1910
Butylbenzylphthalate	85-68-7	2940	J	3810	1910
3,3'-Dichlorobenzidine	91-94-1		U	7630	3810
Benzo(a)anthracene	56-55-3	2560	J	3810	1910
Chrysene	218-01-9	2400	J	3810	1910
bis(2-Ethylhexyl)phthalate	117-81-7	3790	J	3810	1910
Di-n-octylphthalate	117-84-0	4250		3810	1910
Benzo(b)fluoranthene	205-99-2	2710	J	3810	1910
Benzo(k)fluoranthene	207-08-9	2850	J	3810	1910
Benzo(a)pyrene	50-32-8	2500	J	3810	1910
Indeno(1,2,3-cd)pyrene	193-39-5		U	3810	1910
Dibenzo(a,h)Anthracene	53-70-3		U	3810	1910
Benzo(g,h,i)Perylene	191-24-2		U	3810	1910
1,2,4,5-Tetrachlorobenzene	95-94-3		U	3810	1910

Surrogate	% Recovery	Lower	Upper	Qual
2-Fluorophenol		25	121	*
Phenol-d5		24	113	*
Nitrobenzene-d5		23	120	*
2-Fluorobiphenyl		30	115	*
2,4,6-Tribromophenol		19	122	*
P-Terphenyl-d14		18	137	*

* Surrogate or spike compound out of range
J The analyte was positively identified, but the quantitation was below the RL
U Not detected at or above the reporting limit

Report Number: **L0605548**
Report Date : **June 12, 2006**

Sample Number: **L0605548-16**
Client ID: **SM138SB01052306 MSD**
Matrix: **Soil**
Workgroup Number: **WG214069**
Collect Date: **05/23/2006 11:20**

PrePrep Method: **NONE**
Prep Method: **3545**
Analytical Method: **8270C**
Analyst: **ALT**
Dilution: **20**
Units: **ug/kg**

Instrument: **HPMS5**
Prep Date: **05/24/2006 13:10**
Cal Date: **05/15/2006 13:30**
Run Date: **05/26/2006 22:31**
File ID: **5M40904**
Percent Solid: **86.6**

Analyte	CAS. Number	Result	Qual	PQL	SQL
Benzaldehyde	100-52-7		U	3810	1910
Phenol	108-95-2		U	3730	1860
Bis(2-Chloroethyl)ether	111-44-4		U	3730	1860
2-Chlorophenol	95-57-8		U	3730	1860
2-Methylphenol	95-48-7		U	3730	1860
Acetophenone	98-86-2		U	3730	1860
bis(2-Chloroisopropyl)ether	108-60-1		U	3730	1860
3-,4-Methylphenol	106-44-5		U	3730	1860
N-Nitroso-di-n-propylamine	621-64-7		U	3730	1860
Hexachloroethane	67-72-1		U	3730	1860
Nitrobenzene	98-95-3		U	3730	1860
Isophorone	78-59-1		U	3730	1860
2-Nitrophenol	88-75-5		U	3730	1860
2,4-Dimethylphenol	105-67-9		U	3730	1860
Bis(2-Chloroethoxy)Methane	111-91-1		U	3730	1860
2,4-Dichlorophenol	120-83-2		U	3730	1860
Naphthalene	91-20-3		U	3730	1860
4-Chloroaniline	106-47-8		U	3730	1860
Hexachlorobutadiene	87-68-3		U	3730	1860
Caprolactam	105-60-2		U	3810	1910
4-Chloro-3-methylphenol	59-50-7		U	3730	1860
2-Methylnaphthalene	91-57-6		U	3730	1860
Hexachlorocyclopentadiene	77-47-4		U	3730	1860
2,4,6-Trichlorophenol	88-06-2		U	3730	1860
2,4,5-Trichlorophenol	95-95-4		U	3730	1860
1,1'-Biphenyl	92-52-4		U	3810	1910
2-Chloronaphthalene	91-58-7		U	3730	1860
2-Nitroaniline	88-74-4		U	18600	7460
Dimethylphthalate	131-11-3		U	3730	1860
Acenaphthylene	208-96-8		U	3730	1860
2,6-Dinitrotoluene	606-20-2		U	3730	1860
3-Nitroaniline	99-09-2		U	18600	7460
Acenaphthene	83-32-9		U	3730	1860
2,4-Dinitrophenol	51-28-5		U	18600	7460
4-Nitrophenol	100-02-7		U	18600	7460
Dibenzofuran	132-64-9		U	3730	1860
2,4-Dinitrotoluene	121-14-2		U	3730	1860
Diethylphthalate	84-66-2		U	3730	1860
4-Chlorophenyl-phenyl ether	7005-72-3		U	3730	1860
Fluorene	86-73-7		U	3730	1860
4-Nitroaniline	100-01-6		U	18600	7460
4,6-Dinitro-2-methylphenol	534-52-1		U	18600	7460
N-Nitrosodiphenylamine	86-30-6		U	3730	1860
4-Bromophenyl-phenylether	101-55-3		U	3730	1860
Hexachlorobenzene	118-74-1		U	3730	1860
Atrazine	1912-24-9		U	3810	1910
Pentachlorophenol	87-86-5		U	18600	7460
Phenanthrene	85-01-8	1960	J	3730	1860

Report Number: **L0605548**
Report Date : **June 12, 2006**

Sample Number: **L0605548-16**
Client ID: **SM138SB01052306 MSD**
Matrix: **Soil**
Workgroup Number: **WG214069**
Collect Date: **05/23/2006 11:20**

PrePrep Method: **NONE**
Prep Method: **3545**
Analytical Method: **8270C**
Analyst: **ALT**
Dilution: **20**
Units: **ug/kg**

Instrument: **HPMS5**
Prep Date: **05/24/2006 13:10**
Cal Date: **05/15/2006 13:30**
Run Date: **05/26/2006 22:31**
File ID: **5M40904**
Percent Solid: **86.6**

Analyte	CAS. Number	Result	Qual	PQL	SQL
Anthracene	120-12-7	1940	J	3730	1860
Carbazole	86-74-8	2100	J	3730	1860
Di-N-Butylphthalate	84-74-2	1880	J	3730	1860
Fluoranthene	206-44-0	2010	J	3730	1860
Pyrene	129-00-0	2170	J	3730	1860
Butylbenzylphthalate	85-68-7	2320	J	3730	1860
3,3'-Dichlorobenzidine	91-94-1		U	7460	3730
Benzo(a)anthracene	56-55-3	2130	J	3730	1860
Chrysene	218-01-9	2100	J	3730	1860
bis(2-Ethylhexyl)phthalate	117-81-7	3280	J	3730	1860
Di-n-octylphthalate	117-84-0	3250	J	3730	1860
Benzo(b)fluoranthene	205-99-2	2120	J	3730	1860
Benzo(k)fluoranthene	207-08-9	2460	J	3730	1860
Benzo(a)pyrene	50-32-8		U	3730	1860
Indeno(1,2,3-cd)pyrene	193-39-5		U	3730	1860
Dibenzo(a,h)Anthracene	53-70-3		U	3730	1860
Benzo(g,h,i)Perylene	191-24-2		U	3730	1860
1,2,4,5-Tetrachlorobenzene	95-94-3		U	3810	1910

Surrogate	% Recovery	Lower	Upper	Qual
2-Fluorophenol		25	121	*
Phenol-d5		24	113	*
Nitrobenzene-d5		23	120	*
2-Fluorobiphenyl		30	115	*
2,4,6-Tribromophenol		19	122	*
P-Terphenyl-d14		18	137	*

***** Surrogate or spike compound out of range
J The analyte was positively identified, but the quantitation was below the RL
U Not detected at or above the reporting limit

Report Number: **L0605548**
Report Date : **June 12, 2006**

Sample Number: **L0605548-17**
Client ID: **SM137SB02052306**
Matrix: **Soil**
Workgroup Number: **WG214069**
Collect Date: **05/23/2006 09:25**

PrePrep Method: **NONE**
Prep Method: **3545**
Analytical Method: **8270C**
Analyst: **ALT**
Dilution: **20**
Units: **ug/kg**

Instrument: **HPMS5**
Prep Date: **05/24/2006 13:10**
Cal Date: **05/15/2006 13:30**
Run Date: **05/26/2006 23:03**
File ID: **5M40905**
Percent Solid: **79.1**

Analyte	CAS. Number	Result	Qual	PQL	SQL
Benzaldehyde	100-52-7		U	4170	2090
Phenol	108-95-2		U	4300	2150
Bis(2-Chloroethyl)ether	111-44-4		U	4300	2150
2-Chlorophenol	95-57-8		U	4300	2150
2-Methylphenol	95-48-7		U	4300	2150
Acetophenone	98-86-2		U	4300	2150
bis(2-Chloroisopropyl)ether	108-60-1		U	4300	2150
3-,4-Methylphenol	106-44-5		U	4300	2150
N-Nitroso-di-n-propylamine	621-64-7		U	4300	2150
Hexachloroethane	67-72-1		U	4300	2150
Nitrobenzene	98-95-3		U	4300	2150
Isophorone	78-59-1		U	4300	2150
2-Nitrophenol	88-75-5		U	4300	2150
2,4-Dimethylphenol	105-67-9		U	4300	2150
Bis(2-Chloroethoxy)Methane	111-91-1		U	4300	2150
2,4-Dichlorophenol	120-83-2		U	4300	2150
Naphthalene	91-20-3		U	4300	2150
4-Chloroaniline	106-47-8		U	4300	2150
Hexachlorobutadiene	87-68-3		U	4300	2150
Caprolactam	105-60-2		U	4170	2090
4-Chloro-3-methylphenol	59-50-7		U	4300	2150
2-Methylnaphthalene	91-57-6		U	4300	2150
Hexachlorocyclopentadiene	77-47-4		U	4300	2150
2,4,6-Trichlorophenol	88-06-2		U	4300	2150
2,4,5-Trichlorophenol	95-95-4		U	4300	2150
1,1'-Biphenyl	92-52-4		U	4170	2090
2-Chloronaphthalene	91-58-7		U	4300	2150
2-Nitroaniline	88-74-4		U	21500	8600
Dimethylphthalate	131-11-3		U	4300	2150
Acenaphthylene	208-96-8		U	4300	2150
2,6-Dinitrotoluene	606-20-2		U	4300	2150
3-Nitroaniline	99-09-2		U	21500	8600
Acenaphthene	83-32-9		U	4300	2150
2,4-Dinitrophenol	51-28-5		U	21500	8600
4-Nitrophenol	100-02-7		U	21500	8600
Dibenzofuran	132-64-9		U	4300	2150
2,4-Dinitrotoluene	121-14-2		U	4300	2150
Diethylphthalate	84-66-2		U	4300	2150
4-Chlorophenyl-phenyl ether	7005-72-3		U	4300	2150
Fluorene	86-73-7		U	4300	2150
4-Nitroaniline	100-01-6		U	21500	8600
4,6-Dinitro-2-methylphenol	534-52-1		U	21500	8600
N-Nitrosodiphenylamine	86-30-6		U	4300	2150
4-Bromophenyl-phenylether	101-55-3		U	4300	2150
Hexachlorobenzene	118-74-1		U	4300	2150
Atrazine	1912-24-9		U	4170	2090
Pentachlorophenol	87-86-5		U	21500	8600
Phenanthrene	85-01-8		U	4300	2150

Report Number: **L0605548**
Report Date : **June 12, 2006**

Sample Number: **L0605548-17**
Client ID: **SM137SB02052306**
Matrix: **Soil**
Workgroup Number: **WG214069**
Collect Date: **05/23/2006 09:25**

PrePrep Method: **NONE**
Prep Method: **3545**
Analytical Method: **8270C**
Analyst: **ALT**
Dilution: **20**
Units: **ug/kg**

Instrument: **HPMS5**
Prep Date: **05/24/2006 13:10**
Cal Date: **05/15/2006 13:30**
Run Date: **05/26/2006 23:03**
File ID: **5M40905**
Percent Solid: **79.1**

Analyte	CAS. Number	Result	Qual	PQL	SQL
Anthracene	120-12-7		U	4300	2150
Carbazole	86-74-8		U	4300	2150
Di-N-Butylphthalate	84-74-2		U	4300	2150
Fluoranthene	206-44-0		U	4300	2150
Pyrene	129-00-0		U	4300	2150
Butylbenzylphthalate	85-68-7		U	4300	2150
3,3'-Dichlorobenzidine	91-94-1		U	8600	4300
Benzo(a)anthracene	56-55-3		U	4300	2150
Chrysene	218-01-9		U	4300	2150
bis(2-Ethylhexyl)phthalate	117-81-7		U	4300	2150
Di-n-octylphthalate	117-84-0		U	4300	2150
Benzo(b)fluoranthene	205-99-2		U	4300	2150
Benzo(k)fluoranthene	207-08-9		U	4300	2150
Benzo(a)pyrene	50-32-8		U	4300	2150
Indeno(1,2,3-cd)pyrene	193-39-5		U	4300	2150
Dibenzo(a,h)Anthracene	53-70-3		U	4300	2150
Benzo(g,h,i)Perylene	191-24-2		U	4300	2150
1,2,4,5-Tetrachlorobenzene	95-94-3		U	4300	2150

Surrogate	% Recovery	Lower	Upper	Qual
2-Fluorophenol		25	121	*
Phenol-d5		24	113	*
Nitrobenzene-d5		23	120	*
2-Fluorobiphenyl		30	115	*
2,4,6-Tribromophenol		19	122	*
P-Terphenyl-d14		18	137	*

* Surrogate or spike compound out of range
U Not detected at or above the reporting limit

Report Number: **L0605548**
Report Date : **June 12, 2006**

Sample Number: **L0605548-18**
Client ID: **SM139SB03052306**
Matrix: **Soil**
Workgroup Number: **WG214069**
Collect Date: **05/23/2006 14:40**

PrePrep Method: **NONE**
Prep Method: **3545**
Analytical Method: **8270C**
Analyst: **ALT**
Dilution: **1**
Units: **ug/kg**

Instrument: **HPMS5**
Prep Date: **05/24/2006 13:10**
Cal Date: **05/15/2006 13:30**
Run Date: **05/25/2006 18:53**
File ID: **5M40878**
Percent Solid: **67.4**

Analyte	CAS. Number	Result	Qual	PQL	SQL
Benzaldehyde	100-52-7		U	245	122
Phenol	108-95-2		U	218	109
Bis(2-Chloroethyl)ether	111-44-4		U	218	109
2-Chlorophenol	95-57-8		U	218	109
2-Methylphenol	95-48-7		U	218	109
Acetophenone	98-86-2		U	218	109
bis(2-Chloroisopropyl)ether	108-60-1		U	218	109
3-,4-Methylphenol	106-44-5		U	218	109
N-Nitroso-di-n-propylamine	621-64-7		U	218	109
Hexachloroethane	67-72-1		U	218	109
Nitrobenzene	98-95-3		U	218	109
Isophorone	78-59-1		U	218	109
2-Nitrophenol	88-75-5		U	218	109
2,4-Dimethylphenol	105-67-9		U	218	109
Bis(2-Chloroethoxy)Methane	111-91-1		U	218	109
2,4-Dichlorophenol	120-83-2		U	218	109
Naphthalene	91-20-3		U	218	109
4-Chloroaniline	106-47-8		U	218	109
Hexachlorobutadiene	87-68-3		U	218	109
Caprolactam	105-60-2		U	245	122
4-Chloro-3-methylphenol	59-50-7		U	218	109
2-Methylnaphthalene	91-57-6		U	218	109
Hexachlorocyclopentadiene	77-47-4		U	218	109
2,4,6-Trichlorophenol	88-06-2		U	218	109
2,4,5-Trichlorophenol	95-95-4		U	218	109
1,1'-Biphenyl	92-52-4		U	245	122
2-Chloronaphthalene	91-58-7		U	218	109
2-Nitroaniline	88-74-4		U	1090	437
Dimethylphthalate	131-11-3		U	218	109
Acenaphthylene	208-96-8		U	218	109
2,6-Dinitrotoluene	606-20-2		U	218	109
3-Nitroaniline	99-09-2		U	1090	437
Acenaphthene	83-32-9		U	218	109
2,4-Dinitrophenol	51-28-5		U	1090	437
4-Nitrophenol	100-02-7		U	1090	437
Dibenzofuran	132-64-9		U	218	109
2,4-Dinitrotoluene	121-14-2		U	218	109
Diethylphthalate	84-66-2		U	218	109
4-Chlorophenyl-phenyl ether	7005-72-3		U	218	109
Fluorene	86-73-7		U	218	109
4-Nitroaniline	100-01-6		U	1090	437
4,6-Dinitro-2-methylphenol	534-52-1		U	1090	437
N-Nitrosodiphenylamine	86-30-6		U	218	109
4-Bromophenyl-phenylether	101-55-3		U	218	109
Hexachlorobenzene	118-74-1		U	218	109
Atrazine	1912-24-9		U	245	122
Pentachlorophenol	87-86-5		U	1090	437
Phenanthrene	85-01-8		U	218	109

Report Number: **L0605548**
Report Date : **June 12, 2006**

Sample Number: **L0605548-18**
Client ID: **SM139SB03052306**
Matrix: **Soil**
Workgroup Number: **WG214069**
Collect Date: **05/23/2006 14:40**

PrePrep Method: **NONE**
Prep Method: **3545**
Analytical Method: **8270C**
Analyst: **ALT**
Dilution: **1**
Units: **ug/kg**

Instrument: **HPMS5**
Prep Date: **05/24/2006 13:10**
Cal Date: **05/15/2006 13:30**
Run Date: **05/25/2006 18:53**
File ID: **5M40878**
Percent Solid: **67.4**

Analyte	CAS. Number	Result	Qual	PQL	SQL
Anthracene	120-12-7		U	218	109
Carbazole	86-74-8		U	218	109
Di-N-Butylphthalate	84-74-2		U	218	109
Fluoranthene	206-44-0		U	218	109
Pyrene	129-00-0		U	218	109
Butylbenzylphthalate	85-68-7		U	218	109
3,3'-Dichlorobenzidine	91-94-1		U	437	218
Benzo(a)anthracene	56-55-3		U	218	109
Chrysene	218-01-9		U	218	109
bis(2-Ethylhexyl)phthalate	117-81-7		U	218	109
Di-n-octylphthalate	117-84-0		U	218	109
Benzo(b)fluoranthene	205-99-2		U	218	109
Benzo(k)fluoranthene	207-08-9		U	218	109
Benzo(a)pyrene	50-32-8		U	218	109
Indeno(1,2,3-cd)pyrene	193-39-5		U	218	109
Dibenzo(a,h)Anthracene	53-70-3		U	218	109
Benzo(g,h,i)Perylene	191-24-2		U	218	109
1,2,4,5-Tetrachlorobenzene	95-94-3		U	218	109

Surrogate	% Recovery	Lower	Upper	Qual
2-Fluorophenol	46.9	25	121	
Phenol-d5	59.0	24	113	
Nitrobenzene-d5	48.8	23	120	
2-Fluorobiphenyl	47.7	30	115	
2,4,6-Tribromophenol	78.4	19	122	
P-Terphenyl-d14	70.1	18	137	

U Not detected at or above the reporting limit

Report Number: **L0605548**
Report Date : **June 12, 2006**

Sample Number: **L0605548-19**
Client ID: **SM138SB02052306**
Matrix: **Soil**
Workgroup Number: **WG214069**
Collect Date: **05/23/2006 12:10**

PrePrep Method: **NONE**
Prep Method: **3545**
Analytical Method: **8270C**
Analyst: **ALT**
Dilution: **5**
Units: **ug/kg**

Instrument: **HPMS5**
Prep Date: **05/24/2006 13:10**
Cal Date: **05/15/2006 13:30**
Run Date: **05/30/2006 21:43**
File ID: **5M40929**
Percent Solid: **57.1**

Analyte	CAS. Number	Result	Qual	PQL	SQL
Benzaldehyde	100-52-7		U	1440	722
Phenol	108-95-2		U	1450	725
Bis(2-Chloroethyl)ether	111-44-4		U	1450	725
2-Chlorophenol	95-57-8		U	1450	725
2-Methylphenol	95-48-7		U	1450	725
Acetophenone	98-86-2		U	1450	725
bis(2-Chloroisopropyl)ether	108-60-1		U	1450	725
3-,4-Methylphenol	106-44-5		U	1450	725
N-Nitroso-di-n-propylamine	621-64-7		U	1450	725
Hexachloroethane	67-72-1		U	1450	725
Nitrobenzene	98-95-3		U	1450	725
Isophorone	78-59-1		U	1450	725
2-Nitrophenol	88-75-5		U	1450	725
2,4-Dimethylphenol	105-67-9		U	1450	725
Bis(2-Chloroethoxy)Methane	111-91-1		U	1450	725
2,4-Dichlorophenol	120-83-2		U	1450	725
Naphthalene	91-20-3		U	1450	725
4-Chloroaniline	106-47-8		U	1450	725
Hexachlorobutadiene	87-68-3		U	1450	725
Caprolactam	105-60-2		U	1440	722
4-Chloro-3-methylphenol	59-50-7		U	1450	725
2-Methylnaphthalene	91-57-6		U	1450	725
Hexachlorocyclopentadiene	77-47-4		U	1450	725
2,4,6-Trichlorophenol	88-06-2		U	1450	725
2,4,5-Trichlorophenol	95-95-4		U	1450	725
1,1'-Biphenyl	92-52-4		U	1440	722
2-Chloronaphthalene	91-58-7		U	1450	725
2-Nitroaniline	88-74-4		U	7250	2900
Dimethylphthalate	131-11-3		U	1450	725
Acenaphthylene	208-96-8		U	1450	725
2,6-Dinitrotoluene	606-20-2		U	1450	725
3-Nitroaniline	99-09-2		U	7250	2900
Acenaphthene	83-32-9		U	1450	725
2,4-Dinitrophenol	51-28-5		U	7250	2900
4-Nitrophenol	100-02-7		U	7250	2900
Dibenzofuran	132-64-9		U	1450	725
2,4-Dinitrotoluene	121-14-2		U	1450	725
Diethylphthalate	84-66-2		U	1450	725
4-Chlorophenyl-phenyl ether	7005-72-3		U	1450	725
Fluorene	86-73-7		U	1450	725
4-Nitroaniline	100-01-6		U	7250	2900
4,6-Dinitro-2-methylphenol	534-52-1		U	7250	2900
N-Nitrosodiphenylamine	86-30-6		U	1450	725
4-Bromophenyl-phenylether	101-55-3		U	1450	725
Hexachlorobenzene	118-74-1		U	1450	725
Atrazine	1912-24-9		U	1440	722
Pentachlorophenol	87-86-5		U	7250	2900
Phenanthrene	85-01-8		U	1450	725

Report Number: **L0605548**
Report Date : **June 12, 2006**

Sample Number: **L0605548-19**
Client ID: **SM138SB02052306**
Matrix: **Soil**
Workgroup Number: **WG214069**
Collect Date: **05/23/2006 12:10**

PrePrep Method: **NONE**
Prep Method: **3545**
Analytical Method: **8270C**
Analyst: **ALT**
Dilution: **5**
Units: **ug/kg**

Instrument: **HPMS5**
Prep Date: **05/24/2006 13:10**
Cal Date: **05/15/2006 13:30**
Run Date: **05/30/2006 21:43**
File ID: **5M40929**
Percent Solid: **57.1**

Analyte	CAS. Number	Result	Qual	PQL	SQL
Anthracene	120-12-7		U	1450	725
Carbazole	86-74-8		U	1450	725
Di-N-Butylphthalate	84-74-2		U	1450	725
Fluoranthene	206-44-0		U	1450	725
Pyrene	129-00-0		U	1450	725
Butylbenzylphthalate	85-68-7	840	J	1450	725
3,3'-Dichlorobenzidine	91-94-1		U	2900	1450
Benzo(a)anthracene	56-55-3		U	1450	725
Chrysene	218-01-9		U	1450	725
bis(2-Ethylhexyl)phthalate	117-81-7	17200		1450	725
Di-n-octylphthalate	117-84-0		U	1450	725
Benzo(b)fluoranthene	205-99-2		U	1450	725
Benzo(k)fluoranthene	207-08-9		U	1450	725
Benzo(a)pyrene	50-32-8		U	1450	725
Indeno(1,2,3-cd)pyrene	193-39-5		U	1450	725
Dibenzo(a,h)Anthracene	53-70-3		U	1450	725
Benzo(g,h,i)Perylene	191-24-2		U	1450	725
1,2,4,5-Tetrachlorobenzene	95-94-3		U	1450	725

Surrogate	% Recovery	Lower	Upper	Qual
2-Fluorophenol	39.4	25	121	
Phenol-d5	54.5	24	113	
Nitrobenzene-d5	46.5	23	120	
2-Fluorobiphenyl	54.0	30	115	
2,4,6-Tribromophenol		19	122	*
P-Terphenyl-d14	63.7	18	137	

* Surrogate or spike compound out of range
J The analyte was positively identified, but the quantitation was below the RL
U Not detected at or above the reporting limit

Report Number: **L0605548**
Report Date : **June 12, 2006**

Sample Number: **L0605548-19**
Client ID: **SM138SB02052306**
Matrix: **Soil**
Workgroup Number: **WG214500**
Collect Date: **05/23/2006 12:10**
Sample Tag: **RE**

PrePrep Method: **NONE**
Prep Method: **3545**
Analytical Method: **8270C**
Analyst: **ALT**
Dilution: **10**
Units: **ug/kg**

Instrument: **HPMS5**
Prep Date: **06/01/2006 08:30**
Cal Date: **05/15/2006 13:30**
Run Date: **06/02/2006 23:42**
File ID: **5M41007**
Percent Solid: **57.1**

Analyte	CAS. Number	Result	Qual	PQL	SQL
Benzaldehyde	100-52-7		U	2840	1420
Phenol	108-95-2		U	2840	1420
Bis(2-Chloroethyl)ether	111-44-4		U	2840	1420
2-Chlorophenol	95-57-8		U	2840	1420
2-Methylphenol	95-48-7		U	2840	1420
Acetophenone	98-86-2		U	2840	1420
bis(2-Chloroisopropyl)ether	108-60-1		U	2840	1420
3-,4-Methylphenol	106-44-5		U	2840	1420
N-Nitroso-di-n-propylamine	621-64-7		U	2840	1420
Hexachloroethane	67-72-1		U	2840	1420
Nitrobenzene	98-95-3		U	2840	1420
Isophorone	78-59-1		U	2840	1420
2-Nitrophenol	88-75-5		U	2840	1420
2,4-Dimethylphenol	105-67-9		U	2840	1420
Bis(2-Chloroethoxy)Methane	111-91-1		U	2840	1420
2,4-Dichlorophenol	120-83-2		U	2840	1420
Naphthalene	91-20-3		U	2840	1420
4-Chloroaniline	106-47-8		U	2840	1420
Hexachlorobutadiene	87-68-3		U	2840	1420
Caprolactam	105-60-2		U	2840	1420
4-Chloro-3-methylphenol	59-50-7		U	2840	1420
2-Methylnaphthalene	91-57-6		U	2840	1420
Hexachlorocyclopentadiene	77-47-4		U	2840	1420
2,4,6-Trichlorophenol	88-06-2		U	2840	1420
2,4,5-Trichlorophenol	95-95-4		U	2840	1420
1,1'-Biphenyl	92-52-4		U	2890	1440
2-Chloronaphthalene	91-58-7		U	2840	1420
2-Nitroaniline	88-74-4		U	14200	5670
Dimethylphthalate	131-11-3		U	2840	1420
Acenaphthylene	208-96-8		U	2840	1420
2,6-Dinitrotoluene	606-20-2		U	2840	1420
3-Nitroaniline	99-09-2		U	14200	5670
Acenaphthene	83-32-9		U	2840	1420
2,4-Dinitrophenol	51-28-5		U	14200	5670
4-Nitrophenol	100-02-7		U	14200	5670
Dibenzofuran	132-64-9		U	2840	1420
2,4-Dinitrotoluene	121-14-2		U	2840	1420
Diethylphthalate	84-66-2		U	2840	1420
4-Chlorophenyl-phenyl ether	7005-72-3		U	2840	1420
Fluorene	86-73-7		U	2840	1420
4-Nitroaniline	100-01-6		U	14200	5670
4,6-Dinitro-2-methylphenol	534-52-1		U	14200	5670
N-Nitrosodiphenylamine	86-30-6		U	2840	1420
4-Bromophenyl-phenylether	101-55-3		U	2840	1420
Hexachlorobenzene	118-74-1		U	2840	1420
Atrazine	1912-24-9		U	2840	1420
Pentachlorophenol	87-86-5		U	14200	5670
Phenanthrene	85-01-8		U	2840	1420

Report Number: **L0605548**
Report Date : **June 12, 2006**

Sample Number: **L0605548-19**
Client ID: **SM138SB02052306**
Matrix: **Soil**
Workgroup Number: **WG214500**
Collect Date: **05/23/2006 12:10**
Sample Tag: **RE**

PrePrep Method: **NONE**
Prep Method: **3545**
Analytical Method: **8270C**
Analyst: **ALT**
Dilution: **10**
Units: **ug/kg**

Instrument: **HPMS5**
Prep Date: **06/01/2006 08:30**
Cal Date: **05/15/2006 13:30**
Run Date: **06/02/2006 23:42**
File ID: **5M41007**
Percent Solid: **57.1**

Analyte	CAS. Number	Result	Qual	PQL	SQL
Anthracene	120-12-7		U	2840	1420
Carbazole	86-74-8		U	2840	1420
Di-N-Butylphthalate	84-74-2		U	2840	1420
Fluoranthene	206-44-0		U	2840	1420
Pyrene	129-00-0		U	2840	1420
Butylbenzylphthalate	85-68-7		U	2840	1420
3,3'-Dichlorobenzidine	91-94-1		U	5670	2840
Benzo(a)anthracene	56-55-3		U	2840	1420
Chrysene	218-01-9		U	2840	1420
bis(2-Ethylhexyl)phthalate	117-81-7	33800		2840	1420
Di-n-octylphthalate	117-84-0		U	2840	1420
Benzo(b)fluoranthene	205-99-2		U	2840	1420
Benzo(k)fluoranthene	207-08-9		U	2840	1420
Benzo(a)pyrene	50-32-8		U	2840	1420
Indeno(1,2,3-cd)pyrene	193-39-5		U	2840	1420
Dibenzo(a,h)Anthracene	53-70-3		U	2840	1420
Benzo(g,h,i)Perylene	191-24-2		U	2840	1420
1,2,4,5-Tetrachlorobenzene	95-94-3		U	2840	1420

Surrogate	% Recovery	Lower	Upper	Qual
2-Fluorophenol	36.9	25	121	
Phenol-d5	50.7	24	113	
Nitrobenzene-d5	45.5	23	120	
2-Fluorobiphenyl	51.5	30	115	
2,4,6-Tribromophenol	48.7	19	122	
P-Terphenyl-d14	63.3	18	137	

U Not detected at or above the reporting limit

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1.1.1.1 QC Summary

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Checklist ID: 7491

KEMRON Environmental Services
Data Checklist

Date: 10-MAY-2006
Analyst: CLK
Analyst: NA
Method: 8270
Instrument: HPMS4
Curve Workgroup: WG212888
Analytical Workgroups: ICAL GOOD FOR ACETOPHENONE AS WELL

Runlog ID number:	10322
System Performance Check	
DFTPP	X
Endrin/DDT Breakdown	X
Initial Calibration	X
Average RF	X
Linear Reg or Higher Order Curve	X
Second Source standard % Difference	X
Continuing Calibration /Check Standards	NA
Project/Client Specific Requirements	X
Special Standards	X
Blanks	NA
TCL's	NA
Surrogates	NA
LCS (Laboratory Control Sample)	NA
Recoveries	NA
Surrogates	NA
MS/MSD/Duplicates	NA
Samples	NA
TCL Hits	NA
Spectra of TCL Hits	NA
Surrogates	NA
Internal Standards Criteria	NA
Library Searches	NA
Calculations & Correct Factors	X
Dilutions Run	NA
Reruns	NA
Manual Integrations	X
Case Narrative	NA
Results Reporting/Data Qualifiers	X
KOBRA Workgroup Data	X
Check for Completeness	X
Primary Reviewer	CLK
Secondary Reviewer	MDC
Check for compliance with method and project specific requirements	X
Check the completeness of reported information	X
Check the information for the report narrative	NA
Check the resonableness of the results	X

Primary Reviewer:

Secondary Reviewer:
11-MAY-2006

Generated: MAY-11-2006 13:06:57

Checklist ID: 7552

KEMRON Environmental Services
Data Checklist

Date: 15-MAY-2006
Analyst: ALT
Analyst: NA
Method: 8270
Instrument: HPMS5
Curve Workgroup: NA
Analytical Workgroups: L0605260, L0605232

Runlog ID number:	10383
System Performance Check:	X
DFTPP	X
Endrin/DDT Breakdown	X
Initial Calibration:	NA
Average RF	NA
Linear Reg or Higher Order Curve	NA
Second Source standard % Difference	NA
Continuing Calibration /Check Standards:	X
Project/Client Specific Requirements	X
Special Standards	NA
Blanks:	X
TCL's	X
Surrogates	X
LCS (Laboratory Control Sample):	X
Recoveries	X
Surrogates	X
MS/MSD/Duplicates	X
Samples:	X
TCL Hits	X
Spectra of TCL Hits	X
Surrogates	X
Internal Standards Criteria	X
Library Searches	NA
Calculations & Correct Factors	NA
Dilutions Run	NA
Reruns	NA
Manual Integrations	X
Case Narrative	NA
Results Reporting/Data Qualifiers	X
KOBRA Workgroup Data	X
Check for Completeness	X
Primary Reviewer	ALT
Secondary Reviewer	MDC
Check for compliance with method and project specific requirements	X
Check the completeness of reported information	X
Check the information for the report narrative	NA
Check the resonableness of the results	X
Comments:	

Primary Reviewer:
16-MAY-2006

Secondary Reviewer:
16-MAY-2006

Generated: MAY-16-2006 14:21:51

Checklist ID: 7722

KEMRON Environmental Services
Data Checklist

Date: 25-MAY-2006
Analyst: ALT
Analyst: NA
Method: 8270
Instrument: HPMS5
Curve Workgroup: NA
Analytical Workgroups: L0605455, L0605515, L0605548

Runlog ID number:	10552
System Performance Check:	X
DFTPP	X
Endrin/DDT Breakdown	X
Initial Calibration:	NA
Average RF	NA
Linear Reg or Higher Order Curve	NA
Second Source standard % Difference	NA
Continuing Calibration /Check Standards:	X
Project/Client Specific Requirements	X
Special Standards	X
Blanks:	X
TCL's	X
Surrogates	X
LCS (Laboratory Control Sample):	X
Recoveries	X
Surrogates	X
MS/MSD/Duplicates	X
Samples:	X
TCL Hits	X
Spectra of TCL Hits	X
Surrogates	X
Internal Standards Criteria	X
Library Searches	NA
Calculations & Correct Factors	NA
Dilutions Run	X
Reruns	NA
Manual Integrations	X
Case Narrative	NA
Results Reporting/Data Qualifiers	X
KOBRA Workgroup Data	X
Check for Completeness	X
Primary Reviewer	ALT
Secondary Reviewer	MDC
Check for compliance with method and project specific requirements	X
Check the completeness of reported information	X
Check the information for the report narrative	NA
Check the resonableness of the results	X
Comments:	

Primary Reviewer:
26-MAY-2006

Secondary Reviewer:
26-MAY-2006

Generated: MAY-26-2006 11:37:28

Checklist ID: 7743

KEMRON Environmental Services
Data Checklist

Date: 25-MAY-2006
Analyst: CLK
Analyst: ALT
Method: 8270
Instrument: HPMS4
Curve Workgroup: NA
Analytical Workgroups: L0605531, L0605541, L0605544, L0605565, L0605584

Runlog ID number:	10560
System Performance Check:	X
DFTPP	X
Endrin/DDT Breakdown	X
Initial Calibration:	NA
Average RF	NA
Linear Reg or Higher Order Curve	NA
Second Source standard % Difference	NA
Continuing Calibration /Check Standards:	X
Project/Client Specific Requirements	X
Special Standards	NA
Blanks:	X
TCL's	X
Surrogates	X
LCS (Laboratory Control Sample):	NA
Recoveries	NA
Surrogates	NA
MS/MSD/Duplicates	NA
Samples:	X
TCL Hits	X
Spectra of TCL Hits	X
Surrogates	X
Internal Standards Criteria	X
Library Searches	X
Calculations & Correct Factors	NA
Dilutions Run	NA
Reruns	NA
Manual Integrations	X
Case Narrative	X
Results Reporting/Data Qualifiers	X
KOBRA Workgroup Data	X
Check for Completeness	X
Primary Reviewer	ALT
Secondary Reviewer	MDC
Check for compliance with method and project specific requirements	X
Check the completeness of reported information	X
Check the information for the report narrative	X
Check the resonableness of the results	X
Comments:	
L0605565-03, 04 and 10 need rerun at a dilution	

Primary Reviewer:
26-MAY-2006

Secondary Reviewer:
26-MAY-2006

Generated: MAY-26-2006 14:46:08

Checklist ID: 7766

KEMRON Environmental Services
Data Checklist

Date: 26-MAY-2006
Analyst: ALT
Analyst: NA
Method: 8270
Instrument: HPMS5
Curve Workgroup: NA
Analytical Workgroups: L0605548, L0605576

Runlog ID number:	10577
System Performance Check:	X
DFTPP	X
Endrin/DDT Breakdown	X
Initial Calibration:	NA
Average RF	NA
Linear Reg or Higher Order Curve	NA
Second Source standard % Difference	NA
Continuing Calibration /Check Standards:	X
Project/Client Specific Requirements	X
Special Standards	X
Blanks:	X
TCL's	X
Surrogates	X
LCS (Laboratory Control Sample):	X
Recoveries	X
Surrogates	X
MS/MSD/Duplicates	X
Samples:	X
TCL Hits	X
Spectra of TCL Hits	X
Surrogates	X
Internal Standards Criteria	X
Library Searches	NA
Calculations & Correct Factors	X
Dilutions Run	X
Reruns	NA
Manual Integrations	X
Case Narrative	NA
Results Reporting/Data Qualifiers	X
KOBRA Workgroup Data	X
Check for Completeness	X
Primary Reviewer	ALT
Secondary Reviewer	MDC
Check for compliance with method and project specific requirements	X
Check the completeness of reported information	X
Check the information for the report narrative	NA
Check the resonableness of the results	X
Comments:	
L0605548-12, 13 and 19 need rerun - not reported	
L0605576-02 and 07 need rerun - not reported	

Primary Reviewer:
30-MAY-2006

Secondary Reviewer:
30-MAY-2006

Generated: MAY-30-2006 14:46:42

Checklist ID: 7781

KEMRON Environmental Services
Data Checklist

Date: 30-MAY-2006
Analyst: ALT
Analyst: NA
Method: 8270
Instrument: HPMS5
Curve Workgroup: NA
Analytical Workgroups: L0605548, L0605576, L0605593, L0605596, L0605600

Runlog ID number:	10588
System Performance Check:	X
DFTPP	X
Endrin/DDT Breakdown	X
Initial Calibration:	NA
Average RF	NA
Linear Reg or Higher Order Curve	NA
Second Source standard % Difference	NA
Continuing Calibration /Check Standards:	X
Project/Client Specific Requirements	X
Special Standards	X
Blanks:	X
TCL's	X
Surrogates	X
LCS (Laboratory Control Sample):	X
Recoveries	X
Surrogates	X
MS/MSD/Duplicates	NA
Samples:	X
TCL Hits	X
Spectra of TCL Hits	X
Surrogates	X
Internal Standards Criteria	X
Library Searches	X
Calculations & Correct Factors	NA
Dilutions Run	X
Reruns	NA
Manual Integrations	X
Case Narrative	X
Results Reporting/Data Qualifiers	X
KOBRA Workgroup Data	X
Check for Completeness	X
Primary Reviewer	ALT
Secondary Reviewer	MDC
Check for compliance with method and project specific requirements	X
Check the completeness of reported information	X
Check the information for the report narrative	X
Check the resonableness of the results	X
Comments:	
L0605576-07, L0605548-12 and 19 sent for re-extraction	
L0605600-05 and 10 need rerun at a dilution	

Primary Reviewer:
31-MAY-2006

Secondary Reviewer:
31-MAY-2006

Generated: MAY-31-2006 10:55:41

Checklist ID: 7828

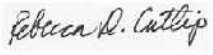
KEMRON Environmental Services
Data Checklist

Date: 01-JUN-2006
Analyst: CLK
Analyst: NA
Method: 8270
Instrument: HPMS4
Curve Workgroup: NA
Analytical Workgroups: L0605660, L0605605(RE), L0605630, LL0605576(RE), L0605599, L0605548(RE)

Runlog ID number:	10634
System Performance Check	
DFTPP	X
Endrin/DDT Breakdown	X
Initial Calibration	NA
Average RF	NA
Linear Reg or Higher Order Curve	NA
Second Source standard % Difference	NA
Continuing Calibration /Check Standards	X
Project/Client Specific Requirements	X
Special Standards	NA
Blanks	X
TCL's	X
Surrogates	X
LCS (Laboratory Control Sample)	X
Recoveries	X
Surrogates	X
MS/MSD/Duplicates	X
Samples	X
TCL Hits	X
Spectra of TCL Hits	X
Surrogates	X
Internal Standards Criteria	X
Library Searches	X
Calculations & Correct Factors	X
Dilutions Run	X
Reruns	NA
Manual Integrations	X
Case Narrative	X
Results Reporting/Data Qualifiers	X
KOBRA Workgroup Data	X
Check for Completeness	X
Primary Reviewer	CLK
Secondary Reviewer	RDC
Check for compliance with method and project specific requirements	X
Check the completeness of reported information	X
Check the information for the report narrative	X
Check the resonableness of the results	X

Primary Reviewer:

Secondary Reviewer:
02-JUN-2006



Generated: JUN-02-2006 15:45:24

Checklist ID: 7854

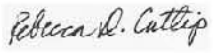
KEMRON Environmental Services
Data Checklist

Date: 02-JUN-2006
Analyst: ALT
Analyst: NA
Method: 8270
Instrument: HPMS5
Curve Workgroup: NA
Analytical Workgroups: L0605548RE, L0605576RE, L0605617, L0605635, L0605660, L0605683, L0606004

Runlog ID number:	10662
System Performance Check:	X
DFTPP	X
Endrin/DDT Breakdown	X
Initial Calibration:	NA
Average RF	NA
Linear Reg or Higher Order Curve	NA
Second Source standard % Difference	NA
Continuing Calibration /Check Standards:	X
Project/Client Specific Requirements	X
Special Standards	X
Blanks:	X
TCL's	X
Surrogates	X
LCS (Laboratory Control Sample):	NA
Recoveries	NA
Surrogates	NA
MS/MSD/Duplicates	X
Samples:	X
TCL Hits	X
Spectra of TCL Hits	X
Surrogates	X
Internal Standards Criteria	X
Library Searches	X
Calculations & Correct Factors	NA
Dilutions Run	X
Reruns	NA
Manual Integrations	X
Case Narrative	X
Results Reporting/Data Qualifiers	X
KOBRA Workgroup Data	X
Check for Completeness	X
Primary Reviewer	ALT
Secondary Reviewer	RDC
Check for compliance with method and project specific requirements	X
Check the completeness of reported information	X
Check the information for the report narrative	X
Check the resonableness of the results	X
Comments:	
L0605683-05 and L0606004-01 need rerun at a dilution	

Primary Reviewer:
05-JUN-2006

Secondary Reviewer:
06-JUN-2006



Generated: JUN-06-2006 16:59:13

Run Log ID: **10322**

KEMRON Environmental Services

Instrument Run Log

Instrument: HPMS4 Dataset: 051006
Analyst1: CLK Analyst2: NA
Method: 8270C SOP: MSS01 Rev: 13
Method: 625 SOP: MSS02 Rev: 8

Column 1 ID: RTI-5MS Column 2 ID: NA

Workgroups:

Internal Standard: STD12522 Surrogate Standard: NA

Comments: ICAL Good for Acetophenone as well

Seq.	File ID	Sample Information	Mat	Dil	Reference	Date/Time
1	4M32961	WG212888-01 50PPM DFTPP	1	1	SOS78-44	05/10/06 13:03
2	4M32962	WG212888-02 50PPM BNA Megamix	1	1	STD12520	05/10/06 13:22
3	4M32963	WG212888-02 50PPM BNA Megamix	1	1	STD12520	05/10/06 13:58
4	4M32964	WG212888-03 3PPM BNA Megamix	1	1	STD12520	05/10/06 14:33
5	4M32965	WG212888-04 15PPM BNA Megamix	1	1	STD12520	05/10/06 15:08
6	4M32966	WG212888-05 25PPM BNA Megamix	1	1	STD12520	05/10/06 15:44
7	4M32967	WG212888-06 80PPM BNA Megamix	1	1	STD12520	05/10/06 16:20
8	4M32968	WG212888-07 120PPM BNA Megamix	1	1	STD12520	05/10/06 16:55
9	4M32969	WG212888-08 100PPM BNA Megamix	1	1	STD12520	05/10/06 17:31
10	4M32970	WG212888-09 50PPM Alt source BNA	1	1	STD12496	05/10/06 18:06
11	4M32971	50PPM Alt source TCL std.	1	1	SOS77-34-4	05/10/06 18:42

Comments

Seq.	Rerun	Dil.	Reason	Analytes
2				
	NA, Wrong STD			
10				
	Alt Source has (#26) Benzoic Acid, (#45) 3-Nitroaniline, and (#74) 3,3'-dichlorobenzidine >25%			
11				
	TCL Alt Source has (#2) Benzadehyde and (#9) Atrazine >25%			

Page: 1 of 1 Approved: 11-MAY-06

006361

Run Log ID: **10383**

KEMRON Environmental Services

Instrument Run Log

Instrument: HPMS5 Dataset: 051506

Analyst1: ALT Analyst2: NA

Method: 8270C SOP: MSS01 Rev: 13

Method: 625 SOP: MSS02 Rev: 8

Column 1 ID: DB-5MS Column 2 ID: NA

Workgroups: WG213277, WG213367

Internal Standard: STD12522 Surrogate Standard: NA

Comments: IML - 14067

Seq.	File ID	Sample Information	Mat	Dil	Reference	Date/Time
1	5M40735	WG213265-01 50PPM DFTPP	1	1	SOS78-44	05/15/06 08:53
2	5M40736	WG213265-02 50PPM BNA STD	1	1	STD12520	05/15/06 09:12
3	5M40737	WG213265-03 3PPM BNA STD	1	1	STD12520	05/15/06 09:43
4	5M40738	WG213265-02 50PPM BNA STD	1	1	SOS78-17	05/15/06 10:16
5	5M40739	WG213265-03 3PPM BNA STD	1	1	SOS78-17	05/15/06 10:48
6	5M40740	WG213265-04 15PPM BNA STD	1	1	SOS78-17	05/15/06 11:21
7	5M40741	WG213265-05 25PPM BNA STD	1	1	SOS78-17	05/15/06 11:52
8	5M40742	WG213265-06 80PPM BNA STD	1	1	SOS78-17	05/15/06 12:25
9	5M40743	WG213265-07 100PPM BNA STD	1	1	SOS78-17	05/15/06 12:58
10	5M40744	WG213265-08 120PPM BNA STD	1	1	SOS78-17	05/15/06 13:30
11	5M40745	WG213265-09 50PPM BNA STD	1	1	STD12496	05/15/06 14:02
12	5M40746	WG213078-02 BLK 5/11 EP261P29 RR	7	1	SOIL	05/15/06 14:35
13	5M40747	WG213078-03 LCS 5/11 EP261P29 RR	7	1	SOIL	05/15/06 15:08
14	5M40748	WG212996-01 BLK 5/10 EP260P93	1	1		05/15/06 15:41
15	5M40749	WG212996-02 LCS 5/10 EP260P93	1	1		05/15/06 16:14
16	5M40750	WG212996-03 LCSDUP 5/10 EP260P93	1	1		05/15/06 16:47
17	5M40751	WG213078-01 L0605260-01 SOIL	7	1	SOIL	05/15/06 17:20
18	5M40752	WG213078-04 L0605260-02 MS SOIL	7	1	SOIL	05/15/06 17:52
19	5M40753	WG213078-05 L0605260-03 MSD SOIL	7	1	SOIL	05/15/06 18:24
20	5M40754	L0605260-04 SOIL	7	1	SOIL	05/15/06 18:57
21	5M40755	L0605232-01	1	1		05/15/06 19:29
22	5M40756	BAKE OUT	1	1		05/15/06 20:01
23	5M40757	BAKE OUT	1	1		05/15/06 20:34
24	5M40758	BAKE OUT	1	1		05/15/06 21:07

Comments

Seq.	Rerun	Dil.	Reason	Analytes
2				
	WG213265-02 50PPM BNA STD - not required, not used for ICAL			
3				
	WG213265-03 3PPM BNA STD - not required, not used for ICAL			
13				
	WG213078-03 LCS - 6 compounds high - DOD criteria			
15				
	WG212996-02 LCS - benzoic acid yielded a %RPD beyond limit.			
18				
	WG213078-04 L0605260-02 MS SOIL - 1,2,4-trichlorobenzene low; 3 compounds %RPDs beyond limit			

Approved: 16-MAY-06

006362

Run Log ID: **10383**

KEMRON Environmental Services

Instrument Run Log

Instrument: HPMS5 Dataset: 051506

Analyst1: ALT Analyst2: NA

Method: 8270C SOP: MSS01 Rev: 13

Method: 625 SOP: MSS02 Rev: 8

Column 1 ID: DB-5MS Column 2 ID: NA

Workgroups: WG213277, WG213367

Internal Standard: STD12522 Surrogate Standard: NA

Comments

Seq.	Rerun	Dil.	Reason	Analytes
19				
	WG213078-05 L0605260-03 MSD SOIL - 3,3'-dichlorobenzidine and 2,4-dimethylphenol low			

Approved: 16-MAY-06

Run Log ID: **10552**

KEMRON Environmental Services

Instrument Run Log

Instrument: HPMS5 Dataset: 052506

Analyst1: ALT Analyst2: NA

Method: 8270C SOP: MSS01 Rev: 14

Method: 625 SOP: MSS02 Rev: 8

Column 1 ID: DB-5MS Column 2 ID: NA

Workgroups: WG213756, WG214069, WG214070

Internal Standard: STD12522 Surrogate Standard: NA

Comments: IML - 14166

Seq.	File ID	Sample Information	Mat	Dil	Reference	Date/Time
1	5M40861	WG214008-01 50PPM DFTPP	1	1	SOS78-44	05/25/06 09:08
2	5M40862	WG214008-02 50PPM BNA STD	1	1	SOS78-17	05/25/06 09:26
3	5M40863	L0605455-01 2X	2	2		05/25/06 09:57
4	5M40864	50PPM TCL STD	1	1	SOS77-34-4	05/25/06 10:30
5	5M40865	50PPM Appendix IX STD	1	1	SOS77-25-4	05/25/06 11:02
6	5M40866	WG213964-03 BLK 5/24 EP261P79	7	1	SOIL	05/25/06 11:37
7	5M40867	WG213964-04 LCS 5/24 EP261P79	7	1	SOIL	05/25/06 12:11
8	5M40868	WG213964-01 L0605548-05 SOIL	7	1	SOIL	05/25/06 12:43
9	5M40869	WG213964-05 L0605548-06 MS SOIL	7	1	SOIL	05/25/06 14:06
10	5M40870	WG213964-06 L0605548-07 MSD SOIL	7	1	SOIL	05/25/06 14:37
11	5M40871	L0605548-10 SOIL	7	1	SOIL	05/25/06 15:09
12	5M40872	WG213990-01 BLK 5/25 EP260P163	1	1		05/25/06 15:42
13	5M40873	WG213990-02 LCS 5/25 EP260P163	1	1		05/25/06 16:14
14	5M40874	WG213990-03 LCSDUP 5/25 EP260P163	1	1		05/25/06 16:46
15	5M40875	L0605548-03	1	1		05/25/06 17:17
16	5M40876	L0605515-01 TCLP	17	1		05/25/06 17:49
17	5M40877	L0605548-09 SOIL	7	1	SOIL	05/25/06 18:21
18	5M40878	L0605548-18 SOIL	7	1	SOIL	05/25/06 18:53
19	5M40879	L0605548-04 SOIL	7	1	SOIL	05/25/06 19:25
20	5M40880	L0605548-01 10X SOIL	7	10	SOIL	05/25/06 19:56
21	5M40881	L0605548-02 20X SOIL	7	20	SOIL	05/25/06 20:28
22	5M40882	L0605548-08 20X SOIL	7	20	SOIL	05/25/06 20:59
23	5M40883	BAKE OUT	1	1		05/25/06 21:31
24	5M40884	BAKE OUT	1	1		05/25/06 22:03
25	5M40885	BAKE OUT	1	1		05/25/06 22:34

Comments

Seq.	Rerun	Dil.	Reason	Analytes
3				
	L0605455-01 2X - SS 4 low; diluted due to sample appearance			
9				
	WG213964-05 L0605548-06 MS SOIL - 3 compounds low			
10				
	WG213964-06 L0605548-07 MSD SOIL - 3 compounds low			
20				
	L0605548-01 10X SOIL - diluted due to sample viscosity			

Approved: 26-MAY-06

006364

Run Log ID: **10552**

KEMRON Environmental Services

Instrument Run Log

Instrument: HPMS5 Dataset: 052506

Analyst1: ALT Analyst2: NA

Method: 8270C SOP: MSS01 Rev: 14

Method: 625 SOP: MSS02 Rev: 8

Column 1 ID: DB-5MS Column 2 ID: NA

Workgroups: WG213756, WG214069, WG214070

Internal Standard: STD12522 Surrogate Standard: NA

Comments

Seq.	Rerun	Dil.	Reason	Analytes
21				
	L0605548-02 20X SOIL - SS DL; diluted due to sample viscosity			
22				
	L0605548-08 20X SOIL - SS DL; diluted due to sample viscosity			

Approved: 26-MAY-06

006365

Run Log ID: **10560**

KEMRON Environmental Services

Instrument Run Log

Instrument: HPMS4 Dataset: 052506

Analyst1: CLK Analyst2: ALT

Method: 8270C SOP: MSS01 Rev: 14

Method: 625 SOP: MSS02 Rev: 8

Column 1 ID: DB-5MS Column 2 ID: NA

Workgroups: WG214070

Internal Standard: STD12522 Surrogate Standard: NA

Comments: IML - 14174

Seq.	File ID	Sample Information	Mat	Dil	Reference	Date/Time
1	4M33136	WG214049-01 50PPM DFTPP	1	1	SOS78-44	05/25/06 14:44
2	4M33137	WG214049-02 50PPM BNA Megamix	1	1	STD12520	05/25/06 15:03
3	4M33138	WG213990-01 BLK 5/25 EP0260P163 RR	1	1		05/25/06 15:39
4	4M33139	WG213978-01 FBLK 5/24 EP0260P163	17	1		05/25/06 16:15
5	4M33140	L0605541-01	1	1		05/25/06 16:50
6	4M33141	L0605541-03	1	1		05/25/06 17:26
7	4M33142	L0605541-05	1	1		05/25/06 18:02
8	4M33143	L0605541-07	1	1		05/25/06 18:37
9	4M33144	L0605541-08	1	1		05/25/06 19:13
10	4M33145	L0605565-01	1	1		05/25/06 19:48
11	4M33146	L0605565-03	1	1		05/25/06 20:24
12	4M33147	L0605565-04	1	1		05/25/06 20:59
13	4M33148	L0605565-05	1	1		05/25/06 21:35
14	4M33149	L0605565-06	1	1		05/25/06 22:10
15	4M33150	L0605565-08	1	1		05/25/06 22:46
16	4M33151	L0605565-10	1	1		05/25/06 23:21
17	4M33152	L0605584-03	1	1		05/25/06 23:57
18	4M33153	L0605584-06	1	1		05/26/06 00:34
19	4M33154	L0605531-01 TCLP	17	1		05/26/06 01:10
20	4M33155	L0605544-01 TCLP	17	1		05/26/06 01:47
21	4M33156	BAKEOUT	1	1		05/26/06 02:23

Comments

Seq.	Rerun	Dil.	Reason	Analytes
2				
	WG214049-02 50PPM BNA Megamix - benzoic acid hexchlorocyclopentadiene and 2,4-dinitrophenol > 20% but < 40%			
11	X	5	Over Calibration Range	4-chloroaniline
	L0605565-03			
12	X	5	Over Calibration Range	4-chloroaniline
	L0605565-04			
16	X	10	Post-Digestion Spike Failure	nitrobenzene
	L0605565-10			
19				
	L0605531-01 TCLP - SS1 low, SS 2 < 10% - SMI			
20				
	L0605544-01 TCLP - SS 3 high, IS 2 low - SMI			

Approved: 26-MAY-06

006366

Run Log ID: **10577**

KEMRON Environmental Services

Instrument Run Log

Instrument: HPMS5 Dataset: 052606
Analyst1: ALT Analyst2: NA
Method: 8270C SOP: MSS01 Rev: 14
Method: 625 SOP: MSS02 Rev: 8

Column 1 ID: DB-5MS Column 2 ID: NA
Workgroups: WG214069, WG214172
Internal Standard: STD12522 Surrogate Standard: NA

Comments: IML -14181

Seq.	File ID	Sample Information	Mat	Dil	Reference	Date/Time
1	5M40886	WG214107-01 50PPM DFTPP	1	1	SOS78-44	05/26/06 13:10
2	5M40887	WG214107-02 50PPM BNA STD	1	1	SOS78-17	05/26/06 13:29
3	5M40888	50PPM TCL STD	1	1	SOS77-34-4	05/26/06 14:01
4	5M40889	50PPM Appendix IX STD	1	1	SOS77-25-4	05/26/06 14:33
5	5M40890	WG214036-01 BLK 5/25 EP261P83	7	1	SOIL	05/26/06 15:05
6	5M40891	WG214036-02 LCS 5/25 EP261P83	7	1	SOIL	05/26/06 15:36
7	5M40892	WG214036-03 LCSDUP 5/25 EP261P83	7	1	SOIL	05/26/06 16:08
8	5M40893	L0605576-04 SOIL	7	1	SOIL	05/26/06 16:40
9	5M40894	L0605576-05 SOIL	7	1	SOIL	05/26/06 17:13
10	5M40895	L0605576-06 SOIL	7	1	SOIL	05/26/06 17:44
11	5M40896	L0605576-07 SOIL	7	1	SOIL	05/26/06 18:16
12	5M40897	L0605548-13 2X SOIL	7	2	SOIL	05/26/06 18:48
13	5M40898	L0605548-19 5X SOIL	7	5	SOIL	05/26/06 19:20
14	5M40899	L0605576-03 20X SOIL	7	20	SOIL	05/26/06 19:52
15	5M40900	L0605548-11 20X SOIL	7	20	SOIL	05/26/06 20:23
16	5M40901	L0605548-12 10X SOIL	7	10	SOIL	05/26/06 20:55
17	5M40902	WG213964-02 L0605548-14 20X SOIL	7	20	SOIL	05/26/06 21:26
18	5M40903	WG213964-07 L0605548-15 MS 20X SOIL	7	20	SOIL	05/26/06 21:58
19	5M40904	WG213964-08 L0605548-16 MSD 20X SOIL	7	20	SOIL	05/26/06 22:31
20	5M40905	L0605548-17 20X SOIL	7	20	SOIL	05/26/06 23:03
21	5M40906	L0605576-02 20X SOIL	7	20	SOIL	05/26/06 23:35
22	5M40907	BAKE OUT	1	1		05/27/06 00:07
23	5M40908	BAKE OUT	1	1		05/27/06 00:40
24	5M40909	BAKE OUT	1	1		05/27/06 01:13

Comments

Seq.	Rerun	Dil.	Reason	Analytes
10				
	L0605576-06 SOIL - SS 3 low			
11	X		Surrogate standard failure	
	L0605576-07 SOIL - SS 5 missing, remix and rerun - not reported			
12	X		Surrogate standard failure	
	L0605548-13 2x SOIL - SS 5 missing, remix and rerun - not reported; diluted due to sample viscosity			
13	X		Surrogate standard failure	
	L0605548-19 5x SOIL - SS 5 missing, remix and rerun - not reported; diluted due to sample viscosity			
14				
	L0605576-03 20X SOIL - SS DL - diluted due to sample viscosity			

Approved: 30-MAY-06

006367

Run Log ID: **10577**

KEMRON Environmental Services

Instrument Run Log

Instrument: HPMS5 Dataset: 052606

Analyst1: ALT Analyst2: NA

Method: 8270C SOP: MSS01 Rev: 14

Method: 625 SOP: MSS02 Rev: 8

Column 1 ID: DB-5MS Column 2 ID: NA

Workgroups: WG214069, WG214172

Internal Standard: STD12522 Surrogate Standard: NA

Comments

Seq.	Rerun	Dil.	Reason	Analytes
15				
	L0605548-11 20X SOIL - SS DL - diluted due to sample viscosity			
16	X		Surrogate standard failure	
	L0605548-12 10x SOIL - SS 5 missing, remix and rerun - not reported; diluted due to sample viscosity			
17				
	WG213964-02 L0605548-14 20X SOIL - SS DL - diluted due to sample viscosity			
18				
	WG213964-07 L0605548-15 MS 20X SOIL - SS DL - diluted due to sample viscosity			
19				
	WG213964-08 L0605548-16 MSD 20X SOIL - SS DL - diluted due to reference sample viscosity			
20				
	L0605548-17 20X SOIL - SS DL - diluted due to sample viscosity			
21	X		Internal standard failure	
	L0605576-02 20X SOIL - IS 6 low, SS 5 missing - not reported			

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006368

Run Log ID: **10588**

KEMRON Environmental Services

Instrument Run Log

Instrument: HPMS5 Dataset: 053006

Analyst1: ALT Analyst2: NA

Method: 8270C SOP: MSS01 Rev: 14

Method: 625 SOP: MSS02 Rev: 8

Column 1 ID: DB-5MS Column 2 ID: NA

Workgroups: WG214069, WG214172, WG214268

Internal Standard: STD12522 Surrogate Standard: NA

Comments: IML -14190

Seq.	File ID	Sample Information	Mat	Dil	Reference	Date/Time
1	5M40910	WG214203-01 50PPM DFTPP	1	1	SOS78-44	05/30/06 11:11
2	5M40911	WG214203-01 50PPM DFTPP	1	1	SOS78-44	05/30/06 11:40
3	5M40912	WG214203-01 50PPM DFTPP	1	1	SOS78-44	05/30/06 12:57
4	5M40913	WG214203-02 50PPM BNA STD	1	1	SOS78-17	05/30/06 13:15
5	5M40914	50PPM TCL STD	1	1	SOS77-34-4	05/30/06 13:47
6	5M40915	50PPM Appendix IX STD	1	1	SOS77-25-4	05/30/06 14:18
7	5M40916	WG214163-01 BLK 5/30 EP260P175	1	1		05/30/06 14:50
8	5M40917	WG214163-02 LCS 5/30 EP260P175	1	1		05/30/06 15:21
9	5M40918	WG214163-03 LCSDUP 5/30 EP260P175	1	1		05/30/06 15:53
10	5M40919	L0605600-01	1	1		05/30/06 16:25
11	5M40920	L0605600-03	1	1		05/30/06 16:57
12	5M40921	L0605600-05	1	1		05/30/06 17:29
13	5M40922	L0605600-07	1	1		05/30/06 18:01
14	5M40923	L0605600-09	1	1		05/30/06 18:33
15	5M40924	L0605600-10	1	1		05/30/06 19:04
16	5M40925	L0605596-01	2	1		05/30/06 19:36
17	5M40926	L0605593-01 2X	2	2		05/30/06 20:08
18	5M40927	L0605548-12 10X SOIL RR	7	10	SOIL	05/30/06 20:40
19	5M40928	L0605548-13 2X SOIL RR	7	2	SOIL	05/30/06 21:12
20	5M40929	L0605548-19 5X SOIL RR	7	5	SOIL	05/30/06 21:43
21	5M40930	L0605576-07 SOIL RR	7	1	SOIL	05/30/06 22:15
22	5M40931	L0605576-02 20X SOIL RR	7	20	SOIL	05/30/06 22:47
23	5M40932	BAKE OUT	1	1		05/30/06 23:19
24	5M40933	BAKE OUT	1	1		05/30/06 23:51
25	5M40934	BAKE OUT	1	1		05/31/06 00:21

Comments

Seq.	Rerun	Dil.	Reason	Analytes
1				
	WG214203-01 50PPM DFTPP - pentachlorophenol missing, clip column and rerun			
2				
	WG214203-01 50PPM DFTPP - pentachlorophenol showing up, but small; clip more off column			
4				
	WG214203-02 50PPM BNA STD - benzoic acid > 20% but < 40%			
12	X	50	Over Calibration Range	nitrobenzene

Page: 1 of 2 Approved: 31-MAY-06

Run Log ID: **10588**

KEMRON Environmental Services

Instrument Run Log

Instrument: HPMS5 Dataset: 053006

Analyst1: ALT Analyst2: NA

Method: 8270C SOP: MSS01 Rev: 14

Method: 625 SOP: MSS02 Rev: 8

Column 1 ID: DB-5MS Column 2 ID: NA

Workgroups: WG214069, WG214172, WG214268

Internal Standard: STD12522 Surrogate Standard: NA

Comments

Seq.	Rerun	Dil.	Reason	Analytes
15	X	5	Over Calibration Range	aniline
17				
	L0605593-01 2X - diluted due to sample appearance			
18				
	Re-extract: L0605548-12 10X SOIL RR - SS 5 still missing; diluted due to sample viscosity			
19				
	L0605548-13 2X SOIL RR - diluted due to sample viscosity			
20				
	Re-extract: L0605548-19 5X SOIL RR - SS 5 still missing; diluted due to sample viscosity			
21				
	Re-extract: L0605576-07 SOIL RR - SS 5 < 10%			
22				
	L0605576-02 20X SOIL RR - SS DL; diluted due to sample viscosity			

Approved: 31-MAY-06

Run Log ID: **10634**

KEMRON Environmental Services

Instrument Run Log

Instrument: HPMS4 Dataset: 060106

Analyst1: CLK Analyst2: NA

Method: 8270C SOP: MSS01 Rev: 14

Method: 625 SOP: MSS02 Rev: 8

Column 1 ID: RTI-5MS Column 2 ID: NA

Workgroups:

Internal Standard: STD12522 Surrogate Standard: NA

Comments:

Seq.	File ID	Sample Information	Mat	Dil	Reference	Date/Time
1	4M33221	WG214395-01 50PPM DFTPP	1	1	SOS78-44	06/01/06 12:11
2	4M33222	WG214395-02 50PPM BNA Megamix	1	1	STD12520	06/01/06 12:29
3	4M33223	WG214273-02 BLK 5/31 EP0260P181	1	1		06/01/06 13:05
4	4M33224	WG214273-03 LCS 5/31 EP0260P181	1	1		06/01/06 13:41
5	4M33225	WG214273-04 LCS2 5/31 EP0260P181	1	1		06/01/06 14:17
6	4M33226	WG214216-01 FBLK 5/30 EP0260P181	17	1		06/01/06 14:53
7	4M33227	WG214365-02 BLK 6/1 EP0261P99	7	1	SOIL	06/01/06 15:29
8	4M33228	WG214365-03 LCS 6/1 EP0261P99	7	1	SOIL	06/01/06 16:05
9	4M33229	L0605660-01 SOIL	7	1	SOIL	06/01/06 16:41
10	4M33230	WG214365-01 L0605660-02 SOIL	7	1	SOIL	06/01/06 17:17
11	4M33231	WG214365-04 L0605660-03 SOIL MS	7	1	SOIL	06/01/06 17:52
12	4M33232	WG214365-05 L0605660-04 SOIL MSD	7	1	SOIL	06/01/06 18:28
13	4M33233	L0605605-16 SOIL RE	7	1		06/01/06 19:03
14	4M33234	WG214273-01 L0605630-02 TCLP	17	1		06/01/06 19:39
15	4M33235	WG214273-05 L0605630-02 TCLP SPK	17	1		06/01/06 20:15
16	4M33236	L0605576-01 TCLP	17	1		06/01/06 20:51
17	4M33237	L0605599-10 TCLP	17	1		06/01/06 21:26
18	4M33238	L0605576-07 SOIL RE	7	1		06/01/06 22:02
19	4M33239	L0605605-14 SOIL RE 5X	7	5		06/01/06 22:37
20	4M33240	L0605548-19 SOIL 10X	7	10		06/01/06 23:13
21	4M33241	L0605548-12 SOIL 10X	7	10		06/01/06 23:49
22	4M33242	BAKEOUT	1	1		06/02/06 00:25

Comments

Seq.	Rerun	Dil.	Reason	Analytes
13				
	SS 5 low			
17	X	20	Over Calibration Range	#50
18				
	Needs RR with TCL STD			
20				
	05-548-19 is a RE (In Hold), Needs RR with TCL STD			
21				
	05-548-12 is a RE (In Hold), Needs RR with TCL STD			

Page: 1 of 1

Approved: 02-JUN-06

Rebecca D. Cattlip

006371

Run Log ID: **10662**

KEMRON Environmental Services

Instrument Run Log

Instrument: HPMS5 Dataset: 060206

Analyst1: ALT Analyst2: NA

Method: 8270C SOP: MSS01 Rev: 14

Method: 625 SOP: MSS02 Rev: 8

Column 1 ID: DB-5MS Column 2 ID: NA

Workgroups: WG214500, WG214620, WG214621

Internal Standard: STD12522 Surrogate Standard: NA

Comments: IML - 14237

Seq.	File ID	Sample Information	Mat	Dil	Reference	Date/Time
1	5M40987	WG214530-01 50PPM DFTPP	1	1	SOS78-44	06/02/06 13:29
2	5M40988	WG214530-02 50PPM BNA STD	1	1	SOS78-17	06/02/06 13:48
3	5M40989	50PPM TCL STD	1	1	SOS77-34-4	06/02/06 14:20
4	5M40990	WG214401-02 BLK 6/1 EP260P191 RR	17	1		06/02/06 14:51
5	5M40991	WG214365-02 BLK 6/1 EP261P99 RR	7	1	SOIL	06/02/06 15:23
6	5M40992	WG214339-01 FBLK 5/31 EP260P191	17	1		06/02/06 15:53
7	5M40993	50PPM Appendix IX STD	1	1	STD12520	06/02/06 16:25
8	5M40994	WG214476-01 BLK 6/2 EP260P193 RR	1	1		06/02/06 16:56
9	5M40995	L0605660-01 TCLP	17	1		06/02/06 17:27
10	5M40996	WG214401-01 L0605660-02 TCLP	17	1		06/02/06 17:58
11	5M40997	WG214401-04 L0605660-03 MS TCLP	17	1		06/02/06 18:29
12	5M40998	WG214401-05 L0605660-04 MSD TCLP	17	1		06/02/06 19:01
13	5M40999	L0605683-03	1	1		06/02/06 19:32
14	5M41000	L0605683-04	1	1		06/02/06 20:03
15	5M41001	L0605683-05	1	1		06/02/06 20:35
16	5M41002	L0605683-01	1	1		06/02/06 21:07
17	5M41003	L0605635-02 TCLP	17	1		06/02/06 21:38
18	5M41004	L0605683-02 5X	1	5		06/02/06 22:10
19	5M41005	L0605576-07 RE IH	7	1	SOIL	06/02/06 22:40
20	5M41006	L0605548-12 10X RE IH	7	10	SOIL	06/02/06 23:11
21	5M41007	L0605548-19 10X RE IH	7	10	SOIL	06/02/06 23:42
22	5M41008	L0605617-01 10x TCLP	17	10		06/03/06 00:13
23	5M41009	L0606004-01 20X	1	20		06/03/06 00:44
24	5M41010	BAKE OUT	1	1		06/03/06 01:16
25	5M41011	BAKE OUT	1	1		06/03/06 01:47
26	5M41012	BAKE OUT	1	1		06/03/06 02:18

Comments

Seq.	Rerun	Dil.	Reason	Analytes
15	X	5	Over Calibration Range	1,2-dchlorobenzene
18				
	L0605683-02 5X - diluted due to sample appearance			
19				
	L0605576-07 RE IH - SS 1 and 4 low			
20				
	L0605548-12 10X RE IH - diluted due to sample viscosity			

Page: 1 of 2 Approved: 06-JUN-06

Rebecca D. Cattlip

Run Log ID: **10662**

KEMRON Environmental Services

Instrument Run Log

Instrument: HPMS5 Dataset: 060206

Analyst1: ALT Analyst2: NA

Method: 8270C SOP: MSS01 Rev: 14

Method: 625 SOP: MSS02 Rev: 8

Column 1 ID: DB-5MS Column 2 ID: NA

Workgroups: WG214500, WG214620, WG214621

Internal Standard: STD12522 Surrogate Standard: NA

Comments

Seq.	Rerun	Dil.	Reason	Analytes
21				
	L0605548-19 10X RE IH - diluted due to sample viscosity			
22				
	L0605617-01 10x TCLP - diluted due to sample appearance			
23	X	50	Over Calibration Range	aniline
	L0606004-01 20X - diluted due to sample viscosity			

Page: 2 of 2 Approved: 06-JUN-06

Rebecca D. Cattlip

006373

Sample Extract Log Sheet R1072665

KEMRON ENVIRONMENTAL SERVICES

Parameter: BNA-S SOP #: EXASE01 Revision #: 6
Extraction Analyst(s): CSH TV/KD Analyst(s): 5-25-06
Date/Time Extracted: 5-24-06 @ 1310 Date TV/KD: CSH
Spike/Surrogate Analyst: CPD Witness: CSH
Surrogate #: STD12042 Earliest Hold Date: 6/5
Spike #: A = STD12043 Spike #: B = —

Extraction Work Group WG 213964

Extract Relinquished By: CSH
Extract Received By & Date: 5/25/06

	Sample ID	Test Code	pH <2	pH N	pH >12	Initial Vol / Wt	Amount Surrogate	Amount Spike	Final Volume	Extract Color	Emulsions A	Emulsions BN	Emulsions N	Comments
1	Blank					20.00g	500uL		1mL	T				WG213964-03
2	LCS					1		500uL		C				WG 1 -04
3	05-54801	827-SPE				20.38g				O				
4	-02					21.43g				O				
5	-04					20.10g				O				
6	-05REF					21.14g				C				WB213964-01
7	-06MS					22.06g		500uL		C				1 -05
8	-07MSD					20.97g		1		C				1 -06
9	-08					20.02g				O				
10	-09					20.44g				C				
11	-10					21.80g				C				
12	-11					18.41g				O				
13	-12					18.36g				O				
14	-13					18.25g				O				
15	-14REF					20.25g				O				WB213964-02
16	-15MS					19.99g		500uL		O				1 -07
17	-16MSD					20.44g		1		O				1 -08
18	-17					19.42g				O				
19	-18					22.43g				C				
20	-19	—				19.90g	—		—	O				
21														
22							CSH 5-25-06							
23														
24														

Methylene Chloride Lot #: C03E63
Hexane Lot #: —
Ether Lot #: —
Methanol Lot #: —
Solvent: — Lot #: —
Reagent: LABSAND Lot #: B49627
Reagent: D.E. Lot #: B45H08
Reagent: — Lot #: —
Acid: 1% ACETIC Lot #: ER0019-16
Florisil Lot #: —
Silica Gel Lot #: —
IR Analyst / Date / Time: —
Dried Na_2SO_4 Lot #: B15580

Color Code
T = Transparent
C = Colored
O = Opaque

SW-846 Method			On	Off	On	Off
Continuous	3520C					
Soxhlet	3540C					
ASE*	3545	✓				
Sep Funnel	3510C					
Sonication	3550B					
Waste	3580A					

* Accelerated Solvent Extractor (ASE)

Clean-ups			
Florisil 3620B		GPC 3640A	
Silica Gel 3630C		Other	
Acid 3665A		N/A	✓
Sulfur 3660B			

Peer Reviewed By: Chris Hill Date: 5-25-06

Extraction Notes For Volume # 261 Page # 79

General Comments: NONE

Extraction Anomalies: NONE

Concentration Anomalies: NONE

Clean-Up Anomalies: NA

Supervisor Review: _____ Date: _____

006375

Sample Extract Log Sheet R1072756

KEMRON ENVIRONMENTAL SERVICES

Parameter: BNA H_2O SOP #: EXB08 Revision #: 11
Extraction Analyst(s): CAF, CPD TV/KD Analyst(s): CAF
Date/Time Extracted: 5-25-06 @ 08:00 Date TV/KD: 5-25-06
Spike/Surrogate Analyst: CAF / CPD Witness: CPD / CAF
Surrogate #: STD 12042 #4 Earliest Hold Date: 5-30-06
Spike #: A = STD 12043 #2 Spike #: B = —

Extraction Work Group WG 213990
Extract Relinquished By: CPD
Extract Received By & Date: CAF 5/25/06

	Sample ID	Test Code	pH √ <2	pH √ N	pH √ >12	Initial Vol / Wt	Amount Surrogate	Amount Spike	Final Volume	Extract Color	Emulsions √ A	Emulsions √ BN	Emulsions √ N	Comments
1	Blank		✓		✓	1000mL	500µL		1mL	T				WG 213990-01
2	LCS		✓		✓			500µL		C				WG -02
3	LCS Dup		✓		✓	—		—		C				WG -03
4	05-541-01	827-SPE/LS	✓		✓	980mL				T				
5	-03		✓		✓	1000mL				T				
6	-05		✓		✓					C				
7	-07		✓		✓					C				
8	-08		✓		✓					T				
9	05-548-03		✓		✓					T				
10	05-565-01	LS	✓		✓					T				
11	-03		✓		✓					T				
12	-04		✓		✓					C				
13	-05		✓		✓					T				
14	-06		✓		✓					T				
15	-08		✓		✓					T				
16	-10	—	✓		✓	—				C				
17	FBlk 5/24	827-TC	✓		✓	100mL				T				WG213978-01
18	05-515-01		✓		✓					T				
19	05-531-01		✓		✓					C				
20	05-544-01		✓		✓	—	—		—	C				
21	05-584-03	8270	✓		✓	870mL	500µL			C				
22	-06	"	✓		✓	860mL	"			C				
23							CAF 5-25-06							
24														

Methylene Chloride Lot #: CO3E63
Hexane Lot #: —
Ether Lot #: —
Methanol Lot #: —
Solvent: — Lot #: —
Reagent: Fortified Lot #: ER0019-8
Reagent: 10N NaOH Lot #: ER0019-28
Reagent: — Lot #: —
Acid: 1:1 H_2SO_4 Lot #: ER0018-57
Florisil Lot #: —
Silica Gel Lot #: —
IR Analyst / Date / Time: —
Dried Na_2SO_4 Lot #: B15580

Color Code
T = Transparent
C = Colored
O = Opaque

SW-846 Method			On	Off	On	Off
Continuous	3520C					
Soxhlet	3540C					
ASE*	3545					
Sep Funnel	3510C	✓				
Sonication	3550B					
Waste	3580A					

* Accelerated Solvent Extractor (ASE)

Clean-ups			
Florisil 3620B		GPC 3640A	
Silica Gel 3630C		Other	
Acid 3665A		N/A	✓
Sulfur 3660B			

Peer Reviewed By: Charles Dorr Date: 5/25/06

Extraction Notes For Volume # 260 Page # 163

General Comments: None

Extraction Anomalies: None

Concentration Anomalies: None

Clean-Up Anomalies: N/A

Supervisor Review: _____ Date: _____

006377

Sample Extract Log Sheet R1074596

KEMRON ENVIRONMENTAL SERVICES

BNA-Soil
Parameter: ~~BNA~~ PAS SOP #: EXASF01 Revision #: 6
Extraction Analyst(s): PAS TV/KD Analyst(s): CSH
Date/Time Extracted: 6/1/06 0830 Date TV/KD: 6-1-06
Spike/Surrogate Analyst: EPS Witness: PAS
Surrogate #: STD12042 Earliest Hold Date: 6/13
Spike #: A = STD12688 Spike #: B = –

Extraction Work Group WG 214365
Extract Relinquished By: CSH
Extract Received By & Date: [illegible] 6/1/06

	Sample ID	Test Code	pH √ <2	pH √ N	pH √ >12	Initial Vol / Wt	Amount Surrogate	Amount Spike	Final Volume	Extract Color	Emulsions √ A	Emulsions √ BN	Emulsions √ N	Comments
1	Blank					20.00g	5mL		1mL	T				WG214365-02
2	LCS					1		500µL		C				WG 1 -03
3	05-660-01	827-SOE				20.48g				T				
4	-02MS					20.30g				1				WG214365-01
5	-03MS					1		500µL		C				X -04
6	-04MSD					1		1		1				X 1 -05
7	05-548-12					20.45g				O				
8	-19					20.36g				1				wet Sludge
9	05-576-07	1				20.00g				C				
10	05-605-14	8270				20.26g				O				
11	-16	1				20.74g				C				
12														
13														
14														
15														
16														
17														
18														
19														
20														
21														
22														
23														
24														

CSH 6-1-06

Methylene Chloride Lot #: CQ3E63
Hexane Lot #: –
Ether Lot #: –
Methanol Lot #: –
Solvent: – Lot #: –
Reagent: Sand Lot #: C02614
Reagent: DE Lot #: B45H08
Reagent: – Lot #: –
Acid: 1% Acetic Lot #: EA0019-16
Florisil Lot #: –
Silica Gel Lot #: –
IR Analyst / Date / Time: –
Dried Na_2SO_4 Lot #: ~~FF~~ B51580
CSH 6-1-6

Color Code
T = Transparent
C = Colored
O = Opaque

SW-846 Method		On	Off	On	Off
Continuous	3520C				
Soxhlet	3540C				
ASE*	3545	✓			
Sep Funnel	3510C				
Sonication	3550B				
Waste	3580A				

* Accelerated Solvent Extractor (ASE)

Clean-ups			
Florisil 3620B		GPC 3640A	
Silica Gel 3630C		Other	
Acid 3665A		N/A	✓
Sulfur 3660B			

Peer Reviewed By: Cheryl J Lowen Date: 6-01-06

Extraction Notes For Volume # 261 Page # 99

General Comments:
X-NS, MD of 660-02

Extraction Anomalies: NONE

Concentration Anomalies: NONE

Clean-Up Anomalies: N/A

Supervisor Review: _____ Date: _____

006379

KEMRON Environmental Services
HOLDING TIMES
EQUIVALENT TO AFCEE FORM 9

Analytical Method: 8270C **AAB#:** WG214069
Login Number: L0605548

Client ID	Date Collected	Date Received	Date Extracted	Max Hold Time Ext.	Time Held Ext.	Date Analyzed	Max Hold Time Anal	Time Held Anal.	Q
SM140SB02052306	05/23/06	05/24/06	05/24/06	14	0.896	05/25/06	40	1.28	
SM140SB01052306	05/23/06	05/24/06	05/24/06	14	0.910	05/25/06	40	1.30	
SM140FD03052306	05/23/06	05/24/06	05/24/06	14	0.854	05/25/06	40	1.26	
SM140SB03052306	05/23/06	05/24/06	05/24/06	14	0.858	05/25/06	40	0.981	
SM140SB03052306 MS	05/23/06	05/24/06	05/24/06	14	0.858	05/25/06	40	1.04	
SM140SB03052306 MSD	05/23/06	05/24/06	05/24/06	14	0.858	05/25/06	40	1.06	
SM137SB01052306	05/23/06	05/24/06	05/24/06	14	1.16	05/25/06	40	1.33	
SM138SB03052306	05/23/06	05/24/06	05/24/06	14	1.01	05/25/06	40	1.22	
SM138FD03052306	05/23/06	05/24/06	05/24/06	14	1.01	05/25/06	40	1.08	
SM139SB01052306	05/23/06	05/24/06	05/24/06	14	0.962	05/26/06	40	2.30	
SM136SB01052206	05/22/06	05/24/06	05/24/06	14	2.21	05/30/06	40	6.31	
SM139SB02052306	05/23/06	05/24/06	05/24/06	14	0.948	05/30/06	40	6.33	
SM138SB01052306	05/23/06	05/24/06	05/24/06	14	1.08	05/26/06	40	2.34	
SM138SB01052306 MS	05/23/06	05/24/06	05/24/06	14	1.08	05/26/06	40	2.37	
SM138SB01052306 MSD	05/23/06	05/24/06	05/24/06	14	1.08	05/26/06	40	2.39	
SM137SB02052306	05/23/06	05/24/06	05/24/06	14	1.16	05/26/06	40	2.41	
SM139SB03052306	05/23/06	05/24/06	05/24/06	14	0.938	05/25/06	40	1.24	
SM138SB02052306	05/23/06	05/24/06	05/24/06	14	1.04	05/30/06	40	6.36	

* EXT = SEE PROJECT QAPP REQUIREMENTS
*ANAL = SEE PROJECT QAPP REQUIREMENTS

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Version 1.5 PDF File ID: 489682
Report generated 06/05/2006 13:49

KEMRON Environmental Services
HOLDING TIMES
EQUIVALENT TO AFCEE FORM 9

Analytical Method: 8270C **AAB#:** WG214070
Login Number: L0605548

Client ID	Date Collected	Date Received	Date Extracted	Max Hold Time Ext.	Time Held Ext.	Date Analyzed	Max Hold Time Anal	Time Held Anal.	Q
SM138EB01052306	05/23/06	05/24/06	05/25/06	7	1.76	05/25/06	40	0.387	

* EXT = SEE PROJECT QAPP REQUIREMENTS
*ANAL = SEE PROJECT QAPP REQUIREMENTS

KEMRON FORMS - Modified 02/14/2006
Version 1.5 PDF File ID: 489682
Report generated 06/05/2006 13:49

KEMRON Environmental Services
HOLDING TIMES
EQUIVALENT TO AFCEE FORM 9

Analytical Method: 8270C **AAB#:** WG214500
Login Number: L0605548

Client ID	Date Collected	Date Received	Date Extracted	Max Hold Time Ext.	Time Held Ext.	Date Analyzed	Max Hold Time Anal	Time Held Anal.	Q
SM136SB01052206	05/22/06	05/24/06	06/01/06	14	10.0	06/02/06	40	1.61	
SM138SB02052306	05/23/06	05/24/06	06/01/06	14	8.85	06/02/06	40	1.63	

* EXT = SEE PROJECT QAPP REQUIREMENTS
*ANAL = SEE PROJECT QAPP REQUIREMENTS

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Version 1.5 PDF File ID: 489682
Report generated 06/05/2006 13:49

KEMRON Environmental Services

SURROGATE STANDARDS

Login Number: L0605548 Method: 8270
Instrument Id: HPMS5 CAL ID: HPMS5-15-MAY-06
Workgroup (AAB#): WG214069 Matrix: SOLID

Sample Number	Dilution	Tag	1	2	3	4	5	6
L0605548-01	10.0		66.0	71.8	43.3	62.5	109	59.3
L0605548-02	20.0		DL	DL	DL	DL	DL	DL
L0605548-04	1.00		90.0	58.0	61.4	68.7	116	70.7
L0605548-05	1.00		88.2	49.5	50.5	54.9	108	58.3
L0605548-06	1.00		98.4	58.2	59.1	63.0	96.8	68.6
L0605548-07	1.00		89.9	54.6	51.6	53.4	96.7	60.3
L0605548-08	20.0		DL	DL	DL	DL	DL	DL
L0605548-09	1.00		75.0	49.0	53.9	58.4	93.4	61.1
L0605548-10	1.00		80.2	48.8	52.5	57.3	75.1	59.1
L0605548-11	20.0		DL	DL	DL	DL	DL	DL
L0605548-12	10.0		ND	67.7	42.5	62.2	59.6	59.4
L0605548-13	2.00		31.3	57.6	57.0	49.6	64.2	66.9
L0605548-14	20.0		DL	DL	DL	DL	DL	DL
L0605548-15	20.0		DL	DL	DL	DL	DL	DL
L0605548-16	20.0		DL	DL	DL	DL	DL	DL
L0605548-17	20.0		DL	DL	DL	DL	DL	DL
L0605548-18	1.00		78.4	47.7	46.9	48.8	70.1	59.0
L0605548-19	5.00		ND	54.0	39.4	46.5	63.7	54.5
WG213964-03	1.00	01	86.4	60.0	55.8	61.7	122	61.5
WG213964-04	1.00	01	103	63.0	53.4	55.9	115	60.8

Surrogates	Surrogate Limits
1 - 2,4,6-Tribromophenol	19 - 122
2 - 2-Fluorobiphenyl	30 - 115
3 - 2-Fluorophenol	25 - 121
4 - Nitrobenzene-d5	23 - 120
5 - P-Terphenyl-d14	18 - 137
6 - Phenol-d5	24 - 113

Underline = Result out of surrogate limits

DL = surrogate diluted out
ND = surrogate not detected

KEMRON FORMS - Modified 04/18/2006
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KEMRON Environmental Services

SURROGATE STANDARDS

Login Number: L0605548
Instrument Id: HPMS5
Workgroup (AAB#): WG214070

Method: 8270
CAL ID: HPMS5-15-MAY-06
Matrix: WATER

Sample Number	Dilution	Tag	1	2	3	4	5	6
L0605548-03	1.00		94.4	77.6	42.3	76.4	95.1	29.8
WG213990-01	1.00	01	78.8	62.3	34.6	63.7	90.6	24.1
WG213990-02	1.00	01	91.2	74.9	38.4	66.7	82.5	27.9
WG213990-03	1.00	01	92.0	80.5	41.1	70.5	79.1	29.2

Surrogates	Surrogate Limits		
1 - 2,4,6-Tribromophenol	10	-	123
2 - 2-Fluorobiphenyl	43	-	116
3 - 2-Fluorophenol	21	-	100
4 - Nitrobenzene-d5	35	-	114
5 - p-Terphenyl-d14	33	-	141
6 - Phenol-d5	10	-	94

Underline = Result out of surrogate limits

DL = surrogate diluted out
ND = surrogate not detected

KEMRON FORMS - Modified 04/18/2006
Version 1.5 PDF File ID: 484673
Report generated 06/12/2006 11:29

KEMRON Environmental Services

SURROGATE STANDARDS

Login Number: L0605548
Instrument Id: HPMS4
Workgroup (AAB#): WG214500

Method: 8270
CAL ID: HPMS4-10-MAY-06
Matrix: SOLID

Sample Number	Dilution	Tag	1	2	3	4	5	6
WG214365-02	1.00	01	76.2	63.3	56.9	61.8	93.0	63.4
WG214365-03	1.00	01	81.3	49.5	42.9	44.1	91.2	48.1

Surrogates	Surrogate Limits
1 - 2,4,6-Tribromophenol	19 - 122
2 - 2-Fluorobiphenyl	30 - 115
3 - 2-Fluorophenol	25 - 121
4 - Nitrobenzene-d5	23 - 120
5 - p-Terphenyl-d14	18 - 137
6 - Phenol-d5	24 - 113

Underline = Result out of surrogate limits

DL = surrogate diluted out
ND = surrogate not detected

KEMRON FORMS - Modified 04/18/2006
Version 1.5 PDF File ID: 484673
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KEMRON Environmental Services

SURROGATE STANDARDS

Login Number: L0605548
Instrument Id: HPMS5
Workgroup (AAB#): WG214500

Method: 8270
CAL ID: HPMS5-15-MAY-06
Matrix: SOLID

Sample Number	Dilution	Tag	1	2	3	4	5	6
L0605548-12	10.0	RE	39.1	65.0	39.9	59.7	74.7	53.1
L0605548-19	10.0	RE	48.7	51.5	36.9	45.5	63.3	50.7

Surrogates	Surrogate Limits
1 - 2,4,6-Tribromophenol	19 - 122
2 - 2-Fluorobiphenyl	30 - 115
3 - 2-Fluorophenol	25 - 121
4 - Nitrobenzene-d5	23 - 120
5 - P-Terphenyl-d14	18 - 137
6 - Phenol-d5	24 - 113

Underline = Result out of surrogate limits

DL = surrogate diluted out
ND = surrogate not detected

KEMRON FORMS - Modified 04/18/2006
Version 1.5 PDF File ID: 484673
Report generated 06/12/2006 11:29

KEMRON Environmental Services

METHOD BLANK SUMMARY

Login Number: L0605548 | Work Group: WG214069
Blank File ID: 5M40866 | Blank Sample ID: WG213964-03
Date Analyzed: 05/25/06 | Instrument ID: HPMS5
Time Analyzed: 11:37 | Method: 8270C
Analyst: ALT

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG213964-04	5M40867	05/25/06 12:11	01
SM140SB03052306	L0605548-05	5M40868	05/25/06 12:43	
SM140SB03052306 MS	L0605548-06	5M40869	05/25/06 14:06	
SM140SB03052306 MSD	L0605548-07	5M40870	05/25/06 14:37	
SM138FD03052306	L0605548-10	5M40871	05/25/06 15:09	
SM138SB03052306	L0605548-09	5M40877	05/25/06 18:21	
SM139SB03052306	L0605548-18	5M40878	05/25/06 18:53	
SM140FD03052306	L0605548-04	5M40879	05/25/06 19:25	
SM140SB02052306	L0605548-01	5M40880	05/25/06 19:56	
SM140SB01052306	L0605548-02	5M40881	05/25/06 20:28	
SM137SB01052306	L0605548-08	5M40882	05/25/06 20:59	
SM139SB01052306	L0605548-11	5M40900	05/26/06 20:23	
SM138SB01052306	L0605548-14	5M40902	05/26/06 21:26	
SM138SB01052306 MS	L0605548-15	5M40903	05/26/06 21:58	
SM138SB01052306 MSD	L0605548-16	5M40904	05/26/06 22:31	
SM137SB02052306	L0605548-17	5M40905	05/26/06 23:03	
SM136SB01052206	L0605548-12	5M40927	05/30/06 20:40	
SM139SB02052306	L0605548-13	5M40928	05/30/06 21:12	
SM138SB02052306	L0605548-19	5M40929	05/30/06 21:43	

KEMRON FORMS - Modified 03/06/2006
Version 1.5 PDF File ID: 489683
Report generated 06/12/2006 11:28

KEMRON Environmental Services

METHOD BLANK SUMMARY

Login Number:	L0605548	Work Group:	WG214070
Blank File ID:	5M40872	Blank Sample ID:	WG213990-01
Date Analyzed:	05/25/06	Instrument ID:	HPMS5
Time Analyzed:	15:42	Method:	8270C
Analyst:	ALT		

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG213990-02	5M40873	05/25/06 16:14	01
LCS2	WG213990-03	5M40874	05/25/06 16:46	01
SM138EB01052306	L0605548-03	5M40875	05/25/06 17:17	

KEMRON FORMS - Modified 03/06/2006
Version 1.5 PDF File ID: 489683
Report generated 06/12/2006 11:28

KEMRON Environmental Services

METHOD BLANK SUMMARY

Login Number:	L0605548	Work Group:	WG214500
Blank File ID:	4M33227	Blank Sample ID:	WG214365-02
Date Analyzed:	06/01/06	Instrument ID:	HPMS4
Time Analyzed:	15:29	Method:	8270C
Analyst:	CLK		

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG214365-03	4M33228	06/01/06 16:05	01
SM136SB01052206	L0605548-12	5M41006	06/02/06 23:11	RE
SM138SB02052306	L0605548-19	5M41007	06/02/06 23:42	RE

KEMRON FORMS - Modified 03/06/2006
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KEMRON Environmental Services

METHOD BLANK REPORT

Login Number: L0605548	Run Date: 06/01/2006	Sample ID: WG214365-02
Instrument ID: HPMS4	Run Time: 15:29	Prep Method: 3545
File ID: 4M33227	Analyst: CLK	Method: 8270C
Workgroup (AAB#): WG214500	Matrix: Solid	Units: ug/kg
Contract #:	Cal ID: HPMS4-10-MAY-06	

Analytes	SQL	PQL	Concentration	Dilution	Qualifier
Phenol	82.5	165	82.5	1	U
Bis(2-Chloroethyl)ether	82.5	165	82.5	1	U
2-Chlorophenol	82.5	165	82.5	1	U
2-Methylphenol	82.5	165	82.5	1	U
Acetophenone	82.5	165	82.5	1	U
bis(2-Chloroisopropyl)ether	82.5	165	82.5	1	U
3-,4-Methylphenol	82.5	165	82.5	1	U
N-Nitroso-di-n-propylamine	82.5	165	82.5	1	U
Hexachloroethane	82.5	165	82.5	1	U
Nitrobenzene	82.5	165	82.5	1	U
Isophorone	82.5	165	82.5	1	U
2-Nitrophenol	82.5	165	82.5	1	U
2,4-Dimethylphenol	82.5	165	82.5	1	U
Bis(2-Chloroethoxy)Methane	82.5	165	82.5	1	U
2,4-Dichlorophenol	82.5	165	82.5	1	U
Naphthalene	82.5	165	82.5	1	U
4-Chloroaniline	82.5	165	82.5	1	U
Hexachlorobutadiene	82.5	165	82.5	1	U
4-Chloro-3-methylphenol	82.5	165	82.5	1	U
2-Methylnaphthalene	82.5	165	82.5	1	U
Hexachlorocyclopentadiene	82.5	165	82.5	1	U
2,4,6-Trichlorophenol	82.5	165	82.5	1	U
2,4,5-Trichlorophenol	82.5	165	82.5	1	U
2-Chloronaphthalene	82.5	165	82.5	1	U
2-Nitroaniline	330	825	330	1	U
Dimethylphthalate	82.5	165	82.5	1	U
Acenaphthylene	82.5	165	82.5	1	U
2,6-Dinitrotoluene	82.5	165	82.5	1	U
3-Nitroaniline	330	825	330	1	U
Acenaphthene	82.5	165	82.5	1	U
2,4-Dinitrophenol	330	825	330	1	U
4-Nitrophenol	330	825	330	1	U
Dibenzofuran	82.5	165	82.5	1	U
2,4-Dinitrotoluene	82.5	165	82.5	1	U
Diethylphthalate	82.5	165	82.5	1	U
4-Chlorophenyl-phenyl ether	82.5	165	82.5	1	U
Fluorene	82.5	165	82.5	1	U
4-Nitroaniline	330	825	330	1	U
4,6-Dinitro-2-methylphenol	330	825	330	1	U
N-Nitrosodiphenylamine	82.5	165	82.5	1	U
4-Bromophenyl-phenylether	82.5	165	82.5	1	U
Hexachlorobenzene	82.5	165	82.5	1	U

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KEMRON Environmental Services

METHOD BLANK REPORT

Login Number: L0605548	Run Date: 06/01/2006	Sample ID: WG214365-02
Instrument ID: HPMS4	Run Time: 15:29	Prep Method: 3545
File ID: 4M33227	Analyst: CLK	Method: 8270C
Workgroup (AAB#): WG214500	Matrix: Solid	Units: ug/kg
Contract #:	Cal ID: HPMS4-10-MAY-06	

Analytes	SQL	PQL	Concentration	Dilution	Qualifier
Pentachlorophenol	330	825	330	1	U
Phenanthrene	82.5	165	82.5	1	U
Anthracene	82.5	165	82.5	1	U
Carbazole	82.5	165	82.5	1	U
Di-N-Butylphthalate	82.5	165	82.5	1	U
Fluoranthene	82.5	165	82.5	1	U
Pyrene	82.5	165	82.5	1	U
Butylbenzylphthalate	82.5	165	82.5	1	U
3,3'-Dichlorobenzidine	165	330	165	1	U
Benzo(a)anthracene	82.5	165	82.5	1	U
Chrysene	82.5	165	82.5	1	U
bis(2-Ethylhexyl)phthalate	82.5	165	82.5	1	U
Di-n-octylphthalate	82.5	165	82.5	1	U
Benzo(b)fluoranthene	82.5	165	82.5	1	U
Benzo(k)fluoranthene	82.5	165	82.5	1	U
Benzo(a)pyrene	82.5	165	82.5	1	U
Indeno(1,2,3-cd)pyrene	82.5	165	82.5	1	U
Dibenzo(a,h)Anthracene	82.5	165	82.5	1	U
Benzo(g,h,i)Perylene	82.5	165	82.5	1	U
1,2,4,5-Tetrachlorobenzene	82.5	165	82.5	1	U

Surrogates	% Recovery	Surrogate Limits			Qualifier
2-Fluorophenol	56.9	25	-	121	PASS
Phenol-d5	63.4	24	-	113	PASS
Nitrobenzene-d5	61.8	23	-	120	PASS
2-Fluorobiphenyl	63.3	30	-	115	PASS
2,4,6-Tribromophenol	76.2	19	-	122	PASS
P-Terphenyl-d14	93.0	18	-	137	PASS

MDL Method Detection Limit
RL Reporting/quantitation Limit

* Analyte concentration > RL

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KEMRON Environmental Services

METHOD BLANK REPORT

Login Number: L0605548	Run Date: 05/25/2006	Sample ID: WG213964-03
Instrument ID: HPMS5	Run Time: 11:37	Prep Method: 3545
File ID: 5M40866	Analyst: ALT	Method: 8270C
Workgroup (AAB#): WG214069	Matrix: Solid	Units: ug/kg
Contract #:	Cal ID: HPMS5-15-MAY-06	

Analytes	SQL	PQL	Concentration	Dilution	Qualifier
Phenol	82.5	165	82.5	1	U
Bis(2-Chloroethyl)ether	82.5	165	82.5	1	U
2-Chlorophenol	82.5	165	82.5	1	U
2-Methylphenol	82.5	165	82.5	1	U
Acetophenone	82.5	165	82.5	1	U
bis(2-Chloroisopropyl)ether	82.5	165	82.5	1	U
3-,4-Methylphenol	82.5	165	82.5	1	U
N-Nitroso-di-n-propylamine	82.5	165	82.5	1	U
Hexachloroethane	82.5	165	82.5	1	U
Nitrobenzene	82.5	165	82.5	1	U
Isophorone	82.5	165	82.5	1	U
2-Nitrophenol	82.5	165	82.5	1	U
2,4-Dimethylphenol	82.5	165	82.5	1	U
Bis(2-Chloroethoxy)Methane	82.5	165	82.5	1	U
2,4-Dichlorophenol	82.5	165	82.5	1	U
Naphthalene	82.5	165	82.5	1	U
4-Chloroaniline	82.5	165	82.5	1	U
Hexachlorobutadiene	82.5	165	82.5	1	U
4-Chloro-3-methylphenol	82.5	165	82.5	1	U
2-Methylnaphthalene	82.5	165	82.5	1	U
Hexachlorocyclopentadiene	82.5	165	82.5	1	U
2,4,6-Trichlorophenol	82.5	165	82.5	1	U
2,4,5-Trichlorophenol	82.5	165	82.5	1	U
2-Chloronaphthalene	82.5	165	82.5	1	U
2-Nitroaniline	330	825	330	1	U
Dimethylphthalate	82.5	165	82.5	1	U
Acenaphthylene	82.5	165	82.5	1	U
2,6-Dinitrotoluene	82.5	165	82.5	1	U
3-Nitroaniline	330	825	330	1	U
Acenaphthene	82.5	165	82.5	1	U
2,4-Dinitrophenol	330	825	330	1	U
4-Nitrophenol	330	825	330	1	U
Dibenzofuran	82.5	165	82.5	1	U
2,4-Dinitrotoluene	82.5	165	82.5	1	U
Diethylphthalate	82.5	165	82.5	1	U
4-Chlorophenyl-phenyl ether	82.5	165	82.5	1	U
Fluorene	82.5	165	82.5	1	U
4-Nitroaniline	330	825	330	1	U
4,6-Dinitro-2-methylphenol	330	825	330	1	U
N-Nitrosodiphenylamine	82.5	165	82.5	1	U
4-Bromophenyl-phenylether	82.5	165	82.5	1	U
Hexachlorobenzene	82.5	165	82.5	1	U

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KEMRON Environmental Services

METHOD BLANK REPORT

Login Number: L0605548	Run Date: 05/25/2006	Sample ID: WG213964-03
Instrument ID: HPMS5	Run Time: 11:37	Prep Method: 3545
File ID: 5M40866	Analyst: ALT	Method: 8270C
Workgroup (AAB#): WG214069	Matrix: Solid	Units: ug/kg
Contract #:	Cal ID: HPMS5-15-MAY-06	

Analytes	SQL	PQL	Concentration	Dilution	Qualifier
Pentachlorophenol	330	825	330	1	U
Phenanthrene	82.5	165	82.5	1	U
Anthracene	82.5	165	82.5	1	U
Carbazole	82.5	165	82.5	1	U
Di-N-Butylphthalate	82.5	165	82.5	1	U
Fluoranthene	82.5	165	82.5	1	U
Pyrene	82.5	165	82.5	1	U
Butylbenzylphthalate	82.5	165	82.5	1	U
3,3'-Dichlorobenzidine	165	330	165	1	U
Benzo(a)anthracene	82.5	165	82.5	1	U
Chrysene	82.5	165	82.5	1	U
bis(2-Ethylhexyl)phthalate	82.5	165	82.5	1	U
Di-n-octylphthalate	82.5	165	82.5	1	U
Benzo(b)fluoranthene	82.5	165	82.5	1	U
Benzo(k)fluoranthene	82.5	165	82.5	1	U
Benzo(a)pyrene	82.5	165	82.5	1	U
Indeno(1,2,3-cd)pyrene	82.5	165	82.5	1	U
Dibenzo(a,h)Anthracene	82.5	165	82.5	1	U
Benzo(g,h,i)Perylene	82.5	165	82.5	1	U
1,2,4,5-Tetrachlorobenzene	82.5	165	82.5	1	U

Surrogates	% Recovery	Surrogate Limits			Qualifier
2-Fluorophenol	55.8	25	-	121	PASS
Phenol-d5	61.5	24	-	113	PASS
Nitrobenzene-d5	61.7	23	-	120	PASS
2-Fluorobiphenyl	60.0	30	-	115	PASS
2,4,6-Tribromophenol	86.4	19	-	122	PASS
P-Terphenyl-d14	122	18	-	137	PASS

MDL Method Detection Limit
RL Reporting/quantitation Limit

* Analyte concentration > RL

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KEMRON Environmental Services

METHOD BLANK REPORT

Login Number: L0605548	Run Date: 05/25/2006	Sample ID: WG213990-01
Instrument ID: HPMS5	Run Time: 15:42	Prep Method: 3510C
File ID: 5M40872	Analyst: ALT	Method: 8270C
Workgroup (AAB#): WG214070	Matrix: Water	Units: ug/L
Contract #:	Cal ID: HPMS5-15-MAY-06	

Analytes	SQL	PQL	Concentration	Dilution	Qualifier
Phenol	2.50	5.00	2.50	1	U
Bis(2-Chloroethyl)ether	2.50	5.00	2.50	1	U
2-Chlorophenol	2.50	5.00	2.50	1	U
2-Methylphenol	2.50	5.00	2.50	1	U
bis(2-Chloroisopropyl)ether	2.50	5.00	2.50	1	U
Acetophenone	2.50	5.00	2.50	1	U
3-,4-Methylphenol	2.50	5.00	2.50	1	U
N-Nitroso-di-n-propylamine	2.50	5.00	2.50	1	U
Hexachloroethane	2.50	5.00	2.50	1	U
Nitrobenzene	2.50	5.00	2.50	1	U
Isophorone	2.50	5.00	2.50	1	U
2-Nitrophenol	2.50	5.00	2.50	1	U
2,4-Dimethylphenol	2.50	5.00	2.50	1	U
Bis(2-Chloroethoxy)Methane	2.50	5.00	2.50	1	U
2,4-Dichlorophenol	2.50	5.00	2.50	1	U
Naphthalene	2.50	5.00	2.50	1	U
4-Chloroaniline	2.50	5.00	2.50	1	U
Hexachlorobutadiene	2.50	5.00	2.50	1	U
4-Chloro-3-methylphenol	2.50	5.00	2.50	1	U
2-Methylnaphthalene	2.50	5.00	2.50	1	U
Hexachlorocyclopentadiene	2.50	5.00	2.50	1	U
2,4,6-Trichlorophenol	2.50	5.00	2.50	1	U
2,4,5-Trichlorophenol	2.50	5.00	2.50	1	U
2-Chloronaphthalene	2.50	5.00	2.50	1	U
2-Nitroaniline	12.5	25.0	12.5	1	U
Dimethylphthalate	2.50	5.00	2.50	1	U
2,6-Dinitrotoluene	2.50	5.00	2.50	1	U
Acenaphthylene	2.50	5.00	2.50	1	U
3-Nitroaniline	12.5	25.0	12.5	1	U
Acenaphthene	2.50	5.00	2.50	1	U
2,4-Dinitrophenol	12.5	25.0	12.5	1	U
4-Nitrophenol	12.5	25.0	12.5	1	U
Dibenzofuran	2.50	5.00	2.50	1	U
2,4-Dinitrotoluene	2.50	5.00	2.50	1	U
Diethylphthalate	2.50	5.00	2.50	1	U
Fluorene	2.50	5.00	2.50	1	U
4-Chlorophenyl-phenyl ether	2.50	5.00	2.50	1	U
4-Nitroaniline	12.5	25.0	12.5	1	U
4,6-Dinitro-2-methylphenol	12.5	25.0	12.5	1	U
N-Nitrosodiphenylamine	2.50	5.00	2.50	1	U
4-Bromophenyl-phenylether	2.50	5.00	2.50	1	U
Hexachlorobenzene	2.50	5.00	2.50	1	U

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KEMRON Environmental Services

METHOD BLANK REPORT

Login Number: L0605548	Run Date: 05/25/2006	Sample ID: WG213990-01
Instrument ID: HPMS5	Run Time: 15:42	Prep Method: 3510C
File ID: 5M40872	Analyst: ALT	Method: 8270C
Workgroup (AAB#): WG214070	Matrix: Water	Units: ug/L
Contract #:	Cal ID: HPMS5-15-MAY-06	

Analytes	SQL	PQL	Concentration	Dilution	Qualifier
Pentachlorophenol	12.5	25.0	12.5	1	U
Phenanthrene	2.50	5.00	2.50	1	U
Anthracene	2.50	5.00	2.50	1	U
Carbazole	2.50	5.00	2.50	1	U
Di-N-Butylphthalate	2.50	5.00	2.50	1	U
Fluoranthene	2.50	5.00	2.50	1	U
Pyrene	2.50	5.00	2.50	1	U
Butylbenzylphthalate	2.50	5.00	2.50	1	U
3,3'-Dichlorobenzidine	2.50	10.0	2.50	1	U
Benzo(a)anthracene	2.50	5.00	2.50	1	U
Chrysene	2.50	5.00	2.50	1	U
bis(2-Ethylhexyl)phthalate	2.50	5.00	2.50	1	U
Di-n-octylphthalate	2.50	5.00	2.50	1	U
Benzo(b)fluoranthene	2.50	5.00	2.50	1	U
Benzo(k)fluoranthene	2.50	5.00	2.50	1	U
Benzo(a)pyrene	2.50	5.00	2.50	1	U
Indeno(1,2,3-cd)pyrene	2.50	5.00	2.50	1	U
Dibenzo(a,h)Anthracene	2.50	5.00	2.50	1	U
Benzo(g,h,i)Perylene	2.50	5.00	2.50	1	U
1,2,4,5-Tetrachlorobenzene	2.50	5.00	2.50	1	U

Surrogates	% Recovery	Surrogate Limits			Qualifier
2-Fluorophenol	34.6	21	-	100	PASS
Phenol-d5	24.1	10	-	94	PASS
Nitrobenzene-d5	63.7	35	-	114	PASS
2-Fluorobiphenyl	62.3	43	-	116	PASS
2,4,6-Tribromophenol	78.8	10	-	123	PASS
p-Terphenyl-d14	90.6	33	-	141	PASS

MDL Method Detection Limit
RL Reporting/quantitation Limit

* Analyte concentration > RL

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LABORATORY CONTROL SAMPLE (LCS)

Login Number: L0605548 | Run Date: 06/01/2006 | Sample ID: WG214365-03
Instrument ID: HPMS4 | Run Time: 16:05 | Prep Method: 3545
File ID: 4M33228 | Analyst: CLK | Method: 8270C
Workgroup (AAB#): WG214500 | Matrix: Solid | Units: ug/kg
Contract #: | Cal ID: HPMS4-10-MAY-06

Analytes	Expected	Found	% Rec	LCS Limits	Q
Phenol	2500	1140	45.5	35 - 100	
Bis(2-Chloroethyl)ether	2500	1170	46.9	30 - 100	
2-Chlorophenol	2500	1110	44.3	35 - 105	
2-Methylphenol	2500	1150	46.0	35 - 100	
Acetophenone	2500		0	40 - 140	*
bis(2-Chloroisopropyl)ether	2500	1040	41.5	20 - 115	
3-,4-Methylphenol	2500	1300	52.2	35 - 105	
N-Nitroso-di-n-propylamine	2500	1110	44.4	35 - 110	
Hexachloroethane	2500	1030	41.4	30 - 100	
Nitrobenzene	2500	1060	42.4	35 - 100	
Isophorone	2500	1170	47.0	35 - 100	
2-Nitrophenol	2500	1180	47.0	35 - 100	
2,4-Dimethylphenol	2500	1120	44.9	30 - 105	
Bis(2-Chloroethoxy)Methane	2500	942	37.7	30 - 100	
2,4-Dichlorophenol	2500	1150	46.2	35 - 110	
Naphthalene	2500	1100	44.2	35 - 100	
4-Chloroaniline	2500	1000	40.0	35 - 100	
Hexachlorobutadiene	2500	1140	45.4	30 - 100	
4-Chloro-3-methylphenol	2500	1380	55.1	40 - 100	
2-Methylnaphthalene	2500	1150	46.1	35 - 115	
Hexachlorocyclopentadiene	2500	789	31.5	30 - 110	
2,4,6-Trichlorophenol	2500	1380	55.3	40 - 110	
2,4,5-Trichlorophenol	2500	1590	63.6	40 - 110	
2-Chloronaphthalene	2500	1060	42.4	40 - 105	
2-Nitroaniline	2500	1660	66.6	45 - 120	
Dimethylphthalate	2500	1730	69.3	45 - 115	
Acenaphthylene	2500	1340	53.4	40 - 110	
2,6-Dinitrotoluene	2500	1750	69.8	50 - 125	
3-Nitroaniline	2500	1900	75.9	50 - 130	
Acenaphthene	2500	1360	54.4	40 - 110	
2,4-Dinitrophenol	2500	1870	74.8	40 - 130	
4-Nitrophenol	2500	2220	88.6	45 - 140	
Dibenzofuran	2500	1440	57.5	35 - 110	
2,4-Dinitrotoluene	2500	2310	92.3	50 - 130	
Diethylphthalate	2500	2040	81.6	50 - 130	
4-Chlorophenyl-phenyl ether	2500	1570	62.7	40 - 110	
Fluorene	2500	1630	65.1	45 - 115	
4-Nitroaniline	2500	1940	77.7	35 - 140	
4,6-Dinitro-2-methylphenol	2500	2130	85.4	45 - 130	
N-Nitrosodiphenylamine	2500	1670	66.8	50 - 130	
4-Bromophenyl-phenylether	2500	1590	63.6	40 - 115	

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KEMRON Environmental Services

LABORATORY CONTROL SAMPLE (LCS)

Login Number: L0605548 Run Date: 06/01/2006 Sample ID: WG214365-03
Instrument ID: HPMS4 Run Time: 16:05 Prep Method: 3545
File ID: 4M33228 Analyst: CLK Method: 8270C
Workgroup (AAB#): WG214500 Matrix: Solid Units: ug/kg
Contract #: Cal ID: HPMS4-10-MAY-06

Analytes	Expected	Found	% Rec	LCS Limits	Q
Hexachlorobenzene	2500	1920	76.9	45 - 120	
Pentachlorophenol	2500	2680	107	50 - 150	
Phenanthrene	2500	2090	83.4	50 - 130	
Anthracene	2500	2160	86.3	55 - 130	
Carbazole	2500	2320	93.0	50 - 140	
Di-N-Butylphthalate	2500	2360	94.3	55 - 140	
Fluoranthene	2500	2400	95.9	55 - 140	
Pyrene	2500	2250	89.9	45 - 135	
Butylbenzylphthalate	2500	2530	101	50 - 150	
3,3'-Dichlorobenzidine	2500	1560	62.2	40 - 140	
Benzo(a)anthracene	2500	2280	91.0	50 - 130	
Chrysene	2500	2270	90.8	55 - 140	
bis(2-Ethylhexyl)phthalate	2500	2340	93.4	50 - 150	
Di-n-octylphthalate	2500	2400	96.0	40 - 145	
Benzo(b)fluoranthene	2500	2270	90.8	45 - 125	
Benzo(k)fluoranthene	2500	2200	87.9	45 - 135	
Benzo(a)pyrene	2500	2260	90.3	50 - 130	
Indeno(1,2,3-cd)pyrene	2500	2190	87.8	50 - 135	
Dibenzo(a,h)Anthracene	2500	2200	87.9	40 - 140	
Benzo(g,h,i)Perylene	2500	2230	89.1	40 - 140	

Surrogates	% Recovery	Surrogate Limits	Qualifier
2-Fluorophenol	42.9	25 - 121	PASS
Phenol-d5	48.1	24 - 113	PASS
Nitrobenzene-d5	44.1	23 - 120	PASS
2-Fluorobiphenyl	49.5	30 - 115	PASS
2,4,6-Tribromophenol	81.3	19 - 122	PASS
P-Terphenyl-d14	91.2	18 - 137	PASS

* FAILS %REC LIMIT

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LABORATORY CONTROL SAMPLE (LCS)

Login Number: L0605548 | Run Date: 05/25/2006 | Sample ID: WG213964-04
Instrument ID: HPMS5 | Run Time: 12:11 | Prep Method: 3545
File ID: 5M40867 | Analyst: ALT | Method: 8270C
Workgroup (AAB#): WG214069 | Matrix: Solid | Units: ug/kg
Contract #: | Cal ID: HPMS5-15-MAY-06

Analytes	Expected	Found	% Rec	LCS Limits	Q
Phenol	2500	1480	59.2	35 - 100	
Bis(2-Chloroethyl)ether	2500	1460	58.6	30 - 100	
2-Chlorophenol	2500	1390	55.6	35 - 105	
2-Methylphenol	2500	1480	59.3	35 - 100	
Acetophenone	2500	1420	56.7	40 - 140	
bis(2-Chloroisopropyl)ether	2500	1480	59.1	20 - 115	
3-,4-Methylphenol	2500	1570	62.7	35 - 105	
N-Nitroso-di-n-propylamine	2500	1670	66.9	35 - 110	
Hexachloroethane	2500	1400	56.2	30 - 100	
Nitrobenzene	2500	1400	56.2	35 - 100	
Isophorone	2500	1590	63.6	35 - 100	
2-Nitrophenol	2500	1330	53.0	35 - 100	
2,4-Dimethylphenol	2500	1450	58.0	30 - 105	
Bis(2-Chloroethoxy)Methane	2500	1460	58.4	30 - 100	
2,4-Dichlorophenol	2500	1440	57.7	35 - 110	
Naphthalene	2500	1400	56.2	35 - 100	
4-Chloroaniline	2500	1450	58.2	35 - 100	
Hexachlorobutadiene	2500	1470	58.8	30 - 100	
4-Chloro-3-methylphenol	2500	1710	68.3	40 - 100	
2-Methylnaphthalene	2500	1450	57.9	35 - 115	
Hexachlorocyclopentadiene	2500	1580	63.1	30 - 110	
2,4,6-Trichlorophenol	2500	1690	67.7	40 - 110	
2,4,5-Trichlorophenol	2500	1800	72.1	40 - 110	
2-Chloronaphthalene	2500	1600	64.0	40 - 105	
2-Nitroaniline	2500	2020	80.9	45 - 120	
Dimethylphthalate	2500	2110	84.4	45 - 115	
Acenaphthylene	2500	1790	71.8	40 - 110	
2,6-Dinitrotoluene	2500	2230	89.2	50 - 125	
3-Nitroaniline	2500	2410	96.6	50 - 130	
Acenaphthene	2500	1860	74.5	40 - 110	
2,4-Dinitrophenol	2500	2350	93.9	40 - 130	
4-Nitrophenol	2500	2610	105	45 - 140	
Dibenzofuran	2500	1800	71.8	35 - 110	
2,4-Dinitrotoluene	2500	2630	105	50 - 130	
Diethylphthalate	2500	2490	99.6	50 - 130	
4-Chlorophenyl-phenyl ether	2500	1890	75.8	40 - 110	
Fluorene	2500	2030	81.1	45 - 115	
4-Nitroaniline	2500	2780	111	35 - 140	
4,6-Dinitro-2-methylphenol	2500	2500	99.9	45 - 130	
N-Nitrosodiphenylamine	2500	2400	96.2	50 - 130	
4-Bromophenyl-phenylether	2500	1890	75.6	40 - 115	

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KEMRON Environmental Services

LABORATORY CONTROL SAMPLE (LCS)

Login Number: L0605548 Run Date: 05/25/2006 Sample ID: WG213964-04
Instrument ID: HPMS5 Run Time: 12:11 Prep Method: 3545
File ID: 5M40867 Analyst: ALT Method: 8270C
Workgroup (AAB#): WG214069 Matrix: Solid Units: ug/kg
Contract #: Cal ID: HPMS5-15-MAY-06

Analytes	Expected	Found	% Rec	LCS Limits	Q
Hexachlorobenzene	2500	2310	92.5	45 - 120	
Pentachlorophenol	2500	2810	112	50 - 150	
Phenanthrene	2500	2490	99.6	50 - 130	
Anthracene	2500	2540	102	55 - 130	
Carbazole	2500	2720	109	50 - 140	
Di-N-Butylphthalate	2500	2780	111	55 - 140	
Fluoranthene	2500	2720	109	55 - 140	
Pyrene	2500	2570	103	45 - 135	
Butylbenzylphthalate	2500	2770	111	50 - 150	
3,3'-Dichlorobenzidine	2500	2760	110	40 - 140	
Benzo(a)anthracene	2500	2700	108	50 - 130	
Chrysene	2500	2550	102	55 - 140	
bis(2-Ethylhexyl)phthalate	2500	2730	109	50 - 150	
Di-n-octylphthalate	2500	2880	115	40 - 145	
Benzo(b)fluoranthene	2500	2600	104	45 - 125	
Benzo(k)fluoranthene	2500	2820	113	45 - 135	
Benzo(a)pyrene	2500	2600	104	50 - 130	
Indeno(1,2,3-cd)pyrene	2500	2600	104	50 - 135	
Dibenzo(a,h)Anthracene	2500	2650	106	40 - 140	
Benzo(g,h,i)Perylene	2500	2580	103	40 - 140	

Surrogates	% Recovery	Surrogate Limits	Qualifier
2-Fluorophenol	53.4	25 - 121	PASS
Phenol-d5	60.8	24 - 113	PASS
Nitrobenzene-d5	55.9	23 - 120	PASS
2-Fluorobiphenyl	63.0	30 - 115	PASS
2,4,6-Tribromophenol	103	19 - 122	PASS
P-Terphenyl-d14	115	18 - 137	PASS

* FAILS %REC LIMIT

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LABORATORY CONTROL SAMPLE (LCS)

Login Number: L0605548 | Run Date: 05/25/2006 | Sample ID: WG213990-02
Instrument ID: HPMS5 | Run Time: 16:14 | Prep Method: 3510C
File ID: 5M40873 | Analyst: ALT | Method: 8270C
Workgroup (AAB#): WG214070 | Matrix: Water | Units: ug/L
Contract #: | Cal ID: HPMS5-15-MAY-06

Analytes	Expected	Found	% Rec	LCS Limits	Q
Phenol	50.0	14.0	28.0	10 - 120	
Bis(2-Chloroethyl)ether	50.0	36.8	73.7	30 - 120	
2-Chlorophenol	50.0	33.6	67.3	35 - 110	
2-Methylphenol	50.0	32.3	64.6	34 - 120	
bis(2-Chloroisopropyl)ether	50.0	36.8	73.6	25 - 130	
Acetophenone	50.0	39.1	78.2	-	
3-,4-Methylphenol	50.0	30.3	60.7	30 - 110	
N-Nitroso-di-n-propylamine	50.0	42.2	84.3	35 - 130	
Hexachloroethane	50.0	31.1	62.1	30 - 95	
Nitrobenzene	50.0	34.1	68.2	40 - 110	
Isophorone	50.0	38.9	77.7	40 - 110	
2-Nitrophenol	50.0	31.6	63.2	40 - 115	
2,4-Dimethylphenol	50.0	34.8	69.6	30 - 120	
Bis(2-Chloroethoxy)Methane	50.0	35.8	71.7	45 - 105	
2,4-Dichlorophenol	50.0	35.3	70.6	40 - 110	
Naphthalene	50.0	33.3	66.6	40 - 100	
4-Chloroaniline	50.0	32.0	63.9	30 - 120	
Hexachlorobutadiene	50.0	33.1	66.1	25 - 105	
4-Chloro-3-methylphenol	50.0	37.4	74.8	35 - 110	
2-Methylnaphthalene	50.0	33.7	67.4	35 - 120	
Hexachlorocyclopentadiene	50.0	19.2	38.3	20 - 143	
2,4,6-Trichlorophenol	50.0	38.1	76.2	40 - 120	
2,4,5-Trichlorophenol	50.0	39.0	78.0	40 - 120	
2-Chloronaphthalene	50.0	37.7	75.4	50 - 130	
2-Nitroaniline	50.0	42.1	84.2	45 - 115	
Dimethylphthalate	50.0	42.3	84.5	25 - 112	
2,6-Dinitrotoluene	50.0	44.0	87.9	50 - 140	
Acenaphthylene	50.0	40.8	81.7	50 - 130	
3-Nitroaniline	50.0	46.8	93.6	45 - 135	
Acenaphthene	50.0	40.2	80.4	45 - 135	
2,4-Dinitrophenol	50.0	30.0	59.9	30 - 140	
4-Nitrophenol	50.0	17.7	35.5	10 - 132	
Dibenzofuran	50.0	39.1	78.3	45 - 115	
2,4-Dinitrotoluene	50.0	48.4	96.9	50 - 139	
Diethylphthalate	50.0	46.3	92.6	40 - 120	
Fluorene	50.0	42.3	84.6	50 - 121	
4-Chlorophenyl-phenyl ether	50.0	39.7	79.4	45 - 130	
4-Nitroaniline	50.0	50.5	101	45 - 135	
4,6-Dinitro-2-methylphenol	50.0	35.7	71.5	40 - 145	
N-Nitrosodiphenylamine	50.0	45.6	91.1	50 - 130	
4-Bromophenyl-phenylether	50.0	35.7	71.4	50 - 115	

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LABORATORY CONTROL SAMPLE (LCS)

Login Number: L0605548 Run Date: 05/25/2006 Sample ID: WG213990-02
Instrument ID: HPMS5 Run Time: 16:14 Prep Method: 3510C
File ID: 5M40873 Analyst: ALT Method: 8270C
Workgroup (AAB#): WG214070 Matrix: Water Units: ug/L
Contract #: Cal ID: HPMS5-15-MAY-06

Analytes	Expected	Found	% Rec	LCS Limits	Q
Hexachlorobenzene	50.0	42.6	85.2	50 - 130	
Pentachlorophenol	50.0	45.8	91.7	40 - 140	
Phenanthrene	50.0	44.9	89.8	50 - 120	
Anthracene	50.0	45.8	91.6	55 - 130	
Carbazole	50.0	48.3	96.6	50 - 130	
Di-N-Butylphthalate	50.0	49.7	99.4	55 - 118	
Fluoranthene	50.0	48.3	96.6	50 - 137	
Pyrene	50.0	46.6	93.2	50 - 115	
Butylbenzylphthalate	50.0	51.2	102	50 - 150	
3,3'-Dichlorobenzidine	50.0	46.1	92.2	30 - 140	
Benzo(a)anthracene	50.0	49.0	98.1	55 - 130	
Chrysene	50.0	46.0	91.9	55 - 130	
bis(2-Ethylhexyl)phthalate	50.0	50.3	101	45 - 150	
Di-n-octylphthalate	50.0	53.6	107	35 - 146	
Benzo(b)fluoranthene	50.0	47.6	95.2	45 - 125	
Benzo(k)fluoranthene	50.0	50.6	101	50 - 140	
Benzo(a)pyrene	50.0	46.1	92.3	55 - 135	
Indeno(1,2,3-cd)pyrene	50.0	42.7	85.4	45 - 135	
Dibenzo(a,h)Anthracene	50.0	43.8	87.7	40 - 125	
Benzo(g,h,i)Perylene	50.0	41.1	82.3	40 - 140	

Surrogates	% Recovery	Surrogate Limits	Qualifier
2-Fluorophenol	38.4	21 - 100	PASS
Phenol-d5	27.9	10 - 94	PASS
Nitrobenzene-d5	66.7	35 - 114	PASS
2-Fluorobiphenyl	74.9	43 - 116	PASS
2,4,6-Tribromophenol	91.2	10 - 123	PASS
p-Terphenyl-d14	82.5	33 - 141	PASS

* FAILS %REC LIMIT

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LABORATORY CONTROL SAMPLE (LCS)

Login Number:L0605548 Analyst:ALT Prep Method:3510C
Instrument ID:HPMS5 Matrix:Water Method:8270C
Workgroup (AAB#):WG214070 Units:ug/L
Sample ID:WG213990-02 LCS File ID:5M40873 Run Date:05/25/2006 16:14
Sample ID:WG213990-03 LCS2 File ID:5M40874 Run Date:05/25/2006 16:46

Analytes	LCS			LCS2			%RPD	%Rec Limits	RPD Lmt	Q
	Known	Found	% REC	Known	Found	% REC				
Phenol	50.0	14.0	28.0	50.0	15.3	30.6	9.00	10 - 120	21	
Bis(2-Chloroethyl)ether	50.0	36.8	73.7	50.0	39.6	79.3	7.32	30 - 120	45	
2-Chlorophenol	50.0	33.6	67.3	50.0	36.0	71.9	6.68	35 - 110	51	
2-Methylphenol	50.0	32.3	64.6	50.0	34.0	68.0	5.19	34 - 120	50	
bis(2-Chloroisopropyl)ether	50.0	36.8	73.6	50.0	39.7	79.5	7.64	25 - 130	44	
Acetophenone	50.0	39.1	78.2	50.0	42.1	84.1	7.32	-	0	#
3-,4-Methylphenol	50.0	30.3	60.7	50.0	32.2	64.3	5.88	30 - 110	35	
N-Nitroso-di-n-propylamine	50.0	42.2	84.3	50.0	45.4	90.8	7.39	35 - 130	51	
Hexachloroethane	50.0	31.1	62.1	50.0	33.9	67.8	8.75	30 - 95	47	
Nitrobenzene	50.0	34.1	68.2	50.0	36.4	72.8	6.57	40 - 110	45	
Isophorone	50.0	38.9	77.7	50.0	41.7	83.3	6.96	40 - 110	71	
2-Nitrophenol	50.0	31.6	63.2	50.0	34.5	69.1	8.88	40 - 115	55	
2,4-Dimethylphenol	50.0	34.8	69.6	50.0	36.6	73.2	4.94	30 - 120	58	
Bis(2-Chloroethoxy)Methane	50.0	35.8	71.7	50.0	38.4	76.8	6.90	45 - 105	55	
2,4-Dichlorophenol	50.0	35.3	70.6	50.0	37.2	74.4	5.21	40 - 110	59	
Naphthalene	50.0	33.3	66.6	50.0	35.8	71.5	7.13	40 - 100	45	
4-Chloroaniline	50.0	32.0	63.9	50.0	35.4	70.7	10.1	30 - 120	70	
Hexachlorobutadiene	50.0	33.1	66.1	50.0	35.5	70.9	7.04	25 - 105	59	
4-Chloro-3-methylphenol	50.0	37.4	74.8	50.0	39.5	79.1	5.53	35 - 110	66	
2-Methylnaphthalene	50.0	33.7	67.4	50.0	36.4	72.9	7.89	35 - 120	49	
Hexachlorocyclopentadiene	50.0	19.2	38.3	50.0	23.0	46.0	18.2	20 - 143	47	
2,4,6-Trichlorophenol	50.0	38.1	76.2	50.0	42.3	84.6	10.5	40 - 120	60	
2,4,5-Trichlorophenol	50.0	39.0	78.0	50.0	42.6	85.3	8.86	40 - 120	62	
2-Chloronaphthalene	50.0	37.7	75.4	50.0	41.4	82.9	9.44	50 - 130	48	
2-Nitroaniline	50.0	42.1	84.2	50.0	44.8	89.6	6.20	45 - 115	52	
Dimethylphthalate	50.0	42.3	84.5	50.0	44.8	89.5	5.70	25 - 112	57	
2,6-Dinitrotoluene	50.0	44.0	87.9	50.0	47.2	94.3	7.03	50 - 140	56	
Acenaphthylene	50.0	40.8	81.7	50.0	44.3	88.7	8.24	50 - 130	55	
3-Nitroaniline	50.0	46.8	93.6	50.0	48.8	97.7	4.26	45 - 135	115	
Acenaphthene	50.0	40.2	80.4	50.0	43.6	87.2	8.17	45 - 135	51	
2,4-Dinitrophenol	50.0	30.0	59.9	50.0	34.2	68.4	13.2	30 - 140	67	
4-Nitrophenol	50.0	17.7	35.5	50.0	17.5	35.0	1.22	10 - 132	29	
Dibenzofuran	50.0	39.1	78.3	50.0	42.7	85.3	8.67	45 - 115	54	
2,4-Dinitrotoluene	50.0	48.4	96.9	50.0	49.5	99.0	2.23	50 - 139	56	
Diethylphthalate	50.0	46.3	92.6	50.0	47.8	95.6	3.19	40 - 120	59	
Fluorene	50.0	42.3	84.6	50.0	45.2	90.4	6.66	50 - 121	59	
4-Chlorophenyl-phenyl ether	50.0	39.7	79.4	50.0	42.5	85.0	6.90	45 - 130	55	
4-Nitroaniline	50.0	50.5	101	50.0	50.8	102	0.509	45 - 135	95	
4,6-Dinitro-2-methylphenol	50.0	35.7	71.5	50.0	38.1	76.2	6.46	40 - 145	70	
N-Nitrosodiphenylamine	50.0	45.6	91.1	50.0	46.5	93.1	2.10	50 - 130	57	
4-Bromophenyl-phenylether	50.0	35.7	71.4	50.0	37.5	75.0	4.87	50 - 115	48	
Hexachlorobenzene	50.0	42.6	85.2	50.0	44.0	87.9	3.12	50 - 130	55	

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KEMRON Environmental Services

LABORATORY CONTROL SAMPLE (LCS)

Login Number: L0605548 Analyst: ALT Prep Method: 3510C
Instrument ID: HPMS5 Matrix: Water Method: 8270C
Workgroup (AAB#): WG214070 Units: ug/L
Sample ID: WG213990-02 LCS File ID: 5M40873 Run Date: 05/25/2006 16:14
Sample ID: WG213990-03 LCS2 File ID: 5M40874 Run Date: 05/25/2006 16:46

Analytes	LCS			LCS2			%RPD	%Rec Limits	RPD Lmt	Q
	Known	Found	% REC	Known	Found	% REC				
Pentachlorophenol	50.0	45.8	91.7	50.0	46.6	93.2	1.60	40 - 140	60	
Phenanthrene	50.0	44.9	89.8	50.0	45.4	90.7	1.03	50 - 120	59	
Anthracene	50.0	45.8	91.6	50.0	46.7	93.4	1.92	55 - 130	65	
Carbazole	50.0	48.3	96.6	50.0	48.7	97.4	0.858	50 - 130	109	
Di-N-Butylphthalate	50.0	49.7	99.4	50.0	49.2	98.3	1.05	55 - 118	61	
Fluoranthene	50.0	48.3	96.6	50.0	47.9	95.7	0.932	50 - 137	68	
Pyrene	50.0	46.6	93.2	50.0	46.4	92.8	0.427	50 - 115	53	
Butylbenzylphthalate	50.0	51.2	102	50.0	49.8	99.6	2.80	50 - 150	62	
3,3'-Dichlorobenzidine	50.0	46.1	92.2	50.0	45.9	91.9	0.392	30 - 140	119	
Benzo(a)anthracene	50.0	49.0	98.1	50.0	48.3	96.7	1.44	55 - 130	55	
Chrysene	50.0	46.0	91.9	50.0	46.5	92.9	1.07	55 - 130	55	
bis(2-Ethylhexyl)phthalate	50.0	50.3	101	50.0	48.8	97.6	2.99	45 - 150	57	
Di-n-octylphthalate	50.0	53.6	107	50.0	52.2	104	2.66	35 - 146	64	
Benzo(b)fluoranthene	50.0	47.6	95.2	50.0	46.8	93.6	1.69	45 - 125	60	
Benzo(k)fluoranthene	50.0	50.6	101	50.0	50.5	101	0.213	50 - 140	60	
Benzo(a)pyrene	50.0	46.1	92.3	50.0	45.6	91.2	1.16	55 - 135	62	
Indeno(1,2,3-cd)pyrene	50.0	42.7	85.4	50.0	42.1	84.1	1.54	45 - 135	83	
Dibenzo(a,h)Anthracene	50.0	43.8	87.7	50.0	42.9	85.9	2.09	40 - 125	86	
Benzo(g,h,i)Perylene	50.0	41.1	82.3	50.0	40.5	81.0	1.58	40 - 140	88	

Surogates	LCS	LCS2	Surrogate Limits	Qualifier
	% Recovery	% Recovery		
2-Fluorophenol	38.4	41.1	21 - 100	PASS
Phenol-d5	27.9	29.2	10 - 94	PASS
Nitrobenzene-d5	66.7	70.5	35 - 114	PASS
2-Fluorobiphenyl	74.9	80.5	43 - 116	PASS
2,4,6-Tribromophenol	91.2	92.0	10 - 123	PASS
p-Terphenyl-d14	82.5	79.1	33 - 141	PASS

* FAILS %REC LIMIT

\# FAILS RPD LIMIT

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KEMRON Environmental Services

MS/MSD REPORT

Loginnum:L0605548 Cal ID:HPMS5-15-MAY-06 Worknum:WG214069
Instrument ID:HPMS5 Contract #: Prep Method:3545
Parent ID:L0605548-05 File ID:5M40868 Dil:1 Method:8270C
Sample ID:L0605548-06 MS File ID:5M40869 Dil:1 Matrix:Soil
Sample ID:L0605548-07 MSD File ID:5M40870 Dil:1 Units:ug/kg
Percent Solid:61.4

Analyte	Parent	MS Spiked	MS Found	MS %Rec	MSD Spiked	MSD Found	MSD %Rec	%RPD	%Rec Limits	RPD Limit	Q
Phenol	U	3690	2720	73.7	3880	2590	66.6	5.04	35 - 100	51	
Bis(2-Chloroethyl)ether	U	3690	2550	69.2	3880	2250	58.0	12.7	30 - 100	52	
2-Chlorophenol	U	3690	2430	65.8	3880	2210	56.9	9.54	35 - 105	47	
2-Methylphenol	U	3690	2550	69.2	3880	2310	59.5	9.98	35 - 100	52	
Acetophenone	U	3690	2670	72.2	3880	2400	61.8	10.6	40 - 140	40	
bis(2-Chloroisopropyl)ether	U	3690	2500	67.8	3880	2260	58.2	10.2	20 - 115	49	
3-,4-Methylphenol	U	3690	2680	72.6	3880	2450	63.1	8.86	35 - 105	52	
N-Nitroso-di-n-propylamine	U	3690	2910	78.8	3880	2620	67.4	10.6	35 - 110	59	
Hexachloroethane	U	3690	2040	55.3	3880	1810	46.7	11.8	30 - 100	47	
Nitrobenzene	U	3690	2370	64.3	3880	2110	54.4	11.6	35 - 100	50	
Isophorone	U	3690	2690	72.8	3880	2370	61.1	12.4	35 - 100	62	
2-Nitrophenol	U	3690	2180	59.2	3880	1950	50.3	11.1	35 - 100	60	
2,4-Dimethylphenol	U	3690	2490	67.3	3880	2190	56.3	12.8	30 - 105	57	
Bis(2-Chloroethoxy)Methane	U	3690	2490	67.5	3880	2210	57.0	11.8	30 - 100	53	
2,4-Dichlorophenol	U	3690	2480	67.1	3880	2200	56.7	11.8	35 - 110	53	
Naphthalene	U	3690	2290	61.9	3880	2050	52.9	10.6	35 - 100	45	
4-Chloroaniline	U	3690	1810	49.1	3880	1760	45.4	2.68	35 - 100	73	
Hexachlorobutadiene	U	3690	2080	56.3	3880	1990	51.4	4.03	30 - 100	52	
4-Chloro-3-methylphenol	U	3690	2930	79.3	3880	2570	66.1	13.1	40 - 100	62	
2-Methylnaphthalene	U	3690	2200	59.7	3880	2030	52.2	8.22	35 - 115	49	
Hexachlorocyclopentadiene	U	3690	270	7.31	3880	151	3.90	56.2	30 - 110	60	*
2,4,6-Trichlorophenol	U	3690	2880	78.1	3880	2480	64.0	14.9	40 - 110	63	
2,4,5-Trichlorophenol	U	3690	3040	82.5	3880	2720	70.1	11.2	40 - 110	63	
2-Chloronaphthalene	U	3690	2430	65.7	3880	2230	57.5	8.33	40 - 105	50	
2-Nitroaniline	U	3690	3340	90.4	3880	2850	73.5	15.6	45 - 120	67	
Dimethylphthalate	U	3690	3220	87.2	3880	2730	70.2	16.6	45 - 115	63	
Acenaphthylene	U	3690	2250	60.9	3880	1960	50.5	13.6	40 - 110	53	
2,6-Dinitrotoluene	U	3690	3280	88.7	3880	2850	73.3	14.0	50 - 125	69	
3-Nitroaniline	U	3690	3230	87.6	3880	3200	82.4	1.10	50 - 130	86	
Acenaphthene	U	3690	2540	68.9	3880	2250	58.1	12.1	40 - 110	70	
2,4-Dinitrophenol	U	3690	0	0	3880	0	0	NA	40 - 130	72	*
4-Nitrophenol	U	3690	2710	73.4	3880	3150	81.3	15.2	45 - 140	99	
Dibenzofuran	U	3690	2630	71.4	3880	2370	60.9	10.7	35 - 110	55	
2,4-Dinitrotoluene	U	3690	3610	97.7	3880	3340	85.9	7.83	50 - 130	75	
Diethylphthalate	U	3690	3430	92.8	3880	3190	82.1	7.20	50 - 130	70	
4-Chlorophenyl-phenyl ether	U	3690	2610	70.7	3880	2340	60.2	11.0	40 - 110	64	
Fluorene	U	3690	2910	78.9	3880	2590	66.6	11.8	45 - 115	55	
4-Nitroaniline	U	3690	3880	105	3880	3910	101	0.809	35 - 140	95	
4,6-Dinitro-2-methylphenol	U	3690	1400	38.0	3880	1180	30.4	17.0	45 - 130	86	*
N-Nitrosodiphenylamine	U	3690	3380	91.6	3880	3220	82.9	4.91	50 - 130	65	
4-Bromophenyl-phenylether	U	3690	2460	66.5	3880	2240	57.7	9.19	40 - 115	58	

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KEMRON Environmental Services

MS/MSD REPORT

Loginnum:L0605548 Cal ID:HPMS5 15-MAY-06 Worknum:WG214069
Instrument ID:HPMS5 Contract #: Prep Method:3545
Parent ID:L0605548-05 File ID:5M40868 Dil:1 Method:8270C
Sample ID:L0605548-06 MS File ID:5M40869 Dil:1 Matrix:Soil
Sample ID:L0605548-07 MSD File ID:5M40870 Dil:1 Units:ug/kg
Percent Solid:61.4

Analyte	Parent	MS Spiked	MS Found	MS %Rec	MSD Spiked	MSD Found	MSD %Rec	%RPD	%Rec Limits	RPD Limit	Q
Hexachlorobenzene	U	3690	2950	79.9	3880	2750	70.8	6.91	45 - 120	68	
Pentachlorophenol	U	3690	3620	98.1	3880	3680	94.8	1.56	50 - 150	77	
Phenanthrene	U	3690	3110	84.4	3880	3060	78.9	1.64	50 - 130	70	
Anthracene	U	3690	3120	84.6	3880	3050	78.5	2.36	55 - 130	72	
Carbazole	U	3690	3670	99.3	3880	3720	95.9	1.56	50 - 140	99	
Di-N-Butylphthalate	U	3690	3130	84.8	3880	3210	82.6	2.52	55 - 140	82	
Fluoranthene	U	3690	3200	86.7	3880	3260	84.0	1.96	55 - 140	80	
Pyrene	U	3690	3040	82.2	3880	3150	81.1	3.74	45 - 135	89	
Butylbenzylphthalate	U	3690	3190	86.4	3880	3210	82.7	0.706	50 - 150	86	
3,3'-Dichlorobenzidine	U	3690	2740	74.3	3880	3000	77.4	9.09	40 - 140	135	
Benzo(a)anthracene	U	3690	3120	84.5	3880	3170	81.8	1.77	50 - 130	83	
Chrysene	U	3690	2980	80.8	3880	3110	80.0	4.06	55 - 140	72	
bis(2-Ethylhexyl)phthalate	138	3690	3480	90.5	3880	3210	79.1	7.96	50 - 150	83	
Di-n-octylphthalate	U	3690	3510	95.1	3880	3290	84.7	6.47	40 - 145	96	
Benzo(b)fluoranthene	U	3690	3020	81.7	3880	3040	78.4	0.899	45 - 125	76	
Benzo(k)fluoranthene	U	3690	3180	86.1	3880	2980	76.7	6.49	45 - 135	79	
Benzo(a)pyrene	U	3690	2960	80.1	3880	2820	72.6	4.77	50 - 130	72	
Indeno(1,2,3-cd)pyrene	U	3690	2830	76.7	3880	2570	66.2	9.60	50 - 135	84	
Dibenzo(a,h)Anthracene	U	3690	3030	82.0	3880	2890	74.3	4.78	40 - 140	88	
Benzo(g,h,i)Perylene	U	3690	2720	73.8	3880	2420	62.3	11.9	40 - 140	85	

* FAILS %REC LIMIT

FAILS RPD LIMIT

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KEMRON Environmental Services

MS/MSD REPORT

Loginnum:L0605548 Cal ID:HPMS5-15-MAY-06 Worknum:WG214069
Instrument ID:HPMS5 Contract #: Prep Method:3545
Parent ID:L0605548-14 File ID:5M40902 Dil:20 Method:8270C
Sample ID:L0605548-15 MS File ID:5M40903 Dil:20 Matrix:Soil
Sample ID:L0605548-16 MSD File ID:5M40904 Dil:20 Units:ug/kg
Percent Solid:86.6

Analyte	Parent	MS Spiked	MS Found	MS %Rec	MSD Spiked	MSD Found	MSD %Rec	%RPD	%Rec Limits	RPD Limit	Q
Phenol	U	2890	0	0	2830	0	0	NA	35 - 100	51	*
Bis(2-Chloroethyl)ether	U	2890	0	0	2830	0	0	NA	30 - 100	52	*
2-Chlorophenol	U	2890	0	0	2830	0	0	NA	35 - 105	47	*
2-Methylphenol	U	2890	0	0	2830	0	0	NA	35 - 100	52	*
Acetophenone	U	2890	0	0	2830	0	0	NA	40 - 140	40	*
bis(2-Chloroisopropyl)ether	U	2890	1950	67.4	2830	0	0	200	20 - 115	49	*
3-,4-Methylphenol	U	2890	0	0	2830	0	0	NA	35 - 105	52	*
N-Nitroso-di-n-propylamine	U	2890	2160	74.7	2830	0	0	200	35 - 110	59	*
Hexachloroethane	U	2890	0	0	2830	0	0	NA	30 - 100	47	*
Nitrobenzene	U	2890	0	0	2830	0	0	NA	35 - 100	50	*
Isophorone	U	2890	2110	73.0	2830	0	0	200	35 - 100	62	*
2-Nitrophenol	U	2890	0	0	2830	0	0	NA	35 - 100	60	*
2,4-Dimethylphenol	U	2890	0	0	2830	0	0	NA	30 - 105	57	*
Bis(2-Chloroethoxy)Methane	U	2890	1910	66.1	2830	0	0	200	30 - 100	53	*
2,4-Dichlorophenol	U	2890	0	0	2830	0	0	NA	35 - 110	53	*
Naphthalene	U	2890	0	0	2830	0	0	NA	35 - 100	45	*
4-Chloroaniline	U	2890	0	0	2830	0	0	NA	35 - 100	73	*
Hexachlorobutadiene	U	2890	0	0	2830	0	0	NA	30 - 100	52	*
4-Chloro-3-methylphenol	U	2890	2040	70.8	2830	0	0	200	40 - 100	62	*
2-Methylnaphthalene	U	2890	1980	68.6	2830	0	0	200	35 - 115	49	*
Hexachlorocyclopentadiene	U	2890	0	0	2830	0	0	NA	30 - 110	60	*
2,4,6-Trichlorophenol	U	2890	0	0	2830	0	0	NA	40 - 110	63	*
2,4,5-Trichlorophenol	U	2890	0	0	2830	0	0	NA	40 - 110	63	*
2-Chloronaphthalene	U	2890	1990	68.9	2830	0	0	200	40 - 105	50	*
2-Nitroaniline	U	2890	0	0	2830	0	0	NA	45 - 120	67	*
Dimethylphthalate	U	2890	2190	75.9	2830	0	0	200	45 - 115	63	*
Acenaphthylene	U	2890	2110	73.0	2830	0	0	200	40 - 110	53	*
2,6-Dinitrotoluene	U	2890	0	0	2830	0	0	NA	50 - 125	69	*
3-Nitroaniline	U	2890	0	0	2830	0	0	NA	50 - 130	86	*
Acenaphthene	U	2890	2050	71.0	2830	0	0	200	40 - 110	70	*
2,4-Dinitrophenol	U	2890	0	0	2830	0	0	NA	40 - 130	72	*
4-Nitrophenol	U	2890	0	0	2830	0	0	NA	45 - 140	99	*
Dibenzofuran	U	2890	2060	71.4	2830	0	0	200	35 - 110	55	*
2,4-Dinitrotoluene	U	2890	0	0	2830	0	0	NA	50 - 130	75	*
Diethylphthalate	U	2890	2310	79.8	2830	0	0	200	50 - 130	70	*
4-Chlorophenyl-phenyl ether	U	2890	2000	69.4	2830	0	0	200	40 - 110	64	*
Fluorene	U	2890	2230	77.3	2830	0	0	200	45 - 115	55	*
4-Nitroaniline	U	2890	0	0	2830	0	0	NA	35 - 140	95	*
4,6-Dinitro-2-methylphenol	U	2890	0	0	2830	0	0	NA	45 - 130	86	*
N-Nitrosodiphenylamine	U	2890	1980	68.5	2830	0	0	200	50 - 130	65	*
4-Bromophenyl-phenylether	U	2890	1940	67.1	2830	0	0	200	40 - 115	58	*

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KEMRON Environmental Services

MS/MSD REPORT

Loginnum:L0605548 Cal ID: HPMS5 15-MAY-06 Worknum:WG214069
Instrument ID:HPMS5 Contract #: Prep Method:3545
Parent ID:L0605548-14 File ID:5M40902 Dil:20 Method:8270C
Sample ID:L0605548-15 MS File ID:5M40903 Dil:20 Matrix:Soil
Sample ID:L0605548-16 MSD File ID:5M40904 Dil:20 Units:ug/kg
Percent Solid:86.6

Analyte	Parent	MS Spiked	MS Found	MS %Rec	MSD Spiked	MSD Found	MSD %Rec	%RPD	%Rec Limits	RPD Limit	Q
Hexachlorobenzene	U	2890	2150	74.4	2830	0	0	200	45 - 120	68	*
Pentachlorophenol	U	2890	0	0	2830	0	0	NA	50 - 150	77	*
Phenanthrene	U	2890	2440	84.4	2830	1960	69.3	21.8	50 - 130	70	
Anthracene	U	2890	2490	86.1	2830	1940	68.7	24.6	55 - 130	72	
Carbazole	U	2890	2460	85.0	2830	2100	74.3	15.7	50 - 140	99	
Di-N-Butylphthalate	U	2890	2430	84.1	2830	1880	66.6	25.4	55 - 140	82	
Fluoranthene	U	2890	2480	85.9	2830	2010	71.3	20.8	55 - 140	80	
Pyrene	U	2890	2700	93.5	2830	2170	76.9	21.7	45 - 135	89	
Butylbenzylphthalate	U	2890	2940	102	2830	2320	82.3	23.5	50 - 150	86	
3,3'-Dichlorobenzidine	U	2890	0	0	2830	0	0	NA	40 - 140	135	*
Benzo(a)anthracene	U	2890	2560	88.7	2830	2130	75.5	18.2	50 - 130	83	
Chrysene	U	2890	2400	83.2	2830	2100	74.5	13.2	55 - 140	72	
bis(2-Ethylhexyl)phthalate	U	2890	3790	131	2830	3280	116	14.3	50 - 150	83	
Di-n-octylphthalate	U	2890	4250	147	2830	3250	115	26.7	40 - 145	96	*
Benzo(b)fluoranthene	U	2890	2710	93.9	2830	2120	75.1	24.5	45 - 125	76	
Benzo(k)fluoranthene	U	2890	2850	98.7	2830	2460	87.2	14.6	45 - 135	79	
Benzo(a)pyrene	U	2890	2500	86.4	2830	0	0	200	50 - 130	72	*
Indeno(1,2,3-cd)pyrene	U	2890	0	0	2830	0	0	NA	50 - 135	84	*
Dibenzo(a,h)Anthracene	U	2890	0	0	2830	0	0	NA	40 - 140	88	*
Benzo(g,h,i)Perylene	U	2890	0	0	2830	0	0	NA	40 - 140	85	*

* FAILS %REC LIMIT

\# FAILS RPD LIMIT

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KEMRON ENVIRONMENTAL SERVICES
ORGANIC INSTRUMENT CHECK

DFTPP

Login Number: L0605548
Instrument: HPMS4
Analyst: CLK
Workgroup: WG212888

Tune ID: WG212888-01
Run Date: 05/10/2006
Run Time: 13:03
File ID: 4M32961
Cal ID: HPMS4-10-MAY-06

Target	Rel. to	Lower	Upper	Rel.	Raw	Result
51.0	198	30.0	60.0	38.4	197430	PASS
68.0	69.0	0	2.00	0	0	PASS
69.0	198	0	100	38.8	199829	PASS
70.0	69.0	0	2.00	0.531	1061	PASS
127	198	40.0	60.0	51.3	264213	PASS
197	198	0	1.00	0	0	PASS
198	198	100	100	100	514581	PASS
199	198	5.00	9.00	6.63	34117	PASS
275	198	10.0	30.0	25.1	129296	PASS
365	198	1.00	100	2.75	14129	PASS
441	443	0.0100	100	80.4	63090	PASS
442	198	40.0	100	79.0	406762	PASS
443	442	17.0	23.0	19.3	78506	PASS

This check relates to the following samples, MS, MSD:

Lab ID	Client ID	Tag	Date Analyzed	Q
WG212888-09	SSCV	01	05/10/2006 18:06	
WG212888-08	STD	01	05/10/2006 17:31	
WG212888-07	STD	01	05/10/2006 16:55	
WG212888-06	STD	01	05/10/2006 16:20	
WG212888-05	STD	01	05/10/2006 15:44	
WG212888-04	STD	01	05/10/2006 15:08	
WG212888-03	STD	01	05/10/2006 14:33	
WG212888-02	CCV	01	05/10/2006 13:58	

* Sample past 12 hour tune limit

KEMRON FORMS - Modified 02/14/2006
Version 1.3 PDF File ID: 490958
Report generated 06/06/2006 16:50

KEMRON ENVIRONMENTAL SERVICES
ORGANIC INSTRUMENT CHECK

DFTPP

Login Number: L0605548 Tune ID: WG213265-01
Instrument: HPMS5 Run Date: 05/15/2006
Analyst: ALT Run Time: 08:53
Workgroup: WG213265 File ID: 5M40735
Cal ID: HPMS5-18-APR-06

Target	Rel. to	Lower	Upper	Rel.	Raw	Result
51.0	198	30.0	60.0	45.1	139063	PASS
68.0	69.0	0	2.00	1.23	1488	PASS
69.0	198	0	100	39.1	120639	PASS
70.0	69.0	0	2.00	0.516	623	PASS
127	198	40.0	60.0	49.4	152320	PASS
197	198	0	1.00	0	0	PASS
198	198	100	100	100	308437	PASS
199	198	5.00	9.00	6.90	21282	PASS
275	198	10.0	30.0	20.1	62045	PASS
365	198	1.00	100	2.20	6778	PASS
441	443	0.0100	100	65.2	24142	PASS
442	198	40.0	100	60.4	186253	PASS
443	442	17.0	23.0	19.9	37024	PASS

This check relates to the following samples, MS, MSD:

Lab ID	Client ID	Tag	Date Analyzed	Q
WG213265-09	SSCV	01	05/15/2006 14:02	
WG213265-08	STD	01	05/15/2006 13:30	
WG213265-07	STD	01	05/15/2006 12:58	
WG213265-06	STD	01	05/15/2006 12:25	
WG213265-05	STD	01	05/15/2006 11:52	
WG213265-04	STD	01	05/15/2006 11:21	
WG213265-03	STD	01	05/15/2006 10:48	
WG213265-02	CCV	01	05/15/2006 10:16	

* Sample past 12 hour tune limit

KEMRON FORMS - Modified 02/14/2006
Version 1.3 PDF File ID: 490958
Report generated 06/06/2006 16:50

KEMRON ENVIRONMENTAL SERVICES
ORGANIC INSTRUMENT CHECK

DFTPP

Login Number: L0605548 | Tune ID: WG214008-01
Instrument: HPMS5 | Run Date: 05/25/2006
Analyst: ALT | Run Time: 09:08
Workgroup: WG214008 | File ID: 5M40861
Cal ID: HPMS5-15-MAY-06

Target	Rel. to	Lower	Upper	Rel.	Raw	Result
51.0	198	30.0	60.0	47.0	104478	PASS
68.0	69.0	0	2.00	1.08	998	PASS
69.0	198	0	100	41.6	92585	PASS
70.0	69.0	0	2.00	0.480	444	PASS
127	198	40.0	60.0	51.4	114440	PASS
197	198	0	1.00	0	0	PASS
198	198	100	100	100	222528	PASS
199	198	5.00	9.00	6.94	15443	PASS
275	198	10.0	30.0	20.6	45842	PASS
365	198	1.00	100	2.64	5865	PASS
441	443	0.0100	100	65.6	16534	PASS
442	198	40.0	100	59.0	131184	PASS
443	442	17.0	23.0	19.2	25216	PASS

This check relates to the following CCV:

Lab ID	Client ID	Date Analyzed	
WG214008-02	CCV	05/25/2006 09:26	

This check relates to the following samples & batch QC:

Lab ID	Client ID	Tag	Date Analyzed	Q
WG213964-03	BLANK	01	05/25/2006 11:37	
WG213964-04	LCS	01	05/25/2006 12:11	
L0605548-05	SM140SB03052306	01	05/25/2006 12:43	
L0605548-06	SM140SB03052306 MS	01	05/25/2006 14:06	
L0605548-07	SM140SB03052306 MSD	01	05/25/2006 14:37	
L0605548-10	SM138FD03052306	01	05/25/2006 15:09	
WG213990-01	BLANK	01	05/25/2006 15:42	
WG213990-02	LCS	01	05/25/2006 16:14	
WG213990-03	LCS2	01	05/25/2006 16:46	
L0605548-03	SM138EB01052306	01	05/25/2006 17:17	
L0605548-09	SM138SB03052306	01	05/25/2006 18:21	
L0605548-18	SM139SB03052306	01	05/25/2006 18:53	
L0605548-04	SM140FD03052306	01	05/25/2006 19:25	
L0605548-01	SM140SB02052306	DL01	05/25/2006 19:56	
L0605548-02	SM140SB01052306	DL01	05/25/2006 20:28	
L0605548-08	SM137SB01052306	DL01	05/25/2006 20:59	

* Sample past 12 hour tune limit

KEMRON FORMS - Modified 03/15/2006
Version 1.3 PDF File ID: 490959
Report generated 06/06/2006 16:50

KEMRON ENVIRONMENTAL SERVICES
ORGANIC INSTRUMENT CHECK

DFTPP

Login Number: L0605548 | Tune ID: WG214107-01
Instrument: HPMS5 | Run Date: 05/26/2006
Analyst: ALT | Run Time: 13:10
Workgroup: WG214107 | File ID: 5M40886
Cal ID: HPMS5-15-MAY-06

Target	Rel. to	Lower	Upper	Rel.	Raw	Result
51.0	198	30.0	60.0	49.8	113789	PASS
68.0	69.0	0	2.00	0.991	978	PASS
69.0	198	0	100	43.2	98711	PASS
70.0	69.0	0	2.00	0.429	423	PASS
127	198	40.0	60.0	53.5	122170	PASS
197	198	0	1.00	0	0	PASS
198	198	100	100	100	228352	PASS
199	198	5.00	9.00	6.74	15380	PASS
275	198	10.0	30.0	20.3	46365	PASS
365	198	1.00	100	2.52	5757	PASS
441	443	0.0100	100	72.2	16502	PASS
442	198	40.0	100	54.5	124482	PASS
443	442	17.0	23.0	18.4	22844	PASS

This check relates to the following CCV:

Lab ID	Client ID	Date Analyzed	
WG214107-02	CCV	05/26/2006 13:29	

This check relates to the following samples & batch QC:

Lab ID	Client ID	Tag	Date Analyzed	Q
L0605548-11	SM139SB01052306	DL01	05/26/2006 20:23	
L0605548-14	SM138SB01052306	DL01	05/26/2006 21:26	
L0605548-15	SM138SB01052306 MS	DL01	05/26/2006 21:58	
L0605548-16	SM138SB01052306 MSD	DL01	05/26/2006 22:31	
L0605548-17	SM137SB02052306	DL01	05/26/2006 23:03	

* Sample past 12 hour tune limit

KEMRON FORMS - Modified 03/15/2006
Version 1.3 PDF File ID: 490959
Report generated 06/06/2006 16:50

KEMRON ENVIRONMENTAL SERVICES
ORGANIC INSTRUMENT CHECK

DFTPP

Login Number: L0605548 | Tune ID: WG214203-01
Instrument: HPMS5 | Run Date: 05/30/2006
Analyst: ALT | Run Time: 12:57
Workgroup: WG214203 | File ID: 5M40912
Cal ID: HPMS5-15-MAY-06

Target	Rel. to	Lower	Upper	Rel.	Raw	Result
51.0	198	30.0	60.0	49.4	106463	PASS
68.0	69.0	0	2.00	0.620	578	PASS
69.0	198	0	100	43.2	93210	PASS
70.0	69.0	0	2.00	0.143	133	PASS
127	198	40.0	60.0	53.2	114786	PASS
197	198	0	1.00	0	0	PASS
198	198	100	100	100	215722	PASS
199	198	5.00	9.00	6.89	14854	PASS
275	198	10.0	30.0	20.2	43645	PASS
365	198	1.00	100	2.49	5377	PASS
441	443	0.0100	100	68.3	14865	PASS
442	198	40.0	100	53.2	114725	PASS
443	442	17.0	23.0	19.0	21778	PASS

This check relates to the following CCV:

Lab ID	Client ID	Date Analyzed	
WG214203-02	CCV	05/30/2006 13:15	

This check relates to the following samples & batch QC:

Lab ID	Client ID	Tag	Date Analyzed	Q
L0605548-12	SM136SB01052206	DL01	05/30/2006 20:40	
L0605548-13	SM139SB02052306	DL01	05/30/2006 21:12	
L0605548-19	SM138SB02052306	DL01	05/30/2006 21:43	

*** Sample past 12 hour tune limit**

KEMRON FORMS - Modified 03/15/2006
Version 1.3 PDF File ID: 490959
Report generated 06/06/2006 16:50

KEMRON ENVIRONMENTAL SERVICES
ORGANIC INSTRUMENT CHECK

DFTPP

Login Number: L0605548 Tune ID: WG214395-01
Instrument: HPMS4 Run Date: 06/01/2006
Analyst: CLK Run Time: 12:11
Workgroup: WG214395 File ID: 4M33221
Cal ID: HPMS4 -10-MAY-06

Target	Rel. to	Lower	Upper	Rel.	Raw	Result
51.0	198	30.0	60.0	38.1	90058	PASS
68.0	69.0	0	2.00	0	0	PASS
69.0	198	0	100	39.1	92494	PASS
70.0	69.0	0	2.00	0.591	547	PASS
127	198	40.0	60.0	53.3	126069	PASS
197	198	0	1.00	0	0	PASS
198	198	100	100	100	236352	PASS
199	198	5.00	9.00	6.81	16088	PASS
275	198	10.0	30.0	25.3	59845	PASS
365	198	1.00	100	2.88	6809	PASS
441	443	0.0100	100	31.5	11370	PASS
442	198	40.0	100	81.0	191445	PASS
443	442	17.0	23.0	18.8	36074	PASS

This check relates to the following CCV:

Lab ID	Client ID	Date Analyzed	
WG214395-02	CCV	06/01/2006 12:29	

This check relates to the following samples & batch QC:

Lab ID	Client ID	Tag	Date Analyzed	Q
WG214365-02	BLANK	01	06/01/2006 15:29	
WG214365-03	LCS	01	06/01/2006 16:05	

* Sample past 12 hour tune limit

KEMRON FORMS - Modified 03/15/2006
Version 1.3 PDF File ID: 490959
Report generated 06/06/2006 16:50

KEMRON ENVIRONMENTAL SERVICES
ORGANIC INSTRUMENT CHECK

DFTPP

Login Number: L0605548 | Tune ID: WG214530-01
Instrument: HPMS5 | Run Date: 06/02/2006
Analyst: ALT | Run Time: 13:29
Workgroup: WG214530 | File ID: 5M40987
Cal ID: HPMS5-15-MAY-06

Target	Rel. to	Lower	Upper	Rel.	Raw	Result
51.0	198	30.0	60.0	44.1	98601	PASS
68.0	69.0	0	2.00	1.00	856	PASS
69.0	198	0	100	38.1	85341	PASS
70.0	69.0	0	2.00	0.697	595	PASS
127	198	40.0	60.0	51.8	115802	PASS
197	198	0	1.00	0	0	PASS
198	198	100	100	100	223744	PASS
199	198	5.00	9.00	6.33	14174	PASS
275	198	10.0	30.0	21.8	48717	PASS
365	198	1.00	100	2.98	6668	PASS
441	443	0.0100	100	66.1	17955	PASS
442	198	40.0	100	62.7	140234	PASS
443	442	17.0	23.0	19.4	27165	PASS

This check relates to the following CCV:

Lab ID	Client ID	Date Analyzed	
WG214530-02	CCV	06/02/2006 13:48	

This check relates to the following samples & batch QC:

Lab ID	Client ID	Tag	Date Analyzed	Q
L0605548-12	SM136SB01052206	REDL1	06/02/2006 23:11	
L0605548-19	SM138SB02052306	REDL1	06/02/2006 23:42	

*** Sample past 12 hour tune limit**

KEMRON FORMS - Modified 03/15/2006
Version 1.3 PDF File ID: 490959
Report generated 06/06/2006 16:50

KEMRON Environmental Services

INITIAL CALIBRATION SUMMARY

Login Number: L0605548 **Instrument ID:** HPMS4
Analytical Method: 8270C **Initial Calibration Date:** 10-MAY-06 17:31
ICAL Workgroup: WG212888 **Column ID:** F

Analyte		AVG RF	% RSD	LINEAR	QUAD
2,4,6-Trichlorophenol	CCC	0.3283	5.49		
2,4-Dichlorophenol	CCC	0.2681	3.67		
2-Nitrophenol	CCC	0.1847	5.51		
4-Chloro-3-Methylphenol	CCC	0.2730	4.09		
Acenaphthene	CCC	1.090	9.06		
Benzo[a]pyrene	CCC	1.248	2.72		
Di-n-Octyl Phthalate	CCC	1.580	5.20		
Fluoranthene	CCC	1.210	10.1		
Hexachlorobutadiene	CCC	0.1500	6.47		
Pentachlorophenol	CCC	0.1338	6.25		
Phenol	CCC	1.636	4.78		
n-Nitrosodiphenylamine	CCC	0.7356	8.20		
2,4-Dinitrophenol	SPCC	0.1177	20.8	0.999	
4-Nitrophenol	SPCC	0.2111	3.85		
Hexachlorocyclopentadiene	SPCC	0.2264	20.9	0.999	
n-Nitrosodipropylamine	SPCC	0.8445	15.1		1.00
2,4,5-Trichlorophenol		0.3508	3.83		
2,4-Dimethylphenol		0.3152	7.28		
2,4-Dinitrotoluene		0.3479	8.33		
2,6-Dinitrotoluene		0.3049	3.86		
2-Chloronaphthalene		1.260	9.11		
2-Chlorophenol		1.443	2.61		
2-Methylnaphthalene		0.6550	8.07		
2-Methylphenol		1.085	3.55		
2-Nitroaniline		0.3072	4.63		
3,3'-Dichlorobenzidine		0.4577	5.51		
3-,4-Methylphenol		1.430	3.31		
3-Nitroaniline		0.3325	1.30		
4,6-Dinitro-2-Methylphenol		0.1368	10.3		
4-Bromophenyl Phenyl Ether		0.2312	6.48		
4-Chloroaniline		0.4339	5.74		
4-Chlorophenyl Phenyl Ether		0.5924	11.5		
4-Nitroaniline		0.3427	3.15		
Acenaphthylene		1.794	9.53		
Anthracene		1.213	9.76		
Benzo[a]anthracene		1.297	6.51		
Benzo[b]fluoranthene		1.354	7.23		
Benzo[ghi]perylene		1.262	2.28		
Benzo[k]fluoranthene		1.234	5.20		
Butyl Benzyl Phthalate		0.6078	17.6		0.999
Carbazole		1.119	7.89		
Chrysene		1.264	7.89		
Di-n-Butyl Phthalate		1.383	10.4		
Dibenz[ah]anthracene		1.234	3.42		
Dibenzofuran		1.494	12.9		

KEMRON FORMS - Modified 03/06/2006
Version 1.5 PDF File ID: 490956
Report generated 06/06/2006 16:47

KEMRON Environmental Services

INITIAL CALIBRATION SUMMARY

Login Number: L0605548 **Instrument ID:** HPMS4
Analytical Method: 8270C **Initial Calibration Date:** 10-MAY-06 17:31
ICAL Workgroup: WG212888 **Column ID:** F

Analyte		AVG RF	% RSD	LINEAR	QUAD
Diethylphthalate		1.235	7.42		
Dimethylphthalate		1.229	7.69		
Fluorene		1.272	9.60		
Hexachlorobenzene		0.2427	7.56		
Hexachloroethane		0.5807	2.90		
Indeno[1,2,3-cd]pyrene		1.456	2.66		
Isophorone		0.5845	6.16		
Naphthalene		1.013	9.65		
Nitrobenzene		0.3309	5.49		
Phenanthrene		1.201	10.2		
Pyrene		1.416	8.99		
bis(2-Chloroethoxy)methane		0.4697	14.0		
bis(2-Chloroethyl)ether		0.9052	10.3		
bis(2-Chloroisopropyl)ether		2.179	8.93		
bis(2-Ethylhexyl)phthalate		0.9425	6.50		
2,4,6-Tribromophenol	SURR	0.1557	5.93		
2-Fluorobiphenyl	SURR	1.211	9.02		
2-Fluorophenol	SURR	1.291	2.06		
Nitrobenzene-d5	SURR	0.3230	4.29		
Phenol-d5	SURR	1.516	4.39		
p-Terphenyl-d14	SURR	0.9339	8.86		

KEMRON Environmental Services

INITIAL CALIBRATION SUMMARY

Login Number: L0605548 **Instrument ID:** HPMS5
Analytical Method: 8270C **Initial Calibration Date:** 15-MAY-06 13:30
ICAL Workgroup: WG213265 **Column ID:** F

Analyte		AVG RF	% RSD	LINEAR	QUAD
2,4,6-Trichlorophenol	CCC	0.3613	5.95		
2,4-Dichlorophenol	CCC	0.3198	4.13		
2-Nitrophenol	CCC	0.2100	5.33		
4-Chloro-3-Methylphenol	CCC	0.3072	4.25		
Acenaphthene	CCC	1.175	5.67		
Benzo[a]pyrene	CCC	1.329	2.91		
Di-n-Octyl Phthalate	CCC	2.123	6.28		
Fluoranthene	CCC	1.348	5.16		
Hexachlorobutadiene	CCC	0.1746	3.27		
Pentachlorophenol	CCC	0.1318	16.5	0.999	
Phenol	CCC	1.619	3.17		
n-Nitrosodiphenylamine	CCC	0.6281	3.75		
2,4-Dinitrophenol	SPCC	0.1250	27.5	0.998	
4-Nitrophenol	SPCC	0.2516	4.24		
Hexachlorocyclopentadiene	SPCC	0.2231	17.8	0.999	
n-Nitrosodipropylamine	SPCC	0.8572	6.36		
2,4,5-Trichlorophenol		0.3930	5.37		
2,4-Dimethylphenol		0.3440	3.28		
2,4-Dinitrotoluene		0.3794	9.28		
2,6-Dinitrotoluene		0.2946	6.86		
2-Chloronaphthalene		1.139	4.10		
2-Chlorophenol		1.397	2.43		
2-Methylnaphthalene		0.7721	5.35		
2-Methylphenol		1.023	3.29		
2-Nitroaniline		0.3741	4.20		
3,3'-Dichlorobenzidine		0.3521	13.3		
3-,4-Methylphenol		1.445	4.49		
3-Nitroaniline		0.3233	6.92		
4,6-Dinitro-2-Methylphenol		0.1454	15.9	0.999	
4-Bromophenyl Phenyl Ether		0.2376	2.91		
4-Chloroaniline		0.4116	4.07		
4-Chlorophenyl Phenyl Ether		0.6148	3.35		
4-Nitroaniline		0.3230	8.13		
Acenaphthylene		1.881	4.84		
Anthracene		1.328	5.78		
Benzo[a]anthracene		1.337	3.70		
Benzo[b]fluoranthene		1.478	3.60		
Benzo[ghi]perylene		1.220	2.95		
Benzo[k]fluoranthene		1.367	4.76		
Butyl Benzyl Phthalate		0.7877	4.69		
Carbazole		1.184	8.08		
Chrysene		1.331	4.25		
Di-n-Butyl Phthalate		1.486	5.30		
Dibenz[ah]anthracene		1.218	4.46		
Dibenzofuran		1.702	5.56		

KEMRON Environmental Services

INITIAL CALIBRATION SUMMARY

Login Number: L0605548 **Instrument ID:** HPMS5
Analytical Method: 8270C **Initial Calibration Date:** 15-MAY-06 13:30
ICAL Workgroup: WG213265 **Column ID:** F

Analyte		AVG RF	% RSD	LINEAR	QUAD
Diethylphthalate		1.286	4.75		
Dimethylphthalate		1.313	3.77		
Fluorene		1.343	6.77		
Hexachlorobenzene		0.2322	2.75		
Hexachloroethane		0.5959	3.62		
Indeno[1,2,3-cd]pyrene		1.493	3.78		
Isophorone		0.6084	3.51		
Naphthalene		1.077	5.32		
Nitrobenzene		0.3723	3.80		
Phenanthrene		1.319	7.09		
Pyrene		1.661	5.69		
bis(2-Chloroethoxy)methane		0.3836	4.51		
bis(2-Chloroethyl)ether		0.9864	6.00		
bis(2-Chloroisopropyl)ether		2.442	9.74		
bis(2-Ethylhexyl)phthalate		1.084	5.10		
2,4,6-Tribromophenol	SURR	0.1400	12.1		
2-Fluorobiphenyl	SURR	1.342	5.21		
2-Fluorophenol	SURR	1.284	2.54		
Nitrobenzene-d5	SURR	0.3796	3.16		
Phenol-d5	SURR	1.498	2.86		
p-Terphenyl-d14	SURR	1.018	3.12		

KEMRON Environmental Services

INITIAL CALIBRATION SUMMARY

Login Number: L0605548 **Instrument ID:** HPMS5
Analytical Method: 8270C **Initial Calibration Date:** 15-MAY-06 13:30
ICAL Workgroup: WG213265 **Column ID:** F

Analyte		AVG RF	% RSD	LINEAR	QUAD
2,4,6-Trichlorophenol	CCC	0.3613	5.95		
2,4-Dichlorophenol	CCC	0.3198	4.13		
2-Nitrophenol	CCC	0.2100	5.33		
4-Chloro-3-Methylphenol	CCC	0.3072	4.25		
Acenaphthene	CCC	1.175	5.67		
Benzo[a]pyrene	CCC	1.329	2.91		
Di-n-Octyl Phthalate	CCC	2.123	6.28		
Fluoranthene	CCC	1.348	5.16		
Hexachlorobutadiene	CCC	0.1746	3.27		
Pentachlorophenol	CCC	0.1318	16.5	0.999	
Phenol	CCC	1.619	3.17		
n-Nitrosodiphenylamine	CCC	0.6281	3.75		
2,4-Dinitrophenol	SPCC	0.1250	27.5	0.998	
4-Nitrophenol	SPCC	0.2516	4.24		
Hexachlorocyclopentadiene	SPCC	0.2231	17.8	0.999	
n-Nitrosodipropylamine	SPCC	0.8572	6.36		
2,4,5-Trichlorophenol		0.3930	5.37		
2,4-Dimethylphenol		0.3440	3.28		
2,4-Dinitrotoluene		0.3794	9.28		
2,6-Dinitrotoluene		0.2946	6.86		
2-Chloronaphthalene		1.139	4.10		
2-Chlorophenol		1.397	2.43		
2-Methylnaphthalene		0.7721	5.35		
2-Methylphenol		1.023	3.29		
2-Nitroaniline		0.3741	4.20		
3,3'-Dichlorobenzidine		0.3521	13.3		
3-,4-Methylphenol		1.445	4.49		
3-Nitroaniline		0.3233	6.92		
4,6-Dinitro-2-Methylphenol		0.1454	15.9	0.999	
4-Bromophenyl Phenyl Ether		0.2376	2.91		
4-Chloroaniline		0.4116	4.07		
4-Chlorophenyl Phenyl Ether		0.6148	3.35		
4-Nitroaniline		0.3230	8.13		
Acenaphthylene		1.881	4.84		
Anthracene		1.328	5.78		
Benzo[a]anthracene		1.337	3.70		
Benzo[b]fluoranthene		1.478	3.60		
Benzo[ghi]perylene		1.220	2.95		
Benzo[k]fluoranthene		1.367	4.76		
Butyl Benzyl Phthalate		0.7877	4.69		
Carbazole		1.184	8.08		
Chrysene		1.331	4.25		
Di-n-Butyl Phthalate		1.486	5.30		
Dibenz[ah]anthracene		1.218	4.46		
Dibenzofuran		1.702	5.56		

KEMRON Environmental Services

INITIAL CALIBRATION SUMMARY

Login Number: L0605548 **Instrument ID:** HPMS5
Analytical Method: 8270C **Initial Calibration Date:** 15-MAY-06 13:30
ICAL Workgroup: WG213265 **Column ID:** F

Analyte		AVG RF	% RSD	LINEAR	QUAD
Diethylphthalate		1.286	4.75		
Dimethylphthalate		1.313	3.77		
Fluorene		1.343	6.77		
Hexachlorobenzene		0.2322	2.75		
Hexachloroethane		0.5959	3.62		
Indeno[1,2,3-cd]pyrene		1.493	3.78		
Isophorone		0.6084	3.51		
Naphthalene		1.077	5.32		
Nitrobenzene		0.3723	3.80		
Phenanthrene		1.319	7.09		
Pyrene		1.661	5.69		
bis(2-Chloroethoxy)methane		0.3836	4.51		
bis(2-Chloroethyl)ether		0.9864	6.00		
bis(2-Chloroisopropyl)ether		2.442	9.74		
bis(2-Ethylhexyl)phthalate		1.084	5.10		
2,4,6-Tribromophenol	SURR	0.1400	12.1		
2-Fluorobiphenyl	SURR	1.342	5.21		
2-Fluorophenol	SURR	1.284	2.54		
Nitrobenzene-d5	SURR	0.3796	3.16		
Phenol-d5	SURR	1.498	2.86		
p-Terphenyl-d14	SURR	1.018	3.12		

KEMRON Environmental Services

INITIAL CALIBRATION DATA

Login Number:L0605548
Analytical Method:8270C

Instrument ID:HPMS4
Initial Calibration Date:10-MAY-06 17:31
Column ID:F

Analyte	WG212888-02			WG212888-03			WG212888-04		
	CONC	RESP	RF	CONC	RESP	RF	CONC	RESP	RF
2,4,6-Trichlorophenol	50.0	630279	0.3365	3.00	31348	0.2931	15.0	178627	0.3373
2,4-Dichlorophenol	50.0	878638	0.2691	3.00	49586	0.2589	15.0	264718	0.2817
2-Nitrophenol	50.0	631206	0.1933	3.00	32361	0.1689	15.0	180942	0.1926
4-Chloro-3-Methylphenol	50.0	888302	0.2720	3.00	53608	0.2799	15.0	268804	0.2861
Acenaphthene	50.0	2039286	1.089	3.00	125902	1.177	15.0	640515	1.210
Benzo[a]pyrene	50.0	3182993	1.233	3.00	187510	1.247	15.0	979854	1.296
Di-n-Octyl Phthalate	50.0	4205428	1.629	3.00	215811	1.436	15.0	1241745	1.643
Fluoranthene	50.0	3397674	1.194	3.00	210859	1.334	15.0	1076449	1.346
Hexachlorobutadiene	50.0	479552	0.1468	3.00	30534	0.1594	15.0	152479	0.1623
Pentachlorophenol	50.0	393132	0.1382	NA	NA	NA	15.0	94432	0.1181
Phenol	50.0	1330683	1.635	3.00	81437	1.668	15.0	412478	1.733
n-Nitrosodiphenylamine	50.0	2074115	0.7289	3.00	125691	0.7949	15.0	644347	0.8058
2,4-Dinitrophenol	50.0	228051	0.1218	NA	NA	NA	15.0	41017	0.07750
4-Nitrophenol	50.0	401393	0.2143	NA	NA	NA	15.0	104092	0.1966
Hexachlorocyclopentadiene	50.0	471489	0.2518	3.00	13054	0.1220	15.0	117137	0.2212
n-Nitrosodipropylamine	50.0	682603	0.8387	3.00	48040	0.9839	15.0	233769	0.9821
2,4,5-Trichlorophenol	50.0	663501	0.3543	3.00	34799	0.3253	15.0	190453	0.3597
2,4-Dimethylphenol	50.0	1033755	0.3166	3.00	63111	0.3295	15.0	321073	0.3417
2,4-Dinitrotoluene	50.0	680558	0.3634	3.00	33714	0.3152	15.0	203197	0.3837
2,6-Dinitrotoluene	50.0	578499	0.3089	3.00	30470	0.2849	15.0	168306	0.3179
2-Chloronaphthalene	50.0	2337322	1.248	3.00	147933	1.383	15.0	735348	1.389
2-Chlorophenol	50.0	1169446	1.437	3.00	69809	1.430	15.0	355937	1.495
2-Methylnaphthalene	50.0	2126603	0.6512	3.00	134918	0.7044	15.0	672331	0.7155
2-Methylphenol	50.0	874935	1.075	3.00	53823	1.102	15.0	271658	1.141
2-Nitroaniline	50.0	576672	0.3079	NA	NA	NA	15.0	171269	0.3235
3,3'-Dichlorobenzidine	50.0	1153440	0.4468	3.00	72787	0.4959	15.0	357767	0.4826
3-,4-Methylphenol	50.0	1157928	1.423	3.00	69532	1.424	15.0	357396	1.502
3-Nitroaniline	50.0	626849	0.3347	NA	NA	NA	15.0	173677	0.3280
4,6-Dinitro-2-Methylphenol	50.0	394637	0.1387	NA	NA	NA	15.0	89871	0.1124
4-Bromophenyl Phenyl Ether	50.0	639414	0.2247	3.00	38885	0.2459	15.0	200545	0.2508
4-Chloroaniline	50.0	1360479	0.4166	3.00	82641	0.4314	15.0	442043	0.4704
4-Chlorophenyl Phenyl Ether	50.0	1107453	0.5913	3.00	70157	0.6559	15.0	354279	0.6691
4-Nitroaniline	50.0	645443	0.3446	NA	NA	NA	15.0	187737	0.3546
Acenaphthylene	50.0	3363777	1.796	3.00	209199	1.956	15.0	1050314	1.984
Anthracene	50.0	3413035	1.200	3.00	211294	1.336	15.0	1077271	1.347
Benzo[a]anthracene	50.0	3298264	1.278	3.00	203420	1.386	15.0	1034414	1.396
Benzo[b]fluoranthene	50.0	3440880	1.333	3.00	221961	1.476	15.0	1120240	1.482
Benzo[ghi]perylene	50.0	3219321	1.247	3.00	185420	1.233	15.0	983150	1.301
Benzo[k]fluoranthene	50.0	3221302	1.248	3.00	195325	1.299	15.0	995202	1.316
Butyl Benzyl Phthalate	50.0	1565537	0.6065	3.00	106532	0.7258	15.0	534491	0.7210
Carbazole	50.0	3176297	1.116	3.00	190284	1.204	15.0	967614	1.210
Chrysene	50.0	3216152	1.246	3.00	202828	1.382	15.0	1015300	1.370

KEMRON Environmental Services

INITIAL CALIBRATION DATA

Login Number:L0605548 **Instrument ID:HPMS4**

Analytical Method:8270C **Initial Calibration Date:10-MAY-06 17:31**

Column ID:F

Analyte	WG212888-05			WG212888-06			WG212888-07		
	CONC	RESP	RF	CONC	RESP	RF	CONC	RESP	RF
2,4,6-Trichlorophenol	25.0	311395	0.3500	80.0	998116	0.3281	120	1492493	0.3201
2,4-Dichlorophenol	25.0	438016	0.2811	80.0	1385801	0.2633	120	2070102	0.2576
2-Nitrophenol	25.0	306170	0.1965	80.0	964395	0.1832	120	1406275	0.1750
4-Chloro-3-Methylphenol	25.0	444575	0.2853	80.0	1399916	0.2660	120	2063145	0.2567
Acenaphthene	25.0	1042886	1.172	80.0	3121066	1.026	120	4437960	0.9519
Benzo[a]pyrene	25.0	1613460	1.291	80.0	5074404	1.227	120	7522638	1.204
Di-n-Octyl Phthalate	25.0	2086119	1.670	80.0	6557748	1.585	120	9415402	1.507
Fluoranthene	25.0	1765176	1.314	80.0	5223644	1.133	120	7257495	1.048
Hexachlorobutadiene	25.0	246283	0.1581	80.0	752608	0.1430	120	1107561	0.1378
Pentachlorophenol	25.0	175499	0.1306	80.0	636754	0.1380	120	967763	0.1397
Phenol	25.0	677563	1.724	80.0	2048646	1.590	120	2972416	1.520
n-Nitrosodiphenylamine	25.0	1055245	0.7854	80.0	3203270	0.6945	120	4524416	0.6533
2,4-Dinitrophenol	25.0	88287	0.09920	80.0	397232	0.1306	120	648660	0.1391
4-Nitrophenol	25.0	183609	0.2064	80.0	661051	0.2173	120	1010926	0.2168
Hexachlorocyclopentadiene	25.0	214645	0.2412	80.0	761240	0.2502	120	1135774	0.2436
n-Nitrosodipropylamine	25.0	370684	0.9430	80.0	982605	0.7624	120	1310833	0.6702
2,4,5-Trichlorophenol	25.0	326852	0.3674	80.0	1069734	0.3516	120	1600241	0.3432
2,4-Dimethylphenol	25.0	527833	0.3388	80.0	1583213	0.3008	120	2254654	0.2806
2,4-Dinitrotoluene	25.0	338747	0.3807	80.0	1040606	0.3420	120	1458474	0.3128
2,6-Dinitrotoluene	25.0	282891	0.3179	80.0	923633	0.3036	120	1381899	0.2964
2-Chloronaphthalene	25.0	1202533	1.352	80.0	3590772	1.180	120	5160451	1.107
2-Chlorophenol	25.0	586570	1.492	80.0	1828909	1.419	120	2725154	1.393
2-Methylnaphthalene	25.0	1091897	0.7008	80.0	3263720	0.6201	120	4663854	0.5804
2-Methylphenol	25.0	440527	1.121	80.0	1370410	1.063	120	2020568	1.033
2-Nitroaniline	25.0	287901	0.3236	80.0	916917	0.3014	120	1342068	0.2879
3,3'-Dichlorobenzidine	25.0	579744	0.4694	80.0	1807706	0.4355	120	2671145	0.4294
3-,4-Methylphenol	25.0	582688	1.482	80.0	1810984	1.405	120	2667924	1.364
3-Nitroaniline	25.0	299832	0.3370	80.0	1011692	0.3325	120	1522681	0.3266
4,6-Dinitro-2-Methylphenol	25.0	172341	0.1283	80.0	668341	0.1449	120	1028982	0.1486
4-Bromophenyl Phenyl Ether	25.0	327452	0.2437	80.0	1014606	0.2200	120	1497900	0.2163
4-Chloroaniline	25.0	726612	0.4663	80.0	2232903	0.4243	120	3255219	0.4051
4-Chlorophenyl Phenyl Ether	25.0	578545	0.6502	80.0	1677628	0.5514	120	2298777	0.4930
4-Nitroaniline	25.0	315510	0.3546	80.0	1023582	0.3365	120	1526265	0.3274
Acenaphthylene	25.0	1720360	1.934	80.0	5131692	1.687	120	7181672	1.540
Anthracene	25.0	1756598	1.307	80.0	5264941	1.141	120	7293257	1.053
Benzo[a]anthracene	25.0	1687015	1.366	80.0	5141067	1.239	120	7376624	1.186
Benzo[b]fluoranthene	25.0	1737496	1.391	80.0	5334535	1.289	120	7892305	1.264
Benzo[ghi]perylene	25.0	1629056	1.304	80.0	5163550	1.248	120	7742585	1.240
Benzo[k]fluoranthene	25.0	1553802	1.244	80.0	5074385	1.227	120	7225684	1.157
Butyl Benzyl Phthalate	25.0	853531	0.6911	80.0	2202921	0.5308	120	2879231	0.4628
Carbazole	25.0	1614383	1.202	80.0	4892866	1.061	120	6902707	0.9968
Chrysene	25.0	1653259	1.339	80.0	4941686	1.191	120	7050767	1.133

KEMRON Environmental Services

INITIAL CALIBRATION DATA

Login Number: L0605548 **Instrument ID:** HPMS4

Analytical Method: 8270C **Initial Calibration Date:** 10-MAY-06 17:31

Column ID: F

Analyte	WG212888-08		
	CONC	RESP	RF
2,4,6-Trichlorophenol	100	1231222	0.3328
2,4-Dichlorophenol	100	1694676	0.2653
2-Nitrophenol	100	1171313	0.1833
4-Chloro-3-Methylphenol	100	1692604	0.2649
Acenaphthene	100	3728299	1.008
Benzo[a]pyrene	100	6172154	1.237
Di-n-Octyl Phthalate	100	7926368	1.588
Fluoranthene	100	6193023	1.102
Hexachlorobutadiene	100	911448	0.1427
Pentachlorophenol	100	777380	0.1383
Phenol	100	2469344	1.582
n-Nitrosodiphenylamine	100	3857905	0.6864
2,4-Dinitrophenol	100	510127	0.1379
4-Nitrophenol	100	795194	0.2150
Hexachlorocyclopentadiene	100	941671	0.2546
n-Nitrosodipropylamine	100	1140909	0.7309
2,4,5-Trichlorophenol	100	1310165	0.3542
2,4-Dimethylphenol	100	1905067	0.2982
2,4-Dinitrotoluene	100	1248768	0.3376
2,6-Dinitrotoluene	100	1128410	0.3050
2-Chloronaphthalene	100	4310104	1.165
2-Chlorophenol	100	2237290	1.433
2-Methylnaphthalene	100	3915550	0.6129
2-Methylphenol	100	1647904	1.056
2-Nitroaniline	100	1105111	0.2987
3,3'-Dichlorobenzidine	100	2215872	0.4440
3-,4-Methylphenol	100	2197686	1.408
3-Nitroaniline	100	1243105	0.3360
4,6-Dinitro-2-Methylphenol	100	830250	0.1477
4-Bromophenyl Phenyl Ether	100	1220359	0.2171
4-Chloroaniline	100	2704555	0.4233
4-Chlorophenyl Phenyl Ether	100	1982867	0.5360
4-Nitroaniline	100	1250955	0.3382
Acenaphthylene	100	6139087	1.660
Anthracene	100	6223937	1.107
Benzo[a]anthracene	100	6145575	1.231
Benzo[b]fluoranthene	100	6209963	1.244
Benzo[ghi]perylene	100	6290487	1.260
Benzo[k]fluoranthene	100	5730791	1.148
Butyl Benzyl Phthalate	100	2579054	0.5167
Carbazole	100	5850640	1.041
Chrysene	100	5916305	1.185

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KEMRON Environmental Services

INITIAL CALIBRATION DATA

Login Number: L0605548 **Instrument ID:** HPMS4

Analytical Method: 8270C **Initial Calibration Date:** 10-MAY-06 17:31

Column ID: F

Analyte	WG212888-02			WG212888-03			WG212888-04		
	CONC	RESP	RF	CONC	RESP	RF	CONC	RESP	RF
Di-n-Butyl Phthalate	50.0	3940512	1.385	3.00	235552	1.490	15.0	1242185	1.554
Dibenz[ah]anthracene	50.0	3171315	1.228	3.00	184371	1.226	15.0	979574	1.296
Dibenzofuran	50.0	2774947	1.482	3.00	183177	1.713	15.0	901459	1.703
Diethylphthalate	50.0	2292294	1.224	3.00	141660	1.324	15.0	711737	1.344
Dimethylphthalate	50.0	2267472	1.211	3.00	141172	1.320	15.0	711131	1.343
Fluorene	50.0	2359968	1.260	3.00	149253	1.395	15.0	747679	1.412
Hexachlorobenzene	50.0	669599	0.2353	3.00	42222	0.2670	15.0	209351	0.2618
Hexachloroethane	50.0	468256	0.5753	3.00	27768	0.5687	15.0	143822	0.6042
Indeno[1,2,3-cd]pyrene	50.0	3720042	1.441	3.00	214070	1.424	15.0	1144486	1.514
Isophorone	50.0	1893412	0.5798	3.00	117025	0.6109	15.0	589466	0.6273
Naphthalene	50.0	3306761	1.013	3.00	213312	1.114	15.0	1044560	1.112
Nitrobenzene	50.0	1074250	0.3290	3.00	64104	0.3347	15.0	333993	0.3554
Phenanthrene	50.0	3388108	1.191	3.00	212930	1.347	15.0	1063820	1.330
Pyrene	50.0	3639678	1.410	3.00	227442	1.550	15.0	1152208	1.554
bis(2-Chloroethoxy)methane	50.0	1528958	0.4682	3.00	102820	0.5368	15.0	508843	0.5415
bis(2-Chloroethyl)ether	50.0	733062	0.9007	3.00	48143	0.9860	15.0	242051	1.017
bis(2-Chloroisopropyl)ether	50.0	1753265	2.154	3.00	117049	2.397	15.0	571151	2.400
bis(2-Ethylhexyl)phthalate	50.0	2426220	0.9399	3.00	142563	0.9713	15.0	756033	1.020
2,4,6-Tribromophenol	50.0	297521	0.1589	3.00	14684	0.1373	15.0	87429	0.1651
2-Fluorobiphenyl	50.0	2234703	1.193	3.00	143882	1.345	15.0	700636	1.323
2-Fluorophenol	50.0	1043671	1.282	3.00	61652	1.263	15.0	315552	1.326
Nitrobenzene-d5	50.0	1056262	0.3235	3.00	60193	0.3142	15.0	322497	0.3432
Phenol-d5	50.0	1237869	1.521	3.00	73918	1.514	15.0	380898	1.600
p-Terphenyl-d14	50.0	2380370	0.9222	3.00	149218	1.017	15.0	763744	1.030

KEMRON Environmental Services

INITIAL CALIBRATION DATA

Login Number: L0605548 **Instrument ID:** HPMS4

Analytical Method: 8270C **Initial Calibration Date:** 10-MAY-06 17:31

Column ID: F

Analyte	WG212888-05			WG212888-06			WG212888-07		
	CONC	RESP	RF	CONC	RESP	RF	CONC	RESP	RF
Di-n-Butyl Phthalate	25.0	2043202	1.521	80.0	5958995	1.292	120	8214523	1.186
Dibenz[ah]anthracene	25.0	1610025	1.289	80.0	4978255	1.203	120	7403477	1.185
Dibenzofuran	25.0	1449562	1.629	80.0	4171217	1.371	120	5711615	1.225
Diethylphthalate	25.0	1163784	1.308	80.0	3569642	1.173	120	5166610	1.108
Dimethylphthalate	25.0	1165011	1.309	80.0	3537120	1.163	120	5134460	1.101
Fluorene	25.0	1220493	1.372	80.0	3621004	1.190	120	5147931	1.104
Hexachlorobenzene	25.0	344183	0.2562	80.0	1049100	0.2274	120	1548808	0.2236
Hexachloroethane	25.0	237474	0.6041	80.0	737832	0.5725	120	1099049	0.5619
Indeno[1,2,3-cd]pyrene	25.0	1884713	1.508	80.0	5935655	1.435	120	8886073	1.423
Isophorone	25.0	968975	0.6219	80.0	2949627	0.5605	120	4300715	0.5352
Naphthalene	25.0	1711438	1.098	80.0	5005820	0.9512	120	7003011	0.8715
Nitrobenzene	25.0	549893	0.3529	80.0	1686320	0.3204	120	2466127	0.3069
Phenanthrene	25.0	1734000	1.291	80.0	5153623	1.117	120	7233747	1.045
Pyrene	25.0	1872355	1.516	80.0	5536270	1.334	120	7692802	1.237
bis(2-Chloroethoxy)methane	25.0	815826	0.5236	80.0	2250533	0.4276	120	3034222	0.3776
bis(2-Chloroethyl)ether	25.0	387651	0.9862	80.0	1087006	0.8434	120	1519410	0.7769
bis(2-Chloroisopropyl)ether	25.0	910538	2.317	80.0	2651303	2.057	120	3749588	1.917
bis(2-Ethylhexyl)phthalate	25.0	1245494	1.009	80.0	3740854	0.9013	120	5301814	0.8522
2,4,6-Tribromophenol	25.0	145658	0.1637	80.0	473622	0.1557	120	712643	0.1528
2-Fluorobiphenyl	25.0	1144935	1.287	80.0	3463027	1.138	120	4950609	1.062
2-Fluorophenol	25.0	521667	1.327	80.0	1647246	1.278	120	2474996	1.266
Nitrobenzene-d5	25.0	531018	0.3408	80.0	1667522	0.3168	120	2465444	0.3068
Phenol-d5	25.0	629351	1.601	80.0	1910849	1.483	120	2774141	1.418
p-Terphenyl-d14	25.0	1238227	1.003	80.0	3639985	0.8770	120	5127227	0.8241

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Version 1.6 PDF File ID: 490956
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KEMRON Environmental Services

INITIAL CALIBRATION DATA

Login Number: L0605548
Analytical Method: 8270C
Instrument ID: HPMS4
Initial Calibration Date: 10-MAY-06 17:31
Column ID: F

Analyte	WG212888-08		
	CONC	RESP	RF
Di-n-Butyl Phthalate	100	7042671	1.253
Dibenz[ah]anthracene	100	6046463	1.211
Dibenzofuran	100	4940502	1.336
Diethylphthalate	100	4301637	1.163
Dimethylphthalate	100	4287057	1.159
Fluorene	100	4339270	1.173
Hexachlorobenzene	100	1278359	0.2275
Hexachloroethane	100	902593	0.5782
Indeno[1,2,3-cd]pyrene	100	7214638	1.445
Isophorone	100	3552172	0.5560
Naphthalene	100	5961187	0.9331
Nitrobenzene	100	2026137	0.3171
Phenanthrene	100	6118799	1.089
Pyrene	100	6536778	1.310
bis(2-Chloroethoxy)methane	100	2634100	0.4123
bis(2-Chloroethyl)ether	100	1290087	0.8264
bis(2-Chloroisopropyl)ether	100	3140966	2.012
bis(2-Ethylhexyl)phthalate	100	4512407	0.9041
2,4,6-Tribromophenol	100	577527	0.1561
2-Fluorobiphenyl	100	4162599	1.125
2-Fluorophenol	100	2022240	1.296
Nitrobenzene-d5	100	2018174	0.3159
Phenol-d5	100	2305608	1.477
p-Terphenyl-d14	100	4315298	0.8646

KEMRON Environmental Services

INITIAL CALIBRATION DATA

Login Number: L0605548 **Instrument ID:** HPMS5

Analytical Method: 8270C **Initial Calibration Date:** 15-MAY-06 13:30

Column ID: F

Analyte	WG213265-02			WG213265-03			WG213265-04		
	CONC	RESP	RF	CONC	RESP	RF	CONC	RESP	RF
2,4,6-Trichlorophenol	50.0	470113	0.3841	3.00	23709	0.3160	15.0	138112	0.3594
2,4-Dichlorophenol	50.0	696065	0.3382	3.00	37660	0.2956	15.0	210412	0.3248
2-Nitrophenol	50.0	466314	0.2266	3.00	24047	0.1888	15.0	135659	0.2094
4-Chloro-3-Methylphenol	50.0	671777	0.3264	3.00	36651	0.2877	15.0	203829	0.3146
Acenaphthene	50.0	1514288	1.237	3.00	92039	1.227	15.0	470785	1.225
Benzo[a]pyrene	50.0	1799847	1.396	3.00	95923	1.272	15.0	537366	1.326
Di-n-Octyl Phthalate	50.0	2967745	2.301	3.00	141015	1.870	15.0	874180	2.157
Fluoranthene	50.0	2493569	1.416	3.00	148469	1.394	15.0	782442	1.410
Hexachlorobutadiene	50.0	369599	0.1796	3.00	22809	0.1790	15.0	117795	0.1818
Pentachlorophenol	50.0	246375	0.1399	NA	NA	NA	15.0	53845	0.09700
Phenol	50.0	939661	1.703	3.00	55157	1.602	15.0	288501	1.667
n-Nitrosodiphenylamine	50.0	1153006	0.6547	3.00	67859	0.6369	15.0	363679	0.6555
2,4-Dinitrophenol	50.0	162308	0.1326	NA	NA	NA	15.0	27873	0.07250
4-Nitrophenol	50.0	325731	0.2662	NA	NA	NA	15.0	90094	0.2345
Hexachlorocyclopentadiene	50.0	308574	0.2521	3.00	10548	0.1406	15.0	80590	0.2097
n-Nitrosodipropylamine	50.0	498828	0.9040	3.00	30637	0.8900	15.0	157145	0.9080
2,4,5-Trichlorophenol	50.0	509603	0.4164	3.00	26251	0.3499	15.0	150088	0.3906
2,4-Dimethylphenol	50.0	733280	0.3563	3.00	44788	0.3516	15.0	228598	0.3528
2,4-Dinitrotoluene	50.0	501252	0.4096	3.00	22688	0.3024	15.0	148040	0.3853
2,6-Dinitrotoluene	50.0	382778	0.3128	3.00	18881	0.2517	15.0	113597	0.2956
2-Chloronaphthalene	50.0	1447870	1.183	3.00	89313	1.191	15.0	443072	1.153
2-Chlorophenol	50.0	805118	1.459	3.00	47587	1.382	15.0	245180	1.417
2-Methylnaphthalene	50.0	1661460	0.8073	3.00	103298	0.8109	15.0	519480	0.8018
2-Methylphenol	50.0	594350	1.077	3.00	35309	1.026	15.0	181784	1.050
2-Nitroaniline	50.0	483215	0.3949	NA	NA	NA	15.0	144916	0.3771
3,3'-Dichlorobenzidine	50.0	507215	0.3364	3.00	35105	0.3971	15.0	199637	0.4271
3-,4-Methylphenol	50.0	843598	1.529	3.00	50400	1.464	15.0	261586	1.512
3-Nitroaniline	50.0	419881	0.3431	NA	NA	NA	15.0	130171	0.3388
4,6-Dinitro-2-Methylphenol	50.0	273072	0.1551	NA	NA	NA	15.0	60264	0.1086
4-Bromophenyl Phenyl Ether	50.0	436938	0.2481	3.00	25743	0.2416	15.0	134241	0.2419
4-Chloroaniline	50.0	901099	0.4378	3.00	50597	0.3972	15.0	273906	0.4227
4-Chlorophenyl Phenyl Ether	50.0	784797	0.6413	3.00	47340	0.6311	15.0	238589	0.6209
4-Nitroaniline	50.0	420932	0.3440	NA	NA	NA	15.0	134647	0.3504
Acenaphthylene	50.0	2411122	1.970	3.00	142978	1.906	15.0	754126	1.963
Anthracene	50.0	2478722	1.408	3.00	148696	1.396	15.0	765013	1.379
Benzo[a]anthracene	50.0	2093856	1.389	3.00	123135	1.393	15.0	638852	1.367
Benzo[b]fluoranthene	50.0	1905242	1.477	3.00	109126	1.447	15.0	579033	1.428
Benzo[ghi]perylene	50.0	1646403	1.277	3.00	87740	1.163	15.0	496623	1.225
Benzo[k]fluoranthene	50.0	1899888	1.473	3.00	103729	1.375	15.0	581641	1.435
Butyl Benzyl Phthalate	50.0	1263398	0.8380	3.00	66181	0.7486	15.0	379603	0.8122
Carbazole	50.0	2218492	1.260	3.00	132974	1.248	15.0	710331	1.280
Chrysene	50.0	2015444	1.337	3.00	124571	1.409	15.0	646776	1.384

KEMRON Environmental Services

INITIAL CALIBRATION DATA

Login Number:L0605548 **Instrument ID:HPMS5**

Analytical Method:8270C **Initial Calibration Date:15-MAY-06 13:30**

Column ID:F

Analyte	WG213265-05			WG213265-06			WG213265-07		
	CONC	RESP	RF	CONC	RESP	RF	CONC	RESP	RF
2,4,6-Trichlorophenol	25.0	234871	0.3655	80.0	742487	0.3652	100	934913	0.3733
2,4-Dichlorophenol	25.0	352725	0.3244	80.0	1089554	0.3179	100	1380261	0.3248
2-Nitrophenol	25.0	231641	0.2130	80.0	719718	0.2100	100	907790	0.2136
4-Chloro-3-Methylphenol	25.0	343580	0.3160	80.0	1048165	0.3058	100	1294473	0.3046
Acenaphthene	25.0	771904	1.201	80.0	2317549	1.140	100	2856031	1.140
Benzo[a]pyrene	25.0	906510	1.327	80.0	2847905	1.309	100	3607287	1.356
Di-n-Octyl Phthalate	25.0	1490884	2.182	80.0	4632211	2.130	100	5757905	2.164
Fluoranthene	25.0	1298181	1.387	80.0	3852125	1.288	100	4777103	1.301
Hexachlorobutadiene	25.0	189781	0.1745	80.0	577812	0.1686	100	729666	0.1717
Pentachlorophenol	25.0	105966	0.1132	80.0	421569	0.1409	100	549924	0.1498
Phenol	25.0	478594	1.623	80.0	1471191	1.587	100	1835387	1.601
n-Nitrosodiphenylamine	25.0	593233	0.6338	80.0	1806754	0.6039	100	2259128	0.6154
2,4-Dinitrophenol	25.0	60060	0.09350	80.0	285314	0.1403	100	388552	0.1552
4-Nitrophenol	25.0	160927	0.2504	80.0	510755	0.2512	100	647867	0.2587
Hexachlorocyclopentadiene	25.0	142114	0.2211	80.0	494271	0.2431	100	629997	0.2516
n-Nitrosodipropylamine	25.0	263732	0.8944	80.0	754755	0.8143	100	936470	0.8167
2,4,5-Trichlorophenol	25.0	256265	0.3988	80.0	808630	0.3978	100	1019239	0.4070
2,4-Dimethylphenol	25.0	379541	0.3490	80.0	1148066	0.3350	100	1433322	0.3373
2,4-Dinitrotoluene	25.0	250654	0.3901	80.0	786542	0.3869	100	999579	0.3991
2,6-Dinitrotoluene	25.0	193561	0.3012	80.0	605542	0.2979	100	774949	0.3094
2-Chloronaphthalene	25.0	746860	1.162	80.0	2251456	1.108	100	2791504	1.115
2-Chlorophenol	25.0	413526	1.402	80.0	1264717	1.365	100	1596307	1.392
2-Methylnaphthalene	25.0	864457	0.7950	80.0	2542380	0.7418	100	3144075	0.7399
2-Methylphenol	25.0	303694	1.030	80.0	919022	0.9916	100	1152799	1.005
2-Nitroaniline	25.0	248170	0.3862	80.0	742245	0.3651	100	928711	0.3708
3,3'-Dichlorobenzidine	25.0	288779	0.3680	80.0	774321	0.3042	100	976310	0.3148
3-,4-Methylphenol	25.0	432105	1.465	80.0	1291455	1.393	100	1602035	1.397
3-Nitroaniline	25.0	221902	0.3453	80.0	633239	0.3115	100	778781	0.3110
4,6-Dinitro-2-Methylphenol	25.0	116690	0.1247	80.0	465348	0.1555	100	599736	0.1634
4-Bromophenyl Phenyl Ether	25.0	222391	0.2376	80.0	685881	0.2293	100	862374	0.2349
4-Chloroaniline	25.0	462913	0.4257	80.0	1367575	0.3990	100	1706263	0.4016
4-Chlorophenyl Phenyl Ether	25.0	400759	0.6236	80.0	1208706	0.5946	100	1526020	0.6094
4-Nitroaniline	25.0	218206	0.3396	80.0	644823	0.3172	100	758399	0.3028
Acenaphthylene	25.0	1249501	1.944	80.0	3705389	1.823	100	4599415	1.837
Anthracene	25.0	1279682	1.367	80.0	3768771	1.260	100	4677107	1.274
Benzo[a]anthracene	25.0	1054142	1.343	80.0	3238279	1.272	100	4079601	1.316
Benzo[b]fluoranthene	25.0	1030032	1.508	80.0	3144206	1.446	100	4212952	1.583
Benzo[ghi]perylene	25.0	824421	1.207	80.0	2622927	1.206	100	3325910	1.250
Benzo[k]fluoranthene	25.0	893983	1.309	80.0	2892195	1.330	100	3467963	1.303
Butyl Benzyl Phthalate	25.0	646712	0.8240	80.0	1949363	0.7659	100	2413008	0.7782
Carbazole	25.0	1163103	1.243	80.0	3308873	1.106	100	4062110	1.107
Chrysene	25.0	1064072	1.356	80.0	3204742	1.259	100	4054304	1.307

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Report generated 06/06/2006 16:47

KEMRON Environmental Services

INITIAL CALIBRATION DATA

Login Number: L0605548 **Instrument ID:** HPMS5

Analytical Method: 8270C **Initial Calibration Date:** 15-MAY-06 13:30

Column ID: F

Analyte	WG213265-08		
	CONC	RESP	RF
2,4,6-Trichlorophenol	120	1153112	0.3657
2,4-Dichlorophenol	120	1647206	0.3127
2-Nitrophenol	120	1098126	0.2085
4-Chloro-3-Methylphenol	120	1556767	0.2956
Acenaphthene	120	3326651	1.055
Benzo[a]pyrene	120	4414467	1.317
Di-n-Octyl Phthalate	120	6893309	2.056
Fluoranthene	120	5670170	1.242
Hexachlorobutadiene	120	880588	0.1672
Pentachlorophenol	120	683955	0.1498
Phenol	120	2187928	1.550
n-Nitrosodiphenylamine	120	2721486	0.5962
2,4-Dinitrophenol	120	491795	0.1560
4-Nitrophenol	120	783422	0.2485
Hexachlorocyclopentadiene	120	766988	0.2432
n-Nitrosodipropylamine	120	1091482	0.7730
2,4,5-Trichlorophenol	120	1230792	0.3903
2,4-Dimethylphenol	120	1716983	0.3260
2,4-Dinitrotoluene	120	1206104	0.3825
2,6-Dinitrotoluene	120	925371	0.2935
2-Chloronaphthalene	120	3344360	1.061
2-Chlorophenol	120	1920550	1.360
2-Methylnaphthalene	120	3728464	0.7079
2-Methylphenol	120	1385271	0.9810
2-Nitroaniline	120	1105288	0.3505
3,3'-Dichlorobenzidine	120	1227252	0.3169
3-,4-Methylphenol	120	1913453	1.355
3-Nitroaniline	120	915045	0.2902
4,6-Dinitro-2-Methylphenol	120	752989	0.1650
4-Bromophenyl Phenyl Ether	120	1047962	0.2296
4-Chloroaniline	120	2092431	0.3973
4-Chlorophenyl Phenyl Ether	120	1837542	0.5828
4-Nitroaniline	120	894766	0.2838
Acenaphthylene	120	5431157	1.722
Anthracene	120	5546655	1.215
Benzo[a]anthracene	120	4953920	1.279
Benzo[b]fluoranthene	120	4874069	1.454
Benzo[ghi]perylene	120	4063006	1.212
Benzo[k]fluoranthene	120	4502852	1.343
Butyl Benzyl Phthalate	120	2893379	0.7472
Carbazole	120	4753861	1.042
Chrysene	120	4909748	1.268

KEMRON FORMS - Modified 03/06/2006
Version 1.6 PDF File ID: 490956
Report generated 06/06/2006 16:47

KEMRON Environmental Services

INITIAL CALIBRATION DATA

Login Number: L0605548 **Instrument ID:** HPMS5

Analytical Method: 8270C **Initial Calibration Date:** 15-MAY-06 13:30

Column ID: F

Analyte	WG213265-02			WG213265-03			WG213265-04		
	CONC	RESP	RF	CONC	RESP	RF	CONC	RESP	RF
Di-n-Butyl Phthalate	50.0	2798725	1.589	3.00	156215	1.466	15.0	861233	1.552
Dibenz[ah]anthracene	50.0	1634871	1.268	3.00	84886	1.125	15.0	489020	1.206
Dibenzofuran	50.0	2156978	1.763	3.00	135266	1.803	15.0	682877	1.777
Diethylphthalate	50.0	1635132	1.336	3.00	100624	1.341	15.0	512760	1.334
Dimethylphthalate	50.0	1664606	1.360	3.00	101111	1.348	15.0	520427	1.354
Fluorene	50.0	1714977	1.401	3.00	107685	1.436	15.0	545023	1.418
Hexachlorobenzene	50.0	426591	0.2422	3.00	25406	0.2385	15.0	129458	0.2333
Hexachloroethane	50.0	346564	0.6281	3.00	20587	0.5980	15.0	106202	0.6136
Indeno[1,2,3-cd]pyrene	50.0	2007986	1.557	3.00	104681	1.388	15.0	606929	1.497
Isophorone	50.0	1312675	0.6378	3.00	76247	0.5985	15.0	405836	0.6264
Naphthalene	50.0	2294888	1.115	3.00	146127	1.147	15.0	726274	1.121
Nitrobenzene	50.0	804568	0.3909	3.00	47458	0.3725	15.0	249139	0.3845
Phenanthrene	50.0	2427913	1.379	3.00	154006	1.446	15.0	765063	1.379
Pyrene	50.0	2576946	1.709	3.00	155333	1.757	15.0	820188	1.755
bis(2-Chloroethoxy)methane	50.0	827966	0.4023	3.00	50434	0.3959	15.0	256275	0.3955
bis(2-Chloroethyl)ether	50.0	559007	1.013	3.00	36519	1.061	15.0	179700	1.038
bis(2-Chloroisopropyl)ether	50.0	1392557	2.524	3.00	95085	2.762	15.0	458453	2.649
bis(2-Ethylhexyl)phthalate	50.0	1736635	1.152	3.00	92274	1.044	15.0	528396	1.131
2,4,6-Tribromophenol	50.0	183489	0.1499	3.00	7739	0.1032	15.0	52870	0.1376
2-Fluorobiphenyl	50.0	1700510	1.390	3.00	107053	1.427	15.0	530844	1.382
2-Fluorophenol	50.0	738052	1.338	3.00	42559	1.236	15.0	224137	1.295
Nitrobenzene-d5	50.0	820344	0.3986	3.00	46586	0.3657	15.0	251412	0.3880
Phenol-d5	50.0	867625	1.572	3.00	51028	1.482	15.0	265006	1.531
p-Terphenyl-d14	50.0	1564961	1.038	3.00	92207	1.043	15.0	494872	1.059

KEMRON Environmental Services

INITIAL CALIBRATION DATA

Login Number: L0605548 **Instrument ID:** HPMS5

Analytical Method: 8270C **Initial Calibration Date:** 15-MAY-06 13:30

Column ID: F

Analyte	WG213265-05			WG213265-06			WG213265-07		
	CONC	RESP	RF	CONC	RESP	RF	CONC	RESP	RF
Di-n-Butyl Phthalate	25.0	1448154	1.547	80.0	4299533	1.437	100	5306007	1.445
Dibenz[ah]anthracene	25.0	806017	1.180	80.0	2638196	1.213	100	3391427	1.274
Dibenzofuran	25.0	1124679	1.750	80.0	3314043	1.630	100	4116686	1.644
Diethylphthalate	25.0	844393	1.314	80.0	2520902	1.240	100	3146818	1.257
Dimethylphthalate	25.0	853921	1.329	80.0	2603650	1.281	100	3233439	1.291
Fluorene	25.0	890550	1.386	80.0	2599396	1.279	100	3220657	1.286
Hexachlorobenzene	25.0	212148	0.2266	80.0	671858	0.2246	100	851547	0.2320
Hexachloroethane	25.0	178079	0.6039	80.0	535456	0.5777	100	669603	0.5839
Indeno[1,2,3-cd]pyrene	25.0	1003052	1.468	80.0	3234445	1.487	100	4121661	1.549
Isophorone	25.0	678436	0.6239	80.0	2040255	0.5953	100	2548962	0.5999
Naphthalene	25.0	1191211	1.096	80.0	3540500	1.033	100	4417646	1.040
Nitrobenzene	25.0	413705	0.3805	80.0	1240572	0.3620	100	1551758	0.3652
Phenanthrene	25.0	1266258	1.353	80.0	3704225	1.238	100	4603413	1.254
Pyrene	25.0	1341756	1.710	80.0	4010804	1.576	100	4948102	1.596
bis(2-Chloroethoxy)methane	25.0	427486	0.3931	80.0	1277635	0.3728	100	1571617	0.3699
bis(2-Chloroethyl)ether	25.0	298088	1.011	80.0	867924	0.9364	100	1081940	0.9435
bis(2-Chloroisopropyl)ether	25.0	749278	2.541	80.0	2088442	2.253	100	2577842	2.248
bis(2-Ethylhexyl)phthalate	25.0	890959	1.135	80.0	2674899	1.051	100	3304679	1.066
2,4,6-Tribromophenol	25.0	90877	0.1414	80.0	301261	0.1482	100	377228	0.1506
2-Fluorobiphenyl	25.0	882657	1.374	80.0	2630928	1.294	100	3254347	1.300
2-Fluorophenol	25.0	375355	1.273	80.0	1169041	1.261	100	1497073	1.306
Nitrobenzene-d5	25.0	419365	0.3857	80.0	1287277	0.3756	100	1602829	0.3772
Phenol-d5	25.0	444083	1.506	80.0	1357404	1.465	100	1704754	1.487
p-Terphenyl-d14	25.0	803943	1.024	80.0	2480798	0.9747	100	3123902	1.007

KEMRON Environmental Services

INITIAL CALIBRATION DATA

Login Number: L0605548
Analytical Method: 8270C
Instrument ID: HPMS5
Initial Calibration Date: 15-MAY-06 13:30
Column ID: F

Analyte	WG213265-08		
	CONC	RESP	RF
Di-n-Butyl Phthalate	120	6241600	1.367
Dibenz[ah]anthracene	120	4226713	1.261
Dibenzofuran	120	4884611	1.549
Diethylphthalate	120	3728297	1.182
Dimethylphthalate	120	3862200	1.225
Fluorene	120	3758843	1.192
Hexachlorobenzene	120	1042953	0.2285
Hexachloroethane	120	798928	0.5658
Indeno[1,2,3-cd]pyrene	120	5054361	1.508
Isophorone	120	3040738	0.5773
Naphthalene	120	5208918	0.9890
Nitrobenzene	120	1845062	0.3503
Phenanthrene	120	5417401	1.187
Pyrene	120	5892971	1.522
bis(2-Chloroethoxy)methane	120	1875197	0.3560
bis(2-Chloroethyl)ether	120	1273437	0.9018
bis(2-Chloroisopropyl)ether	120	2991515	2.119
bis(2-Ethylhexyl)phthalate	120	3900201	1.007
2,4,6-Tribromophenol	120	469858	0.1490
2-Fluorobiphenyl	120	3870224	1.227
2-Fluorophenol	120	1806608	1.279
Nitrobenzene-d5	120	1928850	0.3662
Phenol-d5	120	2040566	1.445
p-Terphenyl-d14	120	3800392	0.9814

KEMRON Environmental Services

INITIAL CALIBRATION DATA

Login Number: L0605548
Analytical Method: 8270C
Instrument ID: HPMS5
Initial Calibration Date: 15-MAY-06 13:30
Column ID: F

Analyte	WG213265-02			WG213265-03			WG213265-04		
	CONC	RESP	RF	CONC	RESP	RF	CONC	RESP	RF
2,4,6-Trichlorophenol	50.0	470113	0.3841	3.00	23709	0.3160	15.0	138112	0.3594
2,4-Dichlorophenol	50.0	696065	0.3382	3.00	37660	0.2956	15.0	210412	0.3248
2-Nitrophenol	50.0	466314	0.2266	3.00	24047	0.1888	15.0	135659	0.2094
4-Chloro-3-Methylphenol	50.0	671777	0.3264	3.00	36651	0.2877	15.0	203829	0.3146
Acenaphthene	50.0	1514288	1.237	3.00	92039	1.227	15.0	470785	1.225
Benzo[a]pyrene	50.0	1799847	1.396	3.00	95923	1.272	15.0	537366	1.326
Di-n-Octyl Phthalate	50.0	2967745	2.301	3.00	141015	1.870	15.0	874180	2.157
Fluoranthene	50.0	2493569	1.416	3.00	148469	1.394	15.0	782442	1.410
Hexachlorobutadiene	50.0	369599	0.1796	3.00	22809	0.1790	15.0	117795	0.1818
Pentachlorophenol	50.0	246375	0.1399	NA	NA	NA	15.0	53845	0.09700
Phenol	50.0	939661	1.703	3.00	55157	1.602	15.0	288501	1.667
n-Nitrosodiphenylamine	50.0	1153006	0.6547	3.00	67859	0.6369	15.0	363679	0.6555
2,4-Dinitrophenol	50.0	162308	0.1326	NA	NA	NA	15.0	27873	0.07250
4-Nitrophenol	50.0	325731	0.2662	NA	NA	NA	15.0	90094	0.2345
Hexachlorocyclopentadiene	50.0	308574	0.2521	3.00	10548	0.1406	15.0	80590	0.2097
n-Nitrosodipropylamine	50.0	498828	0.9040	3.00	30637	0.8900	15.0	157145	0.9080
2,4,5-Trichlorophenol	50.0	509603	0.4164	3.00	26251	0.3499	15.0	150088	0.3906
2,4-Dimethylphenol	50.0	733280	0.3563	3.00	44788	0.3516	15.0	228598	0.3528
2,4-Dinitrotoluene	50.0	501252	0.4096	3.00	22688	0.3024	15.0	148040	0.3853
2,6-Dinitrotoluene	50.0	382778	0.3128	3.00	18881	0.2517	15.0	113597	0.2956
2-Chloronaphthalene	50.0	1447870	1.183	3.00	89313	1.191	15.0	443072	1.153
2-Chlorophenol	50.0	805118	1.459	3.00	47587	1.382	15.0	245180	1.417
2-Methylnaphthalene	50.0	1661460	0.8073	3.00	103298	0.8109	15.0	519480	0.8018
2-Methylphenol	50.0	594350	1.077	3.00	35309	1.026	15.0	181784	1.050
2-Nitroaniline	50.0	483215	0.3949	NA	NA	NA	15.0	144916	0.3771
3,3'-Dichlorobenzidine	50.0	507215	0.3364	3.00	35105	0.3971	15.0	199637	0.4271
3-,4-Methylphenol	50.0	843598	1.529	3.00	50400	1.464	15.0	261586	1.512
3-Nitroaniline	50.0	419881	0.3431	NA	NA	NA	15.0	130171	0.3388
4,6-Dinitro-2-Methylphenol	50.0	273072	0.1551	NA	NA	NA	15.0	60264	0.1086
4-Bromophenyl Phenyl Ether	50.0	436938	0.2481	3.00	25743	0.2416	15.0	134241	0.2419
4-Chloroaniline	50.0	901099	0.4378	3.00	50597	0.3972	15.0	273906	0.4227
4-Chlorophenyl Phenyl Ether	50.0	784797	0.6413	3.00	47340	0.6311	15.0	238589	0.6209
4-Nitroaniline	50.0	420932	0.3440	NA	NA	NA	15.0	134647	0.3504
Acenaphthylene	50.0	2411122	1.970	3.00	142978	1.906	15.0	754126	1.963
Anthracene	50.0	2478722	1.408	3.00	148696	1.396	15.0	765013	1.379
Benzo[a]anthracene	50.0	2093856	1.389	3.00	123135	1.393	15.0	638852	1.367
Benzo[b]fluoranthene	50.0	1905242	1.477	3.00	109126	1.447	15.0	579033	1.428
Benzo[ghi]perylene	50.0	1646403	1.277	3.00	87740	1.163	15.0	496623	1.225
Benzo[k]fluoranthene	50.0	1899888	1.473	3.00	103729	1.375	15.0	581641	1.435
Butyl Benzyl Phthalate	50.0	1263398	0.8380	3.00	66181	0.7486	15.0	379603	0.8122
Carbazole	50.0	2218492	1.260	3.00	132974	1.248	15.0	710331	1.280
Chrysene	50.0	2015444	1.337	3.00	124571	1.409	15.0	646776	1.384

KEMRON Environmental Services

INITIAL CALIBRATION DATA

Login Number: L0605548
Analytical Method: 8270C
Instrument ID: HPMS5
Initial Calibration Date: 15-MAY-06 13:30
Column ID: F

Analyte	WG213265-05			WG213265-06			WG213265-07		
	CONC	RESP	RF	CONC	RESP	RF	CONC	RESP	RF
2,4,6-Trichlorophenol	25.0	234871	0.3655	80.0	742487	0.3652	100	934913	0.3733
2,4-Dichlorophenol	25.0	352725	0.3244	80.0	1089554	0.3179	100	1380261	0.3248
2-Nitrophenol	25.0	231641	0.2130	80.0	719718	0.2100	100	907790	0.2136
4-Chloro-3-Methylphenol	25.0	343580	0.3160	80.0	1048165	0.3058	100	1294473	0.3046
Acenaphthene	25.0	771904	1.201	80.0	2317549	1.140	100	2856031	1.140
Benzo[a]pyrene	25.0	906510	1.327	80.0	2847905	1.309	100	3607287	1.356
Di-n-Octyl Phthalate	25.0	1490884	2.182	80.0	4632211	2.130	100	5757905	2.164
Fluoranthene	25.0	1298181	1.387	80.0	3852125	1.288	100	4777103	1.301
Hexachlorobutadiene	25.0	189781	0.1745	80.0	577812	0.1686	100	729666	0.1717
Pentachlorophenol	25.0	105966	0.1132	80.0	421569	0.1409	100	549924	0.1498
Phenol	25.0	478594	1.623	80.0	1471191	1.587	100	1835387	1.601
n-Nitrosodiphenylamine	25.0	593233	0.6338	80.0	1806754	0.6039	100	2259128	0.6154
2,4-Dinitrophenol	25.0	60060	0.09350	80.0	285314	0.1403	100	388552	0.1552
4-Nitrophenol	25.0	160927	0.2504	80.0	510755	0.2512	100	647867	0.2587
Hexachlorocyclopentadiene	25.0	142114	0.2211	80.0	494271	0.2431	100	629997	0.2516
n-Nitrosodipropylamine	25.0	263732	0.8944	80.0	754755	0.8143	100	936470	0.8167
2,4,5-Trichlorophenol	25.0	256265	0.3988	80.0	808630	0.3978	100	1019239	0.4070
2,4-Dimethylphenol	25.0	379541	0.3490	80.0	1148066	0.3350	100	1433322	0.3373
2,4-Dinitrotoluene	25.0	250654	0.3901	80.0	786542	0.3869	100	999579	0.3991
2,6-Dinitrotoluene	25.0	193561	0.3012	80.0	605542	0.2979	100	774949	0.3094
2-Chloronaphthalene	25.0	746860	1.162	80.0	2251456	1.108	100	2791504	1.115
2-Chlorophenol	25.0	413526	1.402	80.0	1264717	1.365	100	1596307	1.392
2-Methylnaphthalene	25.0	864457	0.7950	80.0	2542380	0.7418	100	3144075	0.7399
2-Methylphenol	25.0	303694	1.030	80.0	919022	0.9916	100	1152799	1.005
2-Nitroaniline	25.0	248170	0.3862	80.0	742245	0.3651	100	928711	0.3708
3,3'-Dichlorobenzidine	25.0	288779	0.3680	80.0	774321	0.3042	100	976310	0.3148
3-,4-Methylphenol	25.0	432105	1.465	80.0	1291455	1.393	100	1602035	1.397
3-Nitroaniline	25.0	221902	0.3453	80.0	633239	0.3115	100	778781	0.3110
4,6-Dinitro-2-Methylphenol	25.0	116690	0.1247	80.0	465348	0.1555	100	599736	0.1634
4-Bromophenyl Phenyl Ether	25.0	222391	0.2376	80.0	685881	0.2293	100	862374	0.2349
4-Chloroaniline	25.0	462913	0.4257	80.0	1367575	0.3990	100	1706263	0.4016
4-Chlorophenyl Phenyl Ether	25.0	400759	0.6236	80.0	1208706	0.5946	100	1526020	0.6094
4-Nitroaniline	25.0	218206	0.3396	80.0	644823	0.3172	100	758399	0.3028
Acenaphthylene	25.0	1249501	1.944	80.0	3705389	1.823	100	4599415	1.837
Anthracene	25.0	1279682	1.367	80.0	3768771	1.260	100	4677107	1.274
Benzo[a]anthracene	25.0	1054142	1.343	80.0	3238279	1.272	100	4079601	1.316
Benzo[b]fluoranthene	25.0	1030032	1.508	80.0	3144206	1.446	100	4212952	1.583
Benzo[ghi]perylene	25.0	824421	1.207	80.0	2622927	1.206	100	3325910	1.250
Benzo[k]fluoranthene	25.0	893983	1.309	80.0	2892195	1.330	100	3467963	1.303
Butyl Benzyl Phthalate	25.0	646712	0.8240	80.0	1949363	0.7659	100	2413008	0.7782
Carbazole	25.0	1163103	1.243	80.0	3308873	1.106	100	4062110	1.107
Chrysene	25.0	1064072	1.356	80.0	3204742	1.259	100	4054304	1.307

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KEMRON Environmental Services

INITIAL CALIBRATION DATA

Login Number: L0605548 **Instrument ID:** HPMS5

Analytical Method: 8270C **Initial Calibration Date:** 15-MAY-06 13:30

Column ID: F

Analyte	WG213265-08		
	CONC	RESP	RF
2,4,6-Trichlorophenol	120	1153112	0.3657
2,4-Dichlorophenol	120	1647206	0.3127
2-Nitrophenol	120	1098126	0.2085
4-Chloro-3-Methylphenol	120	1556767	0.2956
Acenaphthene	120	3326651	1.055
Benzo[a]pyrene	120	4414467	1.317
Di-n-Octyl Phthalate	120	6893309	2.056
Fluoranthene	120	5670170	1.242
Hexachlorobutadiene	120	880588	0.1672
Pentachlorophenol	120	683955	0.1498
Phenol	120	2187928	1.550
n-Nitrosodiphenylamine	120	2721486	0.5962
2,4-Dinitrophenol	120	491795	0.1560
4-Nitrophenol	120	783422	0.2485
Hexachlorocyclopentadiene	120	766988	0.2432
n-Nitrosodipropylamine	120	1091482	0.7730
2,4,5-Trichlorophenol	120	1230792	0.3903
2,4-Dimethylphenol	120	1716983	0.3260
2,4-Dinitrotoluene	120	1206104	0.3825
2,6-Dinitrotoluene	120	925371	0.2935
2-Chloronaphthalene	120	3344360	1.061
2-Chlorophenol	120	1920550	1.360
2-Methylnaphthalene	120	3728464	0.7079
2-Methylphenol	120	1385271	0.9810
2-Nitroaniline	120	1105288	0.3505
3,3'-Dichlorobenzidine	120	1227252	0.3169
3-,4-Methylphenol	120	1913453	1.355
3-Nitroaniline	120	915045	0.2902
4,6-Dinitro-2-Methylphenol	120	752989	0.1650
4-Bromophenyl Phenyl Ether	120	1047962	0.2296
4-Chloroaniline	120	2092431	0.3973
4-Chlorophenyl Phenyl Ether	120	1837542	0.5828
4-Nitroaniline	120	894766	0.2838
Acenaphthylene	120	5431157	1.722
Anthracene	120	5546655	1.215
Benzo[a]anthracene	120	4953920	1.279
Benzo[b]fluoranthene	120	4874069	1.454
Benzo[ghi]perylene	120	4063006	1.212
Benzo[k]fluoranthene	120	4502852	1.343
Butyl Benzyl Phthalate	120	2893379	0.7472
Carbazole	120	4753861	1.042
Chrysene	120	4909748	1.268

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KEMRON Environmental Services

INITIAL CALIBRATION DATA

Login Number: L0605548 **Instrument ID:** HPMS5

Analytical Method: 8270C **Initial Calibration Date:** 15-MAY-06 13:30

Column ID: F

Analyte	WG213265-02			WG213265-03			WG213265-04		
	CONC	RESP	RF	CONC	RESP	RF	CONC	RESP	RF
Di-n-Butyl Phthalate	50.0	2798725	1.589	3.00	156215	1.466	15.0	861233	1.552
Dibenz[ah]anthracene	50.0	1634871	1.268	3.00	84886	1.125	15.0	489020	1.206
Dibenzofuran	50.0	2156978	1.763	3.00	135266	1.803	15.0	682877	1.777
Diethylphthalate	50.0	1635132	1.336	3.00	100624	1.341	15.0	512760	1.334
Dimethylphthalate	50.0	1664606	1.360	3.00	101111	1.348	15.0	520427	1.354
Fluorene	50.0	1714977	1.401	3.00	107685	1.436	15.0	545023	1.418
Hexachlorobenzene	50.0	426591	0.2422	3.00	25406	0.2385	15.0	129458	0.2333
Hexachloroethane	50.0	346564	0.6281	3.00	20587	0.5980	15.0	106202	0.6136
Indeno[1,2,3-cd]pyrene	50.0	2007986	1.557	3.00	104681	1.388	15.0	606929	1.497
Isophorone	50.0	1312675	0.6378	3.00	76247	0.5985	15.0	405836	0.6264
Naphthalene	50.0	2294888	1.115	3.00	146127	1.147	15.0	726274	1.121
Nitrobenzene	50.0	804568	0.3909	3.00	47458	0.3725	15.0	249139	0.3845
Phenanthrene	50.0	2427913	1.379	3.00	154006	1.446	15.0	765063	1.379
Pyrene	50.0	2576946	1.709	3.00	155333	1.757	15.0	820188	1.755
bis(2-Chloroethoxy)methane	50.0	827966	0.4023	3.00	50434	0.3959	15.0	256275	0.3955
bis(2-Chloroethyl)ether	50.0	559007	1.013	3.00	36519	1.061	15.0	179700	1.038
bis(2-Chloroisopropyl)ether	50.0	1392557	2.524	3.00	95085	2.762	15.0	458453	2.649
bis(2-Ethylhexyl)phthalate	50.0	1736635	1.152	3.00	92274	1.044	15.0	528396	1.131
2,4,6-Tribromophenol	50.0	183489	0.1499	3.00	7739	0.1032	15.0	52870	0.1376
2-Fluorobiphenyl	50.0	1700510	1.390	3.00	107053	1.427	15.0	530844	1.382
2-Fluorophenol	50.0	738052	1.338	3.00	42559	1.236	15.0	224137	1.295
Nitrobenzene-d5	50.0	820344	0.3986	3.00	46586	0.3657	15.0	251412	0.3880
Phenol-d5	50.0	867625	1.572	3.00	51028	1.482	15.0	265006	1.531
p-Terphenyl-d14	50.0	1564961	1.038	3.00	92207	1.043	15.0	494872	1.059

KEMRON Environmental Services

INITIAL CALIBRATION DATA

Login Number: L0605548 **Instrument ID:** HPMS5

Analytical Method: 8270C **Initial Calibration Date:** 15-MAY-06 13:30

Column ID: F

Analyte	WG213265-05			WG213265-06			WG213265-07		
	CONC	RESP	RF	CONC	RESP	RF	CONC	RESP	RF
Di-n-Butyl Phthalate	25.0	1448154	1.547	80.0	4299533	1.437	100	5306007	1.445
Dibenz[ah]anthracene	25.0	806017	1.180	80.0	2638196	1.213	100	3391427	1.274
Dibenzofuran	25.0	1124679	1.750	80.0	3314043	1.630	100	4116686	1.644
Diethylphthalate	25.0	844393	1.314	80.0	2520902	1.240	100	3146818	1.257
Dimethylphthalate	25.0	853921	1.329	80.0	2603650	1.281	100	3233439	1.291
Fluorene	25.0	890550	1.386	80.0	2599396	1.279	100	3220657	1.286
Hexachlorobenzene	25.0	212148	0.2266	80.0	671858	0.2246	100	851547	0.2320
Hexachloroethane	25.0	178079	0.6039	80.0	535456	0.5777	100	669603	0.5839
Indeno[1,2,3-cd]pyrene	25.0	1003052	1.468	80.0	3234445	1.487	100	4121661	1.549
Isophorone	25.0	678436	0.6239	80.0	2040255	0.5953	100	2548962	0.5999
Naphthalene	25.0	1191211	1.096	80.0	3540500	1.033	100	4417646	1.040
Nitrobenzene	25.0	413705	0.3805	80.0	1240572	0.3620	100	1551758	0.3652
Phenanthrene	25.0	1266258	1.353	80.0	3704225	1.238	100	4603413	1.254
Pyrene	25.0	1341756	1.710	80.0	4010804	1.576	100	4948102	1.596
bis(2-Chloroethoxy)methane	25.0	427486	0.3931	80.0	1277635	0.3728	100	1571617	0.3699
bis(2-Chloroethyl)ether	25.0	298088	1.011	80.0	867924	0.9364	100	1081940	0.9435
bis(2-Chloroisopropyl)ether	25.0	749278	2.541	80.0	2088442	2.253	100	2577842	2.248
bis(2-Ethylhexyl)phthalate	25.0	890959	1.135	80.0	2674899	1.051	100	3304679	1.066
2,4,6-Tribromophenol	25.0	90877	0.1414	80.0	301261	0.1482	100	377228	0.1506
2-Fluorobiphenyl	25.0	882657	1.374	80.0	2630928	1.294	100	3254347	1.300
2-Fluorophenol	25.0	375355	1.273	80.0	1169041	1.261	100	1497073	1.306
Nitrobenzene-d5	25.0	419365	0.3857	80.0	1287277	0.3756	100	1602829	0.3772
Phenol-d5	25.0	444083	1.506	80.0	1357404	1.465	100	1704754	1.487
p-Terphenyl-d14	25.0	803943	1.024	80.0	2480798	0.9747	100	3123902	1.007

KEMRON Environmental Services

INITIAL CALIBRATION DATA

Login Number: L0605548 **Instrument ID:** HPMS5

Analytical Method: 8270C **Initial Calibration Date:** 15-MAY-06 13:30

Column ID: F

Analyte	WG213265-08		
	CONC	RESP	RF
Di-n-Butyl Phthalate	120	6241600	1.367
Dibenz[ah]anthracene	120	4226713	1.261
Dibenzofuran	120	4884611	1.549
Diethylphthalate	120	3728297	1.182
Dimethylphthalate	120	3862200	1.225
Fluorene	120	3758843	1.192
Hexachlorobenzene	120	1042953	0.2285
Hexachloroethane	120	798928	0.5658
Indeno[1,2,3-cd]pyrene	120	5054361	1.508
Isophorone	120	3040738	0.5773
Naphthalene	120	5208918	0.9890
Nitrobenzene	120	1845062	0.3503
Phenanthrene	120	5417401	1.187
Pyrene	120	5892971	1.522
bis(2-Chloroethoxy)methane	120	1875197	0.3560
bis(2-Chloroethyl)ether	120	1273437	0.9018
bis(2-Chloroisopropyl)ether	120	2991515	2.119
bis(2-Ethylhexyl)phthalate	120	3900201	1.007
2,4,6-Tribromophenol	120	469858	0.1490
2-Fluorobiphenyl	120	3870224	1.227
2-Fluorophenol	120	1806608	1.279
Nitrobenzene-d5	120	1928850	0.3662
Phenol-d5	120	2040566	1.445
p-Terphenyl-d14	120	3800392	0.9814

KEMRON Environmental Services

ALTERNATE SOURCE CALIBRATION REPORT

Login Number:L0605548 Run Date:05/10/2006 Sample ID:WG212888-09
Instrument ID:HPMS4 Run Time:18:06 Method:8270C
File ID:4M32970 Analyst:CLK
ICal Workgroup:WG212888 Cal ID: HPMS4 - 10-MAY-06

Analyte		Expected	Found	RF	%D	UNITS	Q
Phenol	CCC	50	51.7	1.69	3.4	ug/mL	
2-Nitrophenol	CCC	50	53.5	0.198	7	ug/mL	
2,4-Dichlorophenol	CCC	50	53.9	0.289	7.7	ug/mL	
Hexachlorobutadiene	CCC	50	54.1	0.162	8.3	ug/mL	
4-Chloro-3-Methylphenol	CCC	50	52.2	0.285	4.5	ug/mL	
2,4,6-Trichlorophenol	CCC	50	54.3	0.356	8.5	ug/mL	
Acenaphthene	CCC	50	54.2	1.18	8.4	ug/mL	
n-Nitrosodiphenylamine	CCC	50	42.3	0.623	15.3	ug/mL	
Pentachlorophenol	CCC	50	55.1	0.147	10.1	ug/mL	
Fluoranthene	CCC	50	57.3	1.39	14.6	ug/mL	
Di-n-Octyl Phthalate	CCC	50	52.5	1.66	5	ug/mL	
Benzo[a]pyrene	CCC	50	55.4	1.38	10.8	ug/mL	
n-Nitrosodipropylamine	SPCC	50	56.1	0.932	12.1	ug/mL	
Hexachlorocyclopentadiene	SPCC	50	52.9	0.261	5.8	ug/mL	
2,4-Dinitrophenol	SPCC	50	54.5	0.138	9	ug/mL	
4-Nitrophenol	SPCC	50	49.5	0.209	.9	ug/mL	
bis(2-Chloroethyl)ether		50	54.4	0.985	8.8	ug/mL	
2-Chlorophenol		50	52.1	1.50	4.3	ug/mL	
2-Methylphenol		50	52.2	1.13	4.3	ug/mL	
bis(2-Chloroisopropyl)ether		50	49.5	2.16	.9	ug/mL	
3-,4-Methylphenol		50	57.5	1.64	14.9	ug/mL	
Hexachloroethane		50	49.2	0.571	1.6	ug/mL	
Nitrobenzene		50	49.8	0.330	.4	ug/mL	
Isophorone		50	53.6	0.626	7.1	ug/mL	
2,4-Dimethylphenol		50	52.4	0.330	4.8	ug/mL	
bis(2-Chloroethoxy)methane		50	44.6	0.419	10.8	ug/mL	
Naphthalene		50	54.8	1.11	9.7	ug/mL	
4-Chloroaniline		50	37.5	0.326	25	ug/mL	
2-Methylnaphthalene		50	51.4	0.674	2.9	ug/mL	
2,4,5-Trichlorophenol		50	55.0	0.386	10.1	ug/mL	
2-Chloronaphthalene		50	43.5	1.10	12.9	ug/mL	
2-Nitroaniline		50	51.5	0.316	3	ug/mL	
Dimethylphthalate		50	49.4	1.21	1.2	ug/mL	
Acenaphthylene		50	55.0	1.97	9.9	ug/mL	
2,6-Dinitrotoluene		50	48.8	0.298	2.3	ug/mL	
3-Nitroaniline		50	37.2	0.248	25.5	ug/mL	*
Dibenzofuran		50	50.4	1.51	.8	ug/mL	
2,4-Dinitrotoluene		50	53.3	0.371	6.7	ug/mL	
Diethylphthalate		50	48.8	1.20	2.4	ug/mL	
4-Chlorophenyl Phenyl Ether		50	50.3	0.596	.5	ug/mL	
Fluorene		50	54.6	1.39	9.2	ug/mL	
4-Nitroaniline		50	41.2	0.283	17.5	ug/mL	

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ALTERNATE SOURCE CALIBRATION REPORT

Login Number: L0605548 Run Date: 05/10/2006 Sample ID: WG212888-09
Instrument ID: HPMS4 Run Time: 18:06 Method: 8270C
File ID: 4M32970 Analyst: CLK
ICal Workgroup: WG212888 Cal ID: HPMS4 - 10-MAY-06

Analyte		Expected	Found	RF	%D	UNITS	Q
4,6-Dinitro-2-Methylphenol		50	56.6	0.155	13.2	ug/mL	
4-Bromophenyl Phenyl Ether		50	44.3	0.205	11.3	ug/mL	
Hexachlorobenzene		50	49.8	0.242	.3	ug/mL	
Phenanthrene		50	54.6	1.31	9.3	ug/mL	
Anthracene		50	56.0	1.36	12.1	ug/mL	
Carbazole		50	47.8	1.07	4.4	ug/mL	
Di-n-Butyl Phthalate		50	51.2	1.42	2.5	ug/mL	
Pyrene		50	55.3	1.57	10.6	ug/mL	
Butyl Benzyl Phthalate		50	61.8	0.720	23.5	ug/mL	
3,3'-Dichlorobenzidine		50	33.0	0.302	34	ug/mL	*
Benzo[a]anthracene		50	54.8	1.42	9.7	ug/mL	
Chrysene		50	54.7	1.38	9.4	ug/mL	
bis(2-Ethylhexyl)phthalate		50	51.3	0.967	2.6	ug/mL	
Benzo[b]fluoranthene		50	54.4	1.47	8.9	ug/mL	
Benzo[k]fluoranthene		50	54.8	1.35	9.6	ug/mL	
Indeno[1,2,3-cd]pyrene		50	54.2	1.58	8.5	ug/mL	
Dibenz[ah]anthracene		50	54.4	1.34	8.9	ug/mL	
Benzo[ghi]perylene		50	54.5	1.38	9.1	ug/mL	

* Exceeds %D Limit

CCC Calibration Check Compounds
SPCC System Performance Check Compounds

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KEMRON Environmental Services

ALTERNATE SOURCE CALIBRATION REPORT

Login Number:L0605548 Run Date:05/15/2006 Sample ID:WG213265-09
Instrument ID:HPMS5 Run Time:14:02 Method:8270C
File ID:5M40745 Analyst:ALT
ICal Workgroup:WG213265 Cal ID: HPMS5 - 15-MAY-06

Analyte		Expected	Found	RF	%D	UNITS	Q
Phenol	CCC	50	48.4	1.57	3.2	ug/mL	
2-Nitrophenol	CCC	50	51.0	0.214	2	ug/mL	
2,4-Dichlorophenol	CCC	50	48.9	0.313	2.1	ug/mL	
Hexachlorobutadiene	CCC	50	50.4	0.176	.8	ug/mL	
4-Chloro-3-Methylphenol	CCC	50	48.4	0.297	3.2	ug/mL	
2,4,6-Trichlorophenol	CCC	50	48.5	0.351	3	ug/mL	
Acenaphthene	CCC	50	52.4	1.23	4.8	ug/mL	
n-Nitrosodiphenylamine	CCC	50	48.4	0.608	3.2	ug/mL	
Pentachlorophenol	CCC	50	47.0	0.128	5.9	ug/mL	
Fluoranthene	CCC	50	52.0	1.40	4	ug/mL	
Di-n-Octyl Phthalate	CCC	50	49.0	2.08	2.1	ug/mL	
Benzo[a]pyrene	CCC	50	52.8	1.40	5.7	ug/mL	
n-Nitrosodipropylamine	SPCC	50	51.3	0.879	2.6	ug/mL	
Hexachlorocyclopentadiene	SPCC	50	61.0	0.297	22.1	ug/mL	
2,4-Dinitrophenol	SPCC	50	51.3	0.139	2.7	ug/mL	
4-Nitrophenol	SPCC	50	49.4	0.249	1.1	ug/mL	
bis(2-Chloroethyl)ether		50	48.8	0.963	2.4	ug/mL	
2-Chlorophenol		50	48.3	1.35	3.5	ug/mL	
2-Methylphenol		50	48.9	1.00	2.1	ug/mL	
bis(2-Chloroisopropyl)ether		50	47.2	2.30	5.7	ug/mL	
3-,4-Methylphenol		50	48.6	1.40	2.9	ug/mL	
Hexachloroethane		50	47.6	0.568	4.7	ug/mL	
Nitrobenzene		50	48.0	0.357	4	ug/mL	
Isophorone		50	53.3	0.649	6.7	ug/mL	
2,4-Dimethylphenol		50	47.8	0.329	4.5	ug/mL	
bis(2-Chloroethoxy)methane		50	50.4	0.387	.9	ug/mL	
Naphthalene		50	51.1	1.10	2.3	ug/mL	
4-Chloroaniline		50	46.5	0.382	7.1	ug/mL	
2-Methylnaphthalene		50	46.0	0.711	7.9	ug/mL	
2,4,5-Trichlorophenol		50	48.0	0.377	4	ug/mL	
2-Chloronaphthalene		50	47.4	1.08	5.2	ug/mL	
2-Nitroaniline		50	47.4	0.355	5.2	ug/mL	
Dimethylphthalate		50	46.5	1.22	6.9	ug/mL	
Acenaphthylene		50	53.4	2.01	6.8	ug/mL	
2,6-Dinitrotoluene		50	48.5	0.286	3	ug/mL	
3-Nitroaniline		50	49.4	0.319	1.2	ug/mL	
Dibenzofuran		50	46.1	1.57	7.8	ug/mL	
2,4-Dinitrotoluene		50	50.7	0.385	1.5	ug/mL	
Diethylphthalate		50	47.7	1.23	4.5	ug/mL	
4-Chlorophenyl Phenyl Ether		50	45.8	0.563	8.4	ug/mL	
Fluorene		50	51.4	1.38	2.9	ug/mL	
4-Nitroaniline		50	48.9	0.316	2.2	ug/mL	

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ALTERNATE SOURCE CALIBRATION REPORT

Login Number: L0605548 Run Date: 05/15/2006 Sample ID: WG213265-09
Instrument ID: HPMS5 Run Time: 14:02 Method: 8270C
File ID: 5M40745 Analyst: ALT
ICal Workgroup: WG213265 Cal ID: HPMS5 - 15-MAY-06

Analyte		Expected	Found	RF	%D	UNITS	Q
4,6-Dinitro-2-Methylphenol		50	49.5	0.150	1	ug/mL	
4-Bromophenyl Phenyl Ether		50	40.4	0.192	19.2	ug/mL	
Hexachlorobenzene		50	45.9	0.213	8.2	ug/mL	
Phenanthrene		50	50.8	1.34	1.7	ug/mL	
Anthracene		50	52.2	1.39	4.5	ug/mL	
Carbazole		50	46.1	1.09	7.8	ug/mL	
Di-n-Butyl Phthalate		50	48.4	1.44	3.2	ug/mL	
Pyrene		50	52.4	1.74	4.9	ug/mL	
Butyl Benzyl Phthalate		50	50.4	0.794	.8	ug/mL	
3,3'-Dichlorobenzidine		50	42.0	0.296	16.1	ug/mL	
Benzo[a]anthracene		50	53.4	1.43	6.8	ug/mL	
Chrysene		50	51.3	1.37	2.6	ug/mL	
bis(2-Ethylhexyl)phthalate		50	48.6	1.05	2.8	ug/mL	
Benzo[b]fluoranthene		50	51.8	1.53	3.6	ug/mL	
Benzo[k]fluoranthene		50	51.8	1.42	3.7	ug/mL	
Indeno[1,2,3-cd]pyrene		50	49.3	1.47	1.4	ug/mL	
Dibenz[ah]anthracene		50	51.0	1.24	1.9	ug/mL	
Benzo[ghi]perylene		50	50.4	1.23	.8	ug/mL	

* Exceeds %D Limit

CCC Calibration Check Compounds
SPCC System Performance Check Compounds

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KEMRON Environmental Services

ALTERNATE SOURCE CALIBRATION REPORT

Login Number:L0605548 Run Date:05/15/2006 Sample ID:WG213265-09
Instrument ID:HPMS5 Run Time:14:02 Method:8270C
File ID:5M40745 Analyst:ALT
ICal Workgroup:WG213265 Cal ID: HPMS5 - 15-MAY-06

Analyte		Expected	Found	RF	%D	UNITS	Q
Phenol	CCC	50	48.4	1.57	3.2	ug/mL	
2-Nitrophenol	CCC	50	51.0	0.214	2	ug/mL	
2,4-Dichlorophenol	CCC	50	48.9	0.313	2.1	ug/mL	
Hexachlorobutadiene	CCC	50	50.4	0.176	.8	ug/mL	
4-Chloro-3-Methylphenol	CCC	50	48.4	0.297	3.2	ug/mL	
2,4,6-Trichlorophenol	CCC	50	48.5	0.351	3	ug/mL	
Acenaphthene	CCC	50	52.4	1.23	4.8	ug/mL	
n-Nitrosodiphenylamine	CCC	50	48.4	0.608	3.2	ug/mL	
Pentachlorophenol	CCC	50	47.0	0.128	5.9	ug/mL	
Fluoranthene	CCC	50	52.0	1.40	4	ug/mL	
Di-n-Octyl Phthalate	CCC	50	49.0	2.08	2.1	ug/mL	
Benzo[a]pyrene	CCC	50	52.8	1.40	5.7	ug/mL	
n-Nitrosodipropylamine	SPCC	50	51.3	0.879	2.6	ug/mL	
Hexachlorocyclopentadiene	SPCC	50	61.0	0.297	22.1	ug/mL	
2,4-Dinitrophenol	SPCC	50	51.3	0.139	2.7	ug/mL	
4-Nitrophenol	SPCC	50	49.4	0.249	1.1	ug/mL	
bis(2-Chloroethyl)ether		50	48.8	0.963	2.4	ug/mL	
2-Chlorophenol		50	48.3	1.35	3.5	ug/mL	
2-Methylphenol		50	48.9	1.00	2.1	ug/mL	
bis(2-Chloroisopropyl)ether		50	47.2	2.30	5.7	ug/mL	
3-,4-Methylphenol		50	48.6	1.40	2.9	ug/mL	
Hexachloroethane		50	47.6	0.568	4.7	ug/mL	
Nitrobenzene		50	48.0	0.357	4	ug/mL	
Isophorone		50	53.3	0.649	6.7	ug/mL	
2,4-Dimethylphenol		50	47.8	0.329	4.5	ug/mL	
bis(2-Chloroethoxy)methane		50	50.4	0.387	.9	ug/mL	
Naphthalene		50	51.1	1.10	2.3	ug/mL	
4-Chloroaniline		50	46.5	0.382	7.1	ug/mL	
2-Methylnaphthalene		50	46.0	0.711	7.9	ug/mL	
2,4,5-Trichlorophenol		50	48.0	0.377	4	ug/mL	
2-Chloronaphthalene		50	47.4	1.08	5.2	ug/mL	
2-Nitroaniline		50	47.4	0.355	5.2	ug/mL	
Dimethylphthalate		50	46.5	1.22	6.9	ug/mL	
2,6-Dinitrotoluene		50	48.5	0.286	3	ug/mL	
Acenaphthylene		50	53.4	2.01	6.8	ug/mL	
3-Nitroaniline		50	49.4	0.319	1.2	ug/mL	
Dibenzofuran		50	46.1	1.57	7.8	ug/mL	
2,4-Dinitrotoluene		50	50.7	0.385	1.5	ug/mL	
Diethylphthalate		50	47.7	1.23	4.5	ug/mL	
Fluorene		50	51.4	1.38	2.9	ug/mL	
4-Chlorophenyl Phenyl Ether		50	45.8	0.563	8.4	ug/mL	
4-Nitroaniline		50	48.9	0.316	2.2	ug/mL	

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KEMRON Environmental Services

ALTERNATE SOURCE CALIBRATION REPORT

Login Number: L0605548 Run Date: 05/15/2006 Sample ID: WG213265-09
Instrument ID: HPMS5 Run Time: 14:02 Method: 8270C
File ID: 5M40745 Analyst: ALT
ICal Workgroup: WG213265 Cal ID: HPMS5 - 15-MAY-06

Analyte		Expected	Found	RF	%D	UNITS	Q
4,6-Dinitro-2-Methylphenol		50	49.5	0.150	1	ug/mL	
4-Bromophenyl Phenyl Ether		50	40.4	0.192	19.2	ug/mL	
Hexachlorobenzene		50	45.9	0.213	8.2	ug/mL	
Phenanthrene		50	50.8	1.34	1.7	ug/mL	
Anthracene		50	52.2	1.39	4.5	ug/mL	
Carbazole		50	46.1	1.09	7.8	ug/mL	
Di-n-Butyl Phthalate		50	48.4	1.44	3.2	ug/mL	
Pyrene		50	52.4	1.74	4.9	ug/mL	
Butyl Benzyl Phthalate		50	50.4	0.794	.8	ug/mL	
3,3'-Dichlorobenzidine		50	42.0	0.296	16.1	ug/mL	
Benzo[a]anthracene		50	53.4	1.43	6.8	ug/mL	
Chrysene		50	51.3	1.37	2.6	ug/mL	
bis(2-Ethylhexyl)phthalate		50	48.6	1.05	2.8	ug/mL	
Benzo[b]fluoranthene		50	51.8	1.53	3.6	ug/mL	
Benzo[k]fluoranthene		50	51.8	1.42	3.7	ug/mL	
Indeno[1,2,3-cd]pyrene		50	49.3	1.47	1.4	ug/mL	
Dibenz[ah]anthracene		50	51.0	1.24	1.9	ug/mL	
Benzo[ghi]perylene		50	50.4	1.23	.8	ug/mL	

* Exceeds %D Limit

CCC Calibration Check Compounds
SPCC System Performance Check Compounds

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KEMRON Environmental Services

CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number:L0605548 Run Date:05/25/2006 Sample ID:WG214008-02
Instrument ID:HPMS5 Run Time:09:26 Method:8270C
File ID:5M40862 Analyst:ALT
Workgroup (AAB#):WG214069 Cal ID: HPMS5 - 15-MAY-06

Analyte		Expected	Found	RF	%D	UNITS	Q
Phenol	CCC	50	51.6	1.67	3.3	ug/mL	
2-Nitrophenol	CCC	50	53.1	0.223	6.2	ug/mL	
2,4-Dichlorophenol	CCC	50	53.2	0.340	6.4	ug/mL	
Hexachlorobutadiene	CCC	50	54.1	0.189	8.1	ug/mL	
4-Chloro-3-Methylphenol	CCC	50	54.5	0.335	8.9	ug/mL	
2,4,6-Trichlorophenol	CCC	50	51.9	0.375	3.7	ug/mL	
Acenaphthene	CCC	50	54.2	1.27	8.3	ug/mL	
n-Nitrosodiphenylamine	CCC	50	51.9	0.652	3.7	ug/mL	
Pentachlorophenol	CCC	50	49.7	0.137	.5	ug/mL	
Fluoranthene	CCC	50	53.6	1.44	7.2	ug/mL	
Di-n-Octyl Phthalate	CCC	50	56.0	2.38	11.9	ug/mL	
Benzo[a]pyrene	CCC	50	52.8	1.40	5.6	ug/mL	
n-Nitrosodipropylamine	SPCC	50	53.7	0.920	7.3	ug/mL	
Hexachlorocyclopentadiene	SPCC	50	52.9	0.257	5.9	ug/mL	
2,4-Dinitrophenol	SPCC	50	50.7	0.137	1.5	ug/mL	
4-Nitrophenol	SPCC	50	52.4	0.264	4.7	ug/mL	
bis(2-Chloroethyl)ether		50	50.7	1.00	1.5	ug/mL	
2-Chlorophenol		50	51.1	1.43	2.2	ug/mL	
2-Methylphenol		50	51.8	1.06	3.6	ug/mL	
bis(2-Chloroisopropyl)ether		50	52.7	2.57	5.4	ug/mL	
3-,4-Methylphenol		50	52.5	1.52	4.9	ug/mL	
Hexachloroethane		50	54.7	0.652	9.3	ug/mL	
Nitrobenzene		50	53.1	0.395	6.1	ug/mL	
Isophorone		50	52.9	0.644	5.9	ug/mL	
2,4-Dimethylphenol		50	50.4	0.346	.7	ug/mL	
bis(2-Chloroethoxy)methane		50	51.8	0.397	3.5	ug/mL	
Naphthalene		50	53.0	1.14	6	ug/mL	
4-Chloroaniline		50	51.5	0.424	2.9	ug/mL	
2-Methylnaphthalene		50	53.6	0.828	7.3	ug/mL	
2,4,5-Trichlorophenol		50	52.9	0.416	5.8	ug/mL	
2-Chloronaphthalene		50	52.2	1.19	4.4	ug/mL	
2-Nitroaniline		50	52.7	0.394	5.3	ug/mL	
Dimethylphthalate		50	52.4	1.38	4.8	ug/mL	
Acenaphthylene		50	52.8	1.99	5.6	ug/mL	
2,6-Dinitrotoluene		50	52.7	0.310	5.3	ug/mL	
3-Nitroaniline		50	53.2	0.344	6.3	ug/mL	
Dibenzofuran		50	52.5	1.79	5	ug/mL	
2,4-Dinitrotoluene		50	53.2	0.403	6.3	ug/mL	
Diethylphthalate		50	54.0	1.39	7.9	ug/mL	
4-Chlorophenyl Phenyl Ether		50	52.4	0.644	4.8	ug/mL	
Fluorene		50	53.9	1.45	7.7	ug/mL	
4-Nitroaniline		50	56.0	0.362	12	ug/mL	

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KEMRON Environmental Services

CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number:L0605548 Run Date:05/25/2006 Sample ID:WG214008-02
Instrument ID:HPMS5 Run Time:09:26 Method:8270C
File ID:5M40862 Analyst:ALT
Workgroup (AAB#):WG214069 Cal ID: HPMS5 - 15-MAY-06

Analyte		Expected	Found	RF	%D	UNITS	Q
4,6-Dinitro-2-Methylphenol		50	50.4	0.153	.8	ug/mL	
4-Bromophenyl Phenyl Ether		50	52.1	0.247	4.1	ug/mL	
Hexachlorobenzene		50	51.9	0.241	3.9	ug/mL	
Phenanthrene		50	52.9	1.40	5.9	ug/mL	
Anthracene		50	53.6	1.42	7.1	ug/mL	
Carbazole		50	52.9	1.25	5.8	ug/mL	
Di-n-Butyl Phthalate		50	54.6	1.62	9.1	ug/mL	
Pyrene		50	51.7	1.72	3.4	ug/mL	
Butyl Benzyl Phthalate		50	52.7	0.830	5.4	ug/mL	
3,3'-Dichlorobenzidine		50	47.3	0.333	5.5	ug/mL	
Benzo[a]anthracene		50	51.9	1.39	3.7	ug/mL	
Chrysene		50	50.5	1.35	1.1	ug/mL	
bis(2-Ethylhexyl)phthalate		50	52.8	1.15	5.7	ug/mL	
Benzo[b]fluoranthene		50	53.0	1.57	6	ug/mL	
Benzo[k]fluoranthene		50	54.4	1.49	8.9	ug/mL	
Indeno[1,2,3-cd]pyrene		50	53.7	1.60	7.4	ug/mL	
Dibenz[ah]anthracene		50	53.2	1.30	6.4	ug/mL	
Benzo[ghi]perylene		50	51.9	1.27	3.9	ug/mL	
2-Fluorophenol	SURR	50	50.8	1.30	1.5	ug/mL	
Phenol-d5	SURR	50	50.7	1.52	1.5	ug/mL	
Nitrobenzene-d5	SURR	50	53.1	0.403	6.1	ug/mL	
2-Fluorobiphenyl	SURR	50	52.0	1.40	4.1	ug/mL	
2,4,6-Tribromophenol	SURR	50	53.3	0.149	6.6	ug/mL	
p-Terphenyl-d14	SURR	50	50.7	1.03	1.4	ug/mL	

* Exceeds %D Criteria

CCC Calibration Check Compounds
SPCC System Performance Check Compounds

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KEMRON Environmental Services

CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number:L0605548 Run Date:05/26/2006 Sample ID:WG214107-02
Instrument ID:HPMS5 Run Time:13:29 Method:8270C
File ID:5M40887 Analyst:ALT
Workgroup (AAB#):WG214069 Cal ID: HPMS5 - 15-MAY-06

Analyte		Expected	Found	RF	%D	UNITS	Q
Phenol	CCC	50	51.9	1.68	3.7	ug/mL	
2-Nitrophenol	CCC	50	53.5	0.225	7	ug/mL	
2,4-Dichlorophenol	CCC	50	53.4	0.341	6.8	ug/mL	
Hexachlorobutadiene	CCC	50	54.4	0.190	8.8	ug/mL	
4-Chloro-3-Methylphenol	CCC	50	55.3	0.340	10.6	ug/mL	
2,4,6-Trichlorophenol	CCC	50	52.3	0.378	4.6	ug/mL	
Acenaphthene	CCC	50	54.6	1.28	9.3	ug/mL	
n-Nitrosodiphenylamine	CCC	50	52.3	0.657	4.6	ug/mL	
Pentachlorophenol	CCC	50	47.0	0.128	6	ug/mL	
Fluoranthene	CCC	50	53.5	1.44	6.9	ug/mL	
Di-n-Octyl Phthalate	CCC	50	57.0	2.42	14	ug/mL	
Benzo[a]pyrene	CCC	50	53.3	1.42	6.7	ug/mL	
n-Nitrosodipropylamine	SPCC	50	54.4	0.933	8.9	ug/mL	
Hexachlorocyclopentadiene	SPCC	50	51.2	0.248	2.3	ug/mL	
2,4-Dinitrophenol	SPCC	50	47.1	0.124	5.8	ug/mL	
4-Nitrophenol	SPCC	50	53.1	0.267	6.3	ug/mL	
bis(2-Chloroethyl)ether		50	51.5	1.02	2.9	ug/mL	
2-Chlorophenol		50	52.1	1.46	4.3	ug/mL	
2-Methylphenol		50	52.0	1.06	3.9	ug/mL	
bis(2-Chloroisopropyl)ether		50	53.3	2.60	6.6	ug/mL	
3-,4-Methylphenol		50	53.4	1.54	6.8	ug/mL	
Hexachloroethane		50	55.3	0.659	10.5	ug/mL	
Nitrobenzene		50	53.0	0.394	5.9	ug/mL	
Isophorone		50	52.9	0.644	5.8	ug/mL	
2,4-Dimethylphenol		50	50.6	0.348	1.3	ug/mL	
bis(2-Chloroethoxy)methane		50	51.5	0.395	2.9	ug/mL	
Naphthalene		50	52.7	1.14	5.4	ug/mL	
4-Chloroaniline		50	52.8	0.435	5.6	ug/mL	
2-Methylnaphthalene		50	54.0	0.833	7.9	ug/mL	
2,4,5-Trichlorophenol		50	52.7	0.415	5.5	ug/mL	
2-Chloronaphthalene		50	53.0	1.21	6	ug/mL	
2-Nitroaniline		50	55.0	0.412	10	ug/mL	
Dimethylphthalate		50	53.2	1.40	6.5	ug/mL	
Acenaphthylene		50	53.5	2.01	7	ug/mL	
2,6-Dinitrotoluene		50	53.2	0.314	6.4	ug/mL	
3-Nitroaniline		50	54.5	0.353	9	ug/mL	
Dibenzofuran		50	52.4	1.78	4.7	ug/mL	
2,4-Dinitrotoluene		50	54.4	0.413	8.9	ug/mL	
Diethylphthalate		50	54.4	1.40	8.8	ug/mL	
4-Chlorophenyl Phenyl Ether		50	52.9	0.651	5.9	ug/mL	
Fluorene		50	54.7	1.47	9.3	ug/mL	
4-Nitroaniline		50	58.6	0.379	17.2	ug/mL	

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KEMRON Environmental Services

CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number:L0605548 Run Date:05/26/2006 Sample ID:WG214107-02
Instrument ID:HPMS5 Run Time:13:29 Method:8270C
File ID:5M40887 Analyst:ALT
Workgroup (AAB#):WG214069 Cal ID: HPMS5 - 15-MAY-06

Analyte		Expected	Found	RF	%D	UNITS	Q
4,6-Dinitro-2-Methylphenol		50	49.2	0.149	1.5	ug/mL	
4-Bromophenyl Phenyl Ether		50	51.8	0.246	3.6	ug/mL	
Hexachlorobenzene		50	51.1	0.238	2.3	ug/mL	
Phenanthrene		50	53.2	1.40	6.5	ug/mL	
Anthracene		50	53.3	1.42	6.6	ug/mL	
Carbazole		50	54.4	1.29	8.8	ug/mL	
Di-n-Butyl Phthalate		50	54.2	1.61	8.4	ug/mL	
Pyrene		50	51.0	1.69	1.9	ug/mL	
Butyl Benzyl Phthalate		50	52.2	0.823	4.5	ug/mL	
3,3'-Dichlorobenzidine		50	50.5	0.355	.9	ug/mL	
Benzo[a]anthracene		50	51.1	1.37	2.2	ug/mL	
Chrysene		50	50.4	1.34	.9	ug/mL	
bis(2-Ethylhexyl)phthalate		50	53.7	1.16	7.4	ug/mL	
Benzo[b]fluoranthene		50	54.0	1.60	8	ug/mL	
Benzo[k]fluoranthene		50	53.9	1.47	7.8	ug/mL	
Indeno[1,2,3-cd]pyrene		50	54.1	1.62	8.2	ug/mL	
Dibenz[ah]anthracene		50	54.0	1.32	8	ug/mL	
Benzo[ghi]perylene		50	52.5	1.28	5	ug/mL	
2-Fluorophenol	SURR	50	51.2	1.32	2.4	ug/mL	
Phenol-d5	SURR	50	52.2	1.56	4.4	ug/mL	
Nitrobenzene-d5	SURR	50	53.4	0.405	6.8	ug/mL	
2-Fluorobiphenyl	SURR	50	52.4	1.41	4.7	ug/mL	
2,4,6-Tribromophenol	SURR	50	54.8	0.153	9.5	ug/mL	
p-Terphenyl-d14	SURR	50	50.6	1.03	1.2	ug/mL	

* Exceeds %D Criteria

CCC Calibration Check Compounds
SPCC System Performance Check Compounds

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KEMRON Environmental Services

CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number:L0605548 Run Date:05/30/2006 Sample ID:WG214203-02
Instrument ID:HPMS5 Run Time:13:15 Method:8270C
File ID:5M40913 Analyst:ALT
Workgroup (AAB#):WG214069 Cal ID: HPMS5 - 15-MAY-06

Analyte		Expected	Found	RF	%D	UNITS	Q
Phenol	CCC	50	54.2	1.75	8.3	ug/mL	
2-Nitrophenol	CCC	50	50.2	0.211	.3	ug/mL	
2,4-Dichlorophenol	CCC	50	53.8	0.344	7.5	ug/mL	
Hexachlorobutadiene	CCC	50	55.0	0.192	9.9	ug/mL	
4-Chloro-3-Methylphenol	CCC	50	54.5	0.335	8.9	ug/mL	
2,4,6-Trichlorophenol	CCC	50	51.7	0.373	3.3	ug/mL	
Acenaphthene	CCC	50	54.8	1.29	9.5	ug/mL	
n-Nitrosodiphenylamine	CCC	50	52.0	0.653	4	ug/mL	
Pentachlorophenol	CCC	50	40.6	0.108	18.8	ug/mL	
Fluoranthene	CCC	50	54.1	1.46	8.3	ug/mL	
Di-n-Octyl Phthalate	CCC	50	55.6	2.36	11.2	ug/mL	
Benzo[a]pyrene	CCC	50	53.4	1.42	6.9	ug/mL	
n-Nitrosodipropylamine	SPCC	50	53.0	0.908	5.9	ug/mL	
Hexachlorocyclopentadiene	SPCC	50	47.5	0.230	5	ug/mL	
2,4-Dinitrophenol	SPCC	50	43.1	0.111	13.8	ug/mL	
4-Nitrophenol	SPCC	50	51.7	0.260	3.4	ug/mL	
bis(2-Chloroethyl)ether		50	50.7	1.00	1.5	ug/mL	
2-Chlorophenol		50	50.7	1.42	1.4	ug/mL	
2-Methylphenol		50	50.5	1.03	1	ug/mL	
bis(2-Chloroisopropyl)ether		50	51.5	2.51	3	ug/mL	
3-,4-Methylphenol		50	52.6	1.52	5.2	ug/mL	
Hexachloroethane		50	54.1	0.645	8.2	ug/mL	
Nitrobenzene		50	52.6	0.391	5.1	ug/mL	
Isophorone		50	52.7	0.642	5.4	ug/mL	
2,4-Dimethylphenol		50	50.0	0.344	0	ug/mL	
bis(2-Chloroethoxy)methane		50	50.9	0.391	1.8	ug/mL	
Naphthalene		50	53.0	1.14	6	ug/mL	
4-Chloroaniline		50	52.2	0.430	4.5	ug/mL	
2-Methylnaphthalene		50	53.9	0.832	7.8	ug/mL	
2,4,5-Trichlorophenol		50	51.6	0.405	3.2	ug/mL	
2-Chloronaphthalene		50	51.9	1.18	3.8	ug/mL	
2-Nitroaniline		50	53.7	0.402	7.5	ug/mL	
Dimethylphthalate		50	53.2	1.40	6.3	ug/mL	
Acenaphthylene		50	53.3	2.01	6.6	ug/mL	
2,6-Dinitrotoluene		50	52.5	0.309	5	ug/mL	
3-Nitroaniline		50	52.6	0.340	5.3	ug/mL	
Dibenzofuran		50	53.1	1.81	6.1	ug/mL	
2,4-Dinitrotoluene		50	53.1	0.403	6.1	ug/mL	
Diethylphthalate		50	54.5	1.40	9	ug/mL	
4-Chlorophenyl Phenyl Ether		50	51.8	0.637	3.5	ug/mL	
Fluorene		50	55.5	1.49	11.1	ug/mL	
4-Nitroaniline		50	43.2	0.279	13.6	ug/mL	

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KEMRON Environmental Services

CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L0605548 Run Date: 05/30/2006 Sample ID: WG214203-02
Instrument ID: HPMS5 Run Time: 13:15 Method: 8270C
File ID: 5M40913 Analyst: ALT
Workgroup (AAB#): WG214069 Cal ID: HPMS5 - 15-MAY-06

Analyte		Expected	Found	RF	%D	UNITS	Q
4,6-Dinitro-2-Methylphenol		50	46.1	0.138	7.9	ug/mL	
4-Bromophenyl Phenyl Ether		50	52.4	0.249	4.9	ug/mL	
Hexachlorobenzene		50	51.6	0.240	3.1	ug/mL	
Phenanthrene		50	53.8	1.42	7.7	ug/mL	
Anthracene		50	53.2	1.41	6.4	ug/mL	
Carbazole		50	50.9	1.20	1.8	ug/mL	
Di-n-Butyl Phthalate		50	54.5	1.62	9	ug/mL	
Pyrene		50	50.9	1.69	1.8	ug/mL	
Butyl Benzyl Phthalate		50	51.6	0.813	3.2	ug/mL	
3,3'-Dichlorobenzidine		50	48.7	0.343	2.6	ug/mL	
Benzo[a]anthracene		50	51.1	1.37	2.1	ug/mL	
Chrysene		50	50.9	1.36	1.8	ug/mL	
bis(2-Ethylhexyl)phthalate		50	52.1	1.13	4.2	ug/mL	
Benzo[b]fluoranthene		50	55.8	1.65	11.6	ug/mL	
Benzo[k]fluoranthene		50	52.2	1.43	4.4	ug/mL	
Indeno[1,2,3-cd]pyrene		50	55.8	1.67	11.6	ug/mL	
Dibenz[ah]anthracene		50	55.6	1.35	11.2	ug/mL	
Benzo[ghi]perylene		50	53.6	1.31	7.1	ug/mL	
2-Fluorophenol	SURR	50	49.6	1.27	.9	ug/mL	
Phenol-d5	SURR	50	50.4	1.51	.8	ug/mL	
Nitrobenzene-d5	SURR	50	53.6	0.407	7.1	ug/mL	
2-Fluorobiphenyl	SURR	50	52.7	1.42	5.5	ug/mL	
2,4,6-Tribromophenol	SURR	50	51.1	0.143	2.2	ug/mL	
p-Terphenyl-d14	SURR	50	50.7	1.03	1.4	ug/mL	

* Exceeds %D Criteria

CCC Calibration Check Compounds
SPCC System Performance Check Compounds

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KEMRON Environmental Services

CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number:L0605548 Run Date:05/25/2006 Sample ID:WG214008-02
Instrument ID:HPMS5 Run Time:09:26 Method:8270C
File ID:5M40862 Analyst:ALT
Workgroup (AAB#):WG214070 Cal ID: HPMS5 - 15-MAY-06

Analyte		Expected	Found	RF	%D	UNITS	Q
Phenol	CCC	50	51.6	1.67	3.3	ug/mL	
2-Nitrophenol	CCC	50	53.1	0.223	6.2	ug/mL	
2,4-Dichlorophenol	CCC	50	53.2	0.340	6.4	ug/mL	
Hexachlorobutadiene	CCC	50	54.1	0.189	8.1	ug/mL	
4-Chloro-3-Methylphenol	CCC	50	54.5	0.335	8.9	ug/mL	
2,4,6-Trichlorophenol	CCC	50	51.9	0.375	3.7	ug/mL	
Acenaphthene	CCC	50	54.2	1.27	8.3	ug/mL	
n-Nitrosodiphenylamine	CCC	50	51.9	0.652	3.7	ug/mL	
Pentachlorophenol	CCC	50	49.7	0.137	.5	ug/mL	
Fluoranthene	CCC	50	53.6	1.44	7.2	ug/mL	
Di-n-Octyl Phthalate	CCC	50	56.0	2.38	11.9	ug/mL	
Benzo[a]pyrene	CCC	50	52.8	1.40	5.6	ug/mL	
n-Nitrosodipropylamine	SPCC	50	53.7	0.920	7.3	ug/mL	
Hexachlorocyclopentadiene	SPCC	50	52.9	0.257	5.9	ug/mL	
2,4-Dinitrophenol	SPCC	50	50.7	0.137	1.5	ug/mL	
4-Nitrophenol	SPCC	50	52.4	0.264	4.7	ug/mL	
bis(2-Chloroethyl)ether		50	50.7	1.00	1.5	ug/mL	
2-Chlorophenol		50	51.1	1.43	2.2	ug/mL	
2-Methylphenol		50	51.8	1.06	3.6	ug/mL	
bis(2-Chloroisopropyl)ether		50	52.7	2.57	5.4	ug/mL	
3-,4-Methylphenol		50	52.5	1.52	4.9	ug/mL	
Hexachloroethane		50	54.7	0.652	9.3	ug/mL	
Nitrobenzene		50	53.1	0.395	6.1	ug/mL	
Isophorone		50	52.9	0.644	5.9	ug/mL	
2,4-Dimethylphenol		50	50.4	0.346	.7	ug/mL	
bis(2-Chloroethoxy)methane		50	51.8	0.397	3.5	ug/mL	
Naphthalene		50	53.0	1.14	6	ug/mL	
4-Chloroaniline		50	51.5	0.424	2.9	ug/mL	
2-Methylnaphthalene		50	53.6	0.828	7.3	ug/mL	
2,4,5-Trichlorophenol		50	52.9	0.416	5.8	ug/mL	
2-Chloronaphthalene		50	52.2	1.19	4.4	ug/mL	
2-Nitroaniline		50	52.7	0.394	5.3	ug/mL	
Dimethylphthalate		50	52.4	1.38	4.8	ug/mL	
2,6-Dinitrotoluene		50	52.7	0.310	5.3	ug/mL	
Acenaphthylene		50	52.8	1.99	5.6	ug/mL	
3-Nitroaniline		50	53.2	0.344	6.3	ug/mL	
Dibenzofuran		50	52.5	1.79	5	ug/mL	
2,4-Dinitrotoluene		50	53.2	0.403	6.3	ug/mL	
Diethylphthalate		50	54.0	1.39	7.9	ug/mL	
Fluorene		50	53.9	1.45	7.7	ug/mL	
4-Chlorophenyl Phenyl Ether		50	52.4	0.644	4.8	ug/mL	
4-Nitroaniline		50	56.0	0.362	12	ug/mL	

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KEMRON Environmental Services

CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number:L0605548 Run Date:05/25/2006 Sample ID:WG214008-02
Instrument ID:HPMS5 Run Time:09:26 Method:8270C
File ID:5M40862 Analyst:ALT
Workgroup (AAB#):WG214070 Cal ID: HPMS5 - 15-MAY-06

Analyte		Expected	Found	RF	%D	UNITS	Q
4,6-Dinitro-2-Methylphenol		50	50.4	0.153	.8	ug/mL	
4-Bromophenyl Phenyl Ether		50	52.1	0.247	4.1	ug/mL	
Hexachlorobenzene		50	51.9	0.241	3.9	ug/mL	
Phenanthrene		50	52.9	1.40	5.9	ug/mL	
Anthracene		50	53.6	1.42	7.1	ug/mL	
Carbazole		50	52.9	1.25	5.8	ug/mL	
Di-n-Butyl Phthalate		50	54.6	1.62	9.1	ug/mL	
Pyrene		50	51.7	1.72	3.4	ug/mL	
Butyl Benzyl Phthalate		50	52.7	0.830	5.4	ug/mL	
3,3'-Dichlorobenzidine		50	47.3	0.333	5.5	ug/mL	
Benzo[a]anthracene		50	51.9	1.39	3.7	ug/mL	
Chrysene		50	50.5	1.35	1.1	ug/mL	
bis(2-Ethylhexyl)phthalate		50	52.8	1.15	5.7	ug/mL	
Benzo[b]fluoranthene		50	53.0	1.57	6	ug/mL	
Benzo[k]fluoranthene		50	54.4	1.49	8.9	ug/mL	
Indeno[1,2,3-cd]pyrene		50	53.7	1.60	7.4	ug/mL	
Dibenz[ah]anthracene		50	53.2	1.30	6.4	ug/mL	
Benzo[ghi]perylene		50	51.9	1.27	3.9	ug/mL	
2-Fluorophenol	SURR	50	50.8	1.30	1.5	ug/mL	
Phenol-d5	SURR	50	50.7	1.52	1.5	ug/mL	
Nitrobenzene-d5	SURR	50	53.1	0.403	6.1	ug/mL	
2-Fluorobiphenyl	SURR	50	52.0	1.40	4.1	ug/mL	
2,4,6-Tribromophenol	SURR	50	53.3	0.149	6.6	ug/mL	
p-Terphenyl-d14	SURR	50	50.7	1.03	1.4	ug/mL	

* Exceeds %D Criteria

CCC Calibration Check Compounds
SPCC System Performance Check Compounds

KEMRON FORMS - Modified 04/19/2006
Version 1.3 PDF File ID: 490963
Report generated 06/06/2006 16:50

KEMRON Environmental Services

CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number:L0605548 Run Date:06/01/2006 Sample ID:WG214395-02
Instrument ID:HPMS4 Run Time:12:29 Method:8270C
File ID:4M33222 Analyst:CLK
Workgroup (AAB#):WG214500 Cal ID: HPMS4 - 10-MAY-06

Analyte		Expected	Found	RF	%D	UNITS	Q
Phenol	CCC	50	49.5	1.62	1.1	ug/mL	
2-Nitrophenol	CCC	50	49.1	0.181	1.8	ug/mL	
2,4-Dichlorophenol	CCC	50	49.3	0.264	1.5	ug/mL	
Hexachlorobutadiene	CCC	50	50.5	0.152	1	ug/mL	
4-Chloro-3-Methylphenol	CCC	50	52.2	0.285	4.3	ug/mL	
2,4,6-Trichlorophenol	CCC	50	51.8	0.340	3.6	ug/mL	
Acenaphthene	CCC	50	48.9	1.07	2.1	ug/mL	
n-Nitrosodiphenylamine	CCC	50	48.0	0.706	4	ug/mL	
Pentachlorophenol	CCC	50	49.4	0.132	1.3	ug/mL	
Fluoranthene	CCC	50	48.9	1.18	2.2	ug/mL	
Di-n-Octyl Phthalate	CCC	50	51.1	1.61	2.2	ug/mL	
Benzo[a]pyrene	CCC	50	49.3	1.23	1.4	ug/mL	
n-Nitrosodipropylamine	SPCC	50	49.9	0.845	.3	ug/mL	
Hexachlorocyclopentadiene	SPCC	50	40.7	0.200	18.6	ug/mL	
2,4-Dinitrophenol	SPCC	50	45.0	0.109	10	ug/mL	
4-Nitrophenol	SPCC	50	50.3	0.212	.6	ug/mL	
bis(2-Chloroethyl)ether		50	48.4	0.876	3.2	ug/mL	
2-Chlorophenol		50	50.3	1.45	.6	ug/mL	
2-Methylphenol		50	50.6	1.10	1.1	ug/mL	
bis(2-Chloroisopropyl)ether		50	46.3	2.02	7.5	ug/mL	
3-,4-Methylphenol		50	50.3	1.44	.7	ug/mL	
Hexachloroethane		50	51.3	0.595	2.5	ug/mL	
Nitrobenzene		50	49.0	0.325	1.9	ug/mL	
Isophorone		50	49.7	0.581	.7	ug/mL	
2,4-Dimethylphenol		50	49.4	0.311	1.3	ug/mL	
bis(2-Chloroethoxy)methane		50	48.7	0.458	2.6	ug/mL	
Naphthalene		50	49.6	1.01	.8	ug/mL	
4-Chloroaniline		50	50.4	0.437	.8	ug/mL	
2-Methylnaphthalene		50	49.9	0.653	.3	ug/mL	
2,4,5-Trichlorophenol		50	51.5	0.361	3	ug/mL	
2-Chloronaphthalene		50	48.6	1.23	2.7	ug/mL	
2-Nitroaniline		50	49.1	0.301	1.9	ug/mL	
Dimethylphthalate		50	49.7	1.22	.6	ug/mL	
Acenaphthylene		50	49.5	1.78	1	ug/mL	
2,6-Dinitrotoluene		50	50.6	0.308	1.1	ug/mL	
3-Nitroaniline		50	47.9	0.318	4.2	ug/mL	
Dibenzofuran		50	48.7	1.46	2.6	ug/mL	
2,4-Dinitrotoluene		50	51.1	0.356	2.3	ug/mL	
Diethylphthalate		50	50.5	1.25	1	ug/mL	
4-Chlorophenyl Phenyl Ether		50	49.4	0.585	1.2	ug/mL	
Fluorene		50	49.6	1.26	.9	ug/mL	
4-Nitroaniline		50	49.8	0.341	.4	ug/mL	

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CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number:L0605548 Run Date:06/01/2006 Sample ID:WG214395-02
Instrument ID:HPMS4 Run Time:12:29 Method:8270C
File ID:4M33222 Analyst:CLK
Workgroup (AAB#):WG214500 Cal ID: HPMS4 - 10-MAY-06

Analyte		Expected	Found	RF	%D	UNITS	Q
4,6-Dinitro-2-Methylphenol		50	48.6	0.133	2.9	ug/mL	
4-Bromophenyl Phenyl Ether		50	48.1	0.223	3.7	ug/mL	
Hexachlorobenzene		50	47.5	0.231	5	ug/mL	
Phenanthrene		50	48.5	1.17	2.9	ug/mL	
Anthracene		50	48.9	1.19	2.2	ug/mL	
Carbazole		50	49.8	1.11	.4	ug/mL	
Di-n-Butyl Phthalate		50	49.3	1.36	1.3	ug/mL	
Pyrene		50	48.9	1.38	2.2	ug/mL	
Butyl Benzyl Phthalate		50	49.5	0.603	.9	ug/mL	
3,3'-Dichlorobenzidine		50	43.7	0.400	12.6	ug/mL	
Benzo[a]anthracene		50	49.0	1.27	2	ug/mL	
Chrysene		50	49.3	1.25	1.5	ug/mL	
bis(2-Ethylhexyl)phthalate		50	49.5	0.934	.9	ug/mL	
Benzo[b]fluoranthene		50	46.1	1.25	7.8	ug/mL	
Benzo[k]fluoranthene		50	51.6	1.27	3.2	ug/mL	
Indeno[1,2,3-cd]pyrene		50	48.4	1.41	3.1	ug/mL	
Dibenz[ah]anthracene		50	48.4	1.20	3.1	ug/mL	
Benzo[ghi]perylene		50	49.1	1.24	1.8	ug/mL	
2-Fluorophenol	SURR	50	49.8	1.29	.5	ug/mL	
Phenol-d5	SURR	50	49.5	1.50	.9	ug/mL	
Nitrobenzene-d5	SURR	50	49.4	0.319	1.2	ug/mL	
2-Fluorobiphenyl	SURR	50	48.1	1.16	3.9	ug/mL	
2,4,6-Tribromophenol	SURR	50	52.6	0.164	5.2	ug/mL	
p-Terphenyl-d14	SURR	50	48.7	0.910	2.5	ug/mL	

* Exceeds %D Criteria

CCC Calibration Check Compounds
SPCC System Performance Check Compounds

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KEMRON Environmental Services

CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number:L0605548 Run Date:06/02/2006 Sample ID:WG214530-02
Instrument ID:HPMS5 Run Time:13:48 Method:8270C
File ID:5M40988 Analyst:ALT
Workgroup (AAB#):WG214500 Cal ID: HPMS5 - 15-MAY-06

Analyte		Expected	Found	RF	%D	UNITS	Q
Phenol	CCC	50	53.8	1.74	7.6	ug/mL	
2-Nitrophenol	CCC	50	51.4	0.216	2.7	ug/mL	
2,4-Dichlorophenol	CCC	50	53.1	0.340	6.3	ug/mL	
Hexachlorobutadiene	CCC	50	54.8	0.191	9.5	ug/mL	
4-Chloro-3-Methylphenol	CCC	50	55.0	0.338	10.1	ug/mL	
2,4,6-Trichlorophenol	CCC	50	52.0	0.376	4.1	ug/mL	
Acenaphthene	CCC	50	56.7	1.33	13.4	ug/mL	
n-Nitrosodiphenylamine	CCC	50	53.4	0.671	6.9	ug/mL	
Pentachlorophenol	CCC	50	44.8	0.121	10.4	ug/mL	
Fluoranthene	CCC	50	55.8	1.50	11.6	ug/mL	
Di-n-Octyl Phthalate	CCC	50	56.8	2.41	13.6	ug/mL	
Benzo[a]pyrene	CCC	50	54.2	1.44	8.3	ug/mL	
n-Nitrosodipropylamine	SPCC	50	53.8	0.922	7.5	ug/mL	
Hexachlorocyclopentadiene	SPCC	50	52.5	0.255	5.1	ug/mL	
2,4-Dinitrophenol	SPCC	50	57.5	0.160	15	ug/mL	
4-Nitrophenol	SPCC	50	57.8	0.291	15.6	ug/mL	
bis(2-Chloroethyl)ether		50	50.5	0.997	1.1	ug/mL	
2-Chlorophenol		50	50.7	1.42	1.4	ug/mL	
2-Methylphenol		50	50.0	1.02	.1	ug/mL	
bis(2-Chloroisopropyl)ether		50	52.9	2.58	5.8	ug/mL	
3-,4-Methylphenol		50	53.2	1.54	6.4	ug/mL	
Hexachloroethane		50	54.8	0.654	9.7	ug/mL	
Nitrobenzene		50	53.0	0.395	6	ug/mL	
Isophorone		50	51.8	0.630	3.6	ug/mL	
2,4-Dimethylphenol		50	48.8	0.336	2.4	ug/mL	
bis(2-Chloroethoxy)methane		50	50.7	0.389	1.4	ug/mL	
Naphthalene		50	52.6	1.13	5.2	ug/mL	
4-Chloroaniline		50	52.0	0.428	4	ug/mL	
2-Methylnaphthalene		50	54.2	0.837	8.4	ug/mL	
2,4,5-Trichlorophenol		50	51.9	0.408	3.9	ug/mL	
2-Chloronaphthalene		50	52.7	1.20	5.5	ug/mL	
2-Nitroaniline		50	55.4	0.414	10.8	ug/mL	
Dimethylphthalate		50	53.3	1.40	6.7	ug/mL	
Acenaphthylene		50	53.3	2.00	6.5	ug/mL	
2,6-Dinitrotoluene		50	52.3	0.308	4.7	ug/mL	
3-Nitroaniline		50	52.5	0.339	4.9	ug/mL	
Dibenzofuran		50	53.6	1.82	7.1	ug/mL	
2,4-Dinitrotoluene		50	52.9	0.402	5.9	ug/mL	
Diethylphthalate		50	55.7	1.43	11.3	ug/mL	
4-Chlorophenyl Phenyl Ether		50	52.8	0.649	5.5	ug/mL	
Fluorene		50	57.4	1.54	14.7	ug/mL	
4-Nitroaniline		50	57.2	0.369	14.3	ug/mL	

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CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number:L0605548 Run Date:06/02/2006 Sample ID:WG214530-02
Instrument ID:HPMS5 Run Time:13:48 Method:8270C
File ID:5M40988 Analyst:ALT
Workgroup (AAB#):WG214500 Cal ID: HPMS5 - 15-MAY-06

Analyte		Expected	Found	RF	%D	UNITS	Q
4,6-Dinitro-2-Methylphenol		50	52.6	0.161	5.3	ug/mL	
4-Bromophenyl Phenyl Ether		50	53.0	0.252	6	ug/mL	
Hexachlorobenzene		50	52.7	0.245	5.3	ug/mL	
Phenanthrene		50	54.8	1.45	9.7	ug/mL	
Anthracene		50	54.8	1.46	9.6	ug/mL	
Carbazole		50	52.3	1.24	4.6	ug/mL	
Di-n-Butyl Phthalate		50	55.6	1.65	11.1	ug/mL	
Pyrene		50	49.6	1.65	.7	ug/mL	
Butyl Benzyl Phthalate		50	50.6	0.797	1.2	ug/mL	
3,3'-Dichlorobenzidine		50	49.8	0.350	.5	ug/mL	
Benzo[a]anthracene		50	52.0	1.39	4.1	ug/mL	
Chrysene		50	50.0	1.33	0	ug/mL	
bis(2-Ethylhexyl)phthalate		50	51.7	1.12	3.4	ug/mL	
Benzo[b]fluoranthene		50	57.8	1.71	15.7	ug/mL	
Benzo[k]fluoranthene		50	52.9	1.45	5.7	ug/mL	
Indeno[1,2,3-cd]pyrene		50	55.8	1.67	11.7	ug/mL	
Dibenz[ah]anthracene		50	55.1	1.34	10.2	ug/mL	
Benzo[ghi]perylene		50	52.3	1.28	4.6	ug/mL	
2-Fluorophenol	SURR	50	48.5	1.25	3	ug/mL	
Phenol-d5	SURR	50	50.4	1.51	.8	ug/mL	
Nitrobenzene-d5	SURR	50	53.9	0.409	7.9	ug/mL	
2-Fluorobiphenyl	SURR	50	53.6	1.44	7.2	ug/mL	
2,4,6-Tribromophenol	SURR	50	52.5	0.147	5.1	ug/mL	
p-Terphenyl-d14	SURR	50	50.0	1.02	0	ug/mL	

* Exceeds %D Criteria

CCC Calibration Check Compounds
SPCC System Performance Check Compounds

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KEMRON ENVIRONMENTAL SERVICES
INTERNAL STANDARD AREA SUMMARY
(COMPARED TO CCV)

Login Number: L0605548 CCV Number: WG214008-02
Instrument ID: HPMS5 CAL ID: HPMS5-15-MAY-06
Workgroup (AAB#): WG214069 Matrix: SOLID

Sample Number	Dilution	Tag	IS-1	IS-2	IS-3	IS-4	IS-5	IS-6
WG214008-02	NA	NA	357049	815089	1054373	1330588	866045	1198522
Upper Limit	NA	NA	714098	1630178	2108746	2661176	1732090	2397044
Lower Limit	NA	NA	178525	407545	527187	665294	433023	599261
L0605548-01	10.0	DL01	334980	775783	1000512	1264311	674644	1157882
L0605548-02	20.0	DL01	342061	792852	946540	1269325	645314	1133664
L0605548-03	1.00	01	354042	798800	982177	1285484	789994	1161330
L0605548-04	1.00	01	358109	819444	1000567	1328819	761534	1186262
L0605548-05	1.00	01	373117	837435	1040318	1359654	879007	1230215
L0605548-06	1.00	01	369710	841727	1104265	1519765	907053	1231082
L0605548-07	1.00	01	375615	860695	1112539	1553569	905469	1276361
L0605548-08	20.0	DL01	343207	786407	938289	1275537	635149	1135646
L0605548-09	1.00	01	371416	839008	1025029	1365323	839679	1219776
L0605548-10	1.00	01	362135	819158	1008799	1323105	824613	1192183
L0605548-18	1.00	01	373194	851090	1065971	1383442	795405	1250359
WG213964-03	1.00	01	362794	810104	994867	1304623	828287	1171076
WG213964-04	1.00	01	374525	858858	1136423	1519637	936186	1257153
WG213990-01	1.00	01	353652	796102	971735	1300936	805275	1172990
WG213990-02	1.00	01	359366	814534	1072775	1481508	866004	1210587
WG213990-03	1.00	01	365050	825953	1086545	1521464	876256	1225758

IS-1 - 1,4-Dichlorobenzene-d4
IS-2 - Acenaphthene-d10
IS-3 - Chrysene-d12
IS-4 - Naphthalene-d8
IS-5 - Perylene-d12
IS-6 - Phenanthrene-d10

Underline = Response outside limits

KEMRON FORMS - Modified 04/18/2006
Version 1.3 PDF File ID: 484672
Report generated 06/05/2006 13:50

KEMRON ENVIRONMENTAL SERVICES
INTERNAL STANDARD AREA SUMMARY
(COMPARED TO CCV)

Login Number: L0605548
Instrument ID: HPMS5
Workgroup (AAB#): WG214069

CCV Number: WG214107-02
CAL ID: HPMS5-15-MAY-06
Matrix: SOLID

Sample Number	Dilution	Tag	IS-1	IS-2	IS-3	IS-4	IS-5	IS-6
WG214107-02	NA	NA	359848	827109	1106405	1359639	883851	1234577
Upper Limit	NA	NA	719696	1654218	2212810	2719278	1767702	2469154
Lower Limit	NA	NA	179924	413555	553203	679820	441926	617289
L0605548-11	20.0	DL01	402190	938598	1124237	1495532	709600	1369291
L0605548-14	20.0	DL01	416753	969009	1136702	1574469	645830	1405368
L0605548-15	20.0	DL01	416105	967355	1118698	1569723	608187	1394906
L0605548-16	20.0	DL01	413333	957824	1113156	1561186	623669	1394581
L0605548-17	20.0	DL01	410296	955210	1091614	1521270	580605	1385200

IS-1 - 1,4-Dichlorobenzene-d4
IS-2 - Acenaphthene-d10
IS-3 - Chrysene-d12
IS-4 - Naphthalene-d8
IS-5 - Perylene-d12
IS-6 - Phenanthrene-d10

Underline = Response outside limits

KEMRON FORMS - Modified 04/18/2006
Version 1.3 PDF File ID: 484672
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KEMRON ENVIRONMENTAL SERVICES
INTERNAL STANDARD AREA SUMMARY
(COMPARED TO CCV)

Login Number:L0605548 CCV Number:WG214203-02
Instrument ID:HPMS5 CAL ID: HPMS5-15-MAY-06
Workgroup (AAB#):WG214069 Matrix:SOLID

Sample Number	Dilution	Tag	IS-1	IS-2	IS-3	IS-4	IS-5	IS-6
WG214203-02	NA	NA	349854	779125	1034921	1286187	836610	1157495
Upper Limit	NA	NA	699708	1558250	2069842	2572374	1673220	2314990
Lower Limit	NA	NA	174927	389563	517461	643094	418305	578748
L0605548-12	10.0	DL01	391055	876098	1063204	1450647	913655	1271994
L0605548-13	2.00	DL01	402069	912934	1108970	1497961	916541	1335716
L0605548-19	5.00	DL01	389910	892640	1077110	1459941	857739	1280476

IS-1 - 1,4-Dichlorobenzene-d4
IS-2 - Acenaphthene-d10
IS-3 - Chrysene-d12
IS-4 - Naphthalene-d8
IS-5 - Perylene-d12
IS-6 - Phenanthrene-d10

Underline = Response outside limits

KEMRON FORMS - Modified 04/18/2006
Version 1.3 PDF File ID: 484672
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KEMRON ENVIRONMENTAL SERVICES
INTERNAL STANDARD AREA SUMMARY
(COMPARED TO CCV)

Login Number: L0605548
Instrument ID: HPMS4
Workgroup (AAB#): WG214500

CCV Number: WG214395-02
CAL ID: HPMS4-10-MAY-06
Matrix: SOLID

Sample Number	Dilution	Tag	IS-1	IS-2	IS-3	IS-4	IS-5	IS-6
WG214395-02	NA	NA	655268	1640896	2361732	2740366	2414732	2590195
Upper Limit	NA	NA	1310536	3281792	4723464	5480732	4829464	5180390
Lower Limit	NA	NA	327634	820448	1180866	1370183	1207366	1295098
WG214365-02	1.00	01	642230	1425930	2007370	2530061	2067406	2132653
WG214365-03	1.00	01	669701	1544074	2245465	2870985	2289761	2363084

IS-1 - 1,4-Dichlorobenzene-d4
IS-2 - Acenaphthene-d10
IS-3 - Chrysene-d12
IS-4 - Naphthalene-d8
IS-5 - Perylene-d12
IS-6 - Phenanthrene-d10

Underline = Response outside limits

KEMRON FORMS - Modified 04/18/2006
Version 1.3 PDF File ID: 484672
Report generated 06/05/2006 13:50

KEMRON ENVIRONMENTAL SERVICES
INTERNAL STANDARD AREA SUMMARY
(COMPARED TO CCV)

Login Number:L0605548 CCV Number:WG214530-02
Instrument ID:HPMS5 CAL ID: HPMS5-15-MAY-06
Workgroup (AAB#):WG214500 Matrix:SOLID

Sample Number	Dilution	Tag	IS-1	IS-2	IS-3	IS-4	IS-5	IS-6
WG214530-02	NA	NA	329125	730051	1017609	1214176	794130	1083045
Upper Limit	NA	NA	658250	1460102	2035218	2428352	1588260	2166090
Lower Limit	NA	NA	164563	365026	508805	607088	397065	541523
L0605548-12	10.0	DL03	340475	773542	957924	1271369	763586	1123042
L0605548-19	10.0	DL03	344790	780577	968663	1285849	730958	1145851

IS-1 - 1,4-Dichlorobenzene-d4
IS-2 - Acenaphthene-d10
IS-3 - Chrysene-d12
IS-4 - Naphthalene-d8
IS-5 - Perylene-d12
IS-6 - Phenanthrene-d10

Underline = Response outside limits

KEMRON FORMS - Modified 04/18/2006
Version 1.3 PDF File ID: 484672
Report generated 06/05/2006 13:50

KEMRON ENVIRONMENTAL SERVICES
INTERNAL STANDARD RETENTION TIME SUMMARY
(COMPARED TO CCV)

Login Number:L0605548 CCV Number:WG214008-02
Instrument ID:HPMS5 CAL ID: HPMS5-15-MAY-06
Workgroup (AAB#):WG214069 Matrix:SOLID

Sample Number	Dilution	Tag	IS-1	IS-2	IS-3	IS-4	IS-5	IS-6
WG214008-02	NA	NA	8.64	12.35	16.71	10.22	18.6	13.98
Upper Limit	NA	NA	9.14	12.85	17.21	10.72	19.1	14.48
Lower Limit	NA	NA	8.14	11.85	16.21	9.72	18.1	13.48
L0605548-01	10.0	DL01	8.64	12.36	16.71	10.22	18.6	13.98
L0605548-02	20.0	DL01	8.64	12.36	16.71	10.22	18.6	13.98
L0605548-03	1.00	01	8.64	12.35	16.71	10.22	18.6	13.98
L0605548-04	1.00	01	8.64	12.35	16.71	10.22	18.6	13.98
L0605548-05	1.00	01	8.64	12.35	16.71	10.22	18.59	13.98
L0605548-06	1.00	01	8.64	12.36	16.71	10.22	18.6	13.98
L0605548-07	1.00	01	8.64	12.35	16.71	10.22	18.6	13.98
L0605548-08	20.0	DL01	8.64	12.35	16.71	10.22	18.6	13.98
L0605548-09	1.00	01	8.64	12.35	16.71	10.22	18.6	13.98
L0605548-10	1.00	01	8.64	12.35	16.71	10.22	18.6	13.98
L0605548-18	1.00	01	8.64	12.35	16.71	10.22	18.6	13.98
WG213964-03	1.00	01	8.64	12.35	16.71	10.22	18.59	13.98
WG213964-04	1.00	01	8.64	12.36	16.71	10.22	18.6	13.98
WG213990-01	1.00	01	8.64	12.35	16.71	10.22	18.59	13.98
WG213990-02	1.00	01	8.64	12.36	16.71	10.22	18.6	13.98
WG213990-03	1.00	01	8.64	12.36	16.71	10.22	18.6	13.98

IS-1 - 1,4-Dichlorobenzene-d4
IS-2 - Acenaphthene-d10
IS-3 - Chrysene-d12
IS-4 - Naphthalene-d8
IS-5 - Perylene-d12
IS-6 - Phenanthrene-d10

Underline = Response outside limits

KEMRON FORMS - Modified 04/18/2006
Version 1.3 PDF File ID:490973
Report generated 06/06/2006 16:50

KEMRON ENVIRONMENTAL SERVICES
INTERNAL STANDARD RETENTION TIME SUMMARY
(COMPARED TO CCV)

Login Number:L0605548 CCV Number:WG214107-02
Instrument ID:HPMS5 CAL ID: HPMS5-15-MAY-06
Workgroup (AAB#):WG214069 Matrix:SOLID

Sample Number	Dilution	Tag	IS-1	IS-2	IS-3	IS-4	IS-5	IS-6
WG214107-02	NA	NA	8.64	12.36	16.72	10.22	18.6	13.99
Upper Limit	NA	NA	9.14	12.86	17.22	10.72	19.1	14.49
Lower Limit	NA	NA	8.14	11.86	16.22	9.72	18.1	13.49
L0605548-11	20.0	DL01	8.64	12.36	16.71	10.22	18.6	13.98
L0605548-14	20.0	DL01	8.64	12.36	16.71	10.22	18.6	13.98
L0605548-15	20.0	DL01	8.64	12.36	16.72	10.22	18.6	13.98
L0605548-16	20.0	DL01	8.64	12.36	16.72	10.22	18.6	13.99
L0605548-17	20.0	DL01	8.64	12.36	16.71	10.22	18.6	13.98

IS-1 - 1,4-Dichlorobenzene-d4
IS-2 - Acenaphthene-d10
IS-3 - Chrysene-d12
IS-4 - Naphthalene-d8
IS-5 - Perylene-d12
IS-6 - Phenanthrene-d10

Underline = Response outside limits

KEMRON FORMS - Modified 04/18/2006
Version 1.3 PDF File ID: 490973
Report generated 06/06/2006 16:50

KEMRON ENVIRONMENTAL SERVICES
INTERNAL STANDARD RETENTION TIME SUMMARY
(COMPARED TO CCV)

Login Number:L0605548 CCV Number:WG214203-02
Instrument ID:HPMS5 CAL ID: HPMS5-15-MAY-06
Workgroup (AAB#):WG214069 Matrix:SOLID

Sample Number	Dilution	Tag	IS-1	IS-2	IS-3	IS-4	IS-5	IS-6
WG214203-02	NA	NA	8.57	12.29	16.65	10.16	18.48	13.92
Upper Limit	NA	NA	9.07	12.79	17.15	10.66	18.98	14.42
Lower Limit	NA	NA	8.07	11.79	16.15	9.66	17.98	13.42
L0605548-12	10.0	DL01	8.57	12.29	16.64	10.15	18.48	13.92
L0605548-13	2.00	DL01	8.57	12.29	16.65	10.15	18.48	13.92
L0605548-19	5.00	DL01	8.57	12.29	16.64	10.16	18.48	13.92

IS-1 - 1,4-Dichlorobenzene-d4
IS-2 - Acenaphthene-d10
IS-3 - Chrysene-d12
IS-4 - Naphthalene-d8
IS-5 - Perylene-d12
IS-6 - Phenanthrene-d10

Underline = Response outside limits

KEMRON FORMS - Modified 04/18/2006
Version 1.3 PDF File ID:490973
Report generated 06/06/2006 16:50

KEMRON ENVIRONMENTAL SERVICES
INTERNAL STANDARD RETENTION TIME SUMMARY
(COMPARED TO CCV)

Login Number: L0605548 **CCV Number:** WG214395-02
Instrument ID: HPMS4 **CAL ID:** HPMS4-10-MAY-06
Workgroup (AAB#): WG214500 **Matrix:** SOLID

Sample Number	Dilution	Tag	IS-1	IS-2	IS-3	IS-4	IS-5	IS-6
WG214395-02	NA	NA	9.33	13.19	18.48	10.94	21.11	15.07
Upper Limit	NA	NA	9.83	13.69	18.98	11.44	21.61	15.57
Lower Limit	NA	NA	8.83	12.69	17.98	10.44	20.61	14.57
WG214365-02	1.00	01	9.34	13.19	18.48	10.94	21.11	15.06
WG214365-03	1.00	01	9.33	13.19	18.48	10.94	21.11	15.07

IS-1 - 1,4-Dichlorobenzene-d4
IS-2 - Acenaphthene-d10
IS-3 - Chrysene-d12
IS-4 - Naphthalene-d8
IS-5 - Perylene-d12
IS-6 - Phenanthrene-d10

Underline = Response outside limits

KEMRON FORMS - Modified 04/18/2006
Version 1.3 PDF File ID: 490973
Report generated 06/06/2006 16:50

KEMRON ENVIRONMENTAL SERVICES
INTERNAL STANDARD RETENTION TIME SUMMARY
(COMPARED TO CCV)

Login Number:L0605548 CCV Number:WG214530-02
Instrument ID:HPMS5 CAL ID: HPMS5-15-MAY-06
Workgroup (AAB#):WG214500 Matrix:SOLID

Sample Number	Dilution	Tag	IS-1	IS-2	IS-3	IS-4	IS-5	IS-6
WG214530-02	NA	NA	8.52	12.24	16.6	10.1	18.42	13.87
Upper Limit	NA	NA	9.02	12.74	17.1	10.6	18.92	14.37
Lower Limit	NA	NA	8.02	11.74	16.1	9.6	17.92	13.37
L0605548-12	10.0	REDL1	8.51	12.24	16.6	10.1	18.41	13.87
L0605548-19	10.0	REDL1	8.51	12.24	16.6	10.1	18.41	13.87

IS-1 - 1,4-Dichlorobenzene-d4
IS-2 - Acenaphthene-d10
IS-3 - Chrysene-d12
IS-4 - Naphthalene-d8
IS-5 - Perylene-d12
IS-6 - Phenanthrene-d10

Underline = Response outside limits

KEMRON FORMS - Modified 04/18/2006
Version 1.3 PDF File ID:490973
Report generated 06/06/2006 16:50

1.2 Metals Data

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1.2.1 Metals I C P Data

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KEMRON ENVIRONMENTAL SERVICES
METALS

KEMRON Login No: L0605548

METHOD

Preparation: SW-846 3005A, 3050B

Analysis: SW-846 6010

HOLDING TIMES

Sample Preparation: All holding times were met.

Sample Analysis: All holding times were met.

PREPARATION

Sample preparation proceeded normally.

CALIBRATION

Initial Calibrations: All acceptance criteria were met.

Alternate Source Standards: All acceptance criteria were met.

Continuing Calibration: All acceptance criteria were met.

BATCH QA/QC

Method Blank: All acceptance criteria were met.

Laboratory Control Sample: All acceptance criteria were met.

MS/MSD: WG214040(6010) - Sample 05 was chosen by the client for MS/MSD analysis. Samples 06(MS) and 07(MSD) failed the acceptance criteria for sixteen elements. Sample 14 was chosen by the client for MS/MSD analysis. Samples 15(MS) and 16(MSD) failed the acceptance criteria for fifteen elements.

Serial Dilution/Post Digestion Spike: WG214050(6010) - All acceptance criteria were met.

WG214040(6010) - Iron for client sample 01 was reported from a five-fold dilution where the 25-fold serial dilution was compliant. Selenium for sample 01 was reported from the five-fold dilution as well. The five-fold post-digestion spike was compliant for selenium.

SAMPLES

WG214040(6010) - Due to results which were noncompliant on the negative side upon initial analysis, cadmium and thallium for client sample 17 and selenium for samples 01, 02, 04, 05, 06(MS), 07(MSD), 09, 10, 11, 12, 13, 17, 18 and 19 were reported from dilution analyses. Due to results which exceeded the linear range of the instrument upon initial analysis, calcium and zinc for client sample 12 ;iron for samples 12, 13 and 17 and manganese for 17 were reported from dilution analyses. All analytes for client sample 11 were reported from dilution analyses since the initial (undiluted) analysis was instrument-flagged for uncorrected interference.

I certify that this data package is in compliance with the terms and conditions agreed to by the client and KEMRON

Environmental Services, both technically and for completeness, except for the conditions noted above. Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or designated person, as verified by the following signature.

Analyst: KHR, SLP

Approved: 01-JUN-06

LABORATORY REPORT

L0605548

06/12/06 13:00

Submitted By

KEMRON Environmental Services
156 Starlite Drive
Marietta , OH 45750
(740) 373 - 4071

For

Account Name: CH2MHILL, Inc
7600 Tidwell Road
Suite 400
San Antonio, TX 77040
Attention: John Ynfante

Account Number: 2736
Work ID: STATE MARINE RI
Invoice Number: 580607
P.O. Number: 915193

Sample Analysis Summary

Client ID	Lab ID	Method	Dilution	Date Received
SM140SB02052306	L0605548-01	6010B	1	24-MAY-06
SM140SB02052306	L0605548-01	6010B	5	24-MAY-06
SM140SB01052306	L0605548-02	6010B	1	24-MAY-06
SM140SB01052306	L0605548-02	6010B	10	24-MAY-06
SM138EB01052306	L0605548-03	6010B	1	24-MAY-06
SM140FD03052306	L0605548-04	6010B	1	24-MAY-06
SM140FD03052306	L0605548-04	6010B	5	24-MAY-06
SM140SB03052306	L0605548-05	6010B	1	24-MAY-06
SM140SB03052306	L0605548-05	6010B	10	24-MAY-06
SM140SB03052306 MS	L0605548-06	6010B	1	24-MAY-06
SM140SB03052306 MS	L0605548-06	6010B	10	24-MAY-06
SM140SB03052306 MSD	L0605548-07	6010B	1	24-MAY-06
SM140SB03052306 MSD	L0605548-07	6010B	10	24-MAY-06
SM137SB01052306	L0605548-08	6010B	1	24-MAY-06
SM138SB03052306	L0605548-09	6010B	1	24-MAY-06
SM138SB03052306	L0605548-09	6010B	5	24-MAY-06
SM138FD03052306	L0605548-10	6010B	1	24-MAY-06
SM138FD03052306	L0605548-10	6010B	5	24-MAY-06
SM139SB01052306	L0605548-11	6010B	10	24-MAY-06
SM139SB01052306	L0605548-11	6010B	50	24-MAY-06
SM136SB01052206	L0605548-12	6010B	1	24-MAY-06
SM136SB01052206	L0605548-12	6010B	10	24-MAY-06
SM139SB02052306	L0605548-13	6010B	1	24-MAY-06
SM139SB02052306	L0605548-13	6010B	10	24-MAY-06
SM139SB02052306	L0605548-13	6010B	50	24-MAY-06
SM138SB01052306	L0605548-14	6010B	1	24-MAY-06
SM138SB01052306 MS	L0605548-15	6010B	1	24-MAY-06
SM138SB01052306 MSD	L0605548-16	6010B	1	24-MAY-06
SM137SB02052306	L0605548-17	6010B	1	24-MAY-06

LABORATORY REPORT

L0605548

06/12/06 13:00

Sample Analysis Summary

Client ID	Lab ID	Method	Dilution	Date Received
SM137SB02052306	L0605548-17	6010B	20	24-MAY-06
SM137SB02052306	L0605548-17	6010B	100	24-MAY-06
SM137SB02052306	L0605548-17	6010B	500	24-MAY-06
SM139SB03052306	L0605548-18	6010B	1	24-MAY-06
SM139SB03052306	L0605548-18	6010B	10	24-MAY-06
SM138SB02052306	L0605548-19	6010B	1	24-MAY-06
SM138SB02052306	L0605548-19	6010B	5	24-MAY-06

Report Number: **L0605548**
Report Date : **June 12, 2006**

Sample Number: **L0605548-01**
Client ID: **SM140SB02052306**
Matrix: **Soil**
Workgroup Number: **WG214040**
Collect Date: **05/23/2006 15:40**
Sample Tag: **01**

PrePrep Method: **NONE**
Prep Method: **3050B**
Analytical Method: **6010B**
Analyst: **SLP**
Dilution: **1**
Units: **mg/kg**

Instrument: **IRIS-ICP**
Prep Date: **05/25/2006 07:10**
Cal Date: **05/26/2006 10:00**
Run Date: **05/26/2006 11:55**
File ID: **IR.052606.115500**
Percent Solid: **72.9**

Analyte	CAS. Number	Result	Qual	PQL	SQL
Aluminum, Total	7429-90-5	14100		20.5	10.2
Silver, Total	7440-22-4	1.35		0.512	0.256
Arsenic, Total	7440-38-2	6.15		1.02	0.512
Barium, Total	7440-39-3	168		0.512	0.102
Beryllium, Total	7440-41-7	0.721		0.512	0.0123
Calcium, Total	7440-70-2	6620		10.2	5.12
Cadmium, Total	7440-43-9	0.589		0.102	0.0512
Cobalt, Total	7440-48-4	6.64		1.02	0.123
Chromium, Total	7440-47-3	20.9		1.02	0.123
Copper, Total	7440-50-8	74.2		1.02	0.512
Potassium, Total	7440-09-7	2220		51.2	25.6
Magnesium, Total	7439-95-4	2180		25.6	12.3
Manganese, Total	7439-96-5	191		0.512	0.102
Sodium, Total	7440-23-5	1860		25.6	5.12
Nickel, Total	7440-02-0	14.9		2.05	0.512
Lead, Total	7439-92-1	120		5.12	0.512
Antimony, Total	7440-36-0	2.70	J	10.2	0.512
Thallium, Total	7440-28-0		U	25.6	1.02
Vanadium, Total	7440-62-2	25.1		0.512	0.256
Zinc, Total	7440-66-6	293		1.02	0.512

J The analyte was positively identified, but the quantitation was below the RL
U Not detected at or above the reporting limit

Report Number: **L0605548**
Report Date : **June 12, 2006**

Sample Number: **L0605548-01**
Client ID: **SM140SB02052306**
Matrix: **Soil**
Workgroup Number: **WG214040**
Collect Date: **05/23/2006 15:40**

PrePrep Method: **NONE**
Prep Method: **3050B**
Analytical Method: **6010B**
Analyst: **SLP**
Dilution: **5**
Units: **mg/kg**

Instrument: **IRIS-ICP**
Prep Date: **05/25/2006 07:10**
Cal Date: **05/26/2006 10:00**
Run Date: **05/26/2006 12:01**
File ID: **IR.052606.120100**
Percent Solid: **72.9**

Analyte	CAS. Number	Result	Qual	PQL	SQL
Iron, Total	7439-89-6	28400		10.2	5.12
Selenium, Total	7782-49-2		U	5.12	2.56

U Not detected at or above the reporting limit

Report Number: **L0605548**
Report Date : **June 12, 2006**

Sample Number: **L0605548-02**
Client ID: **SM140SB01052306**
Matrix: **Soil**
Workgroup Number: **WG214040**
Collect Date: **05/23/2006 15:20**
Sample Tag: **01**

PrePrep Method: **NONE**
Prep Method: **3050B**
Analytical Method: **6010B**
Analyst: **SLP**
Dilution: **1**
Units: **mg/kg**

Instrument: **IRIS-ICP**
Prep Date: **05/25/2006 07:10**
Cal Date: **05/26/2006 10:00**
Run Date: **05/26/2006 12:19**
File ID: **IR.052606.121900**
Percent Solid: **85.9**

Analyte	CAS. Number	Result	Qual	PQL	SQL
Aluminum, Total	7429-90-5	11200		17.8	8.89
Silver, Total	7440-22-4	1.51		0.445	0.222
Arsenic, Total	7440-38-2	5.00		0.889	0.445
Barium, Total	7440-39-3	125		0.445	0.0889
Beryllium, Total	7440-41-7	0.610		0.445	0.0107
Calcium, Total	7440-70-2	9040		8.89	4.45
Cadmium, Total	7440-43-9	0.554		0.0889	0.0445
Cobalt, Total	7440-48-4	5.24		0.889	0.107
Chromium, Total	7440-47-3	18.7		0.889	0.107
Copper, Total	7440-50-8	76.8		0.889	0.445
Iron, Total	7439-89-6	23000		1.78	0.889
Potassium, Total	7440-09-7	1550		44.5	22.2
Magnesium, Total	7439-95-4	1900		22.2	10.7
Manganese, Total	7439-96-5	158		0.445	0.0889
Sodium, Total	7440-23-5	619		22.2	4.45
Nickel, Total	7440-02-0	13.5		1.78	0.445
Lead, Total	7439-92-1	180		4.45	0.445
Antimony, Total	7440-36-0	3.19	J	8.89	0.445
Thallium, Total	7440-28-0		U	22.2	0.889
Vanadium, Total	7440-62-2	22.3		0.445	0.222
Zinc, Total	7440-66-6	279		0.889	0.445

J The analyte was positively identified, but the quantitation was below the RL
U Not detected at or above the reporting limit

Report Number: **L0605548**
Report Date : **June 12, 2006**

Sample Number: **L0605548-02**
Client ID: **SM140SB01052306**
Matrix: **Soil**
Workgroup Number: **WG214040**
Collect Date: **05/23/2006 15:20**

PrePrep Method: **NONE**
Prep Method: **3050B**
Analytical Method: **6010B**
Analyst: **SLP**
Dilution: **10**
Units: **mg/kg**

Instrument: **IRIS-ICP**
Prep Date: **05/25/2006 07:10**
Cal Date: **05/26/2006 10:00**
Run Date: **05/26/2006 14:36**
File ID: **IR.052606.143600**
Percent Solid: **85.9**

Analyte	CAS. Number	Result	Qual	PQL	SQL
Selenium, Total	7782-49-2		U	8.89	4.45

U Not detected at or above the reporting limit

Report Number: **L0605548**
Report Date : **June 12, 2006**

Sample Number: **L0605548-03**
Client ID: **SM138EB01052306**
Matrix: **Water**
Workgroup Number: **WG214050**
Collect Date: **05/23/2006 13:40**

PrePrep Method: **NONE**
Prep Method: **3005A**
Analytical Method: **6010B**
Analyst: **KHR**
Dilution: **1**
Units: **mg/L**

Instrument: **PE-ICP2**
Prep Date: **05/25/2006 08:15**
Cal Date: **05/25/2006 10:09**
Run Date: **05/25/2006 18:24**
File ID: **P2.052506.182412**

Analyte	CAS. Number	Result	Qual	PQL	SQL
Aluminum, Total	7429-90-5		U	0.100	0.0500
Silver, Total	7440-22-4		U	0.0100	0.00500
Arsenic, Total	7440-38-2	0.00311	J	0.0100	0.00200
Barium, Total	7440-39-3		U	0.0100	0.00250
Beryllium, Total	7440-41-7		U	0.0100	0.000500
Calcium, Total	7440-70-2	0.116	J	0.200	0.100
Cadmium, Total	7440-43-9		U	0.0100	0.00250
Cobalt, Total	7440-48-4		U	0.0200	0.00250
Chromium, Total	7440-47-3		U	0.0200	0.00250
Copper, Total	7440-50-8		U	0.0200	0.00500
Iron, Total	7439-89-6	0.0372	J	0.100	0.0250
Potassium, Total	7440-09-7		U	1.00	0.250
Magnesium, Total	7439-95-4		U	0.500	0.250
Manganese, Total	7439-96-5		U	0.0100	0.00100
Sodium, Total	7440-23-5		U	0.500	0.250
Nickel, Total	7440-02-0		U	0.0400	0.00500
Lead, Total	7439-92-1		U	0.00500	0.00250
Vanadium, Total	7440-62-2		U	0.0100	0.00500
Zinc, Total	7440-66-6		U	0.0200	0.00500

J The analyte was positively identified, but the quantitation was below the RL
U Not detected at or above the reporting limit

Report Number: **L0605548**
Report Date : **June 12, 2006**

Sample Number: **L0605548-04**
Client ID: **SM140FD03052306**
Matrix: **Soil**
Workgroup Number: **WG214040**
Collect Date: **05/23/2006 16:40**

PrePrep Method: **NONE**
Prep Method: **3050B**
Analytical Method: **6010B**
Analyst: **SLP**
Dilution: **1**
Units: **mg/kg**

Instrument: **IRIS-ICP**
Prep Date: **05/25/2006 07:10**
Cal Date: **05/26/2006 10:00**
Run Date: **05/26/2006 12:25**
File ID: **IR.052606.122500**
Percent Solid: **66.3**

Analyte	CAS. Number	Result	Qual	PQL	SQL
Aluminum, Total	7429-90-5	9850		21.6	10.8
Silver, Total	7440-22-4	0.703		0.539	0.269
Arsenic, Total	7440-38-2	6.26		1.08	0.539
Barium, Total	7440-39-3	52.5		0.539	0.108
Beryllium, Total	7440-41-7	0.661		0.539	0.0129
Calcium, Total	7440-70-2	2330		10.8	5.39
Cadmium, Total	7440-43-9	0.635		0.108	0.0539
Cobalt, Total	7440-48-4	7.10		1.08	0.129
Chromium, Total	7440-47-3	12.3		1.08	0.129
Copper, Total	7440-50-8	11.7		1.08	0.539
Iron, Total	7439-89-6	14100		2.16	1.08
Potassium, Total	7440-09-7	1910		53.9	26.9
Magnesium, Total	7439-95-4	2900		26.9	12.9
Manganese, Total	7439-96-5	193		0.539	0.108
Sodium, Total	7440-23-5	1770		26.9	5.39
Nickel, Total	7440-02-0	10.3		2.16	0.539
Lead, Total	7439-92-1	42.5		5.39	0.539
Antimony, Total	7440-36-0		U	10.8	0.539
Thallium, Total	7440-28-0		U	26.9	1.08
Vanadium, Total	7440-62-2	20.8		0.539	0.269
Zinc, Total	7440-66-6	59.2		1.08	0.539

U Not detected at or above the reporting limit

Report Number: **L0605548**
Report Date : **June 12, 2006**

Sample Number: **L0605548-04**
Client ID: **SM140FD03052306**
Matrix: **Soil**
Workgroup Number: **WG214040**
Collect Date: **05/23/2006 16:40**
Sample Tag: **DL**

PrePrep Method: **NONE**
Prep Method: **3050B**
Analytical Method: **6010B**
Analyst: **SLP**
Dilution: **5**
Units: **mg/kg**

Instrument: **IRIS-ICP**
Prep Date: **05/25/2006 07:10**
Cal Date: **05/26/2006 10:00**
Run Date: **05/26/2006 14:42**
File ID: **IR.052606.144200**
Percent Solid: **66.3**

Analyte	CAS. Number	Result	Qual	PQL	SQL
Selenium, Total	7782-49-2		U	5.39	2.69

U Not detected at or above the reporting limit

Report Number: **L0605548**
Report Date : **June 12, 2006**

Sample Number: **L0605548-05**
Client ID: **SM140SB03052306**
Matrix: **Soil**
Workgroup Number: **WG214040**
Collect Date: **05/23/2006 16:35**

PrePrep Method: **NONE**
Prep Method: **3050B**
Analytical Method: **6010B**
Analyst: **SLP**
Dilution: **1**
Units: **mg/kg**

Instrument: **IRIS-ICP**
Prep Date: **05/25/2006 07:10**
Cal Date: **05/26/2006 10:00**
Run Date: **05/26/2006 12:31**
File ID: **IR.052606.123100**
Percent Solid: **61.4**

Analyte	CAS. Number	Result	Qual	PQL	SQL
Aluminum, Total	7429-90-5	9290		25.1	12.5
Silver, Total	7440-22-4	1.13		0.626	0.313
Arsenic, Total	7440-38-2	5.05		1.25	0.626
Barium, Total	7440-39-3	59.6		0.626	0.125
Beryllium, Total	7440-41-7	0.611	J	0.626	0.0150
Calcium, Total	7440-70-2	4250		12.5	6.26
Cadmium, Total	7440-43-9	1.13		0.125	0.0626
Cobalt, Total	7440-48-4	7.36		1.25	0.150
Chromium, Total	7440-47-3	12.3		1.25	0.150
Copper, Total	7440-50-8	14.5		1.25	0.626
Iron, Total	7439-89-6	22400		2.51	1.25
Potassium, Total	7440-09-7	1670		62.6	31.3
Magnesium, Total	7439-95-4	2630		31.3	15.0
Manganese, Total	7439-96-5	181		0.626	0.125
Sodium, Total	7440-23-5	1590		31.3	6.26
Nickel, Total	7440-02-0	9.45		2.51	0.626
Lead, Total	7439-92-1	75.6		6.26	0.626
Antimony, Total	7440-36-0		U	12.5	0.626
Thallium, Total	7440-28-0		U	31.3	1.25
Vanadium, Total	7440-62-2	20.1		0.626	0.313
Zinc, Total	7440-66-6	74.3		1.25	0.626

J The analyte was positively identified, but the quantitation was below the RL
U Not detected at or above the reporting limit

Report Number: **L0605548**
Report Date : **June 12, 2006**

Sample Number: **L0605548-05**
Client ID: **SM140SB03052306**
Matrix: **Soil**
Workgroup Number: **WG214040**
Collect Date: **05/23/2006 16:35**
Sample Tag: **DL**

PrePrep Method: **NONE**
Prep Method: **3050B**
Analytical Method: **6010B**
Analyst: **SLP**
Dilution: **10**
Units: **mg/kg**

Instrument: **IRIS-ICP**
Prep Date: **05/25/2006 07:10**
Cal Date: **05/26/2006 10:00**
Run Date: **05/26/2006 14:48**
File ID: **IR.052606.144800**
Percent Solid: **61.4**

Analyte	CAS. Number	Result	Qual	PQL	SQL
Selenium, Total	7782-49-2		U	12.5	6.26

U Not detected at or above the reporting limit

Report Number: **L0605548**
Report Date : **June 12, 2006**

Sample Number: **L0605548-06**
Client ID: **SM140SB03052306 MS**
Matrix: **Soil**
Workgroup Number: **WG214040**
Collect Date: **05/23/2006 16:35**

PrePrep Method: **NONE**
Prep Method: **3050B**
Analytical Method: **6010B**
Analyst: **SLP**
Dilution: **1**
Units: **mg/kg**

Instrument: **IRIS-ICP**
Prep Date: **05/25/2006 07:10**
Cal Date: **05/26/2006 10:00**
Run Date: **05/26/2006 12:37**
File ID: **IR.052606.123700**
Percent Solid: **61.4**

Analyte	CAS. Number	Result	Qual	PQL	SQL
Aluminum, Total	7429-90-5	17800		25.1	12.5
Silver, Total	7440-22-4	13.6		0.626	0.313
Arsenic, Total	7440-38-2	17.1		1.25	0.626
Barium, Total	7440-39-3	102		0.626	0.125
Beryllium, Total	7440-41-7	2.30		0.626	0.0150
Calcium, Total	7440-70-2	3520		12.5	6.26
Cadmium, Total	7440-43-9	2.29		0.125	0.0626
Cobalt, Total	7440-48-4	13.5		1.25	0.150
Chromium, Total	7440-47-3	33.2		1.25	0.150
Copper, Total	7440-50-8	25.9		1.25	0.626
Iron, Total	7439-89-6	18700		2.51	1.25
Potassium, Total	7440-09-7	4090		62.6	31.3
Magnesium, Total	7439-95-4	3650		31.3	15.0
Manganese, Total	7439-96-5	215		0.626	0.125
Sodium, Total	7440-23-5	3470		31.3	6.26
Nickel, Total	7440-02-0	24.6		2.51	0.626
Lead, Total	7439-92-1	157		6.26	0.626
Antimony, Total	7440-36-0	20.8		12.5	0.626
Thallium, Total	7440-28-0	12.9	J	31.3	1.25
Vanadium, Total	7440-62-2	63.0		0.626	0.313
Zinc, Total	7440-66-6	107		1.25	0.626

J The analyte was positively identified, but the quantitation was below the RL

Report Number: **L0605548**
Report Date : **June 12, 2006**

Sample Number:	L0605548-06	PrePrep Method:	NONE	Instrument:	IRIS-ICP
Client ID:	SM140SB03052306 MS	Prep Method:	3050B	Prep Date:	05/25/2006 07:10
Matrix:	Soil	Analytical Method:	6010B	Cal Date:	05/26/2006 10:00
Workgroup Number:	WG214040	Analyst:	SLP	Run Date:	05/26/2006 14:54
Collect Date:	05/23/2006 16:35	Dilution:	10	File ID:	IR.052606.145400
Sample Tag:	DL	Units:	mg/kg	Percent Solid:	61.4

Analyte	CAS. Number	Result	Qual	PQL	SQL
Selenium, Total	7782-49-2		U	12.5	6.26

U Not detected at or above the reporting limit

Report Number: **L0605548**
Report Date : **June 12, 2006**

Sample Number: **L0605548-07**
Client ID: **SM140SB03052306 MSD**
Matrix: **Soil**
Workgroup Number: **WG214040**
Collect Date: **05/23/2006 16:35**

PrePrep Method: **NONE**
Prep Method: **3050B**
Analytical Method: **6010B**
Analyst: **SLP**
Dilution: **1**
Units: **mg/kg**

Instrument: **IRIS-ICP**
Prep Date: **05/25/2006 07:10**
Cal Date: **05/26/2006 10:00**
Run Date: **05/26/2006 12:55**
File ID: **IR.052606.125500**
Percent Solid: **61.4**

Analyte	CAS. Number	Result	Qual	PQL	SQL
Aluminum, Total	7429-90-5	18600		25.1	12.5
Silver, Total	7440-22-4	13.5		0.626	0.313
Arsenic, Total	7440-38-2	16.6		1.25	0.626
Barium, Total	7440-39-3	97.9		0.626	0.125
Beryllium, Total	7440-41-7	2.34		0.626	0.0150
Calcium, Total	7440-70-2	3360		12.5	6.26
Cadmium, Total	7440-43-9	2.17		0.125	0.0626
Cobalt, Total	7440-48-4	12.6		1.25	0.150
Chromium, Total	7440-47-3	32.5		1.25	0.150
Copper, Total	7440-50-8	27.2		1.25	0.626
Iron, Total	7439-89-6	17200		2.51	1.25
Potassium, Total	7440-09-7	4260		62.6	31.3
Magnesium, Total	7439-95-4	4020		31.3	15.0
Manganese, Total	7439-96-5	238		0.626	0.125
Sodium, Total	7440-23-5	3850		31.3	6.26
Nickel, Total	7440-02-0	24.5		2.51	0.626
Lead, Total	7439-92-1	50.0		6.26	0.626
Antimony, Total	7440-36-0	19.9		12.5	0.626
Thallium, Total	7440-28-0	13.0	J	31.3	1.25
Vanadium, Total	7440-62-2	64.5		0.626	0.313
Zinc, Total	7440-66-6	89.8		1.25	0.626

J The analyte was positively identified, but the quantitation was below the RL

Report Number: **L0605548**
Report Date : **June 12, 2006**

Sample Number: **L0605548-07**
Client ID: **SM140SB03052306 MSD**
Matrix: **Soil**
Workgroup Number: **WG214040**
Collect Date: **05/23/2006 16:35**
Sample Tag: **DL**

PrePrep Method: **NONE**
Prep Method: **3050B**
Analytical Method: **6010B**
Analyst: **SLP**
Dilution: **10**
Units: **mg/kg**

Instrument: **IRIS-ICP**
Prep Date: **05/25/2006 07:10**
Cal Date: **05/26/2006 10:00**
Run Date: **05/26/2006 15:00**
File ID: **IR.052606.150000**
Percent Solid: **61.4**

Analyte	CAS. Number	Result	Qual	PQL	SQL
Selenium, Total	7782-49-2		U	12.5	6.26

U Not detected at or above the reporting limit

Report Number: **L0605548**
Report Date : **June 12, 2006**

Sample Number: **L0605548-08**
Client ID: **SM137SB01052306**
Matrix: **Soil**
Workgroup Number: **WG214040**
Collect Date: **05/23/2006 09:20**

PrePrep Method: **NONE**
Prep Method: **3050B**
Analytical Method: **6010B**
Analyst: **SLP**
Dilution: **1**
Units: **mg/kg**

Instrument: **IRIS-ICP**
Prep Date: **05/25/2006 07:10**
Cal Date: **05/26/2006 10:00**
Run Date: **05/26/2006 13:01**
File ID: **IR.052606.130100**
Percent Solid: **84.3**

Analyte	CAS. Number	Result	Qual	PQL	SQL
Aluminum, Total	7429-90-5	8770		16.7	8.36
Silver, Total	7440-22-4	0.991		0.418	0.209
Arsenic, Total	7440-38-2	5.05		0.836	0.418
Barium, Total	7440-39-3	137		0.418	0.0836
Beryllium, Total	7440-41-7	0.526		0.418	0.0100
Calcium, Total	7440-70-2	21800		8.36	4.18
Cadmium, Total	7440-43-9	0.959		0.0836	0.0418
Cobalt, Total	7440-48-4	4.21		0.836	0.100
Chromium, Total	7440-47-3	25.0		0.836	0.100
Copper, Total	7440-50-8	57.2		0.836	0.418
Iron, Total	7439-89-6	15100		1.67	0.836
Potassium, Total	7440-09-7	1190		41.8	20.9
Magnesium, Total	7439-95-4	2380		20.9	10.0
Manganese, Total	7439-96-5	188		0.418	0.0836
Sodium, Total	7440-23-5	271		20.9	4.18
Nickel, Total	7440-02-0	16.4		1.67	0.418
Lead, Total	7439-92-1	118		4.18	0.418
Antimony, Total	7440-36-0	1.97	J	8.36	0.418
Selenium, Total	7782-49-2	1.99		0.836	0.418
Thallium, Total	7440-28-0		U	20.9	0.836
Vanadium, Total	7440-62-2	18.6		0.418	0.209
Zinc, Total	7440-66-6	603		0.836	0.418

J The analyte was positively identified, but the quantitation was below the RL
U Not detected at or above the reporting limit

Report Number: **L0605548**
Report Date : **June 12, 2006**

Sample Number: **L0605548-09**
Client ID: **SM138SB03052306**
Matrix: **Soil**
Workgroup Number: **WG214040**
Collect Date: **05/23/2006 12:55**

PrePrep Method: **NONE**
Prep Method: **3050B**
Analytical Method: **6010B**
Analyst: **SLP**
Dilution: **1**
Units: **mg/kg**

Instrument: **IRIS-ICP**
Prep Date: **05/25/2006 07:10**
Cal Date: **05/26/2006 10:00**
Run Date: **05/26/2006 13:07**
File ID: **IR.052606.130700**
Percent Solid: **69.7**

Analyte	CAS. Number	Result	Qual	PQL	SQL
Aluminum, Total	7429-90-5	10600		19.7	9.83
Silver, Total	7440-22-4	0.460	J	0.491	0.246
Arsenic, Total	7440-38-2	4.58		0.983	0.491
Barium, Total	7440-39-3	49.9		0.491	0.0983
Beryllium, Total	7440-41-7	0.646		0.491	0.0118
Calcium, Total	7440-70-2	1760		9.83	4.91
Cadmium, Total	7440-43-9		U	0.0983	0.0491
Cobalt, Total	7440-48-4	7.48		0.983	0.118
Chromium, Total	7440-47-3	11.2		0.983	0.118
Copper, Total	7440-50-8	4.23		0.983	0.491
Iron, Total	7439-89-6	12600		1.97	0.983
Potassium, Total	7440-09-7	1760		49.1	24.6
Magnesium, Total	7439-95-4	2490		24.6	11.8
Manganese, Total	7439-96-5	195		0.491	0.0983
Sodium, Total	7440-23-5	1380		24.6	4.91
Nickel, Total	7440-02-0	9.00		1.97	0.491
Lead, Total	7439-92-1	9.68		4.91	0.491
Antimony, Total	7440-36-0		U	9.83	0.491
Thallium, Total	7440-28-0		U	24.6	0.983
Vanadium, Total	7440-62-2	21.9		0.491	0.246
Zinc, Total	7440-66-6	37.8		0.983	0.491

J The analyte was positively identified, but the quantitation was below the RL
U Not detected at or above the reporting limit

Report Number: **L0605548**
Report Date : **June 12, 2006**

Sample Number:	L0605548-09	PrePrep Method:	NONE	Instrument:	IRIS-ICP
Client ID:	SM138SB03052306	Prep Method:	3050B	Prep Date:	05/25/2006 07:10
Matrix:	Soil	Analytical Method:	6010B	Cal Date:	05/26/2006 10:00
Workgroup Number:	WG214040	Analyst:	SLP	Run Date:	05/26/2006 16:37
Collect Date:	05/23/2006 12:55	Dilution:	5	File ID:	IR.052606.163700
Sample Tag:	DL	Units:	mg/kg	Percent Solid:	69.7

Analyte	CAS. Number	Result	Qual	PQL	SQL
Selenium, Total	7782-49-2		U	4.91	2.46

U Not detected at or above the reporting limit

Report Number: **L0605548**
Report Date : **June 12, 2006**

Sample Number: **L0605548-10**
Client ID: **SM138FD03052306**
Matrix: **Soil**
Workgroup Number: **WG214040**
Collect Date: **05/23/2006 13:00**

PrePrep Method: **NONE**
Prep Method: **3050B**
Analytical Method: **6010B**
Analyst: **SLP**
Dilution: **1**
Units: **mg/kg**

Instrument: **IRIS-ICP**
Prep Date: **05/25/2006 07:10**
Cal Date: **05/26/2006 10:00**
Run Date: **05/26/2006 13:13**
File ID: **IR.052606.131300**
Percent Solid: **65.7**

Analyte	CAS. Number	Result	Qual	PQL	SQL
Aluminum, Total	7429-90-5	12500		22.1	11.0
Silver, Total	7440-22-4	0.611		0.551	0.276
Arsenic, Total	7440-38-2	4.12		1.10	0.551
Barium, Total	7440-39-3	74.0		0.551	0.110
Beryllium, Total	7440-41-7	0.686		0.551	0.0132
Calcium, Total	7440-70-2	4890		11.0	5.51
Cadmium, Total	7440-43-9		U	0.110	0.0551
Cobalt, Total	7440-48-4	6.60		1.10	0.132
Chromium, Total	7440-47-3	13.2		1.10	0.132
Copper, Total	7440-50-8	7.46		1.10	0.551
Iron, Total	7439-89-6	13700		2.21	1.10
Potassium, Total	7440-09-7	1960		55.1	27.6
Magnesium, Total	7439-95-4	2670		27.6	13.2
Manganese, Total	7439-96-5	167		0.551	0.110
Sodium, Total	7440-23-5	1450		27.6	5.51
Nickel, Total	7440-02-0	8.93		2.21	0.551
Lead, Total	7439-92-1	23.7		5.51	0.551
Antimony, Total	7440-36-0		U	11.0	0.551
Thallium, Total	7440-28-0		U	27.6	1.10
Vanadium, Total	7440-62-2	23.7		0.551	0.276
Zinc, Total	7440-66-6	60.0		1.10	0.551

U Not detected at or above the reporting limit

Report Number: **L0605548**
Report Date : **June 12, 2006**

Sample Number:	L0605548-10	PrePrep Method:	NONE	Instrument:	IRIS-ICP
Client ID:	SM138FD03052306	Prep Method:	3050B	Prep Date:	05/25/2006 07:10
Matrix:	Soil	Analytical Method:	6010B	Cal Date:	05/26/2006 10:00
Workgroup Number:	WG214040	Analyst:	SLP	Run Date:	05/26/2006 15:24
Collect Date:	05/23/2006 13:00	Dilution:	5	File ID:	IR.052606.152400
Sample Tag:	DL	Units:	mg/kg	Percent Solid:	65.7

Analyte	CAS. Number	Result	Qual	PQL	SQL
Selenium, Total	7782-49-2		U	5.51	2.76

U Not detected at or above the reporting limit

Report Number: **L0605548**
Report Date : **June 12, 2006**

Sample Number: **L0605548-11**
Client ID: **SM139SB01052306**
Matrix: **Soil**
Workgroup Number: **WG214040**
Collect Date: **05/23/2006 14:05**

PrePrep Method: **NONE**
Prep Method: **3050B**
Analytical Method: **6010B**
Analyst: **SLP**
Dilution: **10**
Units: **mg/kg**

Instrument: **IRIS-ICP**
Prep Date: **05/25/2006 07:10**
Cal Date: **05/26/2006 10:00**
Run Date: **05/26/2006 15:30**
File ID: **IR.052606.153000**
Percent Solid: **86.3**

Analyte	CAS. Number	Result	Qual	PQL	SQL
Aluminum, Total	7429-90-5	13700		176	87.8
Silver, Total	7440-22-4	2.31	J	4.39	2.19
Arsenic, Total	7440-38-2	12.2		8.78	4.39
Barium, Total	7440-39-3	163		4.39	0.878
Beryllium, Total	7440-41-7	0.702	J	4.39	0.105
Calcium, Total	7440-70-2	15900		87.8	43.9
Cadmium, Total	7440-43-9	0.913		0.878	0.439
Cobalt, Total	7440-48-4	11.0		8.78	1.05
Chromium, Total	7440-47-3	32.1		8.78	1.05
Copper, Total	7440-50-8	115		8.78	4.39
Iron, Total	7439-89-6	74500		17.6	8.78
Potassium, Total	7440-09-7	1280		439	219
Magnesium, Total	7439-95-4	1950		219	105
Manganese, Total	7439-96-5	485		4.39	0.878
Sodium, Total	7440-23-5	246		219	43.9
Nickel, Total	7440-02-0	23.0		17.6	4.39
Lead, Total	7439-92-1	264		43.9	4.39
Antimony, Total	7440-36-0		U	87.8	4.39
Thallium, Total	7440-28-0		U	219	8.78
Vanadium, Total	7440-62-2	30.5		4.39	2.19
Zinc, Total	7440-66-6	563		8.78	4.39

J The analyte was positively identified, but the quantitation was below the RL
U Not detected at or above the reporting limit

Report Number: **L0605548**
Report Date : **June 12, 2006**

Sample Number: **L0605548-11**
Client ID: **SM139SB01052306**
Matrix: **Soil**
Workgroup Number: **WG214040**
Collect Date: **05/23/2006 14:05**
Sample Tag: **DL**

PrePrep Method: **NONE**
Prep Method: **3050B**
Analytical Method: **6010B**
Analyst: **SLP**
Dilution: **50**
Units: **mg/kg**

Instrument: **IRIS-ICP**
Prep Date: **05/25/2006 07:10**
Cal Date: **05/26/2006 10:00**
Run Date: **05/26/2006 16:43**
File ID: **IR.052606.164300**
Percent Solid: **86.3**

Analyte	CAS. Number	Result	Qual	PQL	SQL
Selenium, Total	7782-49-2		U	43.9	21.9

U Not detected at or above the reporting limit

Report Number: **L0605548**
Report Date : **June 12, 2006**

Sample Number: **L0605548-12**
Client ID: **SM136SB01052206**
Matrix: **Soil**
Workgroup Number: **WG214040**
Collect Date: **05/22/2006 08:05**
Sample Tag: **01**

PrePrep Method: **NONE**
Prep Method: **3050B**
Analytical Method: **6010B**
Analyst: **SLP**
Dilution: **1**
Units: **mg/kg**

Instrument: **IRIS-ICP**
Prep Date: **05/25/2006 07:10**
Cal Date: **05/26/2006 10:00**
Run Date: **05/26/2006 13:25**
File ID: **IR.052606.132500**
Percent Solid: **84.9**

Analyte	CAS. Number	Result	Qual	PQL	SQL
Aluminum, Total	7429-90-5	20000		16.2	8.12
Silver, Total	7440-22-4	5.23		0.406	0.203
Arsenic, Total	7440-38-2	13.3		0.812	0.406
Barium, Total	7440-39-3	540		0.406	0.0812
Beryllium, Total	7440-41-7	0.367	J	0.406	0.00974
Cadmium, Total	7440-43-9	7.24		0.0812	0.0406
Cobalt, Total	7440-48-4	16.9		0.812	0.0974
Chromium, Total	7440-47-3	55.0		0.812	0.0974
Copper, Total	7440-50-8	373		0.812	0.406
Potassium, Total	7440-09-7	1880		40.6	20.3
Magnesium, Total	7439-95-4	8150		20.3	9.74
Manganese, Total	7439-96-5	534		0.406	0.0812
Sodium, Total	7440-23-5	1230		20.3	4.06
Nickel, Total	7440-02-0	43.8		1.62	0.406
Lead, Total	7439-92-1	574		4.06	0.406
Antimony, Total	7440-36-0	4.73	J	8.12	0.406
Thallium, Total	7440-28-0		U	20.3	0.812
Vanadium, Total	7440-62-2	29.9		0.406	0.203

J The analyte was positively identified, but the quantitation was below the RL
U Not detected at or above the reporting limit

Report Number: **L0605548**
Report Date : **June 12, 2006**

Sample Number: **L0605548-12**
Client ID: **SM136SB01052206**
Matrix: **Soil**
Workgroup Number: **WG214040**
Collect Date: **05/22/2006 08:05**

PrePrep Method: **NONE**
Prep Method: **3050B**
Analytical Method: **6010B**
Analyst: **SLP**
Dilution: **10**
Units: **mg/kg**

Instrument: **IRIS-ICP**
Prep Date: **05/25/2006 07:10**
Cal Date: **05/26/2006 10:00**
Run Date: **05/26/2006 15:36**
File ID: **IR.052606.153600**
Percent Solid: **84.9**

Analyte	CAS. Number	Result	Qual	PQL	SQL
Calcium, Total	7440-70-2	79000		81.2	40.6
Iron, Total	7439-89-6	103000		16.2	8.12
Selenium, Total	7782-49-2	4.68	J	8.12	4.06
Zinc, Total	7440-66-6	4140		8.12	4.06

J The analyte was positively identified, but the quantitation was below the RL

Report Number: **L0605548**
Report Date : **June 12, 2006**

Sample Number: **L0605548-13**
Client ID: **SM139SB02052306**
Matrix: **Soil**
Workgroup Number: **WG214040**
Collect Date: **05/23/2006 14:25**
Sample Tag: **01**

PrePrep Method: **NONE**
Prep Method: **3050B**
Analytical Method: **6010B**
Analyst: **SLP**
Dilution: **1**
Units: **mg/kg**

Instrument: **IRIS-ICP**
Prep Date: **05/25/2006 07:10**
Cal Date: **05/26/2006 10:00**
Run Date: **05/26/2006 13:31**
File ID: **IR.052606.133100**
Percent Solid: **75.9**

Analyte	CAS. Number	Result	Qual	PQL	SQL
Aluminum, Total	7429-90-5	13800		18.4	9.21
Silver, Total	7440-22-4	5.71		0.460	0.230
Arsenic, Total	7440-38-2	14.3		0.921	0.460
Barium, Total	7440-39-3	379		0.460	0.0921
Beryllium, Total	7440-41-7	0.358	J	0.460	0.0111
Calcium, Total	7440-70-2	24900		9.21	4.60
Cadmium, Total	7440-43-9	7.77		0.0921	0.0460
Cobalt, Total	7440-48-4	16.6		0.921	0.111
Chromium, Total	7440-47-3	61.2		0.921	0.111
Copper, Total	7440-50-8	547		0.921	0.460
Potassium, Total	7440-09-7	1340		46.0	23.0
Magnesium, Total	7439-95-4	2450		23.0	11.1
Manganese, Total	7439-96-5	693		0.460	0.0921
Sodium, Total	7440-23-5	891		23.0	4.60
Nickel, Total	7440-02-0	34.6		1.84	0.460
Lead, Total	7439-92-1	718		4.60	0.460
Antimony, Total	7440-36-0	6.88	J	9.21	0.460
Thallium, Total	7440-28-0		U	23.0	0.921
Vanadium, Total	7440-62-2	23.4		0.460	0.230
Zinc, Total	7440-66-6	1500		0.921	0.460

J The analyte was positively identified, but the quantitation was below the RL
U Not detected at or above the reporting limit

Report Number: **L0605548**
Report Date : **June 12, 2006**

Sample Number: **L0605548-13**
Client ID: **SM139SB02052306**
Matrix: **Soil**
Workgroup Number: **WG214040**
Collect Date: **05/23/2006 14:25**

PrePrep Method: **NONE**
Prep Method: **3050B**
Analytical Method: **6010B**
Analyst: **SLP**
Dilution: **10**
Units: **mg/kg**

Instrument: **IRIS-ICP**
Prep Date: **05/25/2006 07:10**
Cal Date: **05/26/2006 10:00**
Run Date: **05/26/2006 15:48**
File ID: **IR.052606.154800**
Percent Solid: **75.9**

Analyte	CAS. Number	Result	Qual	PQL	SQL
Iron, Total	7439-89-6	134000		18.4	9.21

Report Number: **L0605548**
Report Date : **June 12, 2006**

Sample Number: **L0605548-13**
Client ID: **SM139SB02052306**
Matrix: **Soil**
Workgroup Number: **WG214040**
Collect Date: **05/23/2006 14:25**
Sample Tag: **DL**

PrePrep Method: **NONE**
Prep Method: **3050B**
Analytical Method: **6010B**
Analyst: **SLP**
Dilution: **50**
Units: **mg/kg**

Instrument: **IRIS-ICP**
Prep Date: **05/25/2006 07:10**
Cal Date: **05/26/2006 10:00**
Run Date: **05/26/2006 15:54**
File ID: **IR.052606.155400**
Percent Solid: **75.9**

Analyte	CAS. Number	Result	Qual	PQL	SQL
Selenium, Total	7782-49-2		U	46.0	23.0

U Not detected at or above the reporting limit

Report Number: **L0605548**
Report Date : **June 12, 2006**

Sample Number: **L0605548-14**
Client ID: **SM138SB01052306**
Matrix: **Soil**
Workgroup Number: **WG214040**
Collect Date: **05/23/2006 11:20**

PrePrep Method: **NONE**
Prep Method: **3050B**
Analytical Method: **6010B**
Analyst: **SLP**
Dilution: **1**
Units: **mg/kg**

Instrument: **IRIS-ICP**
Prep Date: **05/25/2006 07:10**
Cal Date: **05/26/2006 10:00**
Run Date: **05/26/2006 13:37**
File ID: **IR.052606.133700**
Percent Solid: **86.6**

Analyte	CAS. Number	Result	Qual	PQL	SQL
Aluminum, Total	7429-90-5	11200		17.8	8.88
Silver, Total	7440-22-4	0.794		0.444	0.222
Arsenic, Total	7440-38-2	5.33		0.888	0.444
Barium, Total	7440-39-3	301		0.444	0.0888
Beryllium, Total	7440-41-7	0.625		0.444	0.0107
Calcium, Total	7440-70-2	33000		8.88	4.44
Cadmium, Total	7440-43-9	0.118		0.0888	0.0444
Cobalt, Total	7440-48-4	4.79		0.888	0.107
Chromium, Total	7440-47-3	14.1		0.888	0.107
Copper, Total	7440-50-8	41.6		0.888	0.444
Iron, Total	7439-89-6	16300		1.78	0.888
Potassium, Total	7440-09-7	1460		44.4	22.2
Magnesium, Total	7439-95-4	2010		22.2	10.7
Manganese, Total	7439-96-5	134		0.444	0.0888
Sodium, Total	7440-23-5	132		22.2	4.44
Nickel, Total	7440-02-0	11.4		1.78	0.444
Lead, Total	7439-92-1	59.7		4.44	0.444
Antimony, Total	7440-36-0	1.84	J	8.88	0.444
Selenium, Total	7782-49-2		U	0.888	0.444
Thallium, Total	7440-28-0		U	22.2	0.888
Vanadium, Total	7440-62-2	21.3		0.444	0.222
Zinc, Total	7440-66-6	287		0.888	0.444

J The analyte was positively identified, but the quantitation was below the RL
U Not detected at or above the reporting limit

Report Number: **L0605548**
Report Date : **June 12, 2006**

Sample Number: **L0605548-15**
Client ID: **SM138SB01052306 MS**
Matrix: **Soil**
Workgroup Number: **WG214040**
Collect Date: **05/23/2006 11:20**

PrePrep Method: **NONE**
Prep Method: **3050B**
Analytical Method: **6010B**
Analyst: **SLP**
Dilution: **1**
Units: **mg/kg**

Instrument: **IRIS-ICP**
Prep Date: **05/25/2006 07:10**
Cal Date: **05/26/2006 10:00**
Run Date: **05/26/2006 13:43**
File ID: **IR.052606.134300**
Percent Solid: **86.6**

Analyte	CAS. Number	Result	Qual	PQL	SQL
Aluminum, Total	7429-90-5	21000		17.8	8.88
Silver, Total	7440-22-4	9.54		0.444	0.222
Arsenic, Total	7440-38-2	13.7		0.888	0.444
Barium, Total	7440-39-3	151		0.444	0.0888
Beryllium, Total	7440-41-7	1.82		0.444	0.0107
Calcium, Total	7440-70-2	23100		8.88	4.44
Cadmium, Total	7440-43-9	1.29		0.0888	0.0444
Cobalt, Total	7440-48-4	9.48		0.888	0.107
Chromium, Total	7440-47-3	30.1		0.888	0.107
Copper, Total	7440-50-8	46.2		0.888	0.444
Iron, Total	7439-89-6	18300		1.78	0.888
Potassium, Total	7440-09-7	3470		44.4	22.2
Magnesium, Total	7439-95-4	3080		22.2	10.7
Manganese, Total	7439-96-5	192		0.444	0.0888
Sodium, Total	7440-23-5	1320		22.2	4.44
Nickel, Total	7440-02-0	28.3		1.78	0.444
Lead, Total	7439-92-1	49.3		4.44	0.444
Antimony, Total	7440-36-0	15.7		8.88	0.444
Selenium, Total	7782-49-2	7.47		0.888	0.444
Thallium, Total	7440-28-0	8.90	J	22.2	0.888
Vanadium, Total	7440-62-2	57.2		0.444	0.222
Zinc, Total	7440-66-6	258		0.888	0.444

J The analyte was positively identified, but the quantitation was below the RL

Report Number: **L0605548**
Report Date : **June 12, 2006**

Sample Number: **L0605548-16**
Client ID: **SM138SB01052306 MSD**
Matrix: **Soil**
Workgroup Number: **WG214040**
Collect Date: **05/23/2006 11:20**

PrePrep Method: **NONE**
Prep Method: **3050B**
Analytical Method: **6010B**
Analyst: **SLP**
Dilution: **1**
Units: **mg/kg**

Instrument: **IRIS-ICP**
Prep Date: **05/25/2006 07:10**
Cal Date: **05/26/2006 10:00**
Run Date: **05/26/2006 13:49**
File ID: **IR.052606.134900**
Percent Solid: **86.6**

Analyte	CAS. Number	Result	Qual	PQL	SQL
Aluminum, Total	7429-90-5	20700		17.8	8.88
Silver, Total	7440-22-4	9.14		0.444	0.222
Arsenic, Total	7440-38-2	13.3		0.888	0.444
Barium, Total	7440-39-3	99.3		0.444	0.0888
Beryllium, Total	7440-41-7	1.96		0.444	0.0107
Calcium, Total	7440-70-2	7890		8.88	4.44
Cadmium, Total	7440-43-9	1.09		0.0888	0.0444
Cobalt, Total	7440-48-4	8.77		0.888	0.107
Chromium, Total	7440-47-3	29.0		0.888	0.107
Copper, Total	7440-50-8	41.8		0.888	0.444
Iron, Total	7439-89-6	17100		1.78	0.888
Potassium, Total	7440-09-7	3430		44.4	22.2
Magnesium, Total	7439-95-4	3080		22.2	10.7
Manganese, Total	7439-96-5	144		0.444	0.0888
Sodium, Total	7440-23-5	1310		22.2	4.44
Nickel, Total	7440-02-0	21.8		1.78	0.444
Lead, Total	7439-92-1	36.3		4.44	0.444
Antimony, Total	7440-36-0	15.2		8.88	0.444
Selenium, Total	7782-49-2	6.59		0.888	0.444
Thallium, Total	7440-28-0	8.83	J	22.2	0.888
Vanadium, Total	7440-62-2	54.1		0.444	0.222
Zinc, Total	7440-66-6	128		0.888	0.444

J The analyte was positively identified, but the quantitation was below the RL

Report Number: **L0605548**
Report Date : **June 12, 2006**

Sample Number: **L0605548-17**
Client ID: **SM137SB02052306**
Matrix: **Soil**
Workgroup Number: **WG214040**
Collect Date: **05/23/2006 09:25**
Sample Tag: **01**

PrePrep Method: **NONE**
Prep Method: **3050B**
Analytical Method: **6010B**
Analyst: **SLP**
Dilution: **1**
Units: **mg/kg**

Instrument: **IRIS-ICP**
Prep Date: **05/25/2006 07:10**
Cal Date: **05/26/2006 10:00**
Run Date: **05/26/2006 14:09**
File ID: **IR.052606.140900**
Percent Solid: **79.1**

Analyte	CAS. Number	Result	Qual	PQL	SQL
Aluminum, Total	7429-90-5	6030		17.3	8.66
Silver, Total	7440-22-4	7.01		0.433	0.217
Arsenic, Total	7440-38-2	9.71		0.866	0.433
Barium, Total	7440-39-3	43.3		0.433	0.0866
Beryllium, Total	7440-41-7	0.138	J	0.433	0.0104
Calcium, Total	7440-70-2	5230		8.66	4.33
Cobalt, Total	7440-48-4	15.4		0.866	0.104
Chromium, Total	7440-47-3	34.9		0.866	0.104
Copper, Total	7440-50-8	117		0.866	0.433
Potassium, Total	7440-09-7	612		43.3	21.7
Magnesium, Total	7439-95-4	953		21.7	10.4
Sodium, Total	7440-23-5	424		21.7	4.33
Nickel, Total	7440-02-0	15.3		1.73	0.433
Lead, Total	7439-92-1	641		4.33	0.433
Antimony, Total	7440-36-0		U	8.66	0.433
Vanadium, Total	7440-62-2	24.1		0.433	0.217
Zinc, Total	7440-66-6	1440		0.866	0.433

J The analyte was positively identified, but the quantitation was below the RL
U Not detected at or above the reporting limit

Report Number: **L0605548**
Report Date : **June 12, 2006**

Sample Number: **L0605548-17**
Client ID: **SM137SB02052306**
Matrix: **Soil**
Workgroup Number: **WG214040**
Collect Date: **05/23/2006 09:25**

PrePrep Method: **NONE**
Prep Method: **3050B**
Analytical Method: **6010B**
Analyst: **SLP**
Dilution: **20**
Units: **mg/kg**

Instrument: **IRIS-ICP**
Prep Date: **05/25/2006 07:10**
Cal Date: **05/26/2006 10:00**
Run Date: **05/26/2006 16:00**
File ID: **IR.052606.160000**
Percent Solid: **79.1**

Analyte	CAS. Number	Result	Qual	PQL	SQL
Iron, Total	7439-89-6	329000		34.7	17.3
Manganese, Total	7439-96-5	1350		8.66	1.73
Thallium, Total	7440-28-0		U	433	17.3

U Not detected at or above the reporting limit

Report Number: **L0605548**
Report Date : **June 12, 2006**

Sample Number: **L0605548-17**
Client ID: **SM137SB02052306**
Matrix: **Soil**
Workgroup Number: **WG214040**
Collect Date: **05/23/2006 09:25**
Sample Tag: **DL**

PrePrep Method: **NONE**
Prep Method: **3050B**
Analytical Method: **6010B**
Analyst: **SLP**
Dilution: **100**
Units: **mg/kg**

Instrument: **IRIS-ICP**
Prep Date: **05/25/2006 07:10**
Cal Date: **05/26/2006 10:00**
Run Date: **05/26/2006 16:06**
File ID: **IR.052606.160600**
Percent Solid: **79.1**

Analyte	CAS. Number	Result	Qual	PQL	SQL
Cadmium, Total	7440-43-9		U	8.66	4.33

U Not detected at or above the reporting limit

Report Number: **L0605548**
Report Date : **June 12, 2006**

Sample Number: **L0605548-17**
Client ID: **SM137SB02052306**
Matrix: **Soil**
Workgroup Number: **WG214040**
Collect Date: **05/23/2006 09:25**
Sample Tag: **DL2**

PrePrep Method: **NONE**
Prep Method: **3050B**
Analytical Method: **6010B**
Analyst: **SLP**
Dilution: **500**
Units: **mg/kg**

Instrument: **IRIS-ICP**
Prep Date: **05/25/2006 07:10**
Cal Date: **05/26/2006 10:00**
Run Date: **05/26/2006 17:42**
File ID: **IR.052606.174200**
Percent Solid: **79.1**

Analyte	CAS. Number	Result	Qual	PQL	SQL
Selenium, Total	7782-49-2		U	433	217

U Not detected at or above the reporting limit

Report Number: **L0605548**
Report Date : **June 12, 2006**

Sample Number: **L0605548-18**
Client ID: **SM139SB03052306**
Matrix: **Soil**
Workgroup Number: **WG214040**
Collect Date: **05/23/2006 14:40**

PrePrep Method: **NONE**
Prep Method: **3050B**
Analytical Method: **6010B**
Analyst: **SLP**
Dilution: **1**
Units: **mg/kg**

Instrument: **IRIS-ICP**
Prep Date: **05/25/2006 07:10**
Cal Date: **05/26/2006 10:00**
Run Date: **05/26/2006 14:15**
File ID: **IR.052606.141500**
Percent Solid: **67.4**

Analyte	CAS. Number	Result	Qual	PQL	SQL
Aluminum, Total	7429-90-5	18100		22.0	11.0
Silver, Total	7440-22-4	0.689		0.550	0.275
Arsenic, Total	7440-38-2	8.98		1.10	0.550
Barium, Total	7440-39-3	96.8		0.550	0.110
Beryllium, Total	7440-41-7	1.08		0.550	0.0132
Calcium, Total	7440-70-2	4650		11.0	5.50
Cadmium, Total	7440-43-9		U	0.110	0.0550
Cobalt, Total	7440-48-4	14.1		1.10	0.132
Chromium, Total	7440-47-3	17.7		1.10	0.132
Copper, Total	7440-50-8	11.3		1.10	0.550
Iron, Total	7439-89-6	18000		2.20	1.10
Potassium, Total	7440-09-7	3110		55.0	27.5
Magnesium, Total	7439-95-4	3150		27.5	13.2
Manganese, Total	7439-96-5	94.9		0.550	0.110
Sodium, Total	7440-23-5	498		27.5	5.50
Nickel, Total	7440-02-0	21.1		2.20	0.550
Lead, Total	7439-92-1	18.1		5.50	0.550
Antimony, Total	7440-36-0		U	11.0	0.550
Thallium, Total	7440-28-0		U	27.5	1.10
Vanadium, Total	7440-62-2	33.0		0.550	0.275
Zinc, Total	7440-66-6	72.6		1.10	0.550

U Not detected at or above the reporting limit

Report Number: **L0605548**
Report Date : **June 12, 2006**

Sample Number: **L0605548-18**
Client ID: **SM139SB03052306**
Matrix: **Soil**
Workgroup Number: **WG214040**
Collect Date: **05/23/2006 14:40**
Sample Tag: **DL**

PrePrep Method: **NONE**
Prep Method: **3050B**
Analytical Method: **6010B**
Analyst: **SLP**
Dilution: **10**
Units: **mg/kg**

Instrument: **IRIS-ICP**
Prep Date: **05/25/2006 07:10**
Cal Date: **05/26/2006 10:00**
Run Date: **05/26/2006 16:55**
File ID: **IR.052606.165500**
Percent Solid: **67.4**

Analyte	CAS. Number	Result	Qual	PQL	SQL
Selenium, Total	7782-49-2		U	11.0	5.50

U Not detected at or above the reporting limit

Report Number: **L0605548**
Report Date : **June 12, 2006**

Sample Number: **L0605548-19**
Client ID: **SM138SB02052306**
Matrix: **Soil**
Workgroup Number: **WG214040**
Collect Date: **05/23/2006 12:10**

PrePrep Method: **NONE**
Prep Method: **3050B**
Analytical Method: **6010B**
Analyst: **SLP**
Dilution: **1**
Units: **mg/kg**

Instrument: **IRIS-ICP**
Prep Date: **05/25/2006 07:10**
Cal Date: **05/26/2006 10:00**
Run Date: **05/26/2006 14:21**
File ID: **IR.052606.142100**
Percent Solid: **57.1**

Analyte	CAS. Number	Result	Qual	PQL	SQL
Aluminum, Total	7429-90-5	5680		24.6	12.3
Silver, Total	7440-22-4	0.851		0.616	0.308
Arsenic, Total	7440-38-2	2.64		1.23	0.616
Barium, Total	7440-39-3	108		0.616	0.123
Beryllium, Total	7440-41-7	0.180	J	0.616	0.0148
Calcium, Total	7440-70-2	22600		12.3	6.16
Cadmium, Total	7440-43-9	0.304		0.123	0.0616
Cobalt, Total	7440-48-4	2.61		1.23	0.148
Chromium, Total	7440-47-3	9.30		1.23	0.148
Copper, Total	7440-50-8	30.8		1.23	0.616
Iron, Total	7439-89-6	17900		2.46	1.23
Potassium, Total	7440-09-7	718		61.6	30.8
Magnesium, Total	7439-95-4	1070		30.8	14.8
Manganese, Total	7439-96-5	119		0.616	0.123
Sodium, Total	7440-23-5	244		30.8	6.16
Nickel, Total	7440-02-0	3.02		2.46	0.616
Lead, Total	7439-92-1	129		6.16	0.616
Antimony, Total	7440-36-0		U	12.3	0.616
Thallium, Total	7440-28-0		U	30.8	1.23
Vanadium, Total	7440-62-2	10.9		0.616	0.308
Zinc, Total	7440-66-6	285		1.23	0.616

J The analyte was positively identified, but the quantitation was below the RL
U Not detected at or above the reporting limit

Report Number: **L0605548**
Report Date : **June 12, 2006**

Sample Number: **L0605548-19**
Client ID: **SM138SB02052306**
Matrix: **Soil**
Workgroup Number: **WG214040**
Collect Date: **05/23/2006 12:10**
Sample Tag: **DL**

PrePrep Method: **NONE**
Prep Method: **3050B**
Analytical Method: **6010B**
Analyst: **SLP**
Dilution: **5**
Units: **mg/kg**

Instrument: **IRIS-ICP**
Prep Date: **05/25/2006 07:10**
Cal Date: **05/26/2006 10:00**
Run Date: **05/26/2006 17:01**
File ID: **IR.052606.170100**
Percent Solid: **57.1**

Analyte	CAS. Number	Result	Qual	PQL	SQL
Selenium, Total	7782-49-2		U	6.16	3.08

U Not detected at or above the reporting limit

1.2.1.1 QC Summary

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Run Log ID:**10563**

KEMRON Environmental Services

Instrument Run Log

Instrument: PE-ICP2 Dataset: 052506H2R.CSV
Analyst1: KHR Analyst2: MMB
Method: 6010B SOP: ME600E Rev: 6

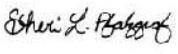
Calibration Std: STD12709 ICV/CCV Std: STD12713 Post Spike: STD12434
ICSA: STD12592 ICSAB: STD12484

Workgroups: WG214016, WG213988, WG213965, WG214050

Comments:

Seq.	File ID	Sample	ID	Prep	Dil	Reference	Date/Time
1	P2.052506.094231	WG214115-01	Calibration Point		1		05/25/06 09:42
2	P2.052506.095021	WG214115-02	Calibration Point		1		05/25/06 09:50
3	P2.052506.095656	WG214115-03	Calibration Point		1		05/25/06 09:56
4	P2.052506.100320	WG214115-04	Calibration Point		1		05/25/06 10:03
5	P2.052506.100947	WG214115-05	Calibration Point		1		05/25/06 10:09
6	P2.052506.101630	WG214115-06	Initial Calibration Verification		1		05/25/06 10:16
7	P2.052506.102255	WG214115-07	Initial Calib Blank		1		05/25/06 10:22
8	P2.052506.102915	WG214115-08	Interference Check		1		05/25/06 10:29
9	P2.052506.103437	WG214115-09	Interference Check		1		05/25/06 10:34
10	P2.052506.103959	WG214115-10	CCV		1		05/25/06 10:39
11	P2.052506.104621	WG214115-11	CCB		1		05/25/06 10:46
12	P2.052506.110449	WG213928-02	Method/Prep Blank	50/50	1		05/25/06 11:04
13	P2.052506.111106	WG213928-03	Laboratory Control S	50/50	1		05/25/06 11:11
14	P2.052506.111747	WG213928-01	Reference Sample		1	L0605541-02	05/25/06 11:17
15	P2.052506.112404	WG213928-04	Matrix Spike	50/50	1		05/25/06 11:24
16	P2.052506.113034	WG213928-05	Matrix Spike Duplica	50/50	1		05/25/06 11:30
17	P2.052506.113701	L0605541-04	W-30WTR	50/50	1		05/25/06 11:37
18	P2.052506.114330	WG214016-01	Post Digestion Spike		1	L0605541-04	05/25/06 11:43
19	P2.052506.114956	WG214016-02	Serial Dilution		5	L0605541-04	05/25/06 11:49
20	P2.052506.115629	WG214115-12	CCV		1		05/25/06 11:56
21	P2.052506.120252	WG214115-13	CCB		1		05/25/06 12:02
22	P2.052506.120922	L0605530-01	WWK-D-GATES-K-C	50/50	1		05/25/06 12:09
23	P2.052506.121543	L0605530-02	WWK-D-WILCOX-A-C	50/50	1		05/25/06 12:15
24	P2.052506.122213	L0605543-04	EFFLUENT	50/50	1		05/25/06 12:22
25	P2.052506.122839	L0605541-06	W-30WB	50/50	1		05/25/06 12:28
26	P2.052506.123459	L0605541-07	W-18	50/50	1		05/25/06 12:34
27	P2.052506.124130	L0605541-09	W-16	50/50	1		05/25/06 12:41
28	P2.052506.124754	L0605449-01	201 EFFLUENT	50/50	50		05/25/06 12:47
29	P2.052506.125419	L0605449-02	202 EFFLUENT	50/50	50		05/25/06 12:54
30	P2.052506.130037	L0605449-03	FLUME	50/50	50		05/25/06 13:00
31	P2.052506.130700	L0605449-04	EMERGENCY BASIN WATE	50/50	50		05/25/06 13:07
32	P2.052506.131323	WG214115-14	CCV		1		05/25/06 13:13
33	P2.052506.131948	WG214115-15	CCB		1		05/25/06 13:19
34	P2.052506.134822	WG213928-01	Reference Sample		5	L0605541-02	05/25/06 13:48
35	P2.052506.135439	WG213928-04	Matrix Spike		5		05/25/06 13:54
36	P2.052506.140104	WG213928-05	Matrix Spike Duplica		5		05/25/06 14:01
37	P2.052506.140726	L0605541-04	W-30WTR		5		05/25/06 14:07

Approved: May 30, 2006



Run Log ID:**10563**

KEMRON Environmental Services

Instrument Run Log

Instrument: PE-ICP2 Dataset: 052506H2R.CSV
Analyst1: KHR Analyst2: MMB
Method: 6010B SOP: ME600E Rev: 6

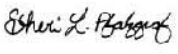
Calibration Std: STD12709 ICV/CCV Std: STD12713 Post Spike: STD12434
ICSA: STD12592 ICSAB: STD12484

Workgroups: WG214016, WG213988, WG213965, WG214050

Comments:

Seq.	File ID	Sample	ID	Prep	Dil	Reference	Date/Time
38	P2.052506.141509	L0605541-06	W-30WB		5		05/25/06 14:15
39	P2.052506.142127	L0605541-07	W-18		5		05/25/06 14:21
40	P2.052506.142753	L0605541-09	W-16		5		05/25/06 14:27
41	P2.052506.143415	WG214115-16	CCV		1		05/25/06 14:34
42	P2.052506.144041	WG214115-17	CCB		1		05/25/06 14:40
43	P2.052506.144715	WG213349-01	Reference Sample		20	L0605365-01	05/25/06 14:47
44	P2.052506.145339	WG213349-05	Matrix Spike	50/50	20	L0605365-03	05/25/06 14:53
45	P2.052506.145956	WG213349-06	Matrix Spike Duplica	50/50	20	L0605365-05	05/25/06 14:59
46	P2.052506.150619	WG213349-02	Reference Sample		20	L0605365-02	05/25/06 15:06
47	P2.052506.151244	WG213349-07	Matrix Spike	50/50	20	L0605365-04	05/25/06 15:12
48	P2.052506.151901	WG213349-08	Matrix Spike Duplica	50/50	20	L0605365-06	05/25/06 15:19
49	P2.052506.152528	L0605365-15	TW-11D	50/50	20		05/25/06 15:25
50	P2.052506.153156	L0605365-07	SL-21	50/50	1		05/25/06 15:31
51	P2.052506.153812	WG213988-03	Post Digestion Spike		1	L0605365-07	05/25/06 15:38
52	P2.052506.154444	WG214115-18	CCV		1		05/25/06 15:44
53	P2.052506.155111	WG214115-19	CCB		1		05/25/06 15:51
54	P2.052506.155537	WG213928-01	Reference Sample		10	L0605541-02	05/25/06 15:55
55	P2.052506.160155	WG213928-04	Matrix Spike		10		05/25/06 16:01
56	P2.052506.160822	WG213928-05	Matrix Spike Duplica		10		05/25/06 16:08
57	P2.052506.161444	L0605541-04	W-30WTR		10		05/25/06 16:14
58	P2.052506.162101	WG214016-01	Post Digestion Spike		10	L0605541-04	05/25/06 16:21
59	P2.052506.162727	L0605541-06	W-30WB	50/50	10		05/25/06 16:27
60	P2.052506.163351	L0605541-07	W-18	50/50	10		05/25/06 16:33
61	P2.052506.164008	L0605541-09	W-16	50/50	10		05/25/06 16:40
62	P2.052506.164732	WG214115-20	CCV		1		05/25/06 16:47
63	P2.052506.165407	WG214115-21	CCB		1		05/25/06 16:54
64	P2.052506.170026	WG214009-02	Method/Prep Blank	50/50	1		05/25/06 17:00
65	P2.052506.170652	WG214009-03	Laboratory Control S	50/50	1		05/25/06 17:06
66	P2.052506.171318	WG213882-01	Fluid Blank		1		05/25/06 17:13
67	P2.052506.171941	WG214009-01	Reference Sample		1	L0605553-22	05/25/06 17:19
68	P2.052506.172608	WG214009-04	Matrix Spike	50/50	1		05/25/06 17:26
69	P2.052506.173232	WG214009-05	Matrix Spike Duplica	50/50	1		05/25/06 17:32
70	P2.052506.173858	L0605525-02	PR-SS-N50E25-0-6	50/50	1		05/25/06 17:38
71	P2.052506.174519	WG214050-01	Post Digestion Spike		1	L0605525-02	05/25/06 17:45
72	P2.052506.175145	WG214050-02	Serial Dilution		5	L0605525-02	05/25/06 17:51
73	P2.052506.175854	WG214115-22	CCV		1		05/25/06 17:58
74	P2.052506.180517	WG214115-23	CCB		1		05/25/06 18:05

Approved: May 30, 2006



Run Log ID:**10563**

KEMRON Environmental Services

Instrument Run Log

Instrument: PE-ICP2 Dataset: 052506H2R.CSV

Analyst1: KHR Analyst2: MMB

Method: 6010B SOP: ME600E Rev: 6

Calibration Std: STD12709 ICV/CCV Std: STD12713 Post Spike: STD12434

ICSA: STD12592 ICSAB: STD12484

Workgroups: WG214016, WG213988, WG213965, WG214050

Comments:

Seq.	File ID	Sample	ID	Prep	Dil	Reference	Date/Time
75	P2.052506.181136	L0605525-04	PR-SS-N50-0-0-6	50/50	1		05/25/06 18:11
76	P2.052506.181757	L0605525-06	PR-SS-N75E75-LOW-6-12	50/50	1		05/25/06 18:17
77	P2.052506.182412	L0605548-03	SM138EB01052306	50/50	1		05/25/06 18:24
78	P2.052506.183037	L0605553-23	MW20-MAY06	50/50	1		05/25/06 18:30
79	P2.052506.183702	L0605553-24	102-MAY06	50/50	1		05/25/06 18:37
80	P2.052506.184328	L0605553-25	129-MAY06	50/50	1		05/25/06 18:43
81	P2.052506.184946	L0605553-26	120-MAY06	50/50	1		05/25/06 18:49
82	P2.052506.185614	L0605565-02	W-6	50/50	1		05/25/06 18:56
83	P2.052506.190240	L0605565-03	W-6B	50/50	1		05/25/06 19:02
84	P2.052506.190900	WG214115-24	CCV		1		05/25/06 19:09
85	P2.052506.191523	WG214115-25	CCB		1		05/25/06 19:15
86	P2.052506.192147	L0605565-04	W-51	50/50	1		05/25/06 19:21
87	P2.052506.192813	L0605565-05	W-7A	50/50	1		05/25/06 19:28
88	P2.052506.193439	L0605565-07	W-7B	50/50	1		05/25/06 19:34
89	P2.052506.194102	L0605565-09	W-5	50/50	1		05/25/06 19:41
90	P2.052506.194729	L0605565-11	W-17	50/50	1		05/25/06 19:47
91	P2.052506.195355	WG214115-26	CCV		1		05/25/06 19:53
92	P2.052506.200017	WG214115-27	CCB		1		05/25/06 20:00
93	P2.052506.200758	WG213928-01	Reference Sample		20	L0605541-02	05/25/06 20:07
94	P2.052506.201416	WG213928-04	Matrix Spike		20		05/25/06 20:14
95	P2.052506.202044	WG213928-05	Matrix Spike Duplica		20		05/25/06 20:20
96	P2.052506.202729	L0605541-04	W-30WTR	50/50	20		05/25/06 20:27
97	P2.052506.203347	WG214016-01	Post Digestion Spike		20	L0605541-04	05/25/06 20:33
98	P2.052506.204017	L0605565-02	W-6	50/50	10		05/25/06 20:40
99	P2.052506.204634	L0605565-03	W-6B	50/50	10		05/25/06 20:46
100	P2.052506.205259	L0605565-04	W-51		10		05/25/06 20:52
101	P2.052506.205925	L0605565-05	W-7A		10		05/25/06 20:59
102	P2.052506.210544	L0605565-07	W-7B	50/50	10		05/25/06 21:05
103	P2.052506.211208	WG214115-28	CCV		1		05/25/06 21:12
104	P2.052506.211833	WG214115-29	CCB		1		05/25/06 21:18
105	P2.052506.212544	L0605565-09	W-5		10		05/25/06 21:25
106	P2.052506.213203	L0605565-11	W-17		10		05/25/06 21:32
107	P2.052506.213830	L0605565-05	W-7A		20		05/25/06 21:38
108	P2.052506.214342	L0605565-04	W-51		20		05/25/06 21:43
109	P2.052506.215001	L0605565-04	W-51		50		05/25/06 21:50
110	P2.052506.215628	WG214115-30	CCV		1		05/25/06 21:56
111	P2.052506.220252	WG214115-31	CCB		1		05/25/06 22:02

Page: 3 of 3 Approved: May 30, 2006

Run Log ID:**10559**

KEMRON Environmental Services

Instrument Run Log

Instrument: IRIS-ICP Dataset: 20060526.1

Analyst1: SLP Analyst2: MMB

Method: 6010B SOP: ME600F Rev: 4

Calibration Std: STD12631 ICV/CCV Std: STD12812 Post Spike: STD12434

ICSA: STD12755 ICSAB: STD12665

Workgroups: 213913, 214040

Comments:

Seq.	File ID	Sample	ID	Prep	Dil	Reference	Date/Time
1	IR.052606.093000	WG214105-01	Calibration Point		1		05/26/06 09:30
2	IR.052606.093600	WG214105-02	Calibration Point		1		05/26/06 09:36
3	IR.052606.094200	WG214105-03	Calibration Point		1		05/26/06 09:42
4	IR.052606.094800	WG214105-04	Calibration Point		1		05/26/06 09:48
5	IR.052606.095400	WG214105-05	Calibration Point		1		05/26/06 09:54
6	IR.052606.100000	WG214105-06	Calibration Point		1		05/26/06 10:00
7	IR.052606.100700	WG214105-07	Initial Calibration Verification		1		05/26/06 10:07
8	IR.052606.101300	WG214105-08	Initial Calib Blank		1		05/26/06 10:13
9	IR.052606.101900	WG214105-09	Interference Check		1		05/26/06 10:19
10	IR.052606.102500	WG214105-10	Interference Check		1		05/26/06 10:25
11	IR.052606.103100	WG214105-11	CCV		1		05/26/06 10:31
12	IR.052606.103700	WG214105-12	CCB		1		05/26/06 10:37
13	IR.052606.110200	L0605458-04	GM060017	5/50	2		05/26/06 11:02
14	IR.052606.110800	L0605458-04	GM060017		2		05/26/06 11:08
15	IR.052606.111400	L0605458-04	GM060017		2		05/26/06 11:14
16	IR.052606.112000	L0605458-04	GM060017		2		05/26/06 11:20
17	IR.052606.112600	WG214105-13	CCV		1		05/26/06 11:26
18	IR.052606.113700	WG214105-14	CCB		1		05/26/06 11:37
19	IR.052606.114300	WG214006-03	Method/Prep Blank	1/50	1		05/26/06 11:43
20	IR.052606.114900	WG214006-04	Laboratory Control S	1/50	1		05/26/06 11:49
21	IR.052606.115500	L0605548-01	SM140SB02052306	1.34/50	1		05/26/06 11:55
22	IR.052606.120100	WG214040-02	Serial Dilution		5	L0605548-01	05/26/06 12:01
23	IR.052606.120700	WG214040-02	Serial Dilution		25	L0605548-01	05/26/06 12:07
24	IR.052606.121300	WG214040-01	Post Digestion Spike		1	L0605548-01	05/26/06 12:13
25	IR.052606.121900	L0605548-02	SM140SB01052306	1.31/50	1		05/26/06 12:19
26	IR.052606.122500	L0605548-04	SM140FD03052306	1.4/50	1		05/26/06 12:25
27	IR.052606.123100	WG214006-01	Reference Sample		1	L0605548-05	05/26/06 12:31
28	IR.052606.123700	WG214006-05	Matrix Spike	1.3/50	1	L0605548-06	05/26/06 12:37
29	IR.052606.124300	WG214105-15	CCV		1		05/26/06 12:43
30	IR.052606.124900	WG214105-16	CCB		1		05/26/06 12:49
31	IR.052606.125500	WG214006-06	Matrix Spike Duplica	1.3/50	1	L0605548-07	05/26/06 12:55
32	IR.052606.130100	L0605548-08	SM137SB01052306	1.42/50	1		05/26/06 13:01
33	IR.052606.130700	L0605548-09	SM138SB03052306	1.46/50	1		05/26/06 13:07
34	IR.052606.131300	L0605548-10	SM138FD03052306	1.38/50	1		05/26/06 13:13
35	IR.052606.131900	L0605548-11	SM139SB01052306		1		05/26/06 13:19
36	IR.052606.132500	L0605548-12	SM136SB01052206	1.45/50	1		05/26/06 13:25
37	IR.052606.133100	L0605548-13	SM139SB02052306	1.43/50	1		05/26/06 13:31

Approved: May 31, 2006

006516

Run Log ID:**10559**

KEMRON Environmental Services

Instrument Run Log

Instrument: IRIS-ICP Dataset: 20060526.1

Analyst1: SLP Analyst2: MMB

Method: 6010B SOP: ME600F Rev: 4

Calibration Std: STD12631 ICV/CCV Std: STD12812 Post Spike: STD12434

ICSA: STD12755 ICSAB: STD12665

Workgroups: 213913, 214040

Comments:

Seq.	File ID	Sample	ID	Prep	Dil	Reference	Date/Time
38	IR.052606.133700	WG214006-02	Reference Sample		1	L0605548-14	05/26/06 13:37
39	IR.052606.134300	WG214006-07	Matrix Spike	1.3/50	1	L0605548-15	05/26/06 13:43
40	IR.052606.134900	WG214006-08	Matrix Spike Duplica	1.3/50	1	L0605548-16	05/26/06 13:49
41	IR.052606.135500	WG214105-17	CCV		1		05/26/06 13:55
42	IR.052606.140100	WG214105-18	CCB		1		05/26/06 14:01
43	IR.052606.140900	L0605548-17	SM137SB02052306	1.46/50	1		05/26/06 14:09
44	IR.052606.141500	L0605548-18	SM139SB03052306	1.35/50	1		05/26/06 14:15
45	IR.052606.142100	L0605548-19	SM138SB02052306	1.42/50	1		05/26/06 14:21
46	IR.052606.143000	WG214040-01	Post Digestion Spike		5	L0605548-01	05/26/06 14:30
47	IR.052606.143600	L0605548-02	SM140SB01052306	1.31/50	10		05/26/06 14:36
48	IR.052606.144200	L0605548-04	SM140FD03052306	1.4/50	5		05/26/06 14:42
49	IR.052606.144800	WG214006-01	Reference Sample		10	L0605548-05	05/26/06 14:48
50	IR.052606.145400	WG214006-05	Matrix Spike	1.3/50	10	L0605548-06	05/26/06 14:54
51	IR.052606.150000	WG214006-06	Matrix Spike Duplica	1.3/50	10	L0605548-07	05/26/06 15:00
52	IR.052606.150600	L0605548-09	SM138SB03052306		2		05/26/06 15:06
53	IR.052606.151200	WG214105-19	CCV		1		05/26/06 15:12
54	IR.052606.151800	WG214105-20	CCB		1		05/26/06 15:18
55	IR.052606.152400	L0605548-10	SM138FD03052306	1.38/50	5		05/26/06 15:24
56	IR.052606.153000	L0605548-11	SM139SB01052306	1.32/50	10		05/26/06 15:30
57	IR.052606.153600	L0605548-12	SM136SB01052206	1.45/50	10		05/26/06 15:36
58	IR.052606.154200	L0605548-12	SM136SB01052206		20		05/26/06 15:42
59	IR.052606.154800	L0605548-13	SM139SB02052306	1.43/50	10		05/26/06 15:48
60	IR.052606.155400	L0605548-13	SM139SB02052306	1.43/50	50		05/26/06 15:54
61	IR.052606.160000	L0605548-17	SM137SB02052306	1.46/50	20		05/26/06 16:00
62	IR.052606.160600	L0605548-17	SM137SB02052306	1.46/50	100		05/26/06 16:06
63	IR.052606.161200	L0605548-18	SM139SB03052306		5		05/26/06 16:12
64	IR.052606.161800	L0605548-19	SM138SB02052306		2		05/26/06 16:18
65	IR.052606.162400	WG214105-21	CCV		1		05/26/06 16:24
66	IR.052606.163000	WG214105-22	CCB		1		05/26/06 16:30
67	IR.052606.163700	L0605548-09	SM138SB03052306	1.46/50	5		05/26/06 16:37
68	IR.052606.164300	L0605548-11	SM139SB01052306	1.32/50	50		05/26/06 16:43
69	IR.052606.164900	L0605548-17	SM137SB02052306		200		05/26/06 16:49
70	IR.052606.165500	L0605548-18	SM139SB03052306	1.35/50	10		05/26/06 16:55
71	IR.052606.170100	L0605548-19	SM138SB02052306	1.42/50	5		05/26/06 17:01
72	IR.052606.170700	WG214105-23	CCV		1		05/26/06 17:07
73	IR.052606.171300	WG214105-24	CCB		1		05/26/06 17:13
74	IR.052606.174200	L0605548-17	SM137SB02052306	1.46/50	500		05/26/06 17:42

Approved: May 31, 2006

006517

Run Log ID:**10559**

KEMRON Environmental Services

Instrument Run Log

Instrument: IRIS-ICP Dataset: 20060526.1
Analyst1: SLP Analyst2: MMB
Method: 6010B SOP: ME600F Rev: 4

Calibration Std: STD12631 ICV/CCV Std: STD12812 Post Spike: STD12434
ICSA: STD12755 ICSAB: STD12665

Workgroups: 213913, 214040

Comments:

Seq.	File ID	Sample	ID	Prep	Dil	Reference	Date/Time
75	IR.052606.174800	WG214105-25	CCV		1		05/26/06 17:48
76	IR.052606.175400	WG214105-26	CCB		1		05/26/06 17:54

Comments

Seq.	Rerun	Dil.	Reason	Analytes
21			Se TN; reanalyzed @ dil. for Se.	
25			Se TN; reanalyzed @ dil. for Se.	
26			Se TN; reanalyzed @ dil. for Se.	
27			Se TN; reanalyzed @ dil. for Se.	
33			Se TN; reanalyzed @ dil. for Se.	
34			Se TN; reanalyzed @ dil. for Se.	
35			Sample instrument-flagged for uncorrected interference; reanalyzed @ dil. for all analytes.	
36			Ca, Fe, Zn OLR, Se TN; reanalyzed @ dil. for Ca, Fe, Se, Zn.	
37			Fe OLR, Se TN; reanalyzed @ dil. for Fe, Se.	
43			Fe, Mn OLR, Cd, Se, Tl TN; reanalyzed @ dil. for Cd, Fe, Mn, Se, Tl.	
44			Se TN; reanalyzed @ dil. for Se.	
45			Se TN; reanalyzed @ dil. for Se.	
52			Se TN; reanalyzed @ greater dil. for Se.	
56			Se TN; reanalyzed @ greater dil. for Se.	
58			Dil. not needed.	
59			Se TN; reanalyzed @ greater dil. for Se.	
61			Cd, Se TN; reanalyzed @ greater dil. for Cd, Se.	
62			Se TN; reanalyzed @ greater dil. for Se.	
63			Se TN; reanalyzed @ greater dil. for Se.	

Approved: May 31, 2006

006518

Run Log ID:**10559**

KEMRON Environmental Services

Instrument Run Log

Instrument: IRIS-ICP Dataset: 20060526.1
Analyst1: SLP Analyst2: MMB
Method: 6010B SOP: ME600F Rev: 4

Calibration Std: STD12631 ICV/CCV Std: STD12812 Post Spike: STD12434
ICSA: STD12755 ICSAB: STD12665

Workgroups: 213913, 214040

Comments:

Seq.	File ID	Sample	ID	Prep	Dil	Reference	Date/Time

Seq.	Rerun	Dil.	Reason	Analytes
64			Se TN; reanalyzed @ greater dil. for Se.	
69			Se TN; reanalyzed @ greater dil. for Se.	

Approved: May 31, 2006

Metals Digestion Log

Analyst(s): AK
Date: 5/25/06
LCS: 5ml SRO 12434
MS/MSD: 5ml SRO 12434
Witness: MP
HNO_3 Lot #: RGR10226
1:1HNO_3: RGR10215
HCl Lot #: RGR10225
H_2O_2 Lot #: RGR10218
Earliest Sample Due Date: 6/2/06
Hotblock #: 1
Hotblock Temp - Start: 91.4°C@0710
Hotblock Temp - End: 91.0°C@1210

Box: 84
Digestion Work Group: WG 214006

General Digestion
ME401 Revision # _____ - Method 3005A-Water
ME403 Revision # 12 - Method 3050B-Soil

Furnace Digestion
ME402 Revision # _____ - Method 3020A-Water
ME403 Revision # _____ - Method 3050B-Soil

AS/SE Digestion
ME410 Revision # _____ - Method 7060/7740-Water

Relinquished By: AK
Digest Received By: ASLP Date: 5/25/06

	KEMRON #	Initial WT/Vol	Final Volume	Comments	Due Date
1	PBS	1.00 g	50ml	-03	
2	LCS	1		-04	
3	05-548-01	1.34			6/2
4	-02	1.31			
5	-04	1.40			
6	-05 REP	1.30		-01	
7	-06 MS	1		-05	
8	-07 MSD	1		-06	
9	-08	1.42			
10	-09	1.46			
11	-10	1.38			
12	-11	1.32			
13	-12	1.45			
14	-13	1.43			
15	-14 REP	1.30		-02	
16	-15 MS	1		-07	
17	-16 MSD	1		-08	
18	-17	1.46			
19	-18	1.35			
20	-19	1.42			
21	04-003-02	1.00		SB FU 2ml 5101759 *	
22	04-004-02	1		1 1 *	
23					
24					
25					
26		AK 5/25/06			
27					
28					

Comments: * REPREP *

Primary Review: _____ Secondary Review: Sheri L. Hoffard 5/25/06

006520

KEMRON
ENVIRONMENTAL SERVICES

Metals Digestion Log

Analyst(s): [illegible]
Date: 5/25/06
LCS: 5 mi STD 12434
MS/MSD: 5 mi STD 12434
Witness: [illegible]
HNO_3 Lot #: RGT 10225
1:1HNO_3: ~~RGT 10225~~ N/A [illegible] 5/25
HCl Lot #: RGT 10226
H_2O_2 Lot #: N/A
Earliest Sample Due Date: 5/30/06
Hotblock #: 2
Hotblock Temp - Start: 97.5°C @ 0815
Hotblock Temp - End: 91.0°C @ 1215

Box: C4
Digestion Work Group: WG 214009

General Digestion
ME401 Revision # 12 - Method 3005A-Water
ME403 Revision # _____ - Method 3050B-Soil

Furnace Digestion
ME402 Revision # _____ - Method 3020A-Water
ME403 Revision # _____ - Method 3050B-Soil

AS/SE Digestion
ME410 Revision # _____ - Method 7060/7740-Water

Relinquished By: [illegible]
Digest Received By: [illegible] Date: 5/25/06

	KEMRON #	Initial WT/Vol	Final Volume	Comments	Due Date
1	PBW	50 mi	50 mi	-02	
2	[illegible] 5/25 LISS			-03	
3	~~05~~ SPLP BLK 5/23			WG 213882 @ 1430	
4	05-525-02				5/30
5	-04				
6	-06				
7	05-548-03				6/2
8	05-553-22			-01	5/31
9	-22 MS			-04	
10	-22 MSD			-05	
11	-23				
12	-24				
13	-25				
14	-26				
15	05-565-02			Level 4	6/7
16	-03				
17	-04				
18	-05				
19	-07				
20	-09				
21	-11				
22					
23					
24					
25					
26					
27					
28					

[illegible] 5/25/06

Comments: _____

Primary Review: [illegible] 5/25/06

Secondary Review: [illegible] 5/25/06

KEMRON Environmental Services
HOLDING TIMES
EQUIVALENT TO AFCEE FORM 9

Analytical Method: 6010B **AAB#:** WG214040
Login Number: L0605548

Client ID	Date Collected	Date Received	Date Extracted	Max Hold Time Ext.	Time Held Ext.	Date Analyzed	Max Hold Time Anal	Time Held Anal.	Q
SM140SB02052306	05/23/06	05/24/06	05/25/06	180	1.65	05/26/06	180	1.20	
SM140SB01052306	05/23/06	05/24/06	05/25/06	180	1.66	05/26/06	180	1.21	
SM140SB01052306	05/23/06	05/24/06	05/25/06	180	1.66	05/26/06	180	1.31	
SM140FD03052306	05/23/06	05/24/06	05/25/06	180	1.60	05/26/06	180	1.22	
SM140FD03052306	05/23/06	05/24/06	05/25/06	180	1.60	05/26/06	180	1.31	
SM140SB03052306	05/23/06	05/24/06	05/25/06	180	1.61	05/26/06	180	1.22	
SM140SB03052306	05/23/06	05/24/06	05/25/06	180	1.61	05/26/06	180	1.32	
SM140SB03052306 MS	05/23/06	05/24/06	05/25/06	180	1.61	05/26/06	180	1.23	
SM140SB03052306 MS	05/23/06	05/24/06	05/25/06	180	1.61	05/26/06	180	1.32	
SM140SB03052306 MSD	05/23/06	05/24/06	05/25/06	180	1.61	05/26/06	180	1.24	
SM140SB03052306 MSD	05/23/06	05/24/06	05/25/06	180	1.61	05/26/06	180	1.33	
SM137SB01052306	05/23/06	05/24/06	05/25/06	180	1.91	05/26/06	180	1.24	
SM138SB03052306	05/23/06	05/24/06	05/25/06	180	1.76	05/26/06	180	1.25	
SM138SB03052306	05/23/06	05/24/06	05/25/06	180	1.76	05/26/06	180	1.39	
SM138FD03052306	05/23/06	05/24/06	05/25/06	180	1.76	05/26/06	180	1.25	
SM138FD03052306	05/23/06	05/24/06	05/25/06	180	1.76	05/26/06	180	1.34	
SM139SB01052306	05/23/06	05/24/06	05/25/06	180	1.71	05/26/06	180	1.35	
SM139SB01052306	05/23/06	05/24/06	05/25/06	180	1.71	05/26/06	180	1.40	
SM136SB01052206	05/22/06	05/24/06	05/25/06	180	2.96	05/26/06	180	1.26	
SM136SB01052206	05/22/06	05/24/06	05/25/06	180	2.96	05/26/06	180	1.35	
SM139SB02052306	05/23/06	05/24/06	05/25/06	180	1.70	05/26/06	180	1.26	
SM139SB02052306	05/23/06	05/24/06	05/25/06	180	1.70	05/26/06	180	1.36	
SM139SB02052306	05/23/06	05/24/06	05/25/06	180	1.70	05/26/06	180	1.36	
SM138SB01052306	05/23/06	05/24/06	05/25/06	180	1.83	05/26/06	180	1.27	
SM138SB01052306 MS	05/23/06	05/24/06	05/25/06	180	1.83	05/26/06	180	1.27	
SM138SB01052306 MSD	05/23/06	05/24/06	05/25/06	180	1.83	05/26/06	180	1.28	
SM137SB02052306	05/23/06	05/24/06	05/25/06	180	1.91	05/26/06	180	1.29	
SM137SB02052306	05/23/06	05/24/06	05/25/06	180	1.91	05/26/06	180	1.37	
SM137SB02052306	05/23/06	05/24/06	05/25/06	180	1.91	05/26/06	180	1.37	
SM137SB02052306	05/23/06	05/24/06	05/25/06	180	1.91	05/26/06	180	1.44	
SM139SB03052306	05/23/06	05/24/06	05/25/06	180	1.69	05/26/06	180	1.30	
SM139SB03052306	05/23/06	05/24/06	05/25/06	180	1.69	05/26/06	180	1.41	
SM138SB02052306	05/23/06	05/24/06	05/25/06	180	1.79	05/26/06	180	1.30	
SM138SB02052306	05/23/06	05/24/06	05/25/06	180	1.79	05/26/06	180	1.41	

*** EXT = SEE PROJECT QAPP REQUIREMENTS**
***ANAL = SEE PROJECT QAPP REQUIREMENTS**

KEMRON FORMS - Modified 02/14/2006
Version 1.5 PDF File ID: 485922
Report generated 05/30/2006 10:51

KEMRON Environmental Services
HOLDING TIMES
EQUIVALENT TO AFCEE FORM 9

Analytical Method: 6010B **AAB#:** WG214050
Login Number: L0605548

Client ID	Date Collected	Date Received	Date Extracted	Max Hold Time Ext.	Time Held Ext.	Date Analyzed	Max Hold Time Anal	Time Held Anal.	Q
SM138EB01052306	05/23/06	05/24/06	05/25/06	180	1.77	05/25/06	180	0.423	

* EXT = SEE PROJECT QAPP REQUIREMENTS
*ANAL = SEE PROJECT QAPP REQUIREMENTS

KEMRON FORMS - Modified 02/14/2006
Version 1.5 PDF File ID: 485581
Report generated 05/26/2006 16:55

KEMRON Environmental Services

METHOD BLANK SUMMARY

Login Number: L0605548 | Work Group: WG214040
Blank File ID: IR.052606.114300 | Blank Sample ID: WG214006-03
Date Analyzed: 05/26/06 | Instrument ID: IRIS-ICP
Time Analyzed: 11:43 | Method: 6010B
Analyst: SLP

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG214006-04	IR.052606.114900	05/26/06 11:49	01
SM140SB02052306	L0605548-01	IR.052606.115500	05/26/06 11:55	01
SM140SB01052306	L0605548-02	IR.052606.121900	05/26/06 12:19	01
SM140FD03052306	L0605548-04	IR.052606.122500	05/26/06 12:25	01
SM140SB03052306	L0605548-05	IR.052606.123100	05/26/06 12:31	01
SM140SB03052306 MS	L0605548-06	IR.052606.123700	05/26/06 12:37	01
SM140SB03052306 MSD	L0605548-07	IR.052606.125500	05/26/06 12:55	01
SM137SB01052306	L0605548-08	IR.052606.130100	05/26/06 13:01	01
SM138SB03052306	L0605548-09	IR.052606.130700	05/26/06 13:07	01
SM138FD03052306	L0605548-10	IR.052606.131300	05/26/06 13:13	01
SM136SB01052206	L0605548-12	IR.052606.132500	05/26/06 13:25	01
SM139SB02052306	L0605548-13	IR.052606.133100	05/26/06 13:31	01
SM138SB01052306	L0605548-14	IR.052606.133700	05/26/06 13:37	01
SM138SB01052306 MS	L0605548-15	IR.052606.134300	05/26/06 13:43	01
SM138SB01052306 MSD	L0605548-16	IR.052606.134900	05/26/06 13:49	01
SM137SB02052306	L0605548-17	IR.052606.140900	05/26/06 14:09	01
SM139SB03052306	L0605548-18	IR.052606.141500	05/26/06 14:15	01
SM138SB02052306	L0605548-19	IR.052606.142100	05/26/06 14:21	01
SM140SB01052306	L0605548-02	IR.052606.143600	05/26/06 14:36	DL01
SM140FD03052306	L0605548-04	IR.052606.144200	05/26/06 14:42	DL01
SM140SB03052306	L0605548-05	IR.052606.144800	05/26/06 14:48	DL01
SM140SB03052306 MS	L0605548-06	IR.052606.145400	05/26/06 14:54	DL01
SM140SB03052306 MSD	L0605548-07	IR.052606.150000	05/26/06 15:00	DL01
SM138FD03052306	L0605548-10	IR.052606.152400	05/26/06 15:24	DL01
SM139SB01052306	L0605548-11	IR.052606.153000	05/26/06 15:30	DL01
SM136SB01052206	L0605548-12	IR.052606.153600	05/26/06 15:36	DL01
SM139SB02052306	L0605548-13	IR.052606.154800	05/26/06 15:48	DL01
SM139SB02052306	L0605548-13	IR.052606.155400	05/26/06 15:54	DL02
SM137SB02052306	L0605548-17	IR.052606.160000	05/26/06 16:00	DL01
SM137SB02052306	L0605548-17	IR.052606.160600	05/26/06 16:06	DL02
SM138SB03052306	L0605548-09	IR.052606.163700	05/26/06 16:37	DL01
SM139SB01052306	L0605548-11	IR.052606.164300	05/26/06 16:43	DL02
SM139SB03052306	L0605548-18	IR.052606.165500	05/26/06 16:55	DL01
SM138SB02052306	L0605548-19	IR.052606.170100	05/26/06 17:01	DL01
SM137SB02052306	L0605548-17	IR.052606.174200	05/26/06 17:42	DL03

KEMRON FORMS - Modified 03/06/2006
Version 1.5 PDF File ID: 485923
Report generated 05/30/2006 10:51

KEMRON Environmental Services

METHOD BLANK SUMMARY

Login Number:	L0605548	Work Group:	WG214050
Blank File ID:	P2.052506.170026	Blank Sample ID:	WG214009-02
Date Analyzed:	05/25/06	Instrument ID:	PE-ICP2
Time Analyzed:	17:00	Method:	6010B
Analyst:	KHR		

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG214009-03	P2.052506.170652	05/25/06 17:06	01
SM138EB01052306	L0605548-03	P2.052506.182412	05/25/06 18:24	01

KEMRON FORMS - Modified 03/06/2006
Version 1.5 PDF File ID: 485582
Report generated 05/26/2006 16:55

KEMRON Environmental Services

METHOD BLANK REPORT

Login Number: L0605548 Run Date: 05/26/2006 Sample ID: WG214006-03
Instrument ID: IRIS-ICP Run Time: 11:43 Prep Method: 3050B
File ID: IR.052606.114300 Analyst: SLP Method: 6010B
Workgroup (AAB#): WG214040 Matrix: Solid Units: mg/kg
Contract #: Cal ID: IRIS-I-26-MAY-06

Analytes	SQL	PQL	Concentration	Dilution	Qualifier
Aluminum	10.0	20.0	10.0	1	U
Silver	0.250	0.500	0.250	1	U
Arsenic	0.500	1.00	0.500	1	U
Barium	0.100	0.500	0.100	1	U
Beryllium	0.0120	0.500	0.0120	1	U
Calcium	5.00	10.0	5.00	1	U
Cadmium	0.0500	0.100	0.0500	1	U
Cobalt	0.120	1.00	0.120	1	U
Chromium	0.120	1.00	0.120	1	U
Copper	0.500	1.00	0.500	1	U
Iron	1.00	2.00	1.42	1	J
Potassium	25.0	50.0	25.0	1	U
Magnesium	12.0	25.0	12.0	1	U
Manganese	0.100	0.500	0.159	1	J
Sodium	5.00	25.0	5.00	1	U
Nickel	0.500	2.00	0.500	1	U
Lead	0.500	5.00	0.500	1	U
Antimony	0.500	10.0	0.500	1	U
Selenium	0.500	1.00	0.500	1	U
Thallium	1.00	25.0	1.00	1	U
Vanadium	0.250	0.500	0.250	1	U
Zinc	0.500	1.00	0.500	1	U

MDL Method Detection Limit
RL Reporting/quantitation Limit

* Analyte concentration > RL

KEMRON FORMS - Modified 05/01/2006
Version 1.5 PDF File ID: 485924
Report generated 05/30/2006 10:51

KEMRON Environmental Services

METHOD BLANK REPORT

Login Number: L0605548 Run Date: 05/25/2006 Sample ID: WG214009-02
Instrument ID: PE-ICP2 Run Time: 17:00 Prep Method: 3005A
File ID: P2.052506.170026 Analyst: KHR Method: 6010B
Workgroup (AAB#): WG214050 Matrix: Water Units: mg/L
Contract #: Cal ID: PE-ICP-25-MAY-06

Analytes	SQL	PQL	Concentration	Dilution	Qualifier
Aluminum	0.0500	0.100	0.0500	1	U
Silver	0.00500	0.0100	0.00500	1	U
Arsenic	0.00200	0.0100	0.00200	1	U
Barium	0.00250	0.0100	0.00250	1	U
Beryllium	0.000500	0.0100	0.000500	1	U
Calcium	0.100	0.200	0.100	1	U
Cadmium	0.00250	0.0100	0.00250	1	U
Cobalt	0.00250	0.0200	0.00250	1	U
Chromium	0.00250	0.0200	0.00250	1	U
Copper	0.00500	0.0200	0.00500	1	U
Iron	0.0250	0.100	0.0250	1	U
Potassium	0.250	1.00	0.250	1	U
Magnesium	0.250	0.500	0.250	1	U
Manganese	0.00100	0.0100	0.00100	1	U
Sodium	0.250	0.500	0.250	1	U
Nickel	0.00500	0.0400	0.00500	1	U
Lead	0.00250	0.00500	0.00250	1	U
Vanadium	0.00500	0.0100	0.00500	1	U
Zinc	0.00500	0.0200	0.00500	1	U

MDL Method Detection Limit
RL Reporting/quantitation Limit

* Analyte concentration > RL

KEMRON FORMS - Modified 05/01/2006
Version 1.5 PDF File ID: 485583
Report generated 05/26/2006 16:55

KEMRON Environmental Services

LABORATORY CONTROL SAMPLE (LCS)

Login Number: L0605548	Run Date: 05/26/2006	Sample ID: WG214006-04
Instrument ID: IRIS-ICP	Run Time: 11:49	Prep Method: 3050B
File ID: IR.052606.114900	Analyst: SLP	Method: 6010B
Workgroup (AAB#): WG214040	Matrix: Solid	Units: mg/kg
Contract #:	Cal ID: IRIS-I-26-MAY-06	

Analytes	Expected	Found	% Rec	LCS Limits	Q
Aluminum	250	247	98.8	80 - 120	
Silver	10.0	10.1	101	80 - 120	
Arsenic	10.0	10.0	100	80 - 120	
Barium	25.0	24.8	99.2	80 - 120	
Beryllium	1.25	1.26	101	80 - 120	
Calcium	250	247	98.8	80 - 120	
Cadmium	1.25	1.27	101	80 - 120	
Cobalt	5.00	5.07	101	80 - 120	
Chromium	12.5	12.7	102	80 - 120	
Copper	12.5	12.3	98.1	80 - 120	
Iron	100	102	102	80 - 120	
Potassium	1250	1320	106	80 - 120	
Magnesium	250	244	97.8	80 - 120	
Manganese	12.5	12.7	102	80 - 120	
Sodium	1250	1380	111	80 - 120	
Nickel	12.5	12.3	98.6	80 - 120	
Lead	12.5	12.1	96.6	80 - 120	
Antimony	30.0	29.6	98.8	80 - 120	
Selenium	10.0	10.1	101	80 - 120	
Thallium	12.5	13.1	105	80 - 120	
Vanadium	25.0	24.9	99.6	80 - 120	
Zinc	25.0	24.8	99.2	80 - 120	

KEMRON FORMS - Modified 05/01/2006
Version 1.5 PDF File ID: 485925
Report generated 05/30/2006 10:51

KEMRON Environmental Services

LABORATORY CONTROL SAMPLE (LCS)

Login Number: L0605548 | Run Date: 05/25/2006 | Sample ID: WG214009-03
Instrument ID: PE-ICP2 | Run Time: 17:06 | Prep Method: 3005A
File ID: P2.052506.170652 | Analyst: KHR | Method: 6010B
Workgroup (AAB#): WG214050 | Matrix: Water | Units: mg/L
Contract #: | Cal ID: PE-ICP-25-MAY-06

Analytes	Expected	Found	% Rec	LCS Limits	Q
Aluminum	5.00	5.01	100	85 - 115	
Silver	0.200	0.215	107	85 - 115	
Arsenic	0.200	0.211	105	85 - 115	
Barium	0.500	0.533	107	85 - 115	
Beryllium	0.0250	0.0269	108	85 - 115	
Calcium	5.00	5.46	109	85 - 115	
Cadmium	0.0250	0.0263	105	85 - 115	
Cobalt	0.100	0.108	108	85 - 115	
Chromium	0.250	0.263	105	85 - 115	
Copper	0.250	0.262	105	85 - 115	
Iron	2.00	2.07	103	85 - 115	
Potassium	25.0	25.8	103	85 - 115	
Magnesium	5.00	5.14	103	85 - 115	
Manganese	0.250	0.265	106	85 - 115	
Sodium	25.0	26.0	104	85 - 115	
Nickel	0.250	0.265	106	85 - 115	
Lead	0.250	0.265	106	85 - 115	
Vanadium	0.500	0.523	105	85 - 115	
Zinc	0.500	0.523	105	85 - 115	

KEMRON FORMS - Modified 05/01/2006
Version 1.5 PDF File ID: 485584
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KEMRON Environmental Services

MS/MSD REPORT

Loginnum:L0605548 Cal ID: IRIS-ICP-26-MAY-06 Worknum:WG214040
Instrument ID:IRIS-ICP Contract #: Prep Method:3050B
Parent ID:L0605548-05 File ID:IR.052606.123100 Dil:1 Method:6010B
Sample ID:L0605548-06 MS File ID:IR.052606.123700 Dil:1 Matrix:Soil
Sample ID:L0605548-07 MSD File ID:IR.052606.125500 Dil:1 Units:mg/kg
Percent Solid:61.4

Analyte	Parent	MS Spiked	MS Found	MS %Rec	MSD Spiked	MSD Found	MSD %Rec	%RPD	%Rec Limits	RPD Limit	Q
Aluminum, Total	9290	313	17800	2730	313	18600	2960	3.97	75 - 125	20	*
Silver, Total	1.13	12.5	13.6	99.4	12.5	13.5	98.9	0.439	75 - 125	20	
Arsenic, Total	5.05	12.5	17.1	96.2	12.5	16.6	91.9	3.23	75 - 125	20	
Barium, Total	59.6	31.3	102	136	31.3	97.9	122	4.21	75 - 125	20	*
Beryllium, Total	0.611	1.57	2.30	108	1.57	2.34	110	1.40	75 - 125	20	
Calcium, Total	4250	313	3520	-234	313	3360	-285	4.62	75 - 125	20	*
Cadmium, Total	1.13	1.57	2.29	74.4	1.57	2.17	66.7	5.38	75 - 125	20	*
Cobalt, Total	7.36	6.26	13.5	97.8	6.26	12.6	84.3	6.48	75 - 125	20	
Chromium, Total	12.3	15.7	33.2	133	15.7	32.5	128	2.24	75 - 125	20	*
Copper, Total	14.5	15.7	25.9	72.5	15.7	27.2	80.8	4.93	75 - 125	20	*
Iron, Total	22400	125	18700	-3000	125	17200	-4180	8.25	75 - 125	20	*
Potassium, Total	1670	1570	4090	155	1570	4260	165	4.02	75 - 125	20	*
Magnesium, Total	2630	313	3650	326	313	4020	443	9.53	75 - 125	20	*
Manganese, Total	181	15.7	215	216	15.7	238	360	9.95	75 - 125	20	*
Sodium, Total	1590	1570	3470	120	1570	3850	144	10.2	75 - 125	20	*
Nickel, Total	9.45	15.7	24.6	96.7	15.7	24.5	95.9	0.534	75 - 125	20	
Lead, Total	75.6	15.7	157	523	15.7	50.0	-163	104	75 - 125	20	*
Antimony, Total	U	37.6	20.8	55.3	37.6	19.9	53.0	4.25	75 - 125	20	*
Thallium, Total	U	15.7	12.9	82.4	15.7	13.0	82.9	0.537	75 - 125	20	
Vanadium, Total	20.1	31.3	63.0	137	31.3	64.5	142	2.34	75 - 125	20	*
Zinc, Total	74.3	31.3	107	104	31.3	89.8	49.4	17.5	75 - 125	20	*

* FAILS %REC LIMIT

FAILS RPD LIMIT

KEMRON FORMS - Modified 05/30/2006
Version 1.5 PDF File ID:485926
Report generated 05/30/2006 10:51

KEMRON Environmental Services

MS/MSD REPORT

Loginnum:L0605548 Cal ID: IRIS-ICP-26-MAY-06 Worknum:WG214040
Instrument ID:IRIS-ICP Contract #: Prep Method:3050B
Parent ID:L0605548-05 File ID:IR.052606.144800 Dil:10 Method:6010B
Sample ID:L0605548-06 MS File ID:IR.052606.145400 Dil:10 Matrix:Soil
Sample ID:L0605548-07 MSD File ID:IR.052606.150000 Dil:10 Units:mg/kg
Percent Solid:61.4

Analyte	Parent	MS Spiked	MS Found	MS %Rec	MSD Spiked	MSD Found	MSD %Rec	%RPD	%Rec Limits	RPD Limit	Q
Selenium, Total	U	12.5	0	0	12.5	0	0	0	75 - 125	20	*

* FAILS %REC LIMIT

FAILS RPD LIMIT

KEMRON FORMS - Modified 05/30/2006
Version 1.5 PDF File ID: 485926
Report generated 05/30/2006 10:51

KEMRON Environmental Services

MS/MSD REPORT

Loginnum:L0605548 Cal ID: IRIS-ICP-26-MAY-06 Worknum:WG214040
Instrument ID:IRIS-ICP Contract #: Prep Method:3050B
Parent ID:L0605548-14 File ID:IR.052606.133700 Dil:1 Method:6010B
Sample ID:L0605548-15 MS File ID:IR.052606.134300 Dil:1 Matrix:Soil
Sample ID:L0605548-16 MSD File ID:IR.052606.134900 Dil:1 Units:mg/kg
Percent Solid:98.1

Analyte	Parent	MS Spiked	MS Found	MS %Rec	MSD Spiked	MSD Found	MSD %Rec	%RPD	%Rec Limits	RPD Limit	Q
Aluminum, Total	9920	196	18600	4410	196	18300	4260	1.58	75 - 125	20	*
Silver, Total	0.701	7.84	8.42	98.5	7.84	8.07	93.9	4.35	75 - 125	20	
Arsenic, Total	4.71	7.84	12.1	93.8	7.84	11.8	90.0	2.46	75 - 125	20	
Barium, Total	265	19.6	133	-675	19.6	87.6	-906	41.1	75 - 125	20	*
Beryllium, Total	0.552	0.980	1.61	108	0.980	1.73	120	7.19	75 - 125	20	
Calcium, Total	29100	196	20400	-4470	196	6960	-11300	98.2	75 - 125	20	*
Cadmium, Total	0.104	0.980	1.14	106	0.980	0.960	87.3	17.0	75 - 125	20	
Cobalt, Total	4.23	3.92	8.37	106	3.92	7.74	89.6	7.81	75 - 125	20	
Chromium, Total	12.4	9.80	26.6	145	9.80	25.6	134	3.99	75 - 125	20	*
Copper, Total	36.7	9.80	40.8	41.6	9.80	36.9	2.15	9.96	75 - 125	20	*
Iron, Total	14400	78.4	16200	2310	78.4	15100	883	7.16	75 - 125	20	*
Potassium, Total	1290	980	3060	181	980	3030	177	1.18	75 - 125	20	*
Magnesium, Total	1780	196	2710	479	196	2720	481	0.170	75 - 125	20	*
Manganese, Total	118	9.80	169	524	9.80	127	95.2	28.4	75 - 125	20	*
Sodium, Total	116	980	1170	107	980	1150	106	1.31	75 - 125	20	
Nickel, Total	10.1	9.80	25.0	152	9.80	19.3	94.1	25.8	75 - 125	20	*
Lead, Total	52.7	9.80	43.5	-93.9	9.80	32.1	-211	30.3	75 - 125	20	*
Antimony, Total	1.63	23.5	13.9	52.1	23.5	13.5	50.3	3.10	75 - 125	20	*
Selenium, Total	U	7.84	6.60	84.1	7.84	5.82	74.2	12.5	75 - 125	20	*
Thallium, Total	U	9.80	7.85	80.1	9.80	7.79	79.5	0.747	75 - 125	20	
Vanadium, Total	18.8	19.6	50.5	162	19.6	47.8	148	5.58	75 - 125	20	*
Zinc, Total	254	19.6	228	-133	19.6	113	-719	67.5	75 - 125	20	*

* FAILS %REC LIMIT

FAILS RPD LIMIT

KEMRON FORMS - Modified 05/30/2006
Version 1.5 PDF File ID: 485926
Report generated 05/30/2006 10:51

KEMRON Environmental Services

MATRIX SPIKE AND MATRIX SPIKE DUP (MS/MSD)

Loginnum:L0605548 Cal ID: PE-ICP2- Worknum:WG214050
Instrument ID:PE-ICP2 Contract #: Method:6010B
Parent ID:WG214009-01 File ID:P2.052506.171941 Dil:1 Matrix:WATER
Sample ID:WG214009-04 MS File ID:P2.052506.172608 Dil:1 Units:mg/L
Sample ID:WG214009-05 MSD File ID:P2.052506.173232 Dil:1

Analyte	Parent	MS Spiked	MS Found	MS %Rec	MSD Spiked	MSD Found	MSD %Rec	%RPD	%Rec Limits	RPD Limit	Q
Aluminum, Total	ND	5.00	4.84	96.8	5.00	4.87	97.4	0.635	75 - 125	20	
Arsenic, Total	0.0158	0.200	0.206	95.3	0.200	0.204	94.1	1.21	75 - 125	20	
Barium, Total	0.0860	0.500	0.600	103	0.500	0.594	102	0.981	75 - 125	20	
Beryllium, Total	ND	0.0250	0.0251	100	0.0250	0.0248	99.1	1.18	75 - 125	20	
Cadmium, Total	ND	0.0250	0.0238	95.3	0.0250	0.0237	94.7	0.683	75 - 125	20	
Calcium, Total	20.9	5.00	26.4	110	5.00	26.6	114	0.758	75 - 125	20	
Chromium, Total	0.540	0.250	0.796	102	0.250	0.786	98.4	1.26	75 - 125	20	
Cobalt, Total	0.0214	0.100	0.121	99.3	0.100	0.121	99.4	0.0381	75 - 125	20	
Copper, Total	0.00978	0.250	0.265	102	0.250	0.261	100	1.42	75 - 125	20	
Iron, Total	2.42	2.00	4.46	102	2.00	4.58	108	2.56	75 - 125	20	
Lead, Total	ND	0.250	0.252	101	0.250	0.252	101	0.172	75 - 125	20	
Magnesium, Total	12.4	5.00	17.4	100	5.00	17.7	106	1.72	75 - 125	20	
Manganese, Total	0.338	0.250	0.596	103	0.250	0.596	103	0.00788	75 - 125	20	
Nickel, Total	1.87	0.250	2.15	115	0.250	2.16	119	0.428	75 - 125	20	
Potassium, Total	0.628	25.0	25.7	100	25.0	25.5	99.4	0.821	75 - 125	20	
Silver, Total	ND	0.200	0.202	101	0.200	0.200	100	1.20	75 - 125	20	
Vanadium, Total	0.00925	0.500	0.519	102	0.500	0.515	101	0.670	75 - 125	20	
Zinc, Total	ND	0.500	0.497	99.3	0.500	0.494	98.9	0.458	75 - 125	20	

* FAILS %REC LIMIT

FAILS RPD LIMIT

NOTE: This is an internal quality control sample.

KEMRON FORMS - Modified 03/16/2006
Version 1.5 PDF File ID: 485585
Report generated 05/26/2006 16:55

KEMRON ENVIRONMENTAL SERVICES
SERIAL DILUTION REPORT

Sample Login ID: L0605548 Worknum: WG214040
Instrument ID: IRIS-ICP Method: 6010B
Sample ID: L0605548-01 File ID: IR.052606.115500 Dil: 1 Units: mg/kg
Serial Dilution ID: WG214040-02 File ID: IR.052606.120100 Dil: 5

Analyte	Sample	C	Serial Dilution	C	% Difference	Q
Aluminum	275		274		0.364	
Antimony	0.0527	F	0	U	100	
Arsenic	0.120	X	0.129	X	7.50	
Barium	3.28		3.32		1.22	
Beryllium	0.0141		0.0145	F	2.84	
Cadmium	0.0115	X	0.0129	X	12.2	
Calcium	129		137		6.20	
Chromium	0.409		0.454	X	11.0	E
Cobalt	0.130		0.152	X	16.9	E
Copper	1.45		1.43	X	1.38	
Iron	473		554		17.1	E
Lead	2.34		2.62		12.0	E
Magnesium	42.6		44.2	X	3.76	
Manganese	3.73		4.58		22.8	E
Nickel	0.291	X	0.317	X	8.93	
Potassium	43.4		41.9	X	3.46	
Selenium	ND	U	ND	U		
Silver	0.0264	X	0	U	100	
Sodium	36.3		35.8		1.38	
Thallium	ND	U	ND	U		
Vanadium	0.490		0.508	X	3.67	
Zinc	5.72		6.07		6.12	

U = Result is below MDL
F = Result is between MDL and RL
X = Result is greater than RL and less than 50 times the MDL
E = %D exceeds control limit of 10% and initial
sample result is greater than or equal to 50 times the MDL

KEMRON FORMS - Modified 02/14/2006
Version 1.3 PDF File ID: 485920
Report generated 05/30/2006 10:55

KEMRON ENVIRONMENTAL SERVICES
SERIAL DILUTION REPORT

Sample Login ID: L0605548 Worknum: WG214040
Instrument ID: IRIS-ICP Method: 6010B
Sample ID: L0605548-01 File ID: IR.052606.120100 Dil: 5 Units: mg/kg
Serial Dilution ID: WG214040-02 File ID: IR.052606.120700 Dil: 25

Analyte	Sample	C	Serial Dilution	C	% Difference	Q
Aluminum	274		274		0.00	
Antimony	0	U	ND	U		
Arsenic	0.129	X	0	U	100	
Barium	3.32		3.25		2.11	
Beryllium	0.0145	F	0.0153	F	5.52	
Cadmium	0.0129	X	0.0298	F	131	
Calcium	137		135		1.46	
Chromium	0.454	X	0.467	F	2.86	
Cobalt	0.152	X	0.202	F	32.9	
Copper	1.43	X	1.41	X	1.40	
Iron	554		573		3.43	
Lead	2.62		2.68	X	2.29	
Magnesium	44.2	X	43.3	X	2.04	
Manganese	4.58		4.86		6.11	
Nickel	0.317	X	0.330	F	4.10	
Potassium	41.9	X	39.4	X	5.97	
Selenium	ND	U	ND	U		
Silver	0	U	0	U		
Sodium	35.8		33.2	X	7.26	
Thallium	ND	U	0	U		
Vanadium	0.508	X	0.485	X	4.53	
Zinc	6.07		6.08	X	0.165	

U = Result is below MDL
F = Result is between MDL and RL
X = Result is greater than RL and less than 50 times the MDL
E = %D exceeds control limit of 10% and initial
sample result is greater than or equal to 50 times the MDL

KEMRON FORMS - Modified 02/14/2006
Version 1.3 PDF File ID: 485920
Report generated 05/30/2006 10:55

KEMRON ENVIRONMENTAL SERVICES
SERIAL DILUTION REPORT

Sample Login ID: L0605548 Worknum: WG214050
Instrument ID: PE-ICP2 Method: 6010B
Sample ID: L0605525-02 File ID: P2.052506.173858 Dil: 1 Units: mg/L
Serial Dilution ID: WG214050-02 File ID: P2.052506.175145 Dil: 5

Analyte	Sample	C	Serial Dilution	C	% Difference	Q
Aluminum	6.99		7.62	X	9.01	
Arsenic	ND	U	0.0195	F	666	
Barium	0.0406	X	0.0516	X	27.1	
Beryllium	0	U	0	U		
Cadmium	ND	U	ND	U		
Calcium	1.32	X	1.41	X	6.82	
Chromium	0.00813	F	0	U	100	
Cobalt	0	U	0	U		
Copper	0.0411	X	0.0420	F	2.19	
Iron	4.27		4.22	X	1.17	
Lead	0.656		0.668		1.83	
Magnesium	0.668	X	0	U	100	
Manganese	0.0477	X	0.0467	F	2.10	
Nickel	0.00643	F	0	U	100	
Potassium	0.817	F	0	U	100	
Silver	0	U	0	U		
Sodium	20.4		20.3	X	0.490	
Vanadium	0.0122	X	0	U	100	
Zinc	0.0441	X	0.0958	F	117	

U = Result is below MDL
F = Result is between MDL and RL
X = Result is greater than RL and less than 50 times the MDL
E = %D exceeds control limit of 10% and initial
sample result is greater than or equal to 50 times the MDL

KEMRON FORMS - Modified 02/14/2006
Version 1.3 PDF File ID: 485579
Report generated 05/26/2006 16:55

KEMRON ENVIRONMENTAL SERVICES
POST SPIKE REPORT

Sample Login ID: L0605548 **Worknum:** WG214040
Instrument ID: IRIS-ICP **Method:** 6010B
Post Spike ID: WG214040-01 **File ID:** IR.052606.121300 **Dil:** 1 **Units:** mg/kg
Sample ID: L0605548-01 **File ID:** IR.052606.115500 **Dil:** 1 **Matrix:** Soil

Analyte	Control Limit %R	Post Spike Result	C	Sample Result	C	Spike Added(SA)	% R	Q
ALUMINUM	75 - 125	254		275		5.00	130	N
ANTIMONY	75 - 125	0.635		0.0527	F	0.600	97.9	
ARSENIC	75 - 125	0.303		0.120		0.200	97.5	
BARIUM	75 - 125	3.46		3.28		0.500	102	
BERYLLIUM	75 - 125	0.0378		0.0141		0.0250	100	
CADMIUM	75 - 125	0.0341		0.0115		0.0250	95.0	
CALCIUM	75 - 125	122		129		5.00	118	
CHROMIUM	75 - 125	0.599		0.409		0.250	92.4	
COBALT	75 - 125	0.211		0.130		0.100	94.0	
COPPER	75 - 125	1.56		1.45		0.250	102	
IRON	75 - 125	432		473		2.00	315	N
LEAD	75 - 125	2.36		2.34		0.250	102	
MAGNESIUM	75 - 125	43.4		42.6		5.00	101	
MANGANESE	75 - 125	3.60		3.73		0.250	97.2	
NICKEL	75 - 125	0.508		0.291		0.250	98.4	
POTASSIUM	75 - 125	66.7		43.4		25.0	111	
SELENIUM	75 - 125	0.130		ND	U	0.200	65.0	N
SILVER	75 - 125	0.227		0.0264		0.200	102	
SODIUM	75 - 125	61.4		36.3		25.0	115	
THALLIUM	75 - 125	0.213	F	ND	U	0.250	85.2	
VANADIUM	75 - 125	0.936		0.490		0.500	99.0	
ZINC	75 - 125	5.63		5.72		0.500	96.4	

N = % Recoverv exceeds control limits of 75% - 125%
F = Result is between MDL and RL
U = Sample result is below MDL. A value of zero is used in the calculation.

KEMRON FORMS - Modified 02/14/2006
Version 2.0 PDF File ID: 485921
Report generated 05/30/2006 10:55

KEMRON ENVIRONMENTAL SERVICES
POST SPIKE REPORT

Sample Login ID: L0605548 **Worknum:** WG214040
Instrument ID: IRIS-ICP **Method:** 6010B
Post Spike ID: WG214040-01 **File ID:** IR.052606.143000 **Dil:** 5 **Units:** mg/kg
Sample ID: L0605548-01 **File ID:** IR.052606.120100 **Dil:** 5 **Matrix:** Soil

Analyte	Control Limit %R	Post Spike Result	C	Sample Result	C	Spike Added(SA)	% R	Q
ALUMINUM	75 - 125	303		274		25.0	116	
ANTIMONY	75 - 125	3.09		0	U	3.00	103	
ARSENIC	75 - 125	1.14		0.129		1.00	101	
BARIUM	75 - 125	5.87		3.32		2.50	102	
BERYLLIUM	75 - 125	0.141		0.0145	F	0.125	101	
CADMIUM	75 - 125	0.139		0.0129		0.125	101	
CALCIUM	75 - 125	163		137		25.0	104	
CHROMIUM	75 - 125	1.67		0.454		1.25	97.3	
COBALT	75 - 125	0.640		0.152		0.500	97.6	
COPPER	75 - 125	2.72		1.43		1.25	103	
IRON	75 - 125	557		554		10.0	30.0	N
LEAD	75 - 125	3.81		2.62		1.25	95.2	
MAGNESIUM	75 - 125	68.0		44.2		25.0	95.2	
MANGANESE	75 - 125	5.67		4.58		1.25	87.2	
NICKEL	75 - 125	1.51		0.317		1.25	95.4	
POTASSIUM	75 - 125	180		41.9		125	110	
SELENIUM	75 - 125	0.959		ND	U	1.00	95.9	
SILVER	75 - 125	1.06		0	U	1.00	106	
SODIUM	75 - 125	179		35.8		125	115	
THALLIUM	75 - 125	1.24	F	ND	U	1.25	99.2	
VANADIUM	75 - 125	3.10		0.508		2.50	104	
ZINC	75 - 125	8.37		6.07		2.50	92.0	

N = % Recoverv exceeds control limits of 75% - 125%
F = Result is between MDL and RL
U = Sample result is below MDL. A value of zero is used in the calculation.

KEMRON FORMS - Modified 02/14/2006
Version 2.0 PDF File ID: 485921
Report generated 05/30/2006 10:55

KEMRON ENVIRONMENTAL SERVICES
POST SPIKE REPORT

Sample Login ID: L0605548 **Worknum:** WG214050
Instrument ID: PE-ICP2 **Method:** 6010B
Post Spike ID: WG214050-01 **File ID:** P2.052506.174519 **Dil:** 1 **Units:** mg/L
Sample ID: L0605525-02 **File ID:** P2.052506.173858 **Dil:** 1 **Matrix:** Water

Analyte	Control Limit %R	Post Spike Result	C	Sample Result	C	Spike Added(SA)	% R	Q
ALUMINUM	75 - 125	11.9		6.99		5.00	112	
ARSENIC	75 - 125	0.202		ND	U	0.200	101	
BARIUM	75 - 125	0.566		0.0406		0.500	106	
BERYLLIUM	75 - 125	0.0260		0	U	0.0250	104	
CADMIUM	75 - 125	0.0252		ND	U	0.0250	101	
CALCIUM	75 - 125	6.48		1.32		5.00	106	
CHROMIUM	75 - 125	0.264		0.00813	F	0.250	103	
COBALT	75 - 125	0.106		0	U	0.100	106	
COPPER	75 - 125	0.293		0.0411		0.250	102	
IRON	75 - 125	5.90		4.27		2.00	103	
LEAD	75 - 125	0.844		0.656		0.250	101	
MAGNESIUM	75 - 125	5.72		0.668		5.00	102	
MANGANESE	75 - 125	0.309		0.0477		0.250	106	
NICKEL	75 - 125	0.267		0.00643	F	0.250	104	
POTASSIUM	75 - 125	26.2		0.817	F	25.0	102	
SILVER	75 - 125	0.207		0	U	0.200	104	
SODIUM	75 - 125	43.8		20.4		25.0	102	
VANADIUM	75 - 125	0.521		0.0122		0.500	102	
ZINC	75 - 125	0.561		0.0441		0.500	104	

N = % Recovery exceeds control limits of 75% - 125%
F = Result is between MDL and RL
U = Sample result is below MDL. A value of zero is used in the calculation.

KEMRON FORMS - Modified 02/14/2006
Version 2.0 PDF File ID: 485580
Report generated 05/26/2006 16:55

KEMRON Environmental Services

INITIAL CALIBRATION SUMMARY

Login Number: L0605548 **Workgroup (AAB#):** WG214040

Analytical Method: 6010B **Instrument ID:** IRIS-ICP

ICAL Worknum: WG214105 **Initial Calibration Date:** 26-MAY-2006 10:00

Analyte	WG214105-01		WG214105-02		WG214105-03		WG214105-04		WG214105-05		WG214105-06	
	STD	INT	STD	INT	STD	INT	STD	INT	STD	INT	STD	INT
Aluminum	NA	.0NA41	NA	.2NA99	NA	.4NA97	NA	9.NA74	NA	19NA63	NA	38NA17
Antimony	NA	-.0NA855	.NA2	.0NA07	.NA4	.1NA87	NA	5.NA93	1NA2	10NA19	2NA4	21NA69
Arsenic	NA	-.0NA971	NA	NA	.NA8	.0NA77	NA	1.NA52	NA	3NA2	NA	7.NA68
Barium	NA	1.NA61	NA1	6.NA96	NA2	12NA19	NA	28NA64	NA	57NA39	NA	11NA.5
Beryllium	NA	.3NA29	.0NA05	1.NA87	.NA1	2.NA68	.NA5	52NA57	NA5	10NA71	NA	20NA82
Cadmium	NA	.5NA53	NA	NA	.NA1	.7NA03	.NA5	3.NA64	NA5	6.NA08	NA	11NA28
Calcium	NA	.6NA15	NA	2.NA24	NA	3.NA35	NA	68NA85	NA	13NA07	NA	26NA15
Chromium	NA	1.NA63	.NA5	2.NA37	NA1	3.NA28	NA5	51NA69	NA5	10NA79	NA	19NA15
Cobalt	NA	.7NA24	NA	NA	.NA4	1.NA76	NA	13NA66	NA	25NA74	NA	48NA53
Copper	NA	.1NA58	NA	NA	NA1	.4NA89	NA5	8.NA34	NA5	17NA72	NA	34NA47
Iron	NA	.0NA76	NA4	.5NA26	NA8	1.NA19	NA	24NA82	NA	49NA48	NA	98NA89
Lead	NA	.0NA68	NA	NA	NA1	.2NA12	NA5	5.NA59	NA5	10NA85	NA	21NA41
Magnesium	NA	.0NA83	NA	NA	NA	.2NA91	NA	5.NA63	NA	9.NA31	NA	19NA53
Manganese	NA	.1NA18	.NA5	8.NA65	NA1	16NA16	NA5	41NA49	NA5	82NA04	NA	16NA.5
Nickel	NA	.0NA92	NA	NA	NA1	1.NA54	NA5	27NA21	NA5	53NA57	NA	10NA91
Potassium	NA	-.9NA424	NA	4.NA678	NA	10NA88	NA	29NA08	NA	58NA68	NA0	11NA.1
Selenium	NA	.1NA27	NA	NA	.NA8	.1NA22	NA	1.NA32	NA	2.NA08	NA	4.NA81
Silver	NA	-.NA35	NA	NA	.NA8	.1NA07	NA	7.NA39	NA	14NA46	NA	28NA67
Sodium	NA	-.2NA971	NA	34NA47	NA	69NA77	NA	1NA87	NA	35NA.7	NA0	69NA.7
Thallium	NA	.0NA18	NA	NA	NA1	.0NA46	NA5	1NA9	NA5	3.NA39	NA	6.NA39
Vanadium	NA	1.NA57	NA1	1.NA84	NA2	2.NA96	NA	25NA57	NA	51NA48	NA	10NA91
Zinc	NA	.3NA47	NA1	2.NA39	NA2	4.NA14	NA	10NA.4	NA	20NA51	NA	40NA62

INT = Instrument intensity
R = Coefficient of correlation
Q = Data Qualifier
*** = Out of Compliance; R < 0.995**

KEMRON FORMS - Modified 03/03/2006
Version 1.5 PDF File ID: 485929
Report generated 05/30/2006 10:51

KEMRON Environmental Services

INITIAL CALIBRATION SUMMARY

Analyte	R	Q
Aluminum	0.999984	
Antimony	0.999988	
Arsenic	0.999959	
Barium	0.999987	
Beryllium	0.999971	
Cadmium	0.999355	
Calcium	0.999917	
Chromium	0.999952	
Cobalt	0.999881	
Copper	0.999644	
Iron	0.999982	
Lead	0.999921	
Magnesium	0.999802	
Manganese	0.999926	
Nickel	0.999987	
Potassium	0.999980	
Selenium	0.999645	
Silver	0.999974	
Sodium	0.999892	
Thallium	0.999892	
Vanadium	0.999967	
Zinc	0.999956	

INT = Instrument intensity
R = Coefficient of correlation
Q = Data Qualifier
*** = Out of Compliance; R < 0.995**

KEMRON FORMS - Modified 03/03/2006
Version 1.5 PDF File ID: 485929
Report generated 05/30/2006 10:51

KEMRON Environmental Services

INITIAL CALIBRATION SUMMARY

Login Number: L0605548 **Workgroup (AAB#):** WG214050

Analytical Method: 6010B **Instrument ID:** PE-ICP2

ICAL Worknum: WG214115 **Initial Calibration Date:** 25-MAY-2006 10:09

Analyte	WG214115-01		WG214115-02		WG214115-03		WG214115-04		WG214115-05			
	STD	INT	STD	INT	STD	INT	STD	INT	STD	INT	R	Q
Aluminum	NA	-166.NA93835	NA	1047.NA72261	NA	2350.NA49377	NA	1103.NA0772	NA	2198.NA4674	0.999998	
Arsenic	NA	-11.7NA14162	NA	NA	.NA08	8.749NA08188	NA	250.NA2684	NA	497.3NA4524	0.999977	
Barium	NA	-104.NA66012	NA	680.1NA40832	NA	1397.NA87804	NA	6558.NA41301	NA	1332.NA8474	0.999971	
Beryllium	NA	-519.NA28287	.NA05	222.0NA78607	.NA01	438.2NA38311	NA	1972.NA37744	NA	3979.NA0426	0.999989	
Cadmium	NA	43.99NA06944	.NA05	17.28NA03186	.NA01	29.2NA8229	NA	1490.NA08992	NA	2967.NA27196	0.999998	
Calcium	NA	-66.8NA71591	NA	11.34NA29746	NA	17.62NA64044	NA	865.3NA67992	NA	1753.NA17757	0.999977	
Chromium	NA	32.82NA45414	.NA05	186.4NA66961	NA	387.3NA59986	NA	1798.NA64163	NA	3665.NA07197	0.999957	
Cobalt	NA	-12.0NA16531	.NA02	43.03NA37895	.NA04	89.60NA19148	NA	451.NA05091	NA	920.4NA25401	0.999958	
Copper	NA	-20.4NA14591	.NA05	288.2NA00883	NA	737.4NA09236	NA	3332.NA56214	NA	6846.NA34689	0.999916	
Iron	NA	.407NA41503	NA	1.468NA00052	NA	3.780NA20084	NA	159.3NA02539	NA	314.7NA44661	0.999980	
Lead	NA	10.90NA83668	NA	11.66NA33389	NA	23.20NA97125	NA	1126.NA67283	NA	2271.NA46942	0.999992	
Magnesium	NA	4.199NA40141	NA	47.3NA45637	NA	95.10NA91345	NA	4409.NA82825	NA	8894.NA89981	0.999991	
Manganese	NA	-33.4NA36203	.NA05	2834.NA37474	NA	5553.NA28935	NA	2558.NA9363	NA	5086.NA.941	0.999996	
Nickel	NA	-25.NA7763	.NA05	86.05NA08698	NA	140.1NA54846	NA	6213.NA68888	NA	12611.NA45888	0.999970	
Potassium	NA	-219.NA01767	NA	1602.NA78705	NA	3497.NA12171	NA	1772.NA.8491	NA	3538.NA.2243	1.00000	
Silver	NA	-260.NA81187	.NA04	473.0NA73448	.NA08	881.5NA51966	NA	4034.NA86207	NA	8155.NA46001	0.999985	
Sodium	NA	3836.NA77657	NA	6006.NA03705	NA	12879.NA46038	NA	5813.NA.194	NA	11494.NA2.832	1.00000	
Vanadium	NA	2816.NA90385	NA	945.0NA71041	NA	2188.NA17915	NA	1086.NA.1359	NA	2220.NA.1114	0.999949	
Zinc	NA	-1.39NA83494	NA	136.7NA56539	NA	231.NA619	NA	1031.NA76593	NA	2087.NA54996	0.999980	

INT = Instrument intensity
R = Coefficient of correlation
Q = Data Qualifier
*** = Out of Compliance; R < 0.995**

KEMRON FORMS - Modified 03/03/2006
Version 1.5 PDF File ID: 485588
Report generated 05/26/2006 16:55

KEMRON Environmental Services

INITIAL CALIBRATION VERIFICATION (ICV)

Login Number:L0605548 Run Date:05/26/2006 Sample ID:WG214105-07
Instrument ID:IRIS-ICP Run Time:10:07 Method:6010B
File ID:IR.052606.100700 Analyst:SLP Units:mg/L
Workgroup (AAB#):WG214040 Cal ID:IRIS-I - 26-MAY-06

Analyte		Expected	Found	%REC	LIMITS	Q
Aluminum		10	10.1	101	90 - 110	
Silver		.4	0.412	103	90 - 110	
Arsenic		.4	0.410	103	90 - 110	
Barium		1	0.998	99.8	90 - 110	
Beryllium		.05	0.0514	103	90 - 110	
Calcium		10	10.2	102	90 - 110	
Cadmium		.05	0.0518	104	90 - 110	
Cobalt		.2	0.205	103	90 - 110	
Chromium		.5	0.503	101	90 - 110	
Copper		.5	0.500	100	90 - 110	
Iron		4	4.00	99.9	90 - 110	
Potassium		50	50.7	101	90 - 110	
Magnesium		10	10.3	103	90 - 110	
Manganese		.5	0.508	102	90 - 110	
Sodium		50	51.5	103	90 - 110	
Nickel		.5	0.493	98.5	90 - 110	
Lead		.5	0.492	98.4	90 - 110	
Antimony		1.2	1.22	102	90 - 110	
Selenium		.4	0.409	102	90 - 110	
Thallium		.5	0.506	101	90 - 110	
Vanadium		1	1.02	102	90 - 110	
Zinc		1	1.01	101	90 - 110	

* Exceeds LIMITS Limit

KEMRON FORMS - Modified 03/03/2006
Version 1.3 PDF File ID: 485930
Report generated 05/30/2006 10:51

KEMRON Environmental Services

INITIAL CALIBRATION VERIFICATION (ICV)

Login Number: L0605548 Run Date: 05/25/2006 Sample ID: WG214115-06
Instrument ID: PE-ICP2 Run Time: 10:16 Method: 6010B
File ID: P2.052506.101630 Analyst: KHR Units: mg/L
Workgroup (AAB#): WG214050 Cal ID: PE-ICP - 25-MAY-06

Analyte		Expected	Found	%REC	LIMITS	Q
Aluminum		10	9.90	99.0	90 - 110	
Silver		.4	0.400	100	90 - 110	
Arsenic		.4	0.386	96.5	90 - 110	
Barium		1	1.02	102	90 - 110	
Beryllium		.05	0.0497	99.4	90 - 110	
Calcium		10	10.4	104	90 - 110	
Cadmium		.05	0.0491	98.3	90 - 110	
Cobalt		.2	0.199	99.3	90 - 110	
Chromium		.5	0.502	100	90 - 110	
Copper		.5	0.500	100	90 - 110	
Iron		4	4.05	101	90 - 110	
Potassium		50	49.0	98.1	90 - 110	
Magnesium		10	9.93	99.3	90 - 110	
Manganese		.5	0.501	100	90 - 110	
Sodium		50	48.6	97.2	90 - 110	
Nickel		.5	0.506	101	90 - 110	
Lead		.5	0.507	101	90 - 110	
Vanadium		1	0.988	98.8	90 - 110	
Zinc		1	0.996	99.6	90 - 110	

* Exceeds LIMITS Limit

KEMRON FORMS - Modified 03/03/2006
Version 1.3 PDF File ID: 485589
Report generated 05/26/2006 16:55

KEMRON Environmental Services

INITIAL CALIBRATION BLANK (ICB)

Login Number: L0605548 Run Date: 05/26/2006 Sample ID: WG214105-08
Instrument ID: IRIS-ICP Run Time: 10:13 Method: 6010B
File ID: IR.052606.101300 Analyst: SLP Units: mg/L
Workgroup (AAB#): WG214040 Cal ID: IRIS-I - 26-MAY-06

Analytes	MDL	RDL	Concentration	Dilution	Qualifier
Aluminum	0.200	0.400	-.0291	1	U
Silver	0.00500	0.0100	.00066	1	U
Arsenic	0.0100	0.0200	-.00005	1	U
Barium	0.00200	0.0100	-.00027	1	U
Beryllium	0.000240	0.0100	.00001	1	U
Calcium	0.100	0.200	.00088	1	U
Cadmium	0.00100	0.00200	.00024	1	U
Cobalt	0.00240	0.0200	-.0001	1	U
Chromium	0.00240	0.0200	-.00004	1	U
Copper	0.0100	0.0200	-.00011	1	U
Iron	0.0200	0.0400	-.00284	1	U
Potassium	0.500	1.00	.0348	1	U
Magnesium	0.240	0.500	-.00619	1	U
Manganese	0.00200	0.0100	.00018	1	U
Sodium	0.100	0.500	.0124	1	U
Nickel	0.0100	0.0400	0	1	U
Lead	0.0100	0.100	-.00197	1	U
Antimony	0.0100	0.200	.00057	1	U
Selenium	0.0100	0.0200	-.00172	1	U
Thallium	0.0200	0.500	.00243	1	U
Vanadium	0.00500	0.0100	-.00088	1	U
Zinc	0.0100	0.0200	.00099	1	U

U = Result is less than MDL
F = Result is between MDL and RL

KEMRON FORMS - Modified 03/06/2006
Version 1.5 PDF File ID: 485931
Report generated 05/30/2006 10:51

KEMRON Environmental Services

INITIAL CALIBRATION BLANK (ICB)

Login Number: L0605548 Run Date: 05/25/2006 Sample ID: WG214115-07
Instrument ID: PE-ICP2 Run Time: 10:22 Method: 6010B
File ID: P2.052506.102255 Analyst: KHR Units: mg/L
Workgroup (AAB#): WG214050 Cal ID: PE-ICP - 25-MAY-06

Analytes	MDL	RDL	Concentration	Dilution	Qualifier
Aluminum	0.0500	0.100	-.00157	1	U
Silver	0.00500	0.0100	.00025	1	U
Arsenic	0.00200	0.0100	.000228	1	U
Barium	0.00250	0.0100	.00154	1	U
Beryllium	0.000500	0.0100	.000042	1	U
Calcium	0.100	0.200	-.0746	1	U
Cadmium	0.00250	0.0100	-.000123	1	U
Cobalt	0.00250	0.0200	.000436	1	U
Chromium	0.00250	0.0200	.00103	1	U
Copper	0.00500	0.0200	.00081	1	U
Iron	0.0250	0.100	-.0127	1	U
Potassium	0.250	1.00	.00258	1	U
Magnesium	0.250	0.500	.0141	1	U
Manganese	0.00100	0.0100	-.000798	1	U
Sodium	0.250	0.500	-.0326	1	U
Nickel	0.00500	0.0400	.000635	1	U
Lead	0.00250	0.00500	.00189	1	U
Vanadium	0.00500	0.0100	.00148	1	U
Zinc	0.00500	0.0200	.000236	1	U

U = Result is less than MDL
F = Result is between MDL and RL

KEMRON FORMS - Modified 03/06/2006
Version 1.5 PDF File ID: 485590
Report generated 05/26/2006 16:55

KEMRON Environmental Services

CONTINUING CALIBRATION BLANK (CCB)

Login Number:L0605548 Run Date:05/26/2006 Sample ID:WG214105-12
Instrument ID:IRIS-ICP Run Time:10:37 Method:6010B
File ID:IR.052606.103700 Analyst:SLP Units:mg/L
Workgroup (AAB#):WG214040 Cal ID:IRIS-I - 26-MAY-06

Analytes	MDL	RDL	Concentration	Dilution	Qualifier
Aluminum	0.200	0.400	0.00670	1	U
Silver	0.00500	0.0100	0.00258	1	U
Arsenic	0.0100	0.0200	-0.00138	1	U
Barium	0.00200	0.0100	0.0000500	1	U
Beryllium	0.000240	0.0100	0	1	U
Calcium	0.100	0.200	0.00157	1	U
Cadmium	0.00100	0.00200	0.000420	1	U
Cobalt	0.00240	0.0200	-0.000290	1	U
Chromium	0.00240	0.0200	-0.0000800	1	U
Copper	0.0100	0.0200	0.00126	1	U
Iron	0.0200	0.0400	-0.00134	1	U
Potassium	0.500	1.00	0.00290	1	U
Magnesium	0.240	0.500	0.0444	1	U
Manganese	0.00200	0.0100	0.000140	1	U
Sodium	0.100	0.500	0.00497	1	U
Nickel	0.0100	0.0400	0.000110	1	U
Lead	0.0100	0.100	-0.00240	1	U
Antimony	0.0100	0.200	-0.00265	1	U
Selenium	0.0100	0.0200	0.000820	1	U
Thallium	0.0200	0.500	0.00289	1	U
Vanadium	0.00500	0.0100	0.000450	1	U
Zinc	0.0100	0.0200	0.000790	1	U

U = Result is less than MDL
F = Result is between MDL and RL

KEMRON FORMS - Modified 04/19/2006
Version 1.5 PDF File ID: 485934
Report generated 05/30/2006 10:51

KEMRON Environmental Services

CONTINUING CALIBRATION BLANK (CCB)

Login Number:L0605548 Run Date:05/26/2006 Sample ID:WG214105-14
Instrument ID:IRIS-ICP Run Time:11:37 Method:6010B
File ID:IR.052606.113700 Analyst:SLP Units:mg/L
Workgroup (AAB#):WG214040 Cal ID:IRIS-I - 26-MAY-06

Analytes	MDL	RDL	Concentration	Dilution	Qualifier
Aluminum	0.200	0.400	-0.00967	1	U
Silver	0.00500	0.0100	0.000880	1	U
Arsenic	0.0100	0.0200	-0.00234	1	U
Barium	0.00200	0.0100	-0.0000600	1	U
Beryllium	0.000240	0.0100	0.0000100	1	U
Calcium	0.100	0.200	-0.00292	1	U
Cadmium	0.00100	0.00200	0.000230	1	U
Cobalt	0.00240	0.0200	-0.000300	1	U
Chromium	0.00240	0.0200	-0.000120	1	U
Copper	0.0100	0.0200	0.000940	1	U
Iron	0.0200	0.0400	-0.00321	1	U
Potassium	0.500	1.00	0.0134	1	U
Magnesium	0.240	0.500	-0.000700	1	U
Manganese	0.00200	0.0100	0.000130	1	U
Sodium	0.100	0.500	0.00855	1	U
Nickel	0.0100	0.0400	-0.000170	1	U
Lead	0.0100	0.100	-0.00165	1	U
Antimony	0.0100	0.200	0.000790	1	U
Selenium	0.0100	0.0200	-0.00276	1	U
Thallium	0.0200	0.500	0.00123	1	U
Vanadium	0.00500	0.0100	0.000460	1	U
Zinc	0.0100	0.0200	0.000610	1	U

U = Result is less than MDL
F = Result is between MDL and RL

KEMRON FORMS - Modified 04/19/2006
Version 1.5 PDF File ID: 485934
Report generated 05/30/2006 10:51

KEMRON Environmental Services

CONTINUING CALIBRATION BLANK (CCB)

Login Number:L0605548 Run Date:05/26/2006 Sample ID:WG214105-16
Instrument ID:IRIS-ICP Run Time:12:49 Method:6010B
File ID:IR.052606.124900 Analyst:SLP Units:mg/L
Workgroup (AAB#):WG214040 Cal ID:IRIS-I - 26-MAY-06

Analytes	MDL	RDL	Concentration	Dilution	Qualifier
Aluminum	0.200	0.400	-0.0102	1	U
Silver	0.00500	0.0100	0.00126	1	U
Arsenic	0.0100	0.0200	-0.00155	1	U
Barium	0.00200	0.0100	-0.0000200	1	U
Beryllium	0.000240	0.0100	0.0000100	1	U
Calcium	0.100	0.200	-0.00727	1	U
Cadmium	0.00100	0.00200	0.000100	1	U
Cobalt	0.00240	0.0200	-0.0000900	1	U
Chromium	0.00240	0.0200	-0.000130	1	U
Copper	0.0100	0.0200	0.000700	1	U
Iron	0.0200	0.0400	-0.00227	1	U
Potassium	0.500	1.00	0.0433	1	U
Magnesium	0.240	0.500	-0.00347	1	U
Manganese	0.00200	0.0100	0.000140	1	U
Sodium	0.100	0.500	0.0106	1	U
Nickel	0.0100	0.0400	0.000100	1	U
Lead	0.0100	0.100	-0.00210	1	U
Antimony	0.0100	0.200	-0.000290	1	U
Selenium	0.0100	0.0200	-0.000790	1	U
Thallium	0.0200	0.500	0.00158	1	U
Vanadium	0.00500	0.0100	0.0000800	1	U
Zinc	0.0100	0.0200	0.000700	1	U

U = Result is less than MDL
F = Result is between MDL and RL

KEMRON FORMS - Modified 04/19/2006
Version 1.5 PDF File ID: 485934
Report generated 05/30/2006 10:51

KEMRON Environmental Services

CONTINUING CALIBRATION BLANK (CCB)

Login Number:L0605548 Run Date:05/26/2006 Sample ID:WG214105-18
Instrument ID:IRIS-ICP Run Time:14:01 Method:6010B
File ID:IR.052606.140100 Analyst:SLP Units:mg/L
Workgroup (AAB#):WG214040 Cal ID:IRIS-I - 26-MAY-06

Analytes	MDL	RDL	Concentration	Dilution	Qualifier
Aluminum	0.200	0.400	0.000370	1	U
Silver	0.00500	0.0100	0.00206	1	U
Arsenic	0.0100	0.0200	-0.000400	1	U
Barium	0.00200	0.0100	-0.0000300	1	U
Beryllium	0.000240	0.0100	0	1	U
Calcium	0.100	0.200	0.00481	1	U
Cadmium	0.00100	0.00200	0.0000700	1	U
Cobalt	0.00240	0.0200	0.0000800	1	U
Chromium	0.00240	0.0200	-0.000150	1	U
Copper	0.0100	0.0200	-0.000760	1	U
Iron	0.0200	0.0400	-0.00284	1	U
Potassium	0.500	1.00	-0.0127	1	U
Magnesium	0.240	0.500	-0.0456	1	U
Manganese	0.00200	0.0100	0.000130	1	U
Sodium	0.100	0.500	0.0104	1	U
Nickel	0.0100	0.0400	0.000100	1	U
Lead	0.0100	0.100	-0.00193	1	U
Antimony	0.0100	0.200	0.000310	1	U
Selenium	0.0100	0.0200	-0.00319	1	U
Thallium	0.0200	0.500	0.00338	1	U
Vanadium	0.00500	0.0100	-0.00100	1	U
Zinc	0.0100	0.0200	0.000660	1	U

U = Result is less than MDL
F = Result is between MDL and RL

KEMRON FORMS - Modified 04/19/2006
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KEMRON Environmental Services

CONTINUING CALIBRATION BLANK (CCB)

Login Number:L0605548 Run Date:05/26/2006 Sample ID:WG214105-20
Instrument ID:IRIS-ICP Run Time:15:18 Method:6010B
File ID:IR.052606.151800 Analyst:SLP Units:mg/L
Workgroup (AAB#):WG214040 Cal ID:IRIS-I - 26-MAY-06

Analytes	MDL	RDL	Concentration	Dilution	Qualifier
Aluminum	0.200	0.400	-0.00634	1	U
Silver	0.00500	0.0100	0.00106	1	U
Arsenic	0.0100	0.0200	-0.000690	1	U
Barium	0.00200	0.0100	-0.0000300	1	U
Beryllium	0.000240	0.0100	0.0000200	1	U
Calcium	0.100	0.200	-0.00360	1	U
Cadmium	0.00100	0.00200	-0.000140	1	U
Cobalt	0.00240	0.0200	0.0000600	1	U
Chromium	0.00240	0.0200	0.0000500	1	U
Copper	0.0100	0.0200	0.000700	1	U
Iron	0.0200	0.0400	-0.00211	1	U
Potassium	0.500	1.00	0.0149	1	U
Magnesium	0.240	0.500	0.00318	1	U
Manganese	0.00200	0.0100	0.000220	1	U
Sodium	0.100	0.500	0.00688	1	U
Nickel	0.0100	0.0400	0.000140	1	U
Lead	0.0100	0.100	-0.00118	1	U
Antimony	0.0100	0.200	0.00124	1	U
Selenium	0.0100	0.0200	-0.00160	1	U
Thallium	0.0200	0.500	0.00166	1	U
Vanadium	0.00500	0.0100	-0.000180	1	U
Zinc	0.0100	0.0200	0.00109	1	U

U = Result is less than MDL
F = Result is between MDL and RL

KEMRON FORMS - Modified 04/19/2006
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Report generated 05/30/2006 10:51

KEMRON Environmental Services

CONTINUING CALIBRATION BLANK (CCB)

Login Number:L0605548 Run Date:05/26/2006 Sample ID:WG214105-22
Instrument ID:IRIS-ICP Run Time:16:30 Method:6010B
File ID:IR.052606.163000 Analyst:SLP Units:mg/L
Workgroup (AAB#):WG214040 Cal ID:IRIS-I - 26-MAY-06

Analytes	MDL	RDL	Concentration	Dilution	Qualifier
Aluminum	0.200	0.400	-0.00632	1	U
Silver	0.00500	0.0100	0.00146	1	U
Arsenic	0.0100	0.0200	-0.0000100	1	U
Barium	0.00200	0.0100	0.0000200	1	U
Beryllium	0.000240	0.0100	0	1	U
Calcium	0.100	0.200	-0.00194	1	U
Cadmium	0.00100	0.00200	0.0000900	1	U
Cobalt	0.00240	0.0200	-0.000200	1	U
Chromium	0.00240	0.0200	-0.0000500	1	U
Copper	0.0100	0.0200	0.000860	1	U
Iron	0.0200	0.0400	-0.000310	1	U
Potassium	0.500	1.00	-0.0380	1	U
Magnesium	0.240	0.500	0.0220	1	U
Manganese	0.00200	0.0100	0.000220	1	U
Sodium	0.100	0.500	-0.00200	1	U
Nickel	0.0100	0.0400	-0.000160	1	U
Lead	0.0100	0.100	-0.00241	1	U
Antimony	0.0100	0.200	0.000910	1	U
Selenium	0.0100	0.0200	-0.00209	1	U
Thallium	0.0200	0.500	0.00274	1	U
Vanadium	0.00500	0.0100	0.000270	1	U
Zinc	0.0100	0.0200	0.00113	1	U

U = Result is less than MDL
F = Result is between MDL and RL

KEMRON FORMS - Modified 04/19/2006
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Report generated 05/30/2006 10:51

KEMRON Environmental Services

CONTINUING CALIBRATION BLANK (CCB)

Login Number:L0605548 Run Date:05/26/2006 Sample ID:WG214105-24
Instrument ID:IRIS-ICP Run Time:17:13 Method:6010B
File ID:IR.052606.171300 Analyst:SLP Units:mg/L
Workgroup (AAB#):WG214040 Cal ID:IRIS-I - 26-MAY-06

Analytes	MDL	RDL	Concentration	Dilution	Qualifier
Aluminum	0.200	0.400	-0.0107	1	U
Silver	0.00500	0.0100	0.000340	1	U
Arsenic	0.0100	0.0200	-0.0000800	1	U
Barium	0.00200	0.0100	-0.000230	1	U
Beryllium	0.000240	0.0100	0	1	U
Calcium	0.100	0.200	-0.00278	1	U
Cadmium	0.00100	0.00200	0.000240	1	U
Cobalt	0.00240	0.0200	-0.000160	1	U
Chromium	0.00240	0.0200	0.000100	1	U
Copper	0.0100	0.0200	0.000860	1	U
Iron	0.0200	0.0400	-0.00260	1	U
Potassium	0.500	1.00	-0.00337	1	U
Magnesium	0.240	0.500	0.0474	1	U
Manganese	0.00200	0.0100	0.000250	1	U
Sodium	0.100	0.500	0.00524	1	U
Nickel	0.0100	0.0400	0.000230	1	U
Lead	0.0100	0.100	-0.00190	1	U
Antimony	0.0100	0.200	-0.00160	1	U
Selenium	0.0100	0.0200	-0.00178	1	U
Thallium	0.0200	0.500	0.00296	1	U
Vanadium	0.00500	0.0100	0.0000800	1	U
Zinc	0.0100	0.0200	0.00117	1	U

U = Result is less than MDL
F = Result is between MDL and RL

KEMRON FORMS - Modified 04/19/2006
Version 1.5 PDF File ID: 485934
Report generated 05/30/2006 10:51

KEMRON Environmental Services

CONTINUING CALIBRATION BLANK (CCB)

Login Number:L0605548 Run Date:05/26/2006 Sample ID:WG214105-26
Instrument ID:IRIS-ICP Run Time:17:54 Method:6010B
File ID:IR.052606.175400 Analyst:SLP Units:mg/L
Workgroup (AAB#):WG214040 Cal ID:IRIS-I - 26-MAY-06

Analytes	MDL	RDL	Concentration	Dilution	Qualifier
Aluminum	0.200	0.400	-0.00587	1	U
Silver	0.00500	0.0100	0.000870	1	U
Arsenic	0.0100	0.0200	-0.000820	1	U
Barium	0.00200	0.0100	-0.0000600	1	U
Beryllium	0.000240	0.0100	0	1	U
Calcium	0.100	0.200	-0.000910	1	U
Cadmium	0.00100	0.00200	0.000290	1	U
Cobalt	0.00240	0.0200	-0.000140	1	U
Chromium	0.00240	0.0200	-0.000210	1	U
Copper	0.0100	0.0200	0.00126	1	U
Iron	0.0200	0.0400	-0.00519	1	U
Potassium	0.500	1.00	-0.0196	1	U
Magnesium	0.240	0.500	0.0116	1	U
Manganese	0.00200	0.0100	0.0000700	1	U
Sodium	0.100	0.500	0.00136	1	U
Nickel	0.0100	0.0400	0.0000300	1	U
Lead	0.0100	0.100	-0.00168	1	U
Antimony	0.0100	0.200	0.000950	1	U
Selenium	0.0100	0.0200	-0.00269	1	U
Thallium	0.0200	0.500	0.00319	1	U
Vanadium	0.00500	0.0100	-0.000100	1	U
Zinc	0.0100	0.0200	0.000280	1	U

U = Result is less than MDL
F = Result is between MDL and RL

KEMRON FORMS - Modified 04/19/2006
Version 1.5 PDF File ID: 485934
Report generated 05/30/2006 10:51

KEMRON Environmental Services

CONTINUING CALIBRATION BLANK (CCB)

Login Number:L0605548 Run Date:05/25/2006 Sample ID:WG214115-11
Instrument ID:PE-ICP2 Run Time:10:46 Method:6010B
File ID:P2.052506.104621 Analyst:KHR Units:mg/L
Workgroup (AAB#):WG214050 Cal ID:PE-ICP - 25-MAY-06

Analytes	MDL	RDL	Concentration	Dilution	Qualifier
Aluminum	0.0500	0.100	-0.00151	1	U
Silver	0.00500	0.0100	0.000746	1	U
Arsenic	0.00200	0.0100	-0.00239	1	F
Barium	0.00250	0.0100	0.00149	1	U
Beryllium	0.000500	0.0100	0.0000519	1	U
Calcium	0.100	0.200	0.00832	1	U
Cadmium	0.00250	0.0100	0.0000447	1	U
Cobalt	0.00250	0.0200	0.000381	1	U
Chromium	0.00250	0.0200	0.000852	1	U
Copper	0.00500	0.0200	0.000763	1	U
Iron	0.0250	0.100	-0.0249	1	U
Potassium	0.250	1.00	0.0213	1	U
Magnesium	0.250	0.500	0.00996	1	U
Manganese	0.00100	0.0100	-0.000800	1	U
Sodium	0.250	0.500	-0.0424	1	U
Nickel	0.00500	0.0400	0.000363	1	U
Lead	0.00250	0.00500	0.00131	1	U
Vanadium	0.00500	0.0100	0.00254	1	U
Zinc	0.00500	0.0200	0.000519	1	U

U = Result is less than MDL
F = Result is between MDL and RL

KEMRON FORMS - Modified 04/19/2006
Version 1.5 PDF File ID: 485593
Report generated 05/26/2006 16:55

KEMRON Environmental Services

CONTINUING CALIBRATION BLANK (CCB)

Login Number:L0605548 Run Date:05/25/2006 Sample ID:WG214115-21
Instrument ID:PE-ICP2 Run Time:16:54 Method:6010B
File ID:P2.052506.165407 Analyst:KHR Units:mg/L
Workgroup (AAB#):WG214050 Cal ID:PE-ICP - 25-MAY-06

Analytes	MDL	RDL	Concentration	Dilution	Qualifier
Aluminum	0.0500	0.100	-0.00548	1	U
Silver	0.00500	0.0100	-0.000706	1	U
Arsenic	0.00200	0.0100	-0.00271	1	F
Barium	0.00250	0.0100	0.00146	1	U
Beryllium	0.000500	0.0100	0.0000307	1	U
Calcium	0.100	0.200	0.0102	1	U
Cadmium	0.00250	0.0100	-0.000208	1	U
Cobalt	0.00250	0.0200	0.0000894	1	U
Chromium	0.00250	0.0200	0.000825	1	U
Copper	0.00500	0.0200	0.0000487	1	U
Iron	0.0250	0.100	-0.0485	1	F
Potassium	0.250	1.00	0.00920	1	U
Magnesium	0.250	0.500	0.0118	1	U
Manganese	0.00100	0.0100	-0.000786	1	U
Sodium	0.250	0.500	-0.0714	1	U
Nickel	0.00500	0.0400	0.000481	1	U
Lead	0.00250	0.00500	-0.0000108	1	U
Vanadium	0.00500	0.0100	0.00145	1	U
Zinc	0.00500	0.0200	0.000274	1	U

U = Result is less than MDL
F = Result is between MDL and RL

KEMRON FORMS - Modified 04/19/2006
Version 1.5 PDF File ID: 485593
Report generated 05/26/2006 16:55

KEMRON Environmental Services

CONTINUING CALIBRATION BLANK (CCB)

Login Number:L0605548 Run Date:05/25/2006 Sample ID:WG214115-23
Instrument ID:PE-ICP2 Run Time:18:05 Method:6010B
File ID:P2.052506.180517 Analyst:KHR Units:mg/L
Workgroup (AAB#):WG214050 Cal ID:PE-ICP - 25-MAY-06

Analytes	MDL	RDL	Concentration	Dilution	Qualifier
Aluminum	0.0500	0.100	-0.00270	1	U
Silver	0.00500	0.0100	-0.000279	1	U
Arsenic	0.00200	0.0100	0.00145	1	U
Barium	0.00250	0.0100	0.00146	1	U
Beryllium	0.000500	0.0100	0.0000490	1	U
Calcium	0.100	0.200	0.0531	1	U
Cadmium	0.00250	0.0100	-0.000289	1	U
Cobalt	0.00250	0.0200	0.000221	1	U
Chromium	0.00250	0.0200	0.00105	1	U
Copper	0.00500	0.0200	-0.000590	1	U
Iron	0.0250	0.100	-0.0334	1	F
Potassium	0.250	1.00	0.0255	1	U
Magnesium	0.250	0.500	0.0102	1	U
Manganese	0.00100	0.0100	-0.000835	1	U
Sodium	0.250	0.500	-0.0433	1	U
Nickel	0.00500	0.0400	0.000253	1	U
Lead	0.00250	0.00500	0.000891	1	U
Vanadium	0.00500	0.0100	0.00212	1	U
Zinc	0.00500	0.0200	0.000106	1	U

U = Result is less than MDL
F = Result is between MDL and RL

KEMRON FORMS - Modified 04/19/2006
Version 1.5 PDF File ID: 485593
Report generated 05/26/2006 16:55

KEMRON Environmental Services

CONTINUING CALIBRATION BLANK (CCB)

Login Number:L0605548 Run Date:05/25/2006 Sample ID:WG214115-25
Instrument ID:PE-ICP2 Run Time:19:15 Method:6010B
File ID:P2.052506.191523 Analyst:KHR Units:mg/L
Workgroup (AAB#):WG214050 Cal ID:PE-ICP - 25-MAY-06

Analytes	MDL	RDL	Concentration	Dilution	Qualifier
Aluminum	0.0500	0.100	-0.00569	1	U
Silver	0.00500	0.0100	-0.000830	1	U
Arsenic	0.00200	0.0100	0.000450	1	U
Barium	0.00250	0.0100	0.00151	1	U
Beryllium	0.000500	0.0100	0.0000614	1	U
Calcium	0.100	0.200	0.00726	1	U
Cadmium	0.00250	0.0100	-0.000214	1	U
Cobalt	0.00250	0.0200	0.000122	1	U
Chromium	0.00250	0.0200	0.000917	1	U
Copper	0.00500	0.0200	0.000174	1	U
Iron	0.0250	0.100	0.0108	1	U
Potassium	0.250	1.00	0.0454	1	U
Magnesium	0.250	0.500	0.00411	1	U
Manganese	0.00100	0.0100	-0.000798	1	U
Sodium	0.250	0.500	0.0191	1	U
Nickel	0.00500	0.0400	0.000672	1	U
Lead	0.00250	0.00500	-0.00193	1	U
Vanadium	0.00500	0.0100	0.00121	1	U
Zinc	0.00500	0.0200	-0.000113	1	U

U = Result is less than MDL
F = Result is between MDL and RL

KEMRON FORMS - Modified 04/19/2006
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Report generated 05/26/2006 16:55

KEMRON Environmental Services

CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L0605548 Run Date: 05/26/2006 Sample ID: WG214105-11
Instrument ID: IRIS-ICP Run Time: 10:31 Method: 6010B
File ID: IR.052606.103100 Analyst: SLP
Workgroup (AAB#): WG214040 Cal ID: IRIS-I - 26-MAY-06

Analyte		Expected	Found	%REC	LIMITS	UNITS	Q
Aluminum		10	10.1	101	90 - 110	mg/L	
Silver		.4	0.409	102	90 - 110	mg/L	
Arsenic		.4	0.411	103	90 - 110	mg/L	
Barium		1	0.998	99.8	90 - 110	mg/L	
Beryllium		.05	0.0513	103	90 - 110	mg/L	
Calcium		10	10.1	101	90 - 110	mg/L	
Cadmium		.05	0.0513	103	90 - 110	mg/L	
Cobalt		.2	0.205	103	90 - 110	mg/L	
Chromium		.5	0.502	100	90 - 110	mg/L	
Copper		.5	0.500	100	90 - 110	mg/L	
Iron		4	4.00	100	90 - 110	mg/L	
Potassium		50	51.1	102	90 - 110	mg/L	
Magnesium		10	10.3	103	90 - 110	mg/L	
Manganese		.5	0.508	102	90 - 110	mg/L	
Sodium		50	51.9	104	90 - 110	mg/L	
Nickel		.5	0.494	98.8	90 - 110	mg/L	
Lead		.5	0.496	99.2	90 - 110	mg/L	
Antimony		1.2	1.22	102	90 - 110	mg/L	
Selenium		.4	0.407	102	90 - 110	mg/L	
Thallium		.5	0.507	101	90 - 110	mg/L	
Vanadium		1	1.02	102	90 - 110	mg/L	
Zinc		1	1.01	101	90 - 110	mg/L	

* Exceeds LIMITS Criteria

KEMRON FORMS - Modified 04/19/2006
Version 1.3 PDF File ID: 485933
Report generated 05/30/2006 10:51

KEMRON Environmental Services

CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L0605548 Run Date: 05/26/2006 Sample ID: WG214105-13
Instrument ID: IRIS-ICP Run Time: 11:26 Method: 6010B
File ID: IR.052606.112600 Analyst: SLP
Workgroup (AAB#): WG214040 Cal ID: IRIS-I - 26-MAY-06

Analyte		Expected	Found	%REC	LIMITS	UNITS	Q
Aluminum		10	9.97	99.7	90 - 110	mg/L	
Silver		.4	0.406	101	90 - 110	mg/L	
Arsenic		.4	0.407	102	90 - 110	mg/L	
Barium		1	0.989	98.9	90 - 110	mg/L	
Beryllium		.05	0.0505	101	90 - 110	mg/L	
Calcium		10	10.1	101	90 - 110	mg/L	
Cadmium		.05	0.0516	103	90 - 110	mg/L	
Cobalt		.2	0.204	102	90 - 110	mg/L	
Chromium		.5	0.498	99.5	90 - 110	mg/L	
Copper		.5	0.495	99.0	90 - 110	mg/L	
Iron		4	3.96	99.1	90 - 110	mg/L	
Potassium		50	51.0	102	90 - 110	mg/L	
Magnesium		10	10.2	102	90 - 110	mg/L	
Manganese		.5	0.504	101	90 - 110	mg/L	
Sodium		50	51.8	104	90 - 110	mg/L	
Nickel		.5	0.486	97.2	90 - 110	mg/L	
Lead		.5	0.489	97.7	90 - 110	mg/L	
Antimony		1.2	1.21	101	90 - 110	mg/L	
Selenium		.4	0.402	100	90 - 110	mg/L	
Thallium		.5	0.500	100	90 - 110	mg/L	
Vanadium		1	1.01	101	90 - 110	mg/L	
Zinc		1	0.996	99.6	90 - 110	mg/L	

* Exceeds LIMITS Criteria

KEMRON FORMS - Modified 04/19/2006
Version 1.3 PDF File ID: 485933
Report generated 05/30/2006 10:51

KEMRON Environmental Services

CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number:L0605548 Run Date:05/26/2006 Sample ID:WG214105-15
Instrument ID:IRIS-ICP Run Time:12:43 Method:6010B
File ID:IR.052606.124300 Analyst:SLP
Workgroup (AAB#):WG214040 Cal ID:IRIS-I - 26-MAY-06

Analyte		Expected	Found	%REC	LIMITS	UNITS	Q
Aluminum		10	10.1	101	90 - 110	mg/L	
Silver		.4	0.412	103	90 - 110	mg/L	
Arsenic		.4	0.409	102	90 - 110	mg/L	
Barium		1	1.00	100	90 - 110	mg/L	
Beryllium		.05	0.0510	102	90 - 110	mg/L	
Calcium		10	10.1	101	90 - 110	mg/L	
Cadmium		.05	0.0518	104	90 - 110	mg/L	
Cobalt		.2	0.205	102	90 - 110	mg/L	
Chromium		.5	0.501	100	90 - 110	mg/L	
Copper		.5	0.500	100	90 - 110	mg/L	
Iron		4	3.98	99.5	90 - 110	mg/L	
Potassium		50	51.5	103	90 - 110	mg/L	
Magnesium		10	10.2	102	90 - 110	mg/L	
Manganese		.5	0.506	101	90 - 110	mg/L	
Sodium		50	52.3	105	90 - 110	mg/L	
Nickel		.5	0.488	97.6	90 - 110	mg/L	
Lead		.5	0.491	98.1	90 - 110	mg/L	
Antimony		1.2	1.22	102	90 - 110	mg/L	
Selenium		.4	0.404	101	90 - 110	mg/L	
Thallium		.5	0.501	100	90 - 110	mg/L	
Vanadium		1	1.02	102	90 - 110	mg/L	
Zinc		1	1.00	100	90 - 110	mg/L	

* Exceeds LIMITS Criteria

KEMRON FORMS - Modified 04/19/2006
Version 1.3 PDF File ID: 485933
Report generated 05/30/2006 10:51

KEMRON Environmental Services

CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L0605548 Run Date: 05/26/2006 Sample ID: WG214105-17
Instrument ID: IRIS-ICP Run Time: 13:55 Method: 6010B
File ID: IR.052606.135500 Analyst: SLP
Workgroup (AAB#): WG214040 Cal ID: IRIS-I - 26-MAY-06

Analyte		Expected	Found	%REC	LIMITS	UNITS	Q
Aluminum		10	10.0	100	90 - 110	mg/L	
Silver		.4	0.405	101	90 - 110	mg/L	
Arsenic		.4	0.408	102	90 - 110	mg/L	
Barium		1	0.989	98.9	90 - 110	mg/L	
Beryllium		.05	0.0503	101	90 - 110	mg/L	
Calcium		10	10.1	101	90 - 110	mg/L	
Cadmium		.05	0.0518	104	90 - 110	mg/L	
Cobalt		.2	0.205	102	90 - 110	mg/L	
Chromium		.5	0.500	100	90 - 110	mg/L	
Copper		.5	0.498	99.6	90 - 110	mg/L	
Iron		4	3.99	99.7	90 - 110	mg/L	
Potassium		50	51.8	104	90 - 110	mg/L	
Magnesium		10	10.1	101	90 - 110	mg/L	
Manganese		.5	0.506	101	90 - 110	mg/L	
Sodium		50	52.8	106	90 - 110	mg/L	
Nickel		.5	0.488	97.7	90 - 110	mg/L	
Lead		.5	0.490	98.0	90 - 110	mg/L	
Antimony		1.2	1.22	102	90 - 110	mg/L	
Selenium		.4	0.406	102	90 - 110	mg/L	
Thallium		.5	0.502	100	90 - 110	mg/L	
Vanadium		1	1.02	102	90 - 110	mg/L	
Zinc		1	0.997	99.7	90 - 110	mg/L	

* Exceeds LIMITS Criteria

KEMRON FORMS - Modified 04/19/2006
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KEMRON Environmental Services

CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L0605548 Run Date: 05/26/2006 Sample ID: WG214105-19
Instrument ID: IRIS-ICP Run Time: 15:12 Method: 6010B
File ID: IR.052606.151200 Analyst: SLP
Workgroup (AAB#): WG214040 Cal ID: IRIS-I - 26-MAY-06

Analyte		Expected	Found	%REC	LIMITS	UNITS	Q
Aluminum		10	10.1	101	90 - 110	mg/L	
Silver		.4	0.406	102	90 - 110	mg/L	
Arsenic		.4	0.407	102	90 - 110	mg/L	
Barium		1	0.991	99.1	90 - 110	mg/L	
Beryllium		.05	0.0504	101	90 - 110	mg/L	
Calcium		10	10.1	101	90 - 110	mg/L	
Cadmium		.05	0.0521	104	90 - 110	mg/L	
Cobalt		.2	0.205	102	90 - 110	mg/L	
Chromium		.5	0.500	100	90 - 110	mg/L	
Copper		.5	0.494	98.8	90 - 110	mg/L	
Iron		4	3.97	99.2	90 - 110	mg/L	
Potassium		50	51.2	102	90 - 110	mg/L	
Magnesium		10	10.3	103	90 - 110	mg/L	
Manganese		.5	0.506	101	90 - 110	mg/L	
Sodium		50	52.1	104	90 - 110	mg/L	
Nickel		.5	0.485	97.1	90 - 110	mg/L	
Lead		.5	0.487	97.4	90 - 110	mg/L	
Antimony		1.2	1.21	101	90 - 110	mg/L	
Selenium		.4	0.404	101	90 - 110	mg/L	
Thallium		.5	0.499	99.7	90 - 110	mg/L	
Vanadium		1	1.02	102	90 - 110	mg/L	
Zinc		1	0.994	99.4	90 - 110	mg/L	

* Exceeds LIMITS Criteria

KEMRON FORMS - Modified 04/19/2006
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KEMRON Environmental Services

CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L0605548 Run Date: 05/26/2006 Sample ID: WG214105-21
Instrument ID: IRIS-ICP Run Time: 16:24 Method: 6010B
File ID: IR.052606.162400 Analyst: SLP
Workgroup (AAB#): WG214040 Cal ID: IRIS-I - 26-MAY-06

Analyte		Expected	Found	%REC	LIMITS	UNITS	Q
Aluminum		10	10.0	100	90 - 110	mg/L	
Silver		.4	0.406	101	90 - 110	mg/L	
Arsenic		.4	0.404	101	90 - 110	mg/L	
Barium		1	0.988	98.8	90 - 110	mg/L	
Beryllium		.05	0.0501	100	90 - 110	mg/L	
Calcium		10	10.0	100	90 - 110	mg/L	
Cadmium		.05	0.0517	103	90 - 110	mg/L	
Cobalt		.2	0.204	102	90 - 110	mg/L	
Chromium		.5	0.498	99.5	90 - 110	mg/L	
Copper		.5	0.496	99.2	90 - 110	mg/L	
Iron		4	3.95	98.8	90 - 110	mg/L	
Potassium		50	51.3	103	90 - 110	mg/L	
Magnesium		10	10.2	102	90 - 110	mg/L	
Manganese		.5	0.504	101	90 - 110	mg/L	
Sodium		50	52.1	104	90 - 110	mg/L	
Nickel		.5	0.484	96.8	90 - 110	mg/L	
Lead		.5	0.487	97.5	90 - 110	mg/L	
Antimony		1.2	1.21	101	90 - 110	mg/L	
Selenium		.4	0.399	99.8	90 - 110	mg/L	
Thallium		.5	0.497	99.4	90 - 110	mg/L	
Vanadium		1	1.01	101	90 - 110	mg/L	
Zinc		1	0.990	99.0	90 - 110	mg/L	

* Exceeds LIMITS Criteria

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KEMRON Environmental Services

CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L0605548 Run Date: 05/26/2006 Sample ID: WG214105-23
Instrument ID: IRIS-ICP Run Time: 17:07 Method: 6010B
File ID: IR.052606.170700 Analyst: SLP
Workgroup (AAB#): WG214040 Cal ID: IRIS-I - 26-MAY-06

Analyte		Expected	Found	%REC	LIMITS	UNITS	Q
Aluminum		10	10.0	100	90 - 110	mg/L	
Silver		.4	0.404	101	90 - 110	mg/L	
Arsenic		.4	0.407	102	90 - 110	mg/L	
Barium		1	0.988	98.8	90 - 110	mg/L	
Beryllium		.05	0.0501	100	90 - 110	mg/L	
Calcium		10	9.89	98.9	90 - 110	mg/L	
Cadmium		.05	0.0515	103	90 - 110	mg/L	
Cobalt		.2	0.205	102	90 - 110	mg/L	
Chromium		.5	0.496	99.3	90 - 110	mg/L	
Copper		.5	0.498	99.5	90 - 110	mg/L	
Iron		4	3.98	99.4	90 - 110	mg/L	
Potassium		50	50.9	102	90 - 110	mg/L	
Magnesium		10	9.96	99.6	90 - 110	mg/L	
Manganese		.5	0.504	101	90 - 110	mg/L	
Sodium		50	51.9	104	90 - 110	mg/L	
Nickel		.5	0.486	97.1	90 - 110	mg/L	
Lead		.5	0.492	98.3	90 - 110	mg/L	
Antimony		1.2	1.21	101	90 - 110	mg/L	
Selenium		.4	0.400	100	90 - 110	mg/L	
Thallium		.5	0.498	99.7	90 - 110	mg/L	
Vanadium		1	1.02	102	90 - 110	mg/L	
Zinc		1	0.988	98.8	90 - 110	mg/L	

* Exceeds LIMITS Criteria

KEMRON FORMS - Modified 04/19/2006
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KEMRON Environmental Services

CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L0605548 Run Date: 05/26/2006 Sample ID: WG214105-25
Instrument ID: IRIS-ICP Run Time: 17:48 Method: 6010B
File ID: IR.052606.174800 Analyst: SLP
Workgroup (AAB#): WG214040 Cal ID: IRIS-I - 26-MAY-06

Analyte		Expected	Found	%REC	LIMITS	UNITS	Q
Aluminum		10	10.0	100	90 - 110	mg/L	
Silver		.4	0.409	102	90 - 110	mg/L	
Arsenic		.4	0.405	101	90 - 110	mg/L	
Barium		1	0.992	99.2	90 - 110	mg/L	
Beryllium		.05	0.0507	101	90 - 110	mg/L	
Calcium		10	10.1	101	90 - 110	mg/L	
Cadmium		.05	0.0518	104	90 - 110	mg/L	
Cobalt		.2	0.204	102	90 - 110	mg/L	
Chromium		.5	0.499	99.9	90 - 110	mg/L	
Copper		.5	0.497	99.4	90 - 110	mg/L	
Iron		4	3.96	98.9	90 - 110	mg/L	
Potassium		50	51.0	102	90 - 110	mg/L	
Magnesium		10	10.2	102	90 - 110	mg/L	
Manganese		.5	0.504	101	90 - 110	mg/L	
Sodium		50	51.6	103	90 - 110	mg/L	
Nickel		.5	0.486	97.3	90 - 110	mg/L	
Lead		.5	0.488	97.5	90 - 110	mg/L	
Antimony		1.2	1.21	101	90 - 110	mg/L	
Selenium		.4	0.401	100	90 - 110	mg/L	
Thallium		.5	0.500	100	90 - 110	mg/L	
Vanadium		1	1.01	101	90 - 110	mg/L	
Zinc		1	0.996	99.6	90 - 110	mg/L	

* Exceeds LIMITS Criteria

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KEMRON Environmental Services

CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L0605548 Run Date: 05/25/2006 Sample ID: WG214115-10
Instrument ID: PE-ICP2 Run Time: 10:39 Method: 6010B
File ID: P2.052506.103959 Analyst: KHR
Workgroup (AAB#): WG214050 Cal ID: PE-ICP - 25-MAY-06

Analyte		Expected	Found	%REC	LIMITS	UNITS	Q
Aluminum		10	10.1	101	90 - 110	mg/L	
Silver		.4	0.407	102	90 - 110	mg/L	
Arsenic		.4	0.398	99.5	90 - 110	mg/L	
Barium		1	1.03	103	90 - 110	mg/L	
Beryllium		.05	0.0505	101	90 - 110	mg/L	
Calcium		10	10.7	107	90 - 110	mg/L	
Cadmium		.05	0.0509	102	90 - 110	mg/L	
Cobalt		.2	0.202	101	90 - 110	mg/L	
Chromium		.5	0.510	102	90 - 110	mg/L	
Copper		.5	0.507	101	90 - 110	mg/L	
Iron		4	4.09	102	90 - 110	mg/L	
Potassium		50	49.6	99.1	90 - 110	mg/L	
Magnesium		10	10.1	101	90 - 110	mg/L	
Manganese		.5	0.512	102	90 - 110	mg/L	
Sodium		50	49.6	99.2	90 - 110	mg/L	
Nickel		.5	0.513	103	90 - 110	mg/L	
Lead		.5	0.526	105	90 - 110	mg/L	
Vanadium		1	1.00	100	90 - 110	mg/L	
Zinc		1	1.01	101	90 - 110	mg/L	

* Exceeds LIMITS Criteria

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KEMRON Environmental Services

CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L0605548 Run Date: 05/25/2006 Sample ID: WG214115-20
Instrument ID: PE-ICP2 Run Time: 16:47 Method: 6010B
File ID: P2.052506.164732 Analyst: KHR
Workgroup (AAB#): WG214050 Cal ID: PE-ICP - 25-MAY-06

Analyte		Expected	Found	%REC	LIMITS	UNITS	Q
Aluminum		10	10.2	102	90 - 110	mg/L	
Silver		.4	0.411	103	90 - 110	mg/L	
Arsenic		.4	0.396	99.1	90 - 110	mg/L	
Barium		1	1.04	104	90 - 110	mg/L	
Beryllium		.05	0.0512	102	90 - 110	mg/L	
Calcium		10	10.7	107	90 - 110	mg/L	
Cadmium		.05	0.0505	101	90 - 110	mg/L	
Cobalt		.2	0.204	102	90 - 110	mg/L	
Chromium		.5	0.512	102	90 - 110	mg/L	
Copper		.5	0.512	102	90 - 110	mg/L	
Iron		4	4.04	101	90 - 110	mg/L	
Potassium		50	50.0	100	90 - 110	mg/L	
Magnesium		10	10.1	101	90 - 110	mg/L	
Manganese		.5	0.514	103	90 - 110	mg/L	
Sodium		50	49.7	99.5	90 - 110	mg/L	
Nickel		.5	0.519	104	90 - 110	mg/L	
Lead		.5	0.520	104	90 - 110	mg/L	
Vanadium		1	1.01	101	90 - 110	mg/L	
Zinc		1	1.02	102	90 - 110	mg/L	

* Exceeds LIMITS Criteria

KEMRON FORMS - Modified 04/19/2006
Version 1.3 PDF File ID: 485592
Report generated 05/26/2006 16:55

KEMRON Environmental Services

CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L0605548 Run Date: 05/25/2006 Sample ID: WG214115-22
Instrument ID: PE-ICP2 Run Time: 17:58 Method: 6010B
File ID: P2.052506.175854 Analyst: KHR
Workgroup (AAB#): WG214050 Cal ID: PE-ICP - 25-MAY-06

Analyte		Expected	Found	%REC	LIMITS	UNITS	Q
Aluminum		10	10.1	101	90 - 110	mg/L	
Silver		.4	0.403	101	90 - 110	mg/L	
Arsenic		.4	0.392	98.0	90 - 110	mg/L	
Barium		1	1.03	103	90 - 110	mg/L	
Beryllium		.05	0.0502	100	90 - 110	mg/L	
Calcium		10	10.6	106	90 - 110	mg/L	
Cadmium		.05	0.0498	99.7	90 - 110	mg/L	
Cobalt		.2	0.201	100	90 - 110	mg/L	
Chromium		.5	0.504	101	90 - 110	mg/L	
Copper		.5	0.505	101	90 - 110	mg/L	
Iron		4	3.99	99.8	90 - 110	mg/L	
Potassium		50	49.5	99.1	90 - 110	mg/L	
Magnesium		10	9.84	98.4	90 - 110	mg/L	
Manganese		.5	0.510	102	90 - 110	mg/L	
Sodium		50	49.1	98.1	90 - 110	mg/L	
Nickel		.5	0.512	102	90 - 110	mg/L	
Lead		.5	0.521	104	90 - 110	mg/L	
Vanadium		1	0.999	99.9	90 - 110	mg/L	
Zinc		1	1.01	101	90 - 110	mg/L	

* Exceeds LIMITS Criteria

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KEMRON Environmental Services

CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L0605548 Run Date: 05/25/2006 Sample ID: WG214115-24
Instrument ID: PE-ICP2 Run Time: 19:09 Method: 6010B
File ID: P2.052506.190900 Analyst: KHR
Workgroup (AAB#): WG214050 Cal ID: PE-ICP - 25-MAY-06

Analyte		Expected	Found	%REC	LIMITS	UNITS	Q
Aluminum		10	10.1	101	90 - 110	mg/L	
Silver		.4	0.404	101	90 - 110	mg/L	
Arsenic		.4	0.395	98.7	90 - 110	mg/L	
Barium		1	1.03	103	90 - 110	mg/L	
Beryllium		.05	0.0502	100	90 - 110	mg/L	
Calcium		10	10.7	107	90 - 110	mg/L	
Cadmium		.05	0.0505	101	90 - 110	mg/L	
Cobalt		.2	0.203	101	90 - 110	mg/L	
Chromium		.5	0.505	101	90 - 110	mg/L	
Copper		.5	0.505	101	90 - 110	mg/L	
Iron		4	4.04	101	90 - 110	mg/L	
Potassium		50	49.8	99.6	90 - 110	mg/L	
Magnesium		10	10.0	100	90 - 110	mg/L	
Manganese		.5	0.512	102	90 - 110	mg/L	
Sodium		50	49.4	98.7	90 - 110	mg/L	
Nickel		.5	0.513	103	90 - 110	mg/L	
Lead		.5	0.526	105	90 - 110	mg/L	
Vanadium		1	0.999	99.9	90 - 110	mg/L	
Zinc		1	1.00	100	90 - 110	mg/L	

* Exceeds LIMITS Criteria

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KEMRON ENVIRONMENTAL SERVICES
INTERFERENCE CHECK SAMPLES

Login number: L0605548 **Workgroup (AAB#):** WG214040
Instrument ID: IRIS-ICP **Method:** 6010B
Sol. A : WG214105-09 **File ID:** IR.052606.101900 **Units:** mg/L
Sol. AB : WG214105-10 **File ID:** IR.052606.102500

	Sol. A			Sol. AB			
ANALYTE	True	Found	%Recovery	True	Found	%Recovery	Q
Aluminum	250	246	98.4	250	246	98.4	
Antimony	NS	0.0104	NS	0.500	0.503	101	
Arsenic	NS	-0.00420	NS	0.250	0.241	96.4	
Barium	NS	-0.000230	NS	0.250	0.242	96.8	
Beryllium	NS	-0.000180	NS	0.250	0.248	99.2	
Cadmium	NS	0.000630	NS	0.500	0.477	95.4	
Calcium	250	238	95.2	250	239	95.6	
Chromium	NS	0.00115	NS	0.250	0.229	91.6	
Cobalt	NS	0.00232	NS	0.250	0.233	93.2	
Copper	NS	0.00228	NS	0.250	0.247	98.8	
Iron	100	89.7	89.7	100	94.6	94.6	
Lead	NS	0.00396	NS	0.500	0.451	90.2	
Magnesium	250	245	98.0	250	244	97.6	
Manganese	NS	-0.00277	NS	0.250	0.215	86.0	
Nickel	NS	-0.00404	NS	0.500	0.444	88.8	
Potassium	NS	0.0856	NS	5.00	5.16	103	
Selenium	NS	0.00905	NS	0.250	0.249	99.6	
Silver	NS	0.00380	NS	0.500	0.504	101	
Sodium	NS	0.0243	NS	5.00	5.14	103	
Thallium	NS	-0.00872	NS	0.500	0.429	85.8	
Vanadium	NS	0.000910	NS	0.250	0.241	96.4	
Zinc	NS	0.000600	NS	0.500	0.487	97.4	

NS = Not spiked
*** = Recovery of spiked element is outside acceptance limit of 80% - 120% of true value.**
 # = Result for unspiked element is outside the acceptance limits of (+/-) the project reporting limit (RL).

KEMRON ENVIRONMENTAL SERVICES
INTERFERENCE CHECK SAMPLES

Login number: L0605548 **Workgroup (AAB#):** WG214050
Instrument ID: PE-ICP2 **Method:** 6010B
Sol. A : WG214115-08 **File ID:** P2.052506.102915 **Units:** mg/L
Sol. AB : WG214115-09 **File ID:** P2.052506.103437

	Sol. A			Sol. AB			
ANALYTE	True	Found	%Recovery	True	Found	%Recovery	Q
Aluminum	250	246	98.4	250	246	98.4	
Arsenic	NS	0.00812	NS	0.250	0.251	100	
Barium	NS	0.00294	NS	0.250	0.259	104	
Beryllium	NS	-0.000110	NS	0.250	0.257	103	
Cadmium	NS	-0.000210	NS	0.500	0.468	93.6	
Calcium	250	273	109	250	279	112	
Chromium	NS	0.000990	NS	0.250	0.254	102	
Cobalt	NS	-0.00185	NS	0.250	0.233	93.2	
Copper	NS	0.00148	NS	0.250	0.256	102	
Iron	100	96.5	96.5	100	98.1	98.1	
Lead	NS	0.00200	NS	0.500	0.495	99.0	
Magnesium	250	247	98.8	250	248	99.2	
Manganese	NS	-0.000300	NS	0.250	0.252	101	
Nickel	NS	0.000900	NS	0.500	0.473	94.6	
Potassium	NS	0.0539	NS	5.00	5.23	105	
Silver	NS	-0.000760	NS	0.500	0.523	105	
Sodium	NS	-0.00105	NS	5.00	5.19	104	
Vanadium	NS	0.00907	NS	0.250	0.262	105	
Zinc	NS	0.00479	NS	0.500	0.480	96.0	

NS = Not spiked
*** = Recovery of spiked element is outside acceptance limit of 80% - 120% of true value.**
 # = Result for unspiked element is outside the acceptance limits of (+/-) the project reporting limit (RL).

KEMRON Environmental Services

INTERELEMENT CORRECTION FACTORS (ANNUALLY)

Login Number: L0605548 **Date:** 05/03/2005
Insturment ID: IRIS-ICP **Method:** 6010B

Analyte	Wave Length	AL	AS	BA	BE	CA
ALUMINUM	308.20	0	0	0	0	0
ANTIMONY	206.80	0.000100	-0.000185	0	0	0
ARSENIC	189.00	0.0000200	0	0	0	0
BARIUM	455.40	0	0	0	0	0
BERYLLIUM	313.00	0	0	0	0	0
BORON	249.70	0	0	0	0	0
CADMIUM	228.80	0	0.00365	-0.000100	0	0
CALCIUM	373.70	0	0	0	0	0
CHROMIUM	267.70	0	0	0	0	0
COBALT	228.60	0	0	0	0	0
COPPER	324.70	0	0	0	0	0
IRON	271.40	0	0	0	0	0
LEAD	220.30	-0.000250	0	0	0	0
LITHIUM	670.80	0	0	0	0	-0.0000500
MAGNESIUM	277.90	0	-0.0936	0	0	0
MANGANESE	257.60	0	0	0	0	0
MOLYBDENUM	202.03	0	0	0	0	0
NICKEL	231.60	0	0	0	0.00830	0
POTASSIUM	766.40	0	0	-0.0899	0	0
SELENIUM	196.00	0	0	0	0	0
SILICON	251.60	0	0	0	0	0
SILVER	328.00	0	0	0	0	0
SODIUM	589.50	0	0	0	0	0
STRONTIUM	215.20	0	0	0	0	0
THALLIUM	190.80	0	0	0	0	0
TIN	189.90	0	0	0	0	0
TITANIUM	334.90	0	0	0	0	-0.0000300
VANADIUM	310.20	-0.0000400	0	0	0.0100	0
ZINC	213.80	0	0	0	0	0

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KEMRON Environmental Services

INTERELEMENT CORRECTION FACTORS (ANNUALLY)

Login Number: L0605548 **Date:** 05/03/2005
Insturment ID: IRIS-ICP **Method:** 6010B

Analyte	Wave Length	CO	CR	CU	FE	LI
ALUMINUM	308.20	-0.00700	0	0	0	0
ANTIMONY	206.80	0	0.0306	0	0.0000790	0
ARSENIC	189.00	0	0.000280	0	-0.0000300	0
BARIUM	455.40	0	0	0	0	0
BERYLLIUM	313.00	0	0	0	0	0
BORON	249.70	0	0	0	-0.000470	0
CADMIUM	228.80	-0.00300	0	0	-0.00000600	0
CALCIUM	373.70	0	0	0	0.0100	0
CHROMIUM	267.70	0	0	0	0.0000180	0
COBALT	228.60	0	0.0000450	0	0.0000400	0
COPPER	324.70	0	-0.000560	0	0.0000100	0
IRON	271.40	0.100	0	0	0	0
LEAD	220.30	0.000300	-0.000780	0	0.0000600	0
LITHIUM	670.80	0	0	0	0	0
MAGNESIUM	277.90	0	-0.0170	0	0	0
MANGANESE	257.60	0	0	0	-0.0000370	0
MOLYBDENUM	202.03	0	0	0	0	0
NICKEL	231.60	0.000450	0	0	-0.0000180	0
POTASSIUM	766.40	0	0	0	0	0
SELENIUM	196.00	0	0	0	-0.000300	0
SILICON	251.60	0	0	0	0	0
SILVER	328.00	0	0.0000520	0	-0.0000480	0
SODIUM	589.50	0	0	0	0	0
STRONTIUM	215.20	-0.000500	0	0	-0.000600	0
THALLIUM	190.80	0.00360	0.000190	0	0	0
TIN	189.90	0	0	0	0	0
TITANIUM	334.90	0	0.000300	0	0	-0.00250
VANADIUM	310.20	0	0	0	-0.0000100	0
ZINC	213.80	-0.000400	0	0.000588	0.0000800	0

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KEMRON Environmental Services

INTERELEMENT CORRECTION FACTORS (ANNUALLY)

Login Number: L0605548 **Date:** 05/03/2005
Insturment ID: IRIS-ICP **Method:** 6010B

Analyte	Wave Length	MG	MN	MO	NI	SB
ALUMINUM	308.20	0	0.00180	0.0320	0	0
ANTIMONY	206.80	0	0	-0.00278	-0.00200	0
ARSENIC	189.00	0	0	0.00108	0	-0.00170
BARIUM	455.40	0	0	0	0	0
BERYLLIUM	313.00	0	0	-0.0000500	0	0
BORON	249.70	0	0	0	0	0
CADMIUM	228.80	0	0	0	-0.000170	0
CALCIUM	373.70	0	0.00160	0	0.000650	0
CHROMIUM	267.70	0	0.000510	0	0	0
COBALT	228.60	0	0	-0.00100	0.000160	0
COPPER	324.70	0	0	0	0	0
IRON	271.40	0.0000400	-0.000500	-0.00750	0	0
LEAD	220.30	0	0	-0.00120	0.000489	0
LITHIUM	670.80	0	0	0	0	0
MAGNESIUM	277.90	0	0.00132	-0.228	0	0
MANGANESE	257.60	0	0	0	0	0
MOLYBDENUM	202.03	0	0	0	0	0
NICKEL	231.60	0	0	0	0	0
POTASSIUM	766.40	0	0	0	0	0
SELENIUM	196.00	0	0.000430	0.00800	0	0
SILICON	251.60	0	0	0.00800	0	0
SILVER	328.00	0	0.0000800	-0.000290	0	0
SODIUM	589.50	0	0	0	0	0
STRONTIUM	215.20	0	0	-0.000220	0	0
THALLIUM	190.80	0	0.00120	-0.00309	0	-0.000500
TIN	189.90	0	0	0	0	0
TITANIUM	334.90	0	0	0	0	0
VANADIUM	310.20	-0.00000400	0	0	0	0
ZINC	213.80	0.0000370	0.000279	0	0.00620	0

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KEMRON Environmental Services

INTERELEMENT CORRECTION FACTORS (ANNUALLY)

Login Number: L0605548 **Date:** 05/03/2005

Insturment ID: IRIS-ICP **Method:** 6010B

Analyte	Wave Length	SN	TI	V	ZN
ALUMINUM	308.20	0	-0.00200	-0.0320	0
ANTIMONY	206.80	-0.0168	0.000620	-0.00159	-0.00170
ARSENIC	189.00	0	0	0	0
BARIUM	455.40	0	0	0	0
BERYLLIUM	313.00	0	0	0.000840	0
BORON	249.70	0	0	0	0
CADMIUM	228.80	0	0	0.0000360	0
CALCIUM	373.70	0	0	0	0
CHROMIUM	267.70	0	0	-0.000150	0
COBALT	228.60	0	0.00120	0	-0.00170
COPPER	324.70	0	-0.00120	-0.00325	0
IRON	271.40	0	0	-0.0829	0
LEAD	220.30	0	0	0	0
LITHIUM	670.80	0	0	0	0
MAGNESIUM	277.90	0	0	-0.0106	0
MANGANESE	257.60	0	0	-0.0000750	0
MOLYBDENUM	202.03	0	0	-0.000247	0.00200
NICKEL	231.60	0	0	0	0
POTASSIUM	766.40	0	0	0	0
SELENIUM	196.00	0	0	0	0.0190
SILICON	251.60	0	0.00665	0	0
SILVER	328.00	0	0.0118	-0.0234	0
SODIUM	589.50	0	0	0	0
STRONTIUM	215.20	0	0	0	0.000700
THALLIUM	190.80	0	-0.00190	-0.0244	0
TIN	189.90	0	0	0	0
TITANIUM	334.90	0		0	0
VANADIUM	310.20	0	0	0	0
ZINC	213.80	0	0	0	0

Login Number: L0605548 **Date:**

Insturment ID: IRIS-ICP **Method:** 6010B

Analyte	Wave Length	

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KEMRON Environmental Services

INTERELEMENT CORRECTION FACTORS (ANNUALLY)

Login Number: L0605548 **Date:** 04/29/2005
Insturment ID: PE-ICP2 **Method:** 6010B

Analyte	Wave Length	AG	AL	AS	B	BA
ALUMINUM	396.15	0	0	0	0	0
ANTIMONY	206.84	0	0.0346	0	0	0
ARSENIC	188.98	0	0	0	0	0
BARIUM	233.53	0	0	0	0	0
BERYLLIUM	313.11	0	-0.00123	0	0	0
BORON	249.68	0	0.123	0	0	0
CADMIUM	228.80	0	0	8.00	0	4.00
CALCIUM	317.93	0	0	6.00	0	0
CHROMIUM	267.72	0	0	0	0	0
COBALT	228.62	0	0	0	0	0
COPPER	327.39	0.687	0	0	0	0
GALLIUM	417.21	0	0	0	0	0
IRON	239.56	0	0	0	0	0
LEAD	220.35	0	-0.136	0	0	0
MAGNESIUM	279.08	0	0	0	0	0
MANGANESE	257.61	0	0	0	0	0
MOLYBDENUM	202.03	0	0	0	0	0
NICKEL	231.60	0	0	0	0	0
POTASSIUM	766.49	0	0	0	0	0
SELENIUM	196.03	0.863	0	0.170	0	0.536
SILICON	251.61	0	0	0	0	0
SILVER	328.07	0	0	0	0	0
SODIUM	589.59	0	0	0	0	0
STRONTIUM	407.77	0	0	0	0	0
THALLIUM	190.80	0	-0.0203	0	0	0
TIN	189.93	0	0	0	0	5.80
TITANIUM	334.94	0	0	0	0	0
VANADIUM	290.88	0	0	0	0	0
YTTRIUM	371.03	0	0	0	0	0
ZINC	206.20	0	0	0.161	0	0

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KEMRON Environmental Services

INTERELEMENT CORRECTION FACTORS (ANNUALLY)

Login Number: L0605548 **Date:** 04/29/2005

Insturment ID: PE-ICP2 **Method:** 6010B

Analyte	Wave Length	BE	CA	CD	CO	CR
ALUMINUM	396.15	0	-0.184	0	0	0
ANTIMONY	206.84	0	0	1.19	0	15.0
ARSENIC	188.98	0	0.100	0	0	-9.80
BARIUM	233.53	0	0	0	0	0
BERYLLIUM	313.11	0	0	0	0	0
BORON	249.68	-2.00	0.0498	0	4.62	0
CADMIUM	228.80	0	0	0	-6.10	0
CALCIUM	317.93	5.00	0	0	200	0
CHROMIUM	267.72	0	0	0	0	0
COBALT	228.62	0	0	0	0	0
COPPER	327.39	0	-0.0134	0	0.335	0
GALLIUM	417.21	0	0	0	0	0
IRON	239.56	0	0	0	2.03	0
LEAD	220.35	0	-0.00533	0	0	-0.103
MAGNESIUM	279.08	0	0	0	0	0
MANGANESE	257.61	0	0	0	0	0
MOLYBDENUM	202.03	0	0	0	0	0
NICKEL	231.60	0	0	0	1.08	0
POTASSIUM	766.49	0	0	0	0	0
SELENIUM	196.03	0	-0.150	0.704	-0.254	0
SILICON	251.61	0	0	0	0	0
SILVER	328.07	0	-0.00558	0	0	0
SODIUM	589.59	0	0	0	0	0
STRONTIUM	407.77	0	0	0	0	0
THALLIUM	190.80	0	-0.0138	0	-0.813	0.119
TIN	189.93	0	-0.0407	0	0	0
TITANIUM	334.94	0	-0.00758	0	0	0.231
VANADIUM	290.88	0	0	0	0	-1.54
YTTRIUM	371.03	0	0	0	0	0
ZINC	206.20	0	0	0	0	-4.93

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INTERELEMENT CORRECTION FACTORS (ANNUALLY)

Login Number: L0605548 **Date:** 04/29/2005
Insturment ID: PE-ICP2 **Method:** 6010B

Analyte	Wave Length	CU	FE	GA	K	MG
ALUMINUM	396.15	0	0	0	0	0
ANTIMONY	206.84	0	0	0	0	0
ARSENIC	188.98	0	-0.260	0	0	0
BARIUM	233.53	0	0.0139	0	0	0
BERYLLIUM	313.11	0	0	0	0	0
BORON	249.68	0	-3.51	0	0.833	0.106
CADMIUM	228.80	0	0	0	0	0
CALCIUM	317.93	0	0	0	0	0.700
CHROMIUM	267.72	0	0.0244	0	0	0
COBALT	228.62	0	0	0	0	0
COPPER	327.39	0	-0.0158	0	0	0
GALLIUM	417.21	0	0	0	0	0
IRON	239.56	0	0	0	0	0
LEAD	220.35	0.744	0	0	0	0
MAGNESIUM	279.08	0	-0.289	0	0	0
MANGANESE	257.61	0	0	0	0	0.0164
MOLYBDENUM	202.03	0	-0.0391	0	0	0
NICKEL	231.60	0	0.0163	0	0	0
POTASSIUM	766.49	0	0	0	0	1.70
SELENIUM	196.03	0	-0.193	0	0	0
SILICON	251.61	0	0	0	0	0
SILVER	328.07	0	-0.200	0	0	0
SODIUM	589.59	0	4.00	0	0	0.210
STRONTIUM	407.77	0	0	0	0	0
THALLIUM	190.80	0	-0.0470	0	0	0
TIN	189.93	0.589	-0.119	0	0	0
TITANIUM	334.94	0	0	0	0	0.0211
VANADIUM	290.88	0	0.120	0	0	0
YTTRIUM	371.03	0	0	0	0	0
ZINC	206.20	0	0.0100	0	0	0

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KEMRON Environmental Services

INTERELEMENT CORRECTION FACTORS (ANNUALLY)

Login Number: L0605548 **Date:** 04/29/2005
Insturment ID: PE-ICP2 **Method:** 6010B

Analyte	Wave Length	MN	MO	NA	NI	PB
ALUMINUM	396.15	0	45.4	0	0	0
ANTIMONY	206.84	0	-1.54	0	-0.653	0
ARSENIC	188.98	0	2.53	0	0	0
BARIUM	233.53	0	0.171	0	0	0
BERYLLIUM	313.11	0	0	0	0	0
BORON	249.68	1.95	-2.54	0.751	0	1.40
CADMIUM	228.80	0	0	0	-0.0800	0
CALCIUM	317.93	0	-15.0	0	-1000	0
CHROMIUM	267.72	0.231	0.187	0	0	0
COBALT	228.62	0	-0.272	0	0.157	0
COPPER	327.39	0	-0.108	0	0.279	0
GALLIUM	417.21	0	0	0	0	0
IRON	239.56	-1.63	0	0	0	0
LEAD	220.35	0	-2.54	0	0	0
MAGNESIUM	279.08	-4.45	-5.59	0	0	0
MANGANESE	257.61	0	0	0	0	0
MOLYBDENUM	202.03	0	0	0	0	0
NICKEL	231.60	0	0	0	0	0
POTASSIUM	766.49	0	0	0	0	0
SELENIUM	196.03	0.633	0.253	0	0	0
SILICON	251.61	0	12.2	0	0	0
SILVER	328.07	0.201	-0.122	0	0	0
SODIUM	589.59	0	3.16	0	0	0
STRONTIUM	407.77	0	0	0	0	0
THALLIUM	190.80	-1.38	1.73	0	0	0
TIN	189.93	0	0	0	0.316	0
TITANIUM	334.94	0	0	0	0	0
VANADIUM	290.88	0	0.900	0	0	0
YTTRIUM	371.03	0	0	0	0	0
ZINC	206.20	0	0	0	0.169	0

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KEMRON Environmental Services

INTERELEMENT CORRECTION FACTORS (ANNUALLY)

Login Number: L0605548 **Date:** 04/29/2005

Insturment ID: PE-ICP2 **Method:** 6010B

Analyte	Wave Length	SB	SE	SI	SN	SR
ALUMINUM	396.15	0	0	0	0	0
ANTIMONY	206.84	0	0.732	0	-4.23	0
ARSENIC	188.98	0	0	0	0	0
BARIUM	233.53	0	0	0	0	0
BERYLLIUM	313.11	0	0	0	0	0
BORON	249.68	0	0	7.59	0	23.5
CADMIUM	228.80	0	0	0	0	0
CALCIUM	317.93	0	5.00	0	0	0
CHROMIUM	267.72	0	0	0	0	0
COBALT	228.62	1.37	0	0	0	0
COPPER	327.39	0.176	0.116	0	0	0
GALLIUM	417.21	0	0	0	0	0
IRON	239.56	0	0	0	0	0
LEAD	220.35	-0.157	0	0	0	0
MAGNESIUM	279.08	0	0	0	0	0
MANGANESE	257.61	0	0	0	0	0
MOLYBDENUM	202.03	0	0	0	0	0
NICKEL	231.60	-0.285	0	0	0	0
POTASSIUM	766.49	0	0	0	0	0
SELENIUM	196.03	0.159	0	0	0	0
SILICON	251.61	0	0	0	3.24	0
SILVER	328.07	0	0	0	0	0
SODIUM	589.59	0	0	0	0	0
STRONTIUM	407.77	0	0	0	0	0
THALLIUM	190.80	0	0	0	0	0
TIN	189.93	0.300	0.246	0	0	0
TITANIUM	334.94	0	0	0	0	0
VANADIUM	290.88	0	0	0	0	0
YTTRIUM	371.03	0	0	0	0	0
ZINC	206.20	0	0	0	0	0

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KEMRON Environmental Services

INTERELEMENT CORRECTION FACTORS (ANNUALLY)

Login Number: L0605548 **Date:** 04/29/2005

Insturment ID: PE-ICP2 **Method:** 6010B

Analyte	Wave Length	TI	TL	V	ZN
ALUMINUM	396.15	0	0	0	0
ANTIMONY	206.84	-0.330	0.264	-2.66	0
ARSENIC	188.98	0	0	0	0
BARIUM	233.53	0	0	-2.23	0
BERYLLIUM	313.11	-3.58	0	-0.0257	0
BORON	249.68	5.10	0	0	1.45
CADMIUM	228.80	0	0	0.0859	0
CALCIUM	317.93	0	0	16.0	0
CHROMIUM	267.72	0	0	-0.433	0
COBALT	228.62	2.12	0	0	0
COPPER	327.39	-0.770	0.112	-0.223	0
GALLIUM	417.21	0	0	0	0
IRON	239.56	0	0	0	0
LEAD	220.35	0	0	0	0
MAGNESIUM	279.08	0	0	0	0
MANGANESE	257.61	0	0	0	0
MOLYBDENUM	202.03	0.861	0	-0.196	0
NICKEL	231.60	0	0.309	0	0
POTASSIUM	766.49	0	0	0	0
SELENIUM	196.03	0	0.248	0.398	0
SILICON	251.61	7.31	0	0	0
SILVER	328.07	0	0	-3.90	0
SODIUM	589.59	0	0	0	0
STRONTIUM	407.77	0	0	0	0
THALLIUM	190.80	-4.51	0	-0.742	0
TIN	189.93	-5.54	0	0	0
TITANIUM	334.94	0	0	0	0
VANADIUM	290.88	0	0	0	0
YTTRIUM	371.03	0	0	0	0
ZINC	206.20	0	0	0	0

KEMRON Environmental Services

LINEAR RANGE (QUARTERLY)

Login Number: L0605548 **Date:** 03/20/2006

Insturment ID: IRIS-ICP **Method:** 6010B

Analyte	Integration Time (Sec.)	Concentration (mg/L)
Aluminum	10.00	800.0
Antimony	55.00	50.0
Arsenic	55.00	100.0
Barium	10.00	20.0
Beryllium	10.00	4.0
Boron	55.00	100.0
Cadmium	55.00	30.0
Calcium	10.00	1000.0
Chromium	55.00	50.0
Cobalt	55.00	100.0
Copper	10.00	50.0
Iron	55.00	900.0
Lead	55.00	200.0
Lithium	10.00	10.0
Magnesium	55.00	1000.0
Manganese	55.00	20.0
Molybdenum	55.00	30.0
Nickel	55.00	100.0
Potassium	10.00	200.0
Selenium	55.00	20.0
Silicon	55.00	50.0
Silver	10.00	10.0
Sodium	10.00	150.0
Strontium	55.00	30.0
Thallium	55.00	20.0
Tin	55.00	30.0
Titanium	10.00	25.0
Vanadium	10.00	100.0
Zinc	55.00	40.0

Comments:

KEMRON Environmental Services

LINEAR RANGE (QUARTERLY)

Login Number: L0605548 **Date:** 03/08/2006

Insturment ID: PE-ICP2 **Method:** 6010B

Analyte	Integration Time (Sec.)	Concentration (mg/L)
Aluminum	10.00	500.0
Antimony	10.00	40.0
Arsenic	10.00	10.0
Barium	10.00	10.0
Beryllium	10.00	2.0
Boron	10.00	20.0
Cadmium	10.00	3.0
Calcium	10.00	500.0
Chromium	10.00	50.0
Cobalt	10.00	50.0
Copper	10.00	50.0
Iron	10.00	400.0
Lead	10.00	50.0
Lithium	10.00	2.0
Magnesium	10.00	500.0
Manganese	10.00	30.0
Molybdenum	10.00	50.0
Nickel	10.00	50.0
Potassium	10.00	100.0
Selenium	10.00	50.0
Silicon	10.00	10.0
Silver	10.00	10.0
Sodium	10.00	200.0
Strontium	10.00	3.0
Thallium	10.00	50.0
Tin	10.00	50.0
Titanium	10.00	10.0
Vanadium	10.00	50.0
Zinc	10.00	40.0

Comments:

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1.2.2 Metals ICP-MS Data

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KEMRON ENVIRONMENTAL SERVICES
METALS

KEMRON Login No: L0605548

METHOD

Preparation: SW-846 3015

Analysis: SW-846 6020

HOLDING TIMES

Sample Preparation: All holding times were met.

Sample Analysis: All holding times were met.

PREPARATION

Sample preparation proceeded normally.

CALIBRATION

Initial Calibrations: All acceptance criteria were met.

Alternate Source Standards: All acceptance criteria were met.

Continuing Calibration: All acceptance criteria were met.

BATCH QA/QC

Method Blank: All acceptance criteria were met.

Laboratory Control Sample: All acceptance criteria were met.

Serial Dilution/Post Digestion Spike: WG214202(6020) - All acceptance criteria were met.

SAMPLES

All acceptance criteria were met.

I certify that this data package is in compliance with the terms and conditions agreed to by the client and KEMRON Environmental Services, both technically and for completeness, except for the conditions noted above. Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or designated person, as verified by the following signature.

Analyst: JYH

Approved: 01-JUN-06

LABORATORY REPORT

L0605548

06/12/06 13:00

Submitted By

KEMRON Environmental Services
156 Starlite Drive
Marietta , OH 45750
(740) 373 - 4071

For

Account Name: CH2MHILL, Inc
7600 Tidwell Road
Suite 400
San Antonio, TX 77040
Attention: John Ynfante

Account Number: 2736
Work ID: STATE MARINE RI
Invoice Number: 580607
P.O. Number: 915193

Sample Analysis Summary

Client ID	Lab ID	Method	Dilution	Date Received
SM138EB01052306	L0605548-03	6020	1	24-MAY-06

Report Number: **L0605548**
Report Date : **June 12, 2006**

Sample Number: **L0605548-03**
Client ID: **SM138EB01052306**
Matrix: **Water**
Workgroup Number: **WG214202**
Collect Date: **05/23/2006 13:40**

PrePrep Method: **NONE**
Prep Method: **3015**
Analytical Method: **6020**
Analyst: **JYH**
Dilution: **1**
Units: **mg/L**

Instrument: **ELAN-ICP**
Prep Date: **05/30/2006 07:40**
Cal Date: **05/30/2006 08:56**
Run Date: **05/30/2006 13:40**
File ID: **EL.053006.134029**

Analyte	CAS. Number	Result	Qual	PQL	SQL
Antimony, Total	7440-36-0	0.000292	J	0.00100	0.000250
Selenium, Total	7782-49-2		U	0.00100	0.000500
Thallium, Total	7440-28-0	0.0000565	J	0.000200	0.0000500

J The analyte was positively identified, but the quantitation was below the RL
U Not detected at or above the reporting limit

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1.2.2.1 QC Summary

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Run Log ID:**10570**

KEMRON Environmental Services

Instrument Run Log

Instrument: ELAN-ICP Dataset: 052906A.REP
Analyst1: JYH Analyst2: N/A
Method: 6020 SOP: ME700 Rev: 3

Calibration Std: STD12409 ICV/CCV Std: STD12449 Post Spike: COA10991
ICSA: STD12448 ICSAB: STD12742

Workgroups: 213993,214136,214187

Comments:

Seq.	File ID	Sample	ID	Prep	Dil	Reference	Date/Time
26	EL.053006.083215	Blank	Blank		1		05/30/06 08:32
27	EL.053006.083817	WG214213-01	Calibration Point		1		05/30/06 08:38
28	EL.053006.084420	WG214213-02	Calibration Point		1		05/30/06 08:44
29	EL.053006.085024	WG214213-03	Calibration Point		1		05/30/06 08:50
30	EL.053006.085629	WG214213-04	Calibration Point		1		05/30/06 08:56
31	EL.053006.090234	WG214213-05	Initial Calibration Verification		1		05/30/06 09:02
32	EL.053006.090848	WG214213-06	Initial Calib Blank		1		05/30/06 09:08
33	EL.053006.091503	WG214213-07	CRQL Check Solid		1		05/30/06 09:15
34	EL.053006.092121	WG214213-08	CRQL Check Water		1		05/30/06 09:21
35	EL.053006.092738	WG214213-09	Interference Check		1		05/30/06 09:27
36	EL.053006.093355	WG214213-10	Interference Check		1		05/30/06 09:33
37	EL.053006.094011	WG214213-11	CCV		1		05/30/06 09:40
38	EL.053006.094625	WG214213-12	CCB		1		05/30/06 09:46
39	EL.053006.095237	L0605456-03	TW-58	40/100	2		05/30/06 09:52
40	EL.053006.095831	L0605456-04	TW-58	40/100	2		05/30/06 09:58
41	EL.053006.101116	WG213671-01	Reference Sample		1	L0605449-01	05/30/06 10:11
42	EL.053006.101710	WG213671-04	Matrix Spike	40/100	1		05/30/06 10:17
43	EL.053006.102304	WG213671-05	Matrix Spike Duplica	40/100	1		05/30/06 10:23
44	EL.053006.102858	L0605449-02	202 EFFLUENT	40/100	1		05/30/06 10:28
45	EL.053006.103425	L0605449-03	FLUME	40/100	1		05/30/06 10:34
46	EL.053006.103950	L0605449-04	EMERGENCY BASIN WATE	40/100	1		05/30/06 10:39
47	EL.053006.104516	L0605456-03	TW-58		10		05/30/06 10:45
48	EL.053006.105041	WG214213-13	CCV		1		05/30/06 10:50
49	EL.053006.105655	WG214213-14	CCB		1		05/30/06 10:56
50	EL.053006.110309	WG214099-02	Method/Prep Blank	.5/200	1		05/30/06 11:03
51	EL.053006.110835	WG214099-03	Laboratory Control S	.5/200	1		05/30/06 11:08
52	EL.053006.111401	WG214099-01	Reference Sample		1	L0605584-01	05/30/06 11:14
53	EL.053006.112102	WG214099-04	Matrix Spike	.51/200	1		05/30/06 11:21
54	EL.053006.112629	WG214099-05	Matrix Spike Duplica	.51/200	1		05/30/06 11:26
55	EL.053006.113154	L0605584-02	SB-1B	.5/200	1		05/30/06 11:31
56	EL.053006.113718	L0605584-04	SB-2A	.53/200	1		05/30/06 11:37
57	EL.053006.114243	L0605584-05	SB-2B	.5/200	1		05/30/06 11:42
58	EL.053006.114807	WG214136-01	Post Digestion Spike		1	L0605584-05	05/30/06 11:48
59	EL.053006.115332	WG214136-02	Serial Dilution		5	L0605584-05	05/30/06 11:53
60	EL.053006.115857	WG214213-15	CCV		1		05/30/06 11:58
61	EL.053006.120511	WG214213-16	CCB		1		05/30/06 12:05
62	EL.053006.121125	L0605456-04	TW-58		10		05/30/06 12:11

Approved: May 31, 2006

006593

Run Log ID:**10570**

KEMRON Environmental Services

Instrument Run Log

Instrument: ELAN-ICP Dataset: 052906A.REP
Analyst1: JYH Analyst2: N/A
Method: 6020 SOP: ME700 Rev: 3

Calibration Std: STD12409 ICV/CCV Std: STD12449 Post Spike: COA10991
ICSA: STD12448 ICSAB: STD12742

Workgroups: 213993,214136,214187

Comments:

Seq.	File ID	Sample	ID	Prep	Dil	Reference	Date/Time
63	EL.053006.121651	WG214187-02	Method/Prep Blank	40/100	1		05/30/06 12:16
64	EL.053006.122217	WG214187-03	Laboratory Control S	40/100	1		05/30/06 12:22
65	EL.053006.122744	WG214187-01	Reference Sample		1	L0605563-04	05/30/06 12:27
66	EL.053006.123310	WG214213-17	CCV		1		05/30/06 12:33
67	EL.053006.123924	WG214213-18	CCB		1		05/30/06 12:39
68	EL.053006.124539	WG214187-04	Matrix Spike	40/100	1	L0605563-06	05/30/06 12:45
69	EL.053006.125106	WG214187-05	Matrix Spike Duplica	40/100	1	L0605563-08	05/30/06 12:51
70	EL.053006.125713	L0605563-09	710MW02FD	40/100	1		05/30/06 12:57
71	EL.053006.130319	WG214202-01	Post Digestion Spike		1	L0605563-04	05/30/06 13:03
72	EL.053006.130924	WG214202-02	Serial Dilution		5	L0605563-04	05/30/06 13:09
73	EL.053006.131529	WG214213-19	Interference Check		1		05/30/06 13:15
74	EL.053006.132146	WG214213-20	Interference Check		1		05/30/06 13:21
75	EL.053006.132802	WG214213-21	CCV		1		05/30/06 13:28
76	EL.053006.133416	WG214213-22	CCB		1		05/30/06 13:34
77	EL.053006.134029	L0605548-03	SM138EB01052306	40/100	1		05/30/06 13:40
78	EL.053006.134634	L0605456-04	TW-58	40/100	10		05/30/06 13:46
79	EL.053006.135200	WG214213-23	CCV		1		05/30/06 13:52
80	EL.053006.135814	WG214213-24	CCB		1		05/30/06 13:58
81	EL.053006.140427	L0605548-03	SM138EB01052306		1		05/30/06 14:04
82	EL.053006.141032	L0605584-03	SB-1	40/100	1		05/30/06 14:10
83	EL.053006.141637	L0605584-06	SB-2	40/100	1		05/30/06 14:16
84	EL.053006.142243	L0605613-01	SB-6	40/100	1		05/30/06 14:22
85	EL.053006.142849	L0605613-02	SB-7	40/100	1		05/30/06 14:28
86	EL.053006.143455	L0605613-03	SB-8	40/100	1		05/30/06 14:34
87	EL.053006.144102	L0605613-04	SB-9	40/100	1		05/30/06 14:41
88	EL.053006.144709	L0605613-05	SB-3	40/100	1		05/30/06 14:47
89	EL.053006.145317	L0605613-06	SB-14	40/100	1		05/30/06 14:53
90	EL.053006.145924	WG214213-25	CCV		1		05/30/06 14:59
91	EL.053006.150538	WG214213-26	CCB		1		05/30/06 15:05
92	EL.053006.151154	L0605613-07	SB-4	40/100	1		05/30/06 15:11
93	EL.053006.151800	L0605613-08	SB-5	40/100	1		05/30/06 15:18
94	EL.053006.152405	L0605613-09	SB-15	40/100	1		05/30/06 15:24
95	EL.053006.153010	L0605613-10	SB-10	40/100	1		05/30/06 15:30
96	EL.053006.153616	L0605613-11	SB-12	40/100	1		05/30/06 15:36
97	EL.053006.154222	L0605613-12	SB-13	40/100	1		05/30/06 15:42
98	EL.053006.154828	WG214213-27	CCV		1		05/30/06 15:48
99	EL.053006.155442	WG214213-28	CCB		1		05/30/06 15:54

Approved: May 31, 2006

Microwave Digestion Log

Analyst(s): RK
Date: 5/30/06 @ 0740
LCS: 125 ml SRO 110224
MS/MSD: 125 ml SRO 110224
Witness: Ed
HNO_3 Lot #: ABC10225
HCl Lot #: N/A
Earliest Sample Due Date: 5/21/06
Microwave # 1

Box: AC
Digestion Work Group: WG 214187

ME407 Revision # 8 Method 3015-Water
ME406 Revision # ____ Method 3051-Soil-Oil

Relinquished By: RK
Digest Received By: JAH Date: 5/29/06

	KEMRON #	Initial Wt/Vol	Final Volume	Initial Weight	Final Weight	Comments	Due Date
1	MBW	40ml	100ml	209.15	209.15	-02	
2	LCSW			209.64	209.64	-03	
3	05-548-03			207.24	207.25		6/2
4	05-563-04 MS			205.60	205.60	Level 4 * -01	6/2
5	-06 MS			205.52	205.51	Level 4 * -04	
6	-08 MSD			206.64	206.64	" * -05	
7	-07 DUP			206.98	206.98	" * -06	
8	05-584-03			208.68	208.68		5/31
9	-06			207.99	207.97		
10	05-613-01			208.51	208.49		6/1
11	-02			205.70	205.69		
12	-03			209.03	209.02		
13	-04			207.94	207.94		
14	-05			207.35	207.35		
15	-06			207.29	207.29		
16	-07			207.00	207.00		
17	-08			207.82	207.82		
18	-09			206.76	206.78		
19	-10			207.04	207.03		
20	-11			207.34	207.35		
21	-12	"	"	208.21	208.21		
22							
23							
24							
25							
26							
27							
28							
29							
30							

5/30/06

Comments: * LCS Filtered

Primary Review: 5/30/06

Secondary Review: Kimberly Decker 05/30/06

006595

KEMRON Environmental Services
HOLDING TIMES
EQUIVALENT TO AFCEE FORM 9

Analytical Method: 6020 **AAB#:** WG214202
Login Number: L0605548

Client ID	Date Collected	Date Received	Date Extracted	Max Hold Time Ext.	Time Held Ext.	Date Analyzed	Max Hold Time Anal	Time Held Anal.	Q
SM138EB01052306	05/23/06	05/24/06	05/30/06	180	6.75	05/30/06	180	0.250	

* EXT = SEE PROJECT QAPP REQUIREMENTS
*ANAL = SEE PROJECT QAPP REQUIREMENTS

KEMRON FORMS - Modified 02/14/2006
Version 1.5 PDF File ID: 486309
Report generated 05/30/2006 14:28

KEMRON Environmental Services

METHOD BLANK SUMMARY

Login Number:	L0605548	Work Group:	WG214202
Blank File ID:	EL.053006.121651	Blank Sample ID:	WG214187-02
Date Analyzed:	05/30/06	Instrument ID:	ELAN-ICP
Time Analyzed:	12:16	Method:	6020
Analyst:	JYH		

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG214187-03	EL.053006.122217	05/30/06 12:22	01
SM138EB01052306	L0605548-03	EL.053006.134029	05/30/06 13:40	01

KEMRON FORMS - Modified 03/06/2006
Version 1.5 PDF File ID: 486310
Report generated 05/30/2006 14:29

KEMRON Environmental Services

METHOD BLANK REPORT

Login Number: L0605548	Run Date: 05/30/2006	Sample ID: WG214187-02
Instrument ID: ELAN-ICP	Run Time: 12:16	Prep Method: 3015
File ID: EL.053006.121651	Analyst: JYH	Method: 6020
Workgroup (AAB#): WG214202	Matrix: Water	Units: mg/L
Contract #:	Cal ID: ELAN-I-30-MAY-06	

Analytes	SQL	PQL	Concentration	Dilution	Qualifier
Antimony	0.000250	0.00100	0.000250	1	U
Selenium	0.000500	0.00100	0.000500	1	U
Thallium	0.0000500	0.000200	0.0000500	1	U

MDL Method Detection Limit
RL Reporting/quantitation Limit

* Analyte concentration > RL

KEMRON FORMS - Modified 05/01/2006
Version 1.5 PDF File ID: 486311
Report generated 05/30/2006 14:29

KEMRON Environmental Services

LABORATORY CONTROL SAMPLE (LCS)

Login Number: L0605548	Run Date: 05/30/2006	Sample ID: WG214187-03
Instrument ID: ELAN-ICP	Run Time: 12:22	Prep Method: 3015
File ID: EL.053006.122217	Analyst: JYH	Method: 6020
Workgroup (AAB#): WG214202	Matrix: Water	Units: mg/L
Contract #:	Cal ID: ELAN-I-30-MAY-06	

Analytes	Expected	Found	% Rec	LCS Limits	Q
Antimony	0.0625	0.0622	99.5	80 - 120	
Selenium	0.0625	0.0606	96.9	80 - 120	
Thallium	0.0625	0.0677	108	80 - 120	

KEMRON FORMS - Modified 05/01/2006
Version 1.5 PDF File ID: 486312
Report generated 05/30/2006 14:29

KEMRON Environmental Services

MATRIX SPIKE AND MATRIX SPIKE DUP (MS/MSD)

Loginnum:L0605548 Cal ID: ELAN-ICP - Worknum:WG214202
Instrument ID:ELAN-ICP Contract #: Method:6020
Parent ID:WG214187-01 File ID:EL.053006.122744 Dil:1 Matrix:WATER
Sample ID:WG214187-04 MS File ID:EL.053006.124539 Dil:1 Units:mg/L
Sample ID:WG214187-05 MSD File ID:EL.053006.125106 Dil:1

Analyte	Parent	MS Spiked	MS Found	MS %Rec	MSD Spiked	MSD Found	MSD %Rec	%RPD	%Rec Limits	RPD Limit	Q
Antimony, Dissolved	0.000308	0.0625	0.0655	104	0.0625	0.0652	104	0.500	75 - 125	20	
Selenium, Dissolved	0.00591	0.0625	0.0749	110	0.0625	0.0743	109	0.704	75 - 125	20	
Thallium, Dissolved	0.000349	0.0625	0.0688	110	0.0625	0.0668	106	2.96	75 - 125	20	

* FAILS %REC LIMIT

FAILS RPD LIMIT

NOTE: This is an internal quality control sample.

KEMRON FORMS - Modified 03/16/2006
Version 1.5 PDF File ID: 486313
Report generated 05/30/2006 14:29

KEMRON ENVIRONMENTAL SERVICES
SERIAL DILUTION REPORT

Sample Login ID: L0605548 Worknum: WG214202
Instrument ID: ELAN-ICP Method: 6020
Sample ID: L0605563-04 File ID: EL.053006.122744 Dil: 1 Units: ug/L
Serial Dilution ID: WG214202-02 File ID: EL.053006.130924 Dil: 5

Analyte	Sample	C	Serial Dilution	C	% Difference	Q
Antimony	0.123	F	0	U	100	
Selenium	2.36	X	3.70	X	56.8	
Thallium	0.140	X	0.156	F	11.4	

U = Result is below MDL
F = Result is between MDL and RL
X = Result is greater than RL and less than 100 times the MDL
E = %D exceeds control limit of 10% and initial
sample result is greater than or equal to 100 times the MDL

KEMRON FORMS - Modified 02/14/2006
Version 1.3 PDF File ID: 486307
Report generated 05/30/2006 14:29

KEMRON ENVIRONMENTAL SERVICES
POST SPIKE REPORT

Sample Login ID: L0605548 **Worknum:** WG214202
Instrument ID: ELAN-ICP **Method:** 6020
Post Spike ID: WG214202-01 **File ID:** EL.053006.130319 **Dil:** 1 **Units:** ug/L
Sample ID: L0605563-04 **File ID:** EL.053006.122744 **Dil:** 1 **Matrix:** Water

Analyte	Control Limit %R	Post Spike Result	C	Sample Result	C	Spike Added(SA)	% R	Q
ANTIMONY	75 - 125	51.0		0.123	F	50.0	102	
SELENIUM	75 - 125	56.5		2.36		50.0	108	
THALLIUM	75 - 125	49.3		0.140		50.0	98.3	

N = % Recoverv exceeds control limits of 75% - 125%
F = Result is between MDL and RL
U = Sample result is below MDL. A value of zero is used in the calculation.

KEMRON FORMS - Modified 02/14/2006
Version 2.0 PDF File ID: 486308
Report generated 05/30/2006 14:29

KEMRON Environmental Services

INITIAL CALIBRATION SUMMARY

Login Number: L0605548 **Workgroup (AAB#):** WG214202

Analytical Method: 6020 **Instrument ID:** ELAN-ICP

ICAL Worknum: WG214213 **Initial Calibration Date:** 30-MAY-2006 08:56

Analyte	WG214213-01		WG214213-02		WG214213-03		WG214213-04			
	STD	INT	STD	INT	STD	INT	STD	INT	R	Q
Antimony	NA	26NA28	NA	231NA807	NA	2967NA.764	100	5994NA.861	0.999847	
Selenium	NA	-2NA94	NA	55NA52	NA	825NA548	100	165NA.76	0.999968	
Thallium	NA	NA	NA	253NA916	NA	3125NA.196	100	6126NA.061	0.999949	

INT = Instrument intensity
R = Coefficient of correlation
Q = Data Qualifier
*** = Out of Compliance; R < 0.995**

KEMRON FORMS - Modified 03/03/2006
Version 1.5 PDF File ID: 486315
Report generated 05/30/2006 14:29

KEMRON Environmental Services

INITIAL CALIBRATION VERIFICATION (ICV)

Login Number: L0605548 Run Date: 05/30/2006 Sample ID: WG214213-05
Instrument ID: ELAN-ICP Run Time: 09:02 Method: 6020
File ID: EL.053006.090234 Analyst: JYH Units: ug/L
Workgroup (AAB#): WG214202 Cal ID: ELAN-I - 30-MAY-06

Analyte		Expected	Found	%REC	LIMITS	Q
Antimony		50	50.5	101	90 - 110	
Selenium		50	50.4	101	90 - 110	
Thallium		50	48.3	96.7	90 - 110	

* Exceeds LIMITS Limit

KEMRON FORMS - Modified 03/03/2006
Version 1.3 PDF File ID: 486316
Report generated 05/30/2006 14:29

KEMRON Environmental Services

INITIAL CALIBRATION BLANK (ICB)

Login Number: L0605548 Run Date: 05/30/2006 Sample ID: WG214213-06
Instrument ID: ELAN-ICP Run Time: 09:08 Method: 6020
File ID: EL.053006.090848 Analyst: JYH Units: ug/L
Workgroup (AAB#): WG214202 Cal ID: ELAN-I - 30-MAY-06

Analytes	MDL	RDL	Concentration	Dilution	Qualifier
Antimony	0.100	0.400	.15	1	F
Selenium	0.200	0.400	.111	1	U
Thallium	0.0200	0.0800	-.0019	1	U

U = Result is less than MDL
F = Result is between MDL and RL

KEMRON FORMS - Modified 03/06/2006
Version 1.5 PDF File ID: 486317
Report generated 05/30/2006 14:29

KEMRON Environmental Services

CONTINUING CALIBRATION BLANK (CCB)

Login Number:L0605548 Run Date:05/30/2006 Sample ID:WG214213-12
Instrument ID:ELAN-ICP Run Time:09:46 Method:6020
File ID:EL.053006.094625 Analyst:JYH Units:ug/L
Workgroup (AAB#):WG214202 Cal ID:ELAN-I - 30-MAY-06

Analytes	MDL	RDL	Concentration	Dilution	Qualifier
Antimony	0.100	0.400	0.155	1	F
Selenium	0.200	0.400	0.0475	1	U
Thallium	0.0200	0.0800	-0.000300	1	U

U = Result is less than MDL
F = Result is between MDL and RL

KEMRON FORMS - Modified 04/19/2006
Version 1.5 PDF File ID: 486320
Report generated 05/30/2006 14:29

KEMRON Environmental Services

CONTINUING CALIBRATION BLANK (CCB)

Login Number:L0605548 Run Date:05/30/2006 Sample ID:WG214213-16
Instrument ID:ELAN-ICP Run Time:12:05 Method:6020
File ID:EL.053006.120511 Analyst:JYH Units:ug/L
Workgroup (AAB#):WG214202 Cal ID:ELAN-I - 30-MAY-06

Analytes	MDL	RDL	Concentration	Dilution	Qualifier
Antimony	0.100	0.400	0.121	1	F
Selenium	0.200	0.400	-0.0673	1	U
Thallium	0.0200	0.0800	-0.000100	1	U

U = Result is less than MDL
F = Result is between MDL and RL

KEMRON FORMS - Modified 04/19/2006
Version 1.5 PDF File ID: 486320
Report generated 05/30/2006 14:29

KEMRON Environmental Services

CONTINUING CALIBRATION BLANK (CCB)

Login Number:L0605548 Run Date:05/30/2006 Sample ID:WG214213-18
Instrument ID:ELAN-ICP Run Time:12:39 Method:6020
File ID:EL.053006.123924 Analyst:JYH Units:ug/L
Workgroup (AAB#):WG214202 Cal ID:ELAN-I - 30-MAY-06

Analytes	MDL	RDL	Concentration	Dilution	Qualifier
Antimony	0.100	0.400	0.116	1	F
Selenium	0.200	0.400	0.219	1	F
Thallium	0.0200	0.0800	-0.000400	1	U

U = Result is less than MDL
F = Result is between MDL and RL

KEMRON FORMS - Modified 04/19/2006
Version 1.5 PDF File ID: 486320
Report generated 05/30/2006 14:29

KEMRON Environmental Services

CONTINUING CALIBRATION BLANK (CCB)

Login Number:L0605548 Run Date:05/30/2006 Sample ID:WG214213-22
Instrument ID:ELAN-ICP Run Time:13:34 Method:6020
File ID:EL.053006.133416 Analyst:JYH Units:ug/L
Workgroup (AAB#):WG214202 Cal ID:ELAN-I - 30-MAY-06

Analytes	MDL	RDL	Concentration	Dilution	Qualifier
Antimony	0.100	0.400	0.154	1	F
Selenium	0.200	0.400	0.108	1	U
Thallium	0.0200	0.0800	0.00160	1	U

U = Result is less than MDL
F = Result is between MDL and RL

KEMRON FORMS - Modified 04/19/2006
Version 1.5 PDF File ID: 486320
Report generated 05/30/2006 14:29

KEMRON Environmental Services

CONTINUING CALIBRATION BLANK (CCB)

Login Number:L0605548 Run Date:05/30/2006 Sample ID:WG214213-24
Instrument ID:ELAN-ICP Run Time:13:58 Method:6020
File ID:EL.053006.135814 Analyst:JYH Units:ug/L
Workgroup (AAB#):WG214202 Cal ID:ELAN-I - 30-MAY-06

Analytes	MDL	RDL	Concentration	Dilution	Qualifier
Antimony	0.100	0.400	0.118	1	F
Selenium	0.200	0.400	0.125	1	U
Thallium	0.0200	0.0800	-0.000200	1	U

U = Result is less than MDL
F = Result is between MDL and RL

KEMRON FORMS - Modified 04/19/2006
Version 1.5 PDF File ID: 486320
Report generated 05/30/2006 14:29

KEMRON Environmental Services

CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L0605548 Run Date: 05/30/2006 Sample ID: WG214213-11
Instrument ID: ELAN-ICP Run Time: 09:40 Method: 6020
File ID: EL.053006.094011 Analyst: JYH
Workgroup (AAB#): WG214202 Cal ID: ELAN-I - 30-MAY-06

Analyte		Expected	Found	%REC	LIMITS	UNITS	Q
Antimony		50	49.7	99.3	90 - 110	ug/L	
Selenium		50	50.2	100	90 - 110	ug/L	
Thallium		50	47.8	95.6	90 - 110	ug/L	

* Exceeds LIMITS Criteria

KEMRON FORMS - Modified 04/19/2006
Version 1.3 PDF File ID: 486319
Report generated 05/30/2006 14:29

KEMRON Environmental Services

CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L0605548 Run Date: 05/30/2006 Sample ID: WG214213-15
Instrument ID: ELAN-ICP Run Time: 11:58 Method: 6020
File ID: EL.053006.115857 Analyst: JYH
Workgroup (AAB#): WG214202 Cal ID: ELAN-I - 30-MAY-06

Analyte		Expected	Found	%REC	LIMITS	UNITS	Q
Antimony		50	49.9	99.8	90 - 110	ug/L	
Selenium		50	50.1	100	90 - 110	ug/L	
Thallium		50	49.8	99.5	90 - 110	ug/L	

* Exceeds LIMITS Criteria

KEMRON FORMS - Modified 04/19/2006
Version 1.3 PDF File ID: 486319
Report generated 05/30/2006 14:29

KEMRON Environmental Services

CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L0605548 Run Date: 05/30/2006 Sample ID: WG214213-17
Instrument ID: ELAN-ICP Run Time: 12:33 Method: 6020
File ID: EL.053006.123310 Analyst: JYH
Workgroup (AAB#): WG214202 Cal ID: ELAN-I - 30-MAY-06

Analyte		Expected	Found	%REC	LIMITS	UNITS	Q
Antimony		50	47.9	95.8	90 - 110	ug/L	
Selenium		50	49.6	99.2	90 - 110	ug/L	
Thallium		50	53.9	108	90 - 110	ug/L	

* Exceeds LIMITS Criteria

KEMRON FORMS - Modified 04/19/2006
Version 1.3 PDF File ID: 486319
Report generated 05/30/2006 14:29

KEMRON Environmental Services

CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L0605548 Run Date: 05/30/2006 Sample ID: WG214213-21
Instrument ID: ELAN-ICP Run Time: 13:28 Method: 6020
File ID: EL.053006.132802 Analyst: JYH
Workgroup (AAB#): WG214202 Cal ID: ELAN-I - 30-MAY-06

Analyte		Expected	Found	%REC	LIMITS	UNITS	Q
Antimony		50	48.0	95.9	90 - 110	ug/L	
Selenium		50	49.1	98.1	90 - 110	ug/L	
Thallium		50	49.7	99.4	90 - 110	ug/L	

* Exceeds LIMITS Criteria

KEMRON FORMS - Modified 04/19/2006
Version 1.3 PDF File ID: 486319
Report generated 05/30/2006 14:29

KEMRON Environmental Services

CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L0605548 Run Date: 05/30/2006 Sample ID: WG214213-23
Instrument ID: ELAN-ICP Run Time: 13:52 Method: 6020
File ID: EL.053006.135200 Analyst: JYH
Workgroup (AAB#): WG214202 Cal ID: ELAN-I - 30-MAY-06

Analyte		Expected	Found	%REC	LIMITS	UNITS	Q
Antimony		50	46.8	93.6	90 - 110	ug/L	
Selenium		50	49.2	98.4	90 - 110	ug/L	
Thallium		50	49.1	98.1	90 - 110	ug/L	

* Exceeds LIMITS Criteria

KEMRON FORMS - Modified 04/19/2006
Version 1.3 PDF File ID: 486319
Report generated 05/30/2006 14:29

KEMRON ENVIRONMENTAL SERVICES
INTERFERENCE CHECK SAMPLES

Login number: L0605548 **Workgroup (AAB#):** WG214202
Instrument ID: ELAN-ICP **Method:** 6020
Sol. A : WG214213-09 **File ID:** EL.053006.092738 **Units:** ug/L
Sol. AB : WG214213-10 **File ID:** EL.053006.093355

	Sol. A			Sol. AB			
ANALYTE	True	Found	%Recovery	True	Found	%Recovery	Q
Antimony	NS	0.121	NS	100	106	106	
Selenium	NS	-0.119	NS	100	105	105	
Thallium	NS	0.0741	NS	100	100	100	

NS = Not spiked
*** = Recovery of spiked element is outside acceptance limit of 80% - 120% of true value.**
 # = Result for unspiked element is outside the acceptance limits of (+/-) the project reporting limit (RL).

KEMRON ENVIRONMENTAL SERVICES
INTERFERENCE CHECK SAMPLES

Login number: L0605548 **Workgroup (AAB#):** WG214202
Instrument ID: ELAN-ICP **Method:** 6020
Sol. A : WG214213-19 **File ID:** EL.053006.131529 **Units:** ug/L
Sol. AB : WG214213-20 **File ID:** EL.053006.132146

	Sol. A			Sol. AB			
ANALYTE	True	Found	%Recovery	True	Found	%Recovery	Q
Antimony	NS	0.106	NS	100	103	103	
Selenium	NS	-0.0421	NS	100	105	105	
Thallium	NS	0.0182	NS	100	108	108	

NS = Not spiked
*** = Recovery of spiked element is outside acceptance limit of 80% - 120% of true value.**
 # = Result for unspiked element is outside the acceptance limits of (+/-) the project reporting limit (RL).

KEMRON Environmental Services

CRI SAMPLE

Login Number: L0605548	Run Date: 05/30/2006	Sample ID: WG214213-08
Instrument ID: ELAN-ICP	Run Time: 09:21	Prep Method: 3015
File ID: EL.053006.092121	Analyst: JYH	Method: 6020
Workgroup (AAB#): WG214213	Matrix: Water	Units: ug/L
Contract #:	Cal ID: ELAN-ICP-30-MAY-2006 08:56	

Analytes	Expected	Found	% Rec	Limits	Q
Thallium, Total	0.0800	0.0902	113	50 - 150	

KEMRON FORMS - Modified 02/14/2006
Version 1.5 PDF File ID: 486306
Report generated 05/30/2006 14:29

KEMRON Environmental Services

LINEAR RANGE (QUARTERLY)

Login Number: L0605548 **Date:** 03/02/2006

Insturment ID: ELAN-ICP **Method:** 6020

Analyte	Integration Time (Sec.)	Concentration (ug/L)
Antimony	1.00	100.0
Arsenic	1.00	100.0
Barium	1.00	100.0
Cadmium	1.00	100.0
Chromium	1.00	100.0
Cobalt	1.00	100.0
Copper	1.00	100.0
Lead	1.00	100.0
Manganese	1.00	100.0
Nickel	1.00	100.0
Selenium	1.00	100.0
Silver	1.00	100.0
Thallium	1.00	100.0
Vanadium	1.00	100.0
Zinc	1.00	100.0

Comments:

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1.2.3 Metals CVAA Data (Mercury)

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KEMRON ENVIRONMENTAL SERVICES
METALS

KEMRON Login No: L0605548

METHOD

Preparation: SW-846 7470A, 7471A

Analysis: SW-846 7470A, 7471A

HOLDING TIMES

Sample Preparation: All holding times were met.

Sample Analysis: All holding times were met.

PREPARATION

Sample preparation proceeded normally.

CALIBRATION

Initial Calibrations: All acceptance criteria were met.

Alternate Source Standards: All acceptance criteria were met.

Continuing Calibration: All acceptance criteria were met.

BATCH QA/QC

Method Blank: All acceptance criteria were met.

Laboratory Control Sample: All acceptance criteria were met.

MS/MSD: WG214249(7471A) - Sample 05 was chosen by the client for MS/MSD analysis. Samples 06(MS) and 07(MSD) failed the acceptance criteria. Sample 14 was chosen by the client for MS/MSD analysis. Samples 15(MS) and 16(MSD) met the acceptance criteria.

Serial Dilution/Post Digestion Spike: WG214048(7470A) - All acceptance criteria were met. WG214249(7471A) - All acceptance criteria were met.

SAMPLES

All acceptance criteria were met.

I certify that this data package is in compliance with the terms and conditions agreed to by the client and KEMRON Environmental Services, both technically and for completeness, except for the conditions noted above. Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or designated person, as verified by the following signature.

Analyst: CRC,PAS

Approved: 01-JUN-06

LABORATORY REPORT

L0605548

06/12/06 13:00

Submitted By

KEMRON Environmental Services
156 Starlite Drive
Marietta , OH 45750
(740) 373 - 4071

For

Account Name: CH2MHILL, Inc
7600 Tidwell Road
Suite 400
San Antonio, TX 77040
Attention: John Ynfante

Account Number: 2736
Work ID: STATE MARINE RI
Invoice Number: 580607
P.O. Number: 915193

Sample Analysis Summary

Client ID	Lab ID	Method	Dilution	Date Received
SM140SB02052306	L0605548-01	7471A	1	24-MAY-06
SM140SB01052306	L0605548-02	7471A	1	24-MAY-06
SM138EB01052306	L0605548-03	7470A	1	24-MAY-06
SM140FD03052306	L0605548-04	7471A	1	24-MAY-06
SM140SB03052306	L0605548-05	7471A	1	24-MAY-06
SM140SB03052306 MS	L0605548-06	7471A	1	24-MAY-06
SM140SB03052306 MSD	L0605548-07	7471A	1	24-MAY-06
SM137SB01052306	L0605548-08	7471A	1	24-MAY-06
SM138SB03052306	L0605548-09	7471A	1	24-MAY-06
SM138FD03052306	L0605548-10	7471A	1	24-MAY-06
SM139SB01052306	L0605548-11	7471A	1	24-MAY-06
SM136SB01052206	L0605548-12	7471A	1	24-MAY-06
SM139SB02052306	L0605548-13	7471A	1	24-MAY-06
SM138SB01052306	L0605548-14	7471A	1	24-MAY-06
SM138SB01052306 MS	L0605548-15	7471A	1	24-MAY-06
SM138SB01052306 MSD	L0605548-16	7471A	1	24-MAY-06
SM137SB02052306	L0605548-17	7471A	1	24-MAY-06
SM139SB03052306	L0605548-18	7471A	1	24-MAY-06
SM138SB02052306	L0605548-19	7471A	1	24-MAY-06

Report Number: **L0605548**
Report Date : **June 12, 2006**

Sample Number: **L0605548-01**
Client ID: **SM140SB02052306**
Matrix: **Soil**
Workgroup Number: **WG214249**
Collect Date: **05/23/2006 15:40**

PrePrep Method: **NONE**
Prep Method: **METHOD**
Analytical Method: **7471A**
Analyst: **PAS**
Dilution: **1**
Units: **mg/kg**

Instrument: **HYDRA**
Prep Date: **05/30/2006 14:30**
Cal Date: **05/31/2006 09:59**
Run Date: **05/31/2006 10:19**
File ID: **HY.053106.101935**
Percent Solid: **72.9**

Analyte	CAS. Number	Result	Qual	PQL	SQL
Mercury, Total	7439-97-6	0.121	J	0.343	0.0137

J The analyte was positively identified, but the quantitation was below the RL

Report Number: **L0605548**
Report Date : **June 12, 2006**

Sample Number: **L0605548-02**
Client ID: **SM140SB01052306**
Matrix: **Soil**
Workgroup Number: **WG214249**
Collect Date: **05/23/2006 15:20**

PrePrep Method: **NONE**
Prep Method: **METHOD**
Analytical Method: **7471A**
Analyst: **PAS**
Dilution: **1**
Units: **mg/kg**

Instrument: **HYDRA**
Prep Date: **05/30/2006 14:30**
Cal Date: **05/31/2006 10:01**
Run Date: **05/31/2006 10:21**
File ID: **HY.053106.102143**
Percent Solid: **85.9**

Analyte	CAS. Number	Result	Qual	PQL	SQL
Mercury, Total	7439-97-6	0.180	J	0.291	0.0116

J The analyte was positively identified, but the quantitation was below the RL

Report Number: **L0605548**
Report Date : **June 12, 2006**

Sample Number: **L0605548-03**
Client ID: **SM138EB01052306**
Matrix: **Water**
Workgroup Number: **WG214048**
Collect Date: **05/23/2006 13:40**

PrePrep Method: **NONE**
Prep Method: **METHOD**
Analytical Method: **7470A**
Analyst: **CRC**
Dilution: **1**
Units: **mg/L**

Instrument: **HYDRA**
Prep Date: **05/25/2006 09:30**
Cal Date: **05/26/2006 10:47**
Run Date: **05/26/2006 11:09**
File ID: **HY.052606.110958**

Analyte	CAS. Number	Result	Qual	PQL	SQL
Mercury	7439-97-6		U	0.000200	0.000100

U Not detected at or above the reporting limit

Report Number: **L0605548**
Report Date : **June 12, 2006**

Sample Number: **L0605548-04**
Client ID: **SM140FD03052306**
Matrix: **Soil**
Workgroup Number: **WG214249**
Collect Date: **05/23/2006 16:40**

PrePrep Method: **NONE**
Prep Method: **METHOD**
Analytical Method: **7471A**
Analyst: **PAS**
Dilution: **1**
Units: **mg/kg**

Instrument: **HYDRA**
Prep Date: **05/30/2006 14:30**
Cal Date: **05/31/2006 10:01**
Run Date: **05/31/2006 10:26**
File ID: **HY.053106.102601**
Percent Solid: **66.3**

Analyte	CAS. Number	Result	Qual	PQL	SQL
Mercury, Total	7439-97-6	0.0871	J	0.377	0.0151

J The analyte was positively identified, but the quantitation was below the RL

Report Number: **L0605548**
Report Date : **June 12, 2006**

Sample Number: **L0605548-05**
Client ID: **SM140SB03052306**
Matrix: **Soil**
Workgroup Number: **WG214249**
Collect Date: **05/23/2006 16:35**

PrePrep Method: **NONE**
Prep Method: **METHOD**
Analytical Method: **7471A**
Analyst: **PAS**
Dilution: **1**
Units: **mg/kg**

Instrument: **HYDRA**
Prep Date: **05/30/2006 14:30**
Cal Date: **05/31/2006 10:07**
Run Date: **05/31/2006 10:27**
File ID: **HY.053106.102750**
Percent Solid: **61.4**

Analyte	CAS. Number	Result	Qual	PQL	SQL
Mercury, Total	7439-97-6	0.532		0.407	0.0163

Report Number: **L0605548**
Report Date : **June 12, 2006**

Sample Number:	L0605548-06	PrePrep Method:	NONE	Instrument:	HYDRA
Client ID:	SM140SB03052306 MS	Prep Method:	METHOD	Prep Date:	05/30/2006 14:30
Matrix:	Soil	Analytical Method:	7471A	Cal Date:	05/31/2006 10:07
Workgroup Number:	WG214249	Analyst:	PAS	Run Date:	05/31/2006 10:29
Collect Date:	05/23/2006 16:35	Dilution:	1	File ID:	HY.053106.102927
		Units:	mg/kg	Percent Solid:	61.4

Analyte	CAS. Number	Result	Qual	PQL	SQL
Mercury, Total	7439-97-6	0.559		0.407	0.0163

Report Number: **L0605548**
Report Date : **June 12, 2006**

Sample Number: **L0605548-07**
Client ID: **SM140SB03052306 MSD**
Matrix: **Soil**
Workgroup Number: **WG214249**
Collect Date: **05/23/2006 16:35**

PrePrep Method: **NONE**
Prep Method: **METHOD**
Analytical Method: **7471A**
Analyst: **PAS**
Dilution: **1**
Units: **mg/kg**

Instrument: **HYDRA**
Prep Date: **05/30/2006 14:30**
Cal Date: **05/31/2006 10:07**
Run Date: **05/31/2006 10:31**
File ID: **HY.053106.103116**
Percent Solid: **61.4**

Analyte	CAS. Number	Result	Qual	PQL	SQL
Mercury, Total	7439-97-6	0.585		0.407	0.0163

Report Number: **L0605548**
Report Date : **June 12, 2006**

Sample Number: **L0605548-08**
Client ID: **SM137SB01052306**
Matrix: **Soil**
Workgroup Number: **WG214249**
Collect Date: **05/23/2006 09:20**

PrePrep Method: **NONE**
Prep Method: **METHOD**
Analytical Method: **7471A**
Analyst: **PAS**
Dilution: **1**
Units: **mg/kg**

Instrument: **HYDRA**
Prep Date: **05/30/2006 14:30**
Cal Date: **05/31/2006 10:07**
Run Date: **05/31/2006 10:33**
File ID: **HY.053106.103306**
Percent Solid: **84.3**

Analyte	CAS. Number	Result	Qual	PQL	SQL
Mercury, Total	7439-97-6	0.127	J	0.297	0.0119

J The analyte was positively identified, but the quantitation was below the RL

Report Number: **L0605548**
Report Date : **June 12, 2006**

Sample Number: **L0605548-09**
Client ID: **SM138SB03052306**
Matrix: **Soil**
Workgroup Number: **WG214249**
Collect Date: **05/23/2006 12:55**

PrePrep Method: **NONE**
Prep Method: **METHOD**
Analytical Method: **7471A**
Analyst: **PAS**
Dilution: **1**
Units: **mg/kg**

Instrument: **HYDRA**
Prep Date: **05/30/2006 14:30**
Cal Date: **05/31/2006 10:07**
Run Date: **05/31/2006 10:40**
File ID: **HY.053106.104008**
Percent Solid: **69.7**

Analyte	CAS. Number	Result	Qual	PQL	SQL
Mercury, Total	7439-97-6	0.0300	J	0.347	0.0139

J The analyte was positively identified, but the quantitation was below the RL

Report Number: **L0605548**
Report Date : **June 12, 2006**

Sample Number: **L0605548-10**
Client ID: **SM138FD03052306**
Matrix: **Soil**
Workgroup Number: **WG214249**
Collect Date: **05/23/2006 13:00**

PrePrep Method: **NONE**
Prep Method: **METHOD**
Analytical Method: **7471A**
Analyst: **PAS**
Dilution: **1**
Units: **mg/kg**

Instrument: **HYDRA**
Prep Date: **05/30/2006 14:30**
Cal Date: **05/31/2006 10:07**
Run Date: **05/31/2006 10:41**
File ID: **HY.053106.104146**
Percent Solid: **65.7**

Analyte	CAS. Number	Result	Qual	PQL	SQL
Mercury, Total	7439-97-6	0.0253	J	0.374	0.0150

J The analyte was positively identified, but the quantitation was below the RL

Report Number: **L0605548**
Report Date : **June 12, 2006**

Sample Number: **L0605548-11**
Client ID: **SM139SB01052306**
Matrix: **Soil**
Workgroup Number: **WG214249**
Collect Date: **05/23/2006 14:05**

PrePrep Method: **NONE**
Prep Method: **METHOD**
Analytical Method: **7471A**
Analyst: **PAS**
Dilution: **1**
Units: **mg/kg**

Instrument: **HYDRA**
Prep Date: **05/30/2006 14:30**
Cal Date: **05/31/2006 10:07**
Run Date: **05/31/2006 10:43**
File ID: **HY.053106.104354**
Percent Solid: **86.3**

Analyte	CAS. Number	Result	Qual	PQL	SQL
Mercury, Total	7439-97-6	0.214	J	0.285	0.0114

J The analyte was positively identified, but the quantitation was below the RL

Report Number: **L0605548**
Report Date : **June 12, 2006**

Sample Number: **L0605548-12**
Client ID: **SM136SB01052206**
Matrix: **Soil**
Workgroup Number: **WG214249**
Collect Date: **05/22/2006 08:05**

PrePrep Method: **NONE**
Prep Method: **METHOD**
Analytical Method: **7471A**
Analyst: **PAS**
Dilution: **1**
Units: **mg/kg**

Instrument: **HYDRA**
Prep Date: **05/30/2006 14:30**
Cal Date: **05/31/2006 10:07**
Run Date: **05/31/2006 10:45**
File ID: **HY.053106.104532**
Percent Solid: **84.9**

Analyte	CAS. Number	Result	Qual	PQL	SQL
Mercury, Total	7439-97-6	0.134	J	0.294	0.0118

J The analyte was positively identified, but the quantitation was below the RL

Report Number: **L0605548**
Report Date : **June 12, 2006**

Sample Number: **L0605548-13**
Client ID: **SM139SB02052306**
Matrix: **Soil**
Workgroup Number: **WG214249**
Collect Date: **05/23/2006 14:25**

PrePrep Method: **NONE**
Prep Method: **METHOD**
Analytical Method: **7471A**
Analyst: **PAS**
Dilution: **1**
Units: **mg/kg**

Instrument: **HYDRA**
Prep Date: **05/30/2006 14:30**
Cal Date: **05/31/2006 10:07**
Run Date: **05/31/2006 10:47**
File ID: **HY.053106.104710**
Percent Solid: **75.9**

Analyte	CAS. Number	Result	Qual	PQL	SQL
Mercury, Total	7439-97-6	0.0429	J	0.314	0.0125

J The analyte was positively identified, but the quantitation was below the RL

Report Number: **L0605548**
Report Date : **June 12, 2006**

Sample Number: **L0605548-14**
Client ID: **SM138SB01052306**
Matrix: **Soil**
Workgroup Number: **WG214249**
Collect Date: **05/23/2006 11:20**

PrePrep Method: **NONE**
Prep Method: **METHOD**
Analytical Method: **7471A**
Analyst: **PAS**
Dilution: **1**
Units: **mg/kg**

Instrument: **HYDRA**
Prep Date: **05/30/2006 14:30**
Cal Date: **05/31/2006 10:07**
Run Date: **05/31/2006 10:48**
File ID: **HY.053106.104848**
Percent Solid: **86.6**

Analyte	CAS. Number	Result	Qual	PQL	SQL
Mercury, Total	7439-97-6	0.0901	J	0.289	0.0115

J The analyte was positively identified, but the quantitation was below the RL

Report Number: **L0605548**
Report Date : **June 12, 2006**

Sample Number: **L0605548-15**
Client ID: **SM138SB01052306 MS**
Matrix: **Soil**
Workgroup Number: **WG214249**
Collect Date: **05/23/2006 11:20**

PrePrep Method: **NONE**
Prep Method: **METHOD**
Analytical Method: **7471A**
Analyst: **PAS**
Dilution: **1**
Units: **mg/kg**

Instrument: **HYDRA**
Prep Date: **05/30/2006 14:30**
Cal Date: **05/31/2006 10:07**
Run Date: **05/31/2006 10:50**
File ID: **HY.053106.105036**
Percent Solid: **86.6**

Analyte	CAS. Number	Result	Qual	PQL	SQL
Mercury, Total	7439-97-6	0.447		0.289	0.0115

Report Number: **L0605548**
Report Date : **June 12, 2006**

Sample Number: **L0605548-16**
Client ID: **SM138SB01052306 MSD**
Matrix: **Soil**
Workgroup Number: **WG214249**
Collect Date: **05/23/2006 11:20**

PrePrep Method: **NONE**
Prep Method: **METHOD**
Analytical Method: **7471A**
Analyst: **PAS**
Dilution: **1**
Units: **mg/kg**

Instrument: **HYDRA**
Prep Date: **05/30/2006 14:30**
Cal Date: **05/31/2006 10:07**
Run Date: **05/31/2006 10:52**
File ID: **HY.053106.105213**
Percent Solid: **86.6**

Analyte	CAS. Number	Result	Qual	PQL	SQL
Mercury, Total	7439-97-6	0.423		0.289	0.0115

Report Number: **L0605548**
Report Date : **June 12, 2006**

Sample Number: **L0605548-17**
Client ID: **SM137SB02052306**
Matrix: **Soil**
Workgroup Number: **WG214249**
Collect Date: **05/23/2006 09:25**

PrePrep Method: **NONE**
Prep Method: **METHOD**
Analytical Method: **7471A**
Analyst: **PAS**
Dilution: **1**
Units: **mg/kg**

Instrument: **HYDRA**
Prep Date: **05/30/2006 14:30**
Cal Date: **05/31/2006 10:07**
Run Date: **05/31/2006 10:54**
File ID: **HY.053106.105401**
Percent Solid: **79.1**

Analyte	CAS. Number	Result	Qual	PQL	SQL
Mercury, Total	7439-97-6	0.467		0.301	0.0120

Report Number: **L0605548**
Report Date : **June 12, 2006**

Sample Number: **L0605548-18**
Client ID: **SM139SB03052306**
Matrix: **Soil**
Workgroup Number: **WG214249**
Collect Date: **05/23/2006 14:40**

PrePrep Method: **NONE**
Prep Method: **METHOD**
Analytical Method: **7471A**
Analyst: **PAS**
Dilution: **1**
Units: **mg/kg**

Instrument: **HYDRA**
Prep Date: **05/30/2006 14:30**
Cal Date: **05/31/2006 10:07**
Run Date: **05/31/2006 10:55**
File ID: **HY.053106.105558**
Percent Solid: **67.4**

Analyte	CAS. Number	Result	Qual	PQL	SQL
Mercury, Total	7439-97-6	0.128	J	0.353	0.0141

J The analyte was positively identified, but the quantitation was below the RL

Report Number: **L0605548**
Report Date : **June 12, 2006**

Sample Number: **L0605548-19**
Client ID: **SM138SB02052306**
Matrix: **Soil**
Workgroup Number: **WG214249**
Collect Date: **05/23/2006 12:10**

PrePrep Method: **NONE**
Prep Method: **METHOD**
Analytical Method: **7471A**
Analyst: **PAS**
Dilution: **1**
Units: **mg/kg**

Instrument: **HYDRA**
Prep Date: **05/30/2006 14:30**
Cal Date: **05/31/2006 10:07**
Run Date: **05/31/2006 11:01**
File ID: **HY.053106.110107**
Percent Solid: **57.1**

Analyte	CAS. Number	Result	Qual	PQL	SQL
Mercury, Total	7439-97-6	0.0267	J	0.437	0.0175

J The analyte was positively identified, but the quantitation was below the RL

1.2.3.1 QC Summary

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Run Log ID:**10558**

KEMRON Environmental Services

Instrument Run Log

Instrument: HYDRA Dataset: 052606A.PRN

Analyst1: CRC Analyst2: N/A

Method: 7470A SOP: 404 Rev: 9

Calibration Std: STD12799 ICV/CCV Std: STD12793 Post Spike: STD12799

ICSA: N/A ICSAB: N/A

Workgroups: 214048

Comments:

Seq.	File ID	Sample	ID	Prep	Dil	Reference	Date/Time
1	HY.052606.104708	WG214103-01	Calibration Point		1		05/26/06 10:47
2	HY.052606.104930	WG214103-02	Calibration Point		1		05/26/06 10:49
3	HY.052606.105116	WG214103-03	Calibration Point		1		05/26/06 10:51
4	HY.052606.105315	WG214103-04	Calibration Point		1		05/26/06 10:53
5	HY.052606.105458	WG214103-05	Calibration Point		1		05/26/06 10:54
6	HY.052606.105637	WG214103-06	Calibration Point		1		05/26/06 10:56
7	HY.052606.105828	WG214103-07	Initial Calibration Verification		1		05/26/06 10:58
8	HY.052606.110015	WG214103-08	Initial Calib Blank		1		05/26/06 11:00
9	HY.052606.110212	WG214103-09	CCV		1		05/26/06 11:02
10	HY.052606.110423	WG214103-10	CCB		1		05/26/06 11:04
11	HY.052606.110611	WG214013-02	Method/Prep Blank	40/40	1		05/26/06 11:06
12	HY.052606.110748	WG214013-03	Laboratory Control S	40/40	1		05/26/06 11:07
13	HY.052606.110958	L0605548-03	SM138EB01052306	40/40	1		05/26/06 11:09
14	HY.052606.111206	L0605556-01	143/14406-PPG-309	40/40	1		05/26/06 11:12
15	HY.052606.111353	L0605556-02	143/14406-PPG-009	40/40	1		05/26/06 11:13
16	HY.052606.111535	L0605556-03	143/14406-PPG-RIVER	40/40	1		05/26/06 11:15
17	HY.052606.111826	L0605565-02	W-6	40/40	1		05/26/06 11:18
18	HY.052606.112006	WG214048-01	Post Digestion Spike		1	L0605565-02	05/26/06 11:20
19	HY.052606.112158	L0605565-03	W-6B	40/40	1		05/26/06 11:21
20	HY.052606.112357	L0605565-04	W-51	40/40	1		05/26/06 11:23
21	HY.052606.112534	WG214103-11	CCV		1		05/26/06 11:25
22	HY.052606.112722	WG214103-12	CCB		1		05/26/06 11:27
23	HY.052606.112900	L0605565-05	W-7A		1		05/26/06 11:29
24	HY.052606.113150	WG214013-04	Matrix Spike	36/40	1		05/26/06 11:31
25	HY.052606.113347	WG214013-05	Matrix Spike Duplica	36/40	1		05/26/06 11:33
26	HY.052606.113526	L0605565-07	W-7B	40/40	1		05/26/06 11:35
27	HY.052606.113702	L0605565-09	W-5	40/40	1		05/26/06 11:37
28	HY.052606.113840	L0605565-11	W-17	40/40	1		05/26/06 11:38
29	HY.052606.114021	WG213977-01	Fluid Blank		1		05/26/06 11:40
30	HY.052606.114218	L0605515-01	TANK BOTTOM SOLIDS	4/40	1		05/26/06 11:42
31	HY.052606.114405	L0605531-01	GM060070	4/40	1		05/26/06 11:44
32	HY.052606.114602	L0605537-01	V-1020 SPENT ABRASIVE	4/40	1		05/26/06 11:46
33	HY.052606.114811	WG214103-13	CCV		1		05/26/06 11:48
34	HY.052606.114948	WG214103-14	CCB		1		05/26/06 11:49
35	HY.052606.115130	L0605544-01	GM060043	4/40	1		05/26/06 11:51
36	HY.052606.115314	WG214048-02	Post Digestion Spike		1	L0605544-01	05/26/06 11:53
37	HY.052606.115455	WG214103-15	CCV		1		05/26/06 11:54

Approved: May 26, 2006

006647

Run Log ID:**10558**

KEMRON Environmental Services

Instrument Run Log

Instrument: HYDRA Dataset: 052606A.PRN

Analyst1: CRC Analyst2: N/A

Method: 7470A SOP: 404 Rev: 9

Calibration Std: STD12799 ICV/CCV Std: STD12793 Post Spike: STD12799

ICSA: N/A ICSAB: N/A

Workgroups: 214048

Comments:

Seq.	File ID	Sample	ID	Prep	Dil	Reference	Date/Time
38	HY.052606.115635	WG214103-16	CCB		1		05/26/06 11:56

Approved: May 26, 2006

006648

Run Log ID:**10596**

KEMRON Environmental Services

Instrument Run Log

Instrument: HYDRA Dataset: 053106A.PRN

Analyst1: PAS Analyst2: N/A

Method: 7471A SOP: 405 Rev: 8

Calibration Std: STD12862 ICV/CCV Std: STD12863 Post Spike: STD12862

ICSA: N/A ICSAB: N/A

Workgroups: WG214249, WG214246, WG214248

Comments:

Seq.	File ID	Sample	ID	Prep	Dil	Reference	Date/Time
1	HY.053106.095652	WG214317-01	Calibration Point		1		05/31/06 09:56
2	HY.053106.095917	WG214317-02	Calibration Point		1		05/31/06 09:59
3	HY.053106.100114	WG214317-03	Calibration Point		1		05/31/06 10:01
4	HY.053106.100313	WG214317-04	Calibration Point		1		05/31/06 10:03
5	HY.053106.100523	WG214317-05	Calibration Point		1		05/31/06 10:05
6	HY.053106.100702	WG214317-06	Calibration Point		1		05/31/06 10:07
7	HY.053106.100840	WG214317-07	Initial Calibration Verification		1		05/31/06 10:08
8	HY.053106.101021	WG214317-08	Initial Calib Blank		1		05/31/06 10:10
9	HY.053106.101240	WG214317-09	CCV		1		05/31/06 10:12
10	HY.053106.101418	WG214317-10	CCB		1		05/31/06 10:14
11	HY.053106.101607	WG214229-03	Method/Prep Blank	.6/40	1		05/31/06 10:16
12	HY.053106.101743	WG214229-04	Laboratory Control Sample	.6/40	1		05/31/06 10:17
13	HY.053106.101935	L0605548-01	SM140SB02052306	.6/40	1		05/31/06 10:19
14	HY.053106.102143	L0605548-02	SM140SB01052306	.6/40	1		05/31/06 10:21
15	HY.053106.102424	WG214249-01	Post Digestion Spike		1		05/31/06 10:24
16	HY.053106.102601	L0605548-04	SM140FD03052306	.6/40	1		05/31/06 10:26
17	HY.053106.102750	L0605548-05	SM140SB03052306		1		05/31/06 10:27
18	HY.053106.102927	WG214229-05	Matrix Spike	.6/40	1		05/31/06 10:29
19	HY.053106.103116	WG214229-06	Matrix Spike Duplicate	.6/40	1		05/31/06 10:31
20	HY.053106.103306	L0605548-08	SM137SB01052306	.6/40	1		05/31/06 10:33
21	HY.053106.103639	WG214317-11	CCV		1		05/31/06 10:36
22	HY.053106.103828	WG214317-12	CCB		1		05/31/06 10:38
23	HY.053106.104008	L0605548-09	SM138SB03052306	.62/40	1		05/31/06 10:40
24	HY.053106.104146	L0605548-10	SM138FD03052306	.61/40	1		05/31/06 10:41
25	HY.053106.104354	L0605548-11	SM139SB01052306	.61/40	1		05/31/06 10:43
26	HY.053106.104532	L0605548-12	SM136SB01052206	.6/40	1		05/31/06 10:45
27	HY.053106.104710	L0605548-13	SM139SB02052306	.63/40	1		05/31/06 10:47
28	HY.053106.104848	L0605548-14	SM138SB01052306		1		05/31/06 10:48
29	HY.053106.105036	WG214229-07	Matrix Spike	.6/40	1		05/31/06 10:50
30	HY.053106.105213	WG214229-08	Matrix Spike Duplicate	.6/40	1		05/31/06 10:52
31	HY.053106.105401	L0605548-17	SM137SB02052306	.63/40	1		05/31/06 10:54
32	HY.053106.105558	L0605548-18	SM139SB03052306	.63/40	1		05/31/06 10:55
33	HY.053106.105746	WG214317-13	CCV		1		05/31/06 10:57
34	HY.053106.105924	WG214317-14	CCB		1		05/31/06 10:59
35	HY.053106.110107	L0605548-19	SM138SB02052306	.6/40	1		05/31/06 11:01
36	HY.053106.110258	L0605618-01	DIAPHRAGM COATING		1		05/31/06 11:02
37	HY.053106.110447	WG214249-02	Post Digestion Spike		1		05/31/06 11:04

Approved: June 01, 2006

006649

Run Log ID:**10596**

KEMRON Environmental Services

Instrument Run Log

Instrument: HYDRA Dataset: 053106A.PRN
Analyst1: PAS Analyst2: N/A
Method: 7471A SOP: 405 Rev: 8

Calibration Std: STD12862 ICV/CCV Std: STD12863 Post Spike: STD12862
ICSA: N/A ICSAB: N/A

Workgroups: WG214249, WG214246, WG214248

Comments:

Seq.	File ID	Sample	ID	Prep	Dil	Reference	Date/Time
38	HY.053106.110625	WG214317-15	CCV		1		05/31/06 11:06
39	HY.053106.110813	WG214317-16	CCB		1		05/31/06 11:08
40	HY.053106.111849	L0605618-01	DIAPHRAGM COATING	.6/40	2		05/31/06 11:18
41	HY.053106.112028	01+1PPB HG	01+1PPB HG		1		05/31/06 11:20
42	HY.053106.112234	01+2PPB HG	01+2PPB HG		1		05/31/06 11:22
43	HY.053106.112421	01+3PPB HG	01+3PPB HG		1		05/31/06 11:24
44	HY.053106.112609	WG214317-17	CCV		1		05/31/06 11:26
45	HY.053106.112750	WG214317-18	CCB		1		05/31/06 11:27
46	HY.053106.114245	WG214317-19	CCV		1		05/31/06 11:42
47	HY.053106.114435	WG214317-20	CCB		1		05/31/06 11:44
48	HY.053106.114633	WG214194-02	Method/Prep Blank	.6/40	1		05/31/06 11:46
49	HY.053106.114810	WG214194-03	Laboratory Control Sample	.6/40	1		05/31/06 11:48
50	HY.053106.114947	L0605605-01	SB-5B		1		05/31/06 11:49
51	HY.053106.115129	WG214194-04	Matrix Spike	.6/40	1		05/31/06 11:51
52	HY.053106.115308	WG214194-05	Matrix Spike Duplicate	.6/40	1		05/31/06 11:53
53	HY.053106.115446	L0605605-02	SB-8B	.6/40	1		05/31/06 11:54
54	HY.053106.115635	WG214246-01	Post Digestion Spike		1		05/31/06 11:56
55	HY.053106.115812	L0605605-03	SB-3B	.6/40	1		05/31/06 11:58
56	HY.053106.120029	L0605605-04	SB-3A	.6/40	1		05/31/06 12:00
57	HY.053106.120218	L0605605-05	SB-14A	.6/40	1		05/31/06 12:02
58	HY.053106.120425	WG214317-21	CCV		1		05/31/06 12:04
59	HY.053106.120653	WG214317-22	CCB		1		05/31/06 12:06
60	HY.053106.120835	L0605605-06	SB-5A	.6/40	1		05/31/06 12:08
61	HY.053106.121015	L0605605-07	SB-8A	.6/40	1		05/31/06 12:10
62	HY.053106.121204	L0605605-08	SB-14B	.6/40	1		05/31/06 12:12
63	HY.053106.121410	L0605605-09	SB-15A	.6/40	1		05/31/06 12:14
64	HY.053106.121637	L0605605-10	SB-15B	.6/40	1		05/31/06 12:16
65	HY.053106.121819	L0605605-11	SB-13A	.6/40	1		05/31/06 12:18
66	HY.053106.122008	L0605605-12	SB-13B	.6/40	1		05/31/06 12:20
67	HY.053106.122146	L0605605-13	SB-12A	.6/40	1		05/31/06 12:21
68	HY.053106.122326	L0605605-14	SB-12B	.6/40	1		05/31/06 12:23
69	HY.053106.122515	L0605605-15	SB-10A	.6/40	1		05/31/06 12:25
70	HY.053106.122705	WG214317-23	CCV		1		05/31/06 12:27
71	HY.053106.122844	WG214317-24	CCB		1		05/31/06 12:28
72	HY.053106.123035	L0605605-16	SB-10B	.6/40	1		05/31/06 12:30
73	HY.053106.123218	L0605605-17	SB-4A	.6/40	1		05/31/06 12:32
74	HY.053106.123445	L0605605-18	SB-4B	.6/40	1		05/31/06 12:34

Approved: June 01, 2006

Run Log ID:**10596**

KEMRON Environmental Services

Instrument Run Log

Instrument: HYDRA Dataset: 053106A.PRN
Analyst1: PAS Analyst2: N/A
Method: 7471A SOP: 405 Rev: 8

Calibration Std: STD12862 ICV/CCV Std: STD12863 Post Spike: STD12862
ICSA: N/A ICSAB: N/A

Workgroups: WG214249, WG214246, WG214248

Comments:

Seq.	File ID	Sample	ID	Prep	Dil	Reference	Date/Time
75	HY.053106.123622	WG214317-25	CCV		1		05/31/06 12:36
76	HY.053106.123801	WG214317-26	CCB		1		05/31/06 12:38
77	HY.053106.123956	WG214195-02	Method/Prep Blank	.6/40	1		05/31/06 12:39
78	HY.053106.124132	WG214195-03	Laboratory Control Sample	.6/40	1		05/31/06 12:41
79	HY.053106.124312	L0605605-19	SB-7A		1		05/31/06 12:43
80	HY.053106.124519	WG214195-04	Matrix Spike	.6/40	1		05/31/06 12:45
81	HY.053106.124710	WG214195-05	Matrix Spike Duplicate	.6/40	1		05/31/06 12:47
82	HY.053106.124850	L0605605-20	SB-7B	.6/40	1		05/31/06 12:48
83	HY.053106.125047	WG214248-01	Post Digestion Spike		1		05/31/06 12:50
84	HY.053106.125228	L0605605-21	SB-6A	.6/40	1		05/31/06 12:52
85	HY.053106.125406	L0605605-22	SB-6B	.6/40	1		05/31/06 12:54
86	HY.053106.125603	L0605605-23	SB-9A	.6/40	1		05/31/06 12:56
87	HY.053106.125830	WG214317-27	CCV		1		05/31/06 12:58
88	HY.053106.130020	WG214317-28	CCB		1		05/31/06 13:00
89	HY.053106.130158	L0605605-24	SB-9B	.6/40	1		05/31/06 13:01
90	HY.053106.130338	WG214317-29	CCV		1		05/31/06 13:03
91	HY.053106.130605	WG214317-30	CCB		1		05/31/06 13:06

Page: 3 of 3 Approved: June 01, 2006

KEMRON
ENVIRONMENTAL SERVICES

Mercury Digestion Log

Analyst(s): [illegible]
Date: 5/25/06
LCS: 4ml STD 12791
MS/MSD: 4ml STD 12791
Witness: [illegible]
H_2SO_4 Lot #: ACT10168
$K2S_2O_8$ Lot #: ACT10224
$KMNO_4$ Lot #:
HNO_3 Lot #: ACT10226
Aqua Regia: NA
Earliest Sample Due Date: 5/29/06
ICV / CCV: STD 12793
Stds: 0, 0.2, 1, 2, 5, 10: STD 12794 & 12799

Box: 51

Digestion Work Group: WG 214013

ME404 Revision # 9 - Method 7470A-Water
ME405 Revision # ____ - Method 7471A-Soil

Hot Block Temperature at start: 96.6°C @ 0930
Hot Block Temperature at end: 95.3°C @ 1130

Relinquished By: [illegible]
Digest Received By: [illegible] Date: 5/25/06

	KEMRON #	Initial Wt/Vol	Final Volume	Comments	Due Date
1	PPW	40ml	40ml	-02	
2	LCSW			-03	
3	05-548-03				6/2
4	05-556-01			Poss. High Hg NPPES	5/29
5	-02				
6	-03				
7	05-565-02			level 4	6/7
8	-03				
9	-04				
10	-05			-01	
11	-05 MS	36ml		-04	
12	-05 MSD			-05	
13	-07	40ml			
14	-09				
15	-11				
16	FCBLK 5/24	4ml		WG 213977 @ 1430	
17	05-515-01				6/2
18	05-531-01				5/31
19	05-537-01				6/2
20	05-544-01				5/31
21					
22					
23		[illegible] 5/25/06			
24					
25					

Comments:

Primary Review: [illegible] 5/25/06 Secondary Review: [illegible] 5/25/06

006652

Mercury Digestion Log

Analyst(s): TFC
Date: 5/30/06
LCS: 4ml STD 12855 @ 13:45
MS/MSD: 4ml STD 12855
Witness: NA
H_2SO_4 Lot #: N/A
$K2S_2O_8$ Lot #: N/A
$KMNO_4$ Lot #: 6F10229
HNO_3 Lot #: N/A
Aqua Regia: 6F10227
Earliest Sample Due Date: 6/1/06
ICV / CCV: STD 12863
Stds: 0, 0.2, 1, 2, 5, 10: STD12857 & 12862

Box: 24

Digestion Work Group: WG 214229

ME404 Revision # ___ - Method 7470A-Water
ME405 Revision # I - Method 7471A-Soil

Hot Block Temperature at start: 94.7 °C @ 1430
Hot Block Temperature at end: 95.6 °C @ 1500

Relinquished By: TFC
Digest Received By: PAS Date: 5/30/06

	KEMRON #	Initial Wt/Vol	Final Volume	Comments	Due Date
1	PBS	0.60 g	40mL	-03	
2	LCSS	1		-04	
3	05-548-01	0.60			6/2
4	-02	0.60			
5	-04	0.60			
6	-05 RS	0.60		-01	
7	-06 MS	0.60		-05	
8	-07 MSD	0.60		-06	
9	-08	0.60			
10	-09	0.62			
11	-10	0.61			
12	-11	0.61			
13	-12	0.60			
14	-13	0.63			
15	-14 RS	0.60		-02	
16	-15 MS	0.60		-07	
17	-16 MSD	0.60		-08	
18	-17	0.63			
19	-18	0.63			
20	-19	0.60			
21	05-618-01	0.60			6/1
22		5/30/06			
23					
24					
25					

Comments: _____

Primary Review: [signature] 5/30/06 Secondary Review: [signature] 5/30/06

006653

KEMRON Environmental Services
HOLDING TIMES
EQUIVALENT TO AFCEE FORM 9

Analytical Method: 7470A **AAB#:** WG214048
Login Number: L0605548

Client ID	Date Collected	Date Received	Date Extracted	Max Hold Time Ext.	Time Held Ext.	Date Analyzed	Max Hold Time Anal	Time Held Anal.	Q
SM138EB01052306	05/23/06	05/24/06	05/25/06	28	1.83	05/26/06	28	1.07	

* EXT = SEE PROJECT QAPP REQUIREMENTS
*ANAL = SEE PROJECT QAPP REQUIREMENTS

KEMRON FORMS - Modified 02/14/2006
Version 1.5 PDF File ID: 485017
Report generated 05/31/2006 14:19

KEMRON Environmental Services
HOLDING TIMES
EQUIVALENT TO AFCEE FORM 9

Analytical Method: 7471A **AAB#:** WG214249
Login Number: L0605548

Client ID	Date Collected	Date Received	Date Extracted	Max Hold Time Ext.	Time Held Ext.	Date Analyzed	Max Hold Time Anal	Time Held Anal.	Q
SM140SB02052306	05/23/06	05/24/06	05/30/06	28	6.95	05/31/06	28	0.826	
SM140SB01052306	05/23/06	05/24/06	05/30/06	28	6.97	05/31/06	28	0.828	
SM140FD03052306	05/23/06	05/24/06	05/30/06	28	6.91	05/31/06	28	0.831	
SM140SB03052306	05/23/06	05/24/06	05/30/06	28	6.91	05/31/06	28	0.832	
SM140SB03052306 MS	05/23/06	05/24/06	05/30/06	28	6.91	05/31/06	28	0.833	
SM140SB03052306 MSD	05/23/06	05/24/06	05/30/06	28	6.91	05/31/06	28	0.834	
SM137SB01052306	05/23/06	05/24/06	05/30/06	28	7.22	05/31/06	28	0.835	
SM138SB03052306	05/23/06	05/24/06	05/30/06	28	7.07	05/31/06	28	0.840	
SM138FD03052306	05/23/06	05/24/06	05/30/06	28	7.06	05/31/06	28	0.842	
SM139SB01052306	05/23/06	05/24/06	05/30/06	28	7.02	05/31/06	28	0.843	
SM136SB01052206	05/22/06	05/24/06	05/30/06	28	8.27	05/31/06	28	0.844	
SM139SB02052306	05/23/06	05/24/06	05/30/06	28	7.00	05/31/06	28	0.845	
SM138SB01052306	05/23/06	05/24/06	05/30/06	28	7.13	05/31/06	28	0.846	
SM138SB01052306 MS	05/23/06	05/24/06	05/30/06	28	7.13	05/31/06	28	0.848	
SM138SB01052306 MSD	05/23/06	05/24/06	05/30/06	28	7.13	05/31/06	28	0.849	
SM137SB02052306	05/23/06	05/24/06	05/30/06	28	7.21	05/31/06	28	0.850	
SM139SB03052306	05/23/06	05/24/06	05/30/06	28	6.99	05/31/06	28	0.851	
SM138SB02052306	05/23/06	05/24/06	05/30/06	28	7.10	05/31/06	28	0.855	

* EXT = SEE PROJECT QAPP REQUIREMENTS
*ANAL = SEE PROJECT QAPP REQUIREMENTS

KEMRON FORMS - Modified 02/14/2006
Version 1.5 PDF File ID: 485017
Report generated 05/31/2006 14:19

KEMRON Environmental Services

METHOD BLANK SUMMARY

Login Number:	L0605548	Work Group:	WG214048
Blank File ID:	HY.052606.110611	Blank Sample ID:	WG214013-02
Date Analyzed:	05/26/06	Instrument ID:	HYDRA
Time Analyzed:	11:06	Method:	7470A
Analyst:	CRC		

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG214013-03	HY.052606.110748	05/26/06 11:07	01
SM138EB01052306	L0605548-03	HY.052606.110958	05/26/06 11:09	01

KEMRON FORMS - Modified 03/06/2006
Version 1.5 PDF File ID: 485018
Report generated 05/31/2006 14:19

KEMRON Environmental Services

METHOD BLANK SUMMARY

Login Number: L0605548 | Work Group: WG214249
Blank File ID: HY.053106.101607 | Blank Sample ID: WG214229-03
Date Analyzed: 05/31/06 | Instrument ID: HYDRA
Time Analyzed: 10:16 | Method: 7471A
Analyst: PAS

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG214229-04	HY.053106.101743	05/31/06 10:17	01
SM140SB02052306	L0605548-01	HY.053106.101935	05/31/06 10:19	01
SM140SB01052306	L0605548-02	HY.053106.102143	05/31/06 10:21	01
SM140FD03052306	L0605548-04	HY.053106.102601	05/31/06 10:26	01
SM140SB03052306	L0605548-05	HY.053106.102750	05/31/06 10:27	01
SM140SB03052306 MS	L0605548-06	HY.053106.102927	05/31/06 10:29	01
SM140SB03052306 MSD	L0605548-07	HY.053106.103116	05/31/06 10:31	01
SM137SB01052306	L0605548-08	HY.053106.103306	05/31/06 10:33	01
SM138SB03052306	L0605548-09	HY.053106.104008	05/31/06 10:40	01
SM138FD03052306	L0605548-10	HY.053106.104146	05/31/06 10:41	01
SM139SB01052306	L0605548-11	HY.053106.104354	05/31/06 10:43	01
SM136SB01052206	L0605548-12	HY.053106.104532	05/31/06 10:45	01
SM139SB02052306	L0605548-13	HY.053106.104710	05/31/06 10:47	01
SM138SB01052306	L0605548-14	HY.053106.104848	05/31/06 10:48	01
SM138SB01052306 MS	L0605548-15	HY.053106.105036	05/31/06 10:50	01
SM138SB01052306 MSD	L0605548-16	HY.053106.105213	05/31/06 10:52	01
SM137SB02052306	L0605548-17	HY.053106.105401	05/31/06 10:54	01
SM139SB03052306	L0605548-18	HY.053106.105558	05/31/06 10:55	01
SM138SB02052306	L0605548-19	HY.053106.110107	05/31/06 11:01	01

KEMRON Environmental Services

METHOD BLANK REPORT

Login Number:	L0605548	Run Date:	05/26/2006	Sample ID:	WG214013-02
Instrument ID:	HYDRA	Run Time:	11:06	Prep Method:	METHOD
File ID:	HY.052606.110611	Analyst:	CRC	Method:	7470A
Workgroup (AAB#):	WG214048	Matrix:	Water	Units:	mg/L
Contract #:		Cal ID:	HYDRA-26-MAY-06		

Analytes	SQL	PQL	Concentration	Dilution	Qualifier
Mercury	0.000100	0.000200	0.000100	1	U

MDL Method Detection Limit
RL Reporting/quantitation Limit

* Analyte concentration > RL

KEMRON FORMS - Modified 05/01/2006
Version 1.5 PDF File ID: 485019
Report generated 05/31/2006 14:19

KEMRON Environmental Services

METHOD BLANK REPORT

Login Number:	L0605548	Run Date:	05/31/2006	Sample ID:	WG214229-03
Instrument ID:	HYDRA	Run Time:	10:16	Prep Method:	METHOD
File ID:	HY.053106.101607	Analyst:	PAS	Method:	7471A
Workgroup (AAB#):	WG214249	Matrix:	Solid	Units:	mg/kg
Contract #:		Cal ID:	HYDRA-31-MAY-06		

Analytes	SQL	PQL	Concentration	Dilution	Qualifier
Mercury	0.0100	0.250	0.0100	1	U

MDL Method Detection Limit
RL Reporting/quantitation Limit

* Analyte concentration > RL

KEMRON FORMS - Modified 05/01/2006
Version 1.5 PDF File ID: 485019
Report generated 05/31/2006 14:19

KEMRON Environmental Services

LABORATORY CONTROL SAMPLE (LCS)

Login Number:	L0605548	Run Date:	05/26/2006	Sample ID:	WG214013-03
Instrument ID:	HYDRA	Run Time:	11:07	Prep Method:	METHOD
File ID:	HY.052606.110748	Analyst:	CRC	Method:	7470A
Workgroup (AAB#):	WG214048	Matrix:	Water	Units:	mg/L
Contract #:		Cal ID:	HYDRA-26-MAY-06		

Analytes	Expected	Found	% Rec	LCS Limits	Q
Mercury	0.00400	0.00400	100	85 - 115	

KEMRON FORMS - Modified 05/01/2006
Version 1.5 PDF File ID: 485020
Report generated 05/31/2006 14:19

KEMRON Environmental Services

LABORATORY CONTROL SAMPLE (LCS)

Login Number:	L0605548	Run Date:	05/31/2006	Sample ID:	WG214229-04
Instrument ID:	HYDRA	Run Time:	10:17	Prep Method:	METHOD
File ID:	HY.053106.101743	Analyst:	PAS	Method:	7471A
Workgroup (AAB#):	WG214249	Matrix:	Solid	Units:	mg/kg
Contract #:		Cal ID:	HYDRA-31-MAY-06		

Analytes	Expected	Found	% Rec	LCS Limits	Q
Mercury	0.267	0.281	105	80 - 120	

KEMRON FORMS - Modified 05/01/2006
Version 1.5 PDF File ID: 485020
Report generated 05/31/2006 14:19

KEMRON Environmental Services

MS/MSD REPORT

Loginnum:L0605548 Cal ID:HYDRA-31-MAY-06 Worknum:WG214249
Instrument ID:HYDRA Contract #: Prep Method:METHOD
Parent ID:L0605548-05 File ID:HY.053106.102750 Dil:1 Method:7471A
Sample ID:L0605548-06 MS File ID:HY.053106.102927 Dil:1 Matrix:Soil
Sample ID:L0605548-07 MSD File ID:HY.053106.103116 Dil:1 Units:mg/kg
Percent Solid:61.4

Analyte	Parent	MS Spiked	MS Found	MS %Rec	MSD Spiked	MSD Found	MSD %Rec	%RPD	%Rec Limits	RPD Limit	Q
Mercury, Total	0.532	0.434	0.559	6.25	0.434	0.585	12.3	4.55	75 - 125	25	*

* FAILS %REC LIMIT

FAILS RPD LIMIT

KEMRON FORMS - Modified 05/30/2006
Version 1.5 PDF File ID:486960
Report generated 05/31/2006 14:19

KEMRON Environmental Services

MS/MSD REPORT

Loginnum:L0605548 Cal ID:HYDRA-31-MAY-06 Worknum:WG214249
Instrument ID:HYDRA Contract #: Prep Method:METHOD
Parent ID:L0605548-14 File ID:HY.053106.104848 Dil:1 Method:7471A
Sample ID:L0605548-15 MS File ID:HY.053106.105036 Dil:1 Matrix:Soil
Sample ID:L0605548-16 MSD File ID:HY.053106.105213 Dil:1 Units:mg/kg
Percent Solid:86.6

Analyte	Parent	MS Spiked	MS Found	MS %Rec	MSD Spiked	MSD Found	MSD %Rec	%RPD	%Rec Limits	RPD Limit	Q
Mercury, Total	0.0901	0.308	0.447	116	0.308	0.423	108	5.49	75 - 125	25	

* FAILS %REC LIMIT

FAILS RPD LIMIT

KEMRON FORMS - Modified 05/30/2006
Version 1.5 PDF File ID:486960
Report generated 05/31/2006 14:19

KEMRON Environmental Services

MATRIX SPIKE AND MATRIX SPIKE DUP (MS/MSD)

Loginnum:L0605548 Cal ID: HYDRA- Worknum:WG214048
Instrument ID:HYDRA Contract #: Method:7470A
Parent ID:WG214013-01 File ID:HY.052606.112900 Dil:1 Matrix:WATER
Sample ID:WG214013-04 MS File ID:HY.052606.113150 Dil:1 Units:mg/L
Sample ID:WG214013-05 MSD File ID:HY.052606.113347 Dil:1

Analyte	Parent	MS Spiked	MS Found	MS %Rec	MSD Spiked	MSD Found	MSD %Rec	%RPD	%Rec Limits	RPD Limit	Q
Mercury	ND	0.00444	0.00440	99.0	0.00444	0.00446	100	1.25	85 - 115	20	

* FAILS %REC LIMIT

FAILS RPD LIMIT

NOTE: This is an internal quality control sample.

KEMRON FORMS - Modified 03/16/2006
Version 1.5 PDF File ID: 485021
Report generated 05/31/2006 14:19

KEMRON ENVIRONMENTAL SERVICES
POST SPIKE REPORT

Sample Login ID: L0605548 **Worknum:** WG214048
Instrument ID: HYDRA **Method:** 7470A
Post Spike ID: WG214048-01 **File ID:** HY.052606.112006 **Dil:** 1 **Units:** ug/L
Sample ID: L0605565-02 **File ID:** HY.052606.111826 **Dil:** 1 **Matrix:** Water

Analyte	Control Limit %R	Post Spike Result	C	Sample Result	C	Spike Added(SA)	% R	Q
MERCURY	85 - 115	0.960		ND	U	1.00	96.0	

N = % Recoverv exceeds control limits of 85% - 115%
F = Result is between MDL and RL
U = Sample result is below MDL. A value of zero is used in the calculation.

KEMRON FORMS - Modified 02/14/2006
Version 2.0 PDF File ID: 485016
Report generated 05/31/2006 14:19

KEMRON ENVIRONMENTAL SERVICES
POST SPIKE REPORT

Sample Login ID: L0605548 **Worknum:** WG214048
Instrument ID: HYDRA **Method:** 7470A
Post Spike ID: WG214048-02 **File ID:** HY.052606.115314 **Dil:** 1 **Units:** ug/L
Sample ID: L0605544-01 **File ID:** HY.052606.115130 **Dil:** 1 **Matrix:** Water

Analyte	Control Limit %R	Post Spike Result	C	Sample Result	C	Spike Added(SA)	% R	Q
MERCURY	85 - 115	0.969		0	U	1.00	96.9	

N = % Recoverv exceeds control limits of 85% - 115%
F = Result is between MDL and RL
U = Sample result is below MDL. A value of zero is used in the calculation.

KEMRON FORMS - Modified 02/14/2006
Version 2.0 PDF File ID: 485016
Report generated 05/31/2006 14:19

KEMRON ENVIRONMENTAL SERVICES
POST SPIKE REPORT

Sample Login ID: L0605548 **Worknum:** WG214249
Instrument ID: HYDRA **Method:** 7471A
Post Spike ID: WG214249-01 **File ID:** HY.053106.102424 **Dil:** 1 **Units:** ug/kg
Sample ID: L0605548-02 **File ID:** HY.053106.102143 **Dil:** 1 **Matrix:** Soil

Analyte	Control Limit %R	Post Spike Result	C	Sample Result	C	Spike Added(SA)	% R	Q
MERCURY	85 - 115	3.18	F	2.32	F	1.00	109	

N = % Recoverv exceeds control limits of 85% - 115%
F = Result is between MDL and RL
U = Sample result is below MDL. A value of zero is used in the calculation.

KEMRON FORMS - Modified 02/14/2006
Version 2.0 PDF File ID: 485016
Report generated 05/31/2006 14:19

KEMRON Environmental Services

INITIAL CALIBRATION SUMMARY

Login Number: L0605548 **Instrument ID:** HYDRA

Analytical Method: 7470A **Initial Calibration Date:** 05/26/2006 10:56

Initial Calibration Time: 10:56

Analyte	WG214103-01		WG214103-02		WG214103-03		WG214103-04		WG214103-05		WG214103-06	
	STD	INT	STD	INT	STD	INT	STD	INT	STD	INT	STD	INT
Mercury	0	3692	0.200	12194	1.00	56610	2.00	113752	5.00	286172	10.0	560666

INT = Instrument intensity
R = Coefficient of correlation
Q = Data Qualifier
*** = Out of Compliance; R < 0.995**

KEMRON FORMS - Modified 03/03/2006
Version 1.5 PDF File ID: 485022
Report generated 05/31/2006 14:19

KEMRON Environmental Services

INITIAL CALIBRATION SUMMARY

Analyte	R	Q
Mercury	0.9999	

INT = Instrument intensity
R = Coefficient of correlation
Q = Data Qualifier
*** = Out of Compliance; R < 0.995**

KEMRON FORMS - Modified 03/03/2006
Version 1.5 PDF File ID: 485022
Report generated 05/31/2006 14:19

KEMRON Environmental Services

INITIAL CALIBRATION SUMMARY

Login Number: L0605548 **Instrument ID:** HYDRA

Analytical Method: 7471A **Initial Calibration Date:** 05/31/2006 10:07

Initial Calibration Time: 10:07

Analyte	WG214317-01		WG214317-02		WG214317-03		WG214317-04		WG214317-05		WG214317-06	
	STD	INT	STD	INT	STD	INT	STD	INT	STD	INT	STD	INT
Mercury	0	1756	0.200	13661	1.00	62924	2.00	121881	5.00	299611	10.0	577202

INT = Instrument intensity
R = Coefficient of correlation
Q = Data Qualifier
*** = Out of Compliance; R < 0.995**

KEMRON FORMS - Modified 03/03/2006
Version 1.5 PDF File ID: 485022
Report generated 05/31/2006 14:19

KEMRON Environmental Services

INITIAL CALIBRATION SUMMARY

Analyte	R	Q
Mercury	0.9998	

INT = Instrument intensity
R = Coefficient of correlation
Q = Data Qualifier
*** = Out of Compliance; R < 0.995**

KEMRON FORMS - Modified 03/03/2006
Version 1.5 PDF File ID: 485022
Report generated 05/31/2006 14:19

KEMRON Environmental Services

INITIAL CALIBRATION VERIFICATION (ICV)

Login Number: L0605548 Run Date: 05/26/2006 Sample ID: WG214103-07
Instrument ID: HYDRA Run Time: 10:58 Method: 7470A
File ID: HY.052606.105828 Analyst: CRC Units: ug/L
Workgroup (AAB#): WG214048 Cal ID: HYDRA - 26-MAY-06

Analyte		Expected	Found	%REC	LIMITS	Q
Mercury		2	2.03	102	90 - 110	

* Exceeds LIMITS Limit

KEMRON FORMS - Modified 03/03/2006
Version 1.3 PDF File ID: 485023
Report generated 05/31/2006 14:19

KEMRON Environmental Services

INITIAL CALIBRATION VERIFICATION (ICV)

Login Number: L0605548 Run Date: 05/31/2006 Sample ID: WG214317-07
Instrument ID: HYDRA Run Time: 10:08 Method: 7471A
File ID: HY.053106.100840 Analyst: PAS Units: ug/L
Workgroup (AAB#): WG214249 Cal ID: HYDRA - 31-MAY-06

Analyte		Expected	Found	%REC	LIMITS	Q
Mercury		2	2.03	102	90 - 110	

* Exceeds LIMITS Limit

KEMRON FORMS - Modified 03/03/2006
Version 1.3 PDF File ID: 485023
Report generated 05/31/2006 14:19

KEMRON Environmental Services

INITIAL CALIBRATION BLANK (ICB)

Login Number: L0605548 Run Date: 05/26/2006 Sample ID: WG214103-08
Instrument ID: HYDRA Run Time: 11:00 Method: 7470A
File ID: HY.052606.110015 Analyst: CRC Units: ug/L
Workgroup (AAB#): WG214048 Cal ID: HYDRA - 26-MAY-06

Analytes	MDL	RDL	Concentration	Dilution	Qualifier
Mercury	0.100	0.200	.006	1	U

U = Result is less than MDL
F = Result is between MDL and RL

KEMRON FORMS - Modified 03/06/2006
Version 1.5 PDF File ID: 485024
Report generated 05/31/2006 14:19

KEMRON Environmental Services

INITIAL CALIBRATION BLANK (ICB)

Login Number: L0605548 Run Date: 05/31/2006 Sample ID: WG214317-08
Instrument ID: HYDRA Run Time: 10:10 Method: 7471A
File ID: HY.053106.101021 Analyst: PAS Units: ug/L
Workgroup (AAB#): WG214249 Cal ID: HYDRA - 31-MAY-06

Analytes	MDL	RDL	Concentration	Dilution	Qualifier
Mercury	0.150	3.75	-.063	1	U

U = Result is less than MDL
F = Result is between MDL and RL

KEMRON FORMS - Modified 03/06/2006
Version 1.5 PDF File ID: 485024
Report generated 05/31/2006 14:19

KEMRON Environmental Services

CONTINUING CALIBRATION BLANK (CCB)

Login Number:L0605548 Run Date:05/26/2006 Sample ID:WG214103-10
Instrument ID:HYDRA Run Time:11:04 Method:7470A
File ID:HY.052606.110423 Analyst:CRC Units:ug/L
Workgroup (AAB#):WG214048 Cal ID: HYDRA - 26-MAY-06

Analytes	MDL	RDL	Concentration	Dilution	Qualifier
Mercury	0.100	0.200	-0.0760	1	U

U = Result is less than MDL
F = Result is between MDL and RL

KEMRON FORMS - Modified 04/19/2006
Version 1.5 PDF File ID: 485026
Report generated 05/31/2006 14:19

KEMRON Environmental Services

CONTINUING CALIBRATION BLANK (CCB)

Login Number:L0605548 Run Date:05/26/2006 Sample ID:WG214103-12
Instrument ID:HYDRA Run Time:11:27 Method:7470A
File ID:HY.052606.112722 Analyst:CRC Units:ug/L
Workgroup (AAB#):WG214048 Cal ID: HYDRA - 26-MAY-06

Analytes	MDL	RDL	Concentration	Dilution	Qualifier
Mercury	0.100	0.200	-0.0380	1	U

U = Result is less than MDL
F = Result is between MDL and RL

KEMRON FORMS - Modified 04/19/2006
Version 1.5 PDF File ID: 485026
Report generated 05/31/2006 14:19

KEMRON Environmental Services

CONTINUING CALIBRATION BLANK (CCB)

Login Number:L0605548 Run Date:05/26/2006 Sample ID:WG214103-14
Instrument ID:HYDRA Run Time:11:49 Method:7470A
File ID:HY.052606.114948 Analyst:CRC Units:ug/L
Workgroup (AAB#):WG214048 Cal ID: HYDRA - 26-MAY-06

Analytes	MDL	RDL	Concentration	Dilution	Qualifier
Mercury	0.100	0.200	-0.0240	1	U

U = Result is less than MDL
F = Result is between MDL and RL

KEMRON FORMS - Modified 04/19/2006
Version 1.5 PDF File ID: 485026
Report generated 05/31/2006 14:19

KEMRON Environmental Services

CONTINUING CALIBRATION BLANK (CCB)

Login Number:L0605548 Run Date:05/26/2006 Sample ID:WG214103-16
Instrument ID:HYDRA Run Time:11:56 Method:7470A
File ID:HY.052606.115635 Analyst:CRC Units:ug/L
Workgroup (AAB#):WG214048 Cal ID: HYDRA - 26-MAY-06

Analytes	MDL	RDL	Concentration	Dilution	Qualifier
Mercury	0.100	0.200	-0.0230	1	U

U = Result is less than MDL
F = Result is between MDL and RL

KEMRON FORMS - Modified 04/19/2006
Version 1.5 PDF File ID: 485026
Report generated 05/31/2006 14:19

KEMRON Environmental Services

CONTINUING CALIBRATION BLANK (CCB)

Login Number:L0605548 Run Date:05/31/2006 Sample ID:WG214317-10
Instrument ID:HYDRA Run Time:10:14 Method:7471A
File ID:HY.053106.101418 Analyst:PAS Units:ug/L
Workgroup (AAB#):WG214249 Cal ID: HYDRA - 31-MAY-06

Analytes	MDL	RDL	Concentration	Dilution	Qualifier
Mercury	0.150	3.75	-0.0310	1	U

U = Result is less than MDL
F = Result is between MDL and RL

KEMRON FORMS - Modified 04/19/2006
Version 1.5 PDF File ID: 485026
Report generated 05/31/2006 14:19

KEMRON Environmental Services

CONTINUING CALIBRATION BLANK (CCB)

Login Number:L0605548 Run Date:05/31/2006 Sample ID:WG214317-12
Instrument ID:HYDRA Run Time:10:38 Method:7471A
File ID:HY.053106.103828 Analyst:PAS Units:ug/L
Workgroup (AAB#):WG214249 Cal ID: HYDRA - 31-MAY-06

Analytes	MDL	RDL	Concentration	Dilution	Qualifier
Mercury	0.150	3.75	-0.120	1	U

U = Result is less than MDL
F = Result is between MDL and RL

KEMRON FORMS - Modified 04/19/2006
Version 1.5 PDF File ID: 485026
Report generated 05/31/2006 14:19

KEMRON Environmental Services

CONTINUING CALIBRATION BLANK (CCB)

Login Number:L0605548 Run Date:05/31/2006 Sample ID:WG214317-14
Instrument ID:HYDRA Run Time:10:59 Method:7471A
File ID:HY.053106.105924 Analyst:PAS Units:ug/L
Workgroup (AAB#):WG214249 Cal ID: HYDRA - 31-MAY-06

Analytes	MDL	RDL	Concentration	Dilution	Qualifier
Mercury	0.150	3.75	-0.0720	1	U

U = Result is less than MDL
F = Result is between MDL and RL

KEMRON FORMS - Modified 04/19/2006
Version 1.5 PDF File ID: 485026
Report generated 05/31/2006 14:19

KEMRON Environmental Services

CONTINUING CALIBRATION BLANK (CCB)

Login Number:L0605548 Run Date:05/31/2006 Sample ID:WG214317-16
Instrument ID:HYDRA Run Time:11:08 Method:7471A
File ID:HY.053106.110813 Analyst:PAS Units:ug/L
Workgroup (AAB#):WG214249 Cal ID: HYDRA - 31-MAY-06

Analytes	MDL	RDL	Concentration	Dilution	Qualifier
Mercury	0.150	3.75	-0.0520	1	U

U = Result is less than MDL
F = Result is between MDL and RL

KEMRON FORMS - Modified 04/19/2006
Version 1.5 PDF File ID: 485026
Report generated 05/31/2006 14:19

KEMRON Environmental Services

CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L0605548 Run Date: 05/26/2006 Sample ID: WG214103-09
Instrument ID: HYDRA Run Time: 11:02 Method: 7470A
File ID: HY.052606.110212 Analyst: CRC
Workgroup (AAB#): WG214048 Cal ID: HYDRA - 26-MAY-06

Analyte		Expected	Found	%REC	LIMITS	UNITS	Q
Mercury		2	2.04	102	80 - 120	ug/L	

* Exceeds LIMITS Criteria

KEMRON FORMS - Modified 04/19/2006
Version 1.3 PDF File ID: 485025
Report generated 05/31/2006 14:19

KEMRON Environmental Services

CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L0605548 Run Date: 05/26/2006 Sample ID: WG214103-11
Instrument ID: HYDRA Run Time: 11:25 Method: 7470A
File ID: HY.052606.112534 Analyst: CRC
Workgroup (AAB#): WG214048 Cal ID: HYDRA - 26-MAY-06

Analyte		Expected	Found	%REC	LIMITS	UNITS	Q
Mercury		2	1.87	93.5	80 - 120	ug/L	

* Exceeds LIMITS Criteria

KEMRON FORMS - Modified 04/19/2006
Version 1.3 PDF File ID: 485025
Report generated 05/31/2006 14:19

KEMRON Environmental Services

CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L0605548 Run Date: 05/26/2006 Sample ID: WG214103-13
Instrument ID: HYDRA Run Time: 11:48 Method: 7470A
File ID: HY.052606.114811 Analyst: CRC
Workgroup (AAB#): WG214048 Cal ID: HYDRA - 26-MAY-06

Analyte		Expected	Found	%REC	LIMITS	UNITS	Q
Mercury		2	1.98	99.0	80 - 120	ug/L	

* Exceeds LIMITS Criteria

KEMRON FORMS - Modified 04/19/2006
Version 1.3 PDF File ID: 485025
Report generated 05/31/2006 14:19

KEMRON Environmental Services

CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L0605548 Run Date: 05/26/2006 Sample ID: WG214103-15
Instrument ID: HYDRA Run Time: 11:54 Method: 7470A
File ID: HY.052606.115455 Analyst: CRC
Workgroup (AAB#): WG214048 Cal ID: HYDRA - 26-MAY-06

Analyte		Expected	Found	%REC	LIMITS	UNITS	Q
Mercury		2	1.98	99.0	80 - 120	ug/L	

* Exceeds LIMITS Criteria

KEMRON FORMS - Modified 04/19/2006
Version 1.3 PDF File ID: 485025
Report generated 05/31/2006 14:19

KEMRON Environmental Services

CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L0605548 Run Date: 05/31/2006 Sample ID: WG214317-09
Instrument ID: HYDRA Run Time: 10:12 Method: 7471A
File ID: HY.053106.101240 Analyst: PAS
Workgroup (AAB#): WG214249 Cal ID: HYDRA - 31-MAY-06

Analyte		Expected	Found	%REC	LIMITS	UNITS	Q
Mercury		2	1.99	99.5	80 - 120	ug/L	

* Exceeds LIMITS Criteria

KEMRON FORMS - Modified 04/19/2006
Version 1.3 PDF File ID: 485025
Report generated 05/31/2006 14:19

KEMRON Environmental Services

CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L0605548 Run Date: 05/31/2006 Sample ID: WG214317-11
Instrument ID: HYDRA Run Time: 10:36 Method: 7471A
File ID: HY.053106.103639 Analyst: PAS
Workgroup (AAB#): WG214249 Cal ID: HYDRA - 31-MAY-06

Analyte		Expected	Found	%REC	LIMITS	UNITS	Q
Mercury		2	2.11	106	80 - 120	ug/L	

* Exceeds LIMITS Criteria

KEMRON FORMS - Modified 04/19/2006
Version 1.3 PDF File ID: 485025
Report generated 05/31/2006 14:19

KEMRON Environmental Services

CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L0605548 Run Date: 05/31/2006 Sample ID: WG214317-13
Instrument ID: HYDRA Run Time: 10:57 Method: 7471A
File ID: HY.053106.105746 Analyst: PAS
Workgroup (AAB#): WG214249 Cal ID: HYDRA - 31-MAY-06

Analyte		Expected	Found	%REC	LIMITS	UNITS	Q
Mercury		2	2.05	103	80 - 120	ug/L	

* Exceeds LIMITS Criteria

KEMRON FORMS - Modified 04/19/2006
Version 1.3 PDF File ID: 485025
Report generated 05/31/2006 14:19

KEMRON Environmental Services

CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L0605548 Run Date: 05/31/2006 Sample ID: WG214317-15
Instrument ID: HYDRA Run Time: 11:06 Method: 7471A
File ID: HY.053106.110625 Analyst: PAS
Workgroup (AAB#): WG214249 Cal ID: HYDRA - 31-MAY-06

Analyte		Expected	Found	%REC	LIMITS	UNITS	Q
Mercury		2	1.82	91.0	80 - 120	ug/L	

* Exceeds LIMITS Criteria

KEMRON FORMS - Modified 04/19/2006
Version 1.3 PDF File ID: 485025
Report generated 05/31/2006 14:19

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1.3 General Chemistry Data

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1.3.1 Percent Solids

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PERCENT SOLIDS DATA

Login Number: L0605548

✓ Analysis benchsheet

✓ Calculation spreadsheet

Example calculation:

[(WT3-WT1)/(WT2-WT1)] * 100 = % solids

100-(% solids) = moisture

where: WT1 = weight (grams) of empty container
WT2 - weight (grams) of container and wet sample
100 = factor to get units as percent weight

Checked By: clm Date: 6/12/06

006697

PERCENT SOLIDS

/orkgroup: 213987 ADT (on): Tmm 5/24/06 @ 1615 Balance: AND GR-202 / Other ELRW60
SOP K0003 Rev: 9 ADT (off): Tmm 5/25/06 @ 1120 Approval: _____

Sample	Empty Pan WT 1	WET WT 2	DRY WT 3A	WET WT 3B	DRY WT 3C
05-533-07	1.30	19.43	14.47		
08	1.29	17.88	14.06		
09	1.30	17.29	15.56		
10	1.30	19.44	14.46		
11	1.28	20.74	17.65		
12	1.29	30.19	26.42		
13	1.29	18.26	14.29		
uplicate 05-533-13	1.27	18.41	15.14		

Workgroup: 214086 ADT (on): Tmm 5/25/06 @ 1620 Balance: AND GR-202 / Other ELRW60
SOP K0003 Rev: 9 ADT (off): Tmm 5/26/06 @ 1040 Approval: _____ 5/30/06

Sample 5125 577 Tmm	Empty Pan WT 1	WET WT 2	DRY WT 3A	WET WT 3B	DRY WT 3C
05-564-01	1.29	23.77	21.05	✓	
05-577 5125 Tmm 02	1.30	26.09	22.60	✓	
~~05-564-02~~	~~1.29~~				
05-564 - 02	1.28	29.14	19.46	✓	
05-577 - 03	1.29	19.41	17.36	✓	
05.579-01	1.29	26.305	22.36	✓	
02	1.29	25.88 Tmm 5/25	24.48	✓	
03	1.29	20.15	15.12	✓	
04	1.28	26.32	20.48	✓	
05-576-02	1.23	24.20	21.55	✓	
03	1.27	17.16	17.16	✓	
04	1.26	23.28	13.90	✓	
05	1.27	26.47	19.78	✓	
06	1.28	24.60	19.46	✓	
07	1.27	24.15	19.59	✓	
05-548-01	1.26	28.61	21.20	✓	
02	1.27	22.34	19.36	✓	
04	1.28	23.57	16.05	✓	
05, 06, 07	1.29	28.60	18.06	✓	
08	1.29	18.66	15.93	✓	
Duplicate 05-548-08	1.29	19.26	16.54	✓	

5125 Tmm

006698

KEMRON ENVIRONMENTAL SERVICES
PERCENT SOLID REPORT

Workgroup (AAB#):WG214088 Run Date:05/25/2006
Method:D2216-90 Run Time:16:20
Analyst:TMM

SAMPLE NUMBER	Pan WT.	Int WT.	Fnl WT.	% Solid	% Moist	UNITS
L0605548-01	1.260	28.61	21.20	72.91		%
L0605548-02	1.270	22.34	19.36	85.86		%
L0605548-04	1.280	23.57	16.05	66.26		%
L0605548-05	1.290	28.60	18.06	61.41		%
L0605548-06	1.290	28.60	18.06	61.41		%
L0605548-07	1.290	28.60	18.06	61.41		%
L0605548-08	1.290	18.66	15.93	84.28		%
L0605564-02	1.280	29.14	19.46	65.25		%
L0605576-02	1.230	24.20	21.55	88.46		%
L0605576-03	1.270	17.16	17.16	100.0		%
L0605576-04	1.260	23.28	13.90	57.40		%
L0605576-05	1.270	26.47	19.78	73.45		%
L0605576-06	1.280	24.60	19.46	77.96		%
L0605576-07	1.270	24.15	19.59	80.07		%
L0605577-01	1.290	23.77	21.05	87.90		%
L0605577-02	1.300	26.09	22.60	85.92		%
L0605577-03	1.290	19.41	17.36	88.69		%
L0605579-01	1.290	26.05	22.36	85.10		%
L0605579-02	1.290	25.88	24.48	94.31		%
L0605579-03	1.290	20.15	15.12	73.33		%
L0605579-04	1.280	26.32	20.48	76.68		%
WG214088-01	1.290	18.66	15.93	84.28	15.72	%
WG214088-02	1.290	19.26	16.54	84.86	15.14	%

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KEMRON
ENVIRONMENTAL SERVICES

PERCENT SOLIDS

Workgroup: 214090 ADT (on): Tmm 5/25/06 @ 1640 Balance: AND GR-202 / Other
SOP K0003 Rev: 9 ADT (off): Tmm 5/26/06 @ 1050 Approval: [signature] 5/30/06

Sample	Empty Pan WT 1	WET WT 2	DRY WT 3A	WET WT 3B	DRY WT 3C
05-548-09	1.28	32.73	23.20	5/26	
10	1.29	26.09	17.59		
11	1.28	25.20	~~21.59~~	21.92	
12	1.30	26.84	22.99		
13	1.30	23.74	18.34		
15, 14, 16, ~~17~~ 17	1.30	18.67	16.34		
17	1.28	30.64	24.49		
18	1.27	21.81	15.11		
19	1.28	28.63	16.91		
05-564-01	1.29	26.11	21.81		
uplicate 05-548-17	1.29	25.82	20.05		

Workgroup: _____ ADT (on): _____ Balance: AND GR-202 / Other
SOP K0003 Rev: _____ ADT (off): _____ Approval: _____

Sample	Empty Pan WT 1	WET WT 2	DRY WT 3A	WET WT 3B	DRY WT 3C
Duplicate					

KEMRON ENVIRONMENTAL SERVICES
PERCENT SOLID REPORT

Workgroup (AAB#):WG214090 Run Date:05/25/2006
Method:D2216-90 Run Time:16:40
Analyst:TMM

SAMPLE NUMBER	Pan WT.	Int WT.	Fnl WT.	% Solid	% Moist	UNITS
L0605548-09	1.280	32.73	23.20	69.70		%
L0605548-10	1.290	26.09	17.59	65.73		%
L0605548-11	1.280	25.20	21.92	86.29		%
L0605548-12	1.300	26.84	22.99	84.93		%
L0605548-13	1.300	23.74	18.34	75.94		%
L0605548-14	1.300	18.67	16.34	86.59		%
L0605548-15	1.300	18.67	16.34	86.59		%
L0605548-16	1.300	18.67	16.34	86.59		%
L0605548-17	1.280	30.64	24.49	79.05		%
L0605548-18	1.270	21.81	15.11	67.38		%
L0605548-19	1.280	28.63	16.91	57.15		%
L0605564-01	1.290	26.11	21.81	82.68		%
WG214090-01	1.280	30.64	24.49	79.05	20.95	%
WG214090-02	1.290	25.82	20.05	76.48	23.52	%

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2.0 Attachments

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Kemron Environmental Services
Analyst Listing
June 12, 2006

AJF - AMANDA J. FICKIESEN	ALB - ANNIE L. BOCK	ALT - ANN L. THAYER
BRG - BRENDA R. GREGORY	CAF - CHERYL A. FLOWERS	CAK - CHERYL A. KOELSCH
CEB - CHAD E. BARNES	CLC - CHRYS L. CRAWFORD	CLK - CARL L. KING
CLS - CARA L. STRICKLER	CLW - CHARISSA L. WINTERS	CM - CHARLIE MARTIN
CMS - CRYSTAL M. STEPHENS	CPD - CHAD P. DAVIS	CRC - CARLA R. COCHRAN
CSA - LUCINDA S. ARNOLD	CSH - CHRIS S. HILL	DAS - DALLAS A. SULLIVAN
DD - DIANE M. DENNIS	DDE - DEBRA D. ELLIOTT	DEL - DON E. LIGHTFRITZ
DEV - DAVID E. VANDENBERG	DGB - DOUGLAS G. BUTCHER	DIH - DEANNA I. HESSON
DLB - DAVID L. BUMGARNER	DLP - DOROTHY L. PAYNE	DLR - DIANNA L. RAUCH
DR - DEANNA ROBERTS	DSM - DAVID S. MOSSOR	DST - DENNIS S. TEPE
ECL - ERIC C. LAWSON	ED - EMILY E. DECKER	HAV - HEMA VILASAGAR
JAL - JOHN A. LENT	JKT - JANE K. THOMPSON	JLS - JANICE L. SCHIMMEL
JNB - JOSHUA N. BOOTH	JWR - JOHN W. RICHARDS	JWS - JACK W. SHEAVES
JYH - JI Y. HU	KCZ - KEVIN C. ZUMBRO	KEB - KATHRYN E. BARNES
KHR - KIM H. RHODES	KRA - KATHY R. ALBERTSON	LKN - LINDA K. NEDEFF
LSB - LESLIE S. BUCINA	MDA - MIKE D. ALBERTSON	MDC - MICHAEL D. COCHRAN
MES - MARY E. SCHILLING	MKZ - MARILYN K. ZUMBRO	MLR - MARY L. ROCHOTTE
MLS - MICHAEL L. SCHIMMEL	MMB - MAREN M. BEERY	MSW - MATT S. WILSON
NJB - NATALIE J. BOOTH	OGT - OKEY G. TUCKER	PAS - PATRICK A. STREET
PJM - PAUL J. MILLER	RB - ROBERT BUCHANAN	RDC - REBECCA D. CUTLIP
REK - ROBERT E. KYER	RWC - RODNEY W. CAMPBELL	SCM - SUSAN C. MOELLENDICK
SLM - STEPHANIE L. MOSSBURG	SLP - SHERI L. PFALZGRAF	SMH - SHAUNA M. HYDE
TMB - TIFFANY M. BAILEY	TMM - TAMMY M. MORRIS	VC - VICKI COLLIER
WFM - WALTER F. MARTIN		

KEMRON Environmental Services

List of Valid Qualifiers

June 09, 2006

Qualkey: CLP

Qualifier	Description
E	Estimated concentration due to interference
E	Estimated concentration.
E	Semiquantitative result (out of instrument calibration range)
J	The analyte was positively identified, but the quantitation was below the RL
J,B	Analyte detected in both the method blank and sample above the MDL.
U	Not detected at or above the reporting limit

*****Special Notes for Organic Analytes**

1. Acrolein and acrylonitrile by method 624 are semi-quantitative screens only.
2. 1,2-Diphenylhydrazine is unstable and is reported as azobenzene.
3. N-nitrosodiphenylamine cannot be separated from diphenylamine.
4. 3-Methylphenol and 4-Methylphenol 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 an are matrix dependent.

COC No. A 61081

156 Starlite Drive
Marietta, OH 45750

KEMRON
ENVIRONMENTAL SERVICES

CHAIN-OF-CUSTODY RECORD

Phone: 740-373-4071
Fax: 740-373-4835

Company Name: CH2M Hill

Project Contact: John Yngante ~~Darren Davis/DFW~~ | Contact Phone #: 1-713-462-0161 ~~1-972-980-2170~~

Turn Around Requirements: Soil 14 Day | Location: CH2M Hill Housto

Project #: | Project Name: State Marine RI

Sampler (print): Meredith Harris | Signature: Meredith C. Harris

Program: ☐ NPDES ☐ AFCEE ☐ RCRA ☐ USACE ☐ Other

Sample I.D. No.	Comp*	Grab	Date	Time	Protocol CWA	Protocol SW846	NUMBER OF CONTAINERS	Hold	Metals	SVOC	ADDITIONAL REQUIREMENTS
SM140SB02052306		X	05/23/06	1540			2		1	1	
SM140SB01052306		X	05/23/06	1520			2		1	1	
SM138EB01052306		X	05/23/06	1340			3		1	2	
SM140FD03052306		X	05/23/06	1640			2		1	1	
SM140SB03052306		X	05/23/06	1635			2		1	1	MS/MSD A150
SM137SB01052306		X	05/23/06	0920			2		1	1	
SM138SB03052306		X	05/23/06	1255			2		1	1	
SM138FD03052306		X	05/23/06	1300			2		1	1	
SM139SB01052306		X	05/23/06	1405			2		1	1	
SM136SB01052206		X	05/22/06	0805			2		1	1	
SM139SB02052306		X	05/23/06	1425			2		1	1	
SM138SB01052306		X	05/23/06	1120			2		1	1	MS/MSD A150
SM137SB02052306		X	05/23/06	0925			2		1	1	
SM139SB03052306		X	05/23/06	1440			2		1	1	
SM138SB02052306		X	05/23/06	1210			2		1	1	

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Relinquished by: (Signature)	Date	Time	Received by: (Signature)
Meredith C. Harris	05/23/06	1815					

Relinquished by: (Signature)	Date	Time	Received for Laboratory by: (Signature)	Date	Time	Cooler Temp in °C	Remarks:
			Cara Strickler	5/24/06	0950	1°	Ice sealed, SX's intact COC

*Homogenize all composite samples prior to analysis

Page 1 of 1

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006707

SAMPLE RECEIPT FORM

Date: 5/24/06 Client: CH2M HILL TEXAS

Shipped By: (✓) Fed-Ex ( ) UPS ( )DHL ( ) KEMRON ( ) Client ( ) Other

Opened By: SRZ

Logged By: VHO Login # L06 5·548

IR Temp Gun: (✓) D ( ) F

156 STARLITE DRIVE
MARIETTA, OH
45750
(740) 373-4071

COOLER INFORMATION

Number	Cooler ID	Temp °C	Airbill#	COC#	Other
1	1012	1	856431636778		
2					
3					
4					
5					
6					

Were all coolers sealed?	(Y)	N	N/A
Were custody seals used on all coolers?	(Y)	N	N/A
Were custody seals intact?	(Y)	N	N/A
Was visible ice present?	(Y)	N	N/A
Were all coolers in the temperature range of 2-6C? (>6C*)	Y	(N)	N/A
Were the samples frozen?*	Y	(N)	N/A
Were COC papers provided?	(Y)	N	N/A
Were all sample containers intact?*	(Y)	N	N/A
Were all sample labels intact?	(Y)	N	N/A
Were all sample labels legible?*	(Y)	N	N/A
Did all sample labels match the COC?*	(Y)	N	N/A
Was the label information complete?*	(Y)	N	N/A
Were the correct containers used?*	(Y)	N	N/A
Were the correct preservatives added to water samples?*	(Y)	N	N/A
Was the pH tested on preserved water samples?	(Y)	N	N/A
Were pH ranges acceptable?*	(Y)	N	N/A
Was sufficient amount of sample provided?*	(Y)	N	N/A
Were bubbles present in VOA samples?*	Y	N	(N/A)
Were COC's signed and dated?	(Y)	N	N/A
Did samples arrive before hold time expired?*	(Y)	N	N/A
Are discrepancy forms attached?	Y	N	(N/A)

**Requires a discrepancy form*

Comments:_____

CRF #1
Revised 8/22/03

006708

KEMRON Environmental Services
Internal Chain of Custody Report
Login: L0605548
Account: 2736
Project: 2736.035
Samples: 19
Due Date: 02-JUN-2006

Samplenum	Container ID	Products
L0605548-01	239920	HG K MG MN NA NI PB PCT-S SB SE-AX TL V ZN AG-

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish
1	LOGIN			24-MAY-2006 10:41	CLS	
2	PREP	W1	DIG	25-MAY-2006 06:42	REK	BRG
3	ANALYZ	DIG	WET	25-MAY-2006 16:12	TMM	EED
4	ANALYZ	WET	DIG	26-MAY-2006 11:03	REK	TMM

Samplenum	Container ID	Products
L0605548-01	239921	827-SPE

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish
1	LOGIN			24-MAY-2006 10:41	CLS	
2	PREP	W1	EXT	24-MAY-2006 13:00	CEB	CLS
3	STORE	EXT	A1	24-MAY-2006 14:00	CLS	CSH

Samplenum	Container ID	Products
L0605548-02	239922	AG-AX AL AS-AX BA BE CA CD-AX CO CR CU FE HG K

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish
1	LOGIN			24-MAY-2006 10:41	CLS	
2	PREP	W1	DIG	25-MAY-2006 06:42	REK	BRG
3	ANALYZ	DIG	WET	25-MAY-2006 16:12	TMM	EED
4	ANALYZ	WET	DIG	26-MAY-2006 11:03	REK	TMM

Samplenum	Container ID	Products
L0605548-02	239923	827-SPE

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish
1	LOGIN			24-MAY-2006 10:41	CLS	
2	PREP	W1	EXT	24-MAY-2006 13:00	CEB	CLS
3	STORE	EXT	A1	24-MAY-2006 14:00	CLS	CSH

KEMRON Environmental Services
Internal Chain of Custody Report
Login: L0605548
Account: 2736
Project: 2736.035
Samples: 19
Due Date: 02-JUN-2006

Samplenum	Container ID	Products
L0605548-03	239924	827-SPE

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish
1	LOGIN			24-MAY-2006 10:41	CLS	
2	PREP	W1	EXT	25-MAY-2006 07:00	CEB	BRG
3	DISP	EXT	DISP	26-MAY-2006 08:53	BRG	DEL

Bottle: 2

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish
1	LOGIN			24-MAY-2006 10:41	CLS	
2	STORE	W1	A1	01-JUN-2006 13:17	CEB	CEB

Samplenum	Container ID	Products
L0605548-03	239925	AG AL AS-AX BA BE CA CD CO CR CU FE HG K MG MN

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish
1	LOGIN			24-MAY-2006 10:41	CLS	

Samplenum	Container ID	Products
L0605548-04	239926	AG-AX AL AS-AX BA BE CA CD-AX CO CR CU FE HG K

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish
1	LOGIN			24-MAY-2006 10:41	CLS	
2	PREP	W1	DIG	25-MAY-2006 06:42	REK	BRG
3	ANALYZ	DIG	WET	25-MAY-2006 16:12	TMM	EED
4	ANALYZ	WET	DIG	26-MAY-2006 11:03	REK	TMM

Samplenum	Container ID	Products
L0605548-04	239927	827-SPE

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish
1	LOGIN			24-MAY-2006 10:41	CLS	
2	PREP	W1	EXT	24-MAY-2006 13:00	CEB	CLS
3	STORE	EXT	A1	24-MAY-2006 14:00	CLS	CSH

KEMRON Environmental Services
Internal Chain of Custody Report
Login: L0605548
Account: 2736
Project: 2736.035
Samples: 19
Due Date: 02-JUN-2006

Samplenum	Container ID	Products
L0605548-05	239928	PB PCT-S SB SE-AX TL V ZN AG-AX AL AS-AX BA BE

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish
1	LOGIN			24-MAY-2006 10:41	CLS	
2	PREP	W1	DIG	25-MAY-2006 06:42	REK	BRG
3	ANALYZ	DIG	WET	25-MAY-2006 16:11	TMM	EED
4	ANALYZ	WET	DIG	26-MAY-2006 11:03	REK	TMM

Samplenum	Container ID	Products
L0605548-05	239929	827-SPE

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish
1	LOGIN			24-MAY-2006 10:41	CLS	
2	PREP	W1	EXT	24-MAY-2006 13:00	CEB	CLS
3	STORE	EXT	A1	24-MAY-2006 13:59	CLS	CSH

Samplenum	Container ID	Products
L0605548-06	239930	FE HG K MG AG-AX AL AS-AX BA BE CA CD-AX CO CR

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish
1	LOGIN			24-MAY-2006 10:41	CLS	
2	PREP	W1	DIG	25-MAY-2006 06:42	REK	BRG
3	ANALYZ	DIG	WET	25-MAY-2006 16:11	TMM	EED
4	ANALYZ	WET	DIG	26-MAY-2006 11:03	REK	TMM

Samplenum	Container ID	Products
L0605548-06	239931	827-SPE

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish
1	LOGIN			24-MAY-2006 10:41	CLS	
2	PREP	W1	EXT	24-MAY-2006 13:00	CEB	CLS
3	STORE	EXT	A1	24-MAY-2006 13:59	CLS	CSH

KEMRON Environmental Services
Internal Chain of Custody Report
Login: L0605548
Account: 2736
Project: 2736.035
Samples: 19
Due Date: 02-JUN-2006

Samplenum	Container ID	Products
L0605548-07	239932	AG-AX AL AS-AX NI PB PCT-S SB SE-AX TL V ZN CC

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish
1	LOGIN			24-MAY-2006 10:41	CLS	
2	PREP	W1	DIG	25-MAY-2006 06:42	REK	BRG
3	ANALYZ	DIG	WET	25-MAY-2006 16:11	TMM	EED
4	ANALYZ	WET	DIG	26-MAY-2006 11:03	REK	TMM

Samplenum	Container ID	Products
L0605548-07	239933	827-SPE

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish
1	LOGIN			24-MAY-2006 10:41	CLS	
2	PREP	W1	EXT	24-MAY-2006 13:00	CEB	CLS
3	STORE	EXT	A1	24-MAY-2006 13:59	CLS	CSH

Samplenum	Container ID	Products
L0605548-08	239934	AG-AX AL AS-AX BA BE CA CD-AX CO CR CU FE HG K

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish
1	LOGIN			24-MAY-2006 10:41	CLS	
2	PREP	W1	DIG	25-MAY-2006 06:42	REK	BRG
3	ANALYZ	DIG	WET	25-MAY-2006 16:12	TMM	EED
4	ANALYZ	WET	DIG	26-MAY-2006 11:02	REK	TMM

Samplenum	Container ID	Products
L0605548-08	239935	827-SPE

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish
1	LOGIN			24-MAY-2006 10:41	CLS	
2	PREP	W1	EXT	24-MAY-2006 13:00	CEB	CLS
3	STORE	EXT	A1	24-MAY-2006 14:00	CLS	CSH

KEMRON Environmental Services
Internal Chain of Custody Report
Login: L0605548
Account: 2736
Project: 2736.035
Samples: 19
Due Date: 02-JUN-2006

Samplenum	Container ID	Products
L0605548-09	239936	AG-AX AL AS-AX BA BE CA CD-AX CO CR CU FE HG K

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish
1	LOGIN			24-MAY-2006 10:42	CLS	
2	PREP	W1	DIG	25-MAY-2006 06:42	REK	BRG
3	ANALYZ	DIG	WET	25-MAY-2006 16:12	TMM	EED
4	ANALYZ	WET	DIG	26-MAY-2006 11:03	REK	TMM

Samplenum	Container ID	Products
L0605548-09	239937	827-SPE

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish
1	LOGIN			24-MAY-2006 10:42	CLS	
2	PREP	W1	EXT	24-MAY-2006 13:00	CEB	CLS
3	STORE	EXT	A1	24-MAY-2006 14:00	CLS	CSH

Samplenum	Container ID	Products
L0605548-10	239938	AG-AX AL AS-AX BA BE CA CD-AX CO CR CU FE HG K

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish
1	LOGIN			24-MAY-2006 10:42	CLS	
2	PREP	W1	DIG	25-MAY-2006 06:41	REK	BRG
3	ANALYZ	DIG	WET	25-MAY-2006 16:12	TMM	EED
4	ANALYZ	WET	DIG	26-MAY-2006 11:02	REK	TMM

Samplenum	Container ID	Products
L0605548-10	239939	827-SPE

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish
1	LOGIN			24-MAY-2006 10:42	CLS	
2	PREP	W1	EXT	24-MAY-2006 13:00	CEB	CLS
3	STORE	EXT	A1	24-MAY-2006 14:00	CLS	CSH

KEMRON Environmental Services
Internal Chain of Custody Report
Login: L0605548
Account: 2736
Project: 2736.035
Samples: 19
Due Date: 02-JUN-2006

Samplenum	Container ID	Products
L0605548-11	239940	AG-AX AL AS-AX BA BE CA CD-AX CO CR CU FE HG K

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish
1	LOGIN			24-MAY-2006 10:42	CLS	
2	PREP	W1	DIG	25-MAY-2006 06:42	REK	BRG
3	ANALYZ	DIG	WET	25-MAY-2006 16:12	TMM	EED
4	ANALYZ	WET	DIG	26-MAY-2006 11:03	REK	TMM

Samplenum	Container ID	Products
L0605548-11	239941	827-SPE

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish
1	LOGIN			24-MAY-2006 10:42	CLS	
2	PREP	W1	EXT	24-MAY-2006 13:00	CEB	CLS
3	STORE	EXT	A1	24-MAY-2006 14:00	CLS	CSH

Samplenum	Container ID	Products
L0605548-12	239942	AG-AX AL AS-AX BA BE CA CD-AX CO CR CU FE HG K

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish
1	LOGIN			24-MAY-2006 10:42	CLS	
2	PREP	W1	DIG	25-MAY-2006 06:42	REK	BRG
3	ANALYZ	DIG	WET	25-MAY-2006 16:12	TMM	EED
4	ANALYZ	WET	DIG	26-MAY-2006 11:03	REK	TMM

Samplenum	Container ID	Products
L0605548-12	239943	827-SPE

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish
1	LOGIN			24-MAY-2006 10:42	CLS	
2	PREP	W1	EXT	24-MAY-2006 13:00	CEB	CLS
3	STORE	EXT	A1	24-MAY-2006 14:00	CLS	CSH
4	PREP	A1	EXT	01-JUN-2006 08:06	CEB	CLS
5	STORE	EXT	A1	01-JUN-2006 09:34	CLS	CEB

KEMRON Environmental Services
Internal Chain of Custody Report
Login: L0605548
Account: 2736
Project: 2736.035
Samples: 19
Due Date: 02-JUN-2006

Samplenum	Container ID	Products
L0605548-13	239944	AG-AX AL AS-AX BA BE CA CD-AX CO CR CU FE HG K

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish
1	LOGIN			24-MAY-2006 10:42	CLS	
2	PREP	W1	DIG	25-MAY-2006 06:41	REK	BRG
3	ANALYZ	DIG	WET	25-MAY-2006 16:12	TMM	EED
4	ANALYZ	WET	DIG	26-MAY-2006 11:02	REK	TMM

Samplenum	Container ID	Products
L0605548-13	239945	827-SPE

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish
1	LOGIN			24-MAY-2006 10:42	CLS	
2	PREP	W1	EXT	24-MAY-2006 13:00	CEB	CLS
3	STORE	EXT	A1	24-MAY-2006 14:00	CLS	CSH

Samplenum	Container ID	Products
L0605548-14	239946	AG-AX AL AS-AX BA BE CA CD-AX CO CR CU FE HG K

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish
1	LOGIN			24-MAY-2006 10:42	CLS	
2	PREP	W1	DIG	25-MAY-2006 06:41	REK	BRG
3	ANALYZ	DIG	WET	25-MAY-2006 16:12	TMM	EED
4	ANALYZ	WET	DIG	26-MAY-2006 11:02	REK	TMM

Samplenum	Container ID	Products
L0605548-14	239947	827-SPE

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish
1	LOGIN			24-MAY-2006 10:42	CLS	
2	PREP	W1	EXT	24-MAY-2006 13:01	CEB	CLS
3	STORE	EXT	A1	24-MAY-2006 13:59	CLS	CSH

KEMRON Environmental Services
Internal Chain of Custody Report
Login: L0605548
Account: 2736
Project: 2736.035
Samples: 19
Due Date: 02-JUN-2006

Samplenum	Container ID	Products
L0605548-15	239948	AG-AX AL AS-AX BA BE CA CD-AX CO CR CU FE HG K

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish
1	LOGIN			24-MAY-2006 10:42	CLS	
2	PREP	W1	DIG	25-MAY-2006 06:41	REK	BRG
3	ANALYZ	DIG	WET	25-MAY-2006 16:12	TMM	EED
4	ANALYZ	WET	DIG	26-MAY-2006 11:02	REK	TMM

Samplenum	Container ID	Products
L0605548-15	239949	827-SPE

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish
1	LOGIN			24-MAY-2006 10:42	CLS	
2	PREP	W1	EXT	24-MAY-2006 13:01	CEB	CLS
3	STORE	EXT	A1	24-MAY-2006 13:59	CLS	CSH

Samplenum	Container ID	Products
L0605548-16	239950	AG-AX AL AS-AX BA BE CA CD-AX CO CR CU FE HG K

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish
1	LOGIN			24-MAY-2006 10:42	CLS	
2	PREP	W1	DIG	25-MAY-2006 06:41	REK	BRG
3	ANALYZ	DIG	WET	25-MAY-2006 16:12	TMM	EED
4	ANALYZ	WET	DIG	26-MAY-2006 11:02	REK	TMM

Samplenum	Container ID	Products
L0605548-16	239951	827-SPE

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish
1	LOGIN			24-MAY-2006 10:42	CLS	
2	PREP	W1	EXT	24-MAY-2006 13:01	CEB	CLS
3	STORE	EXT	A1	24-MAY-2006 13:59	CLS	CSH

KEMRON Environmental Services
Internal Chain of Custody Report
Login: L0605548
Account: 2736
Project: 2736.035
Samples: 19
Due Date: 02-JUN-2006

Samplenum	Container ID	Products
L0605548-17	239952	AG-AX AL AS-AX BA BE CA CD-AX CO CR CU FE HG K

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish
1	LOGIN			24-MAY-2006 10:42	CLS	
2	PREP	W1	DIG	25-MAY-2006 06:41	REK	BRG
3	ANALYZ	DIG	WET	25-MAY-2006 16:12	TMM	EED
4	ANALYZ	WET	DIG	26-MAY-2006 11:03	REK	TMM

Samplenum	Container ID	Products
L0605548-17	239953	827-SPE

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish
1	LOGIN			24-MAY-2006 10:42	CLS	
2	PREP	W1	EXT	24-MAY-2006 13:01	CEB	CLS
3	STORE	EXT	A1	24-MAY-2006 14:00	CLS	CSH

Samplenum	Container ID	Products
L0605548-18	239954	AG-AX AL AS-AX BA BE CA CD-AX CO CR CU FE HG K

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish
1	LOGIN			24-MAY-2006 10:42	CLS	
2	PREP	W1	DIG	25-MAY-2006 06:41	REK	BRG
3	ANALYZ	DIG	WET	25-MAY-2006 16:11	TMM	EED
4	ANALYZ	WET	DIG	26-MAY-2006 11:02	REK	TMM

Samplenum	Container ID	Products
L0605548-18	239955	827-SPE

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish
1	LOGIN			24-MAY-2006 10:42	CLS	
2	PREP	W1	EXT	24-MAY-2006 13:01	CEB	CLS
3	STORE	EXT	A1	24-MAY-2006 13:59	CLS	CSH

KEMRON Environmental Services
Internal Chain of Custody Report
Login: L0605548
Account: 2736
Project: 2736.035
Samples: 19
Due Date: 02-JUN-2006

Samplenum	Container ID	Products
L0605548-19	239956	AG-AX AL AS-AX BA BE CA CD-AX CO CR CU FE HG K

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish
1	LOGIN			24-MAY-2006 10:42	CLS	
2	PREP	W1	DIG	25-MAY-2006 06:41	REK	BRG
3	ANALYZ	DIG	WET	25-MAY-2006 16:11	TMM	EED
4	ANALYZ	WET	DIG	26-MAY-2006 11:02	REK	TMM

Samplenum	Container ID	Products
L0605548-19	239957	827-SPE

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish
1	LOGIN			24-MAY-2006 10:42	CLS	
2	PREP	W1	EXT	24-MAY-2006 13:01	CEB	CLS
3	STORE	EXT	A1	24-MAY-2006 13:59	CLS	CSH
4	PREP	A1	EXT	01-JUN-2006 08:06	CEB	CLS
5	STORE	EXT	A1	01-JUN-2006 09:34	CLS	CEB

KEMRON REPORT L0605576
PREPARED FOR CH2MHILL, Inc
WORK ID: STATE MARINE SUPERFUND SITE

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156 Starlite Drive, Marietta, OH 45750 ● TEL 740-373-4071 ● FAX 740-373-4835 ● http://www.kemron.com

Laboratory Report Number: L0605576

Please find enclosed the analytical results for the samples you submitted to KEMRON Environmental Services.

Review and compilation of your report was completed by KEMRON's Sales and Service Team. If you have questions, comments or require further assistance regarding this report, please contact your team member noted in the reviewed box bleow at 800-373-4071. Team member e-mail addresses also appear here for your convenience.

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kalbertson@kemron-lab.com

This report was reviewed on June 12, 2006.

CHERYL KOELSCH - Team Chemist/Data Specialist

I certify that all test results meet all of the requirements of the NELAP standards and other applicable contract terms and conditions. All results for soil samples are reported on a 'dry-weight' basis unless specified otherwise. Analytical results for water and wastes are reported on a 'as received' basis unless specified otherwise. A statement of uncertainty for each analysis is available upon request. This laboratory report shall not be reproduced, except in full, without the written approval of KEMRON Environmental Services.

This report was certified on June 12, 2006.

David Vandenberg - Vice President

FL DOH NELAP ID: E8755
This report contains a total of 394 pages.

Protecting Our Environmental Future

1.0 Summary Report

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LABORATORY REPORT

L0605576

06/12/06 12:20

Submitted By

KEMRON Environmental Services
156 Starlite Drive
Marietta , OH 45750
(740) 373 - 4071

For

Account Name: CH2MHILL, Inc
7600 Tidwell Road
Suite 400
San Antonio, TX 77040
Attention: John Ynfante

Account Number: 2736
Work ID: STATE MARINE
Invoice Number: 580608
P.O. Number: 915193

Sample Summary

Client ID	Lab ID	Date Collected	Date Received
IWSB01052406	L0605576-01	24-MAY-06	25-MAY-06
SM142SB01052406	L0605576-02	24-MAY-06	25-MAY-06
SM142SB02052406	L0605576-03	24-MAY-06	25-MAY-06
SM141SB03052406	L0605576-04	24-MAY-06	25-MAY-06
SM141FD03052406	L0605576-05	24-MAY-06	25-MAY-06
SM141SB02052406	L0605576-06	24-MAY-06	25-MAY-06
SM141SB01052406	L0605576-07	24-MAY-06	25-MAY-06

KEMRON ENVIRONMENTAL SERVICES
LOGIN-OEPA

KEMRON Login No.: L0605576

CHAIN OF CUSTODY: The chain of custody number was 61082.

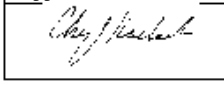
SHIPMENT CONDITIONS: The chain of custody forms were received sealed in a cooler. The cooler temperature was 1 degrees C.

SAMPLE MANAGEMENT: All samples received were intact.

L0605576-01	IWSB01052406
L0605576-02	SM142SB01052406
L0605576-03	SM142SB02052406
L0605576-04	SM141SB03052406
L0605576-05	SM141FD03052406
L0605576-06	SM141SB02052406
L0605576-07	SM141SB01052406

I certify that this data package is in compliance with the terms and conditions agreed to by the client and KEMRON Environmental Services, both technically and for completeness, except for the conditions noted above. Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or designated person, as verified by the following signature.

Approved: 30-MAY-06



1.1 Volatiles Data

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1.1.1 Volatiles GCMS Data (8260)

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KEMRON ENVIRONMENTAL SERVICES
GC/MS VOLATILE ORGANICS

KEMRON Login No.: L0605576

METHOD

Preparation: SW-846 5030B

Analysis: SW-846 8260B

HOLDING TIMES

Sample Preparation: All holding times were met.

Sample Analysis: All holding times were met.

PREPARATION

Sample preparation proceeded normally.

CALIBRATION

Initial Calibration: For all compounds which yielded a %RSD greater than 15%, linear or higher order equations were applied. All acceptance criteria were met.

Alternate Source Standards: All acceptance criteria were met.

Continuing Calibration and Tune: All acceptance criteria were met.

BATCH QA/QC

Method Blank: Toluene-d8 exceeded the upper control limit. All other acceptance criteria were met.

Laboratory Control Sample: Toluene-d8 exceeded the upper control limit. All other acceptance criteria were met.

Matrix Spike: The MS/MSD results were not associated with this sample delivery group (SDG), due to insufficient volume of sample. The laboratory included an LCS and LCS duplicate in the preparation batch in lieu of the NELAC prescribed MS/MSD. Kemron recommends site specific MS/MSD samples to avoid possible data qualifications.

SAMPLES

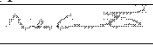
Internal Standards: All acceptance criteria were met.

Surrogates: Toluene-d8 exceeded the upper control limit in the analysis of sample 01. All other acceptance criteria were met.

Samples: All acceptance criteria were met.

I certify that this data package is in compliance with the terms and conditions agreed to by the client and KEMRON Environmental Services, both technically and for completeness, except for the conditions noted above. Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or designated person, as verified by the following signature.

Analyst: CMS

Approved: 02-JUN-06


LABORATORY REPORT

L0605576

06/12/06 12:20

Submitted By

KEMRON Environmental Services
156 Starlite Drive
Marietta , OH 45750
(740) 373 - 4071

For

Account Name: CH2MHILL, Inc
7600 Tidwell Road
Suite 400
San Antonio, TX 77040
Attention: John Ynfante

Account Number: 2736
Work ID: STATE MARINE
Invoice Number: 580608
P.O. Number: 915193

Sample Analysis Summary

Client ID	Lab ID	Method	Dilution	Date Received
IWSB01052406	L0605576-01	8260B	10	25-MAY-06

Report Number: **L0605576**
Report Date : **June 12, 2006**

Sample Number: **L0605576-01**
Client ID: **IWSB01052406**
Matrix: **Leachate**
Workgroup Number: **WG214290**
Collect Date: **05/24/2006 13:50**
Sample Tag: **DL**

PrePrep Method: **1311**
Prep Method: **5030B**
Analytical Method: **8260B**
Analyst: **CMS**
Dilution: **10**
Units: **ug/L**

Instrument: **HPMS6**
Prep Date: **05/31/2006 16:18**
Cal Date: **05/05/2006 15:16**
Run Date: **05/31/2006 16:18**
File ID: **6M57885**

Analyte	CAS.Number	Result	Qual	PQL	SQL	EPA HW#	Reg. Limit
Benzene	71-43-2		U	50	1.25	D018	500
Carbon tetrachloride	56-23-5		U	50	2.5	D019	500
Chlorobenzene	108-90-7		U	50	1.25	D021	100000
Chloroform	67-66-3		U	50	1.25	D022	6000
1,2-Dichloroethane	107-06-2		U	50	2.5	D028	500
1,1-Dichloroethene	75-35-4		U	50	5	D029	700
Methyl Ethyl Ketone	78-93-3		U	100	25	D035	200000
Tetrachloroethene	127-18-4		U	50	2.5	D039	700
Trichloroethene	79-01-6		U	50	2.5	D040	500
Vinyl chloride	75-01-4		U	100	2.5	D043	200
1,4-Dichlorobenzene	106-46-7		U	50	1.25	D027	7500

Surrogate	% Recovery	Lower	Upper
Dibromofluoromethane	108	86	118
1,2-Dichloroethane-d4	97.7	80	120
Toluene-d8	111	88	110
4-Bromofluorobenzene	105	86	115

* Surrogate or spike compound out of range
U Not detected at or above the reporting limit

1.1.1.1 QC Summary

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Checklist ID: 7430

KEMRON Environmental Services
Data Checklist

Date: 05-MAY-2006
Analyst: CMS
Analyst: NA
Method: 8260B/624
Instrument: HPMS6
Curve Workgroup: NA
Analytical Workgroups: WG212574;WG212675

Runlog ID number:	10246
System Performance Check	X
BFB	X
Initial Calibration	X
Average RF	X
Linear Reg or Higher Order Curve	X
Second Source standard % Difference	X
Continuing Calibration /Check Standards	X
Project/Client Specific Requirements	X
Special Standards	NA
Blanks	X
TCL's	X
Surrogates	X
LCS (Laboratory Control Sample)	X
Recoveries	X
Surrogates	X
MS/MSD/Duplicates	NA
Samples	X
TCL Hits	X
Spectra of TCL Hits	X
Surrogates	X
Internal Standards Criteria	X
Library Searches	NA
Calculations & Correct Factors	X
Dilutions Run	X
Reruns	X
Manual Integrations	X
Case Narrative	X
Results Reporting/Data Qualifiers	X
KOBRA Workgroup Data	X
Check for Completeness	X
Primary Reviewer	CMS
Secondary Reviewer	MDA
Check for compliance with method and project specific requirements	X
Check the completeness of reported information	X
Check the information for the report narrative	X
Check the reasonableness of the results	X

Primary Reviewer:

Secondary Reviewer:
09-MAY-2006

Generated: MAY-09-2006 10:33:43

Checklist ID: 7820

KEMRON Environmental Services
Data Checklist

Date: 31-MAY-2006
Analyst: CMS
Analyst: NA
Method: 8260B
Instrument: HPMS6
Curve Workgroup: NA
Analytical Workgroups: WG214290

Runlog ID number:	10626
System Performance Check	X
BFB	X
Initial Calibration	X
Average RF	X
Linear Reg or Higher Order Curve	X
Second Source standard % Difference	X
Continuing Calibration /Check Standards	X
Project/Client Specific Requirements	X
Special Standards	NA
Blanks	X
TCL's	X
Surrogates	X
LCS (Laboratory Control Sample)	X
Recoveries	X
Surrogates	X
MS/MSD/Duplicates	NA
Samples	X
TCL Hits	X
Spectra of TCL Hits	X
Surrogates	X
Internal Standards Criteria	X
Library Searches	NA
Calculations & Correct Factors	X
Dilutions Run	X
Reruns	X
Manual Integrations	X
Case Narrative	X
Results Reporting/Data Qualifiers	X
KOBRA Workgroup Data	X
Check for Completeness	X
Primary Reviewer	CMS
Secondary Reviewer	MDA
Check for compliance with method and project specific requirements	X
Check the completeness of reported information	X
Check the information for the report narrative	X
Check the reasonableness of the results	X

Primary Reviewer:

Secondary Reviewer:
02-JUN-2006

Generated: JUN-02-2006 08:21:38

Run Log ID: **10246**

KEMRON Environmental Services

Instrument Run Log

Instrument: HPMS6 Dataset: 050506

Analyst1: CMS Analyst2: NA

Method: 8260B SOP: MSV01 Rev: 8

Method: 624 SOP: MSV10 Rev: 6

Method: 5030B SOP: PAT01 Rev: 8

Internal Standard: STD12407 Surrogate Standard: STD12408

CCV: STD12439 LCS: STD12451 MS/MSD: NA

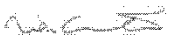
Column 1 ID: RTX502.2 Column 2 ID: NA

Workgroups: WG212574;WG212675

Comments:

Seq.	File ID	Sample Information	pH	Mat	Dil	Reference	Date/Time
1	6M57273	WG212574-01 BFB 50ng STD 8260	NA	1	1	SV15612	05/05/06 06:51
2	6M57274	WG212573-02 50ug/L STD 8260	NA	1	1	STD11943	05/05/06 07:29
3	6M57275	WG212573-03 100ug/L MAOXY STD 8260	NA	1	1	SV15615	05/05/06 08:01
4	6M57276	WG212573-03 VBLK0505 BLANK 8260	NA	1	1		05/05/06 08:34
5	6M57277	SYSTEM BLANK	NA	1	1		05/05/06 09:15
6	6M57278	WG212574-02 0.30ug/L STD 8260	NA	1	1	STD12439	05/05/06 10:29
7	6M57279	WG212574-03 0.40ug/L STD 8260	NA	1	1	STD12439	05/05/06 11:01
8	6M57280	WG212574-04 1ug/L STD 8260	NA	1	1	STD12439	05/05/06 11:33
9	6M57281	WG212574-05 2ug/L STD 8260	NA	1	1	STD12439	05/05/06 12:05
10	6M57282	WG212574-06 5ug/L STD 8260	NA	1	1	STD12439	05/05/06 12:37
11	6M57283	WG212574 10ug/L STD 8260	NA	1	1	STD12439	05/05/06 13:09
12	6M57284	WG212574-07 20ug/L STD 8260	NA	1	1	STD12439	05/05/06 13:40
13	6M57285	WG212574-08 50ug/L STD 8260	NA	1	1	STD12439	05/05/06 14:12
14	6M57286	WG212574-09 100ug/L STD 8260	NA	1	1	STD12439	05/05/06 14:44
15	6M57287	WG212574-10 200ug/L STD 8260	NA	1	1	STD12439	05/05/06 15:16
16	6M57288	SYSTEM BLANK	NA	1	1		05/05/06 15:48
17	6M57289	SYSTEM BLANK	NA	1	1		05/05/06 16:19
18	6M57290	WG212574-11 20ug/L ALT SOURCE STD 8	NA	1	1	STD12451	05/05/06 16:51
19	6M57291	WG212674-01 BFB 50ng STD 8260	NA	1	1	SV15612	05/05/06 17:22
20	6M57292	WG212674-01 BFB 50ng STD 8260	NA	1	1	SV15612	05/05/06 17:52
21	6M57293	WG212674-02 50ug/L STD 8260	NA	1	1	STD12439	05/05/06 18:19
22	6M57294	WG212675-01 VBLK0505 BLANK 8260	NA	1	1		05/05/06 18:51
23	6M57295	WG212675-01 VBLK0505 BLANK 8260	NA	1	1		05/05/06 19:23
24	6M57296	WG212675-02 20ug/L LCS STD 8260	NA	1	1	STD12451	05/05/06 19:55
25	6M57297	WG212675-03 20ug/L LCSDUP STD 8260	NA	1	1	STD12451	05/05/06 20:27
26	6M57298	L0605003-20 B 50X 826-SPE D1	<2	1	50		05/05/06 21:00
27	6M57299	L0605003-21 B 50X 826-SPE D1	<2	1	50		05/05/06 21:32
28	6M57300	L0605003-22 B 50X 826-SPE D1	<2	1	50		05/05/06 22:05
29	6M57301	L0605003-23 B 826-SPE	<2	1	1		05/05/06 22:37
30	6M57302	L0605004-08 A 826-SPE1	<2	1	1		05/05/06 23:09
31	6M57303	L0604744-05 A 826-TCL	<2	1	1		05/05/06 23:42
32	6M57304	L0605014-01 A 826-SPE	<2	1	1		05/06/06 00:15

Approved: May 09, 2006



Run Log ID: **10246**

KEMRON Environmental Services

Instrument Run Log

Instrument: HPMS6 Dataset: 050506
Analyst1: CMS Analyst2: NA
Method: 8260B SOP: MSV01 Rev: 8
Method: 624 SOP: MSV10 Rev: 6
Method: 5030B SOP: PAT01 Rev: 8

Internal Standard: STD12407 Surrogate Standard: STD12408
CCV: STD12439 LCS: STD12451 MS/MSD: NA

Column 1 ID: RTX502.2 Column 2 ID: NA

Workgroups: WG212574;WG212675

Seq.	File ID	Sample Information	pH	Mat	Dil	Reference	Date/Time
33	6M57305	L0604698-05 B 826-SPE	<2	1	1		05/06/06 00:47
34	6M57306	L0604698-06 B 826-SPE	<2	1	1		05/06/06 01:19
35	6M57307	L0605017-07 A 826-LOW	<2	1	1		05/06/06 01:51
36	6M57308	L0605020-01 A 826-SPE	<2	1	1		05/06/06 02:24
37	6M57309	L0605020-05 A 826-SPE	<2	1	1		05/06/06 02:56
38	6M57310	L0604698-07 A 826-SPE	<2	1	1		05/06/06 03:28
39	6M57311	L0605014-02 A 826-SPE	<2	1	1		05/06/06 04:01
40	6M57312	L0605014-03 A 826-SPE	<2	1	1		05/06/06 04:33
41	6M57313	L0605014-04 A 826-SPE	<2	1	1		05/06/06 05:05
42	6M57314	L0604734-01 A 826-SPE2	<2	1	1		05/06/06 05:38
43	6M57315	SYSTEM BLANK	NA	1	1		05/06/06 06:10

Comments

Seq.	Rerun	Dil.	Reason	Analytes
2				
File ID: 6M57274				
	DNR-RERAN CURVE			
3				
File ID: 6M57275				
	DNR-NOT NEEDED			
4				
File ID: 6M57276				
	DNR-NOT NEEDED			
19	X			
File ID: 6M57291				
	Tune failed/DNR			
22	X		Carry-over contamination	
File ID: 6M57294				
	DNR			
38	X	10	Over Calibration Range	TCE
File ID: 6M57310				
40	X		Carry-over contamination	

Approved: May 09, 2006

Run Log ID: **10246**

KEMRON Environmental Services

Instrument Run Log

Instrument: HPMS6 Dataset: 050506

Analyst1: CMS Analyst2: NA

Method: 8260B SOP: MSV01 Rev: 8

Method: 624 SOP: MSV10 Rev: 6

Method: 5030B SOP: PAT01 Rev: 8

Internal Standard: STD12407 Surrogate Standard: STD12408

CCV: STD12439 LCS: STD12451 MS/MSD: NA

Column 1 ID: RTX502.2 Column 2 ID: NA

Workgroups: WG212574;WG212675

Comments

Seq.	Rerun	Dil.	Reason	Analytes
File ID: 6M57312				
	DNR			

Approved: May 09, 2006

Run Log ID: **10626**

KEMRON Environmental Services

Instrument Run Log

Instrument: HPMS6 Dataset: 053106
Analyst1: CMS Analyst2: NA
Method: 8260B SOP: MSV01 Rev: 8
Method: 624 SOP: MSV10 Rev: 6
Method: 5030B SOP: PAT01 Rev: 8

Internal Standard: STD12890 Surrogate Standard: STD12891
CCV: STD12842 LCS: STD12718 MS/MSD: NA

Column 1 ID: RTX502.2 Column 2 ID: NA

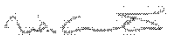
Workgroups: WG214290

Comments:

Seq.	File ID	Sample Information	pH	Mat	Dil	Reference	Date/Time
1	6M57875	WG214289-01 BFB 50ng STD 8260	NA	1	1	STD12453	05/31/06 10:54
2	6M57876	WG214289-02 50ug/L STD 8260	NA	1	1	STD12842	05/31/06 11:29
3	6M57877	WG214290-01 VBLK0531 BLANK 8260	NA	1	1		05/31/06 12:01
4	6M57878	WG214290-02 20ug/L LCS STD 8260	NA	1	1	STD12718	05/31/06 12:33
5	6M57879	WG214290-03 20ug/L LCSDUP STD 8260	NA	1	1	STD12718	05/31/06 13:04
6	6M57880	L0605614-08 B 10X 8260 D1	<2	1	10		05/31/06 13:36
7	6M57881	L0605591-05 A 826-LOW	<2	1	1		05/31/06 14:08
8	6M57882	L0605634-08 A 826-SPE	<2	1	1		05/31/06 14:39
9	6M57883	L0605499-06 A 8260	NA	12	1		05/31/06 15:11
10	6M57884	L0605499-08 A 8260	NA	12	1		05/31/06 15:43
11	6M57885	L0605576-01 A 10X 826-TC	NA	17	10		05/31/06 16:18
12	6M57886	L0605634-01 A 826-SPE	<2	1	1		05/31/06 16:50
13	6M57887	L0605634-02 A 826-SPE	<2	1	1		05/31/06 17:22
14	6M57888	L0605634-03 A 826-SPE	=4	1	1		05/31/06 17:53
15	6M57889	L0605634-04 A 826-SPE	<2	1	1		05/31/06 18:25
16	6M57890	L0605634-05 A 826-SPE	=4	1	1		05/31/06 18:57
17	6M57891	L0605634-06 A 826-SPE	<2	1	1		05/31/06 19:28
18	6M57892	L0605634-07 A 826-SPE	<2	1	1		05/31/06 20:00
19	6M57893	L0605591-01 A 826-LOW	<2	1	1		05/31/06 20:32
20	6M57894	L0605591-02 A 826-LOW	<2	1	1		05/31/06 21:03
21	6M57895	L0605591-03 A 826-LOW	<2	1	1		05/31/06 21:35
22	6M57896	L0605591-04 A 826-LOW	<2	1	1		05/31/06 22:07
23	6M57897	L0605630-02 A 10X 826-TC	NA	17	10		05/31/06 22:39
24	6M57898	SYSTEM BLANK	NA	1	1		05/31/06 23:11
25	6M57899	WG214290-04 624 BLANK	NA	2	1		05/31/06 23:43
26	6M57900	L0605665-01 A 624-SPE1	=7	2	1		06/01/06 00:15
27	6M57901	L0605665-02 A 624-SPE1	=7	2	1		06/01/06 00:47
28	6M57903	SYSTEM CHECK	NA	2	1		06/01/06 05:46
29	6M57904	SYSTEM CHECK	NA	2	1		06/01/06 06:18
30	6M57905	SYSTEM BLANK	NA	2	1		06/01/06 06:50

Comments

Approved: June 02, 2006



Run Log ID: **10626**

KEMRON Environmental Services

Instrument Run Log

Instrument: HPMS6 Dataset: 053106
Analyst1: CMS Analyst2: NA
Method: 8260B SOP: MSV01 Rev: 8
Method: 624 SOP: MSV10 Rev: 6
Method: 5030B SOP: PAT01 Rev: 8

Internal Standard: STD12890 Surrogate Standard: STD12891
CCV: STD12842 LCS: STD12718 MS/MSD: NA

Column 1 ID: RTX502.2 Column 2 ID: NA

Workgroups: WG214290

Comments

Seq.	Rerun	Dil.	Reason	Analytes
16	X	10	Over Calibration Range	TCE
File ID: 6M57890				
17	X	10	Over Calibration Range	TCE
File ID: 6M57891				
18	X	10	Over Calibration Range	TCE
File ID: 6M57892				
23	X		Internal standard failure	
File ID: 6M57897				
	DNR			
25	X		Internal standard failure	
File ID: 6M57899				
	DNR			
26	X		Internal standard failure	
File ID: 6M57900				
	DNR			
27	X		Internal standard failure	
File ID: 6M57901				
	DNR			

Approved: June 02, 2006

Page: 2 of 2

KEMRON Environmental Services
HOLDING TIMES
EQUIVALENT TO AFCEE FORM 9

Analytical Method: 8260B **AAB#:** WG214290
Login Number: L0605576

Client ID	Date Collected	Date Received	Date Extracted	Max Hold Time Ext.	Time Held Ext.	Date Analyzed	Max Hold Time Anal	Time Held Anal.	Q
IWSB01052406	05/24/06	05/25/06	05/31/06	20	7.10	05/31/06	14	7.10	

* EXT = SEE PROJECT QAPP REQUIREMENTS
*ANAL = SEE PROJECT QAPP REQUIREMENTS

KEMRON FORMS - Modified 02/14/2006
Version 1.5 PDF File ID: 488084
Report generated 06/02/2006 10:06

KEMRON Environmental Services

SURROGATE STANDARDS

Login Number: L0605576 Method: 8260
Instrument Id: HPMS6 CAL ID: HPMS6-05-MAY-06
Workgroup (AAB#): WG214290 Matrix: TCLP

Sample Number	Dilution	Tag	1	2	3	4
L0605576-01	10.0	DL01	97.7	108	105	111
WG214290-01	1.00	01	102	111	109	111
WG214290-02	1.00	01	99.4	112	106	111
WG214290-03	1.00	01	102	114	107	111

Surrogates	Surrogate Limits		
1 - 1,2-Dichloroethane-d4	80	-	120
2 - Dibromofluoromethane	86	-	118
3 - 4-Bromofluorobenzene	86	-	115
4 - Toluene-d8	88	-	110

Underline = Result out of surrogate limits

DL = surrogate diluted out
ND = surrogate not detected

KEMRON FORMS - Modified 04/18/2006
Version 1.5 PDF File ID: 488093
Report generated 06/02/2006 10:06

KEMRON Environmental Services

METHOD BLANK SUMMARY

Login Number:	L0605576	Work Group:	WG214290
Blank File ID:	6M57877	Blank Sample ID:	WG214290-01
Date Analyzed:	05/31/06	Instrument ID:	HPMS6
Time Analyzed:	12:01	Method:	8260B
Analyst:	CMS		

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG214290-02	6M57878	05/31/06 12:33	01
LCS2	WG214290-03	6M57879	05/31/06 13:04	01
IWSB01052406	L0605576-01	6M57885	05/31/06 16:18	DL01

KEMRON FORMS - Modified 03/06/2006
Version 1.5 PDF File ID: 488085
Report generated 06/02/2006 10:06

KEMRON Environmental Services

METHOD BLANK REPORT

Login Number: L0605576	Run Date: 05/31/2006	Sample ID: WG214290-01
Instrument ID: HPMS6	Run Time: 12:01	Prep Method: 5030B
File ID: 6M57877	Analyst: CMS	Method: 8260B
Workgroup (AAB#): WG214290	Matrix: Water	Units: ug/L
Contract #:	Cal ID: HPMS6-05-MAY-06	

Analytes	SQL	PQL	Concentration	Dilution	Qualifier
Benzene	0.125	5.00	0.125	1	U
Carbon tetrachloride	0.250	5.00	0.250	1	U
Chlorobenzene	0.125	5.00	0.125	1	U
Chloroform	0.125	5.00	0.125	1	U
1,2-Dichloroethane	0.250	5.00	0.250	1	U
1,1-Dichloroethene	0.500	5.00	0.500	1	U
Methyl Ethyl Ketone	2.50	10.0	2.50	1	U
Tetrachloroethene	0.250	5.00	0.250	1	U
Trichloroethene	0.250	5.00	0.250	1	U
Vinyl chloride	0.250	10.0	0.250	1	U
1,4-Dichlorobenzene	0.125	5.00	0.125	1	U

Surrogates	% Recovery	Surrogate Limits	Qualifier
Dibromofluoromethane	111	86 - 118	PASS
1,2-Dichloroethane-d4	102	80 - 120	PASS
Toluene-d8	111	88 - 110	FAIL
4-Bromofluorobenzene	109	86 - 115	PASS

MDL Method Detection Limit
RL Reporting/quantitation Limit

* Analyte concentration > RL

KEMRON FORMS - Modified 05/01/2006
Version 1.5 PDF File ID: 488086
Report generated 06/02/2006 10:06

KEMRON Environmental Services

LABORATORY CONTROL SAMPLE (LCS)

Login Number: L0605576 Analyst: CMS Prep Method: 5030B
Instrument ID: HPMS6 Matrix: Leachate Method: 8260B
Workgroup (AAB#): WG214290 Units: ug/L
Sample ID: WG214290-02 LCS File ID: 6M57878 Run Date: 05/31/2006 12:33
Sample ID: WG214290-03 LCS2 File ID: 6M57879 Run Date: 05/31/2006 13:04

Analytes	LCS			LCS2			%RPD	%Rec Limits	RPD Lmt	Q
	Known	Found	% REC	Known	Found	% REC				
Benzene	20.0	20.3	102	20.0	21.6	108	5.97	80 - 121	20	
Carbon tetrachloride	20.0	23.8	119	20.0	25.9	130	8.32	65 - 140	20	
Chlorobenzene	20.0	20.7	104	20.0	21.6	108	4.12	80 - 120	20	
Chloroform	20.0	21.4	107	20.0	22.8	114	6.71	80 - 125	20	
1,2-Dichloroethane	20.0	21.3	106	20.0	21.8	109	2.21	80 - 129	20	
1,1-Dichloroethene	20.0	21.4	107	20.0	23.0	115	6.87	80 - 132	20	
Methyl Ethyl Ketone	20.0	19.2	95.8	20.0	19.9	99.6	3.92	30 - 150	20	
Tetrachloroethene	20.0	22.4	112	20.0	23.4	117	4.57	80 - 124	20	
Trichloroethene	20.0	21.9	109	20.0	23.3	116	6.28	80 - 122	20	
Vinyl chloride	20.0	18.0	90.2	20.0	19.4	96.8	7.09	65 - 140	20	
1,4-Dichlorobenzene	20.0	20.3	102	20.0	20.9	104	2.89	80 - 120	20	

Surogates	LCS	LCS2	Surrogate Limits	Qualifier
	% Recovery	% Recovery		
Dibromofluoromethane	112	114	86 - 118	PASS
1,2-Dichloroethane-d4	99.4	102	80 - 120	PASS
Toluene-d8	111	111	88 - 110	FAIL
4-Bromofluorobenzene	106	107	86 - 115	PASS

* FAILS %REC LIMIT

\# FAILS RPD LIMIT

KEMRON FORMS - Modified 04/12/2006
Version 1.5 PDF File ID: 488083
Report generated 06/02/2006 10:06

KEMRON ENVIRONMENTAL SERVICES
ORGANIC INSTRUMENT CHECK

BFB

Login Number: L0605576 Tune ID: WG212574-01
Instrument: HPMS6 Run Date: 05/05/2006
Analyst: CMS Run Time: 06:51
Workgroup: WG212574 File ID: 6M57273
Cal ID: HPMS6-05-MAY-06

Target	Rel. to	Lower	Upper	Rel.	Raw	Result
50.0	95.0	15.0	40.0	21.3	4486	PASS
75.0	95.0	30.0	60.0	45.0	9477	PASS
95.0	95.0	100	100	100	21048	PASS
96.0	95.0	5.00	9.00	7.47	1573	PASS
173	174	0	2.00	0	0	PASS
174	95.0	50.0	100	76.1	16023	PASS
175	174	5.00	9.00	7.60	1217	PASS
176	174	95.0	101	95.8	15343	PASS
177	176	5.00	9.00	5.90	906	PASS

This check relates to the following samples, MS, MSD:

Lab ID	Client ID	Tag	Date Analyzed	Q
WG212574-10	STD	01	05/05/2006 15:16	
WG212574-09	STD	01	05/05/2006 14:44	
WG212574-08	CCV	01	05/05/2006 14:12	
WG212574-07	STD	01	05/05/2006 13:40	
WG212574-06	STD	01	05/05/2006 12:37	
WG212574-05	STD	01	05/05/2006 12:05	
WG212574-04	STD	01	05/05/2006 11:33	
WG212574-03	STD	01	05/05/2006 11:01	
WG212574-02	STD	01	05/05/2006 10:29	
WG212574-11	SSCV	01	05/05/2006 16:51	

* Sample past 12 hour tune limit

KEMRON FORMS - Modified 02/14/2006
Version 1.3 PDF File ID: 488089
Report generated 06/02/2006 10:06

KEMRON ENVIRONMENTAL SERVICES
ORGANIC INSTRUMENT CHECK

BFB

Login Number: L0605576
Instrument: HPMS6
Analyst: CMS
Workgroup: WG214289

Tune ID: WG214289-01
Run Date: 05/31/2006
Run Time: 10:54
File ID: 6M57875
Cal ID: HPMS6-05-MAY-06

Target	Rel. to	Lower	Upper	Rel.	Raw	Result
50.0	95.0	15.0	40.0	21.8	10318	PASS
75.0	95.0	30.0	60.0	47.7	22626	PASS
95.0	95.0	100	100	100	47389	PASS
96.0	95.0	5.00	9.00	6.64	3147	PASS
173	174	0	2.00	0.621	224	PASS
174	95.0	50.0	100	76.2	36098	PASS
175	174	5.00	9.00	6.17	2227	PASS
176	174	95.0	101	96.2	34720	PASS
177	176	5.00	9.00	6.24	2166	PASS

This check relates to the following CCV:

Lab ID	Client ID	Date Analyzed	
WG214289-02	CCV	05/31/2006 11:29	

This check relates to the following samples & batch QC:

Lab ID	Client ID	Tag	Date Analyzed	Q
WG214290-01	BLANK	01	05/31/2006 12:01	
WG214290-02	LCS	01	05/31/2006 12:33	
WG214290-03	LCS2	01	05/31/2006 13:04	
L0605576-01	IWSB01052406	DL01	05/31/2006 16:18	

* Sample past 12 hour tune limit

KEMRON Environmental Services

INITIAL CALIBRATION SUMMARY

Login Number: L0605576 **Instrument ID:** HPMS6
Analytical Method: 8260B **Initial Calibration Date:** 05-MAY-06 15:16
ICAL Workgroup: WG212574 **Column ID:** F

Analyte		AVG RF	% RSD	LINEAR	QUAD
1,1-Dichloroethene	CCC	0.4442	11.8		
Chloroform	CCC	0.5176	5.67		
Vinyl Chloride	CCC	0.2102	14.1		
1,1,2,2-Tetrachloroethane	SPCC	0.4312	6.90		
1,1-Dichloroethane	SPCC	0.5487	4.24		
Bromoform	SPCC	0.1637	12.4		
Chlorobenzene	SPCC	0.9450	7.93		
Chloromethane	SPCC	0.2826	10.1		
1,2-Dichloroethane		0.3899	5.70		
1,4-Dichlorobenzene		1.529	5.57		
2-Butanone		0.05913	8.16		
Benzene		0.9872	5.77		
Carbon Tetrachloride		0.4101	12.6		
Tetrachloroethene		0.3385	12.3		
Trichloroethene		0.2564	5.91		
cis-1,2-Dichloroethene		0.2593	9.42		
m-,p-Xylene		0.6178	10.0		
o-Xylene		0.5907	14.0		
trans-1,2-Dichloroethene		0.2499	6.83		
1,2-Dichloroethane-d4	SURR	0.3189	8.77		
Dibromofluoromethane	SURR	0.2695	4.72		
Toluene-d8	SURR	1.110	7.87		
p-Bromofluorobenzene	SURR	0.8669	8.04		

KEMRON Environmental Services

INITIAL CALIBRATION DATA

Login Number: L0605576 **Instrument ID:** HPMS6

Analytical Method: 8260B **Initial Calibration Date:** 05-MAY-06 15:16

Column ID: F

Analyte	WG212574-02			WG212574-03			WG212574-04		
	CONC	RESP	RF	CONC	RESP	RF	CONC	RESP	RF
1,1-Dichloroethene	NA	NA	NA	0.400	4510	0.3345	1.00	15150	0.4658
Chloroform	0.300	5908	0.5456	0.400	6077	0.4507	1.00	17154	0.5274
Vinyl Chloride	NA	NA	NA	0.400	2927	0.2171	1.00	8214	0.2525
1,1,2,2-Tetrachloroethane	NA	NA	NA	0.400	2006	0.3708	1.00	6407	0.4774
1,1-Dichloroethane	NA	NA	NA	0.400	7066	0.5241	1.00	18778	0.5773
Bromoform	NA	NA	NA	NA	NA	NA	1.00	3229	0.1340
Chlorobenzene	NA	NA	NA	0.400	8809	0.8905	1.00	24990	1.037
Chloromethane	NA	NA	NA	NA	NA	NA	1.00	10620	0.3265
1,2-Dichloroethane	NA	NA	NA	0.400	5242	0.3888	1.00	13529	0.4159
1,4-Dichlorobenzene	0.300	7110	1.642	0.400	8130	1.503	1.00	21526	1.604
2-Butanone	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene	NA	NA	NA	0.400	12867	0.9543	1.00	34024	1.046
Carbon Tetrachloride	NA	NA	NA	0.400	3954	0.2933	1.00	13530	0.4160
Tetrachloroethene	NA	NA	NA	0.400	2382	0.2408	1.00	8606	0.3572
Trichloroethene	NA	NA	NA	0.400	3068	0.2275	1.00	8559	0.2631
cis-1,2-Dichloroethene	NA	NA	NA	0.400	2765	0.2051	1.00	8937	0.2748
m-,p-Xylene	NA	NA	NA	0.800	10526	0.5320	2.00	30655	0.6362
o-Xylene	NA	NA	NA	0.400	4169	0.4214	1.00	13710	0.5690
trans-1,2-Dichloroethene	NA	NA	NA	0.400	2874	0.2132	1.00	8509	0.2616
1,2-Dichloroethane-d4	NA	NA	NA	NA	NA	NA	0.500	5921	0.3641
Dibromofluoromethane	NA	NA	NA	NA	NA	NA	0.500	4389	0.2699
Toluene-d8	NA	NA	NA	NA	NA	NA	0.500	15023	1.247
p-Bromofluorobenzene	NA	NA	NA	NA	NA	NA	0.500	6633	0.9884

KEMRON Environmental Services

INITIAL CALIBRATION DATA

Login Number: L0605576 **Instrument ID:** HPMS6

Analytical Method: 8260B **Initial Calibration Date:** 05-MAY-06 15:16

Column ID: F

Analyte	WG212574-05			WG212574-06			WG212574-07		
	CONC	RESP	RF	CONC	RESP	RF	CONC	RESP	RF
1,1-Dichloroethene	2.00	26168	0.4059	5.00	73620	0.4621	20.0	281994	0.4425
Chloroform	2.00	33138	0.5141	5.00	85043	0.5338	20.0	334252	0.5245
Vinyl Chloride	2.00	15195	0.2357	5.00	36570	0.2295	20.0	123591	0.1939
1,1,2,2-Tetrachloroethane	2.00	11564	0.4361	5.00	29525	0.4354	20.0	119188	0.4382
1,1-Dichloroethane	2.00	33568	0.5207	5.00	90127	0.5657	20.0	346472	0.5437
Bromoform	2.00	6601	0.1389	5.00	18888	0.1596	20.0	82628	0.1727
Chlorobenzene	2.00	45626	0.9600	5.00	120662	1.020	20.0	461323	0.9644
Chloromethane	2.00	19977	0.3099	5.00	46734	0.2933	20.0	169077	0.2653
1,2-Dichloroethane	2.00	25786	0.4000	5.00	64802	0.4067	20.0	254851	0.3999
1,4-Dichlorobenzene	2.00	40765	1.537	5.00	105044	1.549	20.0	417415	1.535
2-Butanone	2.00	3391	0.05260	5.00	8825	0.05540	20.0	36660	0.05750
Benzene	2.00	61956	0.9611	5.00	166440	1.045	20.0	642747	1.009
Carbon Tetrachloride	2.00	25268	0.3920	5.00	69764	0.4379	20.0	266672	0.4185
Tetrachloroethene	2.00	16271	0.3423	5.00	42226	0.3568	20.0	167951	0.3511
Trichloroethene	2.00	16258	0.2522	5.00	42906	0.2693	20.0	157599	0.2473
cis-1,2-Dichloroethene	2.00	16043	0.2489	5.00	41504	0.2605	20.0	170504	0.2675
m-,p-Xylene	4.00	60496	0.6364	10.0	164654	0.6957	40.0	632099	0.6607
o-Xylene	2.00	26240	0.5521	5.00	75943	0.6418	20.0	312459	0.6532
trans-1,2-Dichloroethene	2.00	15665	0.2430	5.00	40412	0.2536	20.0	160816	0.2523
1,2-Dichloroethane-d4	1.00	11218	0.3481	2.50	24503	0.3076	10.0	101733	0.3193
Dibromofluoromethane	1.00	9179	0.2848	2.50	19753	0.2480	10.0	82690	0.2595
Toluene-d8	1.00	27769	1.169	2.50	60375	1.020	10.0	246857	1.032
p-Bromofluorobenzene	1.00	11371	0.8577	2.50	25911	0.7643	10.0	114553	0.8422

KEMRON Environmental Services

INITIAL CALIBRATION DATA

Login Number: L0605576 **Instrument ID:** HPMS6

Analytical Method: 8260B **Initial Calibration Date:** 05-MAY-06 15:16

Column ID: F

Analyte	WG212574-08			WG212574-09			WG212574-10		
	CONC	RESP	RF	CONC	RESP	RF	CONC	RESP	RF
1,1-Dichloroethene	50.0	800031	0.4901	100	1650469	0.4971	200	3094648	0.4558
Chloroform	50.0	877445	0.5375	100	1765266	0.5317	200	3346206	0.4929
Vinyl Chloride	50.0	325858	0.1996	100	647130	0.1949	200	1077047	0.1586
1,1,2,2-Tetrachloroethane	50.0	309225	0.4412	100	650177	0.4345	200	1314542	0.4163
1,1-Dichloroethane	50.0	923257	0.5656	100	1887440	0.5685	200	3559939	0.5243
Bromoform	50.0	215834	0.1751	100	469726	0.1843	200	975335	0.1816
Chlorobenzene	50.0	1188748	0.9644	100	2353094	0.9232	200	4300744	0.8007
Chloromethane	50.0	450778	0.2762	100	864129	0.2603	200	1676347	0.2469
1,2-Dichloroethane	50.0	630125	0.3860	100	1253848	0.3777	200	2334034	0.3438
1,4-Dichlorobenzene	50.0	1089741	1.555	100	2239611	1.497	200	4223310	1.337
2-Butanone	50.0	99891	0.06120	100	207500	0.06250	200	445262	0.06560
Benzene	50.0	1667811	1.022	100	3272089	0.9856	200	5942658	0.8753
Carbon Tetrachloride	50.0	742121	0.4546	100	1507812	0.4542	200	2812070	0.4142
Tetrachloroethene	50.0	454929	0.3691	100	929295	0.3646	200	1752223	0.3262
Trichloroethene	50.0	441605	0.2705	100	901039	0.2714	200	1698945	0.2502
cis-1,2-Dichloroethene	50.0	459535	0.2815	100	920673	0.2773	200	1758336	0.2590
m-,p-Xylene	100	1603126	0.6503	200	3121115	0.6123	400	5569390	0.5184
o-Xylene	50.0	828051	0.6718	100	1658900	0.6508	200	3037401	0.5655
trans-1,2-Dichloroethene	50.0	430145	0.2635	100	885423	0.2667	200	1666489	0.2455
1,2-Dichloroethane-d4	25.0	250078	0.3064	50.0	504818	0.3041	100	960126	0.2828
Dibromofluoromethane	25.0	220842	0.2706	50.0	468927	0.2825	100	920760	0.2712
Toluene-d8	25.0	682962	1.108	50.0	1484904	1.165	100	2765450	1.030
p-Bromofluorobenzene	25.0	311451	0.8888	50.0	673612	0.9003	100	1305618	0.8269

KEMRON FORMS - Modified 03/06/2006
Version 1.6 PDF File ID: 488087
Report generated 06/02/2006 10:06

KEMRON Environmental Services

ALTERNATE SOURCE CALIBRATION REPORT

Login Number: L0605576 Run Date: 05/05/2006 Sample ID: WG212574-11
Instrument ID: HPMS6 Run Time: 16:51 Method: 8260B
File ID: 6M57290 Analyst: CMS
ICal Workgroup: WG212574 Cal ID: HPMS6 - 05-MAY-06

Analyte		Expected	Found	RF	%D	UNITS	Q
Chloroform	CCC	20	20.7	0.535	3.3	ug/L	
1,1-Dichloroethene	CCC	20	21.4	0.475	6.9	ug/L	
Vinyl Chloride	CCC	20	17.2	0.181	13.9	ug/L	
Chlorobenzene	SPCC	20	20.8	0.983	4	ug/L	
Bromoform	SPCC	20	20.0	0.164	.1	ug/L	
Chloromethane	SPCC	20	19.0	0.269	4.9	ug/L	
1,1,2,2-Tetrachloroethane	SPCC	20	20.9	0.451	4.6	ug/L	
1,1-Dichloroethane	SPCC	20	20.2	0.553	.8	ug/L	
Benzene		20	21.1	1.04	5.3	ug/L	
Carbon Tetrachloride		20	21.1	0.433	5.6	ug/L	
1,2-Dichloroethane		20	20.7	0.403	3.3	ug/L	
2-Butanone		20	21.3	0.0629	6.3	ug/L	
Tetrachloroethene		20	21.4	0.363	7.1	ug/L	
Trichloroethene		20	20.9	0.267	4.3	ug/L	
1,4-Dichlorobenzene		20	20.3	1.55	1.6	ug/L	
m-,p-Xylene		40	44.4	0.685	10.9	ug/L	
cis-1,2-Dichloroethene		20	22.0	0.286	10.1	ug/L	
trans-1,2-Dichloroethene		20	20.7	0.259	3.7	ug/L	
o-Xylene		20	22.9	0.675	14.3	ug/L	

* Exceeds %D Limit

CCC Calibration Check Compounds
SPCC System Performance Check Compounds

KEMRON FORMS - Modified 04/11/2006
Version 1.5 PDF File ID: 488088
Report generated 06/02/2006 10:06

KEMRON Environmental Services

CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L0605576 Run Date: 05/31/2006 Sample ID: WG214289-02
Instrument ID: HPMS6 Run Time: 11:29 Method: 8260B
File ID: 6M57876 Analyst: CMS
Workgroup (AAB#): WG214290 Cal ID: HPMS6 - 05-MAY-06

Analyte		Expected	Found	RF	%D	UNITS	Q
Chloroform	CCC	50	51.3	0.531	2.6	ug/L	
1,1-Dichloroethene	CCC	50	56.2	0.499	12.3	ug/L	
Vinyl Chloride	CCC	50	44.2	0.186	11.5	ug/L	
Chlorobenzene	SPCC	50	49.8	0.941	.5	ug/L	
Chloromethane	SPCC	50	45.7	0.258	8.7	ug/L	
1,1,2,2-Tetrachloroethane	SPCC	50	46.5	0.401	6.9	ug/L	
1,1-Dichloroethane	SPCC	50	52.1	0.571	4.1	ug/L	
Bromoform	SPCC	50	52.7	0.173	5.4	ug/L	
Benzene		50	48.9	0.965	2.3	ug/L	
Carbon Tetrachloride		50	57.9	0.475	15.9	ug/L	
1,2-Dichloroethane		50	48.3	0.377	3.3	ug/L	
2-Butanone		50	49.7	0.0588	.6	ug/L	
Tetrachloroethene		50	54.4	0.368	8.8	ug/L	
Trichloroethene		50	53.3	0.273	6.5	ug/L	
1,4-Dichlorobenzene		50	48.1	1.47	3.8	ug/L	
Dibromofluoromethane	SURR	25	28.0	0.302	12.1	ug/L	
1,2-Dichloroethane-d4	SURR	25	24.2	0.309	3.2	ug/L	
Toluene-d8	SURR	25	28.2	1.25	12.9	ug/L	
p-Bromofluorobenzene	SURR	25	27.3	0.948	9.3	ug/L	

* Exceeds %D Criteria

CCC Calibration Check Compounds
SPCC System Performance Check Compounds

KEMRON FORMS - Modified 04/19/2006
Version 1.3 PDF File ID: 488091
Report generated 06/02/2006 10:06

KEMRON ENVIRONMENTAL SERVICES
INTERNAL STANDARD AREA SUMMARY
(COMPARED TO CCV)

Login Number: L0605576
Instrument ID: HPMS6
Workgroup (AAB#): WG214290

CCV Number: WG214289-02
CAL ID: HPMS6-05-MAY-06
Matrix: TCLP

Sample Number	Dilution	Tag	IS-1	IS-2	IS-3
WG214289-02	NA	NA	325100	581604	782743
Upper Limit	NA	NA	650200	1163208	1565486
Lower Limit	NA	NA	162550	290802	391372
L0605576-01	10.0	DL01	235199	424039	570590
WG214290-01	1.00	01	274309	497422	671110
WG214290-02	1.00	01	274255	476614	637713
WG214290-03	1.00	01	269696	474839	621143

IS-1 - 1,4-Dichlorobenzene-d4
IS-2 - Chlorobenzene-d5
IS-3 - Fluorobenzene

Underline = Response outside limits

KEMRON FORMS - Modified 04/18/2006
Version 1.3 PDF File ID: 488092
Report generated 06/02/2006 10:06

KEMRON ENVIRONMENTAL SERVICES
INTERNAL STANDARD RETENTION TIME SUMMARY
(COMPARED TO CCV)

Login Number: L0605576
Instrument ID: HPMS6
Workgroup (AAB#): WG214290

CCV Number: WG214289-02
CAL ID: HPMS6-05-MAY-06
Matrix: TCLP

Sample Number	Dilution	Tag	IS-1	IS-2	IS-3
WG214289-02	NA	NA	19.5	15.93	11.44
Upper Limit	NA	NA	20	16.43	11.94
Lower Limit	NA	NA	19	15.43	10.94
L0605576-01	10.0	DL01	19.49	15.93	11.43
WG214290-01	1.00	01	19.49	15.93	11.43
WG214290-02	1.00	01	19.49	15.93	11.43
WG214290-03	1.00	01	19.49	15.93	11.44

IS-1 - 1,4-Dichlorobenzene-d4
IS-2 - Chlorobenzene-d5
IS-3 - Fluorobenzene

Underline = Response outside limits

KEMRON FORMS - Modified 04/18/2006
Version 1.3 PDF File ID: 488094
Report generated 06/02/2006 10:06

1.2 Semivolatiles Data

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1.2.1 Semivolatiles GC/MS Data (8270)

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KEMRON ENVIRONMENTAL SERVICES
GC/MS SEMIVOLATILE ORGANICS

KEMRON Login No.: L0605576

METHOD

Preparation: Soils - SW-846 3545; Waters - SW-846 3510C or 3520C

Analysis: SW-846 8270C

HOLDING TIMES

Sample Preparation: All holding times were met.

Sample Analysis: All holding times were met.

PREPARATION

Sample preparation proceeded normally.

CALIBRATION

Initial Calibration: For all compounds which yielded a %RSD greater than 15%, linear or higher order equations were applied. All acceptance criteria were met.

Alternate Source Standards: All acceptance criteria were met.

Continuing Calibration and Tune: All acceptance criteria were met.

BATCH QA/QC

Method Blank: All acceptance criteria were met.

Laboratory Control Sample: All acceptance criteria were met.

Matrix Spikes: There were no MS/MSD results associated with this sample delivery group, due to insufficient volume of sample. The laboratory included an LCS and LCS duplicate in the preparation batch in lieu of the NELAC prescribed MS/MSD. KEMRON recommends site specific MS/MSD samples to avoid possible data qualification.

SAMPLES

Internal Standards: All acceptance criteria were met.

Surrogates: All surrogates were diluted out of samples 02 and 03 due to 20x dilution. Sample 06 yielded a percent recovery for nitrobenzene-d5 that was below the lower advisory limit. Sample 07 yielded percent recoveries for 2,4,6-tribromophenol and 2-fluorophenol that were below the lower acceptance limits. Sample 07 was re-extracted within holding time and yielded percent recoveries for 2,4,6-tribromophenol and 2-fluorophenol that were below the lower advisory limits. All other acceptance criteria were met.

Samples: Samples 02 and 03 were initially analyzed at a 20x dilution due to sample viscosity. All acceptance criteria were met.

Manual Integration Reason Codes

KEMRON laboratory management has identified four general cases with valid reasons supporting the use of manual integration techniques.

Reason #1: Data System Fails to Select Correct Peak
In some cases the chromatography system selects and integrates the ”wrong peak”. In this case the analyst must correct the selection and force the system to integrate the proper peak. Other times the system may miss the peak completely.

Reason #2: Data System Splits the Peak Incorrectly or Integrates a False Peak as a Rider Peak.
This phenomena is common at low concentrations where the signal:noise ratio is low. A single compound (peak) is incorrectly split into multiple peaks or integrated as a main peak with one or more rider peaks resulting in low area counts for the target compound.

Reason #3: Improperly Integrated Isomers and/or coeluting compounds.
This system often fails to distinguish coeluting compounds and or isomers. The integration areas and concentrations are wrong, and they must be corrected by manual integration. Prime examples are benzo(k)fluoranthene and benzo(b)fluoranthene which are often unresolved and integrated improperly when both are present at low concentrations in standards or samples.

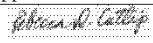
Reason #4: System Establishes Incorrect Baseline
There are numerous situations in chromatography where the system establishes the baseline incorrectly. Some baseline errors will be obvious to the analyst and should be corrected via manual procedures.

Reason #5: Miscellaneous
Other situations involving integration errors may require in-depth review and technical judgment. These cases should be brought to the attention of the laboratory management. If the form of manual integration is not clearly covered by these four cases, then review and approval by the Laboratory Director or the QA/QC Supervisor will be required.

I certify that this data package is in compliance with the terms and conditions agreed to by the client and KEMRON Environmental Services, both technically and for completeness, except for the conditions noted above. Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or designated person, as verified by the following signature.

Analyst: ALT

Approved: 07-JUN-06



LABORATORY REPORT

L0605576

06/12/06 12:20

Submitted By

KEMRON Environmental Services
156 Starlite Drive
Marietta , OH 45750
(740) 373 - 4071

For

Account Name: CH2MHILL, Inc
7600 Tidwell Road
Suite 400
San Antonio, TX 77040
Attention: John Ynfante

Account Number: 2736
Work ID: STATE MARINE
Invoice Number: 580608
P.O. Number: 915193

Sample Analysis Summary

Client ID	Lab ID	Method	Dilution	Date Received
IWSB01052406	L0605576-01	8270C	1	25-MAY-06
SM142SB01052406	L0605576-02	8270C	20	25-MAY-06
SM142SB02052406	L0605576-03	8270C	20	25-MAY-06
SM141SB03052406	L0605576-04	8270C	1	25-MAY-06
SM141FD03052406	L0605576-05	8270C	1	25-MAY-06
SM141SB02052406	L0605576-06	8270C	1	25-MAY-06
SM141SB01052406	L0605576-07	8270C	1	25-MAY-06
SM141SB01052406	L0605576-07	8270C	1	25-MAY-06

Report Number: **L0605576**
Report Date : **June 12, 2006**

Sample Number: **L0605576-01**
Client ID: **IWSB01052406**
Matrix: **Leachate**
Workgroup Number: **WG214398**
Collect Date: **05/24/2006 13:50**

PrePrep Method: **1311**
Prep Method: **3510C**
Analytical Method: **8270C**
Analyst: **CLK**
Dilution: **1**
Units: **ug/L**

Instrument: **HPMS4**
Prep Date: **05/31/2006 11:00**
Cal Date: **05/10/2006 17:31**
Run Date: **06/01/2006 20:51**
File ID: **4M33236**

Analyte	CAS.Number	Result	Qual	PQL	SQL	EPA HW#	Reg. Limit
o-Cresol	95-48-7		U	50	25	D023	200000
m-,p-Cresol	106-44-5		U	50	25	D025	200000
1,4-Dichlorobenzene	106-46-7		U	50	25	D027	7500
2,4-Dinitrotoluene	121-14-2		U	50	25	D030	130
Hexachlorobenzene	118-74-1		U	50	25	D032	130
Hexachlorobutadiene	87-68-3		U	50	25	D033	500
Hexachloroethane	67-72-1		U	50	25	D034	3000
Nitrobenzene	98-95-3		U	50	25	D036	2000
Pentachlorophenol	87-86-5		U	250	25	D037	100000
Pyridine	110-86-1		U	500	250	D038	5000
2,4,5-Trichlorophenol	95-95-4		U	250	25	D041	400000
2,4,6-Trichlorophenol	88-06-2		U	50	25	D042	2000

Surrogate	% Recovery	Lower	Upper
2-Fluorophenol	43.8	21	100
Phenol-d5	31.7	10	94
Nitrobenzene-d5	76.3	35	114
2-Fluorobiphenyl	76.9	43	116
2,4,6-Tribromophenol	89.1	10	123
p-Terphenyl-d14	101	33	141

U Not detected at or above the reporting limit

Report Number: **L0605576**
Report Date : **June 12, 2006**

Sample Number: **L0605576-02**
Client ID: **SM142SB01052406**
Matrix: **Soil**
Workgroup Number: **WG214172**
Collect Date: **05/24/2006 09:20**

PrePrep Method: **NONE**
Prep Method: **3545**
Analytical Method: **8270C**
Analyst: **ALT**
Dilution: **20**
Units: **ug/kg**

Instrument: **HPMS5**
Prep Date: **05/25/2006 14:30**
Cal Date: **05/15/2006 13:30**
Run Date: **05/30/2006 22:47**
File ID: **5M40931**
Percent Solid: **88.5**

Analyte	CAS. Number	Result	Qual	PQL	SQL
Benzaldehyde	100-52-7		U	3730	1870
Phenol	108-95-2		U	3600	1800
Bis(2-Chloroethyl)ether	111-44-4		U	3600	1800
2-Chlorophenol	95-57-8		U	3600	1800
2-Methylphenol	95-48-7		U	3600	1800
Acetophenone	98-86-2		U	3600	1800
bis(2-Chloroisopropyl)ether	108-60-1		U	3600	1800
3-,4-Methylphenol	106-44-5		U	3600	1800
N-Nitroso-di-n-propylamine	621-64-7		U	3600	1800
Hexachloroethane	67-72-1		U	3600	1800
Nitrobenzene	98-95-3		U	3600	1800
Isophorone	78-59-1		U	3600	1800
2-Nitrophenol	88-75-5		U	3600	1800
2,4-Dimethylphenol	105-67-9		U	3600	1800
Bis(2-Chloroethoxy)Methane	111-91-1		U	3600	1800
2,4-Dichlorophenol	120-83-2		U	3600	1800
Naphthalene	91-20-3	2360	J	3600	1800
4-Chloroaniline	106-47-8		U	3600	1800
Hexachlorobutadiene	87-68-3		U	3600	1800
Caprolactam	105-60-2		U	3730	1870
4-Chloro-3-methylphenol	59-50-7		U	3600	1800
2-Methylnaphthalene	91-57-6		U	3600	1800
Hexachlorocyclopentadiene	77-47-4		U	3600	1800
2,4,6-Trichlorophenol	88-06-2		U	3600	1800
2,4,5-Trichlorophenol	95-95-4		U	3600	1800
1,1'-Biphenyl	92-52-4		U	3730	1870
2-Chloronaphthalene	91-58-7		U	3600	1800
2-Nitroaniline	88-74-4		U	18000	7190
Dimethylphthalate	131-11-3		U	3600	1800
Acenaphthylene	208-96-8	5830		3600	1800
2,6-Dinitrotoluene	606-20-2		U	3600	1800
3-Nitroaniline	99-09-2		U	18000	7190
Acenaphthene	83-32-9		U	3600	1800
2,4-Dinitrophenol	51-28-5		U	18000	7190
4-Nitrophenol	100-02-7		U	18000	7190
Dibenzofuran	132-64-9		U	3600	1800
2,4-Dinitrotoluene	121-14-2		U	3600	1800
Diethylphthalate	84-66-2		U	3600	1800
4-Chlorophenyl-phenyl ether	7005-72-3		U	3600	1800
Fluorene	86-73-7	3440	J	3600	1800
4-Nitroaniline	100-01-6		U	18000	7190
4,6-Dinitro-2-methylphenol	534-52-1		U	18000	7190
N-Nitrosodiphenylamine	86-30-6		U	3600	1800
4-Bromophenyl-phenylether	101-55-3		U	3600	1800
Hexachlorobenzene	118-74-1		U	3600	1800
Atrazine	1912-24-9		U	3730	1870
Pentachlorophenol	87-86-5		U	18000	7190
Phenanthrene	85-01-8	16100		3600	1800

Report Number: **L0605576**
Report Date : **June 12, 2006**

Sample Number: **L0605576-02**
Client ID: **SM142SB01052406**
Matrix: **Soil**
Workgroup Number: **WG214172**
Collect Date: **05/24/2006 09:20**

PrePrep Method: **NONE**
Prep Method: **3545**
Analytical Method: **8270C**
Analyst: **ALT**
Dilution: **20**
Units: **ug/kg**

Instrument: **HPMS5**
Prep Date: **05/25/2006 14:30**
Cal Date: **05/15/2006 13:30**
Run Date: **05/30/2006 22:47**
File ID: **5M40931**
Percent Solid: **88.5**

Analyte	CAS. Number	Result	Qual	PQL	SQL
Anthracene	120-12-7	19000		3600	1800
Carbazole	86-74-8	9720		3600	1800
Di-N-Butylphthalate	84-74-2		U	3600	1800
Fluoranthene	206-44-0	18300		3600	1800
Pyrene	129-00-0	13700		3600	1800
Butylbenzylphthalate	85-68-7		U	3600	1800
3,3'-Dichlorobenzidine	91-94-1		U	7190	3600
Benzo(a)anthracene	56-55-3	10800		3600	1800
Chrysene	218-01-9	15500		3600	1800
bis(2-Ethylhexyl)phthalate	117-81-7		U	3600	1800
Di-n-octylphthalate	117-84-0		U	3600	1800
Benzo(b)fluoranthene	205-99-2	15100		3600	1800
Benzo(k)fluoranthene	207-08-9	4330		3600	1800
Benzo(a)pyrene	50-32-8	10800		3600	1800
Indeno(1,2,3-cd)pyrene	193-39-5	4810		3600	1800
Dibenzo(a,h)Anthracene	53-70-3		U	3600	1800
Benzo(g,h,i)Perylene	191-24-2	7320		3600	1800
1,2,4,5-Tetrachlorobenzene	95-94-3		U	3600	1800

Surrogate	% Recovery	Lower	Upper	Qual
2-Fluorophenol		25	121	*
Phenol-d5		24	113	*
Nitrobenzene-d5		23	120	*
2-Fluorobiphenyl		30	115	*
2,4,6-Tribromophenol		19	122	*
P-Terphenyl-d14		18	137	*

* Surrogate or spike compound out of range
J The analyte was positively identified, but the quantitation was below the RL
U Not detected at or above the reporting limit

Report Number: **L0605576**
Report Date : **June 12, 2006**

Sample Number: **L0605576-03**
Client ID: **SM142SB02052406**
Matrix: **Soil**
Workgroup Number: **WG214172**
Collect Date: **05/24/2006 09:45**

PrePrep Method: **NONE**
Prep Method: **3545**
Analytical Method: **8270C**
Analyst: **ALT**
Dilution: **20**
Units: **ug/kg**

Instrument: **HPMS5**
Prep Date: **05/25/2006 14:30**
Cal Date: **05/15/2006 13:30**
Run Date: **05/26/2006 19:52**
File ID: **5M40899**
Percent Solid: **100**

Analyte	CAS. Number	Result	Qual	PQL	SQL
Benzaldehyde	100-52-7		U	3300	1650
Phenol	108-95-2	6510	J	7160	3580
Bis(2-Chloroethyl)ether	111-44-4		U	7160	3580
2-Chlorophenol	95-57-8		U	7160	3580
2-Methylphenol	95-48-7		U	7160	3580
Acetophenone	98-86-2		U	7160	3580
bis(2-Chloroisopropyl)ether	108-60-1		U	7160	3580
3-,4-Methylphenol	106-44-5	11400		7160	3580
N-Nitroso-di-n-propylamine	621-64-7		U	7160	3580
Hexachloroethane	67-72-1		U	7160	3580
Nitrobenzene	98-95-3		U	7160	3580
Isophorone	78-59-1		U	7160	3580
2-Nitrophenol	88-75-5		U	7160	3580
2,4-Dimethylphenol	105-67-9	8020		7160	3580
Bis(2-Chloroethoxy)Methane	111-91-1		U	7160	3580
2,4-Dichlorophenol	120-83-2		U	7160	3580
Naphthalene	91-20-3	33900		7160	3580
4-Chloroaniline	106-47-8		U	7160	3580
Hexachlorobutadiene	87-68-3		U	7160	3580
Caprolactam	105-60-2		U	3300	1650
4-Chloro-3-methylphenol	59-50-7		U	7160	3580
2-Methylnaphthalene	91-57-6	9020		7160	3580
Hexachlorocyclopentadiene	77-47-4		U	7160	3580
2,4,6-Trichlorophenol	88-06-2		U	7160	3580
2,4,5-Trichlorophenol	95-95-4		U	7160	3580
1,1'-Biphenyl	92-52-4		U	3300	1650
2-Chloronaphthalene	91-58-7		U	7160	3580
2-Nitroaniline	88-74-4		U	35800	14300
Dimethylphthalate	131-11-3		U	7160	3580
Acenaphthylene	208-96-8		U	7160	3580
2,6-Dinitrotoluene	606-20-2		U	7160	3580
3-Nitroaniline	99-09-2		U	35800	14300
Acenaphthene	83-32-9	4410	J	7160	3580
2,4-Dinitrophenol	51-28-5		U	35800	14300
4-Nitrophenol	100-02-7		U	35800	14300
Dibenzofuran	132-64-9	4130	J	7160	3580
2,4-Dinitrotoluene	121-14-2		U	7160	3580
Diethylphthalate	84-66-2		U	7160	3580
4-Chlorophenyl-phenyl ether	7005-72-3		U	7160	3580
Fluorene	86-73-7	6190	J	7160	3580
4-Nitroaniline	100-01-6		U	35800	14300
4,6-Dinitro-2-methylphenol	534-52-1		U	35800	14300
N-Nitrosodiphenylamine	86-30-6		U	7160	3580
4-Bromophenyl-phenylether	101-55-3		U	7160	3580
Hexachlorobenzene	118-74-1		U	7160	3580
Atrazine	1912-24-9		U	3300	1650
Pentachlorophenol	87-86-5		U	35800	14300
Phenanthrene	85-01-8	19500		7160	3580

Report Number: **L0605576**
Report Date : **June 12, 2006**

Sample Number: **L0605576-03**
Client ID: **SM142SB02052406**
Matrix: **Soil**
Workgroup Number: **WG214172**
Collect Date: **05/24/2006 09:45**

PrePrep Method: **NONE**
Prep Method: **3545**
Analytical Method: **8270C**
Analyst: **ALT**
Dilution: **20**
Units: **ug/kg**

Instrument: **HPMS5**
Prep Date: **05/25/2006 14:30**
Cal Date: **05/15/2006 13:30**
Run Date: **05/26/2006 19:52**
File ID: **5M40899**
Percent Solid: **100**

Analyte	CAS. Number	Result	Qual	PQL	SQL
Anthracene	120-12-7	6390	J	7160	3580
Carbazole	86-74-8	3870	J	7160	3580
Di-N-Butylphthalate	84-74-2	33200		7160	3580
Fluoranthene	206-44-0	12800		7160	3580
Pyrene	129-00-0	9400		7160	3580
Butylbenzylphthalate	85-68-7	26200		7160	3580
3,3'-Dichlorobenzidine	91-94-1		U	14300	7160
Benzo(a)anthracene	56-55-3	5390	J	7160	3580
Chrysene	218-01-9	5240	J	7160	3580
bis(2-Ethylhexyl)phthalate	117-81-7	79200		7160	3580
Di-n-octylphthalate	117-84-0		U	7160	3580
Benzo(b)fluoranthene	205-99-2	4990	J	7160	3580
Benzo(k)fluoranthene	207-08-9		U	7160	3580
Benzo(a)pyrene	50-32-8	3750	J	7160	3580
Indeno(1,2,3-cd)pyrene	193-39-5		U	7160	3580
Dibenzo(a,h)Anthracene	53-70-3		U	7160	3580
Benzo(g,h,i)Perylene	191-24-2		U	7160	3580
1,2,4,5-Tetrachlorobenzene	95-94-3		U	7160	3580

Surrogate	% Recovery	Lower	Upper	Qual
2-Fluorophenol		25	121	*
Phenol-d5		24	113	*
Nitrobenzene-d5		23	120	*
2-Fluorobiphenyl		30	115	*
2,4,6-Tribromophenol		19	122	*
P-Terphenyl-d14		18	137	*

* Surrogate or spike compound out of range
J The analyte was positively identified, but the quantitation was below the RL
U Not detected at or above the reporting limit

Report Number: **L0605576**
Report Date : **June 12, 2006**

Sample Number: **L0605576-04**
Client ID: **SM141SB03052406**
Matrix: **Soil**
Workgroup Number: **WG214172**
Collect Date: **05/24/2006 08:25**

PrePrep Method: **NONE**
Prep Method: **3545**
Analytical Method: **8270C**
Analyst: **ALT**
Dilution: **1**
Units: **ug/kg**

Instrument: **HPMS5**
Prep Date: **05/25/2006 14:30**
Cal Date: **05/15/2006 13:30**
Run Date: **05/26/2006 16:40**
File ID: **5M40893**
Percent Solid: **57.4**

Analyte	CAS. Number	Result	Qual	PQL	SQL
Benzaldehyde	100-52-7		U	287	144
Phenol	108-95-2		U	265	132
Bis(2-Chloroethyl)ether	111-44-4		U	265	132
2-Chlorophenol	95-57-8		U	265	132
2-Methylphenol	95-48-7		U	265	132
Acetophenone	98-86-2		U	265	132
bis(2-Chloroisopropyl)ether	108-60-1		U	265	132
3-,4-Methylphenol	106-44-5		U	265	132
N-Nitroso-di-n-propylamine	621-64-7		U	265	132
Hexachloroethane	67-72-1		U	265	132
Nitrobenzene	98-95-3		U	265	132
Isophorone	78-59-1		U	265	132
2-Nitrophenol	88-75-5		U	265	132
2,4-Dimethylphenol	105-67-9		U	265	132
Bis(2-Chloroethoxy)Methane	111-91-1		U	265	132
2,4-Dichlorophenol	120-83-2		U	265	132
Naphthalene	91-20-3		U	265	132
4-Chloroaniline	106-47-8		U	265	132
Hexachlorobutadiene	87-68-3		U	265	132
Caprolactam	105-60-2		U	287	144
4-Chloro-3-methylphenol	59-50-7		U	265	132
2-Methylnaphthalene	91-57-6		U	265	132
Hexachlorocyclopentadiene	77-47-4		U	265	132
2,4,6-Trichlorophenol	88-06-2		U	265	132
2,4,5-Trichlorophenol	95-95-4		U	265	132
1,1'-Biphenyl	92-52-4		U	287	144
2-Chloronaphthalene	91-58-7		U	265	132
2-Nitroaniline	88-74-4		U	1320	530
Dimethylphthalate	131-11-3		U	265	132
Acenaphthylene	208-96-8		U	265	132
2,6-Dinitrotoluene	606-20-2		U	265	132
3-Nitroaniline	99-09-2		U	1320	530
Acenaphthene	83-32-9		U	265	132
2,4-Dinitrophenol	51-28-5		U	1320	530
4-Nitrophenol	100-02-7		U	1320	530
Dibenzofuran	132-64-9		U	265	132
2,4-Dinitrotoluene	121-14-2		U	265	132
Diethylphthalate	84-66-2		U	265	132
4-Chlorophenyl-phenyl ether	7005-72-3		U	265	132
Fluorene	86-73-7		U	265	132
4-Nitroaniline	100-01-6		U	1320	530
4,6-Dinitro-2-methylphenol	534-52-1		U	1320	530
N-Nitrosodiphenylamine	86-30-6		U	265	132
4-Bromophenyl-phenylether	101-55-3		U	265	132
Hexachlorobenzene	118-74-1		U	265	132
Atrazine	1912-24-9		U	287	144
Pentachlorophenol	87-86-5		U	1320	530
Phenanthrene	85-01-8		U	265	132

Report Number: **L0605576**
Report Date : **June 12, 2006**

Sample Number: **L0605576-04**
Client ID: **SM141SB03052406**
Matrix: **Soil**
Workgroup Number: **WG214172**
Collect Date: **05/24/2006 08:25**

PrePrep Method: **NONE**
Prep Method: **3545**
Analytical Method: **8270C**
Analyst: **ALT**
Dilution: **1**
Units: **ug/kg**

Instrument: **HPMS5**
Prep Date: **05/25/2006 14:30**
Cal Date: **05/15/2006 13:30**
Run Date: **05/26/2006 16:40**
File ID: **5M40893**
Percent Solid: **57.4**

Analyte	CAS. Number	Result	Qual	PQL	SQL
Anthracene	120-12-7		U	265	132
Carbazole	86-74-8		U	265	132
Di-N-Butylphthalate	84-74-2		U	265	132
Fluoranthene	206-44-0		U	265	132
Pyrene	129-00-0		U	265	132
Butylbenzylphthalate	85-68-7		U	265	132
3,3'-Dichlorobenzidine	91-94-1		U	530	265
Benzo(a)anthracene	56-55-3		U	265	132
Chrysene	218-01-9		U	265	132
bis(2-Ethylhexyl)phthalate	117-81-7		U	265	132
Di-n-octylphthalate	117-84-0		U	265	132
Benzo(b)fluoranthene	205-99-2		U	265	132
Benzo(k)fluoranthene	207-08-9		U	265	132
Benzo(a)pyrene	50-32-8		U	265	132
Indeno(1,2,3-cd)pyrene	193-39-5		U	265	132
Dibenzo(a,h)Anthracene	53-70-3		U	265	132
Benzo(g,h,i)Perylene	191-24-2		U	265	132
1,2,4,5-Tetrachlorobenzene	95-94-3		U	265	132

Surrogate	% Recovery	Lower	Upper	Qual
2-Fluorophenol	47.5	25	121	
Phenol-d5	55.2	24	113	
Nitrobenzene-d5	37.8	23	120	
2-Fluorobiphenyl	43.8	30	115	
2,4,6-Tribromophenol	92.5	19	122	
P-Terphenyl-d14	130	18	137	

U Not detected at or above the reporting limit

Report Number: **L0605576**
Report Date : **June 12, 2006**

Sample Number: **L0605576-05**
Client ID: **SM141FD03052406**
Matrix: **Soil**
Workgroup Number: **WG214172**
Collect Date: **05/24/2006 08:25**

PrePrep Method: **NONE**
Prep Method: **3545**
Analytical Method: **8270C**
Analyst: **ALT**
Dilution: **1**
Units: **ug/kg**

Instrument: **HPMS5**
Prep Date: **05/25/2006 14:30**
Cal Date: **05/15/2006 13:30**
Run Date: **05/26/2006 17:13**
File ID: **5M40894**
Percent Solid: **73.5**

Analyte	CAS. Number	Result	Qual	PQL	SQL
Benzaldehyde	100-52-7		U	225	112
Phenol	108-95-2		U	210	105
Bis(2-Chloroethyl)ether	111-44-4		U	210	105
2-Chlorophenol	95-57-8		U	210	105
2-Methylphenol	95-48-7		U	210	105
Acetophenone	98-86-2		U	210	105
bis(2-Chloroisopropyl)ether	108-60-1		U	210	105
3-,4-Methylphenol	106-44-5		U	210	105
N-Nitroso-di-n-propylamine	621-64-7		U	210	105
Hexachloroethane	67-72-1		U	210	105
Nitrobenzene	98-95-3		U	210	105
Isophorone	78-59-1		U	210	105
2-Nitrophenol	88-75-5		U	210	105
2,4-Dimethylphenol	105-67-9		U	210	105
Bis(2-Chloroethoxy)Methane	111-91-1		U	210	105
2,4-Dichlorophenol	120-83-2		U	210	105
Naphthalene	91-20-3		U	210	105
4-Chloroaniline	106-47-8		U	210	105
Hexachlorobutadiene	87-68-3		U	210	105
Caprolactam	105-60-2		U	225	112
4-Chloro-3-methylphenol	59-50-7		U	210	105
2-Methylnaphthalene	91-57-6		U	210	105
Hexachlorocyclopentadiene	77-47-4		U	210	105
2,4,6-Trichlorophenol	88-06-2		U	210	105
2,4,5-Trichlorophenol	95-95-4		U	210	105
1,1'-Biphenyl	92-52-4		U	225	112
2-Chloronaphthalene	91-58-7		U	210	105
2-Nitroaniline	88-74-4		U	1050	419
Dimethylphthalate	131-11-3		U	210	105
Acenaphthylene	208-96-8		U	210	105
2,6-Dinitrotoluene	606-20-2		U	210	105
3-Nitroaniline	99-09-2		U	1050	419
Acenaphthene	83-32-9		U	210	105
2,4-Dinitrophenol	51-28-5		U	1050	419
4-Nitrophenol	100-02-7		U	1050	419
Dibenzofuran	132-64-9		U	210	105
2,4-Dinitrotoluene	121-14-2		U	210	105
Diethylphthalate	84-66-2		U	210	105
4-Chlorophenyl-phenyl ether	7005-72-3		U	210	105
Fluorene	86-73-7		U	210	105
4-Nitroaniline	100-01-6		U	1050	419
4,6-Dinitro-2-methylphenol	534-52-1		U	1050	419
N-Nitrosodiphenylamine	86-30-6		U	210	105
4-Bromophenyl-phenylether	101-55-3		U	210	105
Hexachlorobenzene	118-74-1		U	210	105
Atrazine	1912-24-9		U	225	112
Pentachlorophenol	87-86-5		U	1050	419
Phenanthrene	85-01-8		U	210	105

Report Number: **L0605576**
Report Date : **June 12, 2006**

Sample Number: **L0605576-05**
Client ID: **SM141FD03052406**
Matrix: **Soil**
Workgroup Number: **WG214172**
Collect Date: **05/24/2006 08:25**

PrePrep Method: **NONE**
Prep Method: **3545**
Analytical Method: **8270C**
Analyst: **ALT**
Dilution: **1**
Units: **ug/kg**

Instrument: **HPMS5**
Prep Date: **05/25/2006 14:30**
Cal Date: **05/15/2006 13:30**
Run Date: **05/26/2006 17:13**
File ID: **5M40894**
Percent Solid: **73.5**

Analyte	CAS. Number	Result	Qual	PQL	SQL
Anthracene	120-12-7		U	210	105
Carbazole	86-74-8		U	210	105
Di-N-Butylphthalate	84-74-2		U	210	105
Fluoranthene	206-44-0		U	210	105
Pyrene	129-00-0		U	210	105
Butylbenzylphthalate	85-68-7		U	210	105
3,3'-Dichlorobenzidine	91-94-1		U	419	210
Benzo(a)anthracene	56-55-3		U	210	105
Chrysene	218-01-9		U	210	105
bis(2-Ethylhexyl)phthalate	117-81-7		U	210	105
Di-n-octylphthalate	117-84-0		U	210	105
Benzo(b)fluoranthene	205-99-2		U	210	105
Benzo(k)fluoranthene	207-08-9		U	210	105
Benzo(a)pyrene	50-32-8		U	210	105
Indeno(1,2,3-cd)pyrene	193-39-5		U	210	105
Dibenzo(a,h)Anthracene	53-70-3		U	210	105
Benzo(g,h,i)Perylene	191-24-2		U	210	105
1,2,4,5-Tetrachlorobenzene	95-94-3		U	210	105

Surrogate	% Recovery	Lower	Upper	Qual
2-Fluorophenol	52.2	25	121	
Phenol-d5	60.6	24	113	
Nitrobenzene-d5	44.5	23	120	
2-Fluorobiphenyl	45.5	30	115	
2,4,6-Tribromophenol	81.0	19	122	
P-Terphenyl-d14	122	18	137	

U Not detected at or above the reporting limit

Report Number: **L0605576**
Report Date : **June 12, 2006**

Sample Number: **L0605576-06**
Client ID: **SM141SB02052406**
Matrix: **Soil**
Workgroup Number: **WG214172**
Collect Date: **05/24/2006 08:15**

PrePrep Method: **NONE**
Prep Method: **3545**
Analytical Method: **8270C**
Analyst: **ALT**
Dilution: **1**
Units: **ug/kg**

Instrument: **HPMS5**
Prep Date: **05/25/2006 14:30**
Cal Date: **05/15/2006 13:30**
Run Date: **05/26/2006 17:44**
File ID: **5M40895**
Percent Solid: **78.0**

Analyte	CAS. Number	Result	Qual	PQL	SQL
Benzaldehyde	100-52-7		U	212	106
Phenol	108-95-2		U	226	113
Bis(2-Chloroethyl)ether	111-44-4		U	226	113
2-Chlorophenol	95-57-8		U	226	113
2-Methylphenol	95-48-7		U	226	113
Acetophenone	98-86-2		U	226	113
bis(2-Chloroisopropyl)ether	108-60-1		U	226	113
3-,4-Methylphenol	106-44-5		U	226	113
N-Nitroso-di-n-propylamine	621-64-7		U	226	113
Hexachloroethane	67-72-1		U	226	113
Nitrobenzene	98-95-3		U	226	113
Isophorone	78-59-1		U	226	113
2-Nitrophenol	88-75-5		U	226	113
2,4-Dimethylphenol	105-67-9		U	226	113
Bis(2-Chloroethoxy)Methane	111-91-1		U	226	113
2,4-Dichlorophenol	120-83-2		U	226	113
Naphthalene	91-20-3		U	226	113
4-Chloroaniline	106-47-8		U	226	113
Hexachlorobutadiene	87-68-3		U	226	113
Caprolactam	105-60-2		U	212	106
4-Chloro-3-methylphenol	59-50-7		U	226	113
2-Methylnaphthalene	91-57-6		U	226	113
Hexachlorocyclopentadiene	77-47-4		U	226	113
2,4,6-Trichlorophenol	88-06-2		U	226	113
2,4,5-Trichlorophenol	95-95-4		U	226	113
1,1'-Biphenyl	92-52-4		U	212	106
2-Chloronaphthalene	91-58-7		U	226	113
2-Nitroaniline	88-74-4		U	1130	452
Dimethylphthalate	131-11-3		U	226	113
Acenaphthylene	208-96-8		U	226	113
2,6-Dinitrotoluene	606-20-2		U	226	113
3-Nitroaniline	99-09-2		U	1130	452
Acenaphthene	83-32-9		U	226	113
2,4-Dinitrophenol	51-28-5		U	1130	452
4-Nitrophenol	100-02-7		U	1130	452
Dibenzofuran	132-64-9		U	226	113
2,4-Dinitrotoluene	121-14-2		U	226	113
Diethylphthalate	84-66-2		U	226	113
4-Chlorophenyl-phenyl ether	7005-72-3		U	226	113
Fluorene	86-73-7		U	226	113
4-Nitroaniline	100-01-6		U	1130	452
4,6-Dinitro-2-methylphenol	534-52-1		U	1130	452
N-Nitrosodiphenylamine	86-30-6		U	226	113
4-Bromophenyl-phenylether	101-55-3		U	226	113
Hexachlorobenzene	118-74-1		U	226	113
Atrazine	1912-24-9		U	212	106
Pentachlorophenol	87-86-5		U	1130	452
Phenanthrene	85-01-8		U	226	113

Report Number: **L0605576**
Report Date : **June 12, 2006**

Sample Number: **L0605576-06**
Client ID: **SM141SB02052406**
Matrix: **Soil**
Workgroup Number: **WG214172**
Collect Date: **05/24/2006 08:15**

PrePrep Method: **NONE**
Prep Method: **3545**
Analytical Method: **8270C**
Analyst: **ALT**
Dilution: **1**
Units: **ug/kg**

Instrument: **HPMS5**
Prep Date: **05/25/2006 14:30**
Cal Date: **05/15/2006 13:30**
Run Date: **05/26/2006 17:44**
File ID: **5M40895**
Percent Solid: **78.0**

Analyte	CAS. Number	Result	Qual	PQL	SQL
Anthracene	120-12-7		U	226	113
Carbazole	86-74-8		U	226	113
Di-N-Butylphthalate	84-74-2		U	226	113
Fluoranthene	206-44-0		U	226	113
Pyrene	129-00-0		U	226	113
Butylbenzylphthalate	85-68-7		U	226	113
3,3'-Dichlorobenzidine	91-94-1		U	452	226
Benzo(a)anthracene	56-55-3		U	226	113
Chrysene	218-01-9		U	226	113
bis(2-Ethylhexyl)phthalate	117-81-7	120	J	226	113
Di-n-octylphthalate	117-84-0		U	226	113
Benzo(b)fluoranthene	205-99-2		U	226	113
Benzo(k)fluoranthene	207-08-9		U	226	113
Benzo(a)pyrene	50-32-8		U	226	113
Indeno(1,2,3-cd)pyrene	193-39-5		U	226	113
Dibenzo(a,h)Anthracene	53-70-3		U	226	113
Benzo(g,h,i)Perylene	191-24-2		U	226	113
1,2,4,5-Tetrachlorobenzene	95-94-3		U	226	113

Surrogate	% Recovery	Lower	Upper	Qual
2-Fluorophenol	50.9	25	121	
Phenol-d5	61.4	24	113	
Nitrobenzene-d5	11.2	23	120	*
2-Fluorobiphenyl	55.2	30	115	
2,4,6-Tribromophenol	79.4	19	122	
P-Terphenyl-d14	111	18	137	

* Surrogate or spike compound out of range
J The analyte was positively identified, but the quantitation was below the RL
U Not detected at or above the reporting limit

Report Number: **L0605576**
Report Date : **June 12, 2006**

Sample Number: **L0605576-07**
Client ID: **SM141SB01052406**
Matrix: **Soil**
Workgroup Number: **WG214172**
Collect Date: **05/24/2006 07:50**

PrePrep Method: **NONE**
Prep Method: **3545**
Analytical Method: **8270C**
Analyst: **ALT**
Dilution: **1**
Units: **ug/kg**

Instrument: **HPMS5**
Prep Date: **05/25/2006 14:30**
Cal Date: **05/15/2006 13:30**
Run Date: **05/30/2006 22:15**
File ID: **5M40930**
Percent Solid: **80.1**

Analyte	CAS. Number	Result	Qual	PQL	SQL
Benzaldehyde	100-52-7		U	206	103
Phenol	108-95-2		U	205	103
Bis(2-Chloroethyl)ether	111-44-4		U	205	103
2-Chlorophenol	95-57-8		U	205	103
2-Methylphenol	95-48-7		U	205	103
Acetophenone	98-86-2		U	205	103
bis(2-Chloroisopropyl)ether	108-60-1		U	205	103
3-,4-Methylphenol	106-44-5		U	205	103
N-Nitroso-di-n-propylamine	621-64-7		U	205	103
Hexachloroethane	67-72-1		U	205	103
Nitrobenzene	98-95-3		U	205	103
Isophorone	78-59-1		U	205	103
2-Nitrophenol	88-75-5		U	205	103
2,4-Dimethylphenol	105-67-9		U	205	103
Bis(2-Chloroethoxy)Methane	111-91-1		U	205	103
2,4-Dichlorophenol	120-83-2		U	205	103
Naphthalene	91-20-3		U	205	103
4-Chloroaniline	106-47-8		U	205	103
Hexachlorobutadiene	87-68-3		U	205	103
Caprolactam	105-60-2		U	206	103
4-Chloro-3-methylphenol	59-50-7		U	205	103
2-Methylnaphthalene	91-57-6		U	205	103
Hexachlorocyclopentadiene	77-47-4		U	205	103
2,4,6-Trichlorophenol	88-06-2		U	205	103
2,4,5-Trichlorophenol	95-95-4		U	205	103
1,1'-Biphenyl	92-52-4		U	206	103
2-Chloronaphthalene	91-58-7		U	205	103
2-Nitroaniline	88-74-4		U	1030	410
Dimethylphthalate	131-11-3		U	205	103
Acenaphthylene	208-96-8		U	205	103
2,6-Dinitrotoluene	606-20-2		U	205	103
3-Nitroaniline	99-09-2		U	1030	410
Acenaphthene	83-32-9		U	205	103
2,4-Dinitrophenol	51-28-5		U	1030	410
4-Nitrophenol	100-02-7		U	1030	410
Dibenzofuran	132-64-9		U	205	103
2,4-Dinitrotoluene	121-14-2		U	205	103
Diethylphthalate	84-66-2		U	205	103
4-Chlorophenyl-phenyl ether	7005-72-3		U	205	103
Fluorene	86-73-7		U	205	103
4-Nitroaniline	100-01-6		U	1030	410
4,6-Dinitro-2-methylphenol	534-52-1		U	1030	410
N-Nitrosodiphenylamine	86-30-6		U	205	103
4-Bromophenyl-phenylether	101-55-3		U	205	103
Hexachlorobenzene	118-74-1		U	205	103
Atrazine	1912-24-9		U	206	103
Pentachlorophenol	87-86-5		U	1030	410
Phenanthrene	85-01-8		U	205	103

Report Number: **L0605576**
Report Date : **June 12, 2006**

Sample Number: **L0605576-07**
Client ID: **SM141SB01052406**
Matrix: **Soil**
Workgroup Number: **WG214172**
Collect Date: **05/24/2006 07:50**

PrePrep Method: **NONE**
Prep Method: **3545**
Analytical Method: **8270C**
Analyst: **ALT**
Dilution: **1**
Units: **ug/kg**

Instrument: **HPMS5**
Prep Date: **05/25/2006 14:30**
Cal Date: **05/15/2006 13:30**
Run Date: **05/30/2006 22:15**
File ID: **5M40930**
Percent Solid: **80.1**

Analyte	CAS. Number	Result	Qual	PQL	SQL
Anthracene	120-12-7		U	205	103
Carbazole	86-74-8		U	205	103
Di-N-Butylphthalate	84-74-2		U	205	103
Fluoranthene	206-44-0		U	205	103
Pyrene	129-00-0		U	205	103
Butylbenzylphthalate	85-68-7		U	205	103
3,3'-Dichlorobenzidine	91-94-1		U	410	205
Benzo(a)anthracene	56-55-3		U	205	103
Chrysene	218-01-9		U	205	103
bis(2-Ethylhexyl)phthalate	117-81-7		U	205	103
Di-n-octylphthalate	117-84-0		U	205	103
Benzo(b)fluoranthene	205-99-2		U	205	103
Benzo(k)fluoranthene	207-08-9		U	205	103
Benzo(a)pyrene	50-32-8		U	205	103
Indeno(1,2,3-cd)pyrene	193-39-5		U	205	103
Dibenzo(a,h)Anthracene	53-70-3		U	205	103
Benzo(g,h,i)Perylene	191-24-2		U	205	103
1,2,4,5-Tetrachlorobenzene	95-94-3		U	205	103

Surrogate	% Recovery	Lower	Upper	Qual
2-Fluorophenol	24.8	25	121	*
Phenol-d5	34.4	24	113	
Nitrobenzene-d5	35.7	23	120	
2-Fluorobiphenyl	30.2	30	115	
2,4,6-Tribromophenol	6.79	19	122	*
P-Terphenyl-d14	102	18	137	

* Surrogate or spike compound out of range
U Not detected at or above the reporting limit

Report Number: **L0605576**
Report Date : **June 12, 2006**

Sample Number: **L0605576-07**
Client ID: **SM141SB01052406**
Matrix: **Soil**
Workgroup Number: **WG214500**
Collect Date: **05/24/2006 07:50**
Sample Tag: **RE**

PrePrep Method: **NONE**
Prep Method: **3545**
Analytical Method: **8270C**
Analyst: **ALT**
Dilution: **1**
Units: **ug/kg**

Instrument: **HPMS5**
Prep Date: **06/01/2006 08:30**
Cal Date: **05/15/2006 13:30**
Run Date: **06/02/2006 22:40**
File ID: **5M41005**
Percent Solid: **80.1**

Analyte	CAS. Number	Result	Qual	PQL	SQL
Benzaldehyde	100-52-7		U	206	103
Phenol	108-95-2		U	206	103
Bis(2-Chloroethyl)ether	111-44-4		U	206	103
2-Chlorophenol	95-57-8		U	206	103
2-Methylphenol	95-48-7		U	206	103
Acetophenone	98-86-2		U	206	103
bis(2-Chloroisopropyl)ether	108-60-1		U	206	103
3-,4-Methylphenol	106-44-5		U	206	103
N-Nitroso-di-n-propylamine	621-64-7		U	206	103
Hexachloroethane	67-72-1		U	206	103
Nitrobenzene	98-95-3		U	206	103
Isophorone	78-59-1		U	206	103
2-Nitrophenol	88-75-5		U	206	103
2,4-Dimethylphenol	105-67-9		U	206	103
Bis(2-Chloroethoxy)Methane	111-91-1		U	206	103
2,4-Dichlorophenol	120-83-2		U	206	103
Naphthalene	91-20-3		U	206	103
4-Chloroaniline	106-47-8		U	206	103
Hexachlorobutadiene	87-68-3		U	206	103
Caprolactam	105-60-2		U	206	103
4-Chloro-3-methylphenol	59-50-7		U	206	103
2-Methylnaphthalene	91-57-6		U	206	103
Hexachlorocyclopentadiene	77-47-4		U	206	103
2,4,6-Trichlorophenol	88-06-2		U	206	103
2,4,5-Trichlorophenol	95-95-4		U	206	103
1,1'-Biphenyl	92-52-4		U	206	103
2-Chloronaphthalene	91-58-7		U	206	103
2-Nitroaniline	88-74-4		U	1030	412
Dimethylphthalate	131-11-3		U	206	103
Acenaphthylene	208-96-8		U	206	103
2,6-Dinitrotoluene	606-20-2		U	206	103
3-Nitroaniline	99-09-2		U	1030	412
Acenaphthene	83-32-9		U	206	103
2,4-Dinitrophenol	51-28-5		U	1030	412
4-Nitrophenol	100-02-7		U	1030	412
Dibenzofuran	132-64-9		U	206	103
2,4-Dinitrotoluene	121-14-2		U	206	103
Diethylphthalate	84-66-2		U	206	103
4-Chlorophenyl-phenyl ether	7005-72-3		U	206	103
Fluorene	86-73-7		U	206	103
4-Nitroaniline	100-01-6		U	1030	412
4,6-Dinitro-2-methylphenol	534-52-1		U	1030	412
N-Nitrosodiphenylamine	86-30-6		U	206	103
4-Bromophenyl-phenylether	101-55-3		U	206	103
Hexachlorobenzene	118-74-1		U	206	103
Atrazine	1912-24-9		U	206	103
Pentachlorophenol	87-86-5		U	1030	412
Phenanthrene	85-01-8		U	206	103

Report Number: **L0605576**
Report Date : **June 12, 2006**

Sample Number: **L0605576-07**
Client ID: **SM141SB01052406**
Matrix: **Soil**
Workgroup Number: **WG214500**
Collect Date: **05/24/2006 07:50**
Sample Tag: **RE**

PrePrep Method: **NONE**
Prep Method: **3545**
Analytical Method: **8270C**
Analyst: **ALT**
Dilution: **1**
Units: **ug/kg**

Instrument: **HPMS5**
Prep Date: **06/01/2006 08:30**
Cal Date: **05/15/2006 13:30**
Run Date: **06/02/2006 22:40**
File ID: **5M41005**
Percent Solid: **80.1**

Analyte	CAS. Number	Result	Qual	PQL	SQL
Anthracene	120-12-7		U	206	103
Carbazole	86-74-8		U	206	103
Di-N-Butylphthalate	84-74-2		U	206	103
Fluoranthene	206-44-0		U	206	103
Pyrene	129-00-0		U	206	103
Butylbenzylphthalate	85-68-7		U	206	103
3,3'-Dichlorobenzidine	91-94-1		U	412	206
Benzo(a)anthracene	56-55-3		U	206	103
Chrysene	218-01-9		U	206	103
bis(2-Ethylhexyl)phthalate	117-81-7		U	206	103
Di-n-octylphthalate	117-84-0		U	206	103
Benzo(b)fluoranthene	205-99-2		U	206	103
Benzo(k)fluoranthene	207-08-9		U	206	103
Benzo(a)pyrene	50-32-8		U	206	103
Indeno(1,2,3-cd)pyrene	193-39-5		U	206	103
Dibenzo(a,h)Anthracene	53-70-3		U	206	103
Benzo(g,h,i)Perylene	191-24-2		U	206	103
1,2,4,5-Tetrachlorobenzene	95-94-3		U	206	103

Surrogate	% Recovery	Lower	Upper	Qual
2-Fluorophenol	23.1	25	121	*
Phenol-d5	32.7	24	113	
Nitrobenzene-d5	40.2	23	120	
2-Fluorobiphenyl	29.7	30	115	*
2,4,6-Tribromophenol	36.5	19	122	
P-Terphenyl-d14	77.7	18	137	

* Surrogate or spike compound out of range
U Not detected at or above the reporting limit

1.2.1.1 QC Summary

006779

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Checklist ID: 7491

KEMRON Environmental Services
Data Checklist

Date: 10-MAY-2006
Analyst: CLK
Analyst: NA
Method: 8270
Instrument: HPMS4
Curve Workgroup: WG212888
Analytical Workgroups: ICAL GOOD FOR ACETOPHENONE AS WELL

Runlog ID number:	10322
System Performance Check	
DFTPP	X
Endrin/DDT Breakdown	X
Initial Calibration	X
Average RF	X
Linear Reg or Higher Order Curve	X
Second Source standard % Difference	X
Continuing Calibration /Check Standards	NA
Project/Client Specific Requirements	X
Special Standards	X
Blanks	NA
TCL's	NA
Surrogates	NA
LCS (Laboratory Control Sample)	NA
Recoveries	NA
Surrogates	NA
MS/MSD/Duplicates	NA
Samples	NA
TCL Hits	NA
Spectra of TCL Hits	NA
Surrogates	NA
Internal Standards Criteria	NA
Library Searches	NA
Calculations & Correct Factors	X
Dilutions Run	NA
Reruns	NA
Manual Integrations	X
Case Narrative	NA
Results Reporting/Data Qualifiers	X
KOBRA Workgroup Data	X
Check for Completeness	X
Primary Reviewer	CLK
Secondary Reviewer	MDC
Check for compliance with method and project specific requirements	X
Check the completeness of reported information	X
Check the information for the report narrative	NA
Check the resonableness of the results	X

Primary Reviewer:

Secondary Reviewer:
11-MAY-2006

Generated: MAY-11-2006 13:06:57

Checklist ID: 7552

KEMRON Environmental Services
Data Checklist

Date: 15-MAY-2006
Analyst: ALT
Analyst: NA
Method: 8270
Instrument: HPMS5
Curve Workgroup: NA
Analytical Workgroups: L0605260, L0605232

Runlog ID number:	10383
System Performance Check:	X
DFTPP	X
Endrin/DDT Breakdown	X
Initial Calibration:	NA
Average RF	NA
Linear Reg or Higher Order Curve	NA
Second Source standard % Difference	NA
Continuing Calibration /Check Standards:	X
Project/Client Specific Requirements	X
Special Standards	NA
Blanks:	X
TCL's	X
Surrogates	X
LCS (Laboratory Control Sample):	X
Recoveries	X
Surrogates	X
MS/MSD/Duplicates	X
Samples:	X
TCL Hits	X
Spectra of TCL Hits	X
Surrogates	X
Internal Standards Criteria	X
Library Searches	NA
Calculations & Correct Factors	NA
Dilutions Run	NA
Reruns	NA
Manual Integrations	X
Case Narrative	NA
Results Reporting/Data Qualifiers	X
KOBRA Workgroup Data	X
Check for Completeness	X
Primary Reviewer	ALT
Secondary Reviewer	MDC
Check for compliance with method and project specific requirements	X
Check the completeness of reported information	X
Check the information for the report narrative	NA
Check the resonableness of the results	X
Comments:	

Primary Reviewer:
16-MAY-2006

Secondary Reviewer:
16-MAY-2006

Generated: MAY-16-2006 14:21:51

Checklist ID: 7766

KEMRON Environmental Services
Data Checklist

Date: 26-MAY-2006
Analyst: ALT
Analyst: NA
Method: 8270
Instrument: HPMS5
Curve Workgroup: NA
Analytical Workgroups: L0605548, L0605576

Runlog ID number:	10577
System Performance Check:	X
DFTPP	X
Endrin/DDT Breakdown	X
Initial Calibration:	NA
Average RF	NA
Linear Reg or Higher Order Curve	NA
Second Source standard % Difference	NA
Continuing Calibration /Check Standards:	X
Project/Client Specific Requirements	X
Special Standards	X
Blanks:	X
TCL's	X
Surrogates	X
LCS (Laboratory Control Sample):	X
Recoveries	X
Surrogates	X
MS/MSD/Duplicates	X
Samples:	X
TCL Hits	X
Spectra of TCL Hits	X
Surrogates	X
Internal Standards Criteria	X
Library Searches	NA
Calculations & Correct Factors	X
Dilutions Run	X
Reruns	NA
Manual Integrations	X
Case Narrative	NA
Results Reporting/Data Qualifiers	X
KOBRA Workgroup Data	X
Check for Completeness	X
Primary Reviewer	ALT
Secondary Reviewer	MDC
Check for compliance with method and project specific requirements	X
Check the completeness of reported information	X
Check the information for the report narrative	NA
Check the resonableness of the results	X
Comments:	
L0605548-12, 13 and 19 need rerun - not reported	
L0605576-02 and 07 need rerun - not reported	

Primary Reviewer:
30-MAY-2006

Secondary Reviewer:
30-MAY-2006

Generated: MAY-30-2006 14:46:42

Checklist ID: 7781

KEMRON Environmental Services
Data Checklist

Date: 30-MAY-2006
Analyst: ALT
Analyst: NA
Method: 8270
Instrument: HPMS5
Curve Workgroup: NA
Analytical Workgroups: L0605548, L0605576, L0605593, L0605596, L0605600

Runlog ID number:	10588
System Performance Check:	X
DFTPP	X
Endrin/DDT Breakdown	X
Initial Calibration:	NA
Average RF	NA
Linear Reg or Higher Order Curve	NA
Second Source standard % Difference	NA
Continuing Calibration /Check Standards:	X
Project/Client Specific Requirements	X
Special Standards	X
Blanks:	X
TCL's	X
Surrogates	X
LCS (Laboratory Control Sample):	X
Recoveries	X
Surrogates	X
MS/MSD/Duplicates	NA
Samples:	X
TCL Hits	X
Spectra of TCL Hits	X
Surrogates	X
Internal Standards Criteria	X
Library Searches	X
Calculations & Correct Factors	NA
Dilutions Run	X
Reruns	NA
Manual Integrations	X
Case Narrative	X
Results Reporting/Data Qualifiers	X
KOBRA Workgroup Data	X
Check for Completeness	X
Primary Reviewer	ALT
Secondary Reviewer	MDC
Check for compliance with method and project specific requirements	X
Check the completeness of reported information	X
Check the information for the report narrative	X
Check the resonableness of the results	X
Comments:	
L0605576-07, L0605548-12 and 19 sent for re-extraction	
L0605600-05 and 10 need rerun at a dilution	

Primary Reviewer:
31-MAY-2006

Secondary Reviewer:
31-MAY-2006

Generated: MAY-31-2006 10:55:41

Checklist ID: 7828

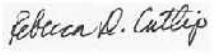
KEMRON Environmental Services
Data Checklist

Date: 01-JUN-2006
Analyst: CLK
Analyst: NA
Method: 8270
Instrument: HPMS4
Curve Workgroup: NA
Analytical Workgroups: L0605660, L0605605(RE), L0605630, LL0605576(RE), L0605599, L0605548(RE)

Runlog ID number:	10634
System Performance Check	
DFTPP	X
Endrin/DDT Breakdown	X
Initial Calibration	NA
Average RF	NA
Linear Reg or Higher Order Curve	NA
Second Source standard % Difference	NA
Continuing Calibration /Check Standards	X
Project/Client Specific Requirements	X
Special Standards	NA
Blanks	X
TCL's	X
Surrogates	X
LCS (Laboratory Control Sample)	X
Recoveries	X
Surrogates	X
MS/MSD/Duplicates	X
Samples	X
TCL Hits	X
Spectra of TCL Hits	X
Surrogates	X
Internal Standards Criteria	X
Library Searches	X
Calculations & Correct Factors	X
Dilutions Run	X
Reruns	NA
Manual Integrations	X
Case Narrative	X
Results Reporting/Data Qualifiers	X
KOBRA Workgroup Data	X
Check for Completeness	X
Primary Reviewer	CLK
Secondary Reviewer	RDC
Check for compliance with method and project specific requirements	X
Check the completeness of reported information	X
Check the information for the report narrative	X
Check the resonableness of the results	X

Primary Reviewer:

Secondary Reviewer:
02-JUN-2006



Generated: JUN-02-2006 15:45:24

Checklist ID: 7854

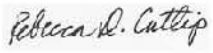
KEMRON Environmental Services
Data Checklist

Date: 02-JUN-2006
Analyst: ALT
Analyst: NA
Method: 8270
Instrument: HPMS5
Curve Workgroup: NA
Analytical Workgroups: L0605548RE, L0605576RE, L0605617, L0605635, L0605660, L0605683, L0606004

Runlog ID number:	10662
System Performance Check:	X
DFTPP	X
Endrin/DDT Breakdown	X
Initial Calibration:	NA
Average RF	NA
Linear Reg or Higher Order Curve	NA
Second Source standard % Difference	NA
Continuing Calibration /Check Standards:	X
Project/Client Specific Requirements	X
Special Standards	X
Blanks:	X
TCL's	X
Surrogates	X
LCS (Laboratory Control Sample):	NA
Recoveries	NA
Surrogates	NA
MS/MSD/Duplicates	X
Samples:	X
TCL Hits	X
Spectra of TCL Hits	X
Surrogates	X
Internal Standards Criteria	X
Library Searches	X
Calculations & Correct Factors	NA
Dilutions Run	X
Reruns	NA
Manual Integrations	X
Case Narrative	X
Results Reporting/Data Qualifiers	X
KOBRA Workgroup Data	X
Check for Completeness	X
Primary Reviewer	ALT
Secondary Reviewer	RDC
Check for compliance with method and project specific requirements	X
Check the completeness of reported information	X
Check the information for the report narrative	X
Check the resonableness of the results	X
Comments:	
L0605683-05 and L0606004-01 need rerun at a dilution	

Primary Reviewer:
05-JUN-2006

Secondary Reviewer:
06-JUN-2006



Generated: JUN-06-2006 16:59:13

Run Log ID: **10322**

KEMRON Environmental Services

Instrument Run Log

Instrument: HPMS4 Dataset: 051006

Analyst1: CLK Analyst2: NA

Method: 8270C SOP: MSS01 Rev: 13

Method: 625 SOP: MSS02 Rev: 8

Column 1 ID: RTI-5MS Column 2 ID: NA

Workgroups:

Internal Standard: STD12522 Surrogate Standard: NA

Comments: ICAL Good for Acetophenone as well

Seq.	File ID	Sample Information	Mat	Dil	Reference	Date/Time
1	4M32961	WG212888-01 50PPM DFTPP	1	1	SOS78-44	05/10/06 13:03
2	4M32962	WG212888-02 50PPM BNA Megamix	1	1	STD12520	05/10/06 13:22
3	4M32963	WG212888-02 50PPM BNA Megamix	1	1	STD12520	05/10/06 13:58
4	4M32964	WG212888-03 3PPM BNA Megamix	1	1	STD12520	05/10/06 14:33
5	4M32965	WG212888-04 15PPM BNA Megamix	1	1	STD12520	05/10/06 15:08
6	4M32966	WG212888-05 25PPM BNA Megamix	1	1	STD12520	05/10/06 15:44
7	4M32967	WG212888-06 80PPM BNA Megamix	1	1	STD12520	05/10/06 16:20
8	4M32968	WG212888-07 120PPM BNA Megamix	1	1	STD12520	05/10/06 16:55
9	4M32969	WG212888-08 100PPM BNA Megamix	1	1	STD12520	05/10/06 17:31
10	4M32970	WG212888-09 50PPM Alt source BNA	1	1	STD12496	05/10/06 18:06
11	4M32971	50PPM Alt source TCL std.	1	1	SOS77-34-4	05/10/06 18:42

Comments

Seq.	Rerun	Dil.	Reason	Analytes
2				
	NA, Wrong STD			
10				
	Alt Source has (#26) Benzoic Acid, (#45) 3-Nitroaniline, and (#74) 3,3'-dichlorobenzidine >25%			
11				
	TCL Alt Source has (#2) Benzadehyde and (#9) Atrazine >25%			

Page: 1 of 1 Approved: 11-MAY-06

006787

Run Log ID: **10383**

KEMRON Environmental Services

Instrument Run Log

Instrument: HPMS5 Dataset: 051506

Analyst1: ALT Analyst2: NA

Method: 8270C SOP: MSS01 Rev: 13

Method: 625 SOP: MSS02 Rev: 8

Column 1 ID: DB-5MS Column 2 ID: NA

Workgroups: WG213277, WG213367

Internal Standard: STD12522 Surrogate Standard: NA

Comments: IML - 14067

Seq.	File ID	Sample Information	Mat	Dil	Reference	Date/Time
1	5M40735	WG213265-01 50PPM DFTPP	1	1	SOS78-44	05/15/06 08:53
2	5M40736	WG213265-02 50PPM BNA STD	1	1	STD12520	05/15/06 09:12
3	5M40737	WG213265-03 3PPM BNA STD	1	1	STD12520	05/15/06 09:43
4	5M40738	WG213265-02 50PPM BNA STD	1	1	SOS78-17	05/15/06 10:16
5	5M40739	WG213265-03 3PPM BNA STD	1	1	SOS78-17	05/15/06 10:48
6	5M40740	WG213265-04 15PPM BNA STD	1	1	SOS78-17	05/15/06 11:21
7	5M40741	WG213265-05 25PPM BNA STD	1	1	SOS78-17	05/15/06 11:52
8	5M40742	WG213265-06 80PPM BNA STD	1	1	SOS78-17	05/15/06 12:25
9	5M40743	WG213265-07 100PPM BNA STD	1	1	SOS78-17	05/15/06 12:58
10	5M40744	WG213265-08 120PPM BNA STD	1	1	SOS78-17	05/15/06 13:30
11	5M40745	WG213265-09 50PPM BNA STD	1	1	STD12496	05/15/06 14:02
12	5M40746	WG213078-02 BLK 5/11 EP261P29 RR	7	1	SOIL	05/15/06 14:35
13	5M40747	WG213078-03 LCS 5/11 EP261P29 RR	7	1	SOIL	05/15/06 15:08
14	5M40748	WG212996-01 BLK 5/10 EP260P93	1	1		05/15/06 15:41
15	5M40749	WG212996-02 LCS 5/10 EP260P93	1	1		05/15/06 16:14
16	5M40750	WG212996-03 LCSDUP 5/10 EP260P93	1	1		05/15/06 16:47
17	5M40751	WG213078-01 L0605260-01 SOIL	7	1	SOIL	05/15/06 17:20
18	5M40752	WG213078-04 L0605260-02 MS SOIL	7	1	SOIL	05/15/06 17:52
19	5M40753	WG213078-05 L0605260-03 MSD SOIL	7	1	SOIL	05/15/06 18:24
20	5M40754	L0605260-04 SOIL	7	1	SOIL	05/15/06 18:57
21	5M40755	L0605232-01	1	1		05/15/06 19:29
22	5M40756	BAKE OUT	1	1		05/15/06 20:01
23	5M40757	BAKE OUT	1	1		05/15/06 20:34
24	5M40758	BAKE OUT	1	1		05/15/06 21:07

Comments

Seq.	Rerun	Dil.	Reason	Analytes
2				
	WG213265-02 50PPM BNA STD - not required, not used for ICAL			
3				
	WG213265-03 3PPM BNA STD - not required, not used for ICAL			
13				
	WG213078-03 LCS - 6 compounds high - DOD criteria			
15				
	WG212996-02 LCS - benzoic acid yielded a %RPD beyond limit.			
18				
	WG213078-04 L0605260-02 MS SOIL - 1,2,4-trichlorobenzene low; 3 compounds %RPDs beyond limit			

Approved: 16-MAY-06

006788

Run Log ID: **10383**

KEMRON Environmental Services

Instrument Run Log

Instrument: HPMS5 Dataset: 051506

Analyst1: ALT Analyst2: NA

Method: 8270C SOP: MSS01 Rev: 13

Method: 625 SOP: MSS02 Rev: 8

Column 1 ID: DB-5MS Column 2 ID: NA

Workgroups: WG213277, WG213367

Internal Standard: STD12522 Surrogate Standard: NA

Comments

Seq.	Rerun	Dil.	Reason	Analytes
19				
	WG213078-05 L0605260-03 MSD SOIL - 3,3'-dichlorobenzidine and 2,4-dimethylphenol low			

Approved: 16-MAY-06

006789

Run Log ID: **10577**

KEMRON Environmental Services

Instrument Run Log

Instrument: HPMS5 Dataset: 052606

Analyst1: ALT Analyst2: NA

Method: 8270C SOP: MSS01 Rev: 14

Method: 625 SOP: MSS02 Rev: 8

Column 1 ID: DB-5MS Column 2 ID: NA

Workgroups: WG214069, WG214172

Internal Standard: STD12522 Surrogate Standard: NA

Comments: IML -14181

Seq.	File ID	Sample Information	Mat	Dil	Reference	Date/Time
1	5M40886	WG214107-01 50PPM DFTPP	1	1	SOS78-44	05/26/06 13:10
2	5M40887	WG214107-02 50PPM BNA STD	1	1	SOS78-17	05/26/06 13:29
3	5M40888	50PPM TCL STD	1	1	SOS77-34-4	05/26/06 14:01
4	5M40889	50PPM Appendix IX STD	1	1	SOS77-25-4	05/26/06 14:33
5	5M40890	WG214036-01 BLK 5/25 EP261P83	7	1	SOIL	05/26/06 15:05
6	5M40891	WG214036-02 LCS 5/25 EP261P83	7	1	SOIL	05/26/06 15:36
7	5M40892	WG214036-03 LCSDUP 5/25 EP261P83	7	1	SOIL	05/26/06 16:08
8	5M40893	L0605576-04 SOIL	7	1	SOIL	05/26/06 16:40
9	5M40894	L0605576-05 SOIL	7	1	SOIL	05/26/06 17:13
10	5M40895	L0605576-06 SOIL	7	1	SOIL	05/26/06 17:44
11	5M40896	L0605576-07 SOIL	7	1	SOIL	05/26/06 18:16
12	5M40897	L0605548-13 2X SOIL	7	2	SOIL	05/26/06 18:48
13	5M40898	L0605548-19 5X SOIL	7	5	SOIL	05/26/06 19:20
14	5M40899	L0605576-03 20X SOIL	7	20	SOIL	05/26/06 19:52
15	5M40900	L0605548-11 20X SOIL	7	20	SOIL	05/26/06 20:23
16	5M40901	L0605548-12 10X SOIL	7	10	SOIL	05/26/06 20:55
17	5M40902	WG213964-02 L0605548-14 20X SOIL	7	20	SOIL	05/26/06 21:26
18	5M40903	WG213964-07 L0605548-15 MS 20X SOIL	7	20	SOIL	05/26/06 21:58
19	5M40904	WG213964-08 L0605548-16 MSD 20X SOIL	7	20	SOIL	05/26/06 22:31
20	5M40905	L0605548-17 20X SOIL	7	20	SOIL	05/26/06 23:03
21	5M40906	L0605576-02 20X SOIL	7	20	SOIL	05/26/06 23:35
22	5M40907	BAKE OUT	1	1		05/27/06 00:07
23	5M40908	BAKE OUT	1	1		05/27/06 00:40
24	5M40909	BAKE OUT	1	1		05/27/06 01:13

Comments

Seq.	Rerun	Dil.	Reason	Analytes
10				
	L0605576-06 SOIL - SS 3 low			
11	X		Surrogate standard failure	
	L0605576-07 SOIL - SS 5 missing, remix and rerun - not reported			
12	X		Surrogate standard failure	
	L0605548-13 2x SOIL - SS 5 missing, remix and rerun - not reported; diluted due to sample viscosity			
13	X		Surrogate standard failure	
	L0605548-19 5x SOIL - SS 5 missing, remix and rerun - not reported; diluted due to sample viscosity			
14				
	L0605576-03 20X SOIL - SS DL - diluted due to sample viscosity			

Approved: 30-MAY-06

006790

Run Log ID: **10577**

KEMRON Environmental Services

Instrument Run Log

Instrument: HPMS5 Dataset: 052606

Analyst1: ALT Analyst2: NA

Method: 8270C SOP: MSS01 Rev: 14

Method: 625 SOP: MSS02 Rev: 8

Column 1 ID: DB-5MS Column 2 ID: NA

Workgroups: WG214069, WG214172

Internal Standard: STD12522 Surrogate Standard: NA

Comments

Seq.	Rerun	Dil.	Reason	Analytes
15				
	L0605548-11 20X SOIL - SS DL - diluted due to sample viscosity			
16	X		Surrogate standard failure	
	L0605548-12 10x SOIL - SS 5 missing, remix and rerun - not reported; diluted due to sample viscosity			
17				
	WG213964-02 L0605548-14 20X SOIL - SS DL - diluted due to sample viscosity			
18				
	WG213964-07 L0605548-15 MS 20X SOIL - SS DL - diluted due to sample viscosity			
19				
	WG213964-08 L0605548-16 MSD 20X SOIL - SS DL - diluted due to reference sample viscosity			
20				
	L0605548-17 20X SOIL - SS DL - diluted due to sample viscosity			
21	X		Internal standard failure	
	L0605576-02 20X SOIL - IS 6 low, SS 5 missing - not reported			

Page: 2 of 2 Approved: 30-MAY-06

006791

Run Log ID: **10588**

KEMRON Environmental Services

Instrument Run Log

Instrument: HPMS5 Dataset: 053006
Analyst1: ALT Analyst2: NA
Method: 8270C SOP: MSS01 Rev: 14
Method: 625 SOP: MSS02 Rev: 8

Column 1 ID: DB-5MS Column 2 ID: NA
Workgroups: WG214069, WG214172, WG214268
Internal Standard: STD12522 Surrogate Standard: NA

Comments: IML -14190

Seq.	File ID	Sample Information	Mat	Dil	Reference	Date/Time
1	5M40910	WG214203-01 50PPM DFTPP	1	1	SOS78-44	05/30/06 11:11
2	5M40911	WG214203-01 50PPM DFTPP	1	1	SOS78-44	05/30/06 11:40
3	5M40912	WG214203-01 50PPM DFTPP	1	1	SOS78-44	05/30/06 12:57
4	5M40913	WG214203-02 50PPM BNA STD	1	1	SOS78-17	05/30/06 13:15
5	5M40914	50PPM TCL STD	1	1	SOS77-34-4	05/30/06 13:47
6	5M40915	50PPM Appendix IX STD	1	1	SOS77-25-4	05/30/06 14:18
7	5M40916	WG214163-01 BLK 5/30 EP260P175	1	1		05/30/06 14:50
8	5M40917	WG214163-02 LCS 5/30 EP260P175	1	1		05/30/06 15:21
9	5M40918	WG214163-03 LCSDUP 5/30 EP260P175	1	1		05/30/06 15:53
10	5M40919	L0605600-01	1	1		05/30/06 16:25
11	5M40920	L0605600-03	1	1		05/30/06 16:57
12	5M40921	L0605600-05	1	1		05/30/06 17:29
13	5M40922	L0605600-07	1	1		05/30/06 18:01
14	5M40923	L0605600-09	1	1		05/30/06 18:33
15	5M40924	L0605600-10	1	1		05/30/06 19:04
16	5M40925	L0605596-01	2	1		05/30/06 19:36
17	5M40926	L0605593-01 2X	2	2		05/30/06 20:08
18	5M40927	L0605548-12 10X SOIL RR	7	10	SOIL	05/30/06 20:40
19	5M40928	L0605548-13 2X SOIL RR	7	2	SOIL	05/30/06 21:12
20	5M40929	L0605548-19 5X SOIL RR	7	5	SOIL	05/30/06 21:43
21	5M40930	L0605576-07 SOIL RR	7	1	SOIL	05/30/06 22:15
22	5M40931	L0605576-02 20X SOIL RR	7	20	SOIL	05/30/06 22:47
23	5M40932	BAKE OUT	1	1		05/30/06 23:19
24	5M40933	BAKE OUT	1	1		05/30/06 23:51
25	5M40934	BAKE OUT	1	1		05/31/06 00:21

Comments

Seq.	Rerun	Dil.	Reason	Analytes
1				
	WG214203-01 50PPM DFTPP - pentachlorophenol missing, clip column and rerun			
2				
	WG214203-01 50PPM DFTPP - pentachlorophenol showing up, but small; clip more off column			
4				
	WG214203-02 50PPM BNA STD - benzoic acid > 20% but < 40%			
12	X	50	Over Calibration Range	nitrobenzene

Approved: 31-MAY-06

Run Log ID: **10588**

KEMRON Environmental Services

Instrument Run Log

Instrument: HPMS5 Dataset: 053006

Analyst1: ALT Analyst2: NA

Method: 8270C SOP: MSS01 Rev: 14

Method: 625 SOP: MSS02 Rev: 8

Column 1 ID: DB-5MS Column 2 ID: NA

Workgroups: WG214069, WG214172, WG214268

Internal Standard: STD12522 Surrogate Standard: NA

Comments

Seq.	Rerun	Dil.	Reason	Analytes
15	X	5	Over Calibration Range	aniline
17				
	L0605593-01 2X - diluted due to sample appearance			
18				
	Re-extract: L0605548-12 10X SOIL RR - SS 5 still missing; diluted due to sample viscosity			
19				
	L0605548-13 2X SOIL RR - diluted due to sample viscosity			
20				
	Re-extract: L0605548-19 5X SOIL RR - SS 5 still missing; diluted due to sample viscosity			
21				
	Re-extract: L0605576-07 SOIL RR - SS 5 < 10%			
22				
	L0605576-02 20X SOIL RR - SS DL; diluted due to sample viscosity			

Approved: 31-MAY-06

006793

Run Log ID: **10634**

KEMRON Environmental Services

Instrument Run Log

Instrument: HPMS4 Dataset: 060106

Analyst1: CLK Analyst2: NA

Method: 8270C SOP: MSS01 Rev: 14

Method: 625 SOP: MSS02 Rev: 8

Column 1 ID: RTI-5MS Column 2 ID: NA

Workgroups:

Internal Standard: STD12522 Surrogate Standard: NA

Comments:

Seq.	File ID	Sample Information	Mat	Dil	Reference	Date/Time
1	4M33221	WG214395-01 50PPM DFTPP	1	1	SOS78-44	06/01/06 12:11
2	4M33222	WG214395-02 50PPM BNA Megamix	1	1	STD12520	06/01/06 12:29
3	4M33223	WG214273-02 BLK 5/31 EP0260P181	1	1		06/01/06 13:05
4	4M33224	WG214273-03 LCS 5/31 EP0260P181	1	1		06/01/06 13:41
5	4M33225	WG214273-04 LCS2 5/31 EP0260P181	1	1		06/01/06 14:17
6	4M33226	WG214216-01 FBLK 5/30 EP0260P181	17	1		06/01/06 14:53
7	4M33227	WG214365-02 BLK 6/1 EP0261P99	7	1	SOIL	06/01/06 15:29
8	4M33228	WG214365-03 LCS 6/1 EP0261P99	7	1	SOIL	06/01/06 16:05
9	4M33229	L0605660-01 SOIL	7	1	SOIL	06/01/06 16:41
10	4M33230	WG214365-01 L0605660-02 SOIL	7	1	SOIL	06/01/06 17:17
11	4M33231	WG214365-04 L0605660-03 SOIL MS	7	1	SOIL	06/01/06 17:52
12	4M33232	WG214365-05 L0605660-04 SOIL MSD	7	1	SOIL	06/01/06 18:28
13	4M33233	L0605605-16 SOIL RE	7	1		06/01/06 19:03
14	4M33234	WG214273-01 L0605630-02 TCLP	17	1		06/01/06 19:39
15	4M33235	WG214273-05 L0605630-02 TCLP SPK	17	1		06/01/06 20:15
16	4M33236	L0605576-01 TCLP	17	1		06/01/06 20:51
17	4M33237	L0605599-10 TCLP	17	1		06/01/06 21:26
18	4M33238	L0605576-07 SOIL RE	7	1		06/01/06 22:02
19	4M33239	L0605605-14 SOIL RE 5X	7	5		06/01/06 22:37
20	4M33240	L0605548-19 SOIL 10X	7	10		06/01/06 23:13
21	4M33241	L0605548-12 SOIL 10X	7	10		06/01/06 23:49
22	4M33242	BAKEOUT	1	1		06/02/06 00:25

Comments

Seq.	Rerun	Dil.	Reason	Analytes
13				
	SS 5 low			
17	X	20	Over Calibration Range	#50
18				
	Needs RR with TCL STD			
20				
	05-548-19 is a RE (In Hold), Needs RR with TCL STD			
21				
	05-548-12 is a RE (In Hold), Needs RR with TCL STD			

Page: 1 of 1

Approved: 02-JUN-06

Rebecca D. Cattlip

006794

Run Log ID: **10662**

KEMRON Environmental Services

Instrument Run Log

Instrument: HPMS5 Dataset: 060206

Analyst1: ALT Analyst2: NA

Method: 8270C SOP: MSS01 Rev: 14

Method: 625 SOP: MSS02 Rev: 8

Column 1 ID: DB-5MS Column 2 ID: NA

Workgroups: WG214500, WG214620, WG214621

Internal Standard: STD12522 Surrogate Standard: NA

Comments: IML - 14237

Seq.	File ID	Sample Information	Mat	Dil	Reference	Date/Time
1	5M40987	WG214530-01 50PPM DFTPP	1	1	SOS78-44	06/02/06 13:29
2	5M40988	WG214530-02 50PPM BNA STD	1	1	SOS78-17	06/02/06 13:48
3	5M40989	50PPM TCL STD	1	1	SOS77-34-4	06/02/06 14:20
4	5M40990	WG214401-02 BLK 6/1 EP260P191 RR	17	1		06/02/06 14:51
5	5M40991	WG214365-02 BLK 6/1 EP261P99 RR	7	1	SOIL	06/02/06 15:23
6	5M40992	WG214339-01 FBLK 5/31 EP260P191	17	1		06/02/06 15:53
7	5M40993	50PPM Appendix IX STD	1	1	STD12520	06/02/06 16:25
8	5M40994	WG214476-01 BLK 6/2 EP260P193 RR	1	1		06/02/06 16:56
9	5M40995	L0605660-01 TCLP	17	1		06/02/06 17:27
10	5M40996	WG214401-01 L0605660-02 TCLP	17	1		06/02/06 17:58
11	5M40997	WG214401-04 L0605660-03 MS TCLP	17	1		06/02/06 18:29
12	5M40998	WG214401-05 L0605660-04 MSD TCLP	17	1		06/02/06 19:01
13	5M40999	L0605683-03	1	1		06/02/06 19:32
14	5M41000	L0605683-04	1	1		06/02/06 20:03
15	5M41001	L0605683-05	1	1		06/02/06 20:35
16	5M41002	L0605683-01	1	1		06/02/06 21:07
17	5M41003	L0605635-02 TCLP	17	1		06/02/06 21:38
18	5M41004	L0605683-02 5X	1	5		06/02/06 22:10
19	5M41005	L0605576-07 RE IH	7	1	SOIL	06/02/06 22:40
20	5M41006	L0605548-12 10X RE IH	7	10	SOIL	06/02/06 23:11
21	5M41007	L0605548-19 10X RE IH	7	10	SOIL	06/02/06 23:42
22	5M41008	L0605617-01 10x TCLP	17	10		06/03/06 00:13
23	5M41009	L0606004-01 20X	1	20		06/03/06 00:44
24	5M41010	BAKE OUT	1	1		06/03/06 01:16
25	5M41011	BAKE OUT	1	1		06/03/06 01:47
26	5M41012	BAKE OUT	1	1		06/03/06 02:18

Comments

Seq.	Rerun	Dil.	Reason	Analytes
15	X	5	Over Calibration Range	1,2-dchlorobenzene
18				
	L0605683-02 5X - diluted due to sample appearance			
19				
	L0605576-07 RE IH - SS 1 and 4 low			
20				
	L0605548-12 10X RE IH - diluted due to sample viscosity			

Page: 1 of 2 Approved: 06-JUN-06

Rebecca D. Cattlip

006795

Run Log ID: **10662**

KEMRON Environmental Services

Instrument Run Log

Instrument: HPMS5 Dataset: 060206

Analyst1: ALT Analyst2: NA

Method: 8270C SOP: MSS01 Rev: 14

Method: 625 SOP: MSS02 Rev: 8

Column 1 ID: DB-5MS Column 2 ID: NA

Workgroups: WG214500, WG214620, WG214621

Internal Standard: STD12522 Surrogate Standard: NA

Comments

Seq.	Rerun	Dil.	Reason	Analytes
21				
	L0605548-19 10X RE IH - diluted due to sample viscosity			
22				
	L0605617-01 10x TCLP - diluted due to sample appearance			
23	X	50	Over Calibration Range	aniline
	L0606004-01 20X - diluted due to sample viscosity			

Page: 2 of 2 Approved: 06-JUN-06

Rebecca D. Cattlip

006796

Sample Extract Log Sheet R1073069

KEMRON ENVIRONMENTAL SERVICES

Parameter: BNA-S SOP #: EXASE01 Revision #: 6
Extraction Analyst(s): CSH TV/KD Analyst(s): CSH
Date/Time Extracted: 5-25-06@1430 Date TV/KD: 5-26-6
Spike/Surrogate Analyst: CSH Witness: CPD
Surrogate #: STD12042 Earliest Hold Date: 6/7
Spike #: A = STD12043 Spike #: B = —

Extraction Work Group WG 214036

Extract Relinquished By: CSH
Extract Received By & Date: WRT/5/26/06

	Sample ID	Test Code	pH √ <2	pH √ N	pH √ >12	Initial Vol / Wt	Amount Surrogate	Amount Spike	Final Volume	Extract Color	Emulsions √ A	Emulsions √ BN	Emulsions √ N	Comments
1	Blank					20.00g	500ul		1mL	T				WG 214036-01
2	LCS					〃	〃	500ul	〃	C				WG 〃 -02
3	LCS DUP					〃	〃	〃	〃	〃				〃 -03
4	0557602	827-SPE				20.74g			〃	O				
5	-03	〃				18.43g			2mL	〃				STRONG ODOR
6	-04	〃				21.70g			1mL	C				
7	-05	〃				21.42g			〃	〃				
8	-06	〃				18.75g			〃	〃				
9	-07	〃				20.10g			〃	O				
10	05-584-01	8270				18.96g			〃	T				
11	-02	〃				19.69g			〃	C				
12	-04	〃				18.87g			〃	O				
13	-05	〃				19.42g			〃	T				
14	05-599-01	827-SPE				19.37g			〃	C				
15	-02	〃				20.63g			〃	〃				
16	-03	〃				19.29g			〃	〃				
17	-04	〃				18.33g			〃	O				
18	-05	〃				17.17g			〃	C				
19	-06	〃				19.09			〃	〃				
20	-07	〃				20.54g			〃	O				
21	-08	〃				17.65g			〃	C				
22	-09	〃				17.61g			〃	〃				
23	-11	〃				17.70g	〃 CSH 5266		〃	〃				
24														

Methylene Chloride Lot #: C03E63
Hexane Lot #: —
Ether Lot #: —
Methanol Lot #: —
Solvent: — Lot #: —
Reagent: LAB SAND Lot #: B49627
Reagent: D.E. Lot #: B45H08
Reagent: — Lot #: —
Acid: 1% ACETIC Lot #: ER0019-16
Florisil Lot #: —
Silica Gel Lot #: —
IR Analyst / Date / Time:
Dried Na_2SO_4 Lot #: B15580

Color Code
T = Transparent
C = Colored
O = Opaque

SW-846 Method		On	Off	On	Off
Continuous	3520C				
Soxhlet	3540C				
ASE*	3545	✓			
Sep Funnel	3510C				
Sonication	3550B				
Waste	3580A				

* Accelerated Solvent Extractor (ASE)

Clean-ups			
Florisil 3620B		GPC 3640A	
Silica Gel 3630C		Other	
Acid 3665A		N/A	✓
Sulfur 3660B			

Peer Reviewed By: Chadwick Davis Date: 5/26/06

006797

Extraction Notes For Volume # 261 Page # 83

General Comments: NONE

Extraction Anomalies: NONE

Concentration Anomalies: 05-576-03 FINAL VOLUME = 2mL

Clean-Up Anomalies: N/A

Supervisor Review: _____ Date: _____

006798

TCLP Non-Volatile

Analyst(s): Ed
Date: 05-30-06

Analyst/Date		Analyst/Date	
Ed 05-30-06		Ed 05-31-06	
Time On	Temp On °C	Time Off	Temp Off °C
1330	24	0730	23

Jug #	Sample #	Tests	Method	Fluid #	Matrix*	%Solid	Size Reduction Yes	Size Reduction No	Int. Wt. (g)	Fluid Vol. (mL)
N/A	05-557-02	ME	1311	Filtered	W	<.5		✓	100	100
D	05-557-03	ME	1311	FI-592	S	100	✓		100.05	2000
	-05	⊥	⊥	⊥	⊥	⊥		✓	100.05	⊥
	-06							✓	100.02	
	-08							✓	100.05	
G-7	05-576-01	SV Pest Herb			S/S			✓	100.05	
G-9	05-577-10	⊥ ⊥ ⊥			⊥			✓	100.02	
G-11	05-630-02	⊥			⊥			✓	100.05	
D	05-633-02	ME pH-L			S			✓	100.05	
⊥	-03	⊥	⊥	⊥	⊥	⊥		✓	100.01	⊥
N/A	FBLK	ME SV Pest Herb	1311	FI-592	N/A	N/A		✓	2000	2000

Ed 05-30-06

*Matrix Code = (S-solid)(SS-sand, soil or sludge)(P-paint)(O-organic or waste)(W-water)

Comments: _____

Peer Review By: _____ Supervisor Review: _____

006799

R1074048

Sample Extract Log Sheet

KEMRON ENVIRONMENTAL SERVICES

Parameter: BNA H2O SOP #: EXB08 Revision #: 11
Extraction Analyst(s): CPO, CEB TV/KD Analyst(s): CPO
Date/Time Extracted: 05/31/06 1100 Date TV/KD: 5/31/06
Spike/Surrogate Analyst: CPO Witness: CEB
Surrogate #: STD12042 Earliest Hold Date: 6/6
Spike #: A – STD12688 Spike #: B = –

Extraction Work Group WG 214273

Extract Relinquished By: CPO
Extract Received By & Date: AKT/5/31/06

	Sample ID	Test Code	pH √ <2	pH √ N	pH √ >12	Initial Vol / Wt	Amount Surrogate	Amount Spike	Final Volume	Extract Color	Emulsions √ A	Emulsions √ BN	Emulsions √ N	Comments
1	Blank		✓		✓	1000mL	500µL		1mL	T				WG 214273 CPO 5/31/06 -02
2	LCS		✓		✓	1		500		C				WG -02 CPO 5/31/06 -03
3	LCSDup		✓		✓	1		1		C				WG 1 -03 CPO 5/31/06 -04
4	05-658-01	827-SOE/LS	✓		✓	1000mL				C				
5	05-659-01		✓		✓	980mL				T				
6	-03		✓		✓	1000mL				C				
7	-04		✓		✓	1				C				
8	-05		✓		✓	980mL				C				
9	-07		✓		✓	1000mL				C				
10	FBLK 5/30	827-TC	✓		✓	100mL				T				WG 214216-01
11	05-576-01		✓		✓	1				T				
12	05-599-10		✓		✓	1				T				
13	05-630-02		✓		✓	1				T				WG 214273-01
14	-02SMK		✓		✓	1		500µL	1	C				1 -05
15														
16														
17														
18														
19														
20														
21														
22														
23														
24														

CPO 5/31/06

Methylene Chloride Lot #: C03E63
Hexane Lot #: –
Ether Lot #: –
Methanol Lot #: –
Solvent: – Lot #: –
Reagent: – Lot #: –
Reagent: Fortified Sol Lot #: ER0019-8
Reagent: 10N NaOH Lot #: ER001928
Acid: 1:1 H_2SO_4 Lot #: RGT10242
Florisil Lot #: –
Silica Gel Lot #: –
IR Analyst / Date / Time: –
Dried Na_2SO_4 Lot #: ER00 B51580 CPO 5/31/06

Color Code
T = Transparent
C = Colored
O = Opaque

SW-846 Method		On	Off	On	Off
Continuous	3520C				
Soxhlet	3540C				
ASE*	3545				
Sep Funnel	3510C	✓			
Sonication	3550B	✓			
Waste	3580A				

CPO 5/31/06

* Accelerated Solvent Extractor (ASE)

Clean-ups			
Florisil 3620B		GPC 3640A	
Silica Gel 3630C		Other	
Acid 3665A		N/A	✓
Sulfur 3660B			

Peer Reviewed By: Cheryl Flowers Date: 5-31-06

006800

Extraction Notes For Volume # 260 Page # 181

General Comments: None

Extraction Anomalies: None

Concentration Anomalies: None

Clean-Up Anomalies: N/A

Supervisor Review: _____ Date: _____

Sample Extract Log Sheet R1074596

KEMRON ENVIRONMENTAL SERVICES

BNA-Soil
Parameter: ~~BLK PAS~~ SOP #: EXASF01 Revision #: 6
Extraction Analyst(s): PAS TV/KD Analyst(s): CSH
Date/Time Extracted: 6/11/06 0830 Date TV/KD: 6-1-06
Spike/Surrogate Analyst: EPS Witness: PAS
Surrogate #: STD12042 Earliest Hold Date: 6/13
Spike #: A = STD12688 Spike #: B = –

Extraction Work Group WG 214365
Extract Relinquished By: CSH
Extract Received By & Date: [illegible] 6/11/06

	Sample ID	Test Code	pH √ <2	pH √ N	pH √ >12	Initial Vol / Wt	Amount Surrogate	Amount Spike	Final Volume	Extract Color	Emulsions √ A	Emulsions √ BN	Emulsions √ N	Comments
1	Blank					20.00g	5cmL		1mL	T				WG214365-02
2	LCS					1		500µL		C				WG 1 -03
3	05-660-01	827-SPE				20.48g				T				
4	-02MS					20.30g				1				WG214365-01
5	-03MS					1		500µL		C				X -04
6	-04MSD					1		1		1				X 1 -05
7	05-548-12					20.45g				O				
8	-19					20.36g				1				wet Sludge
9	05-576-07	1				20.00g				C				
10	05-605-14	8270				20.26g				O				
11	-16	1				20.74g				C				
12														
13														
14														
15														
16														
17														
18														
19														
20														
21														
22														
23														
24														

CSH 6-1-06

Methylene Chloride Lot #: CQ3E63
Hexane Lot #: –
Ether Lot #: –
Methanol Lot #: –
Solvent: – Lot #: –
Reagent: SAmd Lot #: C02614
Reagent: DE Lot #: B45H08
Reagent: – Lot #: –
Acid: 1% Acetic Lot #: EA0019-16
Florisil Lot #: –
Silica Gel Lot #: –
IR Analyst / Date / Time: –
Dried Na_2SO_4 Lot #: ~~FF~~ B51580
CSH 6-1-6

Color Code
T = Transparent
C = Colored
O = Opaque

SW-846 Method		On	Off	On	Off
Continuous	3520C				
Soxhlet	3540C				
ASE*	3545	✓			
Sep Funnel	3510C				
Sonication	3550B				
Waste	3580A				

* Accelerated Solvent Extractor (ASE)

Clean-ups			
Florisil 3620B		GPC 3640A	
Silica Gel 3630C		Other	
Acid 3665A		N/A	✓
Sulfur 3660B			

Peer Reviewed By: Cheryl J Lowen Date: 6-01-06

Extraction Notes For Volume # 261 Page # 99

General Comments:
X-NS, MD of 660-02

Extraction Anomalies: NONE

Concentration Anomalies: NONE

Clean-Up Anomalies: N/A

Supervisor Review: _____ Date: _____

006803

KEMRON Environmental Services
HOLDING TIMES
EQUIVALENT TO AFCEE FORM 9

Analytical Method: 8270C **AAB#:** WG214172
Login Number: L0605576

Client ID	Date Collected	Date Received	Date Extracted	Max Hold Time Ext.	Time Held Ext.	Date Analyzed	Max Hold Time Anal	Time Held Anal.	Q
SM142SB01052406	05/24/06	05/25/06	05/25/06	14	1.22	05/30/06	40	5.35	
SM142SB02052406	05/24/06	05/25/06	05/25/06	14	1.20	05/26/06	40	1.22	
SM141SB03052406	05/24/06	05/25/06	05/25/06	14	1.25	05/26/06	40	1.09	
SM141FD03052406	05/24/06	05/25/06	05/25/06	14	1.25	05/26/06	40	1.11	
SM141SB02052406	05/24/06	05/25/06	05/25/06	14	1.26	05/26/06	40	1.13	
SM141SB01052406	05/24/06	05/25/06	05/25/06	14	1.28	05/30/06	40	5.32	

* EXT = SEE PROJECT QAPP REQUIREMENTS
*ANAL = SEE PROJECT QAPP REQUIREMENTS

KEMRON FORMS - Modified 02/14/2006
Version 1.5 PDF File ID: 491006
Report generated 06/07/2006 15:08

KEMRON Environmental Services
HOLDING TIMES
EQUIVALENT TO AFCEE FORM 9

Analytical Method: 8270C **AAB#:** WG214500
Login Number: L0605576

Client ID	Date Collected	Date Received	Date Extracted	Max Hold Time Ext.	Time Held Ext.	Date Analyzed	Max Hold Time Anal	Time Held Anal.	Q
SM141SB01052406	05/24/06	05/25/06	06/01/06	14	8.03	06/02/06	40	1.59	

* EXT = SEE PROJECT QAPP REQUIREMENTS
*ANAL = SEE PROJECT QAPP REQUIREMENTS

KEMRON FORMS - Modified 02/14/2006
Version 1.5 PDF File ID: 491006
Report generated 06/07/2006 15:08

KEMRON Environmental Services

SURROGATE STANDARDS

Login Number: L0605576
Instrument Id: HPMS5
Workgroup (AAB#): WG214172

Method: 8270
CAL ID: HPMS5-15-MAY-06
Matrix: SOLID

Sample Number	Dilution	Tag	1	2	3	4	5	6
L0605576-02	20.0	DL01	DL	DL	DL	DL	DL	DL
L0605576-03	20.0	DL01	DL	DL	DL	DL	DL	DL
L0605576-04	1.00	01	92.5	43.8	47.5	37.8	130	55.2
L0605576-05	1.00	01	81.0	45.5	52.2	44.5	122	60.6
L0605576-06	1.00	01	79.4	55.2	50.9	11.2	111	61.4
L0605576-07	1.00	01	6.79	30.2	24.8	35.7	102	34.4
WG214036-01	1.00	01	94.2	62.6	58.3	64.2	137	64.7
WG214036-02	1.00	01	105	66.9	59.7	60.0	121	68.6
WG214036-03	1.00	01	107	67.9	56.8	60.4	123	66.1

Surrogates	Surrogate Limits
1 - 2,4,6-Tribromophenol	19 - 122
2 - 2-Fluorobiphenyl	30 - 115
3 - 2-Fluorophenol	25 - 121
4 - Nitrobenzene-d5	23 - 120
5 - P-Terphenyl-d14	18 - 137
6 - Phenol-d5	24 - 113

Underline = Result out of surrogate limits

DL = surrogate diluted out
ND = surrogate not detected

KEMRON FORMS - Modified 04/18/2006
Version 1.5 PDF File ID: 486170
Report generated 06/05/2006 14:47

KEMRON Environmental Services

SURROGATE STANDARDS

Login Number: L0605576
Instrument Id: HPMS4
Workgroup (AAB#): WG214500

Method: 8270
CAL ID: HPMS4-10-MAY-06
Matrix: SOLID

Sample Number	Dilution	Tag	1	2	3	4	5	6
WG214365-02	1.00	01	76.2	63.3	56.9	61.8	93.0	63.4
WG214365-03	1.00	01	81.3	49.5	42.9	44.1	91.2	48.1

Surrogates	Surrogate Limits
1 - 2,4,6-Tribromophenol	19 - 122
2 - 2-Fluorobiphenyl	30 - 115
3 - 2-Fluorophenol	25 - 121
4 - Nitrobenzene-d5	23 - 120
5 - p-Terphenyl-d14	18 - 137
6 - Phenol-d5	24 - 113

Underline = Result out of surrogate limits

DL = surrogate diluted out
ND = surrogate not detected

KEMRON FORMS - Modified 04/18/2006
Version 1.5 PDF File ID: 486170
Report generated 06/05/2006 14:47

KEMRON Environmental Services

SURROGATE STANDARDS

Login Number: L0605576
Instrument Id: HPMS5
Workgroup (AAB#): WG214500

Method: 8270
CAL ID: HPMS5-15-MAY-06
Matrix: SOLID

Sample Number	Dilution	Tag	1	2	3	4	5	6
L0605576-07	1.00	03	36.5	29.7	23.1	40.2	77.7	32.7

Surrogates	Surrogate Limits
1 - 2,4,6-Tribromophenol	19 - 122
2 - 2-Fluorobiphenyl	30 - 115
3 - 2-Fluorophenol	25 - 121
4 - Nitrobenzene-d5	23 - 120
5 - P-Terphenyl-d14	18 - 137
6 - Phenol-d5	24 - 113

Underline = Result out of surrogate limits

DL = surrogate diluted out
ND = surrogate not detected

KEMRON FORMS - Modified 04/18/2006
Version 1.5 PDF File ID: 486170
Report generated 06/05/2006 14:47

KEMRON Environmental Services

SURROGATE STANDARDS

Login Number: L0605576
Instrument Id: HPMS4
Workgroup (AAB#): WG214398

Method: 8270
CAL ID: HPMS4-10-MAY-06
Matrix: TCLP

Sample Number	Dilution	Tag	1	2	3	4	5	6
L0605576-01	1.00	01	89.1	76.9	43.8	76.3	101	31.7
WG214273-02	1.00	01	87.2	80.4	45.5	79.9	101	31.6
WG214273-03	1.00	01	97.6	91.6	50.2	77.8	104	35.3
WG214273-04	1.00	01	98.9	93.8	50.7	78.4	106	35.9

Surrogates	Surrogate Limits		
1 - 2,4,6-Tribromophenol	10	-	123
2 - 2-Fluorobiphenyl	43	-	116
3 - 2-Fluorophenol	21	-	100
4 - Nitrobenzene-d5	35	-	114
5 - p-Terphenyl-d14	33	-	141
6 - Phenol-d5	10	-	94

Underline = Result out of surrogate limits

DL = surrogate diluted out
ND = surrogate not detected

KEMRON FORMS - Modified 04/18/2006
Version 1.5 PDF File ID: 488864
Report generated 06/05/2006 15:42

KEMRON Environmental Services

METHOD BLANK SUMMARY

Login Number:	L0605576	Work Group:	WG214172
Blank File ID:	5M40890	Blank Sample ID:	WG214036-01
Date Analyzed:	05/26/06	Instrument ID:	HPMS5
Time Analyzed:	15:05	Method:	8270C
Analyst:	ALT		

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG214036-02	5M40891	05/26/06 15:36	01
LCS2	WG214036-03	5M40892	05/26/06 16:08	01
SM141SB03052406	L0605576-04	5M40893	05/26/06 16:40	01
SM141FD03052406	L0605576-05	5M40894	05/26/06 17:13	01
SM141SB02052406	L0605576-06	5M40895	05/26/06 17:44	01
SM142SB02052406	L0605576-03	5M40899	05/26/06 19:52	DL01
SM141SB01052406	L0605576-07	5M40930	05/30/06 22:15	01
SM142SB01052406	L0605576-02	5M40931	05/30/06 22:47	DL01

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KEMRON Environmental Services

METHOD BLANK SUMMARY

Login Number:	L0605576	Work Group:	WG214500
Blank File ID:	4M33227	Blank Sample ID:	WG214365-02
Date Analyzed:	06/01/06	Instrument ID:	HPMS4
Time Analyzed:	15:29	Method:	8270C
Analyst:	CLK		

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG214365-03	4M33228	06/01/06 16:05	01
SM141SB01052406	L0605576-07	5M41005	06/02/06 22:40	RE1

KEMRON FORMS - Modified 03/06/2006
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Report generated 06/07/2006 15:08

KEMRON Environmental Services

METHOD BLANK SUMMARY

Login Number:	L0605576	Work Group:	WG214398
Blank File ID:	4M33223	Blank Sample ID:	WG214273-02
Date Analyzed:	06/01/06	Instrument ID:	HPMS4
Time Analyzed:	13:05	Method:	8270C
Analyst:	CLK		

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG214273-03	4M33224	06/01/06 13:41	01
LCS2	WG214273-04	4M33225	06/01/06 14:17	01
IWSB01052406	L0605576-01	4M33236	06/01/06 20:51	01

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Report generated 06/05/2006 15:41

KEMRON Environmental Services

METHOD BLANK REPORT

Login Number: L0605576	Run Date: 06/01/2006	Sample ID: WG214365-02
Instrument ID: HPMS4	Run Time: 15:29	Prep Method: 3545
File ID: 4M33227	Analyst: CLK	Method: 8270C
Workgroup (AAB#): WG214500	Matrix: Solid	Units: ug/kg
Contract #:	Cal ID: HPMS4-10-MAY-06	

Analytes	SQL	PQL	Concentration	Dilution	Qualifier
Phenol	82.5	165	82.5	1	U
Bis(2-Chloroethyl)ether	82.5	165	82.5	1	U
2-Chlorophenol	82.5	165	82.5	1	U
2-Methylphenol	82.5	165	82.5	1	U
Acetophenone	82.5	165	82.5	1	U
bis(2-Chloroisopropyl)ether	82.5	165	82.5	1	U
3-,4-Methylphenol	82.5	165	82.5	1	U
N-Nitroso-di-n-propylamine	82.5	165	82.5	1	U
Hexachloroethane	82.5	165	82.5	1	U
Nitrobenzene	82.5	165	82.5	1	U
Isophorone	82.5	165	82.5	1	U
2-Nitrophenol	82.5	165	82.5	1	U
2,4-Dimethylphenol	82.5	165	82.5	1	U
Bis(2-Chloroethoxy)Methane	82.5	165	82.5	1	U
2,4-Dichlorophenol	82.5	165	82.5	1	U
Naphthalene	82.5	165	82.5	1	U
4-Chloroaniline	82.5	165	82.5	1	U
Hexachlorobutadiene	82.5	165	82.5	1	U
4-Chloro-3-methylphenol	82.5	165	82.5	1	U
2-Methylnaphthalene	82.5	165	82.5	1	U
Hexachlorocyclopentadiene	82.5	165	82.5	1	U
2,4,6-Trichlorophenol	82.5	165	82.5	1	U
2,4,5-Trichlorophenol	82.5	165	82.5	1	U
2-Chloronaphthalene	82.5	165	82.5	1	U
2-Nitroaniline	330	825	330	1	U
Dimethylphthalate	82.5	165	82.5	1	U
Acenaphthylene	82.5	165	82.5	1	U
2,6-Dinitrotoluene	82.5	165	82.5	1	U
3-Nitroaniline	330	825	330	1	U
Acenaphthene	82.5	165	82.5	1	U
2,4-Dinitrophenol	330	825	330	1	U
4-Nitrophenol	330	825	330	1	U
Dibenzofuran	82.5	165	82.5	1	U
2,4-Dinitrotoluene	82.5	165	82.5	1	U
Diethylphthalate	82.5	165	82.5	1	U
4-Chlorophenyl-phenyl ether	82.5	165	82.5	1	U
Fluorene	82.5	165	82.5	1	U
4-Nitroaniline	330	825	330	1	U
4,6-Dinitro-2-methylphenol	330	825	330	1	U
N-Nitrosodiphenylamine	82.5	165	82.5	1	U
4-Bromophenyl-phenylether	82.5	165	82.5	1	U
Hexachlorobenzene	82.5	165	82.5	1	U

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METHOD BLANK REPORT

Login Number: L0605576	Run Date: 06/01/2006	Sample ID: WG214365-02
Instrument ID: HPMS4	Run Time: 15:29	Prep Method: 3545
File ID: 4M33227	Analyst: CLK	Method: 8270C
Workgroup (AAB#): WG214500	Matrix: Solid	Units: ug/kg
Contract #:	Cal ID: HPMS4-10-MAY-06	

Analytes	SQL	PQL	Concentration	Dilution	Qualifier
Pentachlorophenol	330	825	330	1	U
Phenanthrene	82.5	165	82.5	1	U
Anthracene	82.5	165	82.5	1	U
Carbazole	82.5	165	82.5	1	U
Di-N-Butylphthalate	82.5	165	82.5	1	U
Fluoranthene	82.5	165	82.5	1	U
Pyrene	82.5	165	82.5	1	U
Butylbenzylphthalate	82.5	165	82.5	1	U
3,3'-Dichlorobenzidine	165	330	165	1	U
Benzo(a)anthracene	82.5	165	82.5	1	U
Chrysene	82.5	165	82.5	1	U
bis(2-Ethylhexyl)phthalate	82.5	165	82.5	1	U
Di-n-octylphthalate	82.5	165	82.5	1	U
Benzo(b)fluoranthene	82.5	165	82.5	1	U
Benzo(k)fluoranthene	82.5	165	82.5	1	U
Benzo(a)pyrene	82.5	165	82.5	1	U
Indeno(1,2,3-cd)pyrene	82.5	165	82.5	1	U
Dibenzo(a,h)Anthracene	82.5	165	82.5	1	U
Benzo(g,h,i)Perylene	82.5	165	82.5	1	U
1,2,4,5-Tetrachlorobenzene	82.5	165	82.5	1	U

Surrogates	% Recovery	Surrogate Limits	Qualifier
2-Fluorophenol	56.9	25 - 121	PASS
Phenol-d5	63.4	24 - 113	PASS
Nitrobenzene-d5	61.8	23 - 120	PASS
2-Fluorobiphenyl	63.3	30 - 115	PASS
2,4,6-Tribromophenol	76.2	19 - 122	PASS
P-Terphenyl-d14	93.0	18 - 137	PASS

MDL Method Detection Limit
RL Reporting/quantitation Limit

* Analyte concentration > RL

KEMRON FORMS - Modified 05/01/2006
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Report generated 06/07/2006 15:08

KEMRON Environmental Services

METHOD BLANK REPORT

Login Number: L0605576	Run Date: 05/26/2006	Sample ID: WG214036-01
Instrument ID: HPMS5	Run Time: 15:05	Prep Method: 3545
File ID: 5M40890	Analyst: ALT	Method: 8270C
Workgroup (AAB#): WG214172	Matrix: Solid	Units: ug/kg
Contract #:	Cal ID: HPMS5-15-MAY-06	

Analytes	SQL	PQL	Concentration	Dilution	Qualifier
Phenol	82.5	165	82.5	1	U
Bis(2-Chloroethyl)ether	82.5	165	82.5	1	U
2-Chlorophenol	82.5	165	82.5	1	U
2-Methylphenol	82.5	165	82.5	1	U
Acetophenone	82.5	165	82.5	1	U
bis(2-Chloroisopropyl)ether	82.5	165	82.5	1	U
3-,4-Methylphenol	82.5	165	82.5	1	U
N-Nitroso-di-n-propylamine	82.5	165	82.5	1	U
Hexachloroethane	82.5	165	82.5	1	U
Nitrobenzene	82.5	165	82.5	1	U
Isophorone	82.5	165	82.5	1	U
2-Nitrophenol	82.5	165	82.5	1	U
2,4-Dimethylphenol	82.5	165	82.5	1	U
Bis(2-Chloroethoxy)Methane	82.5	165	82.5	1	U
2,4-Dichlorophenol	82.5	165	82.5	1	U
Naphthalene	82.5	165	82.5	1	U
4-Chloroaniline	82.5	165	82.5	1	U
Hexachlorobutadiene	82.5	165	82.5	1	U
4-Chloro-3-methylphenol	82.5	165	82.5	1	U
2-Methylnaphthalene	82.5	165	82.5	1	U
Hexachlorocyclopentadiene	82.5	165	82.5	1	U
2,4,6-Trichlorophenol	82.5	165	82.5	1	U
2,4,5-Trichlorophenol	82.5	165	82.5	1	U
2-Chloronaphthalene	82.5	165	82.5	1	U
2-Nitroaniline	330	825	330	1	U
Dimethylphthalate	82.5	165	82.5	1	U
Acenaphthylene	82.5	165	82.5	1	U
2,6-Dinitrotoluene	82.5	165	82.5	1	U
3-Nitroaniline	330	825	330	1	U
Acenaphthene	82.5	165	82.5	1	U
2,4-Dinitrophenol	330	825	330	1	U
4-Nitrophenol	330	825	330	1	U
Dibenzofuran	82.5	165	82.5	1	U
2,4-Dinitrotoluene	82.5	165	82.5	1	U
Diethylphthalate	82.5	165	82.5	1	U
4-Chlorophenyl-phenyl ether	82.5	165	82.5	1	U
Fluorene	82.5	165	82.5	1	U
4-Nitroaniline	330	825	330	1	U
4,6-Dinitro-2-methylphenol	330	825	330	1	U
N-Nitrosodiphenylamine	82.5	165	82.5	1	U
4-Bromophenyl-phenylether	82.5	165	82.5	1	U
Hexachlorobenzene	82.5	165	82.5	1	U

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KEMRON Environmental Services

METHOD BLANK REPORT

Login Number: L0605576	Run Date: 05/26/2006	Sample ID: WG214036-01
Instrument ID: HPMS5	Run Time: 15:05	Prep Method: 3545
File ID: 5M40890	Analyst: ALT	Method: 8270C
Workgroup (AAB#): WG214172	Matrix: Solid	Units: ug/kg
Contract #:	Cal ID: HPMS5-15-MAY-06	

Analytes	SQL	PQL	Concentration	Dilution	Qualifier
Pentachlorophenol	330	825	330	1	U
Phenanthrene	82.5	165	82.5	1	U
Anthracene	82.5	165	82.5	1	U
Carbazole	82.5	165	82.5	1	U
Di-N-Butylphthalate	82.5	165	82.5	1	U
Fluoranthene	82.5	165	82.5	1	U
Pyrene	82.5	165	82.5	1	U
Butylbenzylphthalate	82.5	165	82.5	1	U
3,3'-Dichlorobenzidine	165	330	165	1	U
Benzo(a)anthracene	82.5	165	82.5	1	U
Chrysene	82.5	165	82.5	1	U
bis(2-Ethylhexyl)phthalate	82.5	165	82.5	1	U
Di-n-octylphthalate	82.5	165	82.5	1	U
Benzo(b)fluoranthene	82.5	165	82.5	1	U
Benzo(k)fluoranthene	82.5	165	82.5	1	U
Benzo(a)pyrene	82.5	165	82.5	1	U
Indeno(1,2,3-cd)pyrene	82.5	165	82.5	1	U
Dibenzo(a,h)Anthracene	82.5	165	82.5	1	U
Benzo(g,h,i)Perylene	82.5	165	82.5	1	U
1,2,4,5-Tetrachlorobenzene	82.5	165	82.5	1	U

Surrogates	% Recovery	Surrogate Limits			Qualifier
2-Fluorophenol	58.3	25	-	121	PASS
Phenol-d5	64.7	24	-	113	PASS
Nitrobenzene-d5	64.2	23	-	120	PASS
2-Fluorobiphenyl	62.6	30	-	115	PASS
2,4,6-Tribromophenol	94.2	19	-	122	PASS
P-Terphenyl-d14	137	18	-	137	PASS

MDL Method Detection Limit
RL Reporting/quantitation Limit

* Analyte concentration > RL

KEMRON FORMS - Modified 05/01/2006
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Report generated 06/07/2006 15:08

KEMRON Environmental Services

METHOD BLANK REPORT

Login Number: L0605576	Run Date: 06/01/2006	Sample ID: WG214273-02
Instrument ID: HPMS4	Run Time: 13:05	Prep Method: 3510C
File ID: 4M33223	Analyst: CLK	Method: 8270C
Workgroup (AAB#): WG214398	Matrix: Water	Units: ug/L
Contract #:	Cal ID: HPMS4-10-MAY-06	

Analytes	SQL	PQL	Concentration	Dilution	Qualifier
o-Cresol	25.0	50.0	25.0	1	U
m-,p-Cresol	25.0	50.0	25.0	1	U
1,4-Dichlorobenzene	25.0	50.0	25.0	1	U
2,4-Dinitrotoluene	25.0	50.0	25.0	1	U
Hexachlorobenzene	25.0	50.0	25.0	1	U
Hexachlorobutadiene	25.0	50.0	25.0	1	U
Hexachloroethane	25.0	50.0	25.0	1	U
Nitrobenzene	25.0	50.0	25.0	1	U
Pentachlorophenol	25.0	250	25.0	1	U
Pyridine	250	500	250	1	U
2,4,5-Trichlorophenol	25.0	250	25.0	1	U
2,4,6-Trichlorophenol	25.0	50.0	25.0	1	U

Surrogates	% Recovery	Surrogate Limits			Qualifier
2-Fluorophenol	45.5	21	-	100	PASS
Phenol-d5	31.6	10	-	94	PASS
Nitrobenzene-d5	79.9	35	-	114	PASS
2-Fluorobiphenyl	80.4	43	-	116	PASS
2,4,6-Tribromophenol	87.2	10	-	123	PASS
p-Terphenyl-d14	101	33	-	141	PASS

MDL Method Detection Limit
RL Reporting/quantitation Limit

* Analyte concentration > RL

KEMRON FORMS - Modified 05/01/2006
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Report generated 06/05/2006 15:41

KEMRON Environmental Services

LABORATORY CONTROL SAMPLE (LCS)

Login Number: L0605576	Run Date: 06/01/2006	Sample ID: WG214365-03
Instrument ID: HPMS4	Run Time: 16:05	Prep Method: 3545
File ID: 4M33228	Analyst: CLK	Method: 8270C
Workgroup (AAB#): WG214500	Matrix: Solid	Units: ug/kg
Contract #:	Cal ID: HPMS4-10-MAY-06	

Analytes	Expected	Found	% Rec	LCS Limits	Q
Phenol	2500	1140	45.5	35 - 100	
Bis(2-Chloroethyl)ether	2500	1170	46.9	30 - 100	
2-Chlorophenol	2500	1110	44.3	35 - 105	
2-Methylphenol	2500	1150	46.0	35 - 100	
Acetophenone	2500	1160	46.4	40 - 140	
bis(2-Chloroisopropyl)ether	2500	1040	41.5	20 - 115	
3-,4-Methylphenol	2500	1300	52.2	35 - 105	
N-Nitroso-di-n-propylamine	2500	1110	44.4	35 - 110	
Hexachloroethane	2500	1030	41.4	30 - 100	
Nitrobenzene	2500	1060	42.4	35 - 100	
Isophorone	2500	1170	47.0	35 - 100	
2-Nitrophenol	2500	1180	47.0	35 - 100	
2,4-Dimethylphenol	2500	1120	44.9	30 - 105	
Bis(2-Chloroethoxy)Methane	2500	942	37.7	30 - 100	
2,4-Dichlorophenol	2500	1150	46.2	35 - 110	
Naphthalene	2500	1100	44.2	35 - 100	
4-Chloroaniline	2500	1000	40.0	35 - 100	
Hexachlorobutadiene	2500	1140	45.4	30 - 100	
4-Chloro-3-methylphenol	2500	1380	55.1	40 - 100	
2-Methylnaphthalene	2500	1150	46.1	35 - 115	
Hexachlorocyclopentadiene	2500	789	31.5	30 - 110	
2,4,6-Trichlorophenol	2500	1380	55.3	40 - 110	
2,4,5-Trichlorophenol	2500	1590	63.6	40 - 110	
2-Chloronaphthalene	2500	1060	42.4	40 - 105	
2-Nitroaniline	2500	1660	66.6	45 - 120	
Dimethylphthalate	2500	1730	69.3	45 - 115	
Acenaphthylene	2500	1340	53.4	40 - 110	
2,6-Dinitrotoluene	2500	1750	69.8	50 - 125	
3-Nitroaniline	2500	1900	75.9	50 - 130	
Acenaphthene	2500	1360	54.4	40 - 110	
2,4-Dinitrophenol	2500	1870	74.8	40 - 130	
4-Nitrophenol	2500	2220	88.6	45 - 140	
Dibenzofuran	2500	1440	57.5	35 - 110	
2,4-Dinitrotoluene	2500	2310	92.3	50 - 130	
Diethylphthalate	2500	2040	81.6	50 - 130	
4-Chlorophenyl-phenyl ether	2500	1570	62.7	40 - 110	
Fluorene	2500	1630	65.1	45 - 115	
4-Nitroaniline	2500	1940	77.7	35 - 140	
4,6-Dinitro-2-methylphenol	2500	2130	85.4	45 - 130	
N-Nitrosodiphenylamine	2500	1670	66.8	50 - 130	
4-Bromophenyl-phenylether	2500	1590	63.6	40 - 115	

KEMRON FORMS - Modified 05/01/2006
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KEMRON Environmental Services

LABORATORY CONTROL SAMPLE (LCS)

Login Number: L0605576	Run Date: 06/01/2006	Sample ID: WG214365-03
Instrument ID: HPMS4	Run Time: 16:05	Prep Method: 3545
File ID: 4M33228	Analyst: CLK	Method: 8270C
Workgroup (AAB#): WG214500	Matrix: Solid	Units: ug/kg
Contract #:	Cal ID: HPMS4-10-MAY-06	

Analytes	Expected	Found	% Rec	LCS Limits	Q
Hexachlorobenzene	2500	1920	76.9	45 - 120	
Pentachlorophenol	2500	2680	107	50 - 150	
Phenanthrene	2500	2090	83.4	50 - 130	
Anthracene	2500	2160	86.3	55 - 130	
Carbazole	2500	2320	93.0	50 - 140	
Di-N-Butylphthalate	2500	2360	94.3	55 - 140	
Fluoranthene	2500	2400	95.9	55 - 140	
Pyrene	2500	2250	89.9	45 - 135	
Butylbenzylphthalate	2500	2530	101	50 - 150	
3,3'-Dichlorobenzidine	2500	1560	62.2	40 - 140	
Benzo(a)anthracene	2500	2280	91.0	50 - 130	
Chrysene	2500	2270	90.8	55 - 140	
bis(2-Ethylhexyl)phthalate	2500	2340	93.4	50 - 150	
Di-n-octylphthalate	2500	2400	96.0	40 - 145	
Benzo(b)fluoranthene	2500	2270	90.8	45 - 125	
Benzo(k)fluoranthene	2500	2200	87.9	45 - 135	
Benzo(a)pyrene	2500	2260	90.3	50 - 130	
Indeno(1,2,3-cd)pyrene	2500	2190	87.8	50 - 135	
Dibenzo(a,h)Anthracene	2500	2200	87.9	40 - 140	
Benzo(g,h,i)Perylene	2500	2230	89.1	40 - 140	

Surrogates	% Recovery	Surrogate Limits	Qualifier
2-Fluorophenol	42.9	25 - 121	PASS
Phenol-d5	48.1	24 - 113	PASS
Nitrobenzene-d5	44.1	23 - 120	PASS
2-Fluorobiphenyl	49.5	30 - 115	PASS
2,4,6-Tribromophenol	81.3	19 - 122	PASS
P-Terphenyl-d14	91.2	18 - 137	PASS

* FAILS %REC LIMIT

KEMRON FORMS - Modified 05/01/2006
Version 1.5 PDF File ID: 488874
Report generated 06/05/2006 14:46

KEMRON Environmental Services

LABORATORY CONTROL SAMPLE (LCS)

Login Number: L0605576 | Run Date: 05/26/2006 | Sample ID: WG214036-02
Instrument ID: HPMS5 | Run Time: 15:36 | Prep Method: 3545
File ID: 5M40891 | Analyst: ALT | Method: 8270C
Workgroup (AAB#): WG214172 | Matrix: Solid | Units: ug/kg
Contract #: | Cal ID: HPMS5-15-MAY-06

Analytes	Expected	Found	% Rec	LCS Limits	Q
Phenol	2500	1660	66.4	35 - 100	
Bis(2-Chloroethyl)ether	2500	1680	67.3	30 - 100	
2-Chlorophenol	2500	1610	64.4	35 - 105	
2-Methylphenol	2500	1660	66.5	35 - 100	
Acetophenone	2500	1630	65.3	40 - 140	
bis(2-Chloroisopropyl)ether	2500	1690	67.5	20 - 115	
3-,4-Methylphenol	2500	1720	68.9	35 - 105	
N-Nitroso-di-n-propylamine	2500	1890	75.6	35 - 110	
Hexachloroethane	2500	1590	63.5	30 - 100	
Nitrobenzene	2500	1530	61.3	35 - 100	
Isophorone	2500	1680	67.1	35 - 100	
2-Nitrophenol	2500	1460	58.6	35 - 100	
2,4-Dimethylphenol	2500	1440	57.7	30 - 105	
Bis(2-Chloroethoxy)Methane	2500	1590	63.6	30 - 100	
2,4-Dichlorophenol	2500	1590	63.4	35 - 110	
Naphthalene	2500	1520	60.9	35 - 100	
4-Chloroaniline	2500	1500	60.0	35 - 100	
Hexachlorobutadiene	2500	1610	64.4	30 - 100	
4-Chloro-3-methylphenol	2500	1820	72.8	40 - 100	
2-Methylnaphthalene	2500	1530	61.4	35 - 115	
Hexachlorocyclopentadiene	2500	1660	66.5	30 - 110	
2,4,6-Trichlorophenol	2500	1800	72.1	40 - 110	
2,4,5-Trichlorophenol	2500	1970	78.9	40 - 110	
2-Chloronaphthalene	2500	1690	67.7	40 - 105	
2-Nitroaniline	2500	2090	83.7	45 - 120	
Dimethylphthalate	2500	2070	82.9	45 - 115	
Acenaphthylene	2500	1860	74.3	40 - 110	
2,6-Dinitrotoluene	2500	2170	86.6	50 - 125	
3-Nitroaniline	2500	2550	102	50 - 130	
Acenaphthene	2500	1870	74.7	40 - 110	
2,4-Dinitrophenol	2500	2030	81.2	40 - 130	
4-Nitrophenol	2500	2700	108	45 - 140	
Dibenzofuran	2500	1800	71.9	35 - 110	
2,4-Dinitrotoluene	2500	2650	106	50 - 130	
Diethylphthalate	2500	2490	99.8	50 - 130	
4-Chlorophenyl-phenyl ether	2500	1860	74.3	40 - 110	
Fluorene	2500	2030	81.3	45 - 115	
4-Nitroaniline	2500	2990	120	35 - 140	
4,6-Dinitro-2-methylphenol	2500	2420	96.8	45 - 130	
N-Nitrosodiphenylamine	2500	2430	97.0	50 - 130	
4-Bromophenyl-phenylether	2500	1870	74.8	40 - 115	

KEMRON FORMS - Modified 05/01/2006
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KEMRON Environmental Services

LABORATORY CONTROL SAMPLE (LCS)

Login Number: L0605576 | Run Date: 05/26/2006 | Sample ID: WG214036-02
Instrument ID: HPMS5 | Run Time: 15:36 | Prep Method: 3545
File ID: 5M40891 | Analyst: ALT | Method: 8270C
Workgroup (AAB#): WG214172 | Matrix: Solid | Units: ug/kg
Contract #: | Cal ID: HPMS5-15-MAY-06

Analytes	Expected	Found	% Rec	LCS Limits	Q
Hexachlorobenzene	2500	2310	92.5	45 - 120	
Pentachlorophenol	2500	2740	110	50 - 150	
Phenanthrene	2500	2520	101	50 - 130	
Anthracene	2500	2590	103	55 - 130	
Carbazole	2500	2860	115	50 - 140	
Di-N-Butylphthalate	2500	2870	115	55 - 140	
Fluoranthene	2500	2830	113	55 - 140	
Pyrene	2500	2630	105	45 - 135	
Butylbenzylphthalate	2500	2850	114	50 - 150	
3,3'-Dichlorobenzidine	2500	2950	118	40 - 140	
Benzo(a)anthracene	2500	2740	110	50 - 130	
Chrysene	2500	2630	105	55 - 140	
bis(2-Ethylhexyl)phthalate	2500	2840	114	50 - 150	
Di-n-octylphthalate	2500	2940	117	40 - 145	
Benzo(b)fluoranthene	2500	2780	111	45 - 125	
Benzo(k)fluoranthene	2500	2680	107	45 - 135	
Benzo(a)pyrene	2500	2630	105	50 - 130	
Indeno(1,2,3-cd)pyrene	2500	2640	106	50 - 135	
Dibenzo(a,h)Anthracene	2500	2670	107	40 - 140	
Benzo(g,h,i)Perylene	2500	2590	104	40 - 140	

Surrogates	% Recovery	Surrogate Limits	Qualifier
2-Fluorophenol	59.7	25 - 121	PASS
Phenol-d5	68.6	24 - 113	PASS
Nitrobenzene-d5	60.0	23 - 120	PASS
2-Fluorobiphenyl	66.9	30 - 115	PASS
2,4,6-Tribromophenol	105	19 - 122	PASS
P-Terphenyl-d14	121	18 - 137	PASS

* FAILS %REC LIMIT

KEMRON FORMS - Modified 05/01/2006
Version 1.5 PDF File ID: 488874
Report generated 06/05/2006 14:46

KEMRON Environmental Services

LABORATORY CONTROL SAMPLE (LCS)

Login Number: L0605576 Run Date: 06/01/2006 Sample ID: WG214273-03
Instrument ID: HPMS4 Run Time: 13:41 Prep Method: 3510C
File ID: 4M33224 Analyst: CLK Method: 8270C
Workgroup (AAB#): WG214398 Matrix: Water Units: ug/L
Contract #: Cal ID: HPMS4-10-MAY-06

Analytes	Expected	Found	% Rec	LCS Limits	Q
o-Cresol	50.0	38.5	76.9	34 - 120	
m-,p-Cresol	50.0	38.8	77.7	25 - 120	
1,4-Dichlorobenzene	50.0	36.0	72.0	33 - 120	
2,4-Dinitrotoluene	50.0	53.5	107	45 - 140	
Hexachlorobenzene	50.0	47.7	95.4	50 - 130	
Hexachlorobutadiene	50.0	35.8	71.5	30 - 120	
Hexachloroethane	50.0	33.9	67.9	40 - 107	
Nitrobenzene	50.0	36.9	73.8	42 - 106	
Pentachlorophenol	50.0	60.4	121	50 - 149	
Pyridine	50.0	7.68	15.4	10 - 120	
2,4,5-Trichlorophenol	50.0	50.9	102	48 - 132	
2,4,6-Trichlorophenol	50.0	47.8	95.6	50 - 135	

Surrogates	% Recovery	Surrogate Limits	Qualifier
2-Fluorophenol	50.2	21 - 100	PASS
Phenol-d5	35.3	10 - 94	PASS
Nitrobenzene-d5	77.8	35 - 114	PASS
2-Fluorobiphenyl	91.6	43 - 116	PASS
2,4,6-Tribromophenol	97.6	10 - 123	PASS
p-Terphenyl-d14	104	33 - 141	PASS

* FAILS %REC LIMIT

KEMRON FORMS - Modified 05/01/2006
Version 1.5 PDF File ID: 488861
Report generated 06/05/2006 15:42

KEMRON Environmental Services

LABORATORY CONTROL SAMPLE (LCS)

Login Number: L0605576 Analyst: ALT Prep Method: 3545
Instrument ID: HPMS5 Matrix: Soil Method: 8270C
Workgroup (AAB#): WG214172 Units: ug/kg
Sample ID: WG214036-02 LCS File ID: 5M40891 Run Date: 05/26/2006 15:36
Sample ID: WG214036-03 LCS2 File ID: 5M40892 Run Date: 05/26/2006 16:08

Analytes	LCS			LCS2			%RPD	%Rec Limits	RPD Lmt	Q
	Known	Found	% REC	Known	Found	% REC				
Phenol	2500	1660	66.4	2500	1630	65.1	1.99	35 - 100	51	
Bis(2-Chloroethyl)ether	2500	1680	67.3	2500	1600	64.1	4.83	30 - 100	52	
2-Chlorophenol	2500	1610	64.4	2500	1560	62.3	3.43	35 - 105	47	
2-Methylphenol	2500	1660	66.5	2500	1640	65.4	1.65	35 - 100	52	
Acetophenone	2500	1630	65.3	2500	1620	64.7	0.895	40 - 140	40	
bis(2-Chloroisopropyl)ether	2500	1690	67.5	2500	1650	66.1	2.13	20 - 115	49	
3-,4-Methylphenol	2500	1720	68.9	2500	1700	68.2	1.11	35 - 105	52	
N-Nitroso-di-n-propylamine	2500	1890	75.6	2500	1870	74.9	0.947	35 - 110	59	
Hexachloroethane	2500	1590	63.5	2500	1530	61.3	3.53	30 - 100	47	
Nitrobenzene	2500	1530	61.3	2500	1540	61.8	0.815	35 - 100	50	
Isophorone	2500	1680	67.1	2500	1710	68.5	2.05	35 - 100	62	
2-Nitrophenol	2500	1460	58.6	2500	1460	58.5	0.125	35 - 100	60	
2,4-Dimethylphenol	2500	1440	57.7	2500	1570	62.7	8.37	30 - 105	57	
Bis(2-Chloroethoxy)Methane	2500	1590	63.6	2500	1610	64.5	1.51	30 - 100	53	
2,4-Dichlorophenol	2500	1590	63.4	2500	1590	63.5	0.162	35 - 110	53	
Naphthalene	2500	1520	60.9	2500	1520	60.6	0.514	35 - 100	45	
4-Chloroaniline	2500	1500	60.0	2500	1570	62.8	4.63	35 - 100	73	
Hexachlorobutadiene	2500	1610	64.4	2500	1580	63.3	1.75	30 - 100	52	
4-Chloro-3-methylphenol	2500	1820	72.8	2500	1860	74.5	2.28	40 - 100	62	
2-Methylnaphthalene	2500	1530	61.4	2500	1560	62.2	1.39	35 - 115	49	
Hexachlorocyclopentadiene	2500	1660	66.5	2500	1790	71.8	7.61	30 - 110	60	
2,4,6-Trichlorophenol	2500	1800	72.1	2500	1800	72.0	0.144	40 - 110	63	
2,4,5-Trichlorophenol	2500	1970	78.9	2500	1970	78.9	0.0017	40 - 110	63	
2-Chloronaphthalene	2500	1690	67.7	2500	1760	70.2	3.64	40 - 105	50	
2-Nitroaniline	2500	2090	83.7	2500	2210	88.4	5.39	45 - 120	67	
Dimethylphthalate	2500	2070	82.9	2500	2260	90.4	8.68	45 - 115	63	
Acenaphthylene	2500	1860	74.3	2500	1940	77.5	4.24	40 - 110	53	
2,6-Dinitrotoluene	2500	2170	86.6	2500	2390	95.7	9.98	50 - 125	69	
3-Nitroaniline	2500	2550	102	2500	2660	106	4.07	50 - 130	86	
Acenaphthene	2500	1870	74.7	2500	1940	77.6	3.78	40 - 110	70	
2,4-Dinitrophenol	2500	2030	81.2	2500	2150	86.0	5.80	40 - 130	72	
4-Nitrophenol	2500	2700	108	2500	2830	113	4.40	45 - 140	99	
Dibenzofuran	2500	1800	71.9	2500	1930	77.2	7.04	35 - 110	55	
2,4-Dinitrotoluene	2500	2650	106	2500	2790	112	5.45	50 - 130	75	
Diethylphthalate	2500	2490	99.8	2500	2660	106	6.43	50 - 130	70	
4-Chlorophenyl-phenyl ether	2500	1860	74.3	2500	2000	80.1	7.61	40 - 110	64	
Fluorene	2500	2030	81.3	2500	2190	87.6	7.43	45 - 115	55	
4-Nitroaniline	2500	2990	120	2500	3070	123	2.51	35 - 140	95	
4,6-Dinitro-2-methylphenol	2500	2420	96.8	2500	2480	99.4	2.66	45 - 130	86	
N-Nitrosodiphenylamine	2500	2430	97.0	2500	2560	102	5.43	50 - 130	65	
4-Bromophenyl-phenylether	2500	1870	74.8	2500	1960	78.6	4.96	40 - 115	58	
Hexachlorobenzene	2500	2310	92.5	2500	2440	97.5	5.25	45 - 120	68	

KEMRON FORMS - Modified 06/02/2006
Version 1.5 PDF File ID: 485947
Report generated 06/07/2006 15:08

KEMRON Environmental Services

LABORATORY CONTROL SAMPLE (LCS)

Login Number: L0605576 Analyst: ALT Prep Method: 3545
Instrument ID: HPMS5 Matrix: Soil Method: 8270C
Workgroup (AAB#): WG214172 Units: ug/kg
Sample ID: WG214036-02 LCS File ID: 5M40891 Run Date: 05/26/2006 15:36
Sample ID: WG214036-03 LCS2 File ID: 5M40892 Run Date: 05/26/2006 16:08

Analytes	LCS			LCS2			%RPD	%Rec Limits	RPD Lmt	Q
	Known	Found	% REC	Known	Found	% REC				
Pentachlorophenol	2500	2740	110	2500	2810	112	2.24	50 - 150	77	
Phenanthrene	2500	2520	101	2500	2630	105	4.25	50 - 130	70	
Anthracene	2500	2590	103	2500	2670	107	3.22	55 - 130	72	
Carbazole	2500	2860	115	2500	2910	116	1.61	50 - 140	99	
Di-N-Butylphthalate	2500	2870	115	2500	2920	117	1.95	55 - 140	82	
Fluoranthene	2500	2830	113	2500	2880	115	1.87	55 - 140	80	
Pyrene	2500	2630	105	2500	2700	108	2.68	45 - 135	89	
Butylbenzylphthalate	2500	2850	114	2500	2930	117	2.57	50 - 150	86	
3,3'-Dichlorobenzidine	2500	2950	118	2500	3080	123	4.45	40 - 140	135	
Benzo(a)anthracene	2500	2740	110	2500	2790	112	1.78	50 - 130	83	
Chrysene	2500	2630	105	2500	2700	108	2.68	55 - 140	72	
bis(2-Ethylhexyl)phthalate	2500	2840	114	2500	2890	116	1.72	50 - 150	83	
Di-n-octylphthalate	2500	2940	117	2500	3030	121	3.06	40 - 145	96	
Benzo(b)fluoranthene	2500	2780	111	2500	2820	113	1.36	45 - 125	76	
Benzo(k)fluoranthene	2500	2680	107	2500	2880	115	7.06	45 - 135	79	
Benzo(a)pyrene	2500	2630	105	2500	2720	109	3.11	50 - 130	72	
Indeno(1,2,3-cd)pyrene	2500	2640	106	2500	2710	108	2.64	50 - 135	84	
Dibenzo(a,h)Anthracene	2500	2670	107	2500	2750	110	3.18	40 - 140	88	
Benzo(g,h,i)Perylene	2500	2590	104	2500	2670	107	2.75	40 - 140	85	

Surogates	LCS	LCS2	Surrogate Limits	Qualifier
	% Recovery	% Recovery		
2-Fluorophenol	59.7	56.8	25 - 121	PASS
Phenol-d5	68.6	66.1	24 - 113	PASS
Nitrobenzene-d5	60.0	60.4	23 - 120	PASS
2-Fluorobiphenyl	66.9	67.9	30 - 115	PASS
2,4,6-Tribromophenol	105	107	19 - 122	PASS
P-Terphenyl-d14	121	123	18 - 137	PASS

* FAILS %REC LIMIT

\# FAILS RPD LIMIT

KEMRON FORMS - Modified 06/02/2006
Version 1.5 PDF File ID: 485947
Report generated 06/07/2006 15:08

KEMRON Environmental Services

LABORATORY CONTROL SAMPLE (LCS)

Login Number: L0605576 Analyst: CLK Prep Method: 3510C
Instrument ID: HPMS4 Matrix: Leachate Method: 8270C
Workgroup (AAB#): WG214398 Units: ug/L
Sample ID: WG214273-03 LCS File ID: 4M33224 Run Date: 06/01/2006 13:41
Sample ID: WG214273-04 LCS2 File ID: 4M33225 Run Date: 06/01/2006 14:17

Analytes	LCS			LCS2			%RPD	%Rec Limits	RPD Lmt	Q
	Known	Found	% REC	Known	Found	% REC				
o-Cresol	50.0	38.5	76.9	50.0	39.2	78.4	1.89	34 - 120	50	
m-,p-Cresol	50.0	38.8	77.7	50.0	39.3	78.7	1.30	25 - 120	35	
1,4-Dichlorobenzene	50.0	36.0	72.0	50.0	35.5	71.0	1.41	33 - 120	37	
2,4-Dinitrotoluene	50.0	53.5	107	50.0	54.9	110	2.59	45 - 140	56	
Hexachlorobenzene	50.0	47.7	95.4	50.0	48.4	96.7	1.34	50 - 130	55	
Hexachlorobutadiene	50.0	35.8	71.5	50.0	36.0	72.0	0.740	30 - 120	59	
Hexachloroethane	50.0	33.9	67.9	50.0	33.8	67.7	0.319	40 - 107	47	
Nitrobenzene	50.0	36.9	73.8	50.0	36.8	73.6	0.169	42 - 106	45	
Pentachlorophenol	50.0	60.4	121	50.0	61.3	123	1.54	50 - 149	60	
Pyridine	50.0	7.68	15.4	50.0	6.58	13.2	15.5	10 - 120	60	
2,4,5-Trichlorophenol	50.0	50.9	102	50.0	51.4	103	0.964	48 - 132	62	
2,4,6-Trichlorophenol	50.0	47.8	95.6	50.0	49.2	98.4	2.92	50 - 135	60	

Surogates	LCS	LCS2	Surrogate Limits	Qualifier
	% Recovery	% Recovery		
2-Fluorophenol	50.2	50.7	21 - 100	PASS
Phenol-d5	35.3	35.9	10 - 94	PASS
Nitrobenzene-d5	77.8	78.4	35 - 114	PASS
2-Fluorobiphenyl	91.6	93.8	43 - 116	PASS
2,4,6-Tribromophenol	97.6	98.9	10 - 123	PASS
p-Terphenyl-d14	104	106	33 - 141	PASS

* FAILS %REC LIMIT

\# FAILS RPD LIMIT

KEMRON FORMS - Modified 06/02/2006
Version 1.5 PDF File ID: 488862
Report generated 06/05/2006 15:44

KEMRON ENVIRONMENTAL SERVICES
ORGANIC INSTRUMENT CHECK

DFTPP

Login Number: L0605576 Tune ID: WG212888-01
Instrument: HPMS4 Run Date: 05/10/2006
Analyst: CLK Run Time: 13:03
Workgroup: WG212888 File ID: 4M32961
Cal ID: HPMS4-10-MAY-06

Target	Rel. to	Lower	Upper	Rel.	Raw	Result
51.0	198	30.0	60.0	38.4	197430	PASS
68.0	69.0	0	2.00	0	0	PASS
69.0	198	0	100	38.8	199829	PASS
70.0	69.0	0	2.00	0.531	1061	PASS
127	198	40.0	60.0	51.3	264213	PASS
197	198	0	1.00	0	0	PASS
198	198	100	100	100	514581	PASS
199	198	5.00	9.00	6.63	34117	PASS
275	198	10.0	30.0	25.1	129296	PASS
365	198	1.00	100	2.75	14129	PASS
441	443	0.0100	100	80.4	63090	PASS
442	198	40.0	100	79.0	406762	PASS
443	442	17.0	23.0	19.3	78506	PASS

This check relates to the following samples, MS, MSD:

Lab ID	Client ID	Tag	Date Analyzed	Q
WG212888-09	SSCV	01	05/10/2006 18:06	
WG212888-08	STD	01	05/10/2006 17:31	
WG212888-07	STD	01	05/10/2006 16:55	
WG212888-06	STD	01	05/10/2006 16:20	
WG212888-05	STD	01	05/10/2006 15:44	
WG212888-04	STD	01	05/10/2006 15:08	
WG212888-03	STD	01	05/10/2006 14:33	
WG212888-02	CCV	01	05/10/2006 13:58	

* Sample past 12 hour tune limit

KEMRON FORMS - Modified 02/14/2006
Version 1.3 PDF File ID: 491009
Report generated 06/06/2006 16:55

KEMRON ENVIRONMENTAL SERVICES
ORGANIC INSTRUMENT CHECK

DFTPP

Login Number: L0605576 Tune ID: WG213265-01
Instrument: HPMS5 Run Date: 05/15/2006
Analyst: ALT Run Time: 08:53
Workgroup: WG213265 File ID: 5M40735
Cal ID: HPMS5-18-APR-06

Target	Rel. to	Lower	Upper	Rel.	Raw	Result
51.0	198	30.0	60.0	45.1	139063	PASS
68.0	69.0	0	2.00	1.23	1488	PASS
69.0	198	0	100	39.1	120639	PASS
70.0	69.0	0	2.00	0.516	623	PASS
127	198	40.0	60.0	49.4	152320	PASS
197	198	0	1.00	0	0	PASS
198	198	100	100	100	308437	PASS
199	198	5.00	9.00	6.90	21282	PASS
275	198	10.0	30.0	20.1	62045	PASS
365	198	1.00	100	2.20	6778	PASS
441	443	0.0100	100	65.2	24142	PASS
442	198	40.0	100	60.4	186253	PASS
443	442	17.0	23.0	19.9	37024	PASS

This check relates to the following samples, MS, MSD:

Lab ID	Client ID	Tag	Date Analyzed	Q
WG213265-09	SSCV	01	05/15/2006 14:02	
WG213265-08	STD	01	05/15/2006 13:30	
WG213265-07	STD	01	05/15/2006 12:58	
WG213265-06	STD	01	05/15/2006 12:25	
WG213265-05	STD	01	05/15/2006 11:52	
WG213265-04	STD	01	05/15/2006 11:21	
WG213265-03	STD	01	05/15/2006 10:48	
WG213265-02	CCV	01	05/15/2006 10:16	

* Sample past 12 hour tune limit

KEMRON FORMS - Modified 02/14/2006
Version 1.3 PDF File ID: 491009
Report generated 06/06/2006 16:55

KEMRON ENVIRONMENTAL SERVICES
ORGANIC INSTRUMENT CHECK

DFTPP

Login Number: L0605576 | Tune ID: WG214107-01
Instrument: HPMS5 | Run Date: 05/26/2006
Analyst: ALT | Run Time: 13:10
Workgroup: WG214107 | File ID: 5M40886
Cal ID: HPMS5 -15-MAY-06

Target	Rel. to	Lower	Upper	Rel.	Raw	Result
51.0	198	30.0	60.0	49.8	113789	PASS
68.0	69.0	0	2.00	0.991	978	PASS
69.0	198	0	100	43.2	98711	PASS
70.0	69.0	0	2.00	0.429	423	PASS
127	198	40.0	60.0	53.5	122170	PASS
197	198	0	1.00	0	0	PASS
198	198	100	100	100	228352	PASS
199	198	5.00	9.00	6.74	15380	PASS
275	198	10.0	30.0	20.3	46365	PASS
365	198	1.00	100	2.52	5757	PASS
441	443	0.0100	100	72.2	16502	PASS
442	198	40.0	100	54.5	124482	PASS
443	442	17.0	23.0	18.4	22844	PASS

This check relates to the following CCV:

Lab ID	Client ID	Date Analyzed	
WG214107-02	CCV	05/26/2006 13:29	

This check relates to the following samples & batch QC:

Lab ID	Client ID	Tag	Date Analyzed	Q
WG214036-01	BLANK	01	05/26/2006 15:05	
WG214036-02	LCS	01	05/26/2006 15:36	
WG214036-03	LCS2	01	05/26/2006 16:08	
L0605576-04	SM141SB03052406	01	05/26/2006 16:40	
L0605576-05	SM141FD03052406	01	05/26/2006 17:13	
L0605576-06	SM141SB02052406	01	05/26/2006 17:44	
L0605576-03	SM142SB02052406	DL01	05/26/2006 19:52	

* Sample past 12 hour tune limit

KEMRON FORMS - Modified 03/15/2006
Version 1.3 PDF File ID: 491010
Report generated 06/06/2006 16:55

KEMRON ENVIRONMENTAL SERVICES
ORGANIC INSTRUMENT CHECK

DFTPP

Login Number: L0605576 | Tune ID: WG214203-01
Instrument: HPMS5 | Run Date: 05/30/2006
Analyst: ALT | Run Time: 12:57
Workgroup: WG214203 | File ID: 5M40912
Cal ID: HPMS5-15-MAY-06

Target	Rel. to	Lower	Upper	Rel.	Raw	Result
51.0	198	30.0	60.0	49.4	106463	PASS
68.0	69.0	0	2.00	0.620	578	PASS
69.0	198	0	100	43.2	93210	PASS
70.0	69.0	0	2.00	0.143	133	PASS
127	198	40.0	60.0	53.2	114786	PASS
197	198	0	1.00	0	0	PASS
198	198	100	100	100	215722	PASS
199	198	5.00	9.00	6.89	14854	PASS
275	198	10.0	30.0	20.2	43645	PASS
365	198	1.00	100	2.49	5377	PASS
441	443	0.0100	100	68.3	14865	PASS
442	198	40.0	100	53.2	114725	PASS
443	442	17.0	23.0	19.0	21778	PASS

This check relates to the following CCV:

Lab ID	Client ID	Date Analyzed	
WG214203-02	CCV	05/30/2006 13:15	

This check relates to the following samples & batch QC:

Lab ID	Client ID	Tag	Date Analyzed	Q
L0605576-07	SM141SB01052406	01	05/30/2006 22:15	
L0605576-02	SM142SB01052406	DL01	05/30/2006 22:47	

*** Sample past 12 hour tune limit**

KEMRON FORMS - Modified 03/15/2006
Version 1.3 PDF File ID: 491010
Report generated 06/06/2006 16:55

KEMRON ENVIRONMENTAL SERVICES
ORGANIC INSTRUMENT CHECK

DFTPP

Login Number: L0605576 | Tune ID: WG214395-01
Instrument: HPMS4 | Run Date: 06/01/2006
Analyst: CLK | Run Time: 12:11
Workgroup: WG214395 | File ID: 4M33221
Cal ID: HPMS4 -10-MAY-06

Target	Rel. to	Lower	Upper	Rel.	Raw	Result
51.0	198	30.0	60.0	38.1	90058	PASS
68.0	69.0	0	2.00	0	0	PASS
69.0	198	0	100	39.1	92494	PASS
70.0	69.0	0	2.00	0.591	547	PASS
127	198	40.0	60.0	53.3	126069	PASS
197	198	0	1.00	0	0	PASS
198	198	100	100	100	236352	PASS
199	198	5.00	9.00	6.81	16088	PASS
275	198	10.0	30.0	25.3	59845	PASS
365	198	1.00	100	2.88	6809	PASS
441	443	0.0100	100	31.5	11370	PASS
442	198	40.0	100	81.0	191445	PASS
443	442	17.0	23.0	18.8	36074	PASS

This check relates to the following CCV:

Lab ID	Client ID	Date Analyzed	
WG214395-02	CCV	06/01/2006 12:29	

This check relates to the following samples & batch QC:

Lab ID	Client ID	Tag	Date Analyzed	Q
WG214365-02	BLANK	01	06/01/2006 15:29	
WG214365-03	LCS	01	06/01/2006 16:05	

* Sample past 12 hour tune limit

KEMRON FORMS - Modified 03/15/2006
Version 1.3 PDF File ID: 491010
Report generated 06/06/2006 16:55

KEMRON ENVIRONMENTAL SERVICES
ORGANIC INSTRUMENT CHECK

DFTPP

Login Number: L0605576 | Tune ID: WG214530-01
Instrument: HPMS5 | Run Date: 06/02/2006
Analyst: ALT | Run Time: 13:29
Workgroup: WG214530 | File ID: 5M40987
Cal ID: HPMS5 -15-MAY-06

Target	Rel. to	Lower	Upper	Rel.	Raw	Result
51.0	198	30.0	60.0	44.1	98601	PASS
68.0	69.0	0	2.00	1.00	856	PASS
69.0	198	0	100	38.1	85341	PASS
70.0	69.0	0	2.00	0.697	595	PASS
127	198	40.0	60.0	51.8	115802	PASS
197	198	0	1.00	0	0	PASS
198	198	100	100	100	223744	PASS
199	198	5.00	9.00	6.33	14174	PASS
275	198	10.0	30.0	21.8	48717	PASS
365	198	1.00	100	2.98	6668	PASS
441	443	0.0100	100	66.1	17955	PASS
442	198	40.0	100	62.7	140234	PASS
443	442	17.0	23.0	19.4	27165	PASS

This check relates to the following CCV:

Lab ID	Client ID	Date Analyzed	
WG214530-02	CCV	06/02/2006 13:48	

This check relates to the following samples & batch QC:

Lab ID	Client ID	Tag	Date Analyzed	Q
L0605576-07	SM141SB01052406	RE1	06/02/2006 22:40	

*** Sample past 12 hour tune limit**

KEMRON FORMS - Modified 03/15/2006
Version 1.3 PDF File ID: 491010
Report generated 06/06/2006 16:55

KEMRON Environmental Services

INITIAL CALIBRATION SUMMARY

Login Number: L0605576 **Instrument ID:** HPMS4
Analytical Method: 8270C **Initial Calibration Date:** 10-MAY-06 17:31
ICAL Workgroup: WG212888 **Column ID:** F

Analyte		AVG RF	% RSD	LINEAR	QUAD
2,4,6-Trichlorophenol	CCC	0.3283	5.49		
2,4-Dichlorophenol	CCC	0.2681	3.67		
2-Nitrophenol	CCC	0.1847	5.51		
4-Chloro-3-Methylphenol	CCC	0.2730	4.09		
Acenaphthene	CCC	1.090	9.06		
Benzo[a]pyrene	CCC	1.248	2.72		
Di-n-Octyl Phthalate	CCC	1.580	5.20		
Fluoranthene	CCC	1.210	10.1		
Hexachlorobutadiene	CCC	0.1500	6.47		
Pentachlorophenol	CCC	0.1338	6.25		
Phenol	CCC	1.636	4.78		
n-Nitrosodiphenylamine	CCC	0.7356	8.20		
2,4-Dinitrophenol	SPCC	0.1177	20.8	0.999	
4-Nitrophenol	SPCC	0.2111	3.85		
Hexachlorocyclopentadiene	SPCC	0.2264	20.9	0.999	
n-Nitrosodipropylamine	SPCC	0.8445	15.1		1.00
2,4,5-Trichlorophenol		0.3508	3.83		
2,4-Dimethylphenol		0.3152	7.28		
2,4-Dinitrotoluene		0.3479	8.33		
2,6-Dinitrotoluene		0.3049	3.86		
2-Chloronaphthalene		1.260	9.11		
2-Chlorophenol		1.443	2.61		
2-Methylnaphthalene		0.6550	8.07		
2-Methylphenol		1.085	3.55		
2-Nitroaniline		0.3072	4.63		
3,3'-Dichlorobenzidine		0.4577	5.51		
3-,4-Methylphenol		1.430	3.31		
3-Nitroaniline		0.3325	1.30		
4,6-Dinitro-2-Methylphenol		0.1368	10.3		
4-Bromophenyl Phenyl Ether		0.2312	6.48		
4-Chloroaniline		0.4339	5.74		
4-Chlorophenyl Phenyl Ether		0.5924	11.5		
4-Nitroaniline		0.3427	3.15		
Acenaphthylene		1.794	9.53		
Anthracene		1.213	9.76		
Benzo[a]anthracene		1.297	6.51		
Benzo[b]fluoranthene		1.354	7.23		
Benzo[ghi]perylene		1.262	2.28		
Benzo[k]fluoranthene		1.234	5.20		
Butyl Benzyl Phthalate		0.6078	17.6		0.999
Carbazole		1.119	7.89		
Chrysene		1.264	7.89		
Di-n-Butyl Phthalate		1.383	10.4		
Dibenz[ah]anthracene		1.234	3.42		
Dibenzofuran		1.494	12.9		

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KEMRON Environmental Services

INITIAL CALIBRATION SUMMARY

Login Number: L0605576 **Instrument ID:** HPMS4
Analytical Method: 8270C **Initial Calibration Date:** 10-MAY-06 17:31
ICAL Workgroup: WG212888 **Column ID:** F

Analyte		AVG RF	% RSD	LINEAR	QUAD
Diethylphthalate		1.235	7.42		
Dimethylphthalate		1.229	7.69		
Fluorene		1.272	9.60		
Hexachlorobenzene		0.2427	7.56		
Hexachloroethane		0.5807	2.90		
Indeno[1,2,3-cd]pyrene		1.456	2.66		
Isophorone		0.5845	6.16		
Naphthalene		1.013	9.65		
Nitrobenzene		0.3309	5.49		
Phenanthrene		1.201	10.2		
Pyrene		1.416	8.99		
bis(2-Chloroethoxy)methane		0.4697	14.0		
bis(2-Chloroethyl)ether		0.9052	10.3		
bis(2-Chloroisopropyl)ether		2.179	8.93		
bis(2-Ethylhexyl)phthalate		0.9425	6.50		
2,4,6-Tribromophenol	SURR	0.1557	5.93		
2-Fluorobiphenyl	SURR	1.211	9.02		
2-Fluorophenol	SURR	1.291	2.06		
Nitrobenzene-d5	SURR	0.3230	4.29		
Phenol-d5	SURR	1.516	4.39		
p-Terphenyl-d14	SURR	0.9339	8.86		

KEMRON Environmental Services

INITIAL CALIBRATION SUMMARY

Login Number: L0605576 **Instrument ID:** HPMS5
Analytical Method: 8270C **Initial Calibration Date:** 15-MAY-06 13:30
ICAL Workgroup: WG213265 **Column ID:** F

Analyte		AVG RF	% RSD	LINEAR	QUAD
2,4,6-Trichlorophenol	CCC	0.3613	5.95		
2,4-Dichlorophenol	CCC	0.3198	4.13		
2-Nitrophenol	CCC	0.2100	5.33		
4-Chloro-3-Methylphenol	CCC	0.3072	4.25		
Acenaphthene	CCC	1.175	5.67		
Benzo[a]pyrene	CCC	1.329	2.91		
Di-n-Octyl Phthalate	CCC	2.123	6.28		
Fluoranthene	CCC	1.348	5.16		
Hexachlorobutadiene	CCC	0.1746	3.27		
Pentachlorophenol	CCC	0.1318	16.5	0.999	
Phenol	CCC	1.619	3.17		
n-Nitrosodiphenylamine	CCC	0.6281	3.75		
2,4-Dinitrophenol	SPCC	0.1250	27.5	0.998	
4-Nitrophenol	SPCC	0.2516	4.24		
Hexachlorocyclopentadiene	SPCC	0.2231	17.8	0.999	
n-Nitrosodipropylamine	SPCC	0.8572	6.36		
2,4,5-Trichlorophenol		0.3930	5.37		
2,4-Dimethylphenol		0.3440	3.28		
2,4-Dinitrotoluene		0.3794	9.28		
2,6-Dinitrotoluene		0.2946	6.86		
2-Chloronaphthalene		1.139	4.10		
2-Chlorophenol		1.397	2.43		
2-Methylnaphthalene		0.7721	5.35		
2-Methylphenol		1.023	3.29		
2-Nitroaniline		0.3741	4.20		
3,3'-Dichlorobenzidine		0.3521	13.3		
3-,4-Methylphenol		1.445	4.49		
3-Nitroaniline		0.3233	6.92		
4,6-Dinitro-2-Methylphenol		0.1454	15.9	0.999	
4-Bromophenyl Phenyl Ether		0.2376	2.91		
4-Chloroaniline		0.4116	4.07		
4-Chlorophenyl Phenyl Ether		0.6148	3.35		
4-Nitroaniline		0.3230	8.13		
Acenaphthylene		1.881	4.84		
Anthracene		1.328	5.78		
Benzo[a]anthracene		1.337	3.70		
Benzo[b]fluoranthene		1.478	3.60		
Benzo[ghi]perylene		1.220	2.95		
Benzo[k]fluoranthene		1.367	4.76		
Butyl Benzyl Phthalate		0.7877	4.69		
Carbazole		1.184	8.08		
Chrysene		1.331	4.25		
Di-n-Butyl Phthalate		1.486	5.30		
Dibenz[ah]anthracene		1.218	4.46		
Dibenzofuran		1.702	5.56		

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KEMRON Environmental Services

INITIAL CALIBRATION SUMMARY

Login Number: L0605576 **Instrument ID:** HPMS5
Analytical Method: 8270C **Initial Calibration Date:** 15-MAY-06 13:30
ICAL Workgroup: WG213265 **Column ID:** F

Analyte		AVG RF	% RSD	LINEAR	QUAD
Diethylphthalate		1.286	4.75		
Dimethylphthalate		1.313	3.77		
Fluorene		1.343	6.77		
Hexachlorobenzene		0.2322	2.75		
Hexachloroethane		0.5959	3.62		
Indeno[1,2,3-cd]pyrene		1.493	3.78		
Isophorone		0.6084	3.51		
Naphthalene		1.077	5.32		
Nitrobenzene		0.3723	3.80		
Phenanthrene		1.319	7.09		
Pyrene		1.661	5.69		
bis(2-Chloroethoxy)methane		0.3836	4.51		
bis(2-Chloroethyl)ether		0.9864	6.00		
bis(2-Chloroisopropyl)ether		2.442	9.74		
bis(2-Ethylhexyl)phthalate		1.084	5.10		
2,4,6-Tribromophenol	SURR	0.1400	12.1		
2-Fluorobiphenyl	SURR	1.342	5.21		
2-Fluorophenol	SURR	1.284	2.54		
Nitrobenzene-d5	SURR	0.3796	3.16		
Phenol-d5	SURR	1.498	2.86		
p-Terphenyl-d14	SURR	1.018	3.12		

KEMRON Environmental Services

INITIAL CALIBRATION DATA

Login Number:L0605576 **Instrument ID:HPMS4**

Analytical Method:8270C **Initial Calibration Date:10-MAY-06 17:31**

Column ID:F

Analyte	WG212888-02			WG212888-03			WG212888-04		
	CONC	RESP	RF	CONC	RESP	RF	CONC	RESP	RF
2,4,6-Trichlorophenol	50.0	630279	0.3365	3.00	31348	0.2931	15.0	178627	0.3373
2,4-Dichlorophenol	50.0	878638	0.2691	3.00	49586	0.2589	15.0	264718	0.2817
2-Nitrophenol	50.0	631206	0.1933	3.00	32361	0.1689	15.0	180942	0.1926
4-Chloro-3-Methylphenol	50.0	888302	0.2720	3.00	53608	0.2799	15.0	268804	0.2861
Acenaphthene	50.0	2039286	1.089	3.00	125902	1.177	15.0	640515	1.210
Benzo[a]pyrene	50.0	3182993	1.233	3.00	187510	1.247	15.0	979854	1.296
Di-n-Octyl Phthalate	50.0	4205428	1.629	3.00	215811	1.436	15.0	1241745	1.643
Fluoranthene	50.0	3397674	1.194	3.00	210859	1.334	15.0	1076449	1.346
Hexachlorobutadiene	50.0	479552	0.1468	3.00	30534	0.1594	15.0	152479	0.1623
Pentachlorophenol	50.0	393132	0.1382	NA	NA	NA	15.0	94432	0.1181
Phenol	50.0	1330683	1.635	3.00	81437	1.668	15.0	412478	1.733
n-Nitrosodiphenylamine	50.0	2074115	0.7289	3.00	125691	0.7949	15.0	644347	0.8058
2,4-Dinitrophenol	50.0	228051	0.1218	NA	NA	NA	15.0	41017	0.07750
4-Nitrophenol	50.0	401393	0.2143	NA	NA	NA	15.0	104092	0.1966
Hexachlorocyclopentadiene	50.0	471489	0.2518	3.00	13054	0.1220	15.0	117137	0.2212
n-Nitrosodipropylamine	50.0	682603	0.8387	3.00	48040	0.9839	15.0	233769	0.9821
2,4,5-Trichlorophenol	50.0	663501	0.3543	3.00	34799	0.3253	15.0	190453	0.3597
2,4-Dimethylphenol	50.0	1033755	0.3166	3.00	63111	0.3295	15.0	321073	0.3417
2,4-Dinitrotoluene	50.0	680558	0.3634	3.00	33714	0.3152	15.0	203197	0.3837
2,6-Dinitrotoluene	50.0	578499	0.3089	3.00	30470	0.2849	15.0	168306	0.3179
2-Chloronaphthalene	50.0	2337322	1.248	3.00	147933	1.383	15.0	735348	1.389
2-Chlorophenol	50.0	1169446	1.437	3.00	69809	1.430	15.0	355937	1.495
2-Methylnaphthalene	50.0	2126603	0.6512	3.00	134918	0.7044	15.0	672331	0.7155
2-Methylphenol	50.0	874935	1.075	3.00	53823	1.102	15.0	271658	1.141
2-Nitroaniline	50.0	576672	0.3079	NA	NA	NA	15.0	171269	0.3235
3,3'-Dichlorobenzidine	50.0	1153440	0.4468	3.00	72787	0.4959	15.0	357767	0.4826
3-,4-Methylphenol	50.0	1157928	1.423	3.00	69532	1.424	15.0	357396	1.502
3-Nitroaniline	50.0	626849	0.3347	NA	NA	NA	15.0	173677	0.3280
4,6-Dinitro-2-Methylphenol	50.0	394637	0.1387	NA	NA	NA	15.0	89871	0.1124
4-Bromophenyl Phenyl Ether	50.0	639414	0.2247	3.00	38885	0.2459	15.0	200545	0.2508
4-Chloroaniline	50.0	1360479	0.4166	3.00	82641	0.4314	15.0	442043	0.4704
4-Chlorophenyl Phenyl Ether	50.0	1107453	0.5913	3.00	70157	0.6559	15.0	354279	0.6691
4-Nitroaniline	50.0	645443	0.3446	NA	NA	NA	15.0	187737	0.3546
Acenaphthylene	50.0	3363777	1.796	3.00	209199	1.956	15.0	1050314	1.984
Anthracene	50.0	3413035	1.200	3.00	211294	1.336	15.0	1077271	1.347
Benzo[a]anthracene	50.0	3298264	1.278	3.00	203420	1.386	15.0	1034414	1.396
Benzo[b]fluoranthene	50.0	3440880	1.333	3.00	221961	1.476	15.0	1120240	1.482
Benzo[ghi]perylene	50.0	3219321	1.247	3.00	185420	1.233	15.0	983150	1.301
Benzo[k]fluoranthene	50.0	3221302	1.248	3.00	195325	1.299	15.0	995202	1.316
Butyl Benzyl Phthalate	50.0	1565537	0.6065	3.00	106532	0.7258	15.0	534491	0.7210
Carbazole	50.0	3176297	1.116	3.00	190284	1.204	15.0	967614	1.210
Chrysene	50.0	3216152	1.246	3.00	202828	1.382	15.0	1015300	1.370

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KEMRON Environmental Services

INITIAL CALIBRATION DATA

Login Number: L0605576 **Instrument ID:** HPMS4

Analytical Method: 8270C **Initial Calibration Date:** 10-MAY-06 17:31

Column ID: F

Analyte	WG212888-05			WG212888-06			WG212888-07		
	CONC	RESP	RF	CONC	RESP	RF	CONC	RESP	RF
2,4,6-Trichlorophenol	25.0	311395	0.3500	80.0	998116	0.3281	120	1492493	0.3201
2,4-Dichlorophenol	25.0	438016	0.2811	80.0	1385801	0.2633	120	2070102	0.2576
2-Nitrophenol	25.0	306170	0.1965	80.0	964395	0.1832	120	1406275	0.1750
4-Chloro-3-Methylphenol	25.0	444575	0.2853	80.0	1399916	0.2660	120	2063145	0.2567
Acenaphthene	25.0	1042886	1.172	80.0	3121066	1.026	120	4437960	0.9519
Benzo[a]pyrene	25.0	1613460	1.291	80.0	5074404	1.227	120	7522638	1.204
Di-n-Octyl Phthalate	25.0	2086119	1.670	80.0	6557748	1.585	120	9415402	1.507
Fluoranthene	25.0	1765176	1.314	80.0	5223644	1.133	120	7257495	1.048
Hexachlorobutadiene	25.0	246283	0.1581	80.0	752608	0.1430	120	1107561	0.1378
Pentachlorophenol	25.0	175499	0.1306	80.0	636754	0.1380	120	967763	0.1397
Phenol	25.0	677563	1.724	80.0	2048646	1.590	120	2972416	1.520
n-Nitrosodiphenylamine	25.0	1055245	0.7854	80.0	3203270	0.6945	120	4524416	0.6533
2,4-Dinitrophenol	25.0	88287	0.09920	80.0	397232	0.1306	120	648660	0.1391
4-Nitrophenol	25.0	183609	0.2064	80.0	661051	0.2173	120	1010926	0.2168
Hexachlorocyclopentadiene	25.0	214645	0.2412	80.0	761240	0.2502	120	1135774	0.2436
n-Nitrosodipropylamine	25.0	370684	0.9430	80.0	982605	0.7624	120	1310833	0.6702
2,4,5-Trichlorophenol	25.0	326852	0.3674	80.0	1069734	0.3516	120	1600241	0.3432
2,4-Dimethylphenol	25.0	527833	0.3388	80.0	1583213	0.3008	120	2254654	0.2806
2,4-Dinitrotoluene	25.0	338747	0.3807	80.0	1040606	0.3420	120	1458474	0.3128
2,6-Dinitrotoluene	25.0	282891	0.3179	80.0	923633	0.3036	120	1381899	0.2964
2-Chloronaphthalene	25.0	1202533	1.352	80.0	3590772	1.180	120	5160451	1.107
2-Chlorophenol	25.0	586570	1.492	80.0	1828909	1.419	120	2725154	1.393
2-Methylnaphthalene	25.0	1091897	0.7008	80.0	3263720	0.6201	120	4663854	0.5804
2-Methylphenol	25.0	440527	1.121	80.0	1370410	1.063	120	2020568	1.033
2-Nitroaniline	25.0	287901	0.3236	80.0	916917	0.3014	120	1342068	0.2879
3,3'-Dichlorobenzidine	25.0	579744	0.4694	80.0	1807706	0.4355	120	2671145	0.4294
3-,4-Methylphenol	25.0	582688	1.482	80.0	1810984	1.405	120	2667924	1.364
3-Nitroaniline	25.0	299832	0.3370	80.0	1011692	0.3325	120	1522681	0.3266
4,6-Dinitro-2-Methylphenol	25.0	172341	0.1283	80.0	668341	0.1449	120	1028982	0.1486
4-Bromophenyl Phenyl Ether	25.0	327452	0.2437	80.0	1014606	0.2200	120	1497900	0.2163
4-Chloroaniline	25.0	726612	0.4663	80.0	2232903	0.4243	120	3255219	0.4051
4-Chlorophenyl Phenyl Ether	25.0	578545	0.6502	80.0	1677628	0.5514	120	2298777	0.4930
4-Nitroaniline	25.0	315510	0.3546	80.0	1023582	0.3365	120	1526265	0.3274
Acenaphthylene	25.0	1720360	1.934	80.0	5131692	1.687	120	7181672	1.540
Anthracene	25.0	1756598	1.307	80.0	5264941	1.141	120	7293257	1.053
Benzo[a]anthracene	25.0	1687015	1.366	80.0	5141067	1.239	120	7376624	1.186
Benzo[b]fluoranthene	25.0	1737496	1.391	80.0	5334535	1.289	120	7892305	1.264
Benzo[ghi]perylene	25.0	1629056	1.304	80.0	5163550	1.248	120	7742585	1.240
Benzo[k]fluoranthene	25.0	1553802	1.244	80.0	5074385	1.227	120	7225684	1.157
Butyl Benzyl Phthalate	25.0	853531	0.6911	80.0	2202921	0.5308	120	2879231	0.4628
Carbazole	25.0	1614383	1.202	80.0	4892866	1.061	120	6902707	0.9968
Chrysene	25.0	1653259	1.339	80.0	4941686	1.191	120	7050767	1.133

KEMRON Environmental Services

INITIAL CALIBRATION DATA

Login Number: L0605576 **Instrument ID:** HPMS4

Analytical Method: 8270C **Initial Calibration Date:** 10-MAY-06 17:31

Column ID: F

Analyte	WG212888-08		
	CONC	RESP	RF
2,4,6-Trichlorophenol	100	1231222	0.3328
2,4-Dichlorophenol	100	1694676	0.2653
2-Nitrophenol	100	1171313	0.1833
4-Chloro-3-Methylphenol	100	1692604	0.2649
Acenaphthene	100	3728299	1.008
Benzo[a]pyrene	100	6172154	1.237
Di-n-Octyl Phthalate	100	7926368	1.588
Fluoranthene	100	6193023	1.102
Hexachlorobutadiene	100	911448	0.1427
Pentachlorophenol	100	777380	0.1383
Phenol	100	2469344	1.582
n-Nitrosodiphenylamine	100	3857905	0.6864
2,4-Dinitrophenol	100	510127	0.1379
4-Nitrophenol	100	795194	0.2150
Hexachlorocyclopentadiene	100	941671	0.2546
n-Nitrosodipropylamine	100	1140909	0.7309
2,4,5-Trichlorophenol	100	1310165	0.3542
2,4-Dimethylphenol	100	1905067	0.2982
2,4-Dinitrotoluene	100	1248768	0.3376
2,6-Dinitrotoluene	100	1128410	0.3050
2-Chloronaphthalene	100	4310104	1.165
2-Chlorophenol	100	2237290	1.433
2-Methylnaphthalene	100	3915550	0.6129
2-Methylphenol	100	1647904	1.056
2-Nitroaniline	100	1105111	0.2987
3,3'-Dichlorobenzidine	100	2215872	0.4440
3-,4-Methylphenol	100	2197686	1.408
3-Nitroaniline	100	1243105	0.3360
4,6-Dinitro-2-Methylphenol	100	830250	0.1477
4-Bromophenyl Phenyl Ether	100	1220359	0.2171
4-Chloroaniline	100	2704555	0.4233
4-Chlorophenyl Phenyl Ether	100	1982867	0.5360
4-Nitroaniline	100	1250955	0.3382
Acenaphthylene	100	6139087	1.660
Anthracene	100	6223937	1.107
Benzo[a]anthracene	100	6145575	1.231
Benzo[b]fluoranthene	100	6209963	1.244
Benzo[ghi]perylene	100	6290487	1.260
Benzo[k]fluoranthene	100	5730791	1.148
Butyl Benzyl Phthalate	100	2579054	0.5167
Carbazole	100	5850640	1.041
Chrysene	100	5916305	1.185

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KEMRON Environmental Services

INITIAL CALIBRATION DATA

Login Number: L0605576 **Instrument ID:** HPMS4

Analytical Method: 8270C **Initial Calibration Date:** 10-MAY-06 17:31

Column ID: F

Analyte	WG212888-02			WG212888-03			WG212888-04		
	CONC	RESP	RF	CONC	RESP	RF	CONC	RESP	RF
Di-n-Butyl Phthalate	50.0	3940512	1.385	3.00	235552	1.490	15.0	1242185	1.554
Dibenz[ah]anthracene	50.0	3171315	1.228	3.00	184371	1.226	15.0	979574	1.296
Dibenzofuran	50.0	2774947	1.482	3.00	183177	1.713	15.0	901459	1.703
Diethylphthalate	50.0	2292294	1.224	3.00	141660	1.324	15.0	711737	1.344
Dimethylphthalate	50.0	2267472	1.211	3.00	141172	1.320	15.0	711131	1.343
Fluorene	50.0	2359968	1.260	3.00	149253	1.395	15.0	747679	1.412
Hexachlorobenzene	50.0	669599	0.2353	3.00	42222	0.2670	15.0	209351	0.2618
Hexachloroethane	50.0	468256	0.5753	3.00	27768	0.5687	15.0	143822	0.6042
Indeno[1,2,3-cd]pyrene	50.0	3720042	1.441	3.00	214070	1.424	15.0	1144486	1.514
Isophorone	50.0	1893412	0.5798	3.00	117025	0.6109	15.0	589466	0.6273
Naphthalene	50.0	3306761	1.013	3.00	213312	1.114	15.0	1044560	1.112
Nitrobenzene	50.0	1074250	0.3290	3.00	64104	0.3347	15.0	333993	0.3554
Phenanthrene	50.0	3388108	1.191	3.00	212930	1.347	15.0	1063820	1.330
Pyrene	50.0	3639678	1.410	3.00	227442	1.550	15.0	1152208	1.554
bis(2-Chloroethoxy)methane	50.0	1528958	0.4682	3.00	102820	0.5368	15.0	508843	0.5415
bis(2-Chloroethyl)ether	50.0	733062	0.9007	3.00	48143	0.9860	15.0	242051	1.017
bis(2-Chloroisopropyl)ether	50.0	1753265	2.154	3.00	117049	2.397	15.0	571151	2.400
bis(2-Ethylhexyl)phthalate	50.0	2426220	0.9399	3.00	142563	0.9713	15.0	756033	1.020
2,4,6-Tribromophenol	50.0	297521	0.1589	3.00	14684	0.1373	15.0	87429	0.1651
2-Fluorobiphenyl	50.0	2234703	1.193	3.00	143882	1.345	15.0	700636	1.323
2-Fluorophenol	50.0	1043671	1.282	3.00	61652	1.263	15.0	315552	1.326
Nitrobenzene-d5	50.0	1056262	0.3235	3.00	60193	0.3142	15.0	322497	0.3432
Phenol-d5	50.0	1237869	1.521	3.00	73918	1.514	15.0	380898	1.600
p-Terphenyl-d14	50.0	2380370	0.9222	3.00	149218	1.017	15.0	763744	1.030

KEMRON Environmental Services

INITIAL CALIBRATION DATA

Login Number: L0605576 **Instrument ID:** HPMS4

Analytical Method: 8270C **Initial Calibration Date:** 10-MAY-06 17:31

Column ID: F

Analyte	WG212888-05			WG212888-06			WG212888-07		
	CONC	RESP	RF	CONC	RESP	RF	CONC	RESP	RF
Di-n-Butyl Phthalate	25.0	2043202	1.521	80.0	5958995	1.292	120	8214523	1.186
Dibenz[ah]anthracene	25.0	1610025	1.289	80.0	4978255	1.203	120	7403477	1.185
Dibenzofuran	25.0	1449562	1.629	80.0	4171217	1.371	120	5711615	1.225
Diethylphthalate	25.0	1163784	1.308	80.0	3569642	1.173	120	5166610	1.108
Dimethylphthalate	25.0	1165011	1.309	80.0	3537120	1.163	120	5134460	1.101
Fluorene	25.0	1220493	1.372	80.0	3621004	1.190	120	5147931	1.104
Hexachlorobenzene	25.0	344183	0.2562	80.0	1049100	0.2274	120	1548808	0.2236
Hexachloroethane	25.0	237474	0.6041	80.0	737832	0.5725	120	1099049	0.5619
Indeno[1,2,3-cd]pyrene	25.0	1884713	1.508	80.0	5935655	1.435	120	8886073	1.423
Isophorone	25.0	968975	0.6219	80.0	2949627	0.5605	120	4300715	0.5352
Naphthalene	25.0	1711438	1.098	80.0	5005820	0.9512	120	7003011	0.8715
Nitrobenzene	25.0	549893	0.3529	80.0	1686320	0.3204	120	2466127	0.3069
Phenanthrene	25.0	1734000	1.291	80.0	5153623	1.117	120	7233747	1.045
Pyrene	25.0	1872355	1.516	80.0	5536270	1.334	120	7692802	1.237
bis(2-Chloroethoxy)methane	25.0	815826	0.5236	80.0	2250533	0.4276	120	3034222	0.3776
bis(2-Chloroethyl)ether	25.0	387651	0.9862	80.0	1087006	0.8434	120	1519410	0.7769
bis(2-Chloroisopropyl)ether	25.0	910538	2.317	80.0	2651303	2.057	120	3749588	1.917
bis(2-Ethylhexyl)phthalate	25.0	1245494	1.009	80.0	3740854	0.9013	120	5301814	0.8522
2,4,6-Tribromophenol	25.0	145658	0.1637	80.0	473622	0.1557	120	712643	0.1528
2-Fluorobiphenyl	25.0	1144935	1.287	80.0	3463027	1.138	120	4950609	1.062
2-Fluorophenol	25.0	521667	1.327	80.0	1647246	1.278	120	2474996	1.266
Nitrobenzene-d5	25.0	531018	0.3408	80.0	1667522	0.3168	120	2465444	0.3068
Phenol-d5	25.0	629351	1.601	80.0	1910849	1.483	120	2774141	1.418
p-Terphenyl-d14	25.0	1238227	1.003	80.0	3639985	0.8770	120	5127227	0.8241

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INITIAL CALIBRATION DATA

Login Number: L0605576
Analytical Method: 8270C
Instrument ID: HPMS4
Initial Calibration Date: 10-MAY-06 17:31
Column ID: F

Analyte	WG212888-08		
	CONC	RESP	RF
Di-n-Butyl Phthalate	100	7042671	1.253
Dibenz[ah]anthracene	100	6046463	1.211
Dibenzofuran	100	4940502	1.336
Diethylphthalate	100	4301637	1.163
Dimethylphthalate	100	4287057	1.159
Fluorene	100	4339270	1.173
Hexachlorobenzene	100	1278359	0.2275
Hexachloroethane	100	902593	0.5782
Indeno[1,2,3-cd]pyrene	100	7214638	1.445
Isophorone	100	3552172	0.5560
Naphthalene	100	5961187	0.9331
Nitrobenzene	100	2026137	0.3171
Phenanthrene	100	6118799	1.089
Pyrene	100	6536778	1.310
bis(2-Chloroethoxy)methane	100	2634100	0.4123
bis(2-Chloroethyl)ether	100	1290087	0.8264
bis(2-Chloroisopropyl)ether	100	3140966	2.012
bis(2-Ethylhexyl)phthalate	100	4512407	0.9041
2,4,6-Tribromophenol	100	577527	0.1561
2-Fluorobiphenyl	100	4162599	1.125
2-Fluorophenol	100	2022240	1.296
Nitrobenzene-d5	100	2018174	0.3159
Phenol-d5	100	2305608	1.477
p-Terphenyl-d14	100	4315298	0.8646

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INITIAL CALIBRATION DATA

Login Number:L0605576 **Instrument ID:HPMS5**

Analytical Method:8270C **Initial Calibration Date:15-MAY-06 13:30**

Column ID:F

Analyte	WG213265-02			WG213265-03			WG213265-04		
	CONC	RESP	RF	CONC	RESP	RF	CONC	RESP	RF
2,4,6-Trichlorophenol	50.0	470113	0.3841	3.00	23709	0.3160	15.0	138112	0.3594
2,4-Dichlorophenol	50.0	696065	0.3382	3.00	37660	0.2956	15.0	210412	0.3248
2-Nitrophenol	50.0	466314	0.2266	3.00	24047	0.1888	15.0	135659	0.2094
4-Chloro-3-Methylphenol	50.0	671777	0.3264	3.00	36651	0.2877	15.0	203829	0.3146
Acenaphthene	50.0	1514288	1.237	3.00	92039	1.227	15.0	470785	1.225
Benzo[a]pyrene	50.0	1799847	1.396	3.00	95923	1.272	15.0	537366	1.326
Di-n-Octyl Phthalate	50.0	2967745	2.301	3.00	141015	1.870	15.0	874180	2.157
Fluoranthene	50.0	2493569	1.416	3.00	148469	1.394	15.0	782442	1.410
Hexachlorobutadiene	50.0	369599	0.1796	3.00	22809	0.1790	15.0	117795	0.1818
Pentachlorophenol	50.0	246375	0.1399	NA	NA	NA	15.0	53845	0.09700
Phenol	50.0	939661	1.703	3.00	55157	1.602	15.0	288501	1.667
n-Nitrosodiphenylamine	50.0	1153006	0.6547	3.00	67859	0.6369	15.0	363679	0.6555
2,4-Dinitrophenol	50.0	162308	0.1326	NA	NA	NA	15.0	27873	0.07250
4-Nitrophenol	50.0	325731	0.2662	NA	NA	NA	15.0	90094	0.2345
Hexachlorocyclopentadiene	50.0	308574	0.2521	3.00	10548	0.1406	15.0	80590	0.2097
n-Nitrosodipropylamine	50.0	498828	0.9040	3.00	30637	0.8900	15.0	157145	0.9080
2,4,5-Trichlorophenol	50.0	509603	0.4164	3.00	26251	0.3499	15.0	150088	0.3906
2,4-Dimethylphenol	50.0	733280	0.3563	3.00	44788	0.3516	15.0	228598	0.3528
2,4-Dinitrotoluene	50.0	501252	0.4096	3.00	22688	0.3024	15.0	148040	0.3853
2,6-Dinitrotoluene	50.0	382778	0.3128	3.00	18881	0.2517	15.0	113597	0.2956
2-Chloronaphthalene	50.0	1447870	1.183	3.00	89313	1.191	15.0	443072	1.153
2-Chlorophenol	50.0	805118	1.459	3.00	47587	1.382	15.0	245180	1.417
2-Methylnaphthalene	50.0	1661460	0.8073	3.00	103298	0.8109	15.0	519480	0.8018
2-Methylphenol	50.0	594350	1.077	3.00	35309	1.026	15.0	181784	1.050
2-Nitroaniline	50.0	483215	0.3949	NA	NA	NA	15.0	144916	0.3771
3,3'-Dichlorobenzidine	50.0	507215	0.3364	3.00	35105	0.3971	15.0	199637	0.4271
3-,4-Methylphenol	50.0	843598	1.529	3.00	50400	1.464	15.0	261586	1.512
3-Nitroaniline	50.0	419881	0.3431	NA	NA	NA	15.0	130171	0.3388
4,6-Dinitro-2-Methylphenol	50.0	273072	0.1551	NA	NA	NA	15.0	60264	0.1086
4-Bromophenyl Phenyl Ether	50.0	436938	0.2481	3.00	25743	0.2416	15.0	134241	0.2419
4-Chloroaniline	50.0	901099	0.4378	3.00	50597	0.3972	15.0	273906	0.4227
4-Chlorophenyl Phenyl Ether	50.0	784797	0.6413	3.00	47340	0.6311	15.0	238589	0.6209
4-Nitroaniline	50.0	420932	0.3440	NA	NA	NA	15.0	134647	0.3504
Acenaphthylene	50.0	2411122	1.970	3.00	142978	1.906	15.0	754126	1.963
Anthracene	50.0	2478722	1.408	3.00	148696	1.396	15.0	765013	1.379
Benzo[a]anthracene	50.0	2093856	1.389	3.00	123135	1.393	15.0	638852	1.367
Benzo[b]fluoranthene	50.0	1905242	1.477	3.00	109126	1.447	15.0	579033	1.428
Benzo[ghi]perylene	50.0	1646403	1.277	3.00	87740	1.163	15.0	496623	1.225
Benzo[k]fluoranthene	50.0	1899888	1.473	3.00	103729	1.375	15.0	581641	1.435
Butyl Benzyl Phthalate	50.0	1263398	0.8380	3.00	66181	0.7486	15.0	379603	0.8122
Carbazole	50.0	2218492	1.260	3.00	132974	1.248	15.0	710331	1.280
Chrysene	50.0	2015444	1.337	3.00	124571	1.409	15.0	646776	1.384

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KEMRON Environmental Services

INITIAL CALIBRATION DATA

Login Number: L0605576
Analytical Method: 8270C
Instrument ID: HPMS5
Initial Calibration Date: 15-MAY-06 13:30
Column ID: F

Analyte	WG213265-05			WG213265-06			WG213265-07		
	CONC	RESP	RF	CONC	RESP	RF	CONC	RESP	RF
2,4,6-Trichlorophenol	25.0	234871	0.3655	80.0	742487	0.3652	100	934913	0.3733
2,4-Dichlorophenol	25.0	352725	0.3244	80.0	1089554	0.3179	100	1380261	0.3248
2-Nitrophenol	25.0	231641	0.2130	80.0	719718	0.2100	100	907790	0.2136
4-Chloro-3-Methylphenol	25.0	343580	0.3160	80.0	1048165	0.3058	100	1294473	0.3046
Acenaphthene	25.0	771904	1.201	80.0	2317549	1.140	100	2856031	1.140
Benzo[a]pyrene	25.0	906510	1.327	80.0	2847905	1.309	100	3607287	1.356
Di-n-Octyl Phthalate	25.0	1490884	2.182	80.0	4632211	2.130	100	5757905	2.164
Fluoranthene	25.0	1298181	1.387	80.0	3852125	1.288	100	4777103	1.301
Hexachlorobutadiene	25.0	189781	0.1745	80.0	577812	0.1686	100	729666	0.1717
Pentachlorophenol	25.0	105966	0.1132	80.0	421569	0.1409	100	549924	0.1498
Phenol	25.0	478594	1.623	80.0	1471191	1.587	100	1835387	1.601
n-Nitrosodiphenylamine	25.0	593233	0.6338	80.0	1806754	0.6039	100	2259128	0.6154
2,4-Dinitrophenol	25.0	60060	0.09350	80.0	285314	0.1403	100	388552	0.1552
4-Nitrophenol	25.0	160927	0.2504	80.0	510755	0.2512	100	647867	0.2587
Hexachlorocyclopentadiene	25.0	142114	0.2211	80.0	494271	0.2431	100	629997	0.2516
n-Nitrosodipropylamine	25.0	263732	0.8944	80.0	754755	0.8143	100	936470	0.8167
2,4,5-Trichlorophenol	25.0	256265	0.3988	80.0	808630	0.3978	100	1019239	0.4070
2,4-Dimethylphenol	25.0	379541	0.3490	80.0	1148066	0.3350	100	1433322	0.3373
2,4-Dinitrotoluene	25.0	250654	0.3901	80.0	786542	0.3869	100	999579	0.3991
2,6-Dinitrotoluene	25.0	193561	0.3012	80.0	605542	0.2979	100	774949	0.3094
2-Chloronaphthalene	25.0	746860	1.162	80.0	2251456	1.108	100	2791504	1.115
2-Chlorophenol	25.0	413526	1.402	80.0	1264717	1.365	100	1596307	1.392
2-Methylnaphthalene	25.0	864457	0.7950	80.0	2542380	0.7418	100	3144075	0.7399
2-Methylphenol	25.0	303694	1.030	80.0	919022	0.9916	100	1152799	1.005
2-Nitroaniline	25.0	248170	0.3862	80.0	742245	0.3651	100	928711	0.3708
3,3'-Dichlorobenzidine	25.0	288779	0.3680	80.0	774321	0.3042	100	976310	0.3148
3-,4-Methylphenol	25.0	432105	1.465	80.0	1291455	1.393	100	1602035	1.397
3-Nitroaniline	25.0	221902	0.3453	80.0	633239	0.3115	100	778781	0.3110
4,6-Dinitro-2-Methylphenol	25.0	116690	0.1247	80.0	465348	0.1555	100	599736	0.1634
4-Bromophenyl Phenyl Ether	25.0	222391	0.2376	80.0	685881	0.2293	100	862374	0.2349
4-Chloroaniline	25.0	462913	0.4257	80.0	1367575	0.3990	100	1706263	0.4016
4-Chlorophenyl Phenyl Ether	25.0	400759	0.6236	80.0	1208706	0.5946	100	1526020	0.6094
4-Nitroaniline	25.0	218206	0.3396	80.0	644823	0.3172	100	758399	0.3028
Acenaphthylene	25.0	1249501	1.944	80.0	3705389	1.823	100	4599415	1.837
Anthracene	25.0	1279682	1.367	80.0	3768771	1.260	100	4677107	1.274
Benzo[a]anthracene	25.0	1054142	1.343	80.0	3238279	1.272	100	4079601	1.316
Benzo[b]fluoranthene	25.0	1030032	1.508	80.0	3144206	1.446	100	4212952	1.583
Benzo[ghi]perylene	25.0	824421	1.207	80.0	2622927	1.206	100	3325910	1.250
Benzo[k]fluoranthene	25.0	893983	1.309	80.0	2892195	1.330	100	3467963	1.303
Butyl Benzyl Phthalate	25.0	646712	0.8240	80.0	1949363	0.7659	100	2413008	0.7782
Carbazole	25.0	1163103	1.243	80.0	3308873	1.106	100	4062110	1.107
Chrysene	25.0	1064072	1.356	80.0	3204742	1.259	100	4054304	1.307

KEMRON FORMS - Modified 03/06/2006
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KEMRON Environmental Services

INITIAL CALIBRATION DATA

Login Number: L0605576 **Instrument ID:** HPMS5

Analytical Method: 8270C **Initial Calibration Date:** 15-MAY-06 13:30

Column ID: F

Analyte	WG213265-08		
	CONC	RESP	RF
2,4,6-Trichlorophenol	120	1153112	0.3657
2,4-Dichlorophenol	120	1647206	0.3127
2-Nitrophenol	120	1098126	0.2085
4-Chloro-3-Methylphenol	120	1556767	0.2956
Acenaphthene	120	3326651	1.055
Benzo[a]pyrene	120	4414467	1.317
Di-n-Octyl Phthalate	120	6893309	2.056
Fluoranthene	120	5670170	1.242
Hexachlorobutadiene	120	880588	0.1672
Pentachlorophenol	120	683955	0.1498
Phenol	120	2187928	1.550
n-Nitrosodiphenylamine	120	2721486	0.5962
2,4-Dinitrophenol	120	491795	0.1560
4-Nitrophenol	120	783422	0.2485
Hexachlorocyclopentadiene	120	766988	0.2432
n-Nitrosodipropylamine	120	1091482	0.7730
2,4,5-Trichlorophenol	120	1230792	0.3903
2,4-Dimethylphenol	120	1716983	0.3260
2,4-Dinitrotoluene	120	1206104	0.3825
2,6-Dinitrotoluene	120	925371	0.2935
2-Chloronaphthalene	120	3344360	1.061
2-Chlorophenol	120	1920550	1.360
2-Methylnaphthalene	120	3728464	0.7079
2-Methylphenol	120	1385271	0.9810
2-Nitroaniline	120	1105288	0.3505
3,3'-Dichlorobenzidine	120	1227252	0.3169
3-,4-Methylphenol	120	1913453	1.355
3-Nitroaniline	120	915045	0.2902
4,6-Dinitro-2-Methylphenol	120	752989	0.1650
4-Bromophenyl Phenyl Ether	120	1047962	0.2296
4-Chloroaniline	120	2092431	0.3973
4-Chlorophenyl Phenyl Ether	120	1837542	0.5828
4-Nitroaniline	120	894766	0.2838
Acenaphthylene	120	5431157	1.722
Anthracene	120	5546655	1.215
Benzo[a]anthracene	120	4953920	1.279
Benzo[b]fluoranthene	120	4874069	1.454
Benzo[ghi]perylene	120	4063006	1.212
Benzo[k]fluoranthene	120	4502852	1.343
Butyl Benzyl Phthalate	120	2893379	0.7472
Carbazole	120	4753861	1.042
Chrysene	120	4909748	1.268

KEMRON FORMS - Modified 03/06/2006
Version 1.6 PDF File ID: 491007
Report generated 06/06/2006 16:54

KEMRON Environmental Services

INITIAL CALIBRATION DATA

Login Number: L0605576
Instrument ID: HPMS5
Analytical Method: 8270C
Initial Calibration Date: 15-MAY-06 13:30
Column ID: F

Analyte	WG213265-02			WG213265-03			WG213265-04		
	CONC	RESP	RF	CONC	RESP	RF	CONC	RESP	RF
Di-n-Butyl Phthalate	50.0	2798725	1.589	3.00	156215	1.466	15.0	861233	1.552
Dibenz[ah]anthracene	50.0	1634871	1.268	3.00	84886	1.125	15.0	489020	1.206
Dibenzofuran	50.0	2156978	1.763	3.00	135266	1.803	15.0	682877	1.777
Diethylphthalate	50.0	1635132	1.336	3.00	100624	1.341	15.0	512760	1.334
Dimethylphthalate	50.0	1664606	1.360	3.00	101111	1.348	15.0	520427	1.354
Fluorene	50.0	1714977	1.401	3.00	107685	1.436	15.0	545023	1.418
Hexachlorobenzene	50.0	426591	0.2422	3.00	25406	0.2385	15.0	129458	0.2333
Hexachloroethane	50.0	346564	0.6281	3.00	20587	0.5980	15.0	106202	0.6136
Indeno[1,2,3-cd]pyrene	50.0	2007986	1.557	3.00	104681	1.388	15.0	606929	1.497
Isophorone	50.0	1312675	0.6378	3.00	76247	0.5985	15.0	405836	0.6264
Naphthalene	50.0	2294888	1.115	3.00	146127	1.147	15.0	726274	1.121
Nitrobenzene	50.0	804568	0.3909	3.00	47458	0.3725	15.0	249139	0.3845
Phenanthrene	50.0	2427913	1.379	3.00	154006	1.446	15.0	765063	1.379
Pyrene	50.0	2576946	1.709	3.00	155333	1.757	15.0	820188	1.755
bis(2-Chloroethoxy)methane	50.0	827966	0.4023	3.00	50434	0.3959	15.0	256275	0.3955
bis(2-Chloroethyl)ether	50.0	559007	1.013	3.00	36519	1.061	15.0	179700	1.038
bis(2-Chloroisopropyl)ether	50.0	1392557	2.524	3.00	95085	2.762	15.0	458453	2.649
bis(2-Ethylhexyl)phthalate	50.0	1736635	1.152	3.00	92274	1.044	15.0	528396	1.131
2,4,6-Tribromophenol	50.0	183489	0.1499	3.00	7739	0.1032	15.0	52870	0.1376
2-Fluorobiphenyl	50.0	1700510	1.390	3.00	107053	1.427	15.0	530844	1.382
2-Fluorophenol	50.0	738052	1.338	3.00	42559	1.236	15.0	224137	1.295
Nitrobenzene-d5	50.0	820344	0.3986	3.00	46586	0.3657	15.0	251412	0.3880
Phenol-d5	50.0	867625	1.572	3.00	51028	1.482	15.0	265006	1.531
p-Terphenyl-d14	50.0	1564961	1.038	3.00	92207	1.043	15.0	494872	1.059

KEMRON Environmental Services

INITIAL CALIBRATION DATA

Login Number: L0605576 **Instrument ID:** HPMS5

Analytical Method: 8270C **Initial Calibration Date:** 15-MAY-06 13:30

Column ID: F

Analyte	WG213265-05			WG213265-06			WG213265-07		
	CONC	RESP	RF	CONC	RESP	RF	CONC	RESP	RF
Di-n-Butyl Phthalate	25.0	1448154	1.547	80.0	4299533	1.437	100	5306007	1.445
Dibenz[ah]anthracene	25.0	806017	1.180	80.0	2638196	1.213	100	3391427	1.274
Dibenzofuran	25.0	1124679	1.750	80.0	3314043	1.630	100	4116686	1.644
Diethylphthalate	25.0	844393	1.314	80.0	2520902	1.240	100	3146818	1.257
Dimethylphthalate	25.0	853921	1.329	80.0	2603650	1.281	100	3233439	1.291
Fluorene	25.0	890550	1.386	80.0	2599396	1.279	100	3220657	1.286
Hexachlorobenzene	25.0	212148	0.2266	80.0	671858	0.2246	100	851547	0.2320
Hexachloroethane	25.0	178079	0.6039	80.0	535456	0.5777	100	669603	0.5839
Indeno[1,2,3-cd]pyrene	25.0	1003052	1.468	80.0	3234445	1.487	100	4121661	1.549
Isophorone	25.0	678436	0.6239	80.0	2040255	0.5953	100	2548962	0.5999
Naphthalene	25.0	1191211	1.096	80.0	3540500	1.033	100	4417646	1.040
Nitrobenzene	25.0	413705	0.3805	80.0	1240572	0.3620	100	1551758	0.3652
Phenanthrene	25.0	1266258	1.353	80.0	3704225	1.238	100	4603413	1.254
Pyrene	25.0	1341756	1.710	80.0	4010804	1.576	100	4948102	1.596
bis(2-Chloroethoxy)methane	25.0	427486	0.3931	80.0	1277635	0.3728	100	1571617	0.3699
bis(2-Chloroethyl)ether	25.0	298088	1.011	80.0	867924	0.9364	100	1081940	0.9435
bis(2-Chloroisopropyl)ether	25.0	749278	2.541	80.0	2088442	2.253	100	2577842	2.248
bis(2-Ethylhexyl)phthalate	25.0	890959	1.135	80.0	2674899	1.051	100	3304679	1.066
2,4,6-Tribromophenol	25.0	90877	0.1414	80.0	301261	0.1482	100	377228	0.1506
2-Fluorobiphenyl	25.0	882657	1.374	80.0	2630928	1.294	100	3254347	1.300
2-Fluorophenol	25.0	375355	1.273	80.0	1169041	1.261	100	1497073	1.306
Nitrobenzene-d5	25.0	419365	0.3857	80.0	1287277	0.3756	100	1602829	0.3772
Phenol-d5	25.0	444083	1.506	80.0	1357404	1.465	100	1704754	1.487
p-Terphenyl-d14	25.0	803943	1.024	80.0	2480798	0.9747	100	3123902	1.007

KEMRON Environmental Services

INITIAL CALIBRATION DATA

Login Number: L0605576 **Instrument ID:** HPMS5

Analytical Method: 8270C **Initial Calibration Date:** 15-MAY-06 13:30

Column ID: F

Analyte	WG213265-08		
	CONC	RESP	RF
Di-n-Butyl Phthalate	120	6241600	1.367
Dibenz[ah]anthracene	120	4226713	1.261
Dibenzofuran	120	4884611	1.549
Diethylphthalate	120	3728297	1.182
Dimethylphthalate	120	3862200	1.225
Fluorene	120	3758843	1.192
Hexachlorobenzene	120	1042953	0.2285
Hexachloroethane	120	798928	0.5658
Indeno[1,2,3-cd]pyrene	120	5054361	1.508
Isophorone	120	3040738	0.5773
Naphthalene	120	5208918	0.9890
Nitrobenzene	120	1845062	0.3503
Phenanthrene	120	5417401	1.187
Pyrene	120	5892971	1.522
bis(2-Chloroethoxy)methane	120	1875197	0.3560
bis(2-Chloroethyl)ether	120	1273437	0.9018
bis(2-Chloroisopropyl)ether	120	2991515	2.119
bis(2-Ethylhexyl)phthalate	120	3900201	1.007
2,4,6-Tribromophenol	120	469858	0.1490
2-Fluorobiphenyl	120	3870224	1.227
2-Fluorophenol	120	1806608	1.279
Nitrobenzene-d5	120	1928850	0.3662
Phenol-d5	120	2040566	1.445
p-Terphenyl-d14	120	3800392	0.9814

KEMRON Environmental Services

ALTERNATE SOURCE CALIBRATION REPORT

Login Number:L0605576 Run Date:05/10/2006 Sample ID:WG212888-09
Instrument ID:HPMS4 Run Time:18:06 Method:8270C
File ID:4M32970 Analyst:CLK
ICal Workgroup:WG212888 Cal ID: HPMS4 - 10-MAY-06

Analyte		Expected	Found	RF	%D	UNITS	Q
Phenol	CCC	50	51.7	1.69	3.4	ug/mL	
2-Nitrophenol	CCC	50	53.5	0.198	7	ug/mL	
2,4-Dichlorophenol	CCC	50	53.9	0.289	7.7	ug/mL	
Hexachlorobutadiene	CCC	50	54.1	0.162	8.3	ug/mL	
4-Chloro-3-Methylphenol	CCC	50	52.2	0.285	4.5	ug/mL	
2,4,6-Trichlorophenol	CCC	50	54.3	0.356	8.5	ug/mL	
Acenaphthene	CCC	50	54.2	1.18	8.4	ug/mL	
n-Nitrosodiphenylamine	CCC	50	42.3	0.623	15.3	ug/mL	
Pentachlorophenol	CCC	50	55.1	0.147	10.1	ug/mL	
Fluoranthene	CCC	50	57.3	1.39	14.6	ug/mL	
Di-n-Octyl Phthalate	CCC	50	52.5	1.66	5	ug/mL	
Benzo[a]pyrene	CCC	50	55.4	1.38	10.8	ug/mL	
n-Nitrosodipropylamine	SPCC	50	56.1	0.932	12.1	ug/mL	
Hexachlorocyclopentadiene	SPCC	50	52.9	0.261	5.8	ug/mL	
2,4-Dinitrophenol	SPCC	50	54.5	0.138	9	ug/mL	
4-Nitrophenol	SPCC	50	49.5	0.209	.9	ug/mL	
bis(2-Chloroethyl)ether		50	54.4	0.985	8.8	ug/mL	
2-Chlorophenol		50	52.1	1.50	4.3	ug/mL	
2-Methylphenol		50	52.2	1.13	4.3	ug/mL	
bis(2-Chloroisopropyl)ether		50	49.5	2.16	.9	ug/mL	
3-,4-Methylphenol		50	57.5	1.64	14.9	ug/mL	
Hexachloroethane		50	49.2	0.571	1.6	ug/mL	
Nitrobenzene		50	49.8	0.330	.4	ug/mL	
Isophorone		50	53.6	0.626	7.1	ug/mL	
2,4-Dimethylphenol		50	52.4	0.330	4.8	ug/mL	
bis(2-Chloroethoxy)methane		50	44.6	0.419	10.8	ug/mL	
Naphthalene		50	54.8	1.11	9.7	ug/mL	
4-Chloroaniline		50	37.5	0.326	25	ug/mL	
2-Methylnaphthalene		50	51.4	0.674	2.9	ug/mL	
2,4,5-Trichlorophenol		50	55.0	0.386	10.1	ug/mL	
2-Chloronaphthalene		50	43.5	1.10	12.9	ug/mL	
2-Nitroaniline		50	51.5	0.316	3	ug/mL	
Dimethylphthalate		50	49.4	1.21	1.2	ug/mL	
Acenaphthylene		50	55.0	1.97	9.9	ug/mL	
2,6-Dinitrotoluene		50	48.8	0.298	2.3	ug/mL	
3-Nitroaniline		50	37.2	0.248	25.5	ug/mL	*
Dibenzofuran		50	50.4	1.51	.8	ug/mL	
2,4-Dinitrotoluene		50	53.3	0.371	6.7	ug/mL	
Diethylphthalate		50	48.8	1.20	2.4	ug/mL	
4-Chlorophenyl Phenyl Ether		50	50.3	0.596	.5	ug/mL	
Fluorene		50	54.6	1.39	9.2	ug/mL	
4-Nitroaniline		50	41.2	0.283	17.5	ug/mL	

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KEMRON Environmental Services

ALTERNATE SOURCE CALIBRATION REPORT

Login Number: L0605576 Run Date: 05/10/2006 Sample ID: WG212888-09
Instrument ID: HPMS4 Run Time: 18:06 Method: 8270C
File ID: 4M32970 Analyst: CLK
ICal Workgroup: WG212888 Cal ID: HPMS4 - 10-MAY-06

Analyte		Expected	Found	RF	%D	UNITS	Q
4,6-Dinitro-2-Methylphenol		50	56.6	0.155	13.2	ug/mL	
4-Bromophenyl Phenyl Ether		50	44.3	0.205	11.3	ug/mL	
Hexachlorobenzene		50	49.8	0.242	.3	ug/mL	
Phenanthrene		50	54.6	1.31	9.3	ug/mL	
Anthracene		50	56.0	1.36	12.1	ug/mL	
Carbazole		50	47.8	1.07	4.4	ug/mL	
Di-n-Butyl Phthalate		50	51.2	1.42	2.5	ug/mL	
Pyrene		50	55.3	1.57	10.6	ug/mL	
Butyl Benzyl Phthalate		50	61.8	0.720	23.5	ug/mL	
3,3'-Dichlorobenzidine		50	33.0	0.302	34	ug/mL	*
Benzo[a]anthracene		50	54.8	1.42	9.7	ug/mL	
Chrysene		50	54.7	1.38	9.4	ug/mL	
bis(2-Ethylhexyl)phthalate		50	51.3	0.967	2.6	ug/mL	
Benzo[b]fluoranthene		50	54.4	1.47	8.9	ug/mL	
Benzo[k]fluoranthene		50	54.8	1.35	9.6	ug/mL	
Indeno[1,2,3-cd]pyrene		50	54.2	1.58	8.5	ug/mL	
Dibenz[ah]anthracene		50	54.4	1.34	8.9	ug/mL	
Benzo[ghi]perylene		50	54.5	1.38	9.1	ug/mL	

* Exceeds %D Limit

CCC Calibration Check Compounds
SPCC System Performance Check Compounds

KEMRON FORMS - Modified 04/11/2006
Version 1.5 PDF File ID: 491008
Report generated 06/06/2006 16:55

KEMRON Environmental Services

ALTERNATE SOURCE CALIBRATION REPORT

Login Number:L0605576 Run Date:05/15/2006 Sample ID:WG213265-09
Instrument ID:HPMS5 Run Time:14:02 Method:8270C
File ID:5M40745 Analyst:ALT
ICal Workgroup:WG213265 Cal ID: HPMS5 - 15-MAY-06

Analyte		Expected	Found	RF	%D	UNITS	Q
Phenol	CCC	50	48.4	1.57	3.2	ug/mL	
2-Nitrophenol	CCC	50	51.0	0.214	2	ug/mL	
2,4-Dichlorophenol	CCC	50	48.9	0.313	2.1	ug/mL	
Hexachlorobutadiene	CCC	50	50.4	0.176	.8	ug/mL	
4-Chloro-3-Methylphenol	CCC	50	48.4	0.297	3.2	ug/mL	
2,4,6-Trichlorophenol	CCC	50	48.5	0.351	3	ug/mL	
Acenaphthene	CCC	50	52.4	1.23	4.8	ug/mL	
n-Nitrosodiphenylamine	CCC	50	48.4	0.608	3.2	ug/mL	
Pentachlorophenol	CCC	50	47.0	0.128	5.9	ug/mL	
Fluoranthene	CCC	50	52.0	1.40	4	ug/mL	
Di-n-Octyl Phthalate	CCC	50	49.0	2.08	2.1	ug/mL	
Benzo[a]pyrene	CCC	50	52.8	1.40	5.7	ug/mL	
n-Nitrosodipropylamine	SPCC	50	51.3	0.879	2.6	ug/mL	
Hexachlorocyclopentadiene	SPCC	50	61.0	0.297	22.1	ug/mL	
2,4-Dinitrophenol	SPCC	50	51.3	0.139	2.7	ug/mL	
4-Nitrophenol	SPCC	50	49.4	0.249	1.1	ug/mL	
bis(2-Chloroethyl)ether		50	48.8	0.963	2.4	ug/mL	
2-Chlorophenol		50	48.3	1.35	3.5	ug/mL	
2-Methylphenol		50	48.9	1.00	2.1	ug/mL	
bis(2-Chloroisopropyl)ether		50	47.2	2.30	5.7	ug/mL	
3-,4-Methylphenol		50	48.6	1.40	2.9	ug/mL	
Hexachloroethane		50	47.6	0.568	4.7	ug/mL	
Nitrobenzene		50	48.0	0.357	4	ug/mL	
Isophorone		50	53.3	0.649	6.7	ug/mL	
2,4-Dimethylphenol		50	47.8	0.329	4.5	ug/mL	
bis(2-Chloroethoxy)methane		50	50.4	0.387	.9	ug/mL	
Naphthalene		50	51.1	1.10	2.3	ug/mL	
4-Chloroaniline		50	46.5	0.382	7.1	ug/mL	
2-Methylnaphthalene		50	46.0	0.711	7.9	ug/mL	
2,4,5-Trichlorophenol		50	48.0	0.377	4	ug/mL	
2-Chloronaphthalene		50	47.4	1.08	5.2	ug/mL	
2-Nitroaniline		50	47.4	0.355	5.2	ug/mL	
Dimethylphthalate		50	46.5	1.22	6.9	ug/mL	
Acenaphthylene		50	53.4	2.01	6.8	ug/mL	
2,6-Dinitrotoluene		50	48.5	0.286	3	ug/mL	
3-Nitroaniline		50	49.4	0.319	1.2	ug/mL	
Dibenzofuran		50	46.1	1.57	7.8	ug/mL	
2,4-Dinitrotoluene		50	50.7	0.385	1.5	ug/mL	
Diethylphthalate		50	47.7	1.23	4.5	ug/mL	
4-Chlorophenyl Phenyl Ether		50	45.8	0.563	8.4	ug/mL	
Fluorene		50	51.4	1.38	2.9	ug/mL	
4-Nitroaniline		50	48.9	0.316	2.2	ug/mL	

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KEMRON Environmental Services

ALTERNATE SOURCE CALIBRATION REPORT

Login Number: L0605576 Run Date: 05/15/2006 Sample ID: WG213265-09
Instrument ID: HPMS5 Run Time: 14:02 Method: 8270C
File ID: 5M40745 Analyst: ALT
ICal Workgroup: WG213265 Cal ID: HPMS5 - 15-MAY-06

Analyte		Expected	Found	RF	%D	UNITS	Q
4,6-Dinitro-2-Methylphenol		50	49.5	0.150	1	ug/mL	
4-Bromophenyl Phenyl Ether		50	40.4	0.192	19.2	ug/mL	
Hexachlorobenzene		50	45.9	0.213	8.2	ug/mL	
Phenanthrene		50	50.8	1.34	1.7	ug/mL	
Anthracene		50	52.2	1.39	4.5	ug/mL	
Carbazole		50	46.1	1.09	7.8	ug/mL	
Di-n-Butyl Phthalate		50	48.4	1.44	3.2	ug/mL	
Pyrene		50	52.4	1.74	4.9	ug/mL	
Butyl Benzyl Phthalate		50	50.4	0.794	.8	ug/mL	
3,3'-Dichlorobenzidine		50	42.0	0.296	16.1	ug/mL	
Benzo[a]anthracene		50	53.4	1.43	6.8	ug/mL	
Chrysene		50	51.3	1.37	2.6	ug/mL	
bis(2-Ethylhexyl)phthalate		50	48.6	1.05	2.8	ug/mL	
Benzo[b]fluoranthene		50	51.8	1.53	3.6	ug/mL	
Benzo[k]fluoranthene		50	51.8	1.42	3.7	ug/mL	
Indeno[1,2,3-cd]pyrene		50	49.3	1.47	1.4	ug/mL	
Dibenz[ah]anthracene		50	51.0	1.24	1.9	ug/mL	
Benzo[ghi]perylene		50	50.4	1.23	.8	ug/mL	

* Exceeds %D Limit

CCC Calibration Check Compounds
SPCC System Performance Check Compounds

KEMRON FORMS - Modified 04/11/2006
Version 1.5 PDF File ID: 491008
Report generated 06/06/2006 16:55

KEMRON Environmental Services

CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number:L0605576 Run Date:05/26/2006 Sample ID:WG214107-02
Instrument ID:HPMS5 Run Time:13:29 Method:8270C
File ID:5M40887 Analyst:ALT
Workgroup (AAB#):WG214172 Cal ID: HPMS5 - 15-MAY-06

Analyte		Expected	Found	RF	%D	UNITS	Q
Phenol	CCC	50	51.9	1.68	3.7	ug/mL	
2-Nitrophenol	CCC	50	53.5	0.225	7	ug/mL	
2,4-Dichlorophenol	CCC	50	53.4	0.341	6.8	ug/mL	
Hexachlorobutadiene	CCC	50	54.4	0.190	8.8	ug/mL	
4-Chloro-3-Methylphenol	CCC	50	55.3	0.340	10.6	ug/mL	
2,4,6-Trichlorophenol	CCC	50	52.3	0.378	4.6	ug/mL	
Acenaphthene	CCC	50	54.6	1.28	9.3	ug/mL	
n-Nitrosodiphenylamine	CCC	50	52.3	0.657	4.6	ug/mL	
Pentachlorophenol	CCC	50	47.0	0.128	6	ug/mL	
Fluoranthene	CCC	50	53.5	1.44	6.9	ug/mL	
Di-n-Octyl Phthalate	CCC	50	57.0	2.42	14	ug/mL	
Benzo[a]pyrene	CCC	50	53.3	1.42	6.7	ug/mL	
n-Nitrosodipropylamine	SPCC	50	54.4	0.933	8.9	ug/mL	
Hexachlorocyclopentadiene	SPCC	50	51.2	0.248	2.3	ug/mL	
2,4-Dinitrophenol	SPCC	50	47.1	0.124	5.8	ug/mL	
4-Nitrophenol	SPCC	50	53.1	0.267	6.3	ug/mL	
bis(2-Chloroethyl)ether		50	51.5	1.02	2.9	ug/mL	
2-Chlorophenol		50	52.1	1.46	4.3	ug/mL	
2-Methylphenol		50	52.0	1.06	3.9	ug/mL	
bis(2-Chloroisopropyl)ether		50	53.3	2.60	6.6	ug/mL	
3-,4-Methylphenol		50	53.4	1.54	6.8	ug/mL	
Hexachloroethane		50	55.3	0.659	10.5	ug/mL	
Nitrobenzene		50	53.0	0.394	5.9	ug/mL	
Isophorone		50	52.9	0.644	5.8	ug/mL	
2,4-Dimethylphenol		50	50.6	0.348	1.3	ug/mL	
bis(2-Chloroethoxy)methane		50	51.5	0.395	2.9	ug/mL	
Naphthalene		50	52.7	1.14	5.4	ug/mL	
4-Chloroaniline		50	52.8	0.435	5.6	ug/mL	
2-Methylnaphthalene		50	54.0	0.833	7.9	ug/mL	
2,4,5-Trichlorophenol		50	52.7	0.415	5.5	ug/mL	
2-Chloronaphthalene		50	53.0	1.21	6	ug/mL	
2-Nitroaniline		50	55.0	0.412	10	ug/mL	
Dimethylphthalate		50	53.2	1.40	6.5	ug/mL	
Acenaphthylene		50	53.5	2.01	7	ug/mL	
2,6-Dinitrotoluene		50	53.2	0.314	6.4	ug/mL	
3-Nitroaniline		50	54.5	0.353	9	ug/mL	
Dibenzofuran		50	52.4	1.78	4.7	ug/mL	
2,4-Dinitrotoluene		50	54.4	0.413	8.9	ug/mL	
Diethylphthalate		50	54.4	1.40	8.8	ug/mL	
4-Chlorophenyl Phenyl Ether		50	52.9	0.651	5.9	ug/mL	
Fluorene		50	54.7	1.47	9.3	ug/mL	
4-Nitroaniline		50	58.6	0.379	17.2	ug/mL	

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KEMRON Environmental Services

CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number:L0605576 Run Date:05/26/2006 Sample ID:WG214107-02
Instrument ID:HPMS5 Run Time:13:29 Method:8270C
File ID:5M40887 Analyst:ALT
Workgroup (AAB#):WG214172 Cal ID: HPMS5 - 15-MAY-06

Analyte		Expected	Found	RF	%D	UNITS	Q
4,6-Dinitro-2-Methylphenol		50	49.2	0.149	1.5	ug/mL	
4-Bromophenyl Phenyl Ether		50	51.8	0.246	3.6	ug/mL	
Hexachlorobenzene		50	51.1	0.238	2.3	ug/mL	
Phenanthrene		50	53.2	1.40	6.5	ug/mL	
Anthracene		50	53.3	1.42	6.6	ug/mL	
Carbazole		50	54.4	1.29	8.8	ug/mL	
Di-n-Butyl Phthalate		50	54.2	1.61	8.4	ug/mL	
Pyrene		50	51.0	1.69	1.9	ug/mL	
Butyl Benzyl Phthalate		50	52.2	0.823	4.5	ug/mL	
3,3'-Dichlorobenzidine		50	50.5	0.355	.9	ug/mL	
Benzo[a]anthracene		50	51.1	1.37	2.2	ug/mL	
Chrysene		50	50.4	1.34	.9	ug/mL	
bis(2-Ethylhexyl)phthalate		50	53.7	1.16	7.4	ug/mL	
Benzo[b]fluoranthene		50	54.0	1.60	8	ug/mL	
Benzo[k]fluoranthene		50	53.9	1.47	7.8	ug/mL	
Indeno[1,2,3-cd]pyrene		50	54.1	1.62	8.2	ug/mL	
Dibenz[ah]anthracene		50	54.0	1.32	8	ug/mL	
Benzo[ghi]perylene		50	52.5	1.28	5	ug/mL	
2-Fluorophenol	SURR	50	51.2	1.32	2.4	ug/mL	
Phenol-d5	SURR	50	52.2	1.56	4.4	ug/mL	
Nitrobenzene-d5	SURR	50	53.4	0.405	6.8	ug/mL	
2-Fluorobiphenyl	SURR	50	52.4	1.41	4.7	ug/mL	
2,4,6-Tribromophenol	SURR	50	54.8	0.153	9.5	ug/mL	
p-Terphenyl-d14	SURR	50	50.6	1.03	1.2	ug/mL	

* Exceeds %D Criteria

CCC Calibration Check Compounds
SPCC System Performance Check Compounds

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CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number:L0605576 Run Date:05/30/2006 Sample ID:WG214203-02
Instrument ID:HPMS5 Run Time:13:15 Method:8270C
File ID:5M40913 Analyst:ALT
Workgroup (AAB#):WG214172 Cal ID: HPMS5 - 15-MAY-06

Analyte		Expected	Found	RF	%D	UNITS	Q
Phenol	CCC	50	54.2	1.75	8.3	ug/mL	
2-Nitrophenol	CCC	50	50.2	0.211	.3	ug/mL	
2,4-Dichlorophenol	CCC	50	53.8	0.344	7.5	ug/mL	
Hexachlorobutadiene	CCC	50	55.0	0.192	9.9	ug/mL	
4-Chloro-3-Methylphenol	CCC	50	54.5	0.335	8.9	ug/mL	
2,4,6-Trichlorophenol	CCC	50	51.7	0.373	3.3	ug/mL	
Acenaphthene	CCC	50	54.8	1.29	9.5	ug/mL	
n-Nitrosodiphenylamine	CCC	50	52.0	0.653	4	ug/mL	
Pentachlorophenol	CCC	50	40.6	0.108	18.8	ug/mL	
Fluoranthene	CCC	50	54.1	1.46	8.3	ug/mL	
Di-n-Octyl Phthalate	CCC	50	55.6	2.36	11.2	ug/mL	
Benzo[a]pyrene	CCC	50	53.4	1.42	6.9	ug/mL	
n-Nitrosodipropylamine	SPCC	50	53.0	0.908	5.9	ug/mL	
Hexachlorocyclopentadiene	SPCC	50	47.5	0.230	5	ug/mL	
2,4-Dinitrophenol	SPCC	50	43.1	0.111	13.8	ug/mL	
4-Nitrophenol	SPCC	50	51.7	0.260	3.4	ug/mL	
bis(2-Chloroethyl)ether		50	50.7	1.00	1.5	ug/mL	
2-Chlorophenol		50	50.7	1.42	1.4	ug/mL	
2-Methylphenol		50	50.5	1.03	1	ug/mL	
bis(2-Chloroisopropyl)ether		50	51.5	2.51	3	ug/mL	
3-,4-Methylphenol		50	52.6	1.52	5.2	ug/mL	
Hexachloroethane		50	54.1	0.645	8.2	ug/mL	
Nitrobenzene		50	52.6	0.391	5.1	ug/mL	
Isophorone		50	52.7	0.642	5.4	ug/mL	
2,4-Dimethylphenol		50	50.0	0.344	0	ug/mL	
bis(2-Chloroethoxy)methane		50	50.9	0.391	1.8	ug/mL	
Naphthalene		50	53.0	1.14	6	ug/mL	
4-Chloroaniline		50	52.2	0.430	4.5	ug/mL	
2-Methylnaphthalene		50	53.9	0.832	7.8	ug/mL	
2,4,5-Trichlorophenol		50	51.6	0.405	3.2	ug/mL	
2-Chloronaphthalene		50	51.9	1.18	3.8	ug/mL	
2-Nitroaniline		50	53.7	0.402	7.5	ug/mL	
Dimethylphthalate		50	53.2	1.40	6.3	ug/mL	
Acenaphthylene		50	53.3	2.01	6.6	ug/mL	
2,6-Dinitrotoluene		50	52.5	0.309	5	ug/mL	
3-Nitroaniline		50	52.6	0.340	5.3	ug/mL	
Dibenzofuran		50	53.1	1.81	6.1	ug/mL	
2,4-Dinitrotoluene		50	53.1	0.403	6.1	ug/mL	
Diethylphthalate		50	54.5	1.40	9	ug/mL	
4-Chlorophenyl Phenyl Ether		50	51.8	0.637	3.5	ug/mL	
Fluorene		50	55.5	1.49	11.1	ug/mL	
4-Nitroaniline		50	43.2	0.279	13.6	ug/mL	

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CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number:L0605576 Run Date:05/30/2006 Sample ID:WG214203-02
Instrument ID:HPMS5 Run Time:13:15 Method:8270C
File ID:5M40913 Analyst:ALT
Workgroup (AAB#):WG214172 Cal ID: HPMS5 - 15-MAY-06

Analyte		Expected	Found	RF	%D	UNITS	Q
4,6-Dinitro-2-Methylphenol		50	46.1	0.138	7.9	ug/mL	
4-Bromophenyl Phenyl Ether		50	52.4	0.249	4.9	ug/mL	
Hexachlorobenzene		50	51.6	0.240	3.1	ug/mL	
Phenanthrene		50	53.8	1.42	7.7	ug/mL	
Anthracene		50	53.2	1.41	6.4	ug/mL	
Carbazole		50	50.9	1.20	1.8	ug/mL	
Di-n-Butyl Phthalate		50	54.5	1.62	9	ug/mL	
Pyrene		50	50.9	1.69	1.8	ug/mL	
Butyl Benzyl Phthalate		50	51.6	0.813	3.2	ug/mL	
3,3'-Dichlorobenzidine		50	48.7	0.343	2.6	ug/mL	
Benzo[a]anthracene		50	51.1	1.37	2.1	ug/mL	
Chrysene		50	50.9	1.36	1.8	ug/mL	
bis(2-Ethylhexyl)phthalate		50	52.1	1.13	4.2	ug/mL	
Benzo[b]fluoranthene		50	55.8	1.65	11.6	ug/mL	
Benzo[k]fluoranthene		50	52.2	1.43	4.4	ug/mL	
Indeno[1,2,3-cd]pyrene		50	55.8	1.67	11.6	ug/mL	
Dibenz[ah]anthracene		50	55.6	1.35	11.2	ug/mL	
Benzo[ghi]perylene		50	53.6	1.31	7.1	ug/mL	
2-Fluorophenol	SURR	50	49.6	1.27	.9	ug/mL	
Phenol-d5	SURR	50	50.4	1.51	.8	ug/mL	
Nitrobenzene-d5	SURR	50	53.6	0.407	7.1	ug/mL	
2-Fluorobiphenyl	SURR	50	52.7	1.42	5.5	ug/mL	
2,4,6-Tribromophenol	SURR	50	51.1	0.143	2.2	ug/mL	
p-Terphenyl-d14	SURR	50	50.7	1.03	1.4	ug/mL	

* Exceeds %D Criteria

CCC Calibration Check Compounds
SPCC System Performance Check Compounds

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KEMRON Environmental Services

CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number:L0605576 Run Date:06/01/2006 Sample ID:WG214395-02
Instrument ID:HPMS4 Run Time:12:29 Method:8270C
File ID:4M33222 Analyst:CLK
Workgroup (AAB#):WG214500 Cal ID: HPMS4 - 10-MAY-06

Analyte		Expected	Found	RF	%D	UNITS	Q
Phenol	CCC	50	49.5	1.62	1.1	ug/mL	
2-Nitrophenol	CCC	50	49.1	0.181	1.8	ug/mL	
2,4-Dichlorophenol	CCC	50	49.3	0.264	1.5	ug/mL	
Hexachlorobutadiene	CCC	50	50.5	0.152	1	ug/mL	
4-Chloro-3-Methylphenol	CCC	50	52.2	0.285	4.3	ug/mL	
2,4,6-Trichlorophenol	CCC	50	51.8	0.340	3.6	ug/mL	
Acenaphthene	CCC	50	48.9	1.07	2.1	ug/mL	
n-Nitrosodiphenylamine	CCC	50	48.0	0.706	4	ug/mL	
Pentachlorophenol	CCC	50	49.4	0.132	1.3	ug/mL	
Fluoranthene	CCC	50	48.9	1.18	2.2	ug/mL	
Di-n-Octyl Phthalate	CCC	50	51.1	1.61	2.2	ug/mL	
Benzo[a]pyrene	CCC	50	49.3	1.23	1.4	ug/mL	
n-Nitrosodipropylamine	SPCC	50	49.9	0.845	.3	ug/mL	
Hexachlorocyclopentadiene	SPCC	50	40.7	0.200	18.6	ug/mL	
2,4-Dinitrophenol	SPCC	50	45.0	0.109	10	ug/mL	
4-Nitrophenol	SPCC	50	50.3	0.212	.6	ug/mL	
bis(2-Chloroethyl)ether		50	48.4	0.876	3.2	ug/mL	
2-Chlorophenol		50	50.3	1.45	.6	ug/mL	
2-Methylphenol		50	50.6	1.10	1.1	ug/mL	
bis(2-Chloroisopropyl)ether		50	46.3	2.02	7.5	ug/mL	
3-,4-Methylphenol		50	50.3	1.44	.7	ug/mL	
Hexachloroethane		50	51.3	0.595	2.5	ug/mL	
Nitrobenzene		50	49.0	0.325	1.9	ug/mL	
Isophorone		50	49.7	0.581	.7	ug/mL	
2,4-Dimethylphenol		50	49.4	0.311	1.3	ug/mL	
bis(2-Chloroethoxy)methane		50	48.7	0.458	2.6	ug/mL	
Naphthalene		50	49.6	1.01	.8	ug/mL	
4-Chloroaniline		50	50.4	0.437	.8	ug/mL	
2-Methylnaphthalene		50	49.9	0.653	.3	ug/mL	
2,4,5-Trichlorophenol		50	51.5	0.361	3	ug/mL	
2-Chloronaphthalene		50	48.6	1.23	2.7	ug/mL	
2-Nitroaniline		50	49.1	0.301	1.9	ug/mL	
Dimethylphthalate		50	49.7	1.22	.6	ug/mL	
Acenaphthylene		50	49.5	1.78	1	ug/mL	
2,6-Dinitrotoluene		50	50.6	0.308	1.1	ug/mL	
3-Nitroaniline		50	47.9	0.318	4.2	ug/mL	
Dibenzofuran		50	48.7	1.46	2.6	ug/mL	
2,4-Dinitrotoluene		50	51.1	0.356	2.3	ug/mL	
Diethylphthalate		50	50.5	1.25	1	ug/mL	
4-Chlorophenyl Phenyl Ether		50	49.4	0.585	1.2	ug/mL	
Fluorene		50	49.6	1.26	.9	ug/mL	
4-Nitroaniline		50	49.8	0.341	.4	ug/mL	

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KEMRON Environmental Services

CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L0605576 Run Date: 06/01/2006 Sample ID: WG214395-02
Instrument ID: HPMS4 Run Time: 12:29 Method: 8270C
File ID: 4M33222 Analyst: CLK
Workgroup (AAB#): WG214500 Cal ID: HPMS4 - 10-MAY-06

Analyte		Expected	Found	RF	%D	UNITS	Q
4,6-Dinitro-2-Methylphenol		50	48.6	0.133	2.9	ug/mL	
4-Bromophenyl Phenyl Ether		50	48.1	0.223	3.7	ug/mL	
Hexachlorobenzene		50	47.5	0.231	5	ug/mL	
Phenanthrene		50	48.5	1.17	2.9	ug/mL	
Anthracene		50	48.9	1.19	2.2	ug/mL	
Carbazole		50	49.8	1.11	.4	ug/mL	
Di-n-Butyl Phthalate		50	49.3	1.36	1.3	ug/mL	
Pyrene		50	48.9	1.38	2.2	ug/mL	
Butyl Benzyl Phthalate		50	49.5	0.603	.9	ug/mL	
3,3'-Dichlorobenzidine		50	43.7	0.400	12.6	ug/mL	
Benzo[a]anthracene		50	49.0	1.27	2	ug/mL	
Chrysene		50	49.3	1.25	1.5	ug/mL	
bis(2-Ethylhexyl)phthalate		50	49.5	0.934	.9	ug/mL	
Benzo[b]fluoranthene		50	46.1	1.25	7.8	ug/mL	
Benzo[k]fluoranthene		50	51.6	1.27	3.2	ug/mL	
Indeno[1,2,3-cd]pyrene		50	48.4	1.41	3.1	ug/mL	
Dibenz[ah]anthracene		50	48.4	1.20	3.1	ug/mL	
Benzo[ghi]perylene		50	49.1	1.24	1.8	ug/mL	
2-Fluorophenol	SURR	50	49.8	1.29	.5	ug/mL	
Phenol-d5	SURR	50	49.5	1.50	.9	ug/mL	
Nitrobenzene-d5	SURR	50	49.4	0.319	1.2	ug/mL	
2-Fluorobiphenyl	SURR	50	48.1	1.16	3.9	ug/mL	
2,4,6-Tribromophenol	SURR	50	52.6	0.164	5.2	ug/mL	
p-Terphenyl-d14	SURR	50	48.7	0.910	2.5	ug/mL	

* Exceeds %D Criteria

CCC Calibration Check Compounds
SPCC System Performance Check Compounds

KEMRON Environmental Services

CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number:L0605576 Run Date:06/02/2006 Sample ID:WG214530-02
Instrument ID:HPMS5 Run Time:13:48 Method:8270C
File ID:5M40988 Analyst:ALT
Workgroup (AAB#):WG214500 Cal ID: HPMS5 - 15-MAY-06

Analyte		Expected	Found	RF	%D	UNITS	Q
Phenol	CCC	50	53.8	1.74	7.6	ug/mL	
2-Nitrophenol	CCC	50	51.4	0.216	2.7	ug/mL	
2,4-Dichlorophenol	CCC	50	53.1	0.340	6.3	ug/mL	
Hexachlorobutadiene	CCC	50	54.8	0.191	9.5	ug/mL	
4-Chloro-3-Methylphenol	CCC	50	55.0	0.338	10.1	ug/mL	
2,4,6-Trichlorophenol	CCC	50	52.0	0.376	4.1	ug/mL	
Acenaphthene	CCC	50	56.7	1.33	13.4	ug/mL	
n-Nitrosodiphenylamine	CCC	50	53.4	0.671	6.9	ug/mL	
Pentachlorophenol	CCC	50	44.8	0.121	10.4	ug/mL	
Fluoranthene	CCC	50	55.8	1.50	11.6	ug/mL	
Di-n-Octyl Phthalate	CCC	50	56.8	2.41	13.6	ug/mL	
Benzo[a]pyrene	CCC	50	54.2	1.44	8.3	ug/mL	
n-Nitrosodipropylamine	SPCC	50	53.8	0.922	7.5	ug/mL	
Hexachlorocyclopentadiene	SPCC	50	52.5	0.255	5.1	ug/mL	
2,4-Dinitrophenol	SPCC	50	57.5	0.160	15	ug/mL	
4-Nitrophenol	SPCC	50	57.8	0.291	15.6	ug/mL	
bis(2-Chloroethyl)ether		50	50.5	0.997	1.1	ug/mL	
2-Chlorophenol		50	50.7	1.42	1.4	ug/mL	
2-Methylphenol		50	50.0	1.02	.1	ug/mL	
bis(2-Chloroisopropyl)ether		50	52.9	2.58	5.8	ug/mL	
3-,4-Methylphenol		50	53.2	1.54	6.4	ug/mL	
Hexachloroethane		50	54.8	0.654	9.7	ug/mL	
Nitrobenzene		50	53.0	0.395	6	ug/mL	
Isophorone		50	51.8	0.630	3.6	ug/mL	
2,4-Dimethylphenol		50	48.8	0.336	2.4	ug/mL	
bis(2-Chloroethoxy)methane		50	50.7	0.389	1.4	ug/mL	
Naphthalene		50	52.6	1.13	5.2	ug/mL	
4-Chloroaniline		50	52.0	0.428	4	ug/mL	
2-Methylnaphthalene		50	54.2	0.837	8.4	ug/mL	
2,4,5-Trichlorophenol		50	51.9	0.408	3.9	ug/mL	
2-Chloronaphthalene		50	52.7	1.20	5.5	ug/mL	
2-Nitroaniline		50	55.4	0.414	10.8	ug/mL	
Dimethylphthalate		50	53.3	1.40	6.7	ug/mL	
Acenaphthylene		50	53.3	2.00	6.5	ug/mL	
2,6-Dinitrotoluene		50	52.3	0.308	4.7	ug/mL	
3-Nitroaniline		50	52.5	0.339	4.9	ug/mL	
Dibenzofuran		50	53.6	1.82	7.1	ug/mL	
2,4-Dinitrotoluene		50	52.9	0.402	5.9	ug/mL	
Diethylphthalate		50	55.7	1.43	11.3	ug/mL	
4-Chlorophenyl Phenyl Ether		50	52.8	0.649	5.5	ug/mL	
Fluorene		50	57.4	1.54	14.7	ug/mL	
4-Nitroaniline		50	57.2	0.369	14.3	ug/mL	

KEMRON FORMS - Modified 04/19/2006
Version 1.3 PDF File ID: 491011
Report generated 06/06/2006 16:55

KEMRON Environmental Services

CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L0605576 Run Date: 06/02/2006 Sample ID: WG214530-02
Instrument ID: HPMS5 Run Time: 13:48 Method: 8270C
File ID: 5M40988 Analyst: ALT
Workgroup (AAB#): WG214500 Cal ID: HPMS5 - 15-MAY-06

Analyte		Expected	Found	RF	%D	UNITS	Q
4,6-Dinitro-2-Methylphenol		50	52.6	0.161	5.3	ug/mL	
4-Bromophenyl Phenyl Ether		50	53.0	0.252	6	ug/mL	
Hexachlorobenzene		50	52.7	0.245	5.3	ug/mL	
Phenanthrene		50	54.8	1.45	9.7	ug/mL	
Anthracene		50	54.8	1.46	9.6	ug/mL	
Carbazole		50	52.3	1.24	4.6	ug/mL	
Di-n-Butyl Phthalate		50	55.6	1.65	11.1	ug/mL	
Pyrene		50	49.6	1.65	.7	ug/mL	
Butyl Benzyl Phthalate		50	50.6	0.797	1.2	ug/mL	
3,3'-Dichlorobenzidine		50	49.8	0.350	.5	ug/mL	
Benzo[a]anthracene		50	52.0	1.39	4.1	ug/mL	
Chrysene		50	50.0	1.33	0	ug/mL	
bis(2-Ethylhexyl)phthalate		50	51.7	1.12	3.4	ug/mL	
Benzo[b]fluoranthene		50	57.8	1.71	15.7	ug/mL	
Benzo[k]fluoranthene		50	52.9	1.45	5.7	ug/mL	
Indeno[1,2,3-cd]pyrene		50	55.8	1.67	11.7	ug/mL	
Dibenz[ah]anthracene		50	55.1	1.34	10.2	ug/mL	
Benzo[ghi]perylene		50	52.3	1.28	4.6	ug/mL	
2-Fluorophenol	SURR	50	48.5	1.25	3	ug/mL	
Phenol-d5	SURR	50	50.4	1.51	.8	ug/mL	
Nitrobenzene-d5	SURR	50	53.9	0.409	7.9	ug/mL	
2-Fluorobiphenyl	SURR	50	53.6	1.44	7.2	ug/mL	
2,4,6-Tribromophenol	SURR	50	52.5	0.147	5.1	ug/mL	
p-Terphenyl-d14	SURR	50	50.0	1.02	0	ug/mL	

* Exceeds %D Criteria

CCC Calibration Check Compounds
SPCC System Performance Check Compounds

KEMRON FORMS - Modified 04/19/2006
Version 1.3 PDF File ID: 491011
Report generated 06/06/2006 16:55

KEMRON ENVIRONMENTAL SERVICES
INTERNAL STANDARD AREA SUMMARY
(COMPARED TO CCV)

Login Number: L0605576 CCV Number: WG214107-02
Instrument ID: HPMS5 CAL ID: HPMS5-15-MAY-06
Workgroup (AAB#): WG214172 Matrix: SOLID

Sample Number	Dilution	Tag	IS-1	IS-2	IS-3	IS-4	IS-5	IS-6
WG214107-02	NA	NA	359848	827109	1106405	1359639	883851	1234577
Upper Limit	NA	NA	719696	1654218	2212810	2719278	1767702	2469154
Lower Limit	NA	NA	179924	413555	553203	679820	441926	617289
L0605576-03	20.0	DL01	282102	652570	815880	1069085	530546	953478
L0605576-04	1.00	01	326785	741187	934282	1209185	779325	1095028
L0605576-05	1.00	01	324794	741247	922102	1214153	774908	1101976
L0605576-06	1.00	01	328006	747506	940934	1223308	739512	1111243
WG214036-01	1.00	01	312823	707774	904548	1158018	750172	1043378
WG214036-02	1.00	01	322330	741238	1002630	1347140	823123	1095188
WG214036-03	1.00	01	333739	757137	1029381	1371675	836875	1132053

IS-1 - 1,4-Dichlorobenzene-d4
IS-2 - Acenaphthene-d10
IS-3 - Chrysene-d12
IS-4 - Naphthalene-d8
IS-5 - Perylene-d12
IS-6 - Phenanthrene-d10

Underline = Response outside limits

KEMRON FORMS - Modified 04/18/2006
Version 1.3 PDF File ID: 488876
Report generated 06/05/2006 14:46

KEMRON ENVIRONMENTAL SERVICES
INTERNAL STANDARD AREA SUMMARY
(COMPARED TO CCV)

Login Number:L0605576 CCV Number:WG214203-02
Instrument ID:HPMS5 CAL ID: HPMS5-15-MAY-06
Workgroup (AAB#):WG214172 Matrix:SOLID

Sample Number	Dilution	Tag	IS-1	IS-2	IS-3	IS-4	IS-5	IS-6
WG214203-02	NA	NA	349854	779125	1034921	1286187	836610	1157495
Upper Limit	NA	NA	699708	1558250	2069842	2572374	1673220	2314990
Lower Limit	NA	NA	174927	389563	517461	643094	418305	578748
L0605576-02	20.0	DL01	386612	889080	1142883	1454287	830574	1297292
L0605576-07	1.00	01	331135	800596	962856	1280743	760817	1168910

IS-1 - 1,4-Dichlorobenzene-d4
IS-2 - Acenaphthene-d10
IS-3 - Chrysene-d12
IS-4 - Naphthalene-d8
IS-5 - Perylene-d12
IS-6 - Phenanthrene-d10

Underline = Response outside limits

KEMRON FORMS - Modified 04/18/2006
Version 1.3 PDF File ID: 488876
Report generated 06/05/2006 14:46

KEMRON ENVIRONMENTAL SERVICES
INTERNAL STANDARD AREA SUMMARY
(COMPARED TO CCV)

Login Number: L0605576
Instrument ID: HPMS4
Workgroup (AAB#): WG214500

CCV Number: WG214395-02
CAL ID: HPMS4-10-MAY-06
Matrix: SOLID

Sample Number	Dilution	Tag	IS-1	IS-2	IS-3	IS-4	IS-5	IS-6
WG214395-02	NA	NA	655268	1640896	2361732	2740366	2414732	2590195
Upper Limit	NA	NA	1310536	3281792	4723464	5480732	4829464	5180390
Lower Limit	NA	NA	327634	820448	1180866	1370183	1207366	1295098
WG214365-02	1.00	01	642230	1425930	2007370	2530061	2067406	2132653
WG214365-03	1.00	01	669701	1544074	2245465	2871263	2289761	2363084

IS-1 - 1,4-Dichlorobenzene-d4
IS-2 - Acenaphthene-d10
IS-3 - Chrysene-d12
IS-4 - Naphthalene-d8
IS-5 - Perylene-d12
IS-6 - Phenanthrene-d10

Underline = Response outside limits

KEMRON FORMS - Modified 04/18/2006
Version 1.3 PDF File ID: 488876
Report generated 06/05/2006 14:46

KEMRON ENVIRONMENTAL SERVICES
INTERNAL STANDARD AREA SUMMARY
(COMPARED TO CCV)

Login Number: L0605576 **CCV Number:** WG214530-02
Instrument ID: HPMS5 **CAL ID:** HPMS5-15-MAY-06
Workgroup (AAB#): WG214500 **Matrix:** SOLID

Sample Number	Dilution	Tag	IS-1	IS-2	IS-3	IS-4	IS-5	IS-6
WG214530-02	NA	NA	329125	730051	1017609	1214176	794130	1083045
Upper Limit	NA	NA	658250	1460102	2035218	2428352	1588260	2166090
Lower Limit	NA	NA	164563	365026	508805	607088	397065	541523
L0605576-07	1.00	03	364356	820974	1030612	1346981	852461	1190000

IS-1 - 1,4-Dichlorobenzene-d4
IS-2 - Acenaphthene-d10
IS-3 - Chrysene-d12
IS-4 - Naphthalene-d8
IS-5 - Perylene-d12
IS-6 - Phenanthrene-d10

Underline = Response outside limits

KEMRON FORMS - Modified 04/18/2006
Version 1.3 PDF File ID: 488876
Report generated 06/05/2006 14:46

KEMRON ENVIRONMENTAL SERVICES
INTERNAL STANDARD AREA SUMMARY
(COMPARED TO CCV)

Login Number: L0605576
Instrument ID: HPMS4
Workgroup (AAB#): WG214398

CCV Number: WG214395-02
CAL ID: HPMS4-10-MAY-06
Matrix: TCLP

Sample Number	Dilution	Tag	IS-1	IS-2	IS-3	IS-4	IS-5	IS-6
WG214395-02	NA	NA	655268	1640896	2361732	2740366	2414732	2590195
Upper Limit	NA	NA	1310536	3281792	4723464	5480732	4829464	5180390
Lower Limit	NA	NA	327634	820448	1180866	1370183	1207366	1295098
L0605576-01	1.00	01	638255	1418344	1978130	2501645	2007770	2111849
WG214273-02	1.00	01	644993	1439653	2028694	2549653	2083334	2163653
WG214273-03	1.00	01	673630	1585471	2241441	3118631	2281016	2398723
WG214273-04	1.00	01	669064	1558129	2204564	3088996	2214394	2357768

IS-1 - 1,4-Dichlorobenzene-d4
IS-2 - Acenaphthene-d10
IS-3 - Chrysene-d12
IS-4 - Naphthalene-d8
IS-5 - Perylene-d12
IS-6 - Phenanthrene-d10

Underline = Response outside limits

KEMRON FORMS - Modified 04/18/2006
Version 1.3 PDF File ID: 488863
Report generated 06/05/2006 15:42

KEMRON ENVIRONMENTAL SERVICES
INTERNAL STANDARD RETENTION TIME SUMMARY
(COMPARED TO CCV)

Login Number:L0605576 CCV Number:WG214107-02
Instrument ID:HPMS5 CAL ID: HPMS5-15-MAY-06
Workgroup (AAB#):WG214172 Matrix:SOLID

Sample Number	Dilution	Tag	IS-1	IS-2	IS-3	IS-4	IS-5	IS-6
WG214107-02	NA	NA	8.64	12.36	16.72	10.22	18.6	13.99
Upper Limit	NA	NA	9.14	12.86	17.22	10.72	19.1	14.49
Lower Limit	NA	NA	8.14	11.86	16.22	9.72	18.1	13.49
L0605576-03	20.0	DL01	8.64	12.36	16.72	10.22	18.6	13.98
L0605576-04	1.00	01	8.64	12.36	16.71	10.22	18.6	13.98
L0605576-05	1.00	01	8.64	12.36	16.71	10.22	18.6	13.98
L0605576-06	1.00	01	8.64	12.35	16.71	10.22	18.6	13.98
WG214036-01	1.00	01	8.64	12.36	16.71	10.22	18.6	13.98
WG214036-02	1.00	01	8.64	12.36	16.72	10.22	18.6	13.98
WG214036-03	1.00	01	8.64	12.36	16.72	10.22	18.6	13.99

IS-1 - 1,4-Dichlorobenzene-d4
IS-2 - Acenaphthene-d10
IS-3 - Chrysene-d12
IS-4 - Naphthalene-d8
IS-5 - Perylene-d12
IS-6 - Phenanthrene-d10

Underline = Response outside limits

KEMRON FORMS - Modified 04/18/2006
Version 1.3 PDF File ID: 491012
Report generated 06/06/2006 16:56

KEMRON ENVIRONMENTAL SERVICES
INTERNAL STANDARD RETENTION TIME SUMMARY
(COMPARED TO CCV)

Login Number:L0605576 CCV Number:WG214203-02
Instrument ID:HPMS5 CAL ID: HPMS5-15-MAY-06
Workgroup (AAB#):WG214172 Matrix:SOLID

Sample Number	Dilution	Tag	IS-1	IS-2	IS-3	IS-4	IS-5	IS-6
WG214203-02	NA	NA	8.57	12.29	16.65	10.16	18.48	13.92
Upper Limit	NA	NA	9.07	12.79	17.15	10.66	18.98	14.42
Lower Limit	NA	NA	8.07	11.79	16.15	9.66	17.98	13.42
L0605576-02	20.0	DL01	8.57	12.29	16.65	10.15	18.49	13.92
L0605576-07	1.00	01	8.57	12.29	16.64	10.15	18.48	13.92

IS-1 - 1,4-Dichlorobenzene-d4
IS-2 - Acenaphthene-d10
IS-3 - Chrysene-d12
IS-4 - Naphthalene-d8
IS-5 - Perylene-d12
IS-6 - Phenanthrene-d10

Underline = Response outside limits

KEMRON FORMS - Modified 04/18/2006
Version 1.3 PDF File ID: 491012
Report generated 06/06/2006 16:56

006866

KEMRON ENVIRONMENTAL SERVICES
INTERNAL STANDARD RETENTION TIME SUMMARY
(COMPARED TO CCV)

Login Number:L0605576 CCV Number:WG214395-02
Instrument ID:HPMS4 CAL ID: HPMS4-10-MAY-06
Workgroup (AAB#):WG214500 Matrix:SOLID

Sample Number	Dilution	Tag	IS-1	IS-2	IS-3	IS-4	IS-5	IS-6
WG214395-02	NA	NA	9.33	13.19	18.48	10.94	21.11	15.07
Upper Limit	NA	NA	9.83	13.69	18.98	11.44	21.61	15.57
Lower Limit	NA	NA	8.83	12.69	17.98	10.44	20.61	14.57
WG214365-02	1.00	01	9.34	13.19	18.48	10.94	21.11	15.06
WG214365-03	1.00	01	9.33	13.19	18.48	10.94	21.11	15.07

IS-1 - 1,4-Dichlorobenzene-d4
IS-2 - Acenaphthene-d10
IS-3 - Chrysene-d12
IS-4 - Naphthalene-d8
IS-5 - Perylene-d12
IS-6 - Phenanthrene-d10

Underline = Response outside limits

KEMRON FORMS - Modified 04/18/2006
Version 1.3 PDF File ID: 491012
Report generated 06/06/2006 16:56

006867

KEMRON ENVIRONMENTAL SERVICES
INTERNAL STANDARD RETENTION TIME SUMMARY
(COMPARED TO CCV)

Login Number: L0605576 CCV Number: WG214530-02
Instrument ID: HPMS5 CAL ID: HPMS5-15-MAY-06
Workgroup (AAB#): WG214500 Matrix: SOLID

Sample Number	Dilution	Tag	IS-1	IS-2	IS-3	IS-4	IS-5	IS-6
WG214530-02	NA	NA	8.52	12.24	16.6	10.1	18.42	13.87
Upper Limit	NA	NA	9.02	12.74	17.1	10.6	18.92	14.37
Lower Limit	NA	NA	8.02	11.74	16.1	9.6	17.92	13.37
L0605576-07	1.00	RE1	8.51	12.24	16.6	10.1	18.41	13.87

IS-1 - 1,4-Dichlorobenzene-d4
IS-2 - Acenaphthene-d10
IS-3 - Chrysene-d12
IS-4 - Naphthalene-d8
IS-5 - Perylene-d12
IS-6 - Phenanthrene-d10

Underline = Response outside limits

KEMRON FORMS - Modified 04/18/2006
Version 1.3 PDF File ID: 491012
Report generated 06/06/2006 16:56

1.2.2 Pesticide GC Data (8081)

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KEMRON ENVIRONMENTAL SERVICES
GC PESTICIDES

KEMRON Login No.: L0605576

METHOD

Preparation: SW- 846 3550B(Soils) 3510C(Waters)

Analysis: SW-846 8081

HOLDING TIMES

Sample Preparation: All holding times were met.

Sample Analysis: All holding times were met.

PREPARATION

Sample preparation proceeded normally.

CALIBRATION

Initial Calibration: For all compounds which yielded a %RSD greater than 20 %, linear or higher order equations were applied. All acceptance criteria were met.

Alternate Source Standards: All acceptance criteria were met.

Continuing Calibration: All acceptance criteria were met.

BATCH QA/QC

Method Blank: All acceptance criteria were met.

Labortory Control Sample: All acceptance criteria were met.

Matrix Spikes: There were no MS/MSD results associated with this sample delivery group, due to insufficient volume of sample. The laboratory included an LCS and LCS duplicate in the preparation batch in lieu of the NELAC prescribed MS/MSD. KEMRON recommends site specific MS/MSD samples to avoid possible data qualification.

SAMPLES

Surrogates: All acceptance criteria were met.

Endrin/DDT Breakdown: All acceptance criteria were met.

Samples: For all samples which yielded results with an RPD of greater than 40% between the primary and confirmation column the appropriate flag was applied. All acceptance criteria were met.

Manual Integration Reason Codes

KEMRON laboratory management has identified four general cases with valid reasons supporting the use of manual integration techniques.

Reason #1: Data System Fails to Select Correct Peak
In some cases the chromatography system selects and integrates the ”wrong peak”. In this case the analyst must correct the selection and force the system to integrate the proper peak. Other times the system may miss the peak completely.

Reason #2: Data System Splits the Peak Incorrectly or Integrates a False Peak as a Rider Peak.
This phenomena is common at low concentrations where the signal:noise ratio is low. A single compound (peak) is incorrectly split into multiple peaks or integrated as a main peak with one or more rider peaks resulting in low area counts for the target compound.

Reason #3: Improperly Integrated Isomers and/or coeluting compounds.
This system often fails to distinguish coeluting compounds and or isomers. The integration areas and concentrations are wrong, and they must be corrected by manual integration. Prime examples are benzo(k)fluoranthene and benzo(b)fluoranthene which are often unresolved and integrated improperly when both are present at low concentrations in standards or samples.

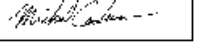
Reason #4: System Establishes Incorrect Baseline
There are numerous situations in chromatography where the system establishes the baseline incorrectly. Some baseline errors will be obvious to the analyst and should be corrected via manual procedures.

Reason #5: Miscellaneous
Other situations involving integration errors may require in-depth review and technical judgment. These cases should be brought to the attention of the laboratory management. If the form of manual integration is not clearly covered by these four cases, then review and approval by the Laboratory Director or the QA/QC Supervisor will be required.

I certify that this data package is in compliance with the terms and conditions agreed to by the client and KEMRON Environmental Services, both technically and for completeness, except for the conditions noted above. Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or designated person, as verified by the following signature.

Analyst: ECL

Approved: 02-JUN-06



LABORATORY REPORT

L0605576

06/12/06 12:20

Submitted By

KEMRON Environmental Services
156 Starlite Drive
Marietta , OH 45750
(740) 373 - 4071

For

Account Name: CH2MHILL, Inc
7600 Tidwell Road
Suite 400
San Antonio, TX 77040
Attention: John Ynfante

Account Number: 2736
Work ID: STATE MARINE
Invoice Number: 580608
P.O. Number: 915193

Sample Analysis Summary

Client ID	Lab ID	Method	Dilution	Date Received
IWSB01052406	L0605576-01	8081A	1	25-MAY-06

Report Number: **L0605576**
Report Date : **June 12, 2006**

Sample Number: **L0605576-01**
Client ID: **IWSB01052406**
Matrix: **Leachate**
Workgroup Number: **WG214367**
Collect Date: **05/24/2006 13:50**

PrePrep Method: **1311**
Prep Method: **3510C**
Analytical Method: **8081A**
Analyst: **ECL**
Dilution: **1**
Units: **ug/L**

Instrument: **HP9**
Prep Date: **05/31/2006 08:30**
Cal Date: **04/26/2006 17:48**
Run Date: **06/01/2006 13:41**
File ID: **9G35058.F**

Analyte	CAS.Number	Result	Qual	PQL	SQL	EPA HW#	Reg. Limit
Endrin	72-20-8		U	.5	.1	D012	20
Lindane	58-89-9		U	.5	.1	D013	400
Methoxychlor	72-43-5		U	.5	.1	D014	10000
Toxaphene	8001-35-2		U	10	3	D015	500
Chlordane	57-74-9		U	10	3	D020	30
Heptachlor	76-44-8		U	.5	.1	D031	8
Heptachlor Epoxide	1024-57-3		U	.5	.1	D031	8

Surrogate	% Recovery	Lower	Upper
2,4,5,6-Tetrachloro-m-xylene	67.1	33	138
Decachlorobiphenyl	102	32	135

U Not detected at or above the reporting limit

1.2.2.1 QC Summary

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Checklist ID: 7206

KEMRON Environmental Services
Data Checklist

Date: 26-APR-2006
Analyst: ECL
Analyst: NA
Method: 8081
Instrument: HP9
Curve Workgroup: WG211780, WG211782
Analytical Workgroups: L0604495, L0604379, L0604380, L0604565

Runlog ID number:	10054
System Performance Check	NA
DFTPP	NA
Endrin/DDT Breakdown	X
Initial Calibration	X
Average RF	X
Linear Reg or Higher Order Curve	NA
Second Source standard % Difference	X
Continuing Calibration /Check Standards	X
Project/Client Specific Requirements	NA
Special Standards	NA
Blanks	X
TCL's	X
Surrogates	X
LCS (Laboratory Control Sample)	X
Recoveries	X
Surrogates	X
MS/MSD/Duplicates	NA
Samples	X
TCL Hits	X
Spectra of TCL Hits	X
Surrogates	X
Internal Standards Criteria	NA
Library Searches	NA
Calculations & Correct Factors	X
Dilutions Run	X
Reruns	NA
Manual Integrations	NA
Case Narrative	X
Results Reporting/Data Qualifiers	X
KOBRA Workgroup Data	X
Check for Completeness	X
Primary Reviewer	ECL
Secondary Reviewer	MDC
Check for compliance with method and project specific requirements	X
Check the completeness of reported information	X
Check the information for the report narrative	X
Check the resonableness of the results	X

Primary Reviewer:
26-APR-2006

Secondary Reviewer:
27-APR-2006

Generated: APR-27-2006 14:17:59

Checklist ID: 7831

KEMRON Environmental Services
Data Checklist

Date: 01-JUN-2006
Analyst: ECL
Analyst: NA
Method: 8081
Instrument: HP9
Curve Workgroup: NA
Analytical Workgroups: L0605576, L0605599, L0605622, L0605659

Runlog ID number:	10639
System Performance Check	NA
DFTPP	NA
Endrin/DDT Breakdown	X
Initial Calibration	NA
Average RF	NA
Linear Reg or Higher Order Curve	NA
Second Source standard % Difference	NA
Continuing Calibration /Check Standards	X
Project/Client Specific Requirements	NA
Special Standards	NA
Blanks	X
TCL's	X
Surrogates	X
LCS (Laboratory Control Sample)	X
Recoveries	X
Surrogates	X
MS/MSD/Duplicates	NA
Samples	X
TCL Hits	X
Spectra of TCL Hits	X
Surrogates	X
Internal Standards Criteria	NA
Library Searches	NA
Calculations & Correct Factors	X
Dilutions Run	NA
Reruns	NA
Manual Integrations	X
Case Narrative	X
Results Reporting/Data Qualifiers	X
KOBRA Workgroup Data	X
Check for Completeness	X
Primary Reviewer	ECL
Secondary Reviewer	MDC
Check for compliance with method and project specific requirements	X
Check the completeness of reported information	X
Check the information for the report narrative	X
Check the resonableness of the results	X

Primary Reviewer:

Secondary Reviewer:
02-JUN-2006

Generated: JUN-02-2006 13:05:47

Run Log ID: **10054**

KEMRON Environmental Services

Instrument Run Log

Instrument: HP9 Dataset: 042606

Analyst1: ECL Analyst2: NA

Method: 8081 SOP: GCS09 Rev: 7

Column 1 ID: RTX-CLP Column 2 ID: RTX-CLP2

Workgroups:

Internal Standard: NA Surrogate Standard: NA

Comments:

Seq.	File ID	Sample Information	Mat	Dil	Reference	Date/Time
1	9G34745.F	WG211783-01 ENDRIN/DDT	1	1	SOS79-14	04/26/06 11:00
2	9G34745.R	WG211783-01 ENDRIN/DDT	1	1	SOS79-14	04/26/06 11:28
3	9G34746.F	WG211780-01 TOX ICAL 2000 PPB	1	1	SOS78-08	04/26/06 12:09
4	9G34746.R	WG211780-01 TOX ICAL 2000 PPB	1	1	SOS78-08	04/26/06 12:38
5	9G34747.F	WG211780-02 TOX ICAL 1000 PPB	1	1	SOS78-08	04/26/06 12:38
6	9G34747.R	WG211780-02 TOX ICAL 1000 PPB	1	1	SOS78-08	04/26/06 13:06
7	9G34748.F	WG211780-03 TOX ICAL 500 PPB	1	1	SOS78-08	04/26/06 13:06
8	9G34748.R	WG211780-03 TOX ICAL 500 PPB	1	1	SOS78-08	04/26/06 13:34
9	9G34749.F	WG211780-04 TOX ICAL 250 PPB	1	1	SOS78-08	04/26/06 13:34
10	9G34749.R	WG211780-04 TOX ICAL 250 PPB	1	1	SOS78-08	04/26/06 14:02
11	9G34750.F	WG211780-05 TOX ICAL 100 PPB	1	1	SOS78-08	04/26/06 14:02
12	9G34750.R	WG211780-05 TOX ICAL 100 PPB	1	1	SOS78-08	04/26/06 14:30
13	9G34751.F	WG211780-06 TOX ALT 500 PPB	1	1	SOS78-12	04/26/06 14:30
14	9G34751.R	WG211780-06 TOX ALT 500 PPB	1	1	SOS78-12	04/26/06 14:59
15	9G34752.F	WG211782-01 PEST ICAL 200 PPB	1	1	SOS78-14	04/26/06 14:59
16	9G34752.R	WG211782-01 PEST ICAL 200 PPB	1	1	SOS78-14	04/26/06 15:27
17	9G34753.F	WG211782-02 PEST ICAL 50 PPB	1	1	SOS78-14	04/26/06 15:27
18	9G34753.R	WG211782-02 PEST ICAL 50 PPB	1	1	SOS78-14	04/26/06 15:55
19	9G34754.F	WG211782-03 PEST ICAL 20 PPB	1	1	SOS78-14	04/26/06 15:55
20	9G34754.R	WG211782-03 PEST ICAL 20 PPB	1	1	SOS78-14	04/26/06 16:23
21	9G34755.F	WG211782-04 PEST ICAL 10 PPB	1	1	SOS78-14	04/26/06 16:23
22	9G34755.R	WG211782-04 PEST ICAL 10 PPB	1	1	SOS78-14	04/26/06 16:51
23	9G34756.F	WG211782-05 PEST ICAL 4 PPB	1	1	SOS78-14	04/26/06 16:51
24	9G34756.R	WG211782-05 PEST ICAL 4 PPB	1	1	SOS78-14	04/26/06 17:20
25	9G34757.F	WG211782-06 PEST ICAL 1 PPB	1	1	SOS78-14	04/26/06 17:20
26	9G34757.R	WG211782-06 PEST ICAL 1 PPB	1	1	SOS78-14	04/26/06 17:48
27	9G34758.F	WG211782-07 PEST ALT 20 PPB	1	1	SOS78-11	04/26/06 17:48
28	9G34758.R	WG211782-07 PEST ALT 20 PPB	1	1	SOS78-11	04/26/06 18:16
29	9G34759.F	WG211623-01 BLANK V260 P33	17	1		04/26/06 18:16
30	9G34759.R	WG211623-01 BLANK V260 P33	17	1		04/26/06 18:44
31	9G34760.F	WG211623-02 LCS V260 P33	17	1		04/26/06 18:44
32	9G34760.R	WG211623-02 LCS V260 P33	17	1		04/26/06 19:13
33	9G34761.F	WG211623-03 LCS DUP V260 P33	17	1		04/26/06 19:13
34	9G34761.R	WG211623-03 LCS DUP V260 P33	17	1		04/26/06 19:41
35	9G34762.F	L0604495-01	17	1		04/26/06 19:41
36	9G34762.R	L0604495-01	17	1		04/26/06 20:09

Approved: 27-APR-06

006879

Run Log ID: **10054**

KEMRON Environmental Services

Instrument Run Log

Instrument: HP9 Dataset: 042606

Analyst1: ECL Analyst2: NA

Method: 8081 SOP: GCS09 Rev: 7

Column 1 ID: RTX-CLP Column 2 ID: RTX-CLP2

Workgroups:

Internal Standard: NA Surrogate Standard: NA

Seq.	File ID	Sample Information	Mat	Dil	Reference	Date/Time
37	9G34763.F	L0604495-02	17	1		04/26/06 20:09
38	9G34763.R	L0604495-02	17	1		04/26/06 20:37
39	9G34764.F	L0604495-03	17	1		04/26/06 20:37
40	9G34764.R	L0604495-03	17	1		04/26/06 21:05
41	9G34765.F	L0604495-04	17	1		04/26/06 21:05
42	9G34765.R	L0604495-04	17	1		04/26/06 21:34
43	9G34766.F	L0604495-05	17	1		04/26/06 21:34
44	9G34766.R	L0604495-05	17	1		04/26/06 22:02
45	9G34767.F	L0604495-06	17	1		04/26/06 22:02
46	9G34767.R	L0604495-06	17	1		04/26/06 22:30
47	9G34768.F	WG211597-01 FBLANK 4/24	17	1		04/26/06 22:30
48	9G34768.R	WG211597-01 FBLANK 4/24	17	1		04/26/06 22:58
49	9G34769.F	WG211783-02 ENDRIN/DDT	1	1	SOS79-14	04/26/06 22:58
50	9G34769.R	WG211783-02 ENDRIN/DDT	1	1	SOS79-14	04/26/06 23:26
51	9G34770.F	WG211783-03 PEST CCV 20 PPB	1	1	SOS78-14	04/26/06 23:26
52	9G34770.R	WG211783-03 PEST CCV 20 PPB	1	1	SOS78-14	04/26/06 23:54
53	9G34771.F	WG211781-01 TOX CCV 250 PPB	1	1	SOS78-08	04/26/06 23:54
54	9G34771.R	WG211781-01 TOX CCV 250 PPB	1	1	SOS78-08	04/27/06 00:22
55	9G34772.F	WG211078-01 BLANK V259 P65	7	1	SOIL	04/27/06 00:22
56	9G34772.R	WG211078-01 BLANK V259 P65	7	1	SOIL	04/27/06 00:51
57	9G34773.F	WG211078-02 LCS V259 P65	7	1	SOIL	04/27/06 00:51
58	9G34773.R	WG211078-02 LCS V259 P65	7	1	SOIL	04/27/06 01:19
59	9G34774.F	WG211078-03 LCS DUP V259 P65	7	1	SOIL	04/27/06 01:19
60	9G34774.R	WG211078-03 LCS DUP V259 P65	7	1	SOIL	04/27/06 01:47
61	9G34775.F	WG211078-04 TOX LCS V259 P65	7	1	SOIL	04/27/06 01:47
62	9G34775.R	WG211078-04 TOX LCS V259 P65	7	1	SOIL	04/27/06 02:15
63	9G34776.F	L0604379-03 10x	7	10	SOIL	04/27/06 02:15
64	9G34776.R	L0604379-03 10x	7	10	SOIL	04/27/06 02:43
65	9G34777.F	L0604379-04 5x	7	5	SOIL	04/27/06 02:43
66	9G34777.R	L0604379-04 5x	7	5	SOIL	04/27/06 03:11
67	9G34778.F	L0604379-05	7	1	SOIL	04/27/06 03:11
68	9G34778.R	L0604379-05	7	1	SOIL	04/27/06 03:40
69	9G34779.F	L0604379-06	7	1	SOIL	04/27/06 03:40
70	9G34779.R	L0604379-06	7	1	SOIL	04/27/06 04:08
71	9G34780.F	L0604379-07 20x	7	20	SOIL	04/27/06 04:08
72	9G34780.R	L0604379-07 20x	7	20	SOIL	04/27/06 04:36
73	9G34781.F	L0604379-08	7	1	SOIL	04/27/06 04:36
74	9G34781.R	L0604379-08	7	1	SOIL	04/27/06 05:04
75	9G34782.F	WG211781-02 TOX CCV 500 PPB	1	1	SOS78-08	04/27/06 05:04

Approved: 27-APR-06

006880

Run Log ID: **10054**

KEMRON Environmental Services

Instrument Run Log

Instrument: HP9 Dataset: 042606

Analyst1: ECL Analyst2: NA

Method: 8081 SOP: GCS09 Rev: 7

Column 1 ID: RTX-CLP Column 2 ID: RTX-CLP2

Workgroups:

Internal Standard: NA Surrogate Standard: NA

Seq.	File ID	Sample Information	Mat	Dil	Reference	Date/Time
76	9G34782.R	WG211781-02 TOX CCV 500 PPB	1	1	SOS78-08	04/27/06 05:32
77	9G34783.F	WG211783-04 PEST CCV 10 PPB	1	1	SOS78-14	04/27/06 05:32
78	9G34783.R	WG211783-04 PEST CCV 10 PPB	1	1	SOS78-14	04/27/06 06:00
79	9G34784.F	L0604380-05 10x	1	10		04/27/06 06:00
80	9G34784.R	L0604380-05 10x	1	10		04/27/06 06:28
81	9G34785.F	WG211617-01 BLANK V259 P113	7	1	SOIL	04/27/06 06:28
82	9G34785.R	WG211617-01 BLANK V259 P113	7	1	SOIL	04/27/06 06:56
83	9G34786.F	WG211617-02 LCS V259 P113	7	1	SOIL	04/27/06 06:56
84	9G34786.R	WG211617-02 LCS V259 P113	7	1	SOIL	04/27/06 07:24
85	9G34787.F	WG211617-03 LCS DUP V259 P113	7	1	SOIL	04/27/06 07:24
86	9G34787.R	WG211617-03 LCS DUP V259 P113	7	1	SOIL	04/27/06 07:53
87	9G34788.F	L0604565-01	7	1	SOIL	04/27/06 07:53
88	9G34788.R	L0604565-01	7	1	SOIL	04/27/06 08:21
89	9G34789.F	L0604565-02	7	1	SOIL	04/27/06 08:21
90	9G34789.R	L0604565-02	7	1	SOIL	04/27/06 08:49
91	9G34790.F	L0604565-03	7	1	SOIL	04/27/06 08:49
92	9G34790.R	L0604565-03	7	1	SOIL	04/27/06 09:17
93	9G34791.F	L0604565-07	7	1	SOIL	04/27/06 09:17
94	9G34791.R	L0604565-07	7	1	SOIL	04/27/06 09:45
95	9G34792.F	L0604565-09	7	1	SOIL	04/27/06 09:45
96	9G34792.R	L0604565-09	7	1	SOIL	04/27/06 10:13
97	9G34793.F	L0604565-12	7	1	SOIL	04/27/06 10:13
98	9G34793.R	L0604565-12	7	1	SOIL	04/27/06 10:42
99	9G34794.F	WG211783-05 ENDRIN/DDT	1	1	SOS79-14	04/27/06 10:42
100	9G34794.R	WG211783-05 ENDRIN/DDT	1	1	SOS79-14	04/27/06 11:10
101	9G34795.F	WG211783-06 PEST CCV 20 PPB	1	1	SOS78-14	04/27/06 11:10
102	9G34795.R	WG211783-06 PEST CCV 20 PPB	1	1	SOS78-14	04/27/06 11:38
103	9G34796.F	WG211781-03 TOX CCV 250 PPB	1	1	SOS78-08	04/27/06 11:38
104	9G34796.R	WG211781-03 TOX CCV 250 PPB	1	1	SOS78-08	04/27/06 12:06

Comments

Seq.	Rerun	Dil.	Reason	Analytes
64				
	L0604379-03: DCB surrogate failed high due to SMI.			
66				
	L0604379-04: DCB surrogate failed high due to SMI.			
74	X	10	Over Calibration Range	alpha and gamma chlordane
	L0604379-08: DCB surrogate failed high due to SMI.			

Page: 3 of 3 Approved: 27-APR-06

006881

Run Log ID: **10639**

KEMRON Environmental Services

Instrument Run Log

Instrument: HP9 Dataset: 060106

Analyst1: ECL Analyst2: NA

Method: 8081 SOP: GCS09 Rev: 7

Column 1 ID: RTX-CLP Column 2 ID: RTX-CLP2

Workgroups:

Internal Standard: NA Surrogate Standard: NA

Comments:

Seq.	File ID	Sample Information	Mat	Dil	Reference	Date/Time
1	9G35052.F	WG214397-01 ENDRIN/DDT	1	1	SOS79-14	06/01/06 09:03
2	9G35052.R	WG214397-01 ENDRIN/DDT	1	1	SOS79-14	06/01/06 09:31
3	9G35053.F	WG214397-02 PEST CCV 20 PPB	1	1	SOS78-14	06/01/06 09:31
4	9G35053.R	WG214397-02 PEST CCV 20 PPB	1	1	SOS78-14	06/01/06 10:00
5	9G35054.F	WG214399-01 TOX CCV 250 PPB	1	1	SOS78-08	06/01/06 10:51
6	9G35054.R	WG214399-01 TOX CCV 250 PPB	1	1	SOS78-08	06/01/06 11:19
7	9G35055.F	WG214262-01 BLANK V260 P179	1	1		06/01/06 11:19
8	9G35055.R	WG214262-01 BLANK V260 P179	1	1		06/01/06 11:47
9	9G35056.F	WG214262-02 LCS V260 P179	1	1		06/01/06 11:47
10	9G35056.R	WG214262-02 LCS V260 P179	1	1		06/01/06 12:15
11	9G35057.F	WG214262-03 LCS DUP V260 P179	1	1		06/01/06 12:15
12	9G35057.R	WG214262-03 LCS DUP V260 P179	1	1		06/01/06 12:43
13	9G35058.F	L0605576-01	17	1		06/01/06 13:41
14	9G35058.R	L0605576-01	17	1		06/01/06 14:09
15	9G35059.F	L0605599-10	17	1		06/01/06 14:09
16	9G35059.R	L0605599-10	17	1		06/01/06 14:38
17	9G35060.F	WG214217-01 FBLANK 5/30	17	1		06/01/06 14:38
18	9G35060.R	WG214217-01 FBLANK 5/30	17	1		06/01/06 15:06
19	9G35061.F	L0605622-01	1	1		06/01/06 15:06
20	9G35061.R	L0605622-01	1	1		06/01/06 15:34
21	9G35062.F	L0605622-03	1	1		06/01/06 15:34
22	9G35062.R	L0605622-03	1	1		06/01/06 16:02
23	9G35063.F	L0605622-05	1	1		06/01/06 16:02
24	9G35063.R	L0605622-05	1	1		06/01/06 16:30
25	9G35064.F	L0605622-06	1	1		06/01/06 16:30
26	9G35064.R	L0605622-06	1	1		06/01/06 16:59
27	9G35065.F	WG214397-03 PEST CCV 10 PPB	1	1	SOS78-14	06/01/06 16:59
28	9G35065.R	WG214397-03 PEST CCV 10 PPB	1	1	SOS78-14	06/01/06 17:27
29	9G35066.F	WG214399-02 TOX CCV 500 PPB	1	1	SOS78-08	06/01/06 17:27
30	9G35066.R	WG214399-02 TOX CCV 500 PPB	1	1	SOS78-08	06/01/06 17:55
31	9G35067.F	L0605659-01	1	1		06/01/06 17:55
32	9G35067.R	L0605659-01	1	1		06/01/06 18:23
33	9G35068.F	L0605659-03	1	1		06/01/06 18:23
34	9G35068.R	L0605659-03	1	1		06/01/06 18:51
35	9G35069.F	L0605659-04	1	1		06/01/06 18:51
36	9G35069.R	L0605659-04	1	1		06/01/06 19:19

Approved: 02-JUN-06

006882

Run Log ID: **10639**

KEMRON Environmental Services

Instrument Run Log

Instrument: HP9 Dataset: 060106

Analyst1: ECL Analyst2: NA

Method: 8081 SOP: GCS09 Rev: 7

Column 1 ID: RTX-CLP Column 2 ID: RTX-CLP2

Workgroups:

Internal Standard: NA Surrogate Standard: NA

Seq.	File ID	Sample Information	Mat	Dil	Reference	Date/Time
37	9G35070.F	L0605659-05	1	1		06/01/06 19:19
38	9G35070.R	L0605659-05	1	1		06/01/06 19:48
39	9G35071.F	L0605659-07	1	1		06/01/06 19:48
40	9G35071.R	L0605659-07	1	1		06/01/06 20:16
41	9G35072.F	WG214397-04 ENDRIN/DDT	1	1	SOS79-14	06/01/06 20:16
42	9G35072.R	WG214397-04 ENDRIN/DDT	1	1	SOS79-14	06/01/06 20:44
43	9G35073.F	WG214397-05 PEST CCV 20 PPB	1	1	SOS78-14	06/01/06 20:44
44	9G35073.R	WG214397-05 PEST CCV 20 PPB	1	1	SOS78-14	06/01/06 21:12
45	9G35074.F	WG214399-03 TOX CCV 250 PPB	1	1	SOS78-08	06/01/06 21:12
46	9G35074.R	WG214399-03 TOX CCV 250 PPB	1	1	SOS78-08	06/01/06 21:40

Comments

Seq.	Rerun	Dil.	Reason	Analytes
2				
	Endrin breakdown was greater than 15% on the rear column.			
4				
	Endrin failed low on the rear column.			
21	X	10	Over Calibration Range	4,4'-DDD
	L0605622-03			
28				
	DCB surrogate failed high on the rear column.			
42				
	Endrin breakdown was greater than 15% on the rear column.			
43				
	Heptachlor failed high on the front column.			

Approved: 02-JUN-06

KEMRON
ENVIRONMENTAL SERVICES

TCLP Non-Volatile

Analyst(s): Ed
Date: 05-30-06

Analyst/Date		Analyst/Date	
Ed 05-30-06		Ed 05-31-06	
Time On	Temp On °C	Time Off	Temp Off °C
1330	24	0730	23

Jug #	Sample #	Tests	Method	Fluid #	Matrix*	%Solid	Size Reduction Yes	Size Reduction No	Int. Wt. (g)	Fluid Vol. (mL)
N/A	05-557-02	ME	1311	Filtered	W	<.5		✓	100	100
D	05-557-03	ME	1311	FI-592	S	100	✓		100.05	2000
	-05	⊥	⊥	⊥	⊥	⊥		✓	100.05	⊥
	-06							✓	100.02	
	-08							✓	100.05	
G-7	05-576-01	SV Pest Herb			S/S			✓	100.05	
G-9	05-599-10	⊥ ⊥ ⊥						✓	100.02	
G-11	05-630-02	⊥			⊥			✓	100.05	
D	05-633-02	ME pH-L			S			✓	100.05	
⊥	-03	⊥	⊥	⊥	⊥	⊥		✓	100.01	⊥
N/A	FBLK	ME SV Pest Herb	1311	FI-592	N/A	N/A		✓	2000	2000

Ed 05-30-06

*Matrix Code = (S-solid)(SS-sand, soil or sludge)(P-paint)(O-organic or waste)(W-water)

Comments: _____

Peer Review By: _____ Supervisor Review: _____

006884

Sample Extract Log Sheet R1073870

KEMRON ENVIRONMENTAL SERVICES

Parameter: Pest-H_2O SOP #: EXP01 Revision #: 12
Extraction Analyst(s): CSH, CEB TV/KD Analyst(s): CSH
Date/Time Extracted: 5/31/06 @ 0830 Date TV/KD: 5-31-06
Spike/Surrogate Analyst: CSH Witness: PAS
Surrogate #: STD11933 Earliest Hold Date: 6/2
Spike #: A = STD 10234 Spike #: B = —

Extraction Work Group WG 214262

Extract Relinquished By: CSH
Extract Received By & Date: EC2 5/31/06

	Sample ID	Test Code	pH √ <2	pH √ N	pH √ >12	Initial Vol / Wt	Amount Surrogate	Amount Spike	Final Volume	Extract Color	Emulsions √ A	Emulsions √ BN	Emulsions √ N	Comments
1	Blank			✓		1000mL	200ul		10mL	T				WG 214262-01
2	LCS			✓		1		250ul						WG -02
3	LCS DUP			✓		1		1						-03
4	05622-01	8081		✓		970mL								
5	-03			✓		980mL								
6	-05			✓		1000mL								
7	~~-06~~ -07 CSH 5/31/06			✓		980mL								
8	05659-01			✓		1000mL								
9	-03			✓		1								
10	-04			✓		980mL								
11	-05			✓		1								
12	-07			✓		1000mL								
13	FBLK 5/30	8081-TC		✓		100mL								W6214217-01
14	05576-01			✓		1								
15	05599-10			✓		1								
16														
17														
18														
19														
20														
21														
22														
23														
24														

CSH 5-31-06

Methylene Chloride Lot #: C03E63
Hexane Lot #: C03E80
Ether Lot #: —
Methanol Lot #: —
Solvent: — Lot #: —
Reagent: 94:6 Lot #: RGT10239
Reagent: 50:50 Lot #: RGT10245
Reagent: — Lot #: —
Acid: — Lot #: —
Florisil Lot #: —
Silica Gel Lot #: —
IR Analyst / Date / Time: —
Dried Na_2SO_4 Lot #: B51580

Color Code
T = Transparent
C = Colored
O = Opaque

SW-846 Method			On	Off	On	Off
Continuous	3520C					
Soxhlet	3540C					
ASE*	3545					
Sep Funnel	3510C	✓				
Sonication	3550B					
Waste	3580A					

* Accelerated Solvent Extractor (ASE)

Clean-ups			
Florisil 3620B	✓	GPC 3640A	
Silica Gel 3630C		Other	
Acid 3665A		N/A	
Sulfur 3660B			

Peer Reviewed By: Chelwick Davis Date: 5/31/06

006885

Extraction Notes For Volume # 260 Page # 179

General Comments: NONE

Extraction Anomalies: NONE

Concentration Anomalies: NONE

Clean-Up Anomalies: NONE

Supervisor Review: _____ Date: _____

006886

KEMRON Environmental Services
HOLDING TIMES
EQUIVALENT TO AFCEE FORM 9

Analytical Method: 8081A **AAB#:** WG214367
Login Number: L0605576

Client ID	Date Collected	Date Received	Date Extracted	Max Hold Time Ext.	Time Held Ext.	Date Analyzed	Max Hold Time Anal	Time Held Anal.	Q
IWSB01052406	05/24/06	05/25/06	05/31/06	13	6.78	06/01/06	40	1.22	

* EXT = SEE PROJECT QAPP REQUIREMENTS
*ANAL = SEE PROJECT QAPP REQUIREMENTS

KEMRON FORMS - Modified 02/14/2006
Version 1.5 PDF File ID: 488911
Report generated 06/02/2006 13:20

KEMRON Environmental Services

SURROGATE STANDARDS

Login Number: L0605576
Instrument Id: HP9
Workgroup (AAB#): WG214367

Method: 8081
CAL ID: HP9-26-APR-06
Matrix: TCLP

Sample Number	Dilution	Tag	1	2
L0605576-01	1.00	01	67.1	102
WG214262-01	1.00	01	85.3	110
WG214262-01	1.00	C201	80.1	108
WG214262-02	1.00	01	73.5	95.9
WG214262-02	1.00	C201	70.6	94.7
WG214262-03	1.00	01	74.3	97.0
WG214262-03	1.00	C201	69.9	95.4

Surrogates	Surrogate Limits		
1 - 2,4,5,6-Tetrachloro-m-xylene	33	-	138
2 - Decachlorobiphenyl	32	-	135

Underline = Result out of surrogate limits

DL = surrogate diluted out
ND = surrogate not detected

KEMRON FORMS - Modified 04/18/2006
Version 1.5 PDF File ID: 488919
Report generated 06/02/2006 13:21

KEMRON Environmental Services

METHOD BLANK SUMMARY

Login Number:	L0605576	Work Group:	WG214367
Blank File ID:	9G35055.F	Blank Sample ID:	WG214262-01
Date Analyzed:	06/01/06	Instrument ID:	HP9
Time Analyzed:	11:19	Method:	8081A
Analyst:	ECL		

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG214262-02	9G35056.F	06/01/06 11:47	01
LCS2	WG214262-03	9G35057.F	06/01/06 12:15	01
IWSB01052406	L0605576-01	9G35058.F	06/01/06 13:41	01

KEMRON FORMS - Modified 03/06/2006
Version 1.5 PDF File ID: 488912
Report generated 06/02/2006 13:20

KEMRON Environmental Services

METHOD BLANK REPORT

Login Number: L0605576 Run Date: 06/01/2006 Sample ID: WG214262-01
Instrument ID: HP9 Run Time: 11:19 Prep Method: 3510C
File ID: 9G35055.F Analyst: ECL Method: 8081A
Workgroup (AAB#): WG214367 Matrix: Water Units: ug/L
Contract #: Cal ID: HP9-26-APR-06

Analytes	SQL	PQL	Concentration	Dilution	Qualifier
Endrin	0.100	0.500	0.100	1	U
Lindane	0.100	0.500	0.100	1	U
Methoxychlor	0.100	0.500	0.100	1	U
Toxaphene	3.00	10.0	3.00	1	U
Chlordane	3.00	10.0	3.00	1	U
Heptachlor	0.100	0.500	0.100	1	U
Heptachlor Epoxide	0.100	0.500	0.100	1	U

Surrogates	% Recovery	Surrogate Limits			Qualifier
2,4,5,6-Tetrachloro-m-xylene	85.3	20	-	180	PASS
Decachlorobiphenyl	110	25	-	140	PASS

MDL Method Detection Limit
RL Reporting/quantitation Limit

* Analyte concentration > RL

KEMRON FORMS - Modified 05/01/2006
Version 1.5 PDF File ID: 488913
Report generated 06/02/2006 13:20

KEMRON Environmental Services

METHOD BLANK REPORT

Login Number: L0605576 Run Date: 06/01/2006 Sample ID: WG214262-01
Instrument ID: HP9 Run Time: 11:47 Prep Method: 3510C
File ID: 9G35055.R Analyst: ECL Method: 8081A
Workgroup (AAB#): WG214367 Matrix: Water Units: ug/L
Contract #: Cal ID: HP9-26-APR-06

Analytes	SQL	PQL	Concentration	Dilution	Qualifier
Endrin	0.100	0.500	0.100	1	U
Lindane	0.100	0.500	0.100	1	U
Methoxychlor	0.100	0.500	0.100	1	U
Toxaphene	3.00	10.0	3.00	1	U
Chlordane	3.00	10.0	3.00	1	U
Heptachlor	0.100	0.500	0.100	1	U
Heptachlor Epoxide	0.100	0.500	0.100	1	U

Surrogates	% Recovery	Surrogate Limits	Qualifier
2,4,5,6-Tetrachloro-m-xylene	80.1	20 - 180	PASS
Decachlorobiphenyl	108	25 - 140	PASS

MDL Method Detection Limit
RL Reporting/quantitation Limit

* Analyte concentration > RL

KEMRON FORMS - Modified 05/01/2006
Version 1.5 PDF File ID: 488913
Report generated 06/02/2006 13:20

KEMRON Environmental Services

LABORATORY CONTROL SAMPLE (LCS)

Login Number: L0605576 Analyst: ECL Prep Method: 3510C
Instrument ID: HP9 Matrix: Leachate Method: 8081A
Workgroup (AAB#): WG214367 Units: ug/L
Sample ID: WG214262-02 LCS File ID: 9G35056.F Run Date: 06/01/2006 11:47
Sample ID: WG214262-03 LCS2 File ID: 9G35057.F Run Date: 06/01/2006 12:15

Analytes	LCS			LCS2			%RPD	%Rec Limits	RPD Lmt	Q
	Known	Found	% REC	Known	Found	% REC				
Endrin	0.500	0.558	112	0.500	0.617	123	10.1	56 - 134	40	
Lindane	0.500	0.511	102	0.500	0.551	110	7.52	30 - 146	40	
Methoxychlor	0.500	0.548	110	0.500	0.609	122	10.7	56 - 150	40	
Heptachlor	0.500	0.463	92.6	0.500	0.494	98.7	6.41	51 - 128	40	
Heptachlor Epoxide	0.500	0.514	103	0.500	0.562	112	8.84	62 - 131	40	

Surogates	LCS	LCS2	Surrogate Limits	Qualifier
	% Recovery	% Recovery		
Decachlorobiphenyl	95.9	97.0	32 - 135	PASS
2,4,5,6-Tetrachloro-m-xylene	73.5	74.3	33 - 138	PASS

* FAILS %REC LIMIT

\# FAILS RPD LIMIT

KEMRON FORMS - Modified 04/12/2006
Version 1.5 PDF File ID: 488914
Report generated 06/02/2006 13:20

KEMRON Environmental Services

LABORATORY CONTROL SAMPLE (LCS)

Login Number: L0605576 Analyst: ECL Prep Method: 3510C
Instrument ID: HP9 Matrix: Leachate Method: 8081A
Workgroup (AAB#): WG214367 Units: ug/L
Sample ID: WG214262-02 LCS File ID: 9G35056.R Run Date: 06/01/2006 12:15
Sample ID: WG214262-03 LCS2 File ID: 9G35057.R Run Date: 06/01/2006 12:43

Analytes	LCS			LCS2			%RPD	%Rec Limits	RPD Lmt	Q
	Known	Found	% REC	Known	Found	% REC				
Endrin	0.500	0.572	114	0.500	0.618	124	7.77	56 - 134	40	
Lindane	0.500	0.527	105	0.500	0.557	111	5.46	30 - 146	40	
Methoxychlor	0.500	0.571	114	0.500	0.615	123	7.54	56 - 150	40	
Heptachlor	0.500	0.440	88.0	0.500	0.461	92.1	4.63	51 - 128	40	
Heptachlor Epoxide	0.500	0.530	106	0.500	0.570	114	7.28	62 - 131	40	

Surogates	LCS	LCS2	Surrogate Limits	Qualifier
	% Recovery	% Recovery		
Decachlorobiphenyl	94.7	95.4	32 - 135	PASS
2,4,5,6-Tetrachloro-m-xylene	70.6	69.9	33 - 138	PASS

* FAILS %REC LIMIT

\# FAILS RPD LIMIT

KEMRON FORMS - Modified 04/12/2006
Version 1.5 PDF File ID: 488914
Report generated 06/02/2006 13:20

KEMRON Environmental Services

INITIAL CALIBRATION SUMMARY

Login Number: L0605576 **Instrument ID:** HP9
Analytical Method: 8081A **Initial Calibration Date:** 26-APR-06 17:48
ICAL Workgroup: WG211782 **Column ID:** F

Analyte		AVG RF	% RSD	LINEAR	QUAD
Endrin		16090000	2.23		
Heptachlor		20930000	4.31		
Heptachlor Epoxide		22120000	4.43		
Methoxychlor		8318000	2.06		
gamma-BHC		24670000	4.49		
2,4,5,6-Tetrachloro-M-Xylene	SURR	19350000	4.43		
Decachlorobiphenyl	SURR	12350000	10.3		

KEMRON Environmental Services

INITIAL CALIBRATION SUMMARY

Login Number: L0605576 **Instrument ID:** HP9
Analytical Method: 8081A **Initial Calibration Date:** 26-APR-06 17:48
ICAL Workgroup: WG211782 **Column ID:** R

Analyte		AVG RF	% RSD	LINEAR	QUAD
Endrin		7060000	3.77		
Heptachlor		11620000	2.70		
Heptachlor Epoxide		9896000	3.66		
Methoxychlor		3361000	5.38		
gamma-BHC		12340000	8.09		
2,4,5,6-Tetrachloro-M-Xylene	SURR	10410000	2.30		
Decachlorobiphenyl	SURR	5417000	19.5		

KEMRON FORMS - Modified 03/06/2006
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KEMRON Environmental Services

INITIAL CALIBRATION DATA

Login Number: L0605576 **Instrument ID:** HP9

Analytical Method: 8081A **Initial Calibration Date:** 26-APR-06 17:48

Column ID: F

Analyte	WG211782-01			WG211782-02			WG211782-03		
	CONC	RESP	RF	CONC	RESP	RF	CONC	RESP	RF
Endrin	200	3283984420	16420000	50.0	809239398	16180000	20.0	319200839	15960000
Heptachlor	200	4466074152	22330000	50.0	1079461628	21590000	20.0	414471628	20720000
Heptachlor Epoxide	200	4149728016	20750000	50.0	1081744365	21630000	20.0	437202927	21860000
Methoxychlor	200	1616951542	8085000	50.0	410607632	8212000	20.0	166410666	8321000
gamma-BHC	200	5218571443	26090000	50.0	1279953800	25600000	20.0	498775244	24940000
2,4,5,6-Tetrachloro-M-Xylene	200	3691918566	18460000	50.0	932387218	18650000	20.0	377604681	18880000
Decachlorobiphenyl	200	2136304786	10680000	50.0	561753496	11240000	20.0	239757846	11990000

KEMRON Environmental Services

INITIAL CALIBRATION DATA

Login Number: L0605576 **Instrument ID:** HP9

Analytical Method: 8081A **Initial Calibration Date:** 26-APR-06 17:48

Column ID: F

Analyte	WG211782-04			WG211782-05			WG211782-06		
	CONC	RESP	RF	CONC	RESP	RF	CONC	RESP	RF
Endrin	10.0	163083061	16310000	4.00	61719066	15430000	1.00	16248553	16250000
Heptachlor	10.0	204860974	20490000	4.00	79029407	19760000	1.00	20678236	20680000
Heptachlor Epoxide	10.0	225122445	22510000	4.00	89091980	22270000	1.00	23683894	23680000
Methoxychlor	10.0	86011053	8601000	4.00	33358360	8340000	1.00	8351001	8351000
gamma-BHC	10.0	245690192	24570000	4.00	93331750	23330000	1.00	23495010	23500000
2,4,5,6-Tetrachloro-M-Xylene	10.0	195925285	19590000	4.00	78986942	19750000	1.00	20743623	20740000
Decachlorobiphenyl	10.0	128343075	12830000	4.00	53289525	13320000	1.00	14027811	14030000

KEMRON FORMS - Modified 03/06/2006
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KEMRON Environmental Services

INITIAL CALIBRATION DATA

Login Number: L0605576 **Instrument ID:** HP9

Analytical Method: 8081A **Initial Calibration Date:** 26-APR-06 17:48

Column ID: R

Analyte	WG211782-01			WG211782-02			WG211782-03		
	CONC	RESP	RF	CONC	RESP	RF	CONC	RESP	RF
Endrin	200	1475990221	7380000	50.0	343407395	6868000	20.0	134199981	6710000
Heptachlor	200	2412931916	12060000	50.0	580557976	11610000	20.0	222416405	11120000
Heptachlor Epoxide	200	1974642600	9873000	50.0	486462836	9729000	20.0	185865958	9293000
Methoxychlor	200	654674629	3273000	50.0	161953544	3239000	20.0	68915581	3446000
gamma-BHC	200	2770329040	13850000	50.0	650032541	13000000	20.0	241472219	12070000
2,4,5,6-Tetrachloro-M-Xylene	200	2086664969	10430000	50.0	511681971	10230000	20.0	202553202	10130000
Decachlorobiphenyl	200	848294798	4241000	50.0	225658744	4513000	20.0	100558352	5028000

KEMRON FORMS - Modified 03/06/2006
Version 1.6 PDF File ID: 488916
Report generated 06/02/2006 13:21

KEMRON Environmental Services

INITIAL CALIBRATION DATA

Login Number: L0605576 **Instrument ID:** HP9

Analytical Method: 8081A **Initial Calibration Date:** 26-APR-06 17:48

Column ID: R

Analyte	WG211782-04			WG211782-05			WG211782-06		
	CONC	RESP	RF	CONC	RESP	RF	CONC	RESP	RF
Endrin	10.0	69885858	6989000	4.00	28244950	7061000	1.00	7354372	7354000
Heptachlor	10.0	117259261	11730000	4.00	45872052	11470000	1.00	11731118	11730000
Heptachlor Epoxide	10.0	100855182	10090000	4.00	40165540	10040000	1.00	10351020	10350000
Methoxychlor	10.0	34455988	3446000	4.00	14532462	3633000	1.00	3131848	3132000
gamma-BHC	10.0	124698219	12470000	4.00	45980448	11500000	1.00	11134264	11130000
2,4,5,6-Tetrachloro-M-Xylene	10.0	108276170	10830000	4.00	41731889	10430000	1.00	10430946	10430000
Decachlorobiphenyl	10.0	55349379	5535000	4.00	24493105	6123000	1.00	7060640	7061000

KEMRON Environmental Services

ALTERNATE SOURCE CALIBRATION REPORT

Login Number: L0605576 Run Date: 04/26/2006 Sample ID: WG211782-07
Instrument ID: HP9 Run Time: 17:48 Method: 8081A
File ID: 9G34758.F Analyst: ECL
ICal Workgroup: WG211782 Cal ID: HP9 - 26-APR-06

Analyte		Expected	Found	RF	%D	UNITS	Q
Endrin		20	19.2	15400000	4.2	ug/L	
gamma-BHC		20	19.9	24600000	.3	ug/L	
Methoxychlor		20	19.8	8220000	1.2	ug/L	
Heptachlor		20	19.2	20100000	4.1	ug/L	
Heptachlor Epoxide		20	19.6	21700000	1.9	ug/L	

* Exceeds %D Limit

KEMRON FORMS - Modified 04/11/2006
Version 1.5 PDF File ID: 488917
Report generated 06/02/2006 13:21

KEMRON Environmental Services

ALTERNATE SOURCE CALIBRATION REPORT

Login Number: L0605576 Run Date: 04/26/2006 Sample ID: WG211782-07
Instrument ID: HP9 Run Time: 18:16 Method: 8081A
File ID: 9G34758.R Analyst: ECL
ICal Workgroup: WG211782 Cal ID: HP9 - 26-APR-06

Analyte		Expected	Found	RF	%D	UNITS	Q
Endrin		20	18.6	6570000	7	ug/L	
gamma-BHC		20	20.7	12800000	3.6	ug/L	
Methoxychlor		20	19.3	3240000	3.5	ug/L	
Heptachlor		20	20.2	11700000	.9	ug/L	
Heptachlor Epoxide		20	20.3	10100000	1.6	ug/L	

* Exceeds %D Limit

KEMRON FORMS - Modified 04/11/2006
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KEMRON Environmental Services

CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L0605576 Run Date: 06/01/2006 Sample ID: WG214399-01
Instrument ID: HP9 Run Time: 10:51 Method: 8081A
File ID: 9G35054.F Analyst: ECL
Workgroup (AAB#): WG214367 Cal ID: HP9 - 26-APR-06

Analyte		Expected	Found	RF	%D	UNITS	Q
Toxaphene-1		250	258	115000	3.4	ug/L	
Toxaphene-2		250	284	123000	13.5	ug/L	
Toxaphene-3		250	272	430000	8.8	ug/L	
Toxaphene-4		250	253	207000	1.2	ug/L	
Toxaphene-5		250	239	173000	4.2	ug/L	

* Exceeds %D Criteria

KEMRON FORMS - Modified 04/19/2006
Version 1.3 PDF File ID: 488918
Report generated 06/02/2006 13:21

KEMRON Environmental Services

CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L0605576 Run Date: 06/01/2006 Sample ID: WG214399-01
Instrument ID: HP9 Run Time: 11:19 Method: 8081A
File ID: 9G35054.R Analyst: ECL
Workgroup (AAB#): WG214367 Cal ID: HP9 - 26-APR-06

Analyte		Expected	Found	RF	%D	UNITS	Q
Toxaphene-1		250	263	98700	5.1	ug/L	
Toxaphene-2		250	247	92500	1	ug/L	
Toxaphene-3		250	292	182000	16.9	ug/L	*
Toxaphene-4		250	278	89200	11.1	ug/L	
Toxaphene-5		250	327	58500	30.7	ug/L	*

* Exceeds %D Criteria

KEMRON FORMS - Modified 04/19/2006
Version 1.3 PDF File ID: 488918
Report generated 06/02/2006 13:21

KEMRON Environmental Services

CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L0605576 Run Date: 06/01/2006 Sample ID: WG214397-03
Instrument ID: HP9 Run Time: 16:59 Method: 8081A
File ID: 9G35065.F Analyst: ECL
Workgroup (AAB#): WG214367 Cal ID: HP9 - 26-APR-06

Analyte		Expected	Found	RF	%D	UNITS	Q
Endrin		10	10.5	16900000	4.8	ug/L	
gamma-BHC		10	10.8	26700000	8.2	ug/L	
Methoxychlor		10	11.2	9310000	11.9	ug/L	
Heptachlor		10	10.9	24300000	9.1	ug/L	
Heptachlor Epoxide		10	11.1	24500000	10.9	ug/L	
2,4,5,6-Tetrachloro-M-Xylene	SURR	10	11.1	21500000	11.1	ug/L	
Decachlorobiphenyl	SURR	10	11.1	13700000	10.9	ug/L	

* Exceeds %D Criteria

KEMRON FORMS - Modified 04/19/2006
Version 1.3 PDF File ID: 488918
Report generated 06/02/2006 13:21

KEMRON Environmental Services

CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L0605576 Run Date: 06/01/2006 Sample ID: WG214397-03
Instrument ID: HP9 Run Time: 17:27 Method: 8081A
File ID: 9G35065.R Analyst: ECL
Workgroup (AAB#): WG214367 Cal ID: HP9 - 26-APR-06

Analyte		Expected	Found	RF	%D	UNITS	Q
Endrin		10	9.13	6440000	8.7	ug/L	
gamma-BHC		10	10.5	13000000	5.4	ug/L	
Methoxychlor		10	11.0	3700000	10	ug/L	
Heptachlor		10	9.55	11100000	4.5	ug/L	
Heptachlor Epoxide		10	10.9	10800000	9.4	ug/L	
2,4,5,6-Tetrachloro-M-Xylene	SURR	10	9.75	10200000	2.5	ug/L	
Decachlorobiphenyl	SURR	10	11.6	6280000	16	ug/L	*

* Exceeds %D Criteria

KEMRON FORMS - Modified 04/19/2006
Version 1.3 PDF File ID: 488918
Report generated 06/02/2006 13:21

KEMRON Environmental Services

CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L0605576 Run Date: 06/01/2006 Sample ID: WG214399-02
Instrument ID: HP9 Run Time: 17:27 Method: 8081A
File ID: 9G35066.F Analyst: ECL
Workgroup (AAB#): WG214367 Cal ID: HP9 - 26-APR-06

Analyte		Expected	Found	RF	%D	UNITS	Q
Toxaphene-1		500	474	106000	5.2	ug/L	
Toxaphene-2		500	559	121000	11.9	ug/L	
Toxaphene-3		500	563	445000	12.7	ug/L	
Toxaphene-4		500	553	226000	10.5	ug/L	
Toxaphene-5		500	539	195000	7.8	ug/L	

* Exceeds %D Criteria

KEMRON FORMS - Modified 04/19/2006
Version 1.3 PDF File ID: 488918
Report generated 06/02/2006 13:21

KEMRON Environmental Services

CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L0605576 Run Date: 06/01/2006 Sample ID: WG214399-02
Instrument ID: HP9 Run Time: 17:55 Method: 8081A
File ID: 9G35066.R Analyst: ECL
Workgroup (AAB#): WG214367 Cal ID: HP9 - 26-APR-06

Analyte		Expected	Found	RF	%D	UNITS	Q
Toxaphene-1		500	510	95800	2	ug/L	
Toxaphene-2		500	564	105000	12.7	ug/L	
Toxaphene-3		500	601	187000	20.2	ug/L	*
Toxaphene-4		500	556	89200	11.2	ug/L	
Toxaphene-5		500	701	62700	40.3	ug/L	*

* Exceeds %D Criteria

KEMRON FORMS - Modified 04/19/2006
Version 1.3 PDF File ID: 488918
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1.2.3 Herbicide GC Data (8151)

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1.2.3.1 QC Summary

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KEMRON ENVIRONMENTAL SERVICES
GC HERBICIDES

KEMRON Login No.: L0605576

METHOD

Preparation: SW- 846 3550B(Soils) 3510C(Waters)

Analysis: SW-846 8151

HOLDING TIMES

Sample Preparation: All holding times were met.

Sample Analysis: All holding times were met.

PREPARATION

Sample preparation proceeded normally.

CALIBRATION

Initial Calibration: For all compounds which yielded a %RSD greater than 15%, linear or higher order equations were applied. All acceptance criteria were met.

Alternate Source Standards: All acceptance criteria were met.

Continuing Calibraton: All acceptance criteria were met.

BATCH QA/QC

Method Blank: All acceptance criteria were met.

Laboratory Control Sample: All acceptance criteria were met.

Matrix Spikes: There were no MS/MSD results associated with this sample delivery group, due to insufficient volume of sample. The laboratory included an LCS and LCS duplicate in the preparation batch in lieu of the NELAC prescribed MS/MSD. KEMRON recommends site specific MS/MSD samples to avoid possible data qualification.

SAMPLES

Surrogates: All acceptance criteria were met.

Samples: For all samples which yielded results with an RPD of greater than 40% between the primary and confirmation column the appropriate flag was applied. All acceptance criteria were met.

Manual Integration Reason Codes

KEMRON laboratory management has identified four general cases with valid reasons supporting the use of manual integration techniques.

Reason #1: Data System Fails to Select Correct Peak
In some cases the chromatography system selects and integrates the ”wrong peak”. In this case the analyst must

correct the selection and force the system to integrate the proper peak. Other times the system may miss the peak completely.

Reason #2: Data System Splits the Peak Incorrectly or Integrates a False Peak as a Rider Peak.
This phenomena is common at low concentrations where the signal:noise ratio is low. A single compound (peak) is incorrectly split into multiple peaks or integrated as a main peak with one or more rider peaks resulting in low area counts for the target compound.

Reason #3: Improperly Integrated Isomers and/or coeluting compounds.
This system often fails to distinguish coeluting compounds and or isomers. The integration areas and concentrations are wrong, and they must be corrected by manual integration. Prime examples are benzo(k)fluoranthene and benzo(b)fluoranthene which are often unresolved and integrated improperly when both are present at low concentrations in standards or samples.

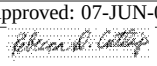
Reason #4: System Establishes Incorrect Baseline
There are numerous situations in chromatography where the system establishes the baseline incorrectly. Some baseline errors will be obvious to the analyst and should be corrected via manual procedures.

Reason #5: Miscellaneous
Other situations involving integration errors may require in-depth review and technical judgment. These cases should be brought to the attention of the laboratory management. If the form of manual integration is not clearly covered by these four cases, then review and approval by the Laboratory Director or the QA/QC Supervisor will be required.

I certify that this data package is in compliance with the terms and conditions agreed to by the client and KEMRON Environmental Services, both technically and for completeness, except for the conditions noted above. Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or designated person, as verified by the following signature.

Analyst: ECL

Approved: 07-JUN-06



006914

LABORATORY REPORT

L0605576

06/12/06 12:20

Submitted By

KEMRON Environmental Services
156 Starlite Drive
Marietta , OH 45750
(740) 373 - 4071

For

Account Name: CH2MHILL, Inc
7600 Tidwell Road
Suite 400
San Antonio, TX 77040
Attention: John Ynfante

Account Number: 2736
Work ID: STATE MARINE
Invoice Number: 580608
P.O. Number: 915193

Sample Analysis Summary

Client ID	Lab ID	Method	Dilution	Date Received
IWSB01052406	L0605576-01	8151A	1	25-MAY-06

Report Number: **L0605576**
Report Date : **June 12, 2006**

Sample Number: **L0605576-01**
Client ID: **IWSB01052406**
Matrix: **Leachate**
Workgroup Number: **WG214435**
Collect Date: **05/24/2006 13:50**

PrePrep Method: **1311**
Prep Method: **METHOD**
Analytical Method: **8151A**
Analyst: **ECL**
Dilution: **1**
Units: **ug/L**

Instrument: **HP15**
Prep Date: **05/31/2006 12:30**
Cal Date: **06/02/2006 13:32**
Run Date: **06/02/2006 16:41**
File ID: **15G5498.F**

Analyte	CAS.Number	Result	Qual	PQL	SQL	EPA HW#	Reg. Limit
2,4-D	94-75-7		U	20	10	D016	10000
2,4,5-TP (Silvex)	93-72-1		U	2	1	D017	1000

Surrogate	% Recovery	Lower	Upper
2,4-Dichlorophenylacetic acid	24.9	20	144

U Not detected at or above the reporting limit

Checklist ID: 7842

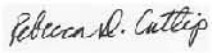
KEMRON Environmental Services
Data Checklist

Date: 02-JUN-2006
Analyst: ECL
Analyst: NA
Method: 8151
Instrument: HP15
Curve Workgroup: WG214420
Analytical Workgroups: L0605576, L0605599, L0605622, L0605659

Runlog ID number:	10650
System Performance Check	NA
DFTPP	NA
Endrin/DDT Breakdown	NA
Initial Calibration	X
Average RF	X
Linear Reg or Higher Order Curve	NA
Second Source standard % Difference	X
Continuing Calibration /Check Standards	X
Project/Client Specific Requirements	NA
Special Standards	NA
Blanks	X
TCL's	X
Surrogates	X
LCS (Laboratory Control Sample)	X
Recoveries	X
Surrogates	X
MS/MSD/Duplicates	NA
Samples	X
TCL Hits	X
Spectra of TCL Hits	NA
Surrogates	X
Internal Standards Criteria	NA
Library Searches	NA
Calculations & Correct Factors	X
Dilutions Run	NA
Reruns	NA
Manual Integrations	NA
Case Narrative	X
Results Reporting/Data Qualifiers	X
KOBRA Workgroup Data	X
Check for Completeness	X
Primary Reviewer	ECL
Secondary Reviewer	RDC
Check for compliance with method and project specific requirements	X
Check the completeness of reported information	X
Check the information for the report narrative	X
Check the resonableness of the results	X

Primary Reviewer:

Secondary Reviewer:
07-JUN-2006



Generated: JUN-07-2006 14:36:24

Run Log ID: **10650**

KEMRON Environmental Services

Instrument Run Log

Instrument: HP15 Dataset: 060206

Analyst1: ECL Analyst2: NA

Method: 8151 SOP: GCS04 Rev: 7

Column 1 ID: RTX-CLP Column 2 ID: RTX-CLP2

Workgroups:

Internal Standard: NA Surrogate Standard: NA

Comments:

Seq.	File ID	Sample Information	Mat	Dil	Reference	Date/Time
1	15G5488.F	WG214420-01 HERB ICAL \#5	1	1	SOS78-26	06/02/06 11:18
2	15G5488.R	WG214420-01 HERB ICAL \#5	1	1	SOS78-26	06/02/06 11:45
3	15G5489.F	WG214420-02 HERB ICAL \#4	1	1	SOS78-26	06/02/06 11:45
4	15G5489.R	WG214420-02 HERB ICAL \#4	1	1	SOS78-26	06/02/06 12:11
5	15G5490.F	WG214420-03 HERB ICAL \#3	1	1	SOS78-26	06/02/06 12:11
6	15G5490.R	WG214420-03 HERB ICAL \#3	1	1	SOS78-26	06/02/06 12:38
7	15G5491.F	WG214420-04 HERB ICAL \#2	1	1	SOS78-26	06/02/06 12:38
8	15G5491.R	WG214420-04 HERB ICAL \#2	1	1	SOS78-26	06/02/06 13:05
9	15G5492.F	WG214420-05 HERB ICAL \#1	1	1	SOS78-26	06/02/06 13:05
10	15G5492.R	WG214420-05 HERB ICAL \#1	1	1	SOS78-26	06/02/06 13:32
11	15G5493.F	WG214420-06 HERB ALT	1	1	SOS78-25	06/02/06 13:32
12	15G5493.R	WG214420-06 HERB ALT	1	1	SOS78-25	06/02/06 13:59
13	15G5494.F	WG214420-06 HERB ALT	1	1	SOS78-25	06/02/06 14:53
14	15G5494.R	WG214420-06 HERB ALT	1	1	SOS78-25	06/02/06 15:20
15	15G5495.F	WG214300-01 BLANK V260 P185	1	1		06/02/06 15:20
16	15G5495.R	WG214300-01 BLANK V260 P185	1	1		06/02/06 15:47
17	15G5496.F	WG214300-02 LCS V260 P185	1	1		06/02/06 15:47
18	15G5496.R	WG214300-02 LCS V260 P185	1	1		06/02/06 16:14
19	15G5497.F	WG214300-03 LCS DUP V260 P185	1	1		06/02/06 16:14
20	15G5497.R	WG214300-03 LCS DUP V260 P185	1	1		06/02/06 16:41
21	15G5498.F	L0605576-01	17	1		06/02/06 16:41
22	15G5498.R	L0605576-01	17	1		06/02/06 17:08
23	15G5499.F	L0605599-10	17	1		06/02/06 17:08
24	15G5499.R	L0605599-10	17	1		06/02/06 17:34
25	15G5500.F	L0605622-01	1	1		06/02/06 17:34
26	15G5500.R	L0605622-01	1	1		06/02/06 18:01
27	15G5501.F	L0605622-03	1	1		06/02/06 18:01
28	15G5501.R	L0605622-03	1	1		06/02/06 18:29
29	15G5502.F	L0605622-05	1	1		06/02/06 18:29
30	15G5502.R	L0605622-05	1	1		06/02/06 18:56
31	15G5503.F	L0605622-06	1	1		06/02/06 18:56
32	15G5503.R	L0605622-06	1	1		06/02/06 19:23
33	15G5504.F	WG214423-01 HERB CCV	1	1	SOS78-26	06/02/06 19:23
34	15G5504.R	WG214423-01 HERB CCV	1	1	SOS78-26	06/02/06 19:50
35	15G5505.F	L0605659-01	1	1		06/02/06 19:50
36	15G5505.R	L0605659-01	1	1		06/02/06 20:16

Approved: 07-JUN-06

Rebecca D. Cattrip

006918

Run Log ID: **10650**

KEMRON Environmental Services

Instrument Run Log

Instrument: HP15 Dataset: 060206

Analyst1: ECL Analyst2: NA

Method: 8151 SOP: GCS04 Rev: 7

Column 1 ID: RTX-CLP Column 2 ID: RTX-CLP2

Workgroups:

Internal Standard: NA Surrogate Standard: NA

Seq.	File ID	Sample Information	Mat	Dil	Reference	Date/Time
37	15G5506.F	L0605659-03	1	1		06/02/06 20:16
38	15G5506.R	L0605659-03	1	1		06/02/06 20:43
39	15G5507.F	L0605659-04	1	1		06/02/06 20:43
40	15G5507.R	L0605659-04	1	1		06/02/06 21:10
41	15G5508.F	L0605659-05	1	1		06/02/06 21:10
42	15G5508.R	L0605659-05	1	1		06/02/06 21:37
43	15G5509.F	L0605659-07	1	1		06/02/06 21:37
44	15G5509.R	L0605659-07	1	1		06/02/06 22:03
45	15G5510.F	WG214218-01 FBLANK 5/30	17	1		06/02/06 22:03
46	15G5510.R	WG214218-01 FBLANK 5/30	17	1		06/02/06 22:30
47	15G5511.F	LCS CHECK V260 P185	1	1	STD12832	06/02/06 22:30
48	15G5511.R	LCS CHECK V260 P185	1	1	STD12832	06/02/06 22:57
49	15G5512.F	WG214423-02 HERB CCV	1	1	SOS78-26	06/02/06 22:57
50	15G5512.R	WG214423-02 HERB CCV	1	1	SOS78-26	06/02/06 23:24

Comments

Seq.	Rerun	Dil.	Reason	Analytes
11	X		Check Standard Failure	

Page: 2 of 2 Approved: 07-JUN-06

Rebecca D. Cattlip

006919

KEMRON
ENVIRONMENTAL SERVICES

TCLP Non-Volatile

Analyst(s): Ed
Date: 05-30-06

Analyst/Date		Analyst/Date	
Ed 05-30-06		Ed 05-31-06	
Time On	Temp On °C	Time Off	Temp Off °C
1330	24	0730	23

Jug #	Sample #	Tests	Method	Fluid #	Matrix*	%Solid	Size Reduction Yes	Size Reduction No	Int. Wt. (g)	Fluid Vol. (mL)
N/A	05-557-02	ME	1311	Filtered	W	<.5		✓	100	100
D	05-557-03	ME	1311	FI-592	S	100	✓		100.05	2000
	-05	↓	↓	↓	↓	↓		✓	100.05	↓
	-06							✓	100.02	
	-08							✓	100.05	
G-7	05-576-01	SV Pest Herb			S/S			✓	100.05	
G-9	05-577-10	↓ ↓ ↓						✓	100.02	
G-11	05-630-02	↓			↓			✓	100.05	
D	05-633-02	ME pH-L			S			✓	100.05	
↓	-03	↓	↓	↓	↓	↓		✓	100.01	↓
N/A	FBLK	ME SV Pest Herb	1311	FI-592	N/A	N/A		✓	2000	2000

Ed 05-30-06

*Matrix Code = (S-solid)(SS-sand, soil or sludge)(P-paint)(O-organic or waste)(W-water)

Comments: _____

Peer Review By: _____ Supervisor Review: _____

006920

Sample Extract Log Sheet R1074297

KEMRON ENVIRONMENTAL SERVICES

Parameter: HEB H2O SOP #: EXH01 Revision #: 13
Extraction Analyst(s): CPD, CEB, DAS TV/KD Analyst(s): CSH
Date/Time Extracted: 05/31 | 06/1230 Date TV/KD: 6-1-06
Spike/Surrogate Analyst: CPD Witness: CEB
Surrogate #: STD12715 Earliest Hold Date: 6/2
Spike #: A = STD11908 Spike #: B = —

Extraction Work Group WG 214300

Extract Relinquished By: CSH
Extract Received By & Date: EC2 6/1/06

	Sample ID	Test Code	pH / <2	pH / N	pH / >12	Initial Vol / Wt	Amount Surrogate	Amount Spike	Final Volume	Extract Color	Emulsions / A	Emulsions / BN	Emulsions / N	Comments
1	Blank		✓		✓	1000mL	1mL		10mL	T				WG 214300-01
2	LCS		✓		✓			1mL						WG -02
3	LCSDup		✓		✓			1						1 -03
4	05-622-01	8151-SPE	✓		✓									
5	-03		✓		✓									
6	-05		✓		✓									
7	-06		✓		✓									
8	05-659-01		✓		✓									
9	-03		✓		✓									
10	-04		✓		✓									
11	-05		✓		✓	980mL								
12	-07		✓		✓	1000mL				C				
13	FBLK 5/30	8151-TC	✓		✓	100mL				T				WG214218-01
14	05-576-01	1	✓		✓	1				1				
15	05-591-10		✓		✓									
16														
17														
18														
19														
20														
21														
22														
23														
24														

CSH 6-1-6

Methylene Chloride Lot #: C03E63
Hexane Lot #: C03E80
Ether Lot #: C15465
Methanol Lot #: B4BE61
Solvent: ISO-OCTANE Lot #: B39588
Reagent: NaCl Lot #: C02H34
Reagent: 6N NaOH Lot #: ER0019-13
Reagent: DIAZO Lot #: RGT10251
Acid: 12N H_2SO_4 Lot #: ER0019-4
Florisil Lot #: —
Silica Gel Lot #: —
IR Analyst / Date / Time: —
Dried Na_2SO_4 Lot #: (ACIDIFIED) RGT10235

Color Code
T = Transparent
C = Colored
O = Opaque

SILICIC ACID: 2847 B10H17

SW-846 Method			On	Off	On	Off
Continuous	3520C					
Soxhlet	3540C					
ASE*	3545					
Sep Funnel	3510C	✓				
Sonication	3550B					
Waste	3580A					

* Accelerated Solvent Extractor (ASE)

Clean-ups			
Florisil 3620B		GPC 3640A	
Silica Gel 3630C		Other	✓
Acid 3665A		N/A	
Sulfur 3660B			

Peer Reviewed By: Cheryl Flowers Date: 6-01-06

006921

Extraction Notes For Volume # 260 Page # 185

General Comments: NONE

Extraction Anomalies: NONE

Concentration Anomalies: NONE

Clean-Up Anomalies: NONE

Supervisor Review: _____ Date: _____

006922

KEMRON Environmental Services
HOLDING TIMES
EQUIVALENT TO AFCEE FORM 9

Analytical Method: 8151A **AAB#:** WG214435
Login Number: L0605576

Client ID	Date Collected	Date Received	Date Extracted	Max Hold Time Ext.	Time Held Ext.	Date Analyzed	Max Hold Time Anal	Time Held Anal.	Q
IWSB01052406	05/24/06	05/25/06	05/31/06	13	6.94	06/02/06	40	2.17	

* EXT = SEE PROJECT QAPP REQUIREMENTS
*ANAL = SEE PROJECT QAPP REQUIREMENTS

KEMRON FORMS - Modified 02/14/2006
Version 1.5 PDF File ID: 489347
Report generated 06/05/2006 09:33

KEMRON Environmental Services

SURROGATE STANDARDS

Login Number: L0605576
Instrument Id: HP15
Workgroup (AAB#): WG214435

Method: 8151
CAL ID: HP15-02-JUN-06
Matrix: TCLP

Sample Number	Dilution	Tag	1
L0605576-01	1.00	01	24.9
WG214300-01	1.00	01	43.7
WG214300-01	1.00	C201	41.7
WG214300-02	1.00	01	51.4
WG214300-02	1.00	C201	55.1
WG214300-03	1.00	01	40.9
WG214300-03	1.00	C201	44.7

Surrogates	Surrogate Limits
1 - 2,4-Dichlorophenylacetic acid	20 - 144

Underline = Result out of surrogate limits

DL = surrogate diluted out
ND = surrogate not detected

KEMRON FORMS - Modified 04/18/2006
Version 1.5 PDF File ID: 489354
Report generated 06/05/2006 09:34

KEMRON Environmental Services

METHOD BLANK SUMMARY

Login Number:	L0605576	Work Group:	WG214435
Blank File ID:	15G5495.F	Blank Sample ID:	WG214300-01
Date Analyzed:	06/02/06	Instrument ID:	HP15
Time Analyzed:	15:20	Method:	8151A
Analyst:	ECL		

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG214300-02	15G5496.F	06/02/06 15:47	01
LCS2	WG214300-03	15G5497.F	06/02/06 16:14	01
IWSB01052406	L0605576-01	15G5498.F	06/02/06 16:41	01

KEMRON FORMS - Modified 03/06/2006
Version 1.5 PDF File ID: 489348
Report generated 06/05/2006 09:33

KEMRON Environmental Services

METHOD BLANK REPORT

Login Number: L0605576	Run Date: 06/02/2006	Sample ID: WG214300-01
Instrument ID: HP15	Run Time: 15:20	Prep Method: METHOD
File ID: 15G5495.F	Analyst: ECL	Method: 8151A
Workgroup (AAB#): WG214435	Matrix: Water	Units: ug/L
Contract #:	Cal ID: HP15-02-JUN-06	

Analytes	SQL	PQL	Concentration	Dilution	Qualifier
2,4-D	10.0	20.0	10.0	1	U
2,4,5-TP (Silvex)	1.00	2.00	1.00	1	U

Surrogates	% Recovery	Surrogate Limits	Qualifier
2,4-Dichlorophenylacetic acid	43.7	20 - 144	PASS

MDL Method Detection Limit
RL Reporting/quantitation Limit

* Analyte concentration > RL

KEMRON FORMS - Modified 05/01/2006
Version 1.5 PDF File ID: 489349
Report generated 06/05/2006 09:33

KEMRON Environmental Services

METHOD BLANK REPORT

Login Number:	L0605576	Run Date:	06/02/2006	Sample ID:	WG214300-01
Instrument ID:	HP15	Run Time:	15:47	Prep Method:	METHOD
File ID:	15G5495.R	Analyst:	ECL	Method:	8151A
Workgroup (AAB#):	WG214435	Matrix:	Water	Units:	ug/L
Contract #:		Cal ID:	HP15-02-JUN-06		

Analytes	SQL	PQL	Concentration	Dilution	Qualifier
2,4-D	10.0	20.0	10.0	1	U
2,4,5-TP (Silvex)	1.00	2.00	1.00	1	U

Surrogates	% Recovery	Surrogate Limits	Qualifier
2,4-Dichlorophenylacetic acid	41.7	20 - 144	PASS

MDL Method Detection Limit
RL Reporting/quantitation Limit

* Analyte concentration > RL

KEMRON FORMS - Modified 05/01/2006
Version 1.5 PDF File ID: 489349
Report generated 06/05/2006 09:33

KEMRON Environmental Services

LABORATORY CONTROL SAMPLE (LCS)

Login Number: L0605576 Analyst: ECL Prep Method: METHOD
Instrument ID: HP15 Matrix: Leachate Method: 8151A
Workgroup (AAB#): WG214435 Units: ug/L
Sample ID: WG214300-02 LCS File ID: 15G5496.F Run Date: 06/02/2006 15:47
Sample ID: WG214300-03 LCS2 File ID: 15G5497.F Run Date: 06/02/2006 16:14

Analytes	LCS			LCS2			%RPD	%Rec Limits	RPD Lmt	Q
	Known	Found	% REC	Known	Found	% REC				
2,4-D	5.00	2.36	47.1	5.00	1.87	37.5	22.8	29 - 133	51	
2,4,5-TP (Silvex)	0.500	0.268	53.5	0.500	0.217	43.3	21.0	38 - 130	44	

Surogates	LCS	LCS2	Surrogate Limits	Qualifier
	% Recovery	% Recovery		
2,4-Dichlorophenylacetic acid	51.4	40.9	20 - 144	PASS

* FAILS %REC LIMIT

\# FAILS RPD LIMIT

KEMRON FORMS - Modified 06/02/2006
Version 1.5 PDF File ID: 489350
Report generated 06/05/2006 09:34

KEMRON Environmental Services

LABORATORY CONTROL SAMPLE (LCS)

Login Number: L0605576 Analyst: ECL Prep Method: METHOD
Instrument ID: HP15 Matrix: Leachate Method: 8151A
Workgroup (AAB#): WG214435 Units: ug/L
Sample ID: WG214300-02 LCS File ID: 15G5496.R Run Date: 06/02/2006 16:14
Sample ID: WG214300-03 LCS2 File ID: 15G5497.R Run Date: 06/02/2006 16:41

Analytes	LCS			LCS2			%RPD	%Rec Limits	RPD Lmt	Q
	Known	Found	% REC	Known	Found	% REC				
2,4-D	5.00	2.43	48.7	5.00	1.76	35.2	32.2	29 - 133	51	
2,4,5-TP (Silvex)	0.500	0.278	55.7	0.500	0.228	45.6	19.9	38 - 130	44	

Surogates	LCS	LCS2	Surrogate Limits	Qualifier
	% Recovery	% Recovery		
2,4-Dichlorophenylacetic acid	55.1	44.7	20 - 144	PASS

* FAILS %REC LIMIT

\# FAILS RPD LIMIT

KEMRON FORMS - Modified 06/02/2006
Version 1.5 PDF File ID: 489350
Report generated 06/05/2006 09:34

KEMRON Environmental Services

INITIAL CALIBRATION SUMMARY

Login Number: L0605576 **Instrument ID:** HP15
Analytical Method: 8151A **Initial Calibration Date:** 02-JUN-06 13:32
ICAL Workgroup: WG214420 **Column ID:** F

Analyte		AVG RF	% RSD	LINEAR	QUAD
2,4-D		939700	12.5		
Silvex		4931000	1.82		
2,4-Dichlorophenylacetic acid	SURR	686000	12.9		

KEMRON FORMS - Modified 03/06/2006
Version 1.5 PDF File ID: 489351
Report generated 06/05/2006 09:34

KEMRON Environmental Services

INITIAL CALIBRATION SUMMARY

Login Number: L0605576 **Instrument ID:** HP15
Analytical Method: 8151A **Initial Calibration Date:** 02-JUN-06 13:32
ICAL Workgroup: WG214420 **Column ID:** R

Analyte		AVG RF	% RSD	LINEAR	QUAD
2,4-D		1211000	10.3		
Silvex		6189000	2.65		
2,4-Dichlorophenylacetic acid	SURR	834200	11.0		

KEMRON Environmental Services

INITIAL CALIBRATION DATA

Login Number: L0605576 **Instrument ID:** HP15

Analytical Method: 8151A **Initial Calibration Date:** 02-JUN-06 13:32

Column ID: F

Analyte	WG214420-01			WG214420-02			WG214420-03		
	CONC	RESP	RF	CONC	RESP	RF	CONC	RESP	RF
2,4-D	2000	1632384690	816200	1000	855174151	855200	500	459638333	919300
Silvex	200	987565717	4938000	100	496908441	4969000	50.0	252107110	5042000
2,4-Dichlorophenylacetic acid	2000	1176895773	588400	1000	616398397	616400	500	343262150	686500

KEMRON FORMS - Modified 03/06/2006
Version 1.6 PDF File ID: 489351
Report generated 06/05/2006 09:34

KEMRON Environmental Services

INITIAL CALIBRATION DATA

Login Number: L0605576 **Instrument ID:** HP15

Analytical Method: 8151A **Initial Calibration Date:** 02-JUN-06 13:32

Column ID: F

Analyte	WG214420-04			WG214420-05		
	CONC	RESP	RF	CONC	RESP	RF
2,4-D	250	248988480	996000	100	111188736	1112000
Silvex	25.0	122695272	4908000	10.0	47968712	4797000
2,4-Dichlorophenylacetic acid	250	182210380	728800	100	80962832	809600

KEMRON Environmental Services

INITIAL CALIBRATION DATA

Login Number: L0605576 **Instrument ID:** HP15

Analytical Method: 8151A **Initial Calibration Date:** 02-JUN-06 13:32

Column ID: R

Analyte	WG214420-01			WG214420-02			WG214420-03		
	CONC	RESP	RF	CONC	RESP	RF	CONC	RESP	RF
2,4-D	2000	2135146849	1068000	1000	1117753216	1118000	500	609570464	1219000
Silvex	200	1196079408	5980000	100	609268925	6093000	50.0	314227855	6285000
2,4-Dichlorophenylacetic acid	2000	1461596248	730800	1000	768158937	768200	500	415841609	831700

KEMRON FORMS - Modified 03/06/2006
Version 1.6 PDF File ID: 489351
Report generated 06/05/2006 09:34

KEMRON Environmental Services

INITIAL CALIBRATION DATA

Login Number: L0605576 **Instrument ID:** HP15

Analytical Method: 8151A **Initial Calibration Date:** 02-JUN-06 13:32

Column ID: R

Analyte	WG214420-04			WG214420-05		
	CONC	RESP	RF	CONC	RESP	RF
2,4-D	250	316809360	1267000	100	138520200	1385000
Silvex	25.0	154569950	6183000	10.0	64026526	6403000
2,4-Dichlorophenylacetic acid	250	219261197	877000	100	96356102	963600

KEMRON Environmental Services

ALTERNATE SOURCE CALIBRATION REPORT

Login Number: L0605576 Run Date: 06/02/2006 Sample ID: WG214420-06
Instrument ID: HP15 Run Time: 14:53 Method: 8151A
File ID: 15G5494.F Analyst: ECL
ICal Workgroup: WG214420 Cal ID: HP15 - 02-JUN-06

Analyte		Expected	Found	RF	%D	UNITS	Q
2,4-D		500	468	879000	6.5	ug/L	
Silvex		50	57.3	5650000	14.5	ug/L	

* Exceeds %D Limit

KEMRON FORMS - Modified 04/11/2006
Version 1.5 PDF File ID: 489352
Report generated 06/05/2006 09:34

KEMRON Environmental Services

ALTERNATE SOURCE CALIBRATION REPORT

Login Number: L0605576 Run Date: 06/02/2006 Sample ID: WG214420-06
Instrument ID: HP15 Run Time: 15:20 Method: 8151A
File ID: 15G5494.R Analyst: ECL
ICal Workgroup: WG214420 Cal ID: HP15 - 02-JUN-06

Analyte		Expected	Found	RF	%D	UNITS	Q
2,4-D		500	522	1260000	4.4	ug/L	
Silvex		50	57.3	7100000	14.7	ug/L	

* Exceeds %D Limit

KEMRON FORMS - Modified 04/11/2006
Version 1.5 PDF File ID: 489352
Report generated 06/05/2006 09:34

KEMRON Environmental Services

CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L0605576 Run Date: 06/02/2006 Sample ID: WG214420-03
Instrument ID: HP15 Run Time: 12:11 Method: 8151A
File ID: 15G5490.F Analyst: ECL
Workgroup (AAB#): WG214435 Cal ID: HP15 - 02-JUN-06

Analyte		Expected	Found	RF	%D	UNITS	Q
2,4-D		500	470	919000	5.9	ug/L	
Silvex		50	45.4	5040000	9.1	ug/L	
2,4-Dichlorophenylacetic acid	SURR	500	451	687000	9.8	ug/L	

* Exceeds %D Criteria

KEMRON FORMS - Modified 04/19/2006
Version 1.3 PDF File ID: 489353
Report generated 06/05/2006 09:34

KEMRON Environmental Services

CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L0605576 Run Date: 06/02/2006 Sample ID: WG214420-03
Instrument ID: HP15 Run Time: 12:38 Method: 8151A
File ID: 15G5490.R Analyst: ECL
Workgroup (AAB#): WG214435 Cal ID: HP15 - 02-JUN-06

Analyte		Expected	Found	RF	%D	UNITS	Q
2,4-D		500	470	1220000	6	ug/L	
Silvex		50	44.3	6280000	11.4	ug/L	
2,4-Dichlorophenylacetic acid	SURR	500	455	832000	9	ug/L	

* Exceeds %D Criteria

KEMRON FORMS - Modified 04/19/2006
Version 1.3 PDF File ID: 489353
Report generated 06/05/2006 09:34

KEMRON Environmental Services

CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L0605576 Run Date: 06/02/2006 Sample ID: WG214423-01
Instrument ID: HP15 Run Time: 19:23 Method: 8151A
File ID: 15G5504.F Analyst: ECL
Workgroup (AAB#): WG214435 Cal ID: HP15 - 02-JUN-06

Analyte		Expected	Found	RF	%D	UNITS	Q
2,4-D		500	494	928000	1.3	ug/L	
Silvex		50	51.1	5040000	2.2	ug/L	
2,4-Dichlorophenylacetic acid	SURR	500	504	692000	.9	ug/L	

* Exceeds %D Criteria

KEMRON FORMS - Modified 04/19/2006
Version 1.3 PDF File ID: 489353
Report generated 06/05/2006 09:34

KEMRON Environmental Services

CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L0605576 Run Date: 06/02/2006 Sample ID: WG214423-01
Instrument ID: HP15 Run Time: 19:50 Method: 8151A
File ID: 15G5504.R Analyst: ECL
Workgroup (AAB#): WG214435 Cal ID: HP15 - 02-JUN-06

Analyte		Expected	Found	RF	%D	UNITS	Q
2,4-D		500	512	1240000	2.4	ug/L	
Silvex		50	50.5	6250000	1.1	ug/L	
2,4-Dichlorophenylacetic acid	SURR	500	505	842000	.9	ug/L	

* Exceeds %D Criteria

KEMRON FORMS - Modified 04/19/2006
Version 1.3 PDF File ID: 489353
Report generated 06/05/2006 09:34

KEMRON Environmental Services

CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L0605576 Run Date: 06/02/2006 Sample ID: WG214420-03
Instrument ID: HP15 Run Time: 12:11 Method: 8151B
File ID: 15G5490.F Analyst: ECL
Workgroup (AAB#): WG214435 Cal ID: HP15 - 02-JUN-06

Analyte		Expected	Found	RF	%D	UNITS	Q
2,4-D		500	470	919000	5.9	ug/L	
Silvex		50	45.4	5040000	9.1	ug/L	
2,4-Dichlorophenylacetic acid	SURR	500	451	687000	9.8	ug/L	

* Exceeds %D Criteria

KEMRON FORMS - Modified 04/19/2006
Version 1.3 PDF File ID: 489353
Report generated 06/05/2006 09:34

KEMRON Environmental Services

CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L0605576 Run Date: 06/02/2006 Sample ID: WG214420-03
Instrument ID: HP15 Run Time: 12:38 Method: 8151B
File ID: 15G5490.R Analyst: ECL
Workgroup (AAB#): WG214435 Cal ID: HP15 - 02-JUN-06

Analyte		Expected	Found	RF	%D	UNITS	Q
2,4-D		500	470	1220000	6	ug/L	
Silvex		50	44.3	6280000	11.4	ug/L	
2,4-Dichlorophenylacetic acid	SURR	500	455	832000	9	ug/L	

* Exceeds %D Criteria

KEMRON FORMS - Modified 04/19/2006
Version 1.3 PDF File ID: 489353
Report generated 06/05/2006 09:34

KEMRON Environmental Services

CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L0605576 Run Date: 06/02/2006 Sample ID: WG214423-01
Instrument ID: HP15 Run Time: 19:23 Method: 8151B
File ID: 15G5504.F Analyst: ECL
Workgroup (AAB#): WG214435 Cal ID: HP15 - 02-JUN-06

Analyte		Expected	Found	RF	%D	UNITS	Q
2,4-D		500	494	928000	1.3	ug/L	
Silvex		50	51.1	5040000	2.2	ug/L	
2,4-Dichlorophenylacetic acid	SURR	500	504	692000	.9	ug/L	

* Exceeds %D Criteria

KEMRON FORMS - Modified 04/19/2006
Version 1.3 PDF File ID: 489353
Report generated 06/05/2006 09:34

KEMRON Environmental Services

CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L0605576 Run Date: 06/02/2006 Sample ID: WG214423-01
Instrument ID: HP15 Run Time: 19:50 Method: 8151B
File ID: 15G5504.R Analyst: ECL
Workgroup (AAB#): WG214435 Cal ID: HP15 - 02-JUN-06

Analyte		Expected	Found	RF	%D	UNITS	Q
2,4-D		500	512	1240000	2.4	ug/L	
Silvex		50	50.5	6250000	1.1	ug/L	
2,4-Dichlorophenylacetic acid	SURR	500	505	842000	.9	ug/L	

* Exceeds %D Criteria

KEMRON FORMS - Modified 04/19/2006
Version 1.3 PDF File ID: 489353
Report generated 06/05/2006 09:34

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1.2.4 TPH GC Data (TNRCC1005)

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1.2.4.1 QC Summary

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KEMRON ENVIRONMENTAL SERVICES
GC TPH ORGANICS

KEMRON Login No.: L0605576

METHOD TNRCC method 1005

HOLDING TIMES

Sample Preparation: All holding times were met.

Sample Analysis: All holding times were met.

PREPARATION

Sample preparation proceeded normally.

CALIBRATION

Initial Calibration: For all compounds which yielded a %RSD greater than 20 %, linear or higher order equations were applied. All acceptance criteria were met.

Alternate Source Standards: All acceptance criteria were met.

Continuing Calibration: All acceptance criteria were met.

BATCH QA/QC

Method Blank: All acceptance criteria were met.

Laboratory Control Sample: The LCS associated with WG214259 yielded a recovery for TPH that was above the acceptance limit. The LCS DUP was acceptable. All other acceptance criteria were met.

Matrix Spike: There were no MS/MSD results associated with this sample delivery group, due to insufficient volume of sample. The laboratory included an LCS and LCS duplicate in the preparation batch in lieu of the NELAC prescribed MS/MSD. KEMRON recommends site specific MS/MSD samples to avoid possible data qualification.

SAMPLES

Samples: All acceptance criteria were met.

Surrogates: All acceptance criteria were met.

Manual Integration Reason Codes

KEMRON laboratory management has identified four general cases with valid reasons supporting the use of manual integration techniques.

Reason #1: Data System Fails to Select Correct Peak
In some cases the chromatography system selects and integrates the ”wrong peak”. In this case the analyst must correct the selection and force the system to integrate the proper peak. Other times the system may miss the peak completely.

Reason #2: Data System Splits the Peak Incorrectly or Integrates a False Peak as a Rider Peak.
This phenomena is common at low concentrations where the signal:noise ratio is low. A single compound (peak) is incorrectly split into multiple peaks or integrated as a main peak with one or more rider peaks resulting in low area counts for the target compound.

Reason #3: Improperly Integrated Isomers and/or coeluting compounds.
This system often fails to distinguish coeluting compounds and or isomers. The integration areas and concentrations are wrong, and they must be corrected by manual integration. Prime examples are benzo(k)fluoranthene and benzo(b)fluoranthene which are often unresolved and integrated improperly when both are present at low concentrations in standards or samples.

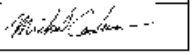
Reason #4: System Establishes Incorrect Baseline
There are numerous situations in chromatography where the system establishes the baseline incorrectly. Some baseline errors will be obvious to the analyst and should be corrected via manual procedures.

Reason #5: Miscellaneous
Other situations involving integration errors may require in-depth review and technical judgment. These cases should be brought to the attention of the laboratory management. If the form of manual integration is not clearly covered by these four cases, then review and approval by the Laboratory Director or the QA/QC Supervisor will be required.

I certify that this data package is in compliance with the terms and conditions agreed to by the client and KEMRON Environmental Services, both technically and for completeness, except for the conditions noted above. Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or designated person, as verified by the following signature.

Analyst: HAV

Approved: 01-JUN-06



LABORATORY REPORT

L0605576

06/12/06 12:20

Submitted By

KEMRON Environmental Services
156 Starlite Drive
Marietta , OH 45750
(740) 373 - 4071

For

Account Name: CH2MHILL, Inc
7600 Tidwell Road
Suite 400
San Antonio, TX 77040
Attention: John Ynfante

Account Number: 2736
Work ID: STATE MARINE
Invoice Number: 580608
P.O. Number: 915193

Sample Analysis Summary

Client ID	Lab ID	Method	Dilution	Date Received
IWSB01052406	L0605576-01	T1005	1	25-MAY-06

Report Number: **L0605576**
Report Date : **June 12, 2006**

Sample Number: **L0605576-01**
Client ID: **IWSB01052406**
Matrix: **Soil**
Workgroup Number: **WG214306**
Collect Date: **05/24/2006 13:50**

PrePrep Method: **NONE**
Prep Method: **METHOD**
Analytical Method: **T1005**
Analyst: **HV**
Dilution: **1**
Units: **mg/kg**

Instrument: **HP14**
Prep Date: **05/31/2006 11:45**
Cal Date: **03/17/2006 13:21**
Run Date: **05/31/2006 12:54**
File ID: **14G9042**
Percent Solid: **67.7**

Analyte	CAS. Number	Result	Qual	PQL	SQL
Carbon Range C6-C12			U	71.5	35.8
Carbon Range C12-C28			U	71.5	35.8
Carbon Range C28-C35			U	71.5	35.8
Carbon Range C6-C35			U	71.5	35.8

Surrogate	% Recovery	Lower	Upper	Qual
Chlorobenzene	101	31	130	
o-Terphenyl	104	70	130	

U Not detected at or above the reporting limit

Checklist ID: 6524

KEMRON Environmental Services
Data Checklist

Date: 17-MAR-2006
Analyst: HAV
Analyst: NA
Method: TX-T1005
Instrument: HP14
Curve Workgroup: WG208825
Analytical Workgroups: L0601275, -360, L0602490, -491.

Runlog ID number:	9425
System Performance Check	NA
DFTPP	NA
Endrin/DDT Breakdown	NA
Initial Calibration	X
Average RF	X
Linear Reg or Higher Order Curve	X
Second Source standard % Difference	X
Continuing Calibration /Check Standards	X
Project/Client Specific Requirements	X
Special Standards	
Blanks	X
TCL's	X
Surrogates	X
LCS (Laboratory Control Sample)	
Recoveries	
Surrogates	
MS/MSD/Duplicates	
Samples	X
TCL Hits	X
Spectra of TCL Hits	NA
Surrogates	X
Internal Standards Criteria	NA
Library Searches	NA
Calculations & Correct Factors	X
Dilutions Run	
Reruns	X
Manual Integrations	NA
Case Narrative	
Results Reporting/Data Qualifiers	X
KOBRA Workgroup Data	X
Check for Completeness	X
Primary Reviewer	HAV
Secondary Reviewer	MDC
Check for compliance with method and project specific requirements	X
Check the completeness of reported information	X
Check the information for the report narrative	X
Check the resonableness of the results	X

Primary Reviewer:

Secondary Reviewer:
05-MAY-2006

Generated: MAY-05-2006 14:29:54

Checklist ID: 7806

KEMRON Environmental Services
Data Checklist

Date: 31-MAY-2006
Analyst: HAV
Analyst: NA
Method: TX-T1005
Instrument: HP14
Curve Workgroup: NA
Analytical Workgroups: L0605576

Runlog ID number:	10612
System Performance Check	NA
DFTPP	NA
Endrin/DDT Breakdown	NA
Initial Calibration	
Average RF	
Linear Reg or Higher Order Curve	
Second Source standard % Difference	
Continuing Calibration /Check Standards	X
Project/Client Specific Requirements	X
Special Standards	
Blanks	X
TCL's	X
Surrogates	X
LCS (Laboratory Control Sample)	X
Recoveries	X
Surrogates	X
MS/MSD/Duplicates	
Samples	X
TCL Hits	X
Spectra of TCL Hits	NA
Surrogates	X
Internal Standards Criteria	NA
Library Searches	NA
Calculations & Correct Factors	X
Dilutions Run	
Reruns	
Manual Integrations	NA
Case Narrative	X
Results Reporting/Data Qualifiers	X
KOBRA Workgroup Data	X
Check for Completeness	X
Primary Reviewer	HAV
Secondary Reviewer	MDC
Check for compliance with method and project specific requirements	X
Check the completeness of reported information	X
Check the information for the report narrative	X
Check the resonableness of the results	X
Comments: As per client, all sample fractions which were >RL (L0604552) required T1006 anal	

Primary Reviewer:

Secondary Reviewer:
01-JUN-2006

Generated: JUN-01-2006 10:29:05

Run Log ID: **9425**

KEMRON Environmental Services

Instrument Run Log

Instrument: HP14 Dataset: 031706

Analyst1: HAV Analyst2: NA

Method: TX-T1005 SOP: GCSOP5 Rev: 4

Column 1 ID: RTX-5 Column 2 ID: NA

Workgroups:

Internal Standard: NA Surrogate Standard: NA

Comments:

Seq.	File ID	Sample Information	Mat	Dil	Reference	Date/Time
37	14G8803	pentane	1	1		03/17/06 08:49
1	14G8804	WIN DEF STD @20ppm	1	1	SOS78-19	03/17/06 09:27
2	14G8805	WG208825-01 TPH @10000ppm	1	1		03/17/06 10:05
3	14G8806	WG208825-02 TPH @5000ppm	1	1		03/17/06 10:44
4	14G8807	WG208825-03 TPH @2500ppm	1	1		03/17/06 11:23
5	14G8808	WG208825-04 TPH @1000ppm	1	1		03/17/06 12:02
6	14G8809	WG208825-05 TPH @500ppm	1	1		03/17/06 12:42
7	14G8810	WG208825-06 TPH @50ppm	1	1		03/17/06 13:21
8	14G8811	WG208825-07 ALT TPH @1000ppm	1	1		03/17/06 14:01
9	14G8812	L0601360-01 TPH water P\&A \#1	1	1		03/17/06 14:45
10	14G8813	L0601360-02 TPH water P\&A \#2	1	1		03/17/06 15:25
11	14G8814	L0601360-03 TPH water P\&A \#3	1	1		03/17/06 16:04
12	14G8815	L0601360-04 TPH water P\&A \#4	1	1		03/17/06 16:44
13	14G8816	WG208828-01 TPH water BLANK V13-P27	1	1		03/17/06 17:24
14	14G8817	WG208833-01 TPH water BLANK V13-P28	1	1		03/17/06 18:03
15	14G8818	L0602490-01 TPH water MDL \#1	1	1		03/17/06 18:42
16	14G8819	L0602490-02 TPH water MDL \#2	1	1		03/17/06 19:22
17	14G8820	L0602490-03 TPH water MDL \#3	1	1		03/17/06 20:01
18	14G8821	L0602490-04 TPH water MDL #4	1	1		03/17/06 20:40
19	14G8822	L0602490-05 TPH water MDL #5	1	1		03/17/06 21:19
20	14G8823	L0602490-06 TPH water MDL #6	1	1		03/17/06 21:58
21	14G8824	L0602490-07 TPH water MDL #7	1	1		03/17/06 22:37
22	14G8825	WG208826-01 TPH CCV @1000ppm	1	1		03/17/06 23:16
23	14G8826	WG208830-01 TPH soil BLANK V13-P29	7	1		03/17/06 23:54
24	14G8827	L0601275-01 TPH soil P&A #1	7	1		03/18/06 00:33
25	14G8828	L0601275-02 TPH soil P&A #2	7	1		03/18/06 01:12
26	14G8829	L0601275-03 TPH soil P&A #3	7	1		03/18/06 01:50
27	14G8830	L0601275-04 TPH soil P&A #4	7	1		03/18/06 02:29
28	14G8831	WG208834-01 TPH soil BLANK V13-P30	7	1		03/18/06 03:08
29	14G8832	L0602491-01 TPH soil MDL #1	7	1		03/18/06 03:46
30	14G8833	L0602491-02 TPH soil MDL #2	7	1		03/18/06 04:26
31	14G8834	L0602491-03 TPH soil MDL #3	7	1		03/18/06 05:04
32	14G8835	L0602491-04 TPH soil MDL #4	7	1		03/18/06 05:42
33	14G8836	L0602491-05 TPH soil MDL #5	7	1		03/18/06 06:21
34	14G8837	L0602491-06 TPH soil MDL #6	7	1		03/18/06 06:59
35	14G8838	L0602491-07 TPH soil MDL #7	7	1		03/18/06 07:38

Approved: 05-MAY-06

006957

Run Log ID: **9425**

KEMRON Environmental Services

Instrument Run Log

Instrument: HP14 Dataset: 031706

Analyst1: HAV Analyst2: NA

Method: TX-T1005 SOP: GCSOP5 Rev: 4

Column 1 ID: RTX-5 Column 2 ID: NA

Workgroups:

Internal Standard: NA Surrogate Standard: NA

Seq.	File ID	Sample Information	Mat	Dil	Reference	Date/Time
36	14G8839	WG208826-02 TPH CCV @1000ppm	1	1		03/18/06 08:17

Comments

Seq.	Rerun	Dil.	Reason	Analytes

Approved: 05-MAY-06

Run Log ID: **10612**

KEMRON Environmental Services

Instrument Run Log

Instrument: HP14 Dataset: 053106

Analyst1: HAV Analyst2: NA

Method: TX-T1005 SOP: GCSOP5 Rev: 4

Column 1 ID: RTX-5 Column 2 ID: NA

Workgroups:

Internal Standard: NA Surrogate Standard: NA

Comments:

Seq.	File ID	Sample Information	Mat	Dil	Reference	Date/Time
1	14G9038	pentane	1	1		05/31/06 09:44
2	14G9039	WIN DEF STD	1	1	SOS78-19	05/31/06 10:27
3	14G9040	WG214329-01 TPH CCV @1000ppm	1	1		05/31/06 11:09
4	14G9041	WG214304-01 BLANK V14-P01	7	1		05/31/06 12:12
5	14G9042	L0605576-01	7	1		05/31/06 12:54
6	14G9043	WG214304-02 LCS V14-P01	7	1		05/31/06 13:36
7	14G9044	WG214304-03 LCS DUP V14-P01	7	1		05/31/06 14:17
8	14G9045	WG214329-02 TPH CCV @1000ppm	1	1		05/31/06 15:01

Comments

Seq.	Rerun	Dil.	Reason	Analytes

Page: 1 of 1 Approved: 01-JUN-06

006959

KEMRON Environmental Services
HOLDING TIMES
EQUIVALENT TO AFCEE FORM 9

Analytical Method: T1005 **AAB#:** WG214306
Login Number: L0605576

Client ID	Date Collected	Date Received	Date Extracted	Max Hold Time Ext.	Time Held Ext.	Date Analyzed	Max Hold Time Anal	Time Held Anal.	Q
IWSB01052406	05/24/06	05/25/06	05/31/06	14	6.91	05/31/06	14	0.0479	

* EXT = SEE PROJECT QAPP REQUIREMENTS
*ANAL = SEE PROJECT QAPP REQUIREMENTS

KEMRON FORMS - Modified 02/14/2006
Version 1.5 PDF File ID: 487439
Report generated 06/01/2006 10:33

KEMRON Environmental Services

SURROGATE STANDARDS

Login Number: L0605576
Instrument Id: HP14
Workgroup (AAB#): WG214306

Method: T1005
CAL ID: HP14-17-MAR-06
Matrix: SOLID

Sample Number	Dilution	Tag	1	2
L0605576-01	1.00	01	101	104
WG214304-01	1.00	01	105	107
WG214304-02	1.00	01	108	110
WG214304-03	1.00	01	99.8	102

Surrogates	Surrogate Limits		
1 - Chlorobenzene	31	-	130
2 - o-Terphenyl	70	-	130

Underline = Result out of surrogate limits

DL = surrogate diluted out
ND = surrogate not detected

KEMRON FORMS - Modified 04/18/2006
Version 1.5 PDF File ID: 487447
Report generated 06/01/2006 10:33

KEMRON Environmental Services

METHOD BLANK SUMMARY

Login Number:	L0605576	Work Group:	WG214306
Blank File ID:	14G9041	Blank Sample ID:	WG214304-01
Date Analyzed:	05/31/06	Instrument ID:	HP14
Time Analyzed:	12:12	Method:	T1005
Analyst:	HV		

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
IWSB01052406	L0605576-01	14G9042	05/31/06 12:54	01
LCS	WG214304-02	14G9043	05/31/06 13:36	01
LCS2	WG214304-03	14G9044	05/31/06 14:17	01

KEMRON FORMS - Modified 03/06/2006
Version 1.5 PDF File ID: 487440
Report generated 06/01/2006 10:33

KEMRON Environmental Services

METHOD BLANK REPORT

Login Number: L0605576	Run Date: 05/31/2006	Sample ID: WG214304-01
Instrument ID: HP14	Run Time: 12:12	Prep Method: METHOD
File ID: 14G9041	Analyst: HV	Method: T1005
Workgroup (AAB#): WG214306	Matrix: Solid	Units: mg/kg
Contract #:	Cal ID: HP14-17-MAR-06	

Analytes	SQL	PQL	Concentration	Dilution	Qualifier
Carbon Range C6-C12	25.0	50.0	25.0	1	U
Carbon Range C12-C28	25.0	50.0	25.0	1	U
Carbon Range C28-C35	25.0	50.0	25.0	1	U
Carbon Range C6-C35	25.0	50.0	34.8	1	J

Surrogates	% Recovery	Surrogate Limits			Qualifier
Chlorobenzene	105	31	-	130	PASS
o-Terphenyl	107	70	-	130	PASS

MDL Method Detection Limit
RL Reporting/quantitation Limit

* Analyte concentration > RL

KEMRON FORMS - Modified 05/01/2006
Version 1.5 PDF File ID: 487444
Report generated 06/01/2006 10:33

KEMRON Environmental Services

LABORATORY CONTROL SAMPLE (LCS)

Login Number: L0605576 Analyst: HV Prep Method: METHOD
Instrument ID: HP14 Matrix: Soil Method: T1005
Workgroup (AAB#): WG214306 Units: mg/kg
Sample ID: WG214304-02 LCS File ID: 14G9043 Run Date: 05/31/2006 13:36
Sample ID: WG214304-03 LCS2 File ID: 14G9044 Run Date: 05/31/2006 14:17

Analytes	LCS			LCS2			%RPD	%Rec Limits	RPD Lmt	Q
	Known	Found	% REC	Known	Found	% REC				
Carbon Range C6-C35	1000	1320	132	1000	1230	123	7.25	75 - 125	20	*

Surogates	LCS	LCS2	Surrogate Limits	Qualifier
	% Recovery	% Recovery		
Chlorobenzene	108	99.8	31 - 130	PASS
o-Terphenyl	110	102	70 - 130	PASS

* FAILS %REC LIMIT

FAILS RPD LIMIT

KEMRON FORMS - Modified 04/12/2006
Version 1.5 PDF File ID: 487445
Report generated 06/01/2006 10:33

KEMRON Environmental Services

INITIAL CALIBRATION SUMMARY

Login Number: L0605576 **Instrument ID:** HP14
Analytical Method: T1005 **Initial Calibration Date:** 17-MAR-06 13:21
ICAL Workgroup: WG208825 **Column ID:** F

Analyte		AVG RF	% RSD	LINEAR	QUAD
Chlorobenzene	SURR	17620	5.08		
Carbon Range C12-C28		10940	4.93		
Carbon Range C28-C35		1576	166	0.151	
Carbon Range C6-C12		6862	6.44		
Carbon Range C6-C35		16640	7.62		
o-Terphenyl	SURR	28860	5.48		

KEMRON FORMS - Modified 03/06/2006
Version 1.5 PDF File ID: 487441
Report generated 06/01/2006 10:33

KEMRON Environmental Services

INITIAL CALIBRATION DATA

Login Number: L0605576 **Instrument ID:** HP14

Analytical Method: T1005 **Initial Calibration Date:** 17-MAR-06 13:21

Column ID: F

Analyte	WG208825-01			WG208825-02			WG208825-03		
	CONC	RESP	RF	CONC	RESP	RF	CONC	RESP	RF
Chlorobenzene	5000	90409324	18080	2500	41487995	16600	1250	20689126	16550
Carbon Range C12-C28	10000	115605234	11560	5000	52924184	10580	2500	26714510	10690
Carbon Range C28-C35	10000	177461	17.75	5000	573174	114.6	2500	727092	290.8
Carbon Range C6-C12	10000	71992049	7199	5000	31460644	6292	2500	16261890	6505
Carbon Range C6-C35	10000	166069931	16610	5000	75522269	15100	2500	38775438	15510
o-Terphenyl	500	14588286	29180	250	6746710	26990	125	3364018	26910

KEMRON FORMS - Modified 03/06/2006
Version 1.6 PDF File ID: 487441
Report generated 06/01/2006 10:33

KEMRON Environmental Services

INITIAL CALIBRATION DATA

Login Number: L0605576 **Instrument ID:** HP14

Analytical Method: T1005 **Initial Calibration Date:** 17-MAR-06 13:21

Column ID: F

Analyte	WG208825-04			WG208825-05			WG208825-06		
	CONC	RESP	RF	CONC	RESP	RF	CONC	RESP	RF
Chlorobenzene	500	9047448	18090	250	4395436	17580	25.0	469847	18790
Carbon Range C12-C28	1000	11537238	11540	500	5534608	11070	50.0	511350	10230
Carbon Range C28-C35	1000	1507977	1508	500	357508	715.0	50.0	340440	6809
Carbon Range C6-C12	1000	7012888	7013	500	3351269	6703	50.0	373158	7463
Carbon Range C6-C35	1000	17183775	17180	500	8397689	16800	50.0	933078	18660
o-Terphenyl	50.0	1493686	29870	25.0	734330	29370	2.50	77029	30810

KEMRON Environmental Services

ALTERNATE SOURCE CALIBRATION REPORT

Login Number: L0605576 Run Date: 03/17/2006 Sample ID: WG208825-07
Instrument ID: HP14 Run Time: 14:01 Method: T1005
File ID: 14G8811 Analyst: HV
ICal Workgroup: WG208825 Cal ID: HP14 - 17-MAR-06

Analyte		Expected	Found	RF	%D	UNITS	Q
Carbon Range C6-C12		1000	1020	17000	1.9	mg/L	
Carbon Range C12-C28		1000	1270	21100	26.7	mg/L	*
Carbon Range C28-C35		1000	38.3	638	96.2	mg/L	*
Carbon Range C6-C35		2000	2050	34100	2.4	mg/L	

* Exceeds %D Limit

KEMRON FORMS - Modified 04/11/2006
Version 1.5 PDF File ID: 487442
Report generated 06/01/2006 10:33

KEMRON Environmental Services

CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L0605576 Run Date: 05/31/2006 Sample ID: WG214329-01
Instrument ID: HP14 Run Time: 11:09 Method: T1005
File ID: 14G9040 Analyst: HV
Workgroup (AAB#): WG214306 Cal ID: HP14 - 17-MAR-06

Analyte		Expected	Found	RF	%D	UNITS	Q
Chlorobenzene	SURR	500	516	18200	3.1	mg/L	
Carbon Range C6-C12		1000	432	7180	56.8	mg/L	*
Carbon Range C12-C28		1000	672	11200	32.8	mg/L	*
Carbon Range C28-C35		1000	119	1970	88.1	mg/L	*
Carbon Range C6-C35		1000	1070	17800	6.8	mg/L	
o-Terphenyl	SURR	50	51.8	29900	3.7	mg/L	

* Exceeds %D Criteria

KEMRON FORMS - Modified 04/19/2006
Version 1.3 PDF File ID: 487443
Report generated 06/01/2006 10:33

KEMRON Environmental Services

CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L0605576 Run Date: 05/31/2006 Sample ID: WG214329-02
Instrument ID: HP14 Run Time: 15:01 Method: T1005
File ID: 14G9045 Analyst: HV
Workgroup (AAB#): WG214306 Cal ID: HP14 - 17-MAR-06

Analyte		Expected	Found	RF	%D	UNITS	Q
Chlorobenzene	SURR	500	462	16300	7.6	mg/L	
Carbon Range C6-C12		1000	350	5820	65	mg/L	*
Carbon Range C12-C28		1000	569	9470	43.1	mg/L	*
Carbon Range C28-C35		1000	60.7	1010	93.9	mg/L	*
Carbon Range C6-C35		1000	993	16500	.7	mg/L	
o-Terphenyl	SURR	50	46.0	26500	8	mg/L	

* Exceeds %D Criteria

KEMRON FORMS - Modified 04/19/2006
Version 1.3 PDF File ID: 487443
Report generated 06/01/2006 10:33

1.3 Metals Data

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1.3.1 Metals I C P Data

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KEMRON ENVIRONMENTAL SERVICES
METALS

KEMRON Login No: L0605576

METHOD

Preparation: SW-846 3050B, 3015

Analysis: SW-846 6010

HOLDING TIMES

Sample Preparation: All holding times were met.

Sample Analysis: All holding times were met.

PREPARATION

Sample preparation proceeded normally.

CALIBRATION

Initial Calibrations: All acceptance criteria were met.

Alternate Source Standards: All acceptance criteria were met.

Continuing Calibration: All acceptance criteria were met.

BATCH QA/QC

Method Blank: All acceptance criteria were met.

Laboratory Control Sample: All acceptance criteria were met.

Serial Dilution/Post Digestion Spike: WG214125(6010) - All acceptance criteria were met.

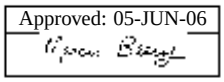
WG214375(6010) - A serial dilution was not performed since the designated sample did not contain analytes at concentrations greater than 50 times the method detection limit.

SAMPLES

WG214125(6010) - Due to results which were noncompliant on the negative side upon initial analysis, selenium for client samples 02 through 07 was reported from dilution analyses. Due to a result which exceeded the linear range of the instrument upon initial analysis, iron for client sample 06 was reported from a dilution analysis. Client samples 02 and 03 were instrument-flagged for uncorrected interference upon initial (undiluted) analysis. All analytes for samples 02 and 03 were reported from dilution analyses.

I certify that this data package is in compliance with the terms and conditions agreed to by the client and KEMRON Environmental Services, both technically and for completeness, except for the conditions noted above. Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or designated person, as verified by the following signature.

Analyst: SLP


Approved: 05-JUN-06

LABORATORY REPORT

L0605576

06/12/06 12:21

Submitted By

KEMRON Environmental Services
156 Starlite Drive
Marietta , OH 45750
(740) 373 - 4071

For

Account Name: CH2MHILL, Inc
7600 Tidwell Road
Suite 400
San Antonio, TX 77040
Attention: John Ynfante

Account Number: 2736
Work ID: STATE MARINE
Invoice Number: 580608
P.O. Number: 915193

Sample Analysis Summary

Client ID	Lab ID	Method	Dilution	Date Received
IWSB01052406	L0605576-01	6010B	1	25-MAY-06
SM142SB01052406	L0605576-02	6010B	5	25-MAY-06
SM142SB01052406	L0605576-02	6010B	25	25-MAY-06
SM142SB02052406	L0605576-03	6010B	2	25-MAY-06
SM142SB02052406	L0605576-03	6010B	20	25-MAY-06
SM141SB03052406	L0605576-04	6010B	1	25-MAY-06
SM141SB03052406	L0605576-04	6010B	5	25-MAY-06
SM141FD03052406	L0605576-05	6010B	1	25-MAY-06
SM141FD03052406	L0605576-05	6010B	2	25-MAY-06
SM141SB02052406	L0605576-06	6010B	1	25-MAY-06
SM141SB02052406	L0605576-06	6010B	10	25-MAY-06
SM141SB02052406	L0605576-06	6010B	50	25-MAY-06
SM141SB01052406	L0605576-07	6010B	1	25-MAY-06
SM141SB01052406	L0605576-07	6010B	10	25-MAY-06

Report Number: **L0605576**
Report Date : **June 12, 2006**

Sample Number: **L0605576-01**
Client ID: **IWSB01052406**
Matrix: **Leachate**
Workgroup Number: **WG214375**
Collect Date: **05/24/2006 13:50**

PrePrep Method: **1311**
Prep Method: **3015**
Analytical Method: **6010B**
Analyst: **SLP**
Dilution: **1**
Units: **mg/L**

Instrument **IRIS-ICP**
Prep Date: **05/31/2006 09:50**
Cal Date: **06/01/2006 10:00**
Run Date **06/01/2006 15:38**
File ID: **IR.060106.153800**

Analyte	CAS.Number	Result	Qual	PQL	SQL	EPA HW#	Reg. Limit
Silver, TCLP	7440-22-4		U	.1	.05	D011	5
Arsenic, TCLP	7440-38-2		U	1	.1	D004	5
Barium, TCLP	7440-39-3	1.00	J	5	.025	D005	100
Cadmium, TCLP	7440-43-9		U	.1	.025	D006	1
Chromium, TCLP	7440-47-3		U	.2	.025	D007	5
Lead, TCLP	7439-92-1		U	1	.1	D008	5
Selenium, TCLP	7782-49-2		U	.8	.5	D010	1

J The analyte was positively identified, but the quantitation was below the RL
U Not detected at or above the reporting limit

Report Number: **L0605576**
Report Date : **June 12, 2006**

Sample Number: **L0605576-02**
Client ID: **SM142SB01052406**
Matrix: **Soil**
Workgroup Number: **WG214125**
Collect Date: **05/24/2006 09:20**

PrePrep Method: **NONE**
Prep Method: **3050B**
Analytical Method: **6010B**
Analyst: **SLP**
Dilution: **5**
Units: **mg/kg**

Instrument: **IRIS-ICP**
Prep Date: **05/26/2006 06:50**
Cal Date: **05/31/2006 08:52**
Run Date: **05/31/2006 09:56**
File ID: **IR.053106.095600**
Percent Solid: **88.5**

Analyte	CAS. Number	Result	Qual	PQL	SQL
Aluminum, Total	7429-90-5	10800		87.0	43.5
Silver, Total	7440-22-4	2.42		2.17	1.09
Arsenic, Total	7440-38-2	8.40		4.35	2.17
Barium, Total	7440-39-3	135		2.17	0.435
Beryllium, Total	7440-41-7	0.646	J	2.17	0.0522
Calcium, Total	7440-70-2	14500		43.5	21.7
Cadmium, Total	7440-43-9	0.387	J	0.435	0.217
Cobalt, Total	7440-48-4	9.91		4.35	0.522
Chromium, Total	7440-47-3	24.5		4.35	0.522
Copper, Total	7440-50-8	168		4.35	2.17
Iron, Total	7439-89-6	52600		8.70	4.35
Potassium, Total	7440-09-7	1460		217	109
Magnesium, Total	7439-95-4	2280		109	52.2
Manganese, Total	7439-96-5	299		2.17	0.435
Sodium, Total	7440-23-5	1490		109	21.7
Nickel, Total	7440-02-0	25.8		8.70	2.17
Lead, Total	7439-92-1	171		21.7	2.17
Antimony, Total	7440-36-0	4.10	J	43.5	2.17
Thallium, Total	7440-28-0		U	109	4.35
Vanadium, Total	7440-62-2	21.9		2.17	1.09
Zinc, Total	7440-66-6	377		4.35	2.17

J The analyte was positively identified, but the quantitation was below the RL
U Not detected at or above the reporting limit

Report Number: **L0605576**
Report Date : **June 12, 2006**

Sample Number:	L0605576-02	PrePrep Method:	NONE	Instrument:	IRIS-ICP
Client ID:	SM142SB01052406	Prep Method:	3050B	Prep Date:	05/26/2006 06:50
Matrix:	Soil	Analytical Method:	6010B	Cal Date:	05/31/2006 08:52
Workgroup Number:	WG214125	Analyst:	SLP	Run Date:	05/31/2006 10:02
Collect Date:	05/24/2006 09:20	Dilution:	25	File ID:	IR.053106.100200
Sample Tag:	DL	Units:	mg/kg	Percent Solid:	88.5

Analyte	CAS. Number	Result	Qual	PQL	SQL
Selenium, Total	7782-49-2		U	21.7	10.9

U Not detected at or above the reporting limit

Report Number: **L0605576**
Report Date : **June 12, 2006**

Sample Number: **L0605576-03**
Client ID: **SM142SB02052406**
Matrix: **Soil**
Workgroup Number: **WG214125**
Collect Date: **05/24/2006 09:45**

PrePrep Method: **NONE**
Prep Method: **3050B**
Analytical Method: **6010B**
Analyst: **SLP**
Dilution: **2**
Units: **mg/kg**

Instrument: **IRIS-ICP**
Prep Date: **05/26/2006 06:50**
Cal Date: **05/31/2006 08:52**
Run Date: **05/31/2006 12:20**
File ID: **IR.053106.122000**
Percent Solid: **100**

Analyte	CAS. Number	Result	Qual	PQL	SQL
Aluminum, Total	7429-90-5	11400		29.6	14.8
Silver, Total	7440-22-4	2.86		0.741	0.370
Arsenic, Total	7440-38-2	5.56		1.48	0.741
Barium, Total	7440-39-3	312		0.741	0.148
Beryllium, Total	7440-41-7	0.319	J	0.741	0.0178
Calcium, Total	7440-70-2	10300		14.8	7.41
Cadmium, Total	7440-43-9	0.807		0.148	0.0741
Cobalt, Total	7440-48-4	9.11		1.48	0.178
Chromium, Total	7440-47-3	81.1		1.48	0.178
Copper, Total	7440-50-8	526		1.48	0.741
Iron, Total	7439-89-6	57400		2.96	1.48
Potassium, Total	7440-09-7	892		74.1	37.0
Magnesium, Total	7439-95-4	1430		37.0	17.8
Manganese, Total	7439-96-5	282		0.741	0.148
Sodium, Total	7440-23-5	1270		37.0	7.41
Nickel, Total	7440-02-0	26.0		2.96	0.741
Lead, Total	7439-92-1	589		7.41	0.741
Antimony, Total	7440-36-0	11.7	J	14.8	0.741
Thallium, Total	7440-28-0		U	37.0	1.48
Vanadium, Total	7440-62-2	17.0		0.741	0.370
Zinc, Total	7440-66-6	1040		1.48	0.741

J The analyte was positively identified, but the quantitation was below the RL
U Not detected at or above the reporting limit

Report Number: **L0605576**
Report Date : **June 12, 2006**

Sample Number: **L0605576-03**
Client ID: **SM142SB02052406**
Matrix: **Soil**
Workgroup Number: **WG214125**
Collect Date: **05/24/2006 09:45**
Sample Tag: **DL**

PrePrep Method: **NONE**
Prep Method: **3050B**
Analytical Method: **6010B**
Analyst: **SLP**
Dilution: **20**
Units: **mg/kg**

Instrument: **IRIS-ICP**
Prep Date: **05/26/2006 06:50**
Cal Date: **05/31/2006 08:52**
Run Date: **05/31/2006 13:43**
File ID: **IR.053106.134300**
Percent Solid: **100**

Analyte	CAS. Number	Result	Qual	PQL	SQL
Selenium, Total	7782-49-2		U	14.8	7.41

U Not detected at or above the reporting limit

Report Number: **L0605576**
Report Date : **June 12, 2006**

Sample Number: **L0605576-04**
Client ID: **SM141SB03052406**
Matrix: **Soil**
Workgroup Number: **WG214125**
Collect Date: **05/24/2006 08:25**

PrePrep Method: **NONE**
Prep Method: **3050B**
Analytical Method: **6010B**
Analyst: **SLP**
Dilution: **1**
Units: **mg/kg**

Instrument: **IRIS-ICP**
Prep Date: **05/26/2006 06:50**
Cal Date: **05/31/2006 08:52**
Run Date: **05/31/2006 10:26**
File ID: **IR.053106.102600**
Percent Solid: **57.4**

Analyte	CAS. Number	Result	Qual	PQL	SQL
Aluminum, Total	7429-90-5	19700		25.6	12.8
Silver, Total	7440-22-4	0.706		0.640	0.320
Arsenic, Total	7440-38-2	8.55		1.28	0.640
Barium, Total	7440-39-3	92.9		0.640	0.128
Beryllium, Total	7440-41-7	1.03		0.640	0.0154
Calcium, Total	7440-70-2	4510		12.8	6.40
Cadmium, Total	7440-43-9		U	0.128	0.0640
Cobalt, Total	7440-48-4	5.22		1.28	0.154
Chromium, Total	7440-47-3	17.6		1.28	0.154
Copper, Total	7440-50-8	13.4		1.28	0.640
Iron, Total	7439-89-6	21500		2.56	1.28
Potassium, Total	7440-09-7	2060		64.0	32.0
Magnesium, Total	7439-95-4	2490		32.0	15.4
Manganese, Total	7439-96-5	386		0.640	0.128
Sodium, Total	7440-23-5	1310		32.0	6.40
Nickel, Total	7440-02-0	8.66		2.56	0.640
Lead, Total	7439-92-1	25.6		6.40	0.640
Antimony, Total	7440-36-0		U	12.8	0.640
Thallium, Total	7440-28-0		U	32.0	1.28
Vanadium, Total	7440-62-2	35.6		0.640	0.320
Zinc, Total	7440-66-6	56.1		1.28	0.640

U Not detected at or above the reporting limit

Report Number: **L0605576**
Report Date : **June 12, 2006**

Sample Number: **L0605576-04**
Client ID: **SM141SB03052406**
Matrix: **Soil**
Workgroup Number: **WG214125**
Collect Date: **05/24/2006 08:25**
Sample Tag: **DL**

PrePrep Method: **NONE**
Prep Method: **3050B**
Analytical Method: **6010B**
Analyst: **SLP**
Dilution: **5**
Units: **mg/kg**

Instrument: **IRIS-ICP**
Prep Date: **05/26/2006 06:50**
Cal Date: **05/31/2006 08:52**
Run Date: **05/31/2006 12:26**
File ID: **IR.053106.122600**
Percent Solid: **57.4**

Analyte	CAS. Number	Result	Qual	PQL	SQL
Selenium, Total	7782-49-2		U	6.40	3.20

U Not detected at or above the reporting limit

Report Number: **L0605576**
Report Date : **June 12, 2006**

Sample Number: **L0605576-05**
Client ID: **SM141FD03052406**
Matrix: **Soil**
Workgroup Number: **WG214125**
Collect Date: **05/24/2006 08:25**

PrePrep Method: **NONE**
Prep Method: **3050B**
Analytical Method: **6010B**
Analyst: **SLP**
Dilution: **1**
Units: **mg/kg**

Instrument: **IRIS-ICP**
Prep Date: **05/26/2006 06:50**
Cal Date: **05/31/2006 08:52**
Run Date: **05/31/2006 10:32**
File ID: **IR.053106.103200**
Percent Solid: **73.5**

Analyte	CAS. Number	Result	Qual	PQL	SQL
Aluminum, Total	7429-90-5	16200		19.7	9.87
Silver, Total	7440-22-4	0.328	J	0.493	0.247
Arsenic, Total	7440-38-2	12.8		0.987	0.493
Barium, Total	7440-39-3	89.0		0.493	0.0987
Beryllium, Total	7440-41-7	0.904		0.493	0.0118
Calcium, Total	7440-70-2	3630		9.87	4.93
Cadmium, Total	7440-43-9		U	0.0987	0.0493
Cobalt, Total	7440-48-4	4.10		0.987	0.118
Chromium, Total	7440-47-3	13.5		0.987	0.118
Copper, Total	7440-50-8	14.8		0.987	0.493
Iron, Total	7439-89-6	13400		1.97	0.987
Potassium, Total	7440-09-7	1830		49.3	24.7
Magnesium, Total	7439-95-4	2080		24.7	11.8
Manganese, Total	7439-96-5	130		0.493	0.0987
Sodium, Total	7440-23-5	1180		24.7	4.93
Nickel, Total	7440-02-0	7.25		1.97	0.493
Lead, Total	7439-92-1	25.0		4.93	0.493
Antimony, Total	7440-36-0		U	9.87	0.493
Thallium, Total	7440-28-0		U	24.7	0.987
Vanadium, Total	7440-62-2	26.5		0.493	0.247
Zinc, Total	7440-66-6	44.0		0.987	0.493

J The analyte was positively identified, but the quantitation was below the RL
U Not detected at or above the reporting limit

Report Number: **L0605576**
Report Date : **June 12, 2006**

Sample Number:	L0605576-05	PrePrep Method:	NONE	Instrument:	IRIS-ICP
Client ID:	SM141FD03052406	Prep Method:	3050B	Prep Date:	05/26/2006 06:50
Matrix:	Soil	Analytical Method:	6010B	Cal Date:	05/31/2006 08:52
Workgroup Number:	WG214125	Analyst:	SLP	Run Date:	05/31/2006 12:32
Collect Date:	05/24/2006 08:25	Dilution:	2	File ID:	IR.053106.123200
Sample Tag:	DL	Units:	mg/kg	Percent Solid:	73.5

Analyte	CAS. Number	Result	Qual	PQL	SQL
Selenium, Total	7782-49-2		U	1.97	0.987

U Not detected at or above the reporting limit

Report Number: **L0605576**
Report Date : **June 12, 2006**

Sample Number: **L0605576-06**
Client ID: **SM141SB02052406**
Matrix: **Soil**
Workgroup Number: **WG214125**
Collect Date: **05/24/2006 08:15**

PrePrep Method: **NONE**
Prep Method: **3050B**
Analytical Method: **6010B**
Analyst: **SLP**
Dilution: **1**
Units: **mg/kg**

Instrument: **IRIS-ICP**
Prep Date: **05/26/2006 06:50**
Cal Date: **05/31/2006 08:52**
Run Date: **05/31/2006 10:50**
File ID: **IR.053106.105000**
Percent Solid: **78.0**

Analyte	CAS. Number	Result	Qual	PQL	SQL
Aluminum, Total	7429-90-5	14700		17.6	8.79
Silver, Total	7440-22-4	13.9		0.439	0.220
Arsenic, Total	7440-38-2	5.45		0.879	0.439
Barium, Total	7440-39-3	319		0.439	0.0879
Beryllium, Total	7440-41-7	0.571		0.439	0.0105
Calcium, Total	7440-70-2	21300		8.79	4.39
Cadmium, Total	7440-43-9	2.58		0.0879	0.0439
Cobalt, Total	7440-48-4	13.4		0.879	0.105
Chromium, Total	7440-47-3	45.9		0.879	0.105
Copper, Total	7440-50-8	291		0.879	0.439
Potassium, Total	7440-09-7	2140		43.9	22.0
Magnesium, Total	7439-95-4	2400		22.0	10.5
Manganese, Total	7439-96-5	590		0.439	0.0879
Sodium, Total	7440-23-5	1290		22.0	4.39
Nickel, Total	7440-02-0	14.5		1.76	0.439
Lead, Total	7439-92-1	951		4.39	0.439
Antimony, Total	7440-36-0	3.39	J	8.79	0.439
Thallium, Total	7440-28-0		U	22.0	0.879
Vanadium, Total	7440-62-2	23.9		0.439	0.220

J The analyte was positively identified, but the quantitation was below the RL
U Not detected at or above the reporting limit

Report Number: **L0605576**
Report Date : **June 12, 2006**

Sample Number: **L0605576-06**
Client ID: **SM141SB02052406**
Matrix: **Soil**
Workgroup Number: **WG214125**
Collect Date: **05/24/2006 08:15**
Sample Tag: **DL**

PrePrep Method: **NONE**
Prep Method: **3050B**
Analytical Method: **6010B**
Analyst: **SLP**
Dilution: **10**
Units: **mg/kg**

Instrument: **IRIS-ICP**
Prep Date: **05/26/2006 06:50**
Cal Date: **05/31/2006 08:52**
Run Date: **05/31/2006 12:38**
File ID: **IR.053106.123800**
Percent Solid: **78.0**

Analyte	CAS. Number	Result	Qual	PQL	SQL
Iron, Total	7439-89-6	126000		17.6	8.79
Zinc, Total	7440-66-6	2910		8.79	4.39

Report Number: **L0605576**
Report Date : **June 12, 2006**

Sample Number:	L0605576-06	PrePrep Method:	NONE	Instrument:	IRIS-ICP
Client ID:	SM141SB02052406	Prep Method:	3050B	Prep Date:	05/26/2006 06:50
Matrix:	Soil	Analytical Method:	6010B	Cal Date:	05/31/2006 08:52
Workgroup Number:	WG214125	Analyst:	SLP	Run Date:	05/31/2006 12:44
Collect Date:	05/24/2006 08:15	Dilution:	50	File ID:	IR.053106.124400
Sample Tag:	DL1	Units:	mg/kg	Percent Solid:	78.0

Analyte	CAS. Number	Result	Qual	PQL	SQL
Selenium, Total	7782-49-2		U	43.9	22.0

U Not detected at or above the reporting limit

Report Number: **L0605576**
Report Date : **June 12, 2006**

Sample Number: **L0605576-07**
Client ID: **SM141SB01052406**
Matrix: **Soil**
Workgroup Number: **WG214125**
Collect Date: **05/24/2006 07:50**

PrePrep Method: **NONE**
Prep Method: **3050B**
Analytical Method: **6010B**
Analyst: **SLP**
Dilution: **1**
Units: **mg/kg**

Instrument: **IRIS-ICP**
Prep Date: **05/26/2006 06:50**
Cal Date: **05/31/2006 08:52**
Run Date: **05/31/2006 10:56**
File ID: **IR.053106.105600**
Percent Solid: **80.1**

Analyte	CAS. Number	Result	Qual	PQL	SQL
Aluminum, Total	7429-90-5	12600		19.2	9.61
Silver, Total	7440-22-4	1.88		0.480	0.240
Arsenic, Total	7440-38-2	3.99		0.961	0.480
Barium, Total	7440-39-3	72.1		0.480	0.0961
Beryllium, Total	7440-41-7	0.559		0.480	0.0115
Calcium, Total	7440-70-2	11100		9.61	4.80
Cadmium, Total	7440-43-9	0.358		0.0961	0.0480
Cobalt, Total	7440-48-4	5.48		0.961	0.115
Chromium, Total	7440-47-3	17.5		0.961	0.115
Copper, Total	7440-50-8	64.7		0.961	0.480
Iron, Total	7439-89-6	24100		1.92	0.961
Potassium, Total	7440-09-7	1560		48.0	24.0
Magnesium, Total	7439-95-4	1660		24.0	11.5
Manganese, Total	7439-96-5	200		0.480	0.0961
Sodium, Total	7440-23-5	642		24.0	4.80
Nickel, Total	7440-02-0	12.0		1.92	0.480
Lead, Total	7439-92-1	132		4.80	0.480
Antimony, Total	7440-36-0	0.504	J	9.61	0.480
Thallium, Total	7440-28-0		U	24.0	0.961
Vanadium, Total	7440-62-2	19.9		0.480	0.240
Zinc, Total	7440-66-6	178		0.961	0.480

J The analyte was positively identified, but the quantitation was below the RL
U Not detected at or above the reporting limit

Report Number: **L0605576**
Report Date : **June 12, 2006**

Sample Number:	L0605576-07	PrePrep Method:	NONE	Instrument:	IRIS-ICP
Client ID:	SM141SB01052406	Prep Method:	3050B	Prep Date:	05/26/2006 06:50
Matrix:	Soil	Analytical Method:	6010B	Cal Date:	05/31/2006 08:52
Workgroup Number:	WG214125	Analyst:	SLP	Run Date:	05/31/2006 12:50
Collect Date:	05/24/2006 07:50	Dilution:	10	File ID:	IR.053106.125000
Sample Tag:	DL	Units:	mg/kg	Percent Solid:	80.1

Analyte	CAS. Number	Result	Qual	PQL	SQL
Selenium, Total	7782-49-2		U	9.61	4.80

U Not detected at or above the reporting limit

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1.3.1.1 QC Summary

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Run Log ID:**10598**

KEMRON Environmental Services

Instrument Run Log

Instrument: IRIS-ICP Dataset: 20060531.1
Analyst1: JYH Analyst2: SLP
Method: 6010B SOP: ME600F Rev: 4

Calibration Std: STD12631 ICV/CCV Std: STD12812 Post Spike: STD12434
ICSA: STD12755 ICSAB: STD12665

Workgroups: 214125, 214227, 214228

Comments:

Seq.	File ID	Sample	ID	Prep	Dil	Reference	Date/Time
1	IR.053106.082200	WG214325-01	Calibration Point		1		05/31/06 08:22
2	IR.053106.082800	WG214325-02	Calibration Point		1		05/31/06 08:28
3	IR.053106.083400	WG214325-03	Calibration Point		1		05/31/06 08:34
4	IR.053106.084000	WG214325-04	Calibration Point		1		05/31/06 08:40
5	IR.053106.084600	WG214325-05	Calibration Point		1		05/31/06 08:46
6	IR.053106.085200	WG214325-06	Calibration Point		1		05/31/06 08:52
7	IR.053106.085900	WG214325-07	Initial Calibration Verification		1		05/31/06 08:59
8	IR.053106.090500	WG214325-08	Initial Calib Blank		1		05/31/06 09:05
9	IR.053106.091100	WG214325-09	Interference Check		1		05/31/06 09:11
10	IR.053106.091700	WG214325-10	Interference Check		1		05/31/06 09:17
11	IR.053106.092300	WG214325-11	CCV		1		05/31/06 09:23
12	IR.053106.092900	WG214325-12	CCB		1		05/31/06 09:29
13	IR.053106.093800	WG214091-02	Method/Prep Blank	1/50	1		05/31/06 09:38
14	IR.053106.094400	WG214091-03	Laboratory Control S	1/50	1		05/31/06 09:44
15	IR.053106.095000	L0605576-02	SM142SB01052406		1		05/31/06 09:50
16	IR.053106.095600	WG214125-02	Serial Dilution		5	L0605576-02	05/31/06 09:56
17	IR.053106.100200	WG214125-02	Serial Dilution		25	L0605576-02	05/31/06 10:02
18	IR.053106.100800	WG214125-01	Post Digestion Spike		5	L0605576-02	05/31/06 10:08
19	IR.053106.101400	WG214125-01	Post Digestion Spike		1	L0605576-02	05/31/06 10:14
20	IR.053106.102000	L0605576-03	SM142SB02052406		1		05/31/06 10:20
21	IR.053106.102600	L0605576-04	SM141SB03052406	1.36/50	1		05/31/06 10:26
22	IR.053106.103200	L0605576-05	SM141FD03052406	1.38/50	1		05/31/06 10:32
23	IR.053106.103800	WG214325-13	CCV		1		05/31/06 10:38
24	IR.053106.104400	WG214325-14	CCB		1		05/31/06 10:44
25	IR.053106.105000	L0605576-06	SM141SB02052406	1.46/50	1		05/31/06 10:50
26	IR.053106.105600	L0605576-07	SM141SB01052406	1.3/50	1		05/31/06 10:56
27	IR.053106.110200	WG214091-01	Reference Sample		1	L0605584-01	05/31/06 11:02
28	IR.053106.110800	WG214091-04	Matrix Spike		1		05/31/06 11:08
29	IR.053106.111400	WG214091-05	Matrix Spike Duplica		1		05/31/06 11:14
30	IR.053106.112100	L0605584-02	SB-1B	1.35/50	1		05/31/06 11:21
31	IR.053106.112700	L0605584-04	SB-2A	1.32/50	1		05/31/06 11:27
32	IR.053106.113300	L0605584-05	SB-2B	1.31/50	1		05/31/06 11:33
33	IR.053106.113900	WG214325-15	CCV		1		05/31/06 11:39
34	IR.053106.114500	WG214325-16	CCB		1		05/31/06 11:45
35	IR.053106.121500	WG214125-01	Post Digestion Spike		25	L0605576-02	05/31/06 12:15
36	IR.053106.122000	L0605576-03	SM142SB02052406	1.35/50	2		05/31/06 12:20
37	IR.053106.122600	L0605576-04	SM141SB03052406	1.36/50	5		05/31/06 12:26

Approved: June 01, 2006

006995

Run Log ID:**10598**

KEMRON Environmental Services

Instrument Run Log

Instrument: IRIS-ICP Dataset: 20060531.1

Analyst1: JYH Analyst2: SLP

Method: 6010B SOP: ME600F Rev: 4

Calibration Std: STD12631 ICV/CCV Std: STD12812 Post Spike: STD12434

ICSA: STD12755 ICSAB: STD12665

Workgroups: 214125, 214227, 214228

Comments:

Seq.	File ID	Sample	ID	Prep	Dil	Reference	Date/Time
38	IR.053106.123200	L0605576-05	SM141FD03052406	1.38/50	2		05/31/06 12:32
39	IR.053106.123800	L0605576-06	SM141SB02052406	1.46/50	10		05/31/06 12:38
40	IR.053106.124400	L0605576-06	SM141SB02052406	1.46/50	50		05/31/06 12:44
41	IR.053106.125000	L0605576-07	SM141SB01052406	1.3/50	10		05/31/06 12:50
42	IR.053106.125600	WG214091-01	Reference Sample		2	L0605584-01	05/31/06 12:56
43	IR.053106.130200	WG214091-04	Matrix Spike	1.31/50	2		05/31/06 13:02
44	IR.053106.130800	WG214091-05	Matrix Spike Duplica	1.31/50	2		05/31/06 13:08
45	IR.053106.131400	WG214325-17	CCV		1		05/31/06 13:14
46	IR.053106.132000	WG214325-18	CCB		1		05/31/06 13:20
47	IR.053106.132600	L0605584-02	SB-1B	1.35/50	2		05/31/06 13:26
48	IR.053106.133200	L0605584-04	SB-2A	1.32/50	2		05/31/06 13:32
49	IR.053106.134300	L0605576-03	SM142SB02052406	1.35/50	20		05/31/06 13:43
50	IR.053106.134900	WG214091-01	Reference Sample		100	L0605584-01	05/31/06 13:49
51	IR.053106.135500	WG214091-04	Matrix Spike	1.31/50	100		05/31/06 13:55
52	IR.053106.140100	WG214091-05	Matrix Spike Duplica	1.31/50	100		05/31/06 14:01
53	IR.053106.140700	WG214325-19	CCV		1		05/31/06 14:07
54	IR.053106.141300	WG214325-20	CCB		1		05/31/06 14:13
55	IR.053106.142600	WG214185-02	Method/Prep Blank	1/50	1		05/31/06 14:26
56	IR.053106.143200	WG214185-03	Laboratory Control S	1/50	1		05/31/06 14:32
57	IR.053106.143800	WG214185-01	Reference Sample		1	L0605605-01	05/31/06 14:38
58	IR.053106.144400	WG214185-04	Matrix Spike	1.35/50	1		05/31/06 14:44
59	IR.053106.145000	WG214185-05	Matrix Spike Duplica	1.35/50	1		05/31/06 14:50
60	IR.053106.145600	L0605605-02	SB-8B	1.34/50	1		05/31/06 14:56
61	IR.053106.150200	WG214227-02	Serial Dilution		5	L0605605-02	05/31/06 15:02
62	IR.053106.150800	WG214227-01	Post Digestion Spike		1	L0605605-02	05/31/06 15:08
63	IR.053106.151400	L0605605-03	SB-3B	1.38/50	1		05/31/06 15:14
64	IR.053106.152000	L0605605-04	SB-3A	1.36/50	1		05/31/06 15:20
65	IR.053106.152600	WG214325-21	CCV		1		05/31/06 15:26
66	IR.053106.153200	WG214325-22	CCB		1		05/31/06 15:32
67	IR.053106.153800	L0605605-05	SB-14A	1.3/50	1		05/31/06 15:38
68	IR.053106.154400	L0605605-06	SB-5A	1.34/50	1		05/31/06 15:44
69	IR.053106.155000	L0605605-07	SB-8A	1.31/50	1		05/31/06 15:50
70	IR.053106.155600	L0605605-08	SB-14B	1.34/50	1		05/31/06 15:56
71	IR.053106.160200	L0605605-09	SB-15A	1.3/50	1		05/31/06 16:02
72	IR.053106.160800	L0605605-10	SB-15B	1.33/50	1		05/31/06 16:08
73	IR.053106.161400	L0605605-11	SB-13A	1.33/50	1		05/31/06 16:14
74	IR.053106.162000	L0605605-12	SB-13B		1		05/31/06 16:20

Approved: June 01, 2006

006996

Run Log ID:**10598**

KEMRON Environmental Services

Instrument Run Log

Instrument: IRIS-ICP Dataset: 20060531.1
Analyst1: JYH Analyst2: SLP
Method: 6010B SOP: ME600F Rev: 4

Calibration Std: STD12631 ICV/CCV Std: STD12812 Post Spike: STD12434
ICSA: STD12755 ICSAB: STD12665

Workgroups: 214125, 214227, 214228

Comments:

Seq.	File ID	Sample	ID	Prep	Dil	Reference	Date/Time
75	IR.053106.162500	L0605605-13	SB-12A	1.31/50	1		05/31/06 16:25
76	IR.053106.163100	L0605605-14	SB-12B		1		05/31/06 16:31
77	IR.053106.163700	WG214325-23	CCV		1		05/31/06 16:37
78	IR.053106.164300	WG214325-24	CCB		1		05/31/06 16:43
79	IR.053106.164900	L0605605-15	SB-10A	1.36/50	1		05/31/06 16:49
80	IR.053106.165600	L0605605-16	SB-10B	1.31/50	1		05/31/06 16:56
81	IR.053106.170200	L0605605-17	SB-4A	1.32/50	1		05/31/06 17:02
82	IR.053106.170800	L0605605-18	SB-4B	1.36/50	1		05/31/06 17:08
83	IR.053106.171400	WG214186-01	Reference Sample		2	L0605605-19	05/31/06 17:14
84	IR.053106.172000	WG214186-04	Matrix Spike	1.32/50	2		05/31/06 17:20
85	IR.053106.172600	WG214186-05	Matrix Spike Duplica	1.32/50	2		05/31/06 17:26
86	IR.053106.173200	L0605605-20	SB-7B	1.34/50	2		05/31/06 17:32
87	IR.053106.173800	WG214228-01	Post Digestion Spike		2	L0605605-20	05/31/06 17:38
88	IR.053106.174600	L0605605-21	SB-6A	1.3/50	2		05/31/06 17:46
89	IR.053106.175200	WG214325-25	CCV		1		05/31/06 17:52
90	IR.053106.175800	WG214325-26	CCB		1		05/31/06 17:58
91	IR.053106.180400	L0605605-04	SB-3A	1.36/50	2		05/31/06 18:04
92	IR.053106.181000	L0605605-12	SB-13B	1.36/50	2		05/31/06 18:10
93	IR.053106.181600	L0605605-14	SB-12B	1.31/50	2		05/31/06 18:16
94	IR.053106.182200	L0605605-15	SB-10A	1.36/50	2		05/31/06 18:22
95	IR.053106.182800	L0605605-16	SB-10B	1.31/50	2		05/31/06 18:28
96	IR.053106.183400	L0605605-18	SB-4B	1.36/50	2		05/31/06 18:34
97	IR.053106.184000	WG214325-27	CCV		1		05/31/06 18:40
98	IR.053106.184600	WG214325-28	CCB		1		05/31/06 18:46

Comments

Seq.	Rerun	Dil.	Reason	Analytes
15			Sample intrument-flagged for uncorrected interference. Reanalyzed @ dil. for all analytes.	
20			Sample intrument-flagged for uncorrected interference. Reanalyzed @ dil. for all analytes.	
21			Se TN; reanalyzed @ dil. for Se.	
22			Se TN; reanalyzed @ dil. for Se.	
25			Fe OLR, Se TN; reanalyzed @ dil. for Fe, Se.	
26			Se TN; reanalyzed @ dil. for Se.	

Approved: June 01, 2006

006997

Run Log ID:**10598**

KEMRON Environmental Services

Instrument Run Log

Instrument: IRIS-ICP Dataset: 20060531.1
Analyst1: JYH Analyst2: SLP
Method: 6010B SOP: ME600F Rev: 4

Calibration Std: STD12631 ICV/CCV Std: STD12812 Post Spike: STD12434
ICSA: STD12755 ICSAB: STD12665

Workgroups: 214125, 214227, 214228

Comments:

Seq.	File ID	Sample	ID	Prep	Dil	Reference	Date/Time

Seq.	Rerun	Dil.	Reason	Analytes
27			Sample intrument-flagged for uncorrected interference. Reanalyzed @ dil. for all analytes.	
30			Cd TN; reanalyzed @ dil. for Cd.	
31			Cd TN; reanalyzed @ dil. for Cd.	
36			Se TN; reanalyzed @ dil. for Se.	
39			Se TN; reanalyzed @ greater dil. for Se.	
42			Fe OLR, Se TN; reanalyzed @ dil. for Fe, Se.	
64			Cd TN; reanalyzed @ dil. for Cd.	
74			Sample intrument-flagged for uncorrected interference. Reanalyzed @ dil. for all analytes.	
76			Sample intrument-flagged for uncorrected interference. Reanalyzed @ dil. for all analytes.	
79			Cd TN; reanalyzed @ dil. for Cd.	
80			Cd TN; reanalyzed @ dil. for Cd.	
82			Cd TN; reanalyzed @ dil. for Cd.	

Approved: June 01, 2006

Run Log ID:**10628**

KEMRON Environmental Services

Instrument Run Log

Instrument: IRIS-ICP Dataset: 20060601.1
Analyst1: SLP Analyst2: N/A
Method: 6010B SOP: ME600F Rev: 4

Calibration Std: STD12631 ICV/CCV Std: STD12812 Post Spike: STD12434
ICSA: STD12755 ICSAB: STD12665

Workgroups: 214374, 214375, 214376, 214453, 208270

Comments: 83-92, 95-98) The LCS, MS, and MSD were not spiked for this analytical batch; all samples need redigested.

Seq.	File ID	Sample	ID	Prep	Dil	Reference	Date/Time
1	IR.060106.093100	WG214460-01	Calibration Point		1		06/01/06 09:31
2	IR.060106.093700	WG214460-02	Calibration Point		1		06/01/06 09:37
3	IR.060106.094300	WG214460-03	Calibration Point		1		06/01/06 09:43
4	IR.060106.094900	WG214460-04	Calibration Point		1		06/01/06 09:49
5	IR.060106.095400	WG214460-05	Calibration Point		1		06/01/06 09:54
6	IR.060106.100000	WG214460-06	Calibration Point		1		06/01/06 10:00
7	IR.060106.100800	WG214460-07	Initial Calibration Verification		1		06/01/06 10:08
8	IR.060106.101300	WG214460-08	Initial Calib Blank		1		06/01/06 10:13
9	IR.060106.101900	WG214460-09	Interference Check		1		06/01/06 10:19
10	IR.060106.102500	WG214460-10	Interference Check		1		06/01/06 10:25
11	IR.060106.103100	WG214460-11	CCV		1		06/01/06 10:31
12	IR.060106.103700	WG214460-12	CCB		1		06/01/06 10:37
13	IR.060106.104300	WG214263-02	Method/Prep Blank	1/50	1		06/01/06 10:43
14	IR.060106.104900	WG214263-03	Laboratory Control S	1/50	1		06/01/06 10:49
15	IR.060106.105500	L0605557-05	51806P-D	1.41/50	1		06/01/06 10:55
16	IR.060106.110200	L0605557-08	52406SFTS	1.47/50	1		06/01/06 11:02
17	IR.060106.110800	L0605633-02	TP-3		1		06/01/06 11:08
18	IR.060106.111400	L0605652-01	RAIL SCALE		1		06/01/06 11:14
19	IR.060106.112000	L0605653-01	B15 PIT		1		06/01/06 11:20
20	IR.060106.112600	L0605660-01	DRL-S-BS1	1.4/50	1		06/01/06 11:26
21	IR.060106.113200	WG214374-02	Serial Dilution		5	L0605660-01	06/01/06 11:32
22	IR.060106.113800	WG214374-01	Post Digestion Spike		1	L0605660-01	06/01/06 11:38
23	IR.060106.114500	WG214460-13	CCV		1		06/01/06 11:45
24	IR.060106.115100	WG214460-14	CCB		1		06/01/06 11:51
25	IR.060106.115700	WG214263-01	Reference Sample		1	L0605660-02	06/01/06 11:57
26	IR.060106.120300	WG214263-04	Matrix Spike		1	L0605660-03	06/01/06 12:03
27	IR.060106.120900	WG214263-05	Matrix Spike Duplica		1	L0605660-04	06/01/06 12:09
28	IR.060106.123100	L0605557-05	51806P-D	1.41/50	20		06/01/06 12:31
29	IR.060106.123700	L0605557-08	52406SFTS	1.47/50	2		06/01/06 12:37
30	IR.060106.124300	L0605633-02	TP-3	1.3/50	10		06/01/06 12:43
31	IR.060106.124900	L0605652-01	RAIL SCALE	1.33/50	10		06/01/06 12:49
32	IR.060106.125500	L0605653-01	B15 PIT	1.39/50	2		06/01/06 12:55
33	IR.060106.130100	L0605660-01	DRL-S-BS1	1.4/50	2		06/01/06 13:01
34	IR.060106.130700	WG214374-01	Post Digestion Spike		2	L0605660-01	06/01/06 13:07
35	IR.060106.131300	WG214460-15	CCV		1		06/01/06 13:13
36	IR.060106.131900	WG214460-16	CCB		1		06/01/06 13:19
37	IR.060106.132600	WG214263-01	Reference Sample		2	L0605660-02	06/01/06 13:26

Approved: June 02, 2006

Run Log ID:**10628**

KEMRON Environmental Services

Instrument Run Log

Instrument: IRIS-ICP Dataset: 20060601.1
Analyst1: SLP Analyst2: N/A
Method: 6010B SOP: ME600F Rev: 4

Calibration Std: STD12631 ICV/CCV Std: STD12812 Post Spike: STD12434
ICSA: STD12755 ICSAB: STD12665

Workgroups: 214374, 214375, 214376, 214453, 208270

Comments: 83-92, 95-98) The LCS, MS, and MSD were not spiked for this analytical batch; all samples need redigested.

Seq.	File ID	Sample	ID	Prep	Dil	Reference	Date/Time
38	IR.060106.133200	WG214263-04	Matrix Spike	1.43/50	2	L0605660-03	06/01/06 13:32
39	IR.060106.133800	WG214263-05	Matrix Spike Duplica	1.43/50	2	L0605660-04	06/01/06 13:38
40	IR.060106.134400	WG214263-01	Reference Sample		5	L0605660-02	06/01/06 13:44
41	IR.060106.135000	WG214263-04	Matrix Spike	1.43/50	5	L0605660-03	06/01/06 13:50
42	IR.060106.135600	WG214263-05	Matrix Spike Duplica	1.43/50	5	L0605660-04	06/01/06 13:56
43	IR.060106.140100	WG214374-01	Post Digestion Spike		5	L0605660-01	06/01/06 14:01
44	IR.060106.140700	WG214460-17	CCV		1		06/01/06 14:07
45	IR.060106.141300	WG214460-18	CCB		1		06/01/06 14:13
46	IR.060106.142600	WG214282-02	Method/Prep Blank	50/50	1		06/01/06 14:26
47	IR.060106.143200	WG214282-03	Laboratory Control S	50/50	1		06/01/06 14:32
48	IR.060106.143800	WG214220-01	Fluid Blank		1		06/01/06 14:38
49	IR.060106.144400	L0605557-03	51806SF	5/50	1		06/01/06 14:44
50	IR.060106.145000	WG214375-01	Post Digestion Spike		1	L0605557-03	06/01/06 14:50
51	IR.060106.145600	WG214282-01	Reference Sample		1	L0605557-05	06/01/06 14:56
52	IR.060106.150200	WG214282-04	Matrix Spike	5/50	1		06/01/06 15:02
53	IR.060106.150800	WG214282-05	Matrix Spike Duplica	5/50	1		06/01/06 15:08
54	IR.060106.151400	L0605557-06	51806HGS	5/50	1		06/01/06 15:14
55	IR.060106.152000	L0605557-08	52406SFTS	5/50	1		06/01/06 15:20
56	IR.060106.152600	WG214460-19	CCV		1		06/01/06 15:26
57	IR.060106.153200	WG214460-20	CCB		1		06/01/06 15:32
58	IR.060106.153800	L0605576-01	IWSB01052406	5/50	1		06/01/06 15:38
59	IR.060106.154400	L0605599-10	VP03-00-48	5/50	1		06/01/06 15:44
60	IR.060106.155000	L0605633-02	TP-3	5/50	1		06/01/06 15:50
61	IR.060106.155600	L0605633-03	TP-3 MIX 1	5/50	1		06/01/06 15:56
62	IR.060106.160200	L0605557-02	51806ORTH/TOP	5/50	1		06/01/06 16:02
63	IR.060106.160800	WG214460-21	CCV		1		06/01/06 16:08
64	IR.060106.161400	WG214460-22	CCB		1		06/01/06 16:14
65	IR.060106.162200	WG214272-01	Method/Prep Blank	.5/50	1		06/01/06 16:22
66	IR.060106.162800	WG214272-02	Laboratory Control S	.5/50	1		06/01/06 16:28
67	IR.060106.163400	WG214272-03	Laboratory Control S	.5/50	1		06/01/06 16:34
68	IR.060106.164000	L0605557-01	51806PAINT	.34/50	1		06/01/06 16:40
69	IR.060106.164600	WG214376-02	Serial Dilution		5	L0605557-01	06/01/06 16:46
70	IR.060106.165200	WG214376-01	Post Digestion Spike		1	L0605557-01	06/01/06 16:52
71	IR.060106.165800	L0605557-04	51706CS2/TOP	.36/50	1		06/01/06 16:58
72	IR.060106.170400	L0605557-07	51806-OCT	.35/50	1		06/01/06 17:04
73	IR.060106.171000	L0605557-09	51806-ORTH/BOTTOM	.25/50	1		06/01/06 17:10
74	IR.060106.171600	L0605586-01	GT060811	.26/50	1		06/01/06 17:16

Approved: June 02, 2006

Run Log ID:**10628**

KEMRON Environmental Services

Instrument Run Log

Instrument: IRIS-ICP Dataset: 20060601.1
Analyst1: SLP Analyst2: N/A
Method: 6010B SOP: ME600F Rev: 4

Calibration Std: STD12631 ICV/CCV Std: STD12812 Post Spike: STD12434
ICSA: STD12755 ICSAB: STD12665

Workgroups: 214374, 214375, 214376, 214453, 208270

Comments: 83-92, 95-98) The LCS, MS, and MSD were not spiked for this analytical batch; all samples need redigested.

Seq.	File ID	Sample	ID	Prep	Dil	Reference	Date/Time
75	IR.060106.172200	WG214460-23	CCV		1		06/01/06 17:22
76	IR.060106.172800	WG214460-24	CCB		1		06/01/06 17:28
77	IR.060106.173400	L0605586-02	GT060812	.34/50	1		06/01/06 17:34
78	IR.060106.174000	L0605586-03	GT060813/TOP	.32/50	1		06/01/06 17:40
79	IR.060106.174600	L0605587-01	GT060034	.26/50	1		06/01/06 17:46
80	IR.060106.175200	L0605587-02	GT060035	.25/50	1		06/01/06 17:52
81	IR.060106.175800	WG214460-25	CCV		1		06/01/06 17:58
82	IR.060106.180400	WG214460-26	CCB		1		06/01/06 18:04
83	IR.060106.182600	WG214421-02	Method/Prep Blank		1		06/01/06 18:26
84	IR.060106.183200	WG214421-03	Laboratory Control S		1		06/01/06 18:32
85	IR.060106.183800	L0605617-01	GM060008		1		06/01/06 18:38
86	IR.060106.184400	WG214341-01	Fluid Blank		1		06/01/06 18:44
87	IR.060106.185000	WG214421-01	Reference Sample		1	L0605660-02	06/01/06 18:50
88	IR.060106.185600	WG214421-04	Matrix Spike		1	L0605660-03	06/01/06 18:56
89	IR.060106.190200	WG214421-05	Matrix Spike Duplica		1	L0605660-04	06/01/06 19:02
90	IR.060106.190800	L0605660-01	DRL-S-BS1		1		06/01/06 19:08
91	IR.060106.191400	WG214453-01	Post Digestion Spike		1	L0605660-01	06/01/06 19:14
92	IR.060106.192000	WG214453-02	Serial Dilution		5	L0605660-01	06/01/06 19:20
93	IR.060106.192600	WG214460-27	CCV		1		06/01/06 19:26
94	IR.060106.193200	WG214460-28	CCB		1		06/01/06 19:32
95	IR.060106.193800	L0605636-01	GN060060		1		06/01/06 19:38
96	IR.060106.194400	L0605653-01	B15 PIT		1		06/01/06 19:44
97	IR.060106.195000	WG213638-01	Fluid Blank		1		06/01/06 19:50
98	IR.060106.195600	L0605423-01	5-15-2006 B-SECTION		10		06/01/06 19:56
99	IR.060106.200200	WG214460-29	CCV		1		06/01/06 20:02
100	IR.060106.200800	WG214460-30	CCB		1		06/01/06 20:08
101	IR.060106.205000	L0603019-01	MDL-1	1/50	1		06/01/06 20:50
102	IR.060106.205600	L0603019-02	MDL-2	1/50	1		06/01/06 20:56
103	IR.060106.210200	L0603019-03	MDL-3	1/50	1		06/01/06 21:02
104	IR.060106.210800	L0603019-04	MDL-4	1/50	1		06/01/06 21:08
105	IR.060106.211400	L0603019-05	MDL-5	1/50	1		06/01/06 21:14
106	IR.060106.212000	L0603019-06	MDL-6	1/50	1		06/01/06 21:20
107	IR.060106.212600	L0603019-07	MDL-7	1/50	1		06/01/06 21:26
108	IR.060106.213200	WG214460-31	CCV		1		06/01/06 21:32
109	IR.060106.213800	WG214460-32	CCB		1		06/01/06 21:38

Comments

Approved: June 02, 2006

Run Log ID:**10628**

KEMRON Environmental Services

Instrument Run Log

Instrument: IRIS-ICP Dataset: 20060601.1
Analyst1: SLP Analyst2: N/A
Method: 6010B SOP: ME600F Rev: 4

Calibration Std: STD12631 ICV/CCV Std: STD12812 Post Spike: STD12434
ICSA: STD12755 ICSAB: STD12665

Workgroups: 214374, 214375, 214376, 214453, 208270

Comments: 83-92, 95-98) The LCS, MS, and MSD were not spiked for this analytical batch; all samples need redigested.

Seq.	File ID	Sample	ID	Prep	Dil	Reference	Date/Time

Seq.	Rerun	Dil.	Reason	Analytes
15			Se TN; reanalyzed @ dil. for Se.	
16			Se TN; reanalyzed @ dil. for Se.	
17			Pb OLR; reanalyzed @ dil. for Pb.	
18			Pb OLR; reanalyzed @ dil. for Pb.	
19			Sample instrument-flagged for uncorrected interference; reanalyzed @ dil. for all analytes.	
20			Cd, Se failed PS; reanalyzed @ dil. with PS for Cd, Se.	
26			Sample instrument-flagged for uncorrected interference; reanalyzed @ dil. for all analytes.	
27			Sample instrument-flagged for uncorrected interference; reanalyzed @ dil. for all analytes.	
33			Se failed PS; reanalyzed PS @ dil. for Se.	
37			Se TN; reanalyzed @ dil. for Se.	
38			Se TN; reanalyzed @ dil. for Se.	
39			Se TN; reanalyzed @ dil. for Se.	

Approved: June 02, 2006

Metals Digestion Log

Analyst(s): MM
Date: 5/26/06
LCS: 5ml STD 12434
MS/MSD: 5ml STD 12434
Witness: MP
HNO_3 Lot #: R6T 10226
1:1HNO_3: R6T 10215
HCl Lot #: R6T 10225
H_2O_2 Lot #: R6T 10218
Earliest Sample Due Date: 5/31/06
Hotblock #: 1
Hotblock Temp - Start: 91.9°C 0650
Hotblock Temp - End: 92.1°C 1215

Box: 76
Digestion Work Group: WG 214091

General Digestion
ME401 Revision # _____ - Method 3005A-Water
ME403 Revision # 12 - Method 3050B-Soil

Furnace Digestion
ME402 Revision # _____ - Method 3020A-Water
ME403 Revision # _____ - Method 3050B-Soil

AS/SE Digestion
ME410 Revision # _____ - Method 7060/7740-Water

Relinquished By: MM
Digest Received By: SAP Date: 5/26/06

	KEMRON #	Initial WT/Vol	Final Volume	Comments	Due Date
1	MBS	1.00 g	50ml	-02	
2	LSS	1		-03	
3	05-576-02	1.30			6/2
4	-03	1.38			
5	-04	1.36			
6	-05	1.38			
7	-06	1.46			
8	-07	1.30			
9	05-594-01	1.31		-01	5/31
10	-01MS	1		-04	
11	-01MSD			-05	
12	-02	1.35			
13	-04	1.32			
14	-05	1.31			
15					
16					
17					
18					
19					
20					
21					
22		MM 5/26/06			
23					
24					
25					
26					
27					
28					

Comments: _____

Primary Review: MM 5/26/06 Secondary Review: Sheri L. Adams 5/26/06

007003

TCLP Non-Volatile

Analyst(s): Ed
Date: 05-30-06

Analyst/Date		Analyst/Date	
Ed 05-30-06		Ed 05-31-06	
Time On	Temp On °C	Time Off	Temp Off °C
1330	24	0730	23

Jug #	Sample #	Tests	Method	Fluid #	Matrix*	%Solid	Size Reduction Yes	Size Reduction No	Int. Wt. (g)	Fluid Vol. (mL)
N/A	05-557-02	ME	1311	Filtered	W	<.5		✓	100	100
D	05-557-03	ME	1311	FI-592	S	100	✓		100.05	2000
	-05	⊥	⊥	⊥	⊥	⊥	⊥	✓	100.05	⊥
	-06	⊥	⊥	⊥	⊥	⊥	⊥	✓	100.02	⊥
	-08	⊥	⊥	⊥	⊥	⊥	⊥	✓	100.05	⊥
G-7	05-576-01	SV Pest Herb	⊥	⊥	S/S	⊥	⊥	✓	100.05	⊥
G-9	05-577-10	⊥ ⊥	⊥	⊥	⊥	⊥	⊥	✓	100.02	⊥
G-11	05-630-02	⊥	⊥	⊥	⊥	⊥	⊥	✓	100.05	⊥
D	05-633-02	ME pH-L	⊥	⊥	S	⊥	⊥	✓	100.05	⊥
⊥	-03	⊥	⊥	⊥	⊥	⊥	⊥	✓	100.01	⊥
N/A	FBLK	ME SV Pest Herb	1311	FI-592	N/A	N/A		✓	2000	2000

Ed 05-30-06

*Matrix Code = (S-solid)(SS-sand, soil or sludge)(P-paint)(O-organic or waste)(W-water)

Comments: _____

Peer Review By: _____ Supervisor Review: _____

007004

Microwave Digestion Log

Analyst(s): AW
Date: 5/31/06 @0950
LCS: 5 ml STD 12433
MS/MSD: 5ml STD 12433
Witness: MD
HNO_3 Lot #: PCT 10226
HCl Lot #: NA
Earliest Sample Due Date: 6/5
Microwave # 2

Box: 66

Digestion Work Group: WG 214282

ME407 Revision # 8 Method 3015-Water
ME406 Revision # ____ Method 3051-Soil-Oil

Relinquished By: AW
Digest Received By: JM Date: 5/31/06

	KEMRON #	Initial Wt/Vol	Final Volume	Initial Weight	Final Weight	Comments	Due Date
1	AW	50ml	50ml	210.70	210.69	-02	
2	LCS	1		212.98	212.98	-03	
3	RBLK 5/30	5ml		210.01	210.00	WG 214220 @ 1330	
4	05-557-03			211.88	211.88		6/5
5	-05			212.11	212.11	-01	
6	-05MS			213.54	213.54	-04	
7	-05MSD			213.00	213.00	-05	
8	-06			210.55	210.55		
9	-08			212.16	212.16		
10	05-576-01			211.75	211.75		6/5
11	05-588-10			211.60	211.59		6/8
12	05-633-02			212.72	212.72		6/5
13	-03			211.61	211.61		
14	05-557-02			211.30	211.30	RE FILT 5/30 WG 214208	6/5
15							
16							
17							
18							
19							
20							
21							
22							
23							
24							
25							
26							
27							
28							
29							
30							

5/31/06

Comments: _____

Primary Review: AW 5/31/06 Secondary Review: Emily Decker 05/31/06

007005

KEMRON Environmental Services
HOLDING TIMES
EQUIVALENT TO AFCEE FORM 9

Analytical Method: 6010B **AAB#:** WG214125
Login Number: L0605576

Client ID	Date Collected	Date Received	Date Extracted	Max Hold Time Ext.	Time Held Ext.	Date Analyzed	Max Hold Time Anal	Time Held Anal.	Q
SM142SB01052406	05/24/06	05/25/06	05/26/06	180	1.90	05/31/06	180	5.13	
SM142SB01052406	05/24/06	05/25/06	05/26/06	180	1.90	05/31/06	180	5.13	
SM142SB02052406	05/24/06	05/25/06	05/26/06	180	1.88	05/31/06	180	5.23	
SM142SB02052406	05/24/06	05/25/06	05/26/06	180	1.88	05/31/06	180	5.29	
SM141SB03052406	05/24/06	05/25/06	05/26/06	180	1.93	05/31/06	180	5.15	
SM141SB03052406	05/24/06	05/25/06	05/26/06	180	1.93	05/31/06	180	5.23	
SM141FD03052406	05/24/06	05/25/06	05/26/06	180	1.93	05/31/06	180	5.15	
SM141FD03052406	05/24/06	05/25/06	05/26/06	180	1.93	05/31/06	180	5.24	
SM141SB02052406	05/24/06	05/25/06	05/26/06	180	1.94	05/31/06	180	5.17	
SM141SB02052406	05/24/06	05/25/06	05/26/06	180	1.94	05/31/06	180	5.24	
SM141SB02052406	05/24/06	05/25/06	05/26/06	180	1.94	05/31/06	180	5.25	
SM141SB01052406	05/24/06	05/25/06	05/26/06	180	1.96	05/31/06	180	5.17	
SM141SB01052406	05/24/06	05/25/06	05/26/06	180	1.96	05/31/06	180	5.25	

* EXT = SEE PROJECT QAPP REQUIREMENTS
*ANAL = SEE PROJECT QAPP REQUIREMENTS

KEMRON FORMS - Modified 02/14/2006
Version 1.5 PDF File ID: 487114
Report generated 06/02/2006 10:12

KEMRON Environmental Services
HOLDING TIMES
EQUIVALENT TO AFCEE FORM 9

Analytical Method: 6010B **AAB#:** WG214375
Login Number: L0605576

Client ID	Date Collected	Date Received	Date Extracted	Max Hold Time Ext.	Time Held Ext.	Date Analyzed	Max Hold Time Anal	Time Held Anal.	Q
IWSB01052406	05/24/06	05/25/06	05/31/06	186	6.83	06/01/06	180	1.24	

* EXT = SEE PROJECT QAPP REQUIREMENTS
*ANAL = SEE PROJECT QAPP REQUIREMENTS

KEMRON FORMS - Modified 02/14/2006
Version 1.5 PDF File ID: 487114
Report generated 06/02/2006 10:12

KEMRON Environmental Services

METHOD BLANK SUMMARY

Login Number:	L0605576	Work Group:	WG214125
Blank File ID:	IR.053106.093800	Blank Sample ID:	WG214091-02
Date Analyzed:	05/31/06	Instrument ID:	IRIS-ICP
Time Analyzed:	09:38	Method:	6010B
Analyst:	SLP		

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG214091-03	IR.053106.094400	05/31/06 09:44	01
SM142SB01052406	L0605576-02	IR.053106.095600	05/31/06 09:56	DL01
SM142SB01052406	L0605576-02	IR.053106.100200	05/31/06 10:02	DL02
SM141SB03052406	L0605576-04	IR.053106.102600	05/31/06 10:26	01
SM141FD03052406	L0605576-05	IR.053106.103200	05/31/06 10:32	01
SM141SB02052406	L0605576-06	IR.053106.105000	05/31/06 10:50	01
SM141SB01052406	L0605576-07	IR.053106.105600	05/31/06 10:56	01
SM142SB02052406	L0605576-03	IR.053106.122000	05/31/06 12:20	DL01
SM141SB03052406	L0605576-04	IR.053106.122600	05/31/06 12:26	DL01
SM141FD03052406	L0605576-05	IR.053106.123200	05/31/06 12:32	DL01
SM141SB02052406	L0605576-06	IR.053106.123800	05/31/06 12:38	DL01
SM141SB02052406	L0605576-06	IR.053106.124400	05/31/06 12:44	DL02
SM141SB01052406	L0605576-07	IR.053106.125000	05/31/06 12:50	DL01
SM142SB02052406	L0605576-03	IR.053106.134300	05/31/06 13:43	DL02

KEMRON Environmental Services

METHOD BLANK SUMMARY

Login Number:	L0605576	Work Group:	WG214375
Blank File ID:	IR.060106.142600	Blank Sample ID:	WG214282-02
Date Analyzed:	06/01/06	Instrument ID:	IRIS-ICP
Time Analyzed:	14:26	Method:	6010B
Analyst:	SLP		

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG214282-03	IR.060106.143200	06/01/06 14:32	01
IWSB01052406	L0605576-01	IR.060106.153800	06/01/06 15:38	01

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KEMRON Environmental Services

METHOD BLANK REPORT

Login Number: L0605576 Run Date: 05/31/2006 Sample ID: WG214091-02
Instrument ID: IRIS-ICP Run Time: 09:38 Prep Method: 3050B
File ID: IR.053106.093800 Analyst: SLP Method: 6010B
Workgroup (AAB#): WG214125 Matrix: Solid Units: mg/kg
Contract #: Cal ID: IRIS-I-31-MAY-06

Analytes	SQL	PQL	Concentration	Dilution	Qualifier
Aluminum	10.0	20.0	10.0	1	U
Silver	0.250	0.500	0.250	1	U
Arsenic	0.500	1.00	0.500	1	U
Barium	0.100	0.500	0.100	1	U
Beryllium	0.0120	0.500	0.0120	1	U
Calcium	5.00	10.0	5.00	1	U
Cadmium	0.0500	0.100	0.0500	1	U
Cobalt	0.120	1.00	0.120	1	U
Chromium	0.120	1.00	0.120	1	U
Copper	0.500	1.00	0.500	1	U
Iron	1.00	2.00	1.87	1	J
Potassium	25.0	50.0	25.0	1	U
Magnesium	12.0	25.0	12.0	1	U
Manganese	0.100	0.500	0.100	1	U
Sodium	5.00	25.0	5.00	1	U
Nickel	0.500	2.00	0.500	1	U
Lead	0.500	5.00	0.500	1	U
Antimony	0.500	10.0	0.500	1	U
Selenium	0.500	1.00	0.500	1	U
Thallium	1.00	25.0	1.00	1	U
Vanadium	0.250	0.500	0.250	1	U
Zinc	0.500	1.00	0.500	1	U

MDL Method Detection Limit
RL Reporting/quantitation Limit

* Analyte concentration > RL

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KEMRON Environmental Services

METHOD BLANK REPORT

Login Number: L0605576	Run Date: 06/01/2006	Sample ID: WG214282-02
Instrument ID: IRIS-ICP	Run Time: 14:26	Prep Method: 3015
File ID: IR.060106.142600	Analyst: SLP	Method: 6010B
Workgroup (AAB#): WG214375	Matrix: Water	Units: mg/L
Contract #:	Cal ID: IRIS-I-01-JUN-06	

Analytes	SQL	PQL	Concentration	Dilution	Qualifier
Silver, TCLP	0.00500	0.0100	0.00500	1	U
Arsenic, TCLP	0.0100	0.100	0.0100	1	U
Barium, TCLP	0.00250	0.500	0.00250	1	U
Cadmium, TCLP	0.00250	0.0100	0.00250	1	U
Chromium, TCLP	0.00250	0.0200	0.00250	1	U
Lead, TCLP	0.0100	0.100	0.0100	1	U
Selenium, TCLP	0.0500	0.0800	0.0500	1	U

MDL Method Detection Limit
RL Reporting/quantitation Limit

* Analyte concentration > RL

KEMRON FORMS - Modified 05/01/2006
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KEMRON Environmental Services

LABORATORY CONTROL SAMPLE (LCS)

Login Number: L0605576	Run Date: 05/31/2006	Sample ID: WG214091-03
Instrument ID: IRIS-ICP	Run Time: 09:44	Prep Method: 3050B
File ID: IR.053106.094400	Analyst: SLP	Method: 6010B
Workgroup (AAB#): WG214125	Matrix: Solid	Units: mg/kg
Contract #:	Cal ID: IRIS-I-31-MAY-06	

Analytes	Expected	Found	% Rec	LCS Limits	Q
Aluminum	250	257	103	80 - 120	
Silver	10.0	10.3	103	80 - 120	
Arsenic	10.0	10.2	102	80 - 120	
Barium	25.0	25.3	101	80 - 120	
Beryllium	1.25	1.29	103	80 - 120	
Calcium	250	253	101	80 - 120	
Cadmium	1.25	1.28	102	80 - 120	
Cobalt	5.00	5.15	103	80 - 120	
Chromium	12.5	12.8	102	80 - 120	
Copper	12.5	12.9	103	80 - 120	
Iron	100	105	105	80 - 120	
Potassium	1250	1360	109	80 - 120	
Magnesium	250	250	99.8	80 - 120	
Manganese	12.5	12.8	102	80 - 120	
Sodium	1250	1420	114	80 - 120	
Nickel	12.5	12.5	100	80 - 120	
Lead	12.5	12.4	99.4	80 - 120	
Antimony	30.0	30.3	101	80 - 120	
Selenium	10.0	10.1	101	80 - 120	
Thallium	12.5	13.2	105	80 - 120	
Vanadium	25.0	25.5	102	80 - 120	
Zinc	25.0	25.3	101	80 - 120	

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KEMRON Environmental Services

LABORATORY CONTROL SAMPLE (LCS)

Login Number: L0605576	Run Date: 06/01/2006	Sample ID: WG214282-03
Instrument ID: IRIS-ICP	Run Time: 14:32	Prep Method: 3015
File ID: IR.060106.143200	Analyst: SLP	Method: 6010B
Workgroup (AAB#): WG214375	Matrix: Water	Units: mg/L
Contract #:	Cal ID: IRIS-I-01-JUN-06	

Analytes	Expected	Found	% Rec	LCS Limits	Q
Silver, TCLP	0.200	0.202	101	80 - 120	
Arsenic, TCLP	0.200	0.205	102	80 - 120	
Barium, TCLP	0.500	0.500	99.9	80 - 120	
Cadmium, TCLP	0.0250	0.0259	104	80 - 120	
Chromium, TCLP	0.250	0.252	101	80 - 120	
Lead, TCLP	0.250	0.248	99.4	80 - 120	
Selenium, TCLP	0.200	0.205	102	80 - 120	

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KEMRON Environmental Services

MATRIX SPIKE AND MATRIX SPIKE DUP (MS/MSD)

Loginnum:L0605576 Cal ID: IRIS-ICP- Worknum:WG214125
Instrument ID:IRIS-ICP Contract #: Method:6010B
Parent ID:WG214091-01 File ID:IR.053106.125600 Dil:2 Matrix:SOLID
Sample ID:WG214091-04 MS File ID:IR.053106.130200 Dil:2 Units:mg/kg
Sample ID:WG214091-05 MSD File ID:IR.053106.130800 Dil:2 Percent Solid:100

Analyte	Parent	MS Spiked	MS Found	MS %Rec	MSD Spiked	MSD Found	MSD %Rec	%RPD	%Rec Limits	RPD Limit	Q
Aluminum	21800	191	34300	6510	191	31800	5200	7.59	75 - 125	20	*
Antimony	ND	22.9	9.03	39.4	22.9	9.20	40.2	1.86	75 - 125	20	*
Arsenic	ND	7.63	3.92	51.3	7.63	2.55	33.3	42.5	75 - 125	20	*
Barium	13.6	19.1	38.5	130	19.1	46.8	174	19.5	75 - 125	20	*
Beryllium	0.972	0.954	1.98	105	0.954	2.21	130	11.3	75 - 125	20	*
Cadmium	ND	0.954	0.159	16.6	0.954	-0.179	-18.8	-3280	75 - 125	20	*
Calcium	1810	191	2130	173	191	2640	436	21.0	75 - 125	20	*
Chromium	10.4	9.54	32.2	228	9.54	156	1520	132	75 - 125	20	*
Cobalt	13.5	3.82	23.9	271	3.82	164	3940	149	75 - 125	20	*
Copper	43.0	9.54	69.1	274	9.54	114	746	49.2	75 - 125	20	*
Lead	1.11	9.54	11.1	105	9.54	11.6	110	4.65	75 - 125	20	
Magnesium	330	191	633	159	191	647	166	2.27	75 - 125	20	*
Manganese	329	9.54	594	2770	9.54	892	5900	40.2	75 - 125	20	*
Nickel	2.69	9.54	25.6	240	9.54	21.3	195	18.5	75 - 125	20	*
Potassium	237	954	1300	111	954	1300	112	0.505	75 - 125	20	
Silver	2.29	7.63	10.2	103	7.63	11.7	124	14.4	75 - 125	20	
Sodium	15.4	954	1050	108	954	1010	104	3.35	75 - 125	20	
Thallium	8.36	9.54	16.1	81.3	9.54	9.34	10.2	53.3	75 - 125	20	*
Vanadium	253	19.1	268	75.8	19.1	343	472	24.8	75 - 125	20	*
Zinc	36.0	19.1	68.7	172	19.1	87.2	268	23.6	75 - 125	20	*

* FAILS %REC LIMIT

FAILS RPD LIMIT

NOTE: This is an internal quality control sample.

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KEMRON Environmental Services

MATRIX SPIKE AND MATRIX SPIKE DUP (MS/MSD)

Loginnum:L0605576 Cal ID: IRIS-ICP- Worknum:WG214125
Instrument ID:IRIS-ICP Contract #: Method:6010B
Parent ID:WG214091-01 File ID:IR.053106.134900 Dil:100 Matrix:SOLID
Sample ID:WG214091-04 MS File ID:IR.053106.135500 Dil:100 Units:mg/kg
Sample ID:WG214091-05 MSD File ID:IR.053106.140100 Dil:100 Percent Solid:100

Analyte	Parent	MS Spiked	MS Found	MS %Rec	MSD Spiked	MSD Found	MSD %Rec	%RPD	%Rec Limits	RPD Limit	Q
Iron	76500	76.3	85100	11200	76.3	123000	60300	36.1	75 - 125	20	*
Selenium	ND	7.63	-10.1	-132	7.63	-34.8	-457	-110	75 - 125	20	*

* FAILS %REC LIMIT

FAILS RPD LIMIT

NOTE: This is an internal quality control sample.

KEMRON FORMS - Modified 03/16/2006
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KEMRON Environmental Services

MATRIX SPIKE AND MATRIX SPIKE DUP (MS/MSD)

Loginnum:L0605576 Cal ID: IRIS-ICP - Worknum:WG214375
Instrument ID:IRIS-ICP Contract #: Method:6010B
Parent ID:WG214282-01 File ID:IR.060106.145600 Dil:1 Matrix:TCLP
Sample ID:WG214282-04 MS File ID:IR.060106.150200 Dil:1 Units:mg/L
Sample ID:WG214282-05 MSD File ID:IR.060106.150800 Dil:1

Analyte	Parent	MS Spiked	MS Found	MS %Rec	MSD Spiked	MSD Found	MSD %Rec	%RPD	%Rec Limits	RPD Limit	Q
Arsenic, TCLP	ND	2.00	2.05	102	2.00	2.02	101	1.27	75 - 125	20	
Barium, TCLP	0.769	5.00	5.81	101	5.00	5.65	97.5	2.90	75 - 125	20	
Cadmium, TCLP	0.0255	0.250	0.284	103	0.250	0.280	102	1.38	75 - 125	20	
Chromium, TCLP	ND	2.50	2.49	99.7	2.50	2.46	98.3	1.34	75 - 125	20	
Lead, TCLP	ND	2.50	2.42	97.0	2.50	2.38	95.2	1.83	75 - 125	20	
Selenium, TCLP	ND	2.00	2.56	128	2.00	2.45	122	4.46	75 - 125	20	*
Silver, TCLP	ND	2.00	2.03	102	2.00	1.98	98.8	2.88	75 - 125	20	

* FAILS %REC LIMIT

FAILS RPD LIMIT

NOTE: This is an internal quality control sample.

KEMRON FORMS - Modified 03/16/2006
Version 1.5 PDF File ID: 487118
Report generated 06/02/2006 10:12

KEMRON ENVIRONMENTAL SERVICES
SERIAL DILUTION REPORT

Sample Login ID: L0605576 Worknum: WG214125
Instrument ID: IRIS-ICP Method: 6010B
Sample ID: L0605576-02 File ID: IR.053106.095600 Dil: 5 Units: mg/kg
Serial Dilution ID: WG214125-02 File ID: IR.053106.100200 Dil: 25

Analyte	Sample	C	Serial Dilution	C	% Difference	Q
Aluminum	250		247	X	1.20	
Antimony	0.0944	F	0	U	100	
Arsenic	0.193	X	0	U	100	
Barium	3.10		3.02		2.58	
Beryllium	0.0149	F	0.0143	F	4.03	
Cadmium	0.00890	F	0	U	100	
Calcium	333		332		0.300	
Chromium	0.565	X	0.599	X	6.02	
Cobalt	0.228	X	0.287	F	25.9	
Copper	3.86		3.79	X	1.81	
Iron	1210		1310		8.26	
Lead	3.94		4.14	X	5.08	
Magnesium	52.4	X	49.8	X	4.96	
Manganese	6.88		7.64		11.0	E
Nickel	0.593	X	0.617	F	4.05	
Potassium	33.7	X	33.7	X	0.00	
Selenium	ND	U	ND	U		
Silver	0.0556	X	0	U	100	
Sodium	34.2		33.4	X	2.34	
Thallium	ND	U	ND	U		
Vanadium	0.503	X	0.520	X	3.38	
Zinc	8.68		8.91	X	2.65	

U = Result is below MDL
F = Result is between MDL and RL
X = Result is greater than RL and less than 50 times the MDL
E = %D exceeds control limit of 10% and initial
sample result is greater than or equal to 50 times the MDL

KEMRON FORMS - Modified 02/14/2006
Version 1.3 PDF File ID: 487112
Report generated 05/31/2006 14:53

KEMRON ENVIRONMENTAL SERVICES
POST SPIKE REPORT

Sample Login ID: L0605576 **Worknum:** WG214125
Instrument ID: IRIS-ICP **Method:** 6010B
Post Spike ID: WG214125-01 **File ID:** IR.053106.100800 **Dil:** 5 **Units:** mg/kg
Sample ID: L0605576-02 **File ID:** IR.053106.095600 **Dil:** 5 **Matrix:** Soil

Analyte	Control Limit %R	Post Spike Result	C	Sample Result	C	Spike Added(SA)	% R	Q
ALUMINUM	75 - 125	271		250		25.0	84.0	
ANTIMONY	75 - 125	3.12		0.0944	F	3.00	101	
ARSENIC	75 - 125	1.21		0.193		1.00	102	
BARIUM	75 - 125	5.54		3.10		2.50	97.6	
BERYLLIUM	75 - 125	0.143		0.0149	F	0.125	102	
CADMIUM	75 - 125	0.134		0.00890	F	0.125	100	
CALCIUM	75 - 125	354		333		25.0	84.0	
CHROMIUM	75 - 125	1.76		0.565		1.25	95.6	
COBALT	75 - 125	0.706		0.228		0.500	95.6	
COPPER	75 - 125	5.08		3.86		1.25	97.6	
IRON	75 - 125	1200		1210		10.0	-100	N
LEAD	75 - 125	5.05		3.94		1.25	88.8	
MAGNESIUM	75 - 125	76.9		52.4		25.0	98.0	
MANGANESE	75 - 125	7.84		6.88		1.25	76.8	
NICKEL	75 - 125	1.77		0.593		1.25	94.2	
POTASSIUM	75 - 125	164		33.7		125	104	
SELENIUM	75 - 125	0.640		ND	U	1.00	64.0	N
SILVER	75 - 125	1.08		0.0556		1.00	102	
SODIUM	75 - 125	168		34.2		125	107	
THALLIUM	75 - 125	1.18	F	ND	U	1.25	94.4	
VANADIUM	75 - 125	3.07		0.503		2.50	103	
ZINC	75 - 125	11.0		8.68		2.50	92.8	

N = % Recoverv exceeds control limits of 75% - 125%
F = Result is between MDL and RL
U = Sample result is below MDL. A value of zero is used in the calculation.

KEMRON FORMS - Modified 02/14/2006
Version 2.0 PDF File ID: 487113
Report generated 06/02/2006 10:12

KEMRON ENVIRONMENTAL SERVICES
POST SPIKE REPORT

Sample Login ID: L0605576 **Worknum:** WG214125
Instrument ID: IRIS-ICP **Method:** 6010B
Post Spike ID: WG214125-01 **File ID:** IR.053106.121500 **Dil:** 25 **Units:** mg/kg
Sample ID: L0605576-02 **File ID:** IR.053106.100200 **Dil:** 25 **Matrix:** Soil

Analyte	Control Limit %R	Post Spike Result	C	Sample Result	C	Spike Added(SA)	% R	Q
ALUMINUM	75 - 125	377		247		125	104	
ANTIMONY	75 - 125	15.5		0	U	15.0	103	
ARSENIC	75 - 125	5.38		0	U	5.00	108	
BARIUM	75 - 125	15.8		3.02		12.5	102	
BERYLLIUM	75 - 125	0.654		0.0143	F	0.625	102	
CADMIUM	75 - 125	0.659		0	U	0.625	105	
CALCIUM	75 - 125	461		332		125	103	
CHROMIUM	75 - 125	6.95		0.599		6.25	102	
COBALT	75 - 125	2.84		0.287	F	2.50	102	
COPPER	75 - 125	10.2		3.79		6.25	103	
IRON	75 - 125	1360		1310		50.0	100	
LEAD	75 - 125	10.4		4.14		6.25	100	
MAGNESIUM	75 - 125	178		49.8		125	103	
MANGANESE	75 - 125	13.8		7.64		6.25	98.6	
NICKEL	75 - 125	6.89		0.617	F	6.25	100	
POTASSIUM	75 - 125	686		33.7		625	104	
SELENIUM	75 - 125	4.82		ND	U	5.00	96.4	
SILVER	75 - 125	5.16		0	U	5.00	103	
SODIUM	75 - 125	708		33.4		625	108	
THALLIUM	75 - 125	6.57	F	ND	U	6.25	105	
VANADIUM	75 - 125	13.4		0.520		12.5	103	
ZINC	75 - 125	21.5		8.91		12.5	101	

N = % Recoverv exceeds control limits of 75% - 125%
F = Result is between MDL and RL
U = Sample result is below MDL. A value of zero is used in the calculation.

KEMRON FORMS - Modified 02/14/2006
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KEMRON ENVIRONMENTAL SERVICES
POST SPIKE REPORT

Sample Login ID: L0605576 **Worknum:** WG214375
Instrument ID: IRIS-ICP **Method:** 6010B
Post Spike ID: WG214375-01 **File ID:** IR.060106.145000 **Dil:** 1 **Units:** mg/L
Sample ID: L0605557-03 **File ID:** IR.060106.144400 **Dil:** 1 **Matrix:** Leachate

Analyte	Control Limit %R	Post Spike Result	C	Sample Result	C	Spike Added(SA)	% R	Q
ARSENIC	75 - 125	0.205		0	U	0.200	103	
BARIUM	75 - 125	0.493	F	0.00839	F	0.500	97.1	
CADMIUM	75 - 125	0.0259		0	U	0.0250	104	
CHROMIUM	75 - 125	0.258		0.0100	F	0.250	99.6	
LEAD	75 - 125	0.243		ND	U	0.250	97.2	
SELENIUM	75 - 125	0.209		0	U	0.200	105	
SILVER	75 - 125	0.199		ND	U	0.200	99.5	

N = % Recoverv exceeds control limits of 75% - 125%
F = Result is between MDL and RL
U = Sample result is below MDL. A value of zero is used in the calculation.

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KEMRON Environmental Services

INITIAL CALIBRATION SUMMARY

Login Number: L0605576 **Workgroup (AAB#):** WG214125

Analytical Method: 6010B **Instrument ID:** IRIS-ICP

ICAL Worknum: WG214325 **Initial Calibration Date:** 31-MAY-2006 08:52

Analyte	WG214325-01		WG214325-02		WG214325-03		WG214325-04		WG214325-05		WG214325-06	
	STD	INT	STD	INT	STD	INT	STD	INT	STD	INT	STD	INT
Aluminum	NA	.0NA96	NA	.2NA27	NA	.4NA89	NA	9.NA01	NA	18NA94	NA	37NA46
Antimony	NA	-.0NA826	.NA2	.0NA591	.NA4	.1NA48	NA	5.NA95	1NA2	10NA73	2NA4	21NA84
Arsenic	NA	-.0NA146	NA	NA	.NA8	.0NA286	NA	1.NA77	NA	3.NA64	NA	7.NA03
Barium	NA	1.NA256	NA1	6.NA27	NA2	12NA24	NA	28NA71	NA	57NA22	NA	11NA.6
Beryllium	NA	.2NA57	.0NA05	1.NA82	.NA1	2.NA02	.NA5	51NA78	NA5	10NA29	NA	20NA29
Cadmium	NA	.5NA36	NA	NA	.NA1	.7NA81	.NA5	3.NA88	NA5	6.NA61	NA	12NA05
Calcium	NA	.5NA19	NA	1.NA34	NA	3.NA46	NA	67NA69	NA	13NA97	NA	27NA02
Chromium	NA	1.NA12	.NA5	2.NA17	NA1	3.NA41	NA5	52NA96	NA5	10NA25	NA	20NA83
Cobalt	NA	.7NA61	NA	NA	.NA4	1.NA02	NA	12NA27	NA2	24NA81	NA	47NA06
Copper	NA	.1NA25	NA	NA	NA1	.4NA85	NA5	8.NA39	NA5	16NA78	NA	33NA41
Iron	NA	.0NA66	NA4	.5NA43	NA8	1.NA15	NA	23NA25	NA	48NA47	NA	95NA89
Lead	NA	.0NA23	NA	NA	NA1	.2NA08	NA5	5.NA74	NA5	10NA17	NA	20NA54
Magnesium	NA	.0NA98	NA	NA	NA	.2NA98	NA	5.NA67	NA	10NA84	NA	21NA19
Manganese	NA	.0NA81	.NA5	8.NA91	NA1	1.NA85	NA5	41NA13	NA5	83NA41	NA	1NA67
Nickel	NA	.7NA12	NA	NA	NA1	1.NA97	NA5	27NA09	NA5	53NA12	NA	10NA02
Potassium	NA	-.8NA918	NA	4.NA63	NA	10NA88	NA	29NA69	NA	59NA.7	NA	11NA.9
Selenium	NA	.1NA81	NA	NA	.NA8	.1NA88	NA	1.NA57	NA	2.NA24	NA	4.NA27
Silver	NA	NA	NA	NA	.NA8	.2NA98	NA	7.NA07	NA	15NA06	NA	30NA34
Sodium	NA	-.2NA928	NA	34NA09	NA	68NA22	NA	17NA.9	NA	34NA.1	NA	67NA.2
Thallium	NA	.0NA49	NA	NA	NA1	.1NA55	NA5	1.NA13	NA5	3.NA98	NA	7.NA53
Vanadium	NA	1.NA98	NA1	1.NA61	NA2	2.NA47	NA	24NA16	NA	49NA08	NA	97NA23
Zinc	NA	.3NA03	NA1	2.NA35	NA2	4.NA69	NA	10NA85	NA	21NA23	NA	42NA86

INT = Instrument intensity
R = Coefficient of correlation
Q = Data Qualifier
*** = Out of Compliance; R < 0.995**

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KEMRON Environmental Services

INITIAL CALIBRATION SUMMARY

Analyte	R	Q
Aluminum	0.999953	
Antimony	0.999902	
Arsenic	0.999881	
Barium	0.999969	
Beryllium	0.999984	
Cadmium	0.999750	
Calcium	0.999948	
Chromium	0.999978	
Cobalt	0.999911	
Copper	0.999630	
Iron	0.999982	
Lead	0.999953	
Magnesium	0.999950	
Manganese	0.999963	
Nickel	0.999993	
Potassium	0.999931	
Selenium	0.999986	
Silver	0.999970	
Sodium	0.999847	
Thallium	0.999949	
Vanadium	0.999964	
Zinc	0.999993	

INT = Instrument intensity
R = Coefficient of correlation
Q = Data Qualifier
*** = Out of Compliance; R < 0.995**

KEMRON Environmental Services

INITIAL CALIBRATION SUMMARY

Login Number: L0605576 **Workgroup (AAB#):** WG214375

Analytical Method: 6010B **Instrument ID:** IRIS-ICP

ICAL Worknum: WG214460 **Initial Calibration Date:** 01-JUN-2006 10:00

Analyte	WG214460-01		WG214460-02		WG214460-03		WG214460-04		WG214460-05		WG214460-06	
	STD	INT	STD	INT	STD	INT	STD	INT	STD	INT	STD	INT
Arsenic	NA	-.0[illegible]284	NA	NA	.[illegible]8	.0[illegible]16	[illegible]	1.[illegible]75	[illegible]	3.[illegible]65	[illegible]	7.[illegible]39
Barium	NA	.9[illegible]57	[illegible]	7.[illegible]35	[illegible]	13[illegible]17	[illegible]	31[illegible]76	[illegible]	63[illegible]25	[illegible]	12[illegible].7
Cadmium	NA	.5[illegible]39	NA	NA	.[illegible]1	.5[illegible]76	.[illegible]5	3.[illegible]05	[illegible]	6.[illegible]51	[illegible]	11[illegible]72
Chromium	NA	1.[illegible]01	.[illegible]5	2.[illegible]94	[illegible]	3.[illegible]23	[illegible]	52[illegible]91	[illegible]	10[illegible]44	[illegible]	20[illegible]53
Lead	NA	.0[illegible]48	NA	NA	[illegible]	.2[illegible]77	[illegible]	4.[illegible]77	[illegible]	9.[illegible]85	[illegible]	19[illegible]59
Selenium	NA	.1[illegible]29	NA	NA	.[illegible]8	.1[illegible]56	[illegible]	1.[illegible]82	[illegible]	2.[illegible]54	[illegible]	4.[illegible]23
Silver	NA	-.0[illegible]293	NA	NA	.[illegible]8	.2[illegible]13	[illegible]	7.[illegible]03	[illegible]	15[illegible]07	[illegible]	31[illegible]53

INT = Instrument intensity
R = Coefficient of correlation
Q = Data Qualifier
*** = Out of Compliance; R < 0.995**

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KEMRON Environmental Services

INITIAL CALIBRATION SUMMARY

Analyte	R	Q
Arsenic	0.999902	
Barium	0.999970	
Cadmium	0.999830	
Chromium	0.999975	
Lead	0.999919	
Selenium	0.999661	
Silver	0.999953	

INT = Instrument intensity
R = Coefficient of correlation
Q = Data Qualifier
*** = Out of Compliance; R < 0.995**

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KEMRON Environmental Services

INITIAL CALIBRATION VERIFICATION (ICV)

Login Number:L0605576 Run Date:05/31/2006 Sample ID:WG214325-07
Instrument ID:IRIS-ICP Run Time:08:59 Method:6010B
File ID:IR.053106.085900 Analyst:SLP Units:mg/L
Workgroup (AAB#):WG214125 Cal ID:IRIS-I - 31-MAY-06

Analyte		Expected	Found	%REC	LIMITS	Q
Aluminum		10	10.1	101	90 - 110	
Silver		.4	0.409	102	90 - 110	
Arsenic		.4	0.410	103	90 - 110	
Barium		1	0.993	99.3	90 - 110	
Beryllium		.05	0.0509	102	90 - 110	
Calcium		10	10.1	101	90 - 110	
Cadmium		.05	0.0518	104	90 - 110	
Cobalt		.2	0.205	103	90 - 110	
Chromium		.5	0.499	99.8	90 - 110	
Copper		.5	0.501	100	90 - 110	
Iron		4	3.99	99.8	90 - 110	
Potassium		50	50.5	101	90 - 110	
Magnesium		10	10.2	102	90 - 110	
Manganese		.5	0.506	101	90 - 110	
Sodium		50	51.1	102	90 - 110	
Nickel		.5	0.491	98.2	90 - 110	
Lead		.5	0.494	98.7	90 - 110	
Antimony		1.2	1.22	102	90 - 110	
Selenium		.4	0.417	104	90 - 110	
Thallium		.5	0.504	101	90 - 110	
Vanadium		1	1.02	102	90 - 110	
Zinc		1	1.01	101	90 - 110	

* Exceeds LIMITS Limit

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KEMRON Environmental Services

INITIAL CALIBRATION VERIFICATION (ICV)

Login Number:L0605576 Run Date:06/01/2006 Sample ID:WG214460-07
Instrument ID:IRIS-ICP Run Time:10:08 Method:6010B
File ID:IR.060106.100800 Analyst:SLP Units:mg/L
Workgroup (AAB#):WG214375 Cal ID:IRIS-I - 01-JUN-06

Analyte		Expected	Found	%REC	LIMITS	Q
Silver		.4	0.412	103	90 - 110	
Arsenic		.4	0.411	103	90 - 110	
Barium		1	0.998	99.8	90 - 110	
Cadmium		.05	0.0517	103	90 - 110	
Chromium		.5	0.501	100	90 - 110	
Lead		.5	0.498	99.7	90 - 110	
Selenium		.4	0.408	102	90 - 110	

* Exceeds LIMITS Limit

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KEMRON Environmental Services

INITIAL CALIBRATION BLANK (ICB)

Login Number: L0605576 Run Date: 05/31/2006 Sample ID: WG214325-08
Instrument ID: IRIS-ICP Run Time: 09:05 Method: 6010B
File ID: IR.053106.090500 Analyst: SLP Units: mg/L
Workgroup (AAB#): WG214125 Cal ID: IRIS-I - 31-MAY-06

Analytes	MDL	RDL	Concentration	Dilution	Qualifier
Aluminum	0.200	0.400	-.00336	1	U
Silver	0.00500	0.0100	-.00224	1	U
Arsenic	0.0100	0.0200	-.00087	1	U
Barium	0.00200	0.0100	-.00023	1	U
Beryllium	0.000240	0.0100	0	1	U
Calcium	0.100	0.200	-.00292	1	U
Cadmium	0.00100	0.00200	-.00008	1	U
Cobalt	0.00240	0.0200	.00005	1	U
Chromium	0.00240	0.0200	-.00005	1	U
Copper	0.0100	0.0200	.00037	1	U
Iron	0.0200	0.0400	.00101	1	U
Potassium	0.500	1.00	.0306	1	U
Magnesium	0.240	0.500	.00919	1	U
Manganese	0.00200	0.0100	.00001	1	U
Sodium	0.100	0.500	.0103	1	U
Nickel	0.0100	0.0400	-.00013	1	U
Lead	0.0100	0.100	-.00059	1	U
Antimony	0.0100	0.200	-.002	1	U
Selenium	0.0100	0.0200	-.001	1	U
Thallium	0.0200	0.500	.00003	1	U
Vanadium	0.00500	0.0100	.00109	1	U
Zinc	0.0100	0.0200	.00004	1	U

U = Result is less than MDL
F = Result is between MDL and RL

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KEMRON Environmental Services

INITIAL CALIBRATION BLANK (ICB)

Login Number: L0605576 Run Date: 06/01/2006 Sample ID: WG214460-08
Instrument ID: IRIS-ICP Run Time: 10:13 Method: 6010B
File ID: IR.060106.101300 Analyst: SLP Units: mg/L
Workgroup (AAB#): WG214375 Cal ID: IRIS-I - 01-JUN-06

Analytes	MDL	RDL	Concentration	Dilution	Qualifier
Silver	0.00500	0.0100	-.00195	1	U
Arsenic	0.0100	0.100	.00075	1	U
Barium	0.00250	0.500	-.00004	1	U
Cadmium	0.00250	0.0100	.00003	1	U
Chromium	0.00250	0.0200	-.00006	1	U
Lead	0.0100	0.100	.0015	1	U
Selenium	0.0500	0.0800	-.0022	1	U

U = Result is less than MDL
F = Result is between MDL and RL

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KEMRON Environmental Services

CONTINUING CALIBRATION BLANK (CCB)

Login Number:L0605576 Run Date:05/31/2006 Sample ID:WG214325-12
Instrument ID:IRIS-ICP Run Time:09:29 Method:6010B
File ID:IR.053106.092900 Analyst:SLP Units:mg/L
Workgroup (AAB#):WG214125 Cal ID:IRIS-I - 31-MAY-06

Analytes	MDL	RDL	Concentration	Dilution	Qualifier
Aluminum	0.200	0.400	-0.00286	1	U
Silver	0.00500	0.0100	-0.00245	1	U
Arsenic	0.0100	0.0200	-0.00225	1	U
Barium	0.00200	0.0100	-0.000280	1	U
Beryllium	0.000240	0.0100	0	1	U
Calcium	0.100	0.200	0.00335	1	U
Cadmium	0.00100	0.00200	-0.000300	1	U
Cobalt	0.00240	0.0200	0	1	U
Chromium	0.00240	0.0200	-0.000140	1	U
Copper	0.0100	0.0200	-0.000970	1	U
Iron	0.0200	0.0400	0.00153	1	U
Potassium	0.500	1.00	-0.0309	1	U
Magnesium	0.240	0.500	-0.00124	1	U
Manganese	0.00200	0.0100	0.0000100	1	U
Sodium	0.100	0.500	0.00908	1	U
Nickel	0.0100	0.0400	0.0000100	1	U
Lead	0.0100	0.100	-0.000430	1	U
Antimony	0.0100	0.200	-0.000830	1	U
Selenium	0.0100	0.0200	0.00466	1	U
Thallium	0.0200	0.500	-0.000450	1	U
Vanadium	0.00500	0.0100	0.000210	1	U
Zinc	0.0100	0.0200	-0.0000300	1	U

U = Result is less than MDL
F = Result is between MDL and RL

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KEMRON Environmental Services

CONTINUING CALIBRATION BLANK (CCB)

Login Number:L0605576 Run Date:05/31/2006 Sample ID:WG214325-14
Instrument ID:IRIS-ICP Run Time:10:44 Method:6010B
File ID:IR.053106.104400 Analyst:SLP Units:mg/L
Workgroup (AAB#):WG214125 Cal ID:IRIS-I - 31-MAY-06

Analytes	MDL	RDL	Concentration	Dilution	Qualifier
Aluminum	0.200	0.400	-0.0201	1	U
Silver	0.00500	0.0100	-0.00143	1	U
Arsenic	0.0100	0.0200	-0.000690	1	U
Barium	0.00200	0.0100	0.0000600	1	U
Beryllium	0.000240	0.0100	-0.0000200	1	U
Calcium	0.100	0.200	0.000460	1	U
Cadmium	0.00100	0.00200	0.000130	1	U
Cobalt	0.00240	0.0200	0.000130	1	U
Chromium	0.00240	0.0200	-0.000130	1	U
Copper	0.0100	0.0200	0.000450	1	U
Iron	0.0200	0.0400	-0.00167	1	U
Potassium	0.500	1.00	-0.0123	1	U
Magnesium	0.240	0.500	-0.00456	1	U
Manganese	0.00200	0.0100	-0.0000100	1	U
Sodium	0.100	0.500	0.0108	1	U
Nickel	0.0100	0.0400	0.000270	1	U
Lead	0.0100	0.100	-0.00108	1	U
Antimony	0.0100	0.200	-0.000530	1	U
Selenium	0.0100	0.0200	0.000760	1	U
Thallium	0.0200	0.500	-0.00171	1	U
Vanadium	0.00500	0.0100	0.00182	1	U
Zinc	0.0100	0.0200	0.0000500	1	U

U = Result is less than MDL
F = Result is between MDL and RL

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KEMRON Environmental Services

CONTINUING CALIBRATION BLANK (CCB)

Login Number:L0605576 Run Date:05/31/2006 Sample ID:WG214325-16
Instrument ID:IRIS-ICP Run Time:11:45 Method:6010B
File ID:IR.053106.114500 Analyst:SLP Units:mg/L
Workgroup (AAB#):WG214125 Cal ID:IRIS-I - 31-MAY-06

Analytes	MDL	RDL	Concentration	Dilution	Qualifier
Aluminum	0.200	0.400	-0.0172	1	U
Silver	0.00500	0.0100	-0.000280	1	U
Arsenic	0.0100	0.0200	-0.0000700	1	U
Barium	0.00200	0.0100	0.0000500	1	U
Beryllium	0.000240	0.0100	0.0000300	1	U
Calcium	0.100	0.200	-0.000440	1	U
Cadmium	0.00100	0.00200	0.000180	1	U
Cobalt	0.00240	0.0200	0.000130	1	U
Chromium	0.00240	0.0200	-0.000180	1	U
Copper	0.0100	0.0200	-0.00181	1	U
Iron	0.0200	0.0400	0.00139	1	U
Potassium	0.500	1.00	-0.000790	1	U
Magnesium	0.240	0.500	-0.0105	1	U
Manganese	0.00200	0.0100	0.0000200	1	U
Sodium	0.100	0.500	0.00557	1	U
Nickel	0.0100	0.0400	-0.000120	1	U
Lead	0.0100	0.100	-0.00120	1	U
Antimony	0.0100	0.200	-0.000860	1	U
Selenium	0.0100	0.0200	0.000760	1	U
Thallium	0.0200	0.500	0.000120	1	U
Vanadium	0.00500	0.0100	-0.000250	1	U
Zinc	0.0100	0.0200	0.0000800	1	U

U = Result is less than MDL
F = Result is between MDL and RL

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KEMRON Environmental Services

CONTINUING CALIBRATION BLANK (CCB)

Login Number:L0605576 Run Date:05/31/2006 Sample ID:WG214325-18
Instrument ID:IRIS-ICP Run Time:13:20 Method:6010B
File ID:IR.053106.132000 Analyst:SLP Units:mg/L
Workgroup (AAB#):WG214125 Cal ID:IRIS-I - 31-MAY-06

Analytes	MDL	RDL	Concentration	Dilution	Qualifier
Aluminum	0.200	0.400	0.0120	1	U
Silver	0.00500	0.0100	-0.000590	1	U
Arsenic	0.0100	0.0200	-0.00167	1	U
Barium	0.00200	0.0100	-0.0000400	1	U
Beryllium	0.000240	0.0100	0.0000200	1	U
Calcium	0.100	0.200	0.00659	1	U
Cadmium	0.00100	0.00200	-0.000110	1	U
Cobalt	0.00240	0.0200	0.000270	1	U
Chromium	0.00240	0.0200	0.000100	1	U
Copper	0.0100	0.0200	0.000780	1	U
Iron	0.0200	0.0400	-0.00109	1	U
Potassium	0.500	1.00	-0.0297	1	U
Magnesium	0.240	0.500	0.00569	1	U
Manganese	0.00200	0.0100	0.000490	1	U
Sodium	0.100	0.500	0.00938	1	U
Nickel	0.0100	0.0400	0.000290	1	U
Lead	0.0100	0.100	-0.00180	1	U
Antimony	0.0100	0.200	-0.00185	1	U
Selenium	0.0100	0.0200	0.000380	1	U
Thallium	0.0200	0.500	0.000210	1	U
Vanadium	0.00500	0.0100	0.000170	1	U
Zinc	0.0100	0.0200	0.00371	1	U

U = Result is less than MDL
F = Result is between MDL and RL

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KEMRON Environmental Services

CONTINUING CALIBRATION BLANK (CCB)

Login Number:L0605576 Run Date:05/31/2006 Sample ID:WG214325-20
Instrument ID:IRIS-ICP Run Time:14:13 Method:6010B
File ID:IR.053106.141300 Analyst:SLP Units:mg/L
Workgroup (AAB#):WG214125 Cal ID:IRIS-I - 31-MAY-06

Analytes	MDL	RDL	Concentration	Dilution	Qualifier
Aluminum	0.200	0.400	0.0273	1	U
Silver	0.00500	0.0100	0.000130	1	U
Arsenic	0.0100	0.0200	-0.00142	1	U
Barium	0.00200	0.0100	0.000120	1	U
Beryllium	0.000240	0.0100	-0.0000200	1	U
Calcium	0.100	0.200	0.0118	1	U
Cadmium	0.00100	0.00200	-0.000350	1	U
Cobalt	0.00240	0.0200	-0.0000300	1	U
Chromium	0.00240	0.0200	0.000110	1	U
Copper	0.0100	0.0200	0.000780	1	U
Iron	0.0200	0.0400	-0.000210	1	U
Potassium	0.500	1.00	-0.0405	1	U
Magnesium	0.240	0.500	-0.0115	1	U
Manganese	0.00200	0.0100	0.000480	1	U
Sodium	0.100	0.500	0.00905	1	U
Nickel	0.0100	0.0400	0.0000500	1	U
Lead	0.0100	0.100	-0.000970	1	U
Antimony	0.0100	0.200	0.000150	1	U
Selenium	0.0100	0.0200	-0.000940	1	U
Thallium	0.0200	0.500	-0.00254	1	U
Vanadium	0.00500	0.0100	-0.000560	1	U
Zinc	0.0100	0.0200	0.00371	1	U

U = Result is less than MDL
F = Result is between MDL and RL

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KEMRON Environmental Services

CONTINUING CALIBRATION BLANK (CCB)

Login Number:L0605576 Run Date:06/01/2006 Sample ID:WG214460-12
Instrument ID:IRIS-ICP Run Time:10:37 Method:6010B
File ID:IR.060106.103700 Analyst:SLP Units:mg/L
Workgroup (AAB#):WG214375 Cal ID:IRIS-I - 01-JUN-06

Analytes	MDL	RDL	Concentration	Dilution	Qualifier
Silver	0.00500	0.0100	-0.000360	1	U
Arsenic	0.0100	0.100	0.00104	1	U
Barium	0.00250	0.500	0.0000500	1	U
Cadmium	0.00250	0.0100	-0.000220	1	U
Chromium	0.00250	0.0200	-0.000120	1	U
Lead	0.0100	0.100	0.00136	1	U
Selenium	0.0500	0.0800	-0.000880	1	U

U = Result is less than MDL
F = Result is between MDL and RL

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KEMRON Environmental Services

CONTINUING CALIBRATION BLANK (CCB)

Login Number:L0605576 Run Date:06/01/2006 Sample ID:WG214460-18
Instrument ID:IRIS-ICP Run Time:14:13 Method:6010B
File ID:IR.060106.141300 Analyst:SLP Units:mg/L
Workgroup (AAB#):WG214375 Cal ID:IRIS-I - 01-JUN-06

Analytes	MDL	RDL	Concentration	Dilution	Qualifier
Silver	0.00500	0.0100	-0.00107	1	U
Arsenic	0.0100	0.100	0.00128	1	U
Barium	0.00250	0.500	-0.0000200	1	U
Cadmium	0.00250	0.0100	0.000170	1	U
Chromium	0.00250	0.0200	-0.0000900	1	U
Lead	0.0100	0.100	-0.000470	1	U
Selenium	0.0500	0.0800	0.000750	1	U

U = Result is less than MDL
F = Result is between MDL and RL

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Report generated 06/02/2006 10:13

KEMRON Environmental Services

CONTINUING CALIBRATION BLANK (CCB)

Login Number:L0605576 Run Date:06/01/2006 Sample ID:WG214460-20
Instrument ID:IRIS-ICP Run Time:15:32 Method:6010B
File ID:IR.060106.153200 Analyst:SLP Units:mg/L
Workgroup (AAB#):WG214375 Cal ID:IRIS-I - 01-JUN-06

Analytes	MDL	RDL	Concentration	Dilution	Qualifier
Silver	0.00500	0.0100	0.000410	1	U
Arsenic	0.0100	0.100	0.000510	1	U
Barium	0.00250	0.500	0.0000300	1	U
Cadmium	0.00250	0.0100	-0.000190	1	U
Chromium	0.00250	0.0200	-0.000120	1	U
Lead	0.0100	0.100	-0.00125	1	U
Selenium	0.0500	0.0800	-0.00194	1	U

U = Result is less than MDL
F = Result is between MDL and RL

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KEMRON Environmental Services

CONTINUING CALIBRATION BLANK (CCB)

Login Number:L0605576 Run Date:06/01/2006 Sample ID:WG214460-22
Instrument ID:IRIS-ICP Run Time:16:14 Method:6010B
File ID:IR.060106.161400 Analyst:SLP Units:mg/L
Workgroup (AAB#):WG214375 Cal ID:IRIS-I - 01-JUN-06

Analytes	MDL	RDL	Concentration	Dilution	Qualifier
Silver	0.00500	0.0100	-0.00208	1	U
Arsenic	0.0100	0.100	0.000350	1	U
Barium	0.00250	0.500	0.0000200	1	U
Cadmium	0.00250	0.0100	0.000130	1	U
Chromium	0.00250	0.0200	-0.000100	1	U
Lead	0.0100	0.100	-0.000660	1	U
Selenium	0.0500	0.0800	-0.00141	1	U

U = Result is less than MDL
F = Result is between MDL and RL

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KEMRON Environmental Services

CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L0605576 Run Date: 05/31/2006 Sample ID: WG214325-11
Instrument ID: IRIS-ICP Run Time: 09:23 Method: 6010B
File ID: IR.053106.092300 Analyst: SLP
Workgroup (AAB#): WG214125 Cal ID: IRIS-I - 31-MAY-06

Analyte		Expected	Found	%REC	LIMITS	UNITS	Q
Aluminum		10	10.1	101	90 - 110	mg/L	
Silver		.4	0.412	103	90 - 110	mg/L	
Arsenic		.4	0.409	102	90 - 110	mg/L	
Barium		1	0.996	99.6	90 - 110	mg/L	
Beryllium		.05	0.0512	102	90 - 110	mg/L	
Calcium		10	10.2	102	90 - 110	mg/L	
Cadmium		.05	0.0514	103	90 - 110	mg/L	
Cobalt		.2	0.204	102	90 - 110	mg/L	
Chromium		.5	0.499	99.7	90 - 110	mg/L	
Copper		.5	0.505	101	90 - 110	mg/L	
Iron		4	3.99	99.7	90 - 110	mg/L	
Potassium		50	50.5	101	90 - 110	mg/L	
Magnesium		10	10.3	103	90 - 110	mg/L	
Manganese		.5	0.505	101	90 - 110	mg/L	
Sodium		50	51.2	102	90 - 110	mg/L	
Nickel		.5	0.491	98.2	90 - 110	mg/L	
Lead		.5	0.493	98.6	90 - 110	mg/L	
Antimony		1.2	1.22	101	90 - 110	mg/L	
Selenium		.4	0.412	103	90 - 110	mg/L	
Thallium		.5	0.503	101	90 - 110	mg/L	
Vanadium		1	1.02	102	90 - 110	mg/L	
Zinc		1	1.01	101	90 - 110	mg/L	

* Exceeds LIMITS Criteria

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KEMRON Environmental Services

CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L0605576 Run Date: 05/31/2006 Sample ID: WG214325-13
Instrument ID: IRIS-ICP Run Time: 10:38 Method: 6010B
File ID: IR.053106.103800 Analyst: SLP
Workgroup (AAB#): WG214125 Cal ID: IRIS-I - 31-MAY-06

Analyte		Expected	Found	%REC	LIMITS	UNITS	Q
Aluminum		10	10.1	101	90 - 110	mg/L	
Silver		.4	0.407	102	90 - 110	mg/L	
Arsenic		.4	0.412	103	90 - 110	mg/L	
Barium		1	0.993	99.3	90 - 110	mg/L	
Beryllium		.05	0.0509	102	90 - 110	mg/L	
Calcium		10	10.1	101	90 - 110	mg/L	
Cadmium		.05	0.0514	103	90 - 110	mg/L	
Cobalt		.2	0.205	103	90 - 110	mg/L	
Chromium		.5	0.498	99.5	90 - 110	mg/L	
Copper		.5	0.510	102	90 - 110	mg/L	
Iron		4	4.02	100	90 - 110	mg/L	
Potassium		50	51.5	103	90 - 110	mg/L	
Magnesium		10	10.1	101	90 - 110	mg/L	
Manganese		.5	0.505	101	90 - 110	mg/L	
Sodium		50	52.4	105	90 - 110	mg/L	
Nickel		.5	0.492	98.4	90 - 110	mg/L	
Lead		.5	0.501	100	90 - 110	mg/L	
Antimony		1.2	1.23	102	90 - 110	mg/L	
Selenium		.4	0.411	103	90 - 110	mg/L	
Thallium		.5	0.504	101	90 - 110	mg/L	
Vanadium		1	1.02	102	90 - 110	mg/L	
Zinc		1	1.00	100	90 - 110	mg/L	

* Exceeds LIMITS Criteria

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KEMRON Environmental Services

CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L0605576 Run Date: 05/31/2006 Sample ID: WG214325-15
Instrument ID: IRIS-ICP Run Time: 11:39 Method: 6010B
File ID: IR.053106.113900 Analyst: SLP
Workgroup (AAB#): WG214125 Cal ID: IRIS-I - 31-MAY-06

Analyte		Expected	Found	%REC	LIMITS	UNITS	Q
Aluminum		10	10.2	102	90 - 110	mg/L	
Silver		.4	0.409	102	90 - 110	mg/L	
Arsenic		.4	0.413	103	90 - 110	mg/L	
Barium		1	0.998	99.8	90 - 110	mg/L	
Beryllium		.05	0.0510	102	90 - 110	mg/L	
Calcium		10	10.2	102	90 - 110	mg/L	
Cadmium		.05	0.0518	104	90 - 110	mg/L	
Cobalt		.2	0.207	103	90 - 110	mg/L	
Chromium		.5	0.500	100	90 - 110	mg/L	
Copper		.5	0.509	102	90 - 110	mg/L	
Iron		4	4.03	101	90 - 110	mg/L	
Potassium		50	51.9	104	90 - 110	mg/L	
Magnesium		10	10.2	102	90 - 110	mg/L	
Manganese		.5	0.508	102	90 - 110	mg/L	
Sodium		50	53.0	106	90 - 110	mg/L	
Nickel		.5	0.493	98.5	90 - 110	mg/L	
Lead		.5	0.502	100	90 - 110	mg/L	
Antimony		1.2	1.23	103	90 - 110	mg/L	
Selenium		.4	0.416	104	90 - 110	mg/L	
Thallium		.5	0.502	100	90 - 110	mg/L	
Vanadium		1	1.03	103	90 - 110	mg/L	
Zinc		1	1.01	101	90 - 110	mg/L	

* Exceeds LIMITS Criteria

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KEMRON Environmental Services

CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L0605576 Run Date: 05/31/2006 Sample ID: WG214325-17
Instrument ID: IRIS-ICP Run Time: 13:14 Method: 6010B
File ID: IR.053106.131400 Analyst: SLP
Workgroup (AAB#): WG214125 Cal ID: IRIS-I - 31-MAY-06

Analyte		Expected	Found	%REC	LIMITS	UNITS	Q
Aluminum		10	10.1	101	90 - 110	mg/L	
Silver		.4	0.408	102	90 - 110	mg/L	
Arsenic		.4	0.412	103	90 - 110	mg/L	
Barium		1	0.990	99.0	90 - 110	mg/L	
Beryllium		.05	0.0507	101	90 - 110	mg/L	
Calcium		10	10.1	101	90 - 110	mg/L	
Cadmium		.05	0.0518	104	90 - 110	mg/L	
Cobalt		.2	0.206	103	90 - 110	mg/L	
Chromium		.5	0.499	99.7	90 - 110	mg/L	
Copper		.5	0.506	101	90 - 110	mg/L	
Iron		4	4.01	100	90 - 110	mg/L	
Potassium		50	51.0	102	90 - 110	mg/L	
Magnesium		10	10.2	102	90 - 110	mg/L	
Manganese		.5	0.506	101	90 - 110	mg/L	
Sodium		50	51.8	104	90 - 110	mg/L	
Nickel		.5	0.490	98.1	90 - 110	mg/L	
Lead		.5	0.497	99.5	90 - 110	mg/L	
Antimony		1.2	1.22	102	90 - 110	mg/L	
Selenium		.4	0.411	103	90 - 110	mg/L	
Thallium		.5	0.501	100	90 - 110	mg/L	
Vanadium		1	1.03	103	90 - 110	mg/L	
Zinc		1	1.00	100	90 - 110	mg/L	

* Exceeds LIMITS Criteria

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KEMRON Environmental Services

CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L0605576 Run Date: 05/31/2006 Sample ID: WG214325-19
Instrument ID: IRIS-ICP Run Time: 14:07 Method: 6010B
File ID: IR.053106.140700 Analyst: SLP
Workgroup (AAB#): WG214125 Cal ID: IRIS-I - 31-MAY-06

Analyte		Expected	Found	%REC	LIMITS	UNITS	Q
Aluminum		10	10.1	101	90 - 110	mg/L	
Silver		.4	0.412	103	90 - 110	mg/L	
Arsenic		.4	0.413	103	90 - 110	mg/L	
Barium		1	1.00	100	90 - 110	mg/L	
Beryllium		.05	0.0513	103	90 - 110	mg/L	
Calcium		10	10.2	102	90 - 110	mg/L	
Cadmium		.05	0.0525	105	90 - 110	mg/L	
Cobalt		.2	0.206	103	90 - 110	mg/L	
Chromium		.5	0.503	101	90 - 110	mg/L	
Copper		.5	0.507	101	90 - 110	mg/L	
Iron		4	4.00	100	90 - 110	mg/L	
Potassium		50	51.7	103	90 - 110	mg/L	
Magnesium		10	10.3	103	90 - 110	mg/L	
Manganese		.5	0.509	102	90 - 110	mg/L	
Sodium		50	52.5	105	90 - 110	mg/L	
Nickel		.5	0.493	98.6	90 - 110	mg/L	
Lead		.5	0.497	99.5	90 - 110	mg/L	
Antimony		1.2	1.23	102	90 - 110	mg/L	
Selenium		.4	0.412	103	90 - 110	mg/L	
Thallium		.5	0.507	101	90 - 110	mg/L	
Vanadium		1	1.03	103	90 - 110	mg/L	
Zinc		1	1.01	101	90 - 110	mg/L	

* Exceeds LIMITS Criteria

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KEMRON Environmental Services

CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L0605576 Run Date: 06/01/2006 Sample ID: WG214460-11
Instrument ID: IRIS-ICP Run Time: 10:31 Method: 6010B
File ID: IR.060106.103100 Analyst: SLP
Workgroup (AAB#): WG214375 Cal ID: IRIS-I - 01-JUN-06

Analyte		Expected	Found	%REC	LIMITS	UNITS	Q
Silver		.4	0.410	102	90 - 110	mg/L	
Arsenic		.4	0.412	103	90 - 110	mg/L	
Barium		1	0.995	99.5	90 - 110	mg/L	
Cadmium		.05	0.0520	104	90 - 110	mg/L	
Chromium		.5	0.503	101	90 - 110	mg/L	
Lead		.5	0.496	99.3	90 - 110	mg/L	
Selenium		.4	0.407	102	90 - 110	mg/L	

* Exceeds LIMITS Criteria

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KEMRON Environmental Services

CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L0605576 Run Date: 06/01/2006 Sample ID: WG214460-17
Instrument ID: IRIS-ICP Run Time: 14:07 Method: 6010B
File ID: IR.060106.140700 Analyst: SLP
Workgroup (AAB#): WG214375 Cal ID: IRIS-I - 01-JUN-06

Analyte		Expected	Found	%REC	LIMITS	UNITS	Q
Silver		.4	0.411	103	90 - 110	mg/L	
Arsenic		.4	0.407	102	90 - 110	mg/L	
Barium		1	0.998	99.8	90 - 110	mg/L	
Cadmium		.05	0.0519	104	90 - 110	mg/L	
Chromium		.5	0.501	100	90 - 110	mg/L	
Lead		.5	0.492	98.3	90 - 110	mg/L	
Selenium		.4	0.403	101	90 - 110	mg/L	

* Exceeds LIMITS Criteria

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KEMRON Environmental Services

CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L0605576 Run Date: 06/01/2006 Sample ID: WG214460-19
Instrument ID: IRIS-ICP Run Time: 15:26 Method: 6010B
File ID: IR.060106.152600 Analyst: SLP
Workgroup (AAB#): WG214375 Cal ID: IRIS-I - 01-JUN-06

Analyte		Expected	Found	%REC	LIMITS	UNITS	Q
Silver		.4	0.404	101	90 - 110	mg/L	
Arsenic		.4	0.411	103	90 - 110	mg/L	
Barium		1	0.991	99.1	90 - 110	mg/L	
Cadmium		.05	0.0519	104	90 - 110	mg/L	
Chromium		.5	0.500	100	90 - 110	mg/L	
Lead		.5	0.494	98.8	90 - 110	mg/L	
Selenium		.4	0.407	102	90 - 110	mg/L	

* Exceeds LIMITS Criteria

KEMRON FORMS - Modified 04/19/2006
Version 1.3 PDF File ID: 487125
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KEMRON Environmental Services

CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L0605576 Run Date: 06/01/2006 Sample ID: WG214460-21
Instrument ID: IRIS-ICP Run Time: 16:08 Method: 6010B
File ID: IR.060106.160800 Analyst: SLP
Workgroup (AAB#): WG214375 Cal ID: IRIS-I - 01-JUN-06

Analyte		Expected	Found	%REC	LIMITS	UNITS	Q
Silver		.4	0.410	103	90 - 110	mg/L	
Arsenic		.4	0.412	103	90 - 110	mg/L	
Barium		1	0.999	99.9	90 - 110	mg/L	
Cadmium		.05	0.0523	105	90 - 110	mg/L	
Chromium		.5	0.502	100	90 - 110	mg/L	
Lead		.5	0.498	99.7	90 - 110	mg/L	
Selenium		.4	0.408	102	90 - 110	mg/L	

* Exceeds LIMITS Criteria

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KEMRON ENVIRONMENTAL SERVICES
INTERFERENCE CHECK SAMPLES

Login number: L0605576 **Workgroup (AAB#):** WG214125
Instrument ID: IRIS-ICP **Method:** 6010B
Sol. A : WG214325-09 **File ID:** IR.053106.091100 **Units:** mg/L
Sol. AB : WG214325-10 **File ID:** IR.053106.091700

	Sol. A			Sol. AB			
ANALYTE	True	Found	%Recovery	True	Found	%Recovery	Q
Aluminum	250	250	100	250	250	100	
Antimony	NS	0.0138	NS	0.500	0.507	101	
Arsenic	NS	-0.00502	NS	0.250	0.242	96.8	
Barium	NS	-0.0000100	NS	0.250	0.244	97.6	
Beryllium	NS	-0.000150	NS	0.250	0.249	99.6	
Cadmium	NS	0.0000400	NS	0.500	0.459	91.8	
Calcium	250	240	96.0	250	239	95.6	
Chromium	NS	0.000810	NS	0.250	0.228	91.2	
Cobalt	NS	0.00205	NS	0.250	0.235	94.0	
Copper	NS	0.00131	NS	0.250	0.252	101	
Iron	100	91.5	91.5	100	96.3	96.3	
Lead	NS	0.00902	NS	0.500	0.463	92.6	
Magnesium	250	240	96.0	250	239	95.6	
Manganese	NS	-0.00232	NS	0.250	0.216	86.4	
Nickel	NS	-0.00522	NS	0.500	0.445	89.0	
Potassium	NS	0.0578	NS	5.00	5.07	101	
Selenium	NS	0.00866	NS	0.250	0.248	99.2	
Silver	NS	0.000180	NS	0.500	0.501	100	
Sodium	NS	0.0267	NS	5.00	5.17	103	
Thallium	NS	-0.00855	NS	0.500	0.431	86.2	
Vanadium	NS	-0.000100	NS	0.250	0.246	98.4	
Zinc	NS	0.00124	NS	0.500	0.482	96.4	

NS = Not spiked
*** = Recovery of spiked element is outside acceptance limit of 80% - 120% of true value.**
 # = Result for unspiked element is outside the acceptance limits of (+/-) the project reporting limit (RL).

KEMRON ENVIRONMENTAL SERVICES
INTERFERENCE CHECK SAMPLES

Login number: L0605576 **Workgroup (AAB#):** WG214375
Instrument ID: IRIS-ICP **Method:** 6010B
Sol. A : WG214460-09 **File ID:** IR.060106.101900 **Units:** mg/L
Sol. AB : WG214460-10 **File ID:** IR.060106.102500

	Sol. A			Sol. AB			
ANALYTE	True	Found	%Recovery	True	Found	%Recovery	Q
Arsenic	NS	-0.00391	NS	0.250	0.241	96.4	
Barium	NS	0.000250	NS	0.250	0.240	96.0	
Cadmium	NS	0.000490	NS	0.500	0.461	92.2	
Chromium	NS	0.00138	NS	0.250	0.227	90.8	
Lead	NS	0.000340	NS	0.500	0.451	90.2	
Selenium	NS	0.0107	NS	0.250	0.257	103	
Silver	NS	0.00133	NS	0.500	0.495	99.0	

NS = Not spiked
*** = Recovery of spiked element is outside acceptance limit of 80% - 120% of true value.**
 # = Result for unspiked element is outside the acceptance limits of (+/-) the project reporting limit (RL).

KEMRON Environmental Services

INTERELEMENT CORRECTION FACTORS (ANNUALLY)

Login Number: L0605576 **Date:** 05/03/2005
Insturment ID: IRIS-ICP **Method:** 6010B

Analyte	Wave Length	AL	AS	BA	BE	CA
ALUMINUM	308.20	0	0	0	0	0
ANTIMONY	206.80	0.000100	-0.000185	0	0	0
ARSENIC	189.00	0.0000200	0	0	0	0
BARIUM	455.40	0	0	0	0	0
BERYLLIUM	313.00	0	0	0	0	0
BORON	249.70	0	0	0	0	0
CADMIUM	228.80	0	0.00365	-0.000100	0	0
CALCIUM	373.70	0	0	0	0	0
CHROMIUM	267.70	0	0	0	0	0
COBALT	228.60	0	0	0	0	0
COPPER	324.70	0	0	0	0	0
IRON	271.40	0	0	0	0	0
LEAD	220.30	-0.000250	0	0	0	0
LITHIUM	670.80	0	0	0	0	-0.0000500
MAGNESIUM	277.90	0	-0.0936	0	0	0
MANGANESE	257.60	0	0	0	0	0
MOLYBDENUM	202.03	0	0	0	0	0
NICKEL	231.60	0	0	0	0.00830	0
POTASSIUM	766.40	0	0	-0.0899	0	0
SELENIUM	196.00	0	0	0	0	0
SILICON	251.60	0	0	0	0	0
SILVER	328.00	0	0	0	0	0
SODIUM	589.50	0	0	0	0	0
STRONTIUM	215.20	0	0	0	0	0
THALLIUM	190.80	0	0	0	0	0
TIN	189.90	0	0	0	0	0
TITANIUM	334.90	0	0	0	0	-0.0000300
VANADIUM	310.20	-0.0000400	0	0	0.0100	0
ZINC	213.80	0	0	0	0	0

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Report generated 06/02/2006 10:12

KEMRON Environmental Services

INTERELEMENT CORRECTION FACTORS (ANNUALLY)

Login Number: L0605576 **Date:** 05/03/2005
Insturment ID: IRIS-ICP **Method:** 6010B

Analyte	Wave Length	CO	CR	CU	FE	LI
ALUMINUM	308.20	-0.00700	0	0	0	0
ANTIMONY	206.80	0	0.0306	0	0.0000790	0
ARSENIC	189.00	0	0.000280	0	-0.0000300	0
BARIUM	455.40	0	0	0	0	0
BERYLLIUM	313.00	0	0	0	0	0
BORON	249.70	0	0	0	-0.000470	0
CADMIUM	228.80	-0.00300	0	0	-0.00000600	0
CALCIUM	373.70	0	0	0	0.0100	0
CHROMIUM	267.70	0	0	0	0.0000180	0
COBALT	228.60	0	0.0000450	0	0.0000400	0
COPPER	324.70	0	-0.000560	0	0.0000100	0
IRON	271.40	0.100	0	0	0	0
LEAD	220.30	0.000300	-0.000780	0	0.0000600	0
LITHIUM	670.80	0	0	0	0	0
MAGNESIUM	277.90	0	-0.0170	0	0	0
MANGANESE	257.60	0	0	0	-0.0000370	0
MOLYBDENUM	202.03	0	0	0	0	0
NICKEL	231.60	0.000450	0	0	-0.0000180	0
POTASSIUM	766.40	0	0	0	0	0
SELENIUM	196.00	0	0	0	-0.000300	0
SILICON	251.60	0	0	0	0	0
SILVER	328.00	0	0.0000520	0	-0.0000480	0
SODIUM	589.50	0	0	0	0	0
STRONTIUM	215.20	-0.000500	0	0	-0.000600	0
THALLIUM	190.80	0.00360	0.000190	0	0	0
TIN	189.90	0	0	0	0	0
TITANIUM	334.90	0	0.000300	0	0	-0.00250
VANADIUM	310.20	0	0	0	-0.0000100	0
ZINC	213.80	-0.000400	0	0.000588	0.0000800	0

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Report generated 06/02/2006 10:12

KEMRON Environmental Services

INTERELEMENT CORRECTION FACTORS (ANNUALLY)

Login Number: L0605576 **Date:** 05/03/2005
Insturment ID: IRIS-ICP **Method:** 6010B

Analyte	Wave Length	MG	MN	MO	NI	SB
ALUMINUM	308.20	0	0.00180	0.0320	0	0
ANTIMONY	206.80	0	0	-0.00278	-0.00200	0
ARSENIC	189.00	0	0	0.00108	0	-0.00170
BARIUM	455.40	0	0	0	0	0
BERYLLIUM	313.00	0	0	-0.0000500	0	0
BORON	249.70	0	0	0	0	0
CADMIUM	228.80	0	0	0	-0.000170	0
CALCIUM	373.70	0	0.00160	0	0.000650	0
CHROMIUM	267.70	0	0.000510	0	0	0
COBALT	228.60	0	0	-0.00100	0.000160	0
COPPER	324.70	0	0	0	0	0
IRON	271.40	0.0000400	-0.000500	-0.00750	0	0
LEAD	220.30	0	0	-0.00120	0.000489	0
LITHIUM	670.80	0	0	0	0	0
MAGNESIUM	277.90	0	0.00132	-0.228	0	0
MANGANESE	257.60	0	0	0	0	0
MOLYBDENUM	202.03	0	0	0	0	0
NICKEL	231.60	0	0	0	0	0
POTASSIUM	766.40	0	0	0	0	0
SELENIUM	196.00	0	0.000430	0.00800	0	0
SILICON	251.60	0	0	0.00800	0	0
SILVER	328.00	0	0.0000800	-0.000290	0	0
SODIUM	589.50	0	0	0	0	0
STRONTIUM	215.20	0	0	-0.000220	0	0
THALLIUM	190.80	0	0.00120	-0.00309	0	-0.000500
TIN	189.90	0	0	0	0	0
TITANIUM	334.90	0	0	0	0	0
VANADIUM	310.20	-0.00000400	0	0	0	0
ZINC	213.80	0.0000370	0.000279	0	0.00620	0

KEMRON Environmental Services

INTERELEMENT CORRECTION FACTORS (ANNUALLY)

Login Number: L0605576 **Date:** 05/03/2005
Insturment ID: IRIS-ICP **Method:** 6010B

Analyte	Wave Length	SN	TI	V	ZN
ALUMINUM	308.20	0	-0.00200	-0.0320	0
ANTIMONY	206.80	-0.0168	0.000620	-0.00159	-0.00170
ARSENIC	189.00	0	0	0	0
BARIUM	455.40	0	0	0	0
BERYLLIUM	313.00	0	0	0.000840	0
BORON	249.70	0	0	0	0
CADMIUM	228.80	0	0	0.0000360	0
CALCIUM	373.70	0	0	0	0
CHROMIUM	267.70	0	0	-0.000150	0
COBALT	228.60	0	0.00120	0	-0.00170
COPPER	324.70	0	-0.00120	-0.00325	0
IRON	271.40	0	0	-0.0829	0
LEAD	220.30	0	0	0	0
LITHIUM	670.80	0	0	0	0
MAGNESIUM	277.90	0	0	-0.0106	0
MANGANESE	257.60	0	0	-0.0000750	0
MOLYBDENUM	202.03	0	0	-0.000247	0.00200
NICKEL	231.60	0	0	0	0
POTASSIUM	766.40	0	0	0	0
SELENIUM	196.00	0	0	0	0.0190
SILICON	251.60	0	0.00665	0	0
SILVER	328.00	0	0.0118	-0.0234	0
SODIUM	589.50	0	0	0	0
STRONTIUM	215.20	0	0	0	0.000700
THALLIUM	190.80	0	-0.00190	-0.0244	0
TIN	189.90	0	0	0	0
TITANIUM	334.90	0		0	0
VANADIUM	310.20	0	0	0	0
ZINC	213.80	0	0	0	0

Login Number: L0605576 **Date:**
Insturment ID: IRIS-ICP **Method:** 6010B

Analyte	Wave Length	

KEMRON FORMS - Modified 02/14/2006
Version 1.5 PDF File ID: 487120
Report generated 06/02/2006 10:12

KEMRON Environmental Services

LINEAR RANGE (QUARTERLY)

Login Number: L0605576 **Date:** 03/20/2006

Insturment ID: IRIS-ICP **Method:** 6010B

Analyte	Integration Time (Sec.)	Concentration (mg/L)
Aluminum	10.00	800.0
Antimony	55.00	50.0
Arsenic	55.00	100.0
Barium	10.00	20.0
Beryllium	10.00	4.0
Boron	55.00	100.0
Cadmium	55.00	30.0
Calcium	10.00	1000.0
Chromium	55.00	50.0
Cobalt	55.00	100.0
Copper	10.00	50.0
Iron	55.00	900.0
Lead	55.00	200.0
Lithium	10.00	10.0
Magnesium	55.00	1000.0
Manganese	55.00	20.0
Molybdenum	55.00	30.0
Nickel	55.00	100.0
Potassium	10.00	200.0
Selenium	55.00	20.0
Silicon	55.00	50.0
Silver	10.00	10.0
Sodium	10.00	150.0
Strontium	55.00	30.0
Thallium	55.00	20.0
Tin	55.00	30.0
Titanium	10.00	25.0
Vanadium	10.00	100.0
Zinc	55.00	40.0

Comments:

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1.3.2 Metals CVAA Data (Mercury)

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KEMRON ENVIRONMENTAL SERVICES
METALS

KEMRON Login No: L0605576

METHOD

Preparation: SW-846 7471A/7470A

Analysis: SW-846 7471A/7470A

HOLDING TIMES

Sample Preparation: All holding times were met.

Sample Analysis: All holding times were met.

PREPARATION

Sample preparation proceeded normally.

CALIBRATION

Initial Calibrations: All acceptance criteria were met.

Alternate Source Standards: All acceptance criteria were met.

Continuing Calibration: All acceptance criteria were met.

BATCH QA/QC

Method Blank: All acceptance criteria were met.

Laboratory Control Sample: All acceptance criteria were met.

Serial Dilution/Post Digestion Spike: WG214106(7471A) - All acceptance criteria were met. WG214334(7470A) - All acceptance criteria were met.

SAMPLES

WG214106(7471A) - Mercury for client sample 03 exceeded the linear range of the instrument on initial analysis. The sample was reanalyzed at a dilution.

I certify that this data package is in compliance with the terms and conditions agreed to by the client and KEMRON Environmental Services, both technically and for completeness, except for the conditions noted above. Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or designated person, as verified by the following signature.

Analyst: CRC

Approved: 05-JUN-06

LABORATORY REPORT

L0605576

06/12/06 12:21

Submitted By

KEMRON Environmental Services
156 Starlite Drive
Marietta , OH 45750
(740) 373 - 4071

For

Account Name: CH2MHILL, Inc
7600 Tidwell Road
Suite 400
San Antonio, TX 77040
Attention: John Ynfante

Account Number: 2736
Work ID: STATE MARINE
Invoice Number: 580608
P.O. Number: 915193

Sample Analysis Summary

Client ID	Lab ID	Method	Dilution	Date Received
IWSB01052406	L0605576-01	7470A	1	25-MAY-06
SM142SB01052406	L0605576-02	7471A	1	25-MAY-06
SM142SB02052406	L0605576-03	7471A	2	25-MAY-06
SM141SB03052406	L0605576-04	7471A	1	25-MAY-06
SM141FD03052406	L0605576-05	7471A	1	25-MAY-06
SM141SB02052406	L0605576-06	7471A	1	25-MAY-06
SM141SB01052406	L0605576-07	7471A	1	25-MAY-06

Report Number: **L0605576**
Report Date : **June 12, 2006**

Sample Number: **L0605576-01**
Client ID: **IWSB01052406**
Matrix: **Leachate**
Workgroup Number: **WG214334**
Collect Date: **05/24/2006 13:50**

PrePrep Method: **1311**
Prep Method: **METHOD**
Analytical Method: **7470A**
Analyst: **CRC**
Dilution: **1**
Units: **mg/L**

Instrument: **HYDRA**
Prep Date: **05/31/2006 11:40**
Cal Date: **05/31/2006 15:38**
Run Date: **05/31/2006 17:03**
File ID: **HY.053106.170306**

Analyte	CAS.Number	Result	Qual	PQL	SQL	EPA HW#	Reg. Limit
Mercury, TCLP	7439-97-6		U	.005	.001	D009	0.2

U Not detected at or above the reporting limit

Report Number: **L0605576**
Report Date : **June 12, 2006**

Sample Number: **L0605576-02**
Client ID: **SM142SB01052406**
Matrix: **Soil**
Workgroup Number: **WG214106**
Collect Date: **05/24/2006 09:20**

PrePrep Method: **NONE**
Prep Method: **METHOD**
Analytical Method: **7471A**
Analyst: **CRC**
Dilution: **1**
Units: **mg/kg**

Instrument: **HYDRA**
Prep Date: **05/25/2006 13:55**
Cal Date: **05/26/2006 13:04**
Run Date: **05/26/2006 13:22**
File ID: **HY.052606.132233**
Percent Solid: **88.5**

Analyte	CAS. Number	Result	Qual	PQL	SQL
Mercury, Total	7439-97-6	0.0678	J	0.273	0.0109

J The analyte was positively identified, but the quantitation was below the RL

Report Number: **L0605576**
Report Date : **June 12, 2006**

Sample Number: **L0605576-03**
Client ID: **SM142SB02052406**
Matrix: **Soil**
Workgroup Number: **WG214106**
Collect Date: **05/24/2006 09:45**

PrePrep Method: **NONE**
Prep Method: **METHOD**
Analytical Method: **7471A**
Analyst: **CRC**
Dilution: **2**
Units: **mg/kg**

Instrument: **HYDRA**
Prep Date: **05/25/2006 13:55**
Cal Date: **05/26/2006 13:08**
Run Date: **05/26/2006 13:59**
File ID: **HY.052606.135947**
Percent Solid: **100**

Analyte	CAS. Number	Result	Qual	PQL	SQL
Mercury, Total	7439-97-6	1.04		0.476	0.0190

Report Number: **L0605576**
Report Date : **June 12, 2006**

Sample Number:	L0605576-04	PrePrep Method:	NONE	Instrument:	HYDRA
Client ID:	SM141SB03052406	Prep Method:	METHOD	Prep Date:	05/25/2006 13:55
Matrix:	Soil	Analytical Method:	7471A	Cal Date:	05/26/2006 13:04
Workgroup Number:	WG214106	Analyst:	CRC	Run Date:	05/26/2006 13:27
Collect Date:	05/24/2006 08:25	Dilution:	1	File ID:	HY.052606.132751
		Units:	mg/kg	Percent Solid:	57.4

Analyte	CAS. Number	Result	Qual	PQL	SQL
Mercury, Total	7439-97-6	0.0303	J	0.436	0.0174

J The analyte was positively identified, but the quantitation was below the RL

Report Number: **L0605576**
Report Date : **June 12, 2006**

Sample Number: **L0605576-05**
Client ID: **SM141FD03052406**
Matrix: **Soil**
Workgroup Number: **WG214106**
Collect Date: **05/24/2006 08:25**

PrePrep Method: **NONE**
Prep Method: **METHOD**
Analytical Method: **7471A**
Analyst: **CRC**
Dilution: **1**
Units: **mg/kg**

Instrument: **HYDRA**
Prep Date: **05/25/2006 13:55**
Cal Date: **05/26/2006 13:04**
Run Date: **05/26/2006 13:29**
File ID: **HY.052606.132931**
Percent Solid: **73.5**

Analyte	CAS. Number	Result	Qual	PQL	SQL
Mercury, Total	7439-97-6	0.0398	J	0.324	0.0130

J The analyte was positively identified, but the quantitation was below the RL

Report Number: **L0605576**
Report Date : **June 12, 2006**

Sample Number: **L0605576-06**
Client ID: **SM141SB02052406**
Matrix: **Soil**
Workgroup Number: **WG214106**
Collect Date: **05/24/2006 08:15**

PrePrep Method: **NONE**
Prep Method: **METHOD**
Analytical Method: **7471A**
Analyst: **CRC**
Dilution: **1**
Units: **mg/kg**

Instrument: **HYDRA**
Prep Date: **05/25/2006 13:55**
Cal Date: **05/26/2006 13:04**
Run Date: **05/26/2006 13:31**
File ID: **HY.052606.133108**
Percent Solid: **78.0**

Analyte	CAS. Number	Result	Qual	PQL	SQL
Mercury, Total	7439-97-6	0.207	J	0.321	0.0128

J The analyte was positively identified, but the quantitation was below the RL

Report Number: **L0605576**
Report Date : **June 12, 2006**

Sample Number: **L0605576-07**
Client ID: **SM141SB01052406**
Matrix: **Soil**
Workgroup Number: **WG214106**
Collect Date: **05/24/2006 07:50**

PrePrep Method: **NONE**
Prep Method: **METHOD**
Analytical Method: **7471A**
Analyst: **CRC**
Dilution: **1**
Units: **mg/kg**

Instrument: **HYDRA**
Prep Date: **05/25/2006 13:55**
Cal Date: **05/26/2006 13:04**
Run Date: **05/26/2006 13:32**
File ID: **HY.052606.133256**
Percent Solid: **80.1**

Analyte	CAS. Number	Result	Qual	PQL	SQL
Mercury, Total	7439-97-6	0.0572	J	0.307	0.0123

J The analyte was positively identified, but the quantitation was below the RL

1.3.2.1 QC Summary

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Run Log ID:**10565**

KEMRON Environmental Services

Instrument Run Log

Instrument: HYDRA Dataset: 052606B.PRN
Analyst1: CRC Analyst2: N/A
Method: 7471A SOP: 405 Rev: 7

Calibration Std: STD12807 ICV/CCV Std: STD12808 Post Spike: STD12807
ICSA: N/A ICSAB: N/A

Workgroups: 214106

Comments:

Seq.	File ID	Sample	ID	Prep	Dil	Reference	Date/Time
1	HY.052606.125909	WG214124-01	Calibration Point		1		05/26/06 12:59
2	HY.052606.130059	WG214124-02	Calibration Point		1		05/26/06 13:00
3	HY.052606.130236	WG214124-03	Calibration Point		1		05/26/06 13:02
4	HY.052606.130413	WG214124-04	Calibration Point		1		05/26/06 13:04
5	HY.052606.130634	WG214124-05	Calibration Point		1		05/26/06 13:06
6	HY.052606.130815	WG214124-06	Calibration Point		1		05/26/06 13:08
7	HY.052606.131018	WG214124-07	Initial Calibration Verification		1		05/26/06 13:10
8	HY.052606.131252	WG214124-08	Initial Calib Blank		1		05/26/06 13:12
9	HY.052606.131432	WG214124-09	CCV		1		05/26/06 13:14
10	HY.052606.131614	WG214124-10	CCB		1		05/26/06 13:16
11	HY.052606.131822	WG214041-02	Method/Prep Blank	.6/40	1		05/26/06 13:18
12	HY.052606.132032	WG214041-03	Laboratory Control S	.6/40	1		05/26/06 13:20
13	HY.052606.132233	L0605576-02	SM142SB01052406	.62/40	1		05/26/06 13:22
14	HY.052606.132414	WG214106-01	Post Digestion Spike		1	L0605576-02	05/26/06 13:24
15	HY.052606.132611	L0605576-03	SM142SB02052406		1		05/26/06 13:26
16	HY.052606.132751	L0605576-04	SM141SB03052406	.6/40	1		05/26/06 13:27
17	HY.052606.132931	L0605576-05	SM141FD03052406	.63/40	1		05/26/06 13:29
18	HY.052606.133108	L0605576-06	SM141SB02052406	.6/40	1		05/26/06 13:31
19	HY.052606.133256	L0605576-07	SM141SB01052406	.61/40	1		05/26/06 13:32
20	HY.052606.133437	L0605515-01	TANK BOTTOM SOLIDS	.6/40	1		05/26/06 13:34
21	HY.052606.133715	WG214124-11	CCV		1		05/26/06 13:37
22	HY.052606.133906	WG214124-12	CCB		1		05/26/06 13:39
23	HY.052606.134044	WG214106-02	Post Digestion Spike		1	L0605515-01	05/26/06 13:40
24	HY.052606.134227	L0605584-01	SB-1A		1		05/26/06 13:42
25	HY.052606.134457	WG214041-04	Matrix Spike	.6/40	1		05/26/06 13:44
26	HY.052606.134633	WG214041-05	Matrix Spike Duplica	.6/40	1		05/26/06 13:46
27	HY.052606.134810	L0605584-02	SB-1B	.64/40	1		05/26/06 13:48
28	HY.052606.135018	WG214106-03	Post Digestion Spike		1	L0605584-02	05/26/06 13:50
29	HY.052606.135215	L0605584-04	SB-2A	.66/40	1		05/26/06 13:52
30	HY.052606.135403	L0605584-05	SB-2B	.6/40	1		05/26/06 13:54
31	HY.052606.135540	WG214124-13	CCV		1		05/26/06 13:55
32	HY.052606.135739	WG214124-14	CCB		1		05/26/06 13:57
33	HY.052606.135947	L0605576-03	SM142SB02052406	.63/40	2		05/26/06 13:59
34	HY.052606.140127	WG214124-15	CCV		1		05/26/06 14:01
35	HY.052606.140305	WG214124-16	CCB		1		05/26/06 14:03

Comments

Approved: May 26, 2006

Run Log ID:**10565**

KEMRON Environmental Services

Instrument Run Log

Instrument: HYDRA Dataset: 052606B.PRN

Analyst1: CRC Analyst2: N/A

Method: 7471A SOP: 405 Rev: 7

Calibration Std: STD12807 ICV/CCV Std: STD12808 Post Spike: STD12807

ICSA: N/A ICSAB: N/A

Workgroups: 214106

Comments:

Seq.	File ID	Sample	ID	Prep	Dil	Reference	Date/Time

Seq.	Rerun	Dil.	Reason	Analytes
15			OLR - Reanalyzed at a 2x dilution.	

Page: 2 of 2 Approved: May 26, 2006

Run Log ID:**10600**

KEMRON Environmental Services

Instrument Run Log

Instrument: HYDRA Dataset: 053106C.PRN
Analyst1: CRC Analyst2: N/A
Method: 7470A SOP: 404 Rev: 9

Calibration Std: STD12878 ICV/CCV Std: STD12872 Post Spike: STD12878
ICSA: N/A ICSAB: N/A

Workgroups: 214332,214334

Comments:

Seq.	File ID	Sample	ID	Prep	Dil	Reference	Date/Time
1	HY.053106.152957	WG214384-01	Calibration Point		1		05/31/06 15:29
2	HY.053106.153137	WG214384-02	Calibration Point		1		05/31/06 15:31
3	HY.053106.153335	WG214384-03	Calibration Point		1		05/31/06 15:33
4	HY.053106.153528	WG214384-04	Calibration Point		1		05/31/06 15:35
5	HY.053106.153705	WG214384-05	Calibration Point		1		05/31/06 15:37
6	HY.053106.153855	WG214384-06	Calibration Point		1		05/31/06 15:38
7	HY.053106.154107	WG214384-07	Initial Calibration Verification		1		05/31/06 15:41
8	HY.053106.154243	WG214384-08	Initial Calib Blank		1		05/31/06 15:42
9	HY.053106.154421	WG214384-09	CCV		1		05/31/06 15:44
10	HY.053106.154609	WG214384-10	CCB		1		05/31/06 15:46
11	HY.053106.154752	WG214275-02	Method/Prep Blank	40/40	1		05/31/06 15:47
12	HY.053106.154949	WG214275-03	Laboratory Control S	40/40	1		05/31/06 15:49
13	HY.053106.155136	L0605563-04	710MW02		1		05/31/06 15:51
14	HY.053106.155316	WG214275-04	Matrix Spike	36/40	1	L0605563-06	05/31/06 15:53
15	HY.053106.155454	WG214275-05	Matrix Spike Duplica	36/40	1	L0605563-08	05/31/06 15:54
16	HY.053106.155703	WG214275-06	Duplicate	40/40	1	L0605563-09	05/31/06 15:57
17	HY.053106.155845	WG214332-01	Post Digestion Spike		1	L0605563-04	05/31/06 15:58
18	HY.053106.160024	L0605616-01	RVS-MW15	40/40	1		05/31/06 16:00
19	HY.053106.160203	L0605616-02	RVS-DUP1	40/40	1		05/31/06 16:02
20	HY.053106.160352	L0605616-03	RVS-MW01	40/40	1		05/31/06 16:03
21	HY.053106.160530	WG214384-11	CCV		1		05/31/06 16:05
22	HY.053106.160738	WG214384-12	CCB		1		05/31/06 16:07
23	HY.053106.160918	L0605616-05	RVS-MW13		1		05/31/06 16:09
24	HY.053106.161127	WG214275-08	Matrix Spike	36/40	1	L0605616-06	05/31/06 16:11
25	HY.053106.161345	WG214275-09	Matrix Spike Duplica	36/40	1	L0605616-07	05/31/06 16:13
26	HY.053106.161525	L0605622-02	W-24	40/40	1		05/31/06 16:15
27	HY.053106.161701	L0605622-04	W-35WB	40/40	1		05/31/06 16:17
28	HY.053106.161838	L0605622-05	W-10R	40/40	1		05/31/06 16:18
29	HY.053106.162018	L0605622-06	W-43WTR	40/40	1		05/31/06 16:20
30	HY.053106.162205	L0605629-01	MW-1	40/40	1		05/31/06 16:22
31	HY.053106.162402	L0605629-02	MW-2	40/40	1		05/31/06 16:24
32	HY.053106.162614	L0605629-03	MW-3	40/40	1		05/31/06 16:26
33	HY.053106.162822	WG214384-13	CCV		1		05/31/06 16:28
34	HY.053106.163004	WG214384-14	CCB		1		05/31/06 16:30
35	HY.053106.163154	L0605629-04	EQUIP BLANK	40/40	1		05/31/06 16:31
36	HY.053106.163342	L0605629-05	MW-4	40/40	1		05/31/06 16:33
37	HY.053106.163522	L0605629-06	MW-4D	40/40	1		05/31/06 16:35

Approved: June 01, 2006

Run Log ID:**10600**

KEMRON Environmental Services

Instrument Run Log

Instrument: HYDRA Dataset: 053106C.PRN

Analyst1: CRC Analyst2: N/A

Method: 7470A SOP: 404 Rev: 9

Calibration Std: STD12878 ICV/CCV Std: STD12872 Post Spike: STD12878

ICSA: N/A ICSAB: N/A

Workgroups: 214332,214334

Comments:

Seq.	File ID	Sample	ID	Prep	Dil	Reference	Date/Time
38	HY.053106.163704	WG214384-15	CCV		1		05/31/06 16:37
39	HY.053106.163933	WG214384-16	CCB		1		05/31/06 16:39
40	HY.053106.164151	WG214298-02	Method/Prep Blank	40/40	1		05/31/06 16:41
41	HY.053106.164330	WG214298-03	Laboratory Control S	40/40	1		05/31/06 16:43
42	HY.053106.164512	WG214220-01	Fluid Blank		1		05/31/06 16:45
43	HY.053106.164658	L0605557-02	51806ORTH/TOP	1/40	1		05/31/06 16:46
44	HY.053106.164855	L0605557-03	51806SF	4/40	1		05/31/06 16:48
45	HY.053106.165037	WG214298-01	Reference Sample		1	L0605557-05	05/31/06 16:50
46	HY.053106.165214	WG214298-04	Matrix Spike	4/40	1		05/31/06 16:52
47	HY.053106.165353	WG214298-05	Matrix Spike Duplica	4/40	1		05/31/06 16:53
48	HY.053106.165531	L0605557-06	51806HGS	4/40	1		05/31/06 16:55
49	HY.053106.165735	L0605557-08	52406SFTS	4/40	1		05/31/06 16:57
50	HY.053106.165948	WG214384-17	CCV		1		05/31/06 16:59
51	HY.053106.170128	WG214384-18	CCB		1		05/31/06 17:01
52	HY.053106.170306	L0605576-01	IWSB01052406	4/40	1		05/31/06 17:03
53	HY.053106.170443	L0605599-10	VP03-00-48	4/40	1		05/31/06 17:04
54	HY.053106.170619	WG214334-01	Post Digestion Spike		1	L0605599-10	05/31/06 17:06
55	HY.053106.170820	L0605557-02	51806ORTH/TOP	1/40	1		05/31/06 17:08
56	HY.053106.170958	L0605557-10	51706-CS2/BOTTOM	1/40	1		05/31/06 17:09
57	HY.053106.171210	WG214334-02	Post Digestion Spike		1	L0605557-10	05/31/06 17:12
58	HY.053106.171430	L0605659-02	W-23	40/40	1		05/31/06 17:14
59	HY.053106.171610	WG214334-03	Post Digestion Spike		1	L0605659-02	05/31/06 17:16
60	HY.053106.171808	L0605659-03	W-32WT	40/40	1		05/31/06 17:18
61	HY.053106.171949	L0605659-04	W-32WB	40/40	1		05/31/06 17:19
62	HY.053106.172126	WG214384-19	CCV		1		05/31/06 17:21
63	HY.053106.172327	WG214384-20	CCB		1		05/31/06 17:23
64	HY.053106.172528	L0605659-06	W-32B	40/40	1		05/31/06 17:25
65	HY.053106.172731	L0605659-08	W-46WB	40/40	1		05/31/06 17:27
66	HY.053106.172912	WG214384-21	CCV		1		05/31/06 17:29
67	HY.053106.173051	WG214384-22	CCB		1		05/31/06 17:30
68	HY.053106.173233	L0605615-01	8322 TANK	1/40	1		05/31/06 17:32
69	HY.053106.173411	WG214384-23	CCV		1		05/31/06 17:34
70	HY.053106.173653	WG214384-24	CCB		1		05/31/06 17:36

Approved: June 01, 2006

Mercury Digestion Log

Analyst(s): NA
Date: 5/25/06
LCS: 4ml 550 12800
MS/MSD: 4ml 550 12800
Witness: NA
H_2SO_4 Lot #: NA
$K2S_2O_8$ Lot #: NA
$KMNO_4$ Lot #: RCT 10229
HNO_3 Lot #: NA
Aqua Regia: RCT 10227
Earliest Sample Due Date: 5/31/06
ICV / CCV: 550 12808
Stds: 0, 0.2, 1, 2, 5, 10: 550 12802 & 12807

Box: AB

Digestion Work Group: WG 214041

ME404 Revision # ___ - Method 7470A-Water
ME405 Revision # 7 - Method 7471A-Soil

Hot Block Temperature at start: 92.5°C @ 1355
Hot Block Temperature at end: 94.6°C @ 1425

Relinquished By: [signature]
Digest Received By: SLP Date: 5/25/06

	KEMRON #	Initial Wt/Vol	Final Volume	Comments	Due Date
1	MBS	0.65	40ml	-a	
2	LCS	1		-03	
3	05-576-02	0.62			6/5
4	-03	0.63			
5	-04	0.60			
6	-05	0.63			
7	-06	0.60			
8	-07	0.61			
9	05-515-01	0.60			6/2
10	05-584-01	0.60		-01	5/31
11	-01 ms	1		-ms	
12	-01 msd			-msd	
13	-02	0.64			
14	-04	0.66			
15	-05	0.60			
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					

5/25/06

Comments: _____

Primary Review: [signature] 5/25/06 Secondary Review: [signature] 5/25/06

007072

KEMRON
ENVIRONMENTAL SERVICES

TCLP Non-Volatile

Analyst(s): Ed
Date: 05-30-06

Analyst/Date		Analyst/Date	
Ed 05-30-06		Ed 05-31-06	
Time On	Temp On °C	Time Off	Temp Off °C
1330	24	0730	23

Jug #	Sample #	Tests	Method	Fluid #	Matrix*	%Solid	Size Reduction Yes	Size Reduction No	Int. Wt. (g)	Fluid Vol. (mL)
N/A	05-557-02	ME	1311	Filtered	W	<.5		✓	100	100
D	05-557-03	ME	1311	FI-592	S	100	✓		100.05	2000
	-05	↓	↓	↓	↓	↓		✓	100.05	↓
	-06							✓	100.02	
	-08							✓	100.05	
G-7	05-576-01	SV Pest Herb			S/S			✓	100.05	
G-9	05-599-10	↓ ↓ ↓						✓	100.02	
G-11	05-630-02	↓			↓			✓	100.05	
D	05-633-02	ME pH-L			S			✓	100.05	
↓	-03	↓	↓	↓	↓	↓		✓	100.01	↓
N/A	FBLK	ME SV Pest Herb	1311	FI-592	N/A	N/A		✓	2000	2000

Ed 05-30-06

*Matrix Code = (S-solid)(SS-sand, soil or sludge)(P-paint)(O-organic or waste)(W-water)

Comments: _____

Peer Review By: _____ Supervisor Review: _____

007073

Mercury Digestion Log

Analyst(s): TFC, ACA
Date: 5/31/06
LCS: 4 ml STD 12870
MS/MSD: 4 ml STD 12870
Witness: JLN
H_2SO_4 Lot #: 06P10768
$K2S_2O_8$ Lot #: 06P10224
$KMNO_4$ Lot #: 06P10229
HNO_3 Lot #: 06P10226
Aqua Regia: NA
Earliest Sample Due Date: 6/5
ICV / CCV: STD 12872
Stds: 0, 0.2, 1, 2, 5, 10: STD 12873 & 12878

Box: 81

Digestion Work Group: WG 214298

ME404 Revision # 8 - Method 7470A-Water
ME405 Revision # ____ - Method 7471A-Soil

Hot Block Temperature at start: 95.2° @ 11:40
Hot Block Temperature at end: 95.4° @ 1340

Relinquished By: TFC
Digest Received By: CRC Date: 5/31/06

	KEMRON #	Initial Wt/Vol	Final Volume	Comments	Due Date
1	PBW	40mL	40mL	-02	
2	LCSW	"	"	-03	
3	FBLK 5/30	4mL		WG 214220 @ 1330	
4	OS-557-02			Filt 5/30 @ 1215 WG 214208	6/5
5	-03			WG 214220 @ 1330	
6	-05 RS			-01	
7	-05 MS			-04	
8	-05 MSD			-05	
9	-06			*	
10	-08				
11	OS-576-01	4mL			6/5
12	OS-599-10	"			6/8
13	OS-557-02	1mL		Liq. Waste	6/5
14	-10	"			
15	OS-615-01	1mL			6/5
16	OS-654-02	40mL		Level 4	6/9
17	-03				
18	-04				
19	-06				
20	-08				
21					
22					
23					
24					
25					

Comments: * possible high Hg

Primary Review: 5/31/06 Secondary Review: 5/31/06

007074

KEMRON
ENVIRONMENTAL SERVICES

Mercury Digestion Log

Analyst(s): TFC, PH
Date: 5/31/06
LCS: 4ml STD 12879
MS/MSD: N/A
Witness: PH
H_2SO_4 Lot #: N/A
$K2S_2O_8$ Lot #: N/A
$KMNO_4$ Lot #: 061 10229
HNO_3 Lot #: N/A
Aqua Regia: 061 10227
Earliest Sample Due Date: 6/5
ICV / CCV: STD 12887
Stds: 0, 0.2, 1, 2, 5, 10: STD 12881 & 12886

Box: B6

Digestion Work Group: WG 214319

ME404 Revision # ___ - Method 7470A-Water
ME405 Revision # 8 - Method 7471A-Soil

Hot Block Temperature at start: 94.9° @ 1350
Hot Block Temperature at end: 95.2° @ 1430

Relinquished By: TFC
Digest Received By: CRC Date: 5/31/06

	KEMRON #	Initial Wt/Vol	Final Volume	Comments	Due Date
1	PBS	1.00g	40mL	OILS -01	
2	LCSS	1.00g		-02	
3	LCSS Dup	1.00g		-03	
4	05-557-61	1.00g			6/5
5	-04	1.00g			
6	-07	1.03g			
7	-09	1.02g			
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					

5/31 PH

Comments: _____

Primary Review: [signature] 5/31/06 Secondary Review: [signature] 5/31/06

007075

KEMRON Environmental Services
HOLDING TIMES
EQUIVALENT TO AFCEE FORM 9

Analytical Method: 7471A **AAB#:** WG214106
Login Number: L0605576

Client ID	Date Collected	Date Received	Date Extracted	Max Hold Time Ext.	Time Held Ext.	Date Analyzed	Max Hold Time Anal	Time Held Anal.	Q
SM142SB01052406	05/24/06	05/25/06	05/25/06	28	1.19	05/26/06	28	0.977	
SM142SB02052406	05/24/06	05/25/06	05/25/06	28	1.17	05/26/06	28	1.00	
SM141SB03052406	05/24/06	05/25/06	05/25/06	28	1.23	05/26/06	28	0.981	
SM141FD03052406	05/24/06	05/25/06	05/25/06	28	1.23	05/26/06	28	0.982	
SM141SB02052406	05/24/06	05/25/06	05/25/06	28	1.24	05/26/06	28	0.983	
SM141SB01052406	05/24/06	05/25/06	05/25/06	28	1.25	05/26/06	28	0.985	

*** EXT = SEE PROJECT QAPP REQUIREMENTS**
***ANAL = SEE PROJECT QAPP REQUIREMENTS**

KEMRON FORMS - Modified 02/14/2006
Version 1.5 PDF File ID: 485311
Report generated 05/26/2006 14:15

KEMRON Environmental Services
HOLDING TIMES
EQUIVALENT TO AFCEE FORM 9

Analytical Method: 7470A **AAB#:** WG214334
Login Number: L0605576

Client ID	Date Collected	Date Received	Date Extracted	Max Hold Time Ext.	Time Held Ext.	Date Analyzed	Max Hold Time Anal	Time Held Anal.	Q
IWSB01052406	05/24/06	05/25/06	05/31/06	34	6.91	05/31/06	28	0.224	

* EXT = SEE PROJECT QAPP REQUIREMENTS
*ANAL = SEE PROJECT QAPP REQUIREMENTS

KEMRON FORMS - Modified 02/14/2006
Version 1.5 PDF File ID: 487630
Report generated 06/01/2006 11:05

KEMRON Environmental Services

METHOD BLANK SUMMARY

Login Number:	L0605576	Work Group:	WG214106
Blank File ID:	HY.052606.131822	Blank Sample ID:	WG214041-02
Date Analyzed:	05/26/06	Instrument ID:	HYDRA
Time Analyzed:	13:18	Method:	7471A
Analyst:	CRC		

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG214041-03	HY.052606.132032	05/26/06 13:20	01
SM142SB01052406	L0605576-02	HY.052606.132233	05/26/06 13:22	01
SM141SB03052406	L0605576-04	HY.052606.132751	05/26/06 13:27	01
SM141FD03052406	L0605576-05	HY.052606.132931	05/26/06 13:29	01
SM141SB02052406	L0605576-06	HY.052606.133108	05/26/06 13:31	01
SM141SB01052406	L0605576-07	HY.052606.133256	05/26/06 13:32	01
SM142SB02052406	L0605576-03	HY.052606.135947	05/26/06 13:59	DL01

KEMRON FORMS - Modified 03/06/2006
Version 1.5 PDF File ID: 485312
Report generated 05/26/2006 14:15

KEMRON Environmental Services

METHOD BLANK SUMMARY

Login Number:	L0605576	Work Group:	WG214334
Blank File ID:	HY.053106.164151	Blank Sample ID:	WG214298-02
Date Analyzed:	05/31/06	Instrument ID:	HYDRA
Time Analyzed:	16:41	Method:	7470A
Analyst:	CRC		

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG214298-03	HY.053106.164330	05/31/06 16:43	01
IWSB01052406	L0605576-01	HY.053106.170306	05/31/06 17:03	01

KEMRON FORMS - Modified 03/06/2006
Version 1.5 PDF File ID: 487631
Report generated 06/01/2006 11:05

KEMRON Environmental Services

METHOD BLANK REPORT

Login Number:	L0605576	Run Date:	05/26/2006	Sample ID:	WG214041-02
Instrument ID:	HYDRA	Run Time:	13:18	Prep Method:	METHOD
File ID:	HY.052606.131822	Analyst:	CRC	Method:	7471A
Workgroup (AAB#):	WG214106	Matrix:	Solid	Units:	mg/kg
Contract #:		Cal ID:	HYDRA-26-MAY-06		

Analytes	SQL	PQL	Concentration	Dilution	Qualifier
Mercury	0.0100	0.250	0.0100	1	U

MDL Method Detection Limit
RL Reporting/quantitation Limit

* Analyte concentration > RL

KEMRON FORMS - Modified 05/01/2006
Version 1.5 PDF File ID: 485313
Report generated 05/26/2006 14:15

KEMRON Environmental Services

METHOD BLANK REPORT

Login Number:	L0605576	Run Date:	05/31/2006	Sample ID:	WG214298-02
Instrument ID:	HYDRA	Run Time:	16:41	Prep Method:	METHOD
File ID:	HY.053106.164151	Analyst:	CRC	Method:	7470A
Workgroup (AAB#):	WG214334	Matrix:	Water	Units:	mg/L
Contract #:		Cal ID:	HYDRA-31-MAY-06		

Analytes	SQL	PQL	Concentration	Dilution	Qualifier
Mercury, TCLP	0.00100	0.00500	0.00100	1	U

MDL Method Detection Limit
RL Reporting/quantitation Limit

* Analyte concentration > RL

KEMRON FORMS - Modified 05/01/2006
Version 1.5 PDF File ID: 487632
Report generated 06/01/2006 11:05

KEMRON Environmental Services

LABORATORY CONTROL SAMPLE (LCS)

Login Number:	L0605576	Run Date:	05/26/2006	Sample ID:	WG214041-03
Instrument ID:	HYDRA	Run Time:	13:20	Prep Method:	METHOD
File ID:	HY.052606.132032	Analyst:	CRC	Method:	7471A
Workgroup (AAB#):	WG214106	Matrix:	Solid	Units:	mg/kg
Contract #:		Cal ID:	HYDRA-26-MAY-06		

Analytes	Expected	Found	% Rec	LCS Limits	Q
Mercury	0.267	0.257	96.3	80 - 120	

KEMRON FORMS - Modified 05/01/2006
Version 1.5 PDF File ID: 485314
Report generated 05/26/2006 14:15

KEMRON Environmental Services

LABORATORY CONTROL SAMPLE (LCS)

Login Number:	L0605576	Run Date:	05/31/2006	Sample ID:	WG214298-03
Instrument ID:	HYDRA	Run Time:	16:43	Prep Method:	METHOD
File ID:	HY.053106.164330	Analyst:	CRC	Method:	7470A
Workgroup (AAB#):	WG214334	Matrix:	Water	Units:	mg/L
Contract #:		Cal ID:	HYDRA-31-MAY-06		

Analytes	Expected	Found	% Rec	LCS Limits	Q
Mercury, TCLP	0.00400	0.00397	99.3	80 - 120	

KEMRON FORMS - Modified 05/01/2006
Version 1.5 PDF File ID: 487633
Report generated 06/01/2006 11:05

KEMRON Environmental Services

MATRIX SPIKE AND MATRIX SPIKE DUP (MS/MSD)

Loginnum:L0605576 Cal ID: HYDRA- Worknum:WG214106
Instrument ID:HYDRA Contract #: Method:7471A
Parent ID:WG214041-01 File ID:HY.052606.134227 Dil:1 Matrix:SOLID
Sample ID:WG214041-04 MS File ID:HY.052606.134457 Dil:1 Units:mg/kg
Sample ID:WG214041-05 MSD File ID:HY.052606.134633 Dil:1 Percent Solid:100

Analyte	Parent	MS Spiked	MS Found	MS %Rec	MSD Spiked	MSD Found	MSD %Rec	%RPD	%Rec Limits	RPD Limit	Q
Mercury, Total	ND	0.267	0.302	113	0.267	0.301	113	0.442	75 - 125	25	

* FAILS %REC LIMIT

FAILS RPD LIMIT

NOTE: This is an internal quality control sample.

KEMRON FORMS - Modified 03/16/2006
Version 1.5 PDF File ID: 485315
Report generated 05/26/2006 14:15

KEMRON Environmental Services

MATRIX SPIKE AND MATRIX SPIKE DUP (MS/MSD)

Loginnum:L0605576 Cal ID: HYDRA- Worknum:WG214334
Instrument ID:HYDRA Contract #: Method:7470A
Parent ID:WG214298-01 File ID:HY.053106.165037 Dil:1 Matrix:TCLP
Sample ID:WG214298-04 MS File ID:HY.053106.165214 Dil:1 Units:mg/L
Sample ID:WG214298-05 MSD File ID:HY.053106.165353 Dil:1

Analyte	Parent	MS Spiked	MS Found	MS %Rec	MSD Spiked	MSD Found	MSD %Rec	%RPD	%Rec Limits	RPD Limit	Q
Mercury, TCLP	ND	0.0400	0.0401	100	0.0400	0.0406	102	1.24	75 - 125	20	

* FAILS %REC LIMIT

FAILS RPD LIMIT

NOTE: This is an internal quality control sample.

KEMRON FORMS - Modified 03/16/2006
Version 1.5 PDF File ID: 487634
Report generated 06/01/2006 11:05

KEMRON ENVIRONMENTAL SERVICES
POST SPIKE REPORT

Sample Login ID: L0605576 **Worknum:** WG214106
Instrument ID: HYDRA **Method:** 7471A
Post Spike ID: WG214106-01 **File ID:** HY.052606.132414 **Dil:** 1 **Units:** ug/kg
Sample ID: L0605576-02 **File ID:** HY.052606.132233 **Dil:** 1 **Matrix:** Soil

Analyte	Control Limit %R	Post Spike Result	C	Sample Result	C	Spike Added(SA)	% R	Q
MERCURY	85 - 115	1.92	F	0.929	F	1.00	108	

N = % Recoverv exceeds control limits of 85% - 115%
F = Result is between MDL and RL
U = Sample result is below MDL. A value of zero is used in the calculation.

KEMRON FORMS - Modified 02/14/2006
Version 2.0 PDF File ID: 485310
Report generated 05/26/2006 14:15

KEMRON ENVIRONMENTAL SERVICES
POST SPIKE REPORT

Sample Login ID: L0605576 **Worknum:** WG214334
Instrument ID: HYDRA **Method:** 7470A
Post Spike ID: WG214334-01 **File ID:** HY.053106.170619 **Dil:** 1 **Units:** ug/L
Sample ID: L0605599-10 **File ID:** HY.053106.170443 **Dil:** 1 **Matrix:** Leachate

Analyte	Control Limit %R	Post Spike Result	C	Sample Result	C	Spike Added(SA)	% R	Q
MERCURY	85 - 115	1.05		ND	U	1.00	105	

N = % Recoverv exceeds control limits of 85% - 115%
F = Result is between MDL and RL
U = Sample result is below MDL. A value of zero is used in the calculation.

KEMRON FORMS - Modified 02/14/2006
Version 2.0 PDF File ID: 487629
Report generated 06/01/2006 11:05

KEMRON ENVIRONMENTAL SERVICES
POST SPIKE REPORT

Sample Login ID: L0605576 **Worknum:** WG214334
Instrument ID: HYDRA **Method:** 7470A
Post Spike ID: WG214334-02 **File ID:** HY.053106.171210 **Dil:** 1 **Units:** ug/L
Sample ID: L0605557-10 **File ID:** HY.053106.170958 **Dil:** 1 **Matrix:** Leachate

Analyte	Control Limit %R	Post Spike Result	C	Sample Result	C	Spike Added(SA)	% R	Q
MERCURY	85 - 115	1.18		0.205	F	1.00	99.6	

N = % Recoverv exceeds control limits of 85% - 115%
F = Result is between MDL and RL
U = Sample result is below MDL. A value of zero is used in the calculation.

KEMRON FORMS - Modified 02/14/2006
Version 2.0 PDF File ID: 487629
Report generated 06/01/2006 11:05

KEMRON ENVIRONMENTAL SERVICES
POST SPIKE REPORT

Sample Login ID: L0605576 **Worknum:** WG214334
Instrument ID: HYDRA **Method:** 7470A
Post Spike ID: WG214334-03 **File ID:** HY.053106.171610 **Dil:** 1 **Units:** ug/L
Sample ID: L0605659-02 **File ID:** HY.053106.171430 **Dil:** 1 **Matrix:** Leachate

Analyte	Control Limit %R	Post Spike Result	C	Sample Result	C	Spike Added(SA)	% R	Q
MERCURY	85 - 115	1.04		0	U	1.00	104	

N = % Recoverv exceeds control limits of 85% - 115%
F = Result is between MDL and RL
U = Sample result is below MDL. A value of zero is used in the calculation.

KEMRON FORMS - Modified 02/14/2006
Version 2.0 PDF File ID: 487629
Report generated 06/01/2006 11:05

KEMRON Environmental Services

INITIAL CALIBRATION SUMMARY

Login Number: L0605576 **Instrument ID:** HYDRA

Analytical Method: 7471A **Initial Calibration Date:** 05/26/2006 13:08

Initial Calibration Time: 13:08

Analyte	WG214124-01		WG214124-02		WG214124-03		WG214124-04		WG214124-05		WG214124-06	
	STD	INT	STD	INT	STD	INT	STD	INT	STD	INT	STD	INT
Mercury	0	-2711	0.200	13919	1.00	56769	2.00	112969	5.00	291350	10.0	542355

INT = Instrument intensity
R = Coefficient of correlation
Q = Data Qualifier
*** = Out of Compliance; R < 0.995**

KEMRON FORMS - Modified 03/03/2006
Version 1.5 PDF File ID: 485316
Report generated 05/26/2006 14:15

KEMRON Environmental Services

INITIAL CALIBRATION SUMMARY

Analyte	R	Q
Mercury	0.9993	

INT = Instrument intensity
R = Coefficient of correlation
Q = Data Qualifier
*** = Out of Compliance; R < 0.995**

KEMRON FORMS - Modified 03/03/2006
Version 1.5 PDF File ID: 485316
Report generated 05/26/2006 14:15

KEMRON Environmental Services

INITIAL CALIBRATION SUMMARY

Login Number: L0605576
Analytical Method: 7470A

Instrument ID: HYDRA
Initial Calibration Date: 05/31/2006 15:38
Initial Calibration Time: 15:38

Analyte	WG214384-01		WG214384-02		WG214384-03		WG214384-04		WG214384-05		WG214384-06	
	STD	INT	STD	INT	STD	INT	STD	INT	STD	INT	STD	INT
Mercury	0	323	0.200	12252	1.00	54310	2.00	115227	5.00	278850	10.0	557296

INT = Instrument intensity
R = Coefficient of correlation
Q = Data Qualifier
*** = Out of Compliance; R < 0.995**

KEMRON FORMS - Modified 03/03/2006
Version 1.5 PDF File ID: 487635
Report generated 06/01/2006 11:05

KEMRON Environmental Services

INITIAL CALIBRATION SUMMARY

Analyte	R	Q
Mercury	1.000	

INT = Instrument intensity
R = Coefficient of correlation
Q = Data Qualifier
*** = Out of Compliance; R < 0.995**

KEMRON FORMS - Modified 03/03/2006
Version 1.5 PDF File ID: 487635
Report generated 06/01/2006 11:05

KEMRON Environmental Services

INITIAL CALIBRATION VERIFICATION (ICV)

Login Number: L0605576 Run Date: 05/26/2006 Sample ID: WG214124-07
Instrument ID: HYDRA Run Time: 13:10 Method: 7471A
File ID: HY.052606.131018 Analyst: CRC Units: ug/L
Workgroup (AAB#): WG214106 Cal ID: HYDRA - 26-MAY-06

Analyte		Expected	Found	%REC	LIMITS	Q
Mercury		2	2.05	103	90 - 110	

* Exceeds LIMITS Limit

KEMRON FORMS - Modified 03/03/2006
Version 1.3 PDF File ID: 485317
Report generated 05/26/2006 14:15

KEMRON Environmental Services

INITIAL CALIBRATION VERIFICATION (ICV)

Login Number: L0605576 Run Date: 05/31/2006 Sample ID: WG214384-07
Instrument ID: HYDRA Run Time: 15:41 Method: 7470A
File ID: HY.053106.154107 Analyst: CRC Units: ug/L
Workgroup (AAB#): WG214334 Cal ID: HYDRA - 31-MAY-06

Analyte		Expected	Found	%REC	LIMITS	Q
Mercury		2	1.98	99.0	90 - 110	

* Exceeds LIMITS Limit

KEMRON FORMS - Modified 03/03/2006
Version 1.3 PDF File ID: 487636
Report generated 06/01/2006 11:05

KEMRON Environmental Services

INITIAL CALIBRATION BLANK (ICB)

Login Number: L0605576 Run Date: 05/26/2006 Sample ID: WG214124-08
Instrument ID: HYDRA Run Time: 13:12 Method: 7471A
File ID: HY.052606.131252 Analyst: CRC Units: ug/L
Workgroup (AAB#): WG214106 Cal ID: HYDRA - 26-MAY-06

Analytes	MDL	RDL	Concentration	Dilution	Qualifier
Mercury	0.150	3.75	-.019	1	U

U = Result is less than MDL
F = Result is between MDL and RL

KEMRON FORMS - Modified 03/06/2006
Version 1.5 PDF File ID: 485318
Report generated 05/26/2006 14:15

KEMRON Environmental Services

INITIAL CALIBRATION BLANK (ICB)

Login Number: L0605576 Run Date: 05/31/2006 Sample ID: WG214384-08
Instrument ID: HYDRA Run Time: 15:42 Method: 7470A
File ID: HY.053106.154243 Analyst: CRC Units: ug/L
Workgroup (AAB#): WG214334 Cal ID: HYDRA - 31-MAY-06

Analytes	MDL	RDL	Concentration	Dilution	Qualifier
Mercury	0.100	0.500	-.041	1	U

U = Result is less than MDL
F = Result is between MDL and RL

KEMRON FORMS - Modified 03/06/2006
Version 1.5 PDF File ID: 487637
Report generated 06/01/2006 11:05

KEMRON Environmental Services

CONTINUING CALIBRATION BLANK (CCB)

Login Number:L0605576 Run Date:05/26/2006 Sample ID:WG214124-10
Instrument ID:HYDRA Run Time:13:16 Method:7471A
File ID:HY.052606.131614 Analyst:CRC Units:ug/L
Workgroup (AAB#):WG214106 Cal ID: HYDRA - 26-MAY-06

Analytes	MDL	RDL	Concentration	Dilution	Qualifier
Mercury	0.150	3.75	0.00600	1	U

U = Result is less than MDL
F = Result is between MDL and RL

KEMRON FORMS - Modified 04/19/2006
Version 1.5 PDF File ID: 485320
Report generated 05/26/2006 14:15

KEMRON Environmental Services

CONTINUING CALIBRATION BLANK (CCB)

Login Number:L0605576 Run Date:05/26/2006 Sample ID:WG214124-12
Instrument ID:HYDRA Run Time:13:39 Method:7471A
File ID:HY.052606.133906 Analyst:CRC Units:ug/L
Workgroup (AAB#):WG214106 Cal ID: HYDRA - 26-MAY-06

Analytes	MDL	RDL	Concentration	Dilution	Qualifier
Mercury	0.150	3.75	-0.0900	1	U

U = Result is less than MDL
F = Result is between MDL and RL

KEMRON FORMS - Modified 04/19/2006
Version 1.5 PDF File ID: 485320
Report generated 05/26/2006 14:15

KEMRON Environmental Services

CONTINUING CALIBRATION BLANK (CCB)

Login Number:L0605576 Run Date:05/26/2006 Sample ID:WG214124-14
Instrument ID:HYDRA Run Time:13:57 Method:7471A
File ID:HY.052606.135739 Analyst:CRC Units:ug/L
Workgroup (AAB#):WG214106 Cal ID: HYDRA - 26-MAY-06

Analytes	MDL	RDL	Concentration	Dilution	Qualifier
Mercury	0.150	3.75	-0.0210	1	U

U = Result is less than MDL
F = Result is between MDL and RL

KEMRON FORMS - Modified 04/19/2006
Version 1.5 PDF File ID: 485320
Report generated 05/26/2006 14:15

KEMRON Environmental Services

CONTINUING CALIBRATION BLANK (CCB)

Login Number:L0605576 Run Date:05/26/2006 Sample ID:WG214124-16
Instrument ID:HYDRA Run Time:14:03 Method:7471A
File ID:HY.052606.140305 Analyst:CRC Units:ug/L
Workgroup (AAB#):WG214106 Cal ID: HYDRA - 26-MAY-06

Analytes	MDL	RDL	Concentration	Dilution	Qualifier
Mercury	0.150	3.75	-0.134	1	U

U = Result is less than MDL
F = Result is between MDL and RL

KEMRON FORMS - Modified 04/19/2006
Version 1.5 PDF File ID: 485320
Report generated 05/26/2006 14:15

KEMRON Environmental Services

CONTINUING CALIBRATION BLANK (CCB)

Login Number:L0605576 Run Date:05/31/2006 Sample ID:WG214384-16
Instrument ID:HYDRA Run Time:16:39 Method:7470A
File ID:HY.053106.163933 Analyst:CRC Units:ug/L
Workgroup (AAB#):WG214334 Cal ID: HYDRA - 31-MAY-06

Analytes	MDL	RDL	Concentration	Dilution	Qualifier
Mercury	0.100	0.500	0.0390	1	U

U = Result is less than MDL
F = Result is between MDL and RL

KEMRON FORMS - Modified 04/19/2006
Version 1.5 PDF File ID: 487639
Report generated 06/01/2006 11:05

KEMRON Environmental Services

CONTINUING CALIBRATION BLANK (CCB)

Login Number:L0605576 Run Date:05/31/2006 Sample ID:WG214384-18
Instrument ID:HYDRA Run Time:17:01 Method:7470A
File ID:HY.053106.170128 Analyst:CRC Units:ug/L
Workgroup (AAB#):WG214334 Cal ID: HYDRA - 31-MAY-06

Analytes	MDL	RDL	Concentration	Dilution	Qualifier
Mercury	0.100	0.500	-0.0200	1	U

U = Result is less than MDL
F = Result is between MDL and RL

KEMRON FORMS - Modified 04/19/2006
Version 1.5 PDF File ID: 487639
Report generated 06/01/2006 11:05

KEMRON Environmental Services

CONTINUING CALIBRATION BLANK (CCB)

Login Number:L0605576 Run Date:05/31/2006 Sample ID:WG214384-20
Instrument ID:HYDRA Run Time:17:23 Method:7470A
File ID:HY.053106.172327 Analyst:CRC Units:ug/L
Workgroup (AAB#):WG214334 Cal ID: HYDRA - 31-MAY-06

Analytes	MDL	RDL	Concentration	Dilution	Qualifier
Mercury	0.100	0.500	-0.0540	1	U

U = Result is less than MDL
F = Result is between MDL and RL

KEMRON FORMS - Modified 04/19/2006
Version 1.5 PDF File ID: 487639
Report generated 06/01/2006 11:05

KEMRON Environmental Services

CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L0605576 Run Date: 05/26/2006 Sample ID: WG214124-09
Instrument ID: HYDRA Run Time: 13:14 Method: 7471A
File ID: HY.052606.131432 Analyst: CRC
Workgroup (AAB#): WG214106 Cal ID: HYDRA - 26-MAY-06

Analyte		Expected	Found	%REC	LIMITS	UNITS	Q
Mercury		2	1.88	94.0	80 - 120	ug/L	

* Exceeds LIMITS Criteria

KEMRON FORMS - Modified 04/19/2006
Version 1.3 PDF File ID: 485319
Report generated 05/26/2006 14:15

KEMRON Environmental Services

CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L0605576 Run Date: 05/26/2006 Sample ID: WG214124-11
Instrument ID: HYDRA Run Time: 13:37 Method: 7471A
File ID: HY.052606.133715 Analyst: CRC
Workgroup (AAB#): WG214106 Cal ID: HYDRA - 26-MAY-06

Analyte		Expected	Found	%REC	LIMITS	UNITS	Q
Mercury		2	2.24	112	80 - 120	ug/L	

* Exceeds LIMITS Criteria

KEMRON FORMS - Modified 04/19/2006
Version 1.3 PDF File ID: 485319
Report generated 05/26/2006 14:15

KEMRON Environmental Services

CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L0605576 Run Date: 05/26/2006 Sample ID: WG214124-13
Instrument ID: HYDRA Run Time: 13:55 Method: 7471A
File ID: HY.052606.135540 Analyst: CRC
Workgroup (AAB#): WG214106 Cal ID: HYDRA - 26-MAY-06

Analyte		Expected	Found	%REC	LIMITS	UNITS	Q
Mercury		2	2.22	111	80 - 120	ug/L	

* Exceeds LIMITS Criteria

KEMRON FORMS - Modified 04/19/2006
Version 1.3 PDF File ID: 485319
Report generated 05/26/2006 14:15

KEMRON Environmental Services

CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L0605576 Run Date: 05/26/2006 Sample ID: WG214124-15
Instrument ID: HYDRA Run Time: 14:01 Method: 7471A
File ID: HY.052606.140127 Analyst: CRC
Workgroup (AAB#): WG214106 Cal ID: HYDRA - 26-MAY-06

Analyte		Expected	Found	%REC	LIMITS	UNITS	Q
Mercury		2	2.04	102	80 - 120	ug/L	

* Exceeds LIMITS Criteria

KEMRON FORMS - Modified 04/19/2006
Version 1.3 PDF File ID: 485319
Report generated 05/26/2006 14:15

KEMRON Environmental Services

CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L0605576 Run Date: 05/31/2006 Sample ID: WG214384-15
Instrument ID: HYDRA Run Time: 16:37 Method: 7470A
File ID: HY.053106.163704 Analyst: CRC
Workgroup (AAB#): WG214334 Cal ID: HYDRA - 31-MAY-06

Analyte		Expected	Found	%REC	LIMITS	UNITS	Q
Mercury		2	2.02	101	80 - 120	ug/L	

* Exceeds LIMITS Criteria

KEMRON FORMS - Modified 04/19/2006
Version 1.3 PDF File ID: 487638
Report generated 06/01/2006 11:05

KEMRON Environmental Services

CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L0605576 Run Date: 05/31/2006 Sample ID: WG214384-17
Instrument ID: HYDRA Run Time: 16:59 Method: 7470A
File ID: HY.053106.165948 Analyst: CRC
Workgroup (AAB#): WG214334 Cal ID: HYDRA - 31-MAY-06

Analyte		Expected	Found	%REC	LIMITS	UNITS	Q
Mercury		2	2.01	101	80 - 120	ug/L	

* Exceeds LIMITS Criteria

KEMRON FORMS - Modified 04/19/2006
Version 1.3 PDF File ID: 487638
Report generated 06/01/2006 11:05

KEMRON Environmental Services

CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L0605576 Run Date: 05/31/2006 Sample ID: WG214384-19
Instrument ID: HYDRA Run Time: 17:21 Method: 7470A
File ID: HY.053106.172126 Analyst: CRC
Workgroup (AAB#): WG214334 Cal ID: HYDRA - 31-MAY-06

Analyte		Expected	Found	%REC	LIMITS	UNITS	Q
Mercury		2	2.00	100	80 - 120	ug/L	

* Exceeds LIMITS Criteria

KEMRON FORMS - Modified 04/19/2006
Version 1.3 PDF File ID: 487638
Report generated 06/01/2006 11:05

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1.4 General Chemistry Data

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1.4.1 Percent Solids

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PERCENT SOLIDS DATA

Login Number: L0605576

✓ Analysis benchsheet

✓ Calculation spreadsheet

Example calculation:

[(WT3-WT1)/(WT2-WT1)] * 100 = % solids

100-(% solids) = moisture

where: WT1 = weight (grams) of empty container
WT2 - weight (grams) of container and wet sample
100 = factor to get units as percent weight

Checked By: alm Date: 6/12/06

007117

PERCENT SOLIDS

Workgroup: 213987 ADT (on): Tmm 5/24/06 @ 1615 Balance: AND GR-202 / Other ELRW60
SOP K0003 Rev: 9 ADT (off): Tmm 5/25/06 @ 1120 Approval: _____

Sample	Empty Pan WT 1	WET WT 2	DRY WT 3A	WET WT 3B	DRY WT 3C
05-533-07	1.30	19.43	14.47		
08	1.29	17.88	14.06		
09	1.30	17.29	15.56		
10	1.30	19.44	14.46		
11	1.28	20.74	17.65		
12	1.29	30.19	26.42		
13	1.29	18.26	14.29		
Duplicate 05-533-13	1.27	18.41	15.14		

Workgroup: 214086 ADT (on): Tmm 5/25/06 @ 1620 Balance: AND GR-202 / Other ELRW60
SOP K0003 Rev: 9 ADT (off): Tmm 5/26/06 @ 1040 Approval: 5/30/06

Sample 5125 577 Tmm	Empty Pan WT 1	WET WT 2	DRY WT 3A	WET WT 3B	DRY WT 3C
05-564-01	1.29	23.77	21.05	✓	
05-577-5125 Tmm 02	1.30	26.09	22.60	✓	
~~05-564-02~~	~~1.29~~				
05-564-02	1.28	29.14	19.46	✓	
05-577-03	1.29	19.41	17.36	✓	
05-579-01	1.29	26.305	22.36	✓	
02	1.29	25.88 Tmm 5/25	24.48	✓	
03	1.29	20.15	15.12	✓	
04	1.28	26.32	20.48	✓	
05-576-02	1.23	24.20	21.55	✓	
03	1.27	17.16	17.16	✓	
04	1.26	23.28	13.90	✓	
05	1.27	26.47	19.78	✓	
06	1.28	24.60	19.46	✓	
07	1.27	24.15	19.59	✓	
05-548-01	1.26	28.61	21.20	✓	
02	1.27	22.34	19.36	✓	
04	1.28	23.57	16.05	✓	
05, 06, 07	1.29	28.60	18.06	✓	
08	1.29	18.66	15.93	✓	
Duplicate 05-548-08	1.29	19.26	16.54	✓	

5125 Tmm

007118

KEMRON ENVIRONMENTAL SERVICES
PERCENT SOLID REPORT

Workgroup (AAB#):WG214088 Run Date:05/25/2006
Method:D2216-90 Run Time:16:20
Analyst:TMM

SAMPLE NUMBER	Pan WT.	Int WT.	Fnl WT.	% Solid	% Moist	UNITS
L0605548-01	1.260	28.61	21.20	72.91		%
L0605548-02	1.270	22.34	19.36	85.86		%
L0605548-04	1.280	23.57	16.05	66.26		%
L0605548-05	1.290	28.60	18.06	61.41		%
L0605548-06	1.290	28.60	18.06	61.41		%
L0605548-07	1.290	28.60	18.06	61.41		%
L0605548-08	1.290	18.66	15.93	84.28		%
L0605564-02	1.280	29.14	19.46	65.25		%
L0605576-02	1.230	24.20	21.55	88.46		%
L0605576-03	1.270	17.16	17.16	100.0		%
L0605576-04	1.260	23.28	13.90	57.40		%
L0605576-05	1.270	26.47	19.78	73.45		%
L0605576-06	1.280	24.60	19.46	77.96		%
L0605576-07	1.270	24.15	19.59	80.07		%
L0605577-01	1.290	23.77	21.05	87.90		%
L0605577-02	1.300	26.09	22.60	85.92		%
L0605577-03	1.290	19.41	17.36	88.69		%
L0605579-01	1.290	26.05	22.36	85.10		%
L0605579-02	1.290	25.88	24.48	94.31		%
L0605579-03	1.290	20.15	15.12	73.33		%
L0605579-04	1.280	26.32	20.48	76.68		%
WG214088-01	1.290	18.66	15.93	84.28	15.72	%
WG214088-02	1.290	19.26	16.54	84.86	15.14	%

KEMRON FORMS - Modified 08/27/2004
Version 1.2
Report generated 05/26/2006 11:25

PERCENT SOLIDS

Workgroup: 214090 ADT (on): Tmm 5/25/06 @ 1640 Balance: AND GR-202 / Other FIRW60
SOP K0003 Rev: 9 ADT (off): Tmm 5/26/06 @ 1050 Approval: _____

Sample	Empty Pan WT 1	WET WT 2	DRY WT 3A	WET WT 3B	DRY WT 3C
05-548-09	1.28	32.73	23.20	5/26	
10	1.29	26.09	17.59		
11	1.28	25.20	21.59	21.92	
12	1.30	26.84	22.99		
13	1.30	23.74	18.34		
15, 14, 16	1.30	18.67	16.34		
17	1.28	30.64	24.49		
18	1.27	21.81	15.11		
19	1.28	28.63	16.91		
05-564-01	1.29	26.11	21.81		
Duplicate 05-548-17	1.29	25.82	20.05		

Workgroup: 214127 ADT (on): Tmm 5/26/06 @ 1415 Balance: AND GR-202 / Other FIRW60
SOP K0003 Rev: 9 ADT (off): Tmm 5/30/06 @ 935 Approval: _____ 5/30/06

Sample	Empty Pan WT 1	WET WT 2	DRY WT 3A	WET WT 3B	DRY WT 3C
05-576-01	1.29	22.06	15.35		
05-599-01	1.31	31.80	26.84		
02	1.30	20.92	19.72	Sx has alot of Rock	
03	1.31	22.48	20.78		
04	1.31	21.08	17.15		
05	1.30	24.44	20.83		
06	1.29	27.21	23.60		
07	1.29	27.15	23.46		
08	1.30	22.32	21.95	Sx has alot of Rock	
09	1.28	26.66	26.48		
10	1.27	25.73	25.23		
11	1.27	29.04	24.73		
05-603-01	1.31	26.42	22.69		
Duplicate 05-599-11	1.30	24.17	20.71		

007120

KEMRON ENVIRONMENTAL SERVICES
PERCENT SOLID REPORT

Workgroup (AAB#):WG214127 Run Date:05/26/2006
Method:D2216-90 Run Time:14:15
Analyst:TMM

SAMPLE NUMBER	Pan WT.	Int WT.	Fnl WT.	% Solid	% Moist	UNITS
L0605576-01	1.290	22.06	15.35	67.69		%
L0605599-01	1.310	31.80	26.84	83.73		%
L0605599-02	1.300	20.92	19.72	93.88		%
L0605599-03	1.310	22.48	20.78	91.97		%
L0605599-04	1.310	21.08	17.15	80.12		%
L0605599-05	1.300	24.44	20.83	84.40		%
L0605599-06	1.290	27.21	23.60	86.07		%
L0605599-07	1.290	27.15	23.46	85.73		%
L0605599-08	1.300	22.32	21.95	98.24		%
L0605599-09	1.280	26.66	26.48	99.29		%
L0605599-10	1.270	25.73	25.23	97.96		%
L0605599-11	1.270	29.04	24.73	84.48		%
L0605603-01	1.310	26.42	22.69	85.15		%
WG214127-01	1.270	29.04	24.73	84.48	15.52	%
WG214127-02	1.300	24.17	20.71	84.87	15.13	%

EMRON FORMS - Modified 08/27/2004
ersion 1.2
eport generated 05/30/2006 09:45

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1.4.2 Paint Filter Data

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GENERAL CHEMISTRY DATA

Login Number: L0605576

Analyte: PFLT

QC Summary

- ✓ Narrative
- ✓ Checklist
- _____ Preparation Log (if applicable)
- _____ Holding Time Summary
- _____ Method Blank Summary
- _____ Laboratory Control Sample (LCS)
- _____ Matrix Spike / Matrix Spike Duplicate (MS/MSD)
- _____ Duplicate Summary
- _____ Initial Calibration Summary
- _____ Initial Calibration Verification / Continuing Calibration Verification (ICV/CCV)

Raw QC Data

- ✓ Analysis benchsheet
- _____ Calculation spreadsheet
- _____ Example calculations

Checked By: _____ **Date:** 6/12/06

007125

RAW DATA

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Parameter: PFLT **Wet Lab**
Analyst/Date/Time: DR 5/26/06 @ 1100
SOP: K- 9095 Revision: 8
Work Group(s): 214100
Preservation Check: Yes ____ No ✓

	Analyst	
Calibration/Linearity		Date:
Second Source Check		
ICV/CCV (std)		
ICB/CCB		
Blank	✓	
LCS/LCS Dup		
MS/MSD		
Duplicate	✓	
Record On ACS Benchsheet	✓	
Data Upload		
QC Form(s)		
QC Violation Sheet		
Signed Raw Data	✓	
STD/LCS On Benchsheet		

Primary Reviewer Initials & Date Checked DR 5/26/06

Secondary Reviewer Initials & Date Checked dlh 5/26/06

- ✓ • Check for compliance with Method and project-specific requirements
- ✓ • Check the completeness of the reported information
- ✓ • Check the information for the report narrative
- ✓ • Check the reasonableness of results

Comments: _____

√- Checked & OK
NA - Not Applicable
DL - Diluted Out

Scanned_____

007128

PFLT

SW846 9095
SOP 9095
Revision 8
Work Group 214100

SAMPLE	ELASPED TIME (MINUTES)	RESULTS	COMMENTS
Blank	5	NFL	Sand
05-576-01	5	NFL	tar-like mud
DUP: 576-01	5	NFL	tar-like mud

NFL: No Free Liquid
FL: Free Liquid

Deanna Roberts
Analyst

5/26/06 @ 1100
Date/Time

Approved by: dm 5/26/06

007129

2.0 Attachments

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Kemron Environmental Services
Analyst Listing
June 12, 2006

AJF - AMANDA J. FICKIESEN	ALB - ANNIE L. BOCK	ALT - ANN L. THAYER
BRG - BRENDA R. GREGORY	CAF - CHERYL A. FLOWERS	CAK - CHERYL A. KOELSCH
CEB - CHAD E. BARNES	CLC - CHRYS L. CRAWFORD	CLK - CARL L. KING
CLS - CARA L. STRICKLER	CLW - CHARISSA L. WINTERS	CM - CHARLIE MARTIN
CMS - CRYSTAL M. STEPHENS	CPD - CHAD P. DAVIS	CRC - CARLA R. COCHRAN
CSA - LUCINDA S. ARNOLD	CSH - CHRIS S. HILL	DAS - DALLAS A. SULLIVAN
DD - DIANE M. DENNIS	DDE - DEBRA D. ELLIOTT	DEL - DON E. LIGHTFRITZ
DEV - DAVID E. VANDENBERG	DGB - DOUGLAS G. BUTCHER	DIH - DEANNA I. HESSON
DLB - DAVID L. BUMGARNER	DLP - DOROTHY L. PAYNE	DLR - DIANNA L. RAUCH
DR - DEANNA ROBERTS	DSM - DAVID S. MOSSOR	DST - DENNIS S. TEPE
ECL - ERIC C. LAWSON	ED - EMILY E. DECKER	HAV - HEMA VILASAGAR
JAL - JOHN A. LENT	JKT - JANE K. THOMPSON	JLS - JANICE L. SCHIMMEL
JNB - JOSHUA N. BOOTH	JWR - JOHN W. RICHARDS	JWS - JACK W. SHEAVES
JYH - JI Y. HU	KCZ - KEVIN C. ZUMBRO	KEB - KATHRYN E. BARNES
KHR - KIM H. RHODES	KRA - KATHY R. ALBERTSON	LKN - LINDA K. NEDEFF
LSB - LESLIE S. BUCINA	MDA - MIKE D. ALBERTSON	MDC - MICHAEL D. COCHRAN
MES - MARY E. SCHILLING	MKZ - MARILYN K. ZUMBRO	MLR - MARY L. ROCHOTTE
MLS - MICHAEL L. SCHIMMEL	MMB - MAREN M. BEERY	MSW - MATT S. WILSON
NJB - NATALIE J. BOOTH	OGT - OKEY G. TUCKER	PAS - PATRICK A. STREET
PJM - PAUL J. MILLER	RB - ROBERT BUCHANAN	RDC - REBECCA D. CUTLIP
REK - ROBERT E. KYER	RWC - RODNEY W. CAMPBELL	SCM - SUSAN C. MOELLENDICK
SLM - STEPHANIE L. MOSSBURG	SLP - SHERI L. PFALZGRAF	SMH - SHAUNA M. HYDE
TMB - TIFFANY M. BAILEY	TMM - TAMMY M. MORRIS	VC - VICKI COLLIER
WFM - WALTER F. MARTIN		

KEMRON Environmental Services

List of Valid Qualifiers

June 09, 2006

Qualkey: CLP

Qualifier	Description
E	Estimated concentration due to interference
E	Estimated concentration.
E	Semiquantitative result (out of instrument calibration range)
J	The analyte was positively identified, but the quantitation was below the RL
J,B	Analyte detected in both the method blank and sample above the MDL.
U	Not detected at or above the reporting limit

*****Special Notes for Organic Analytes**

1. Acrolein and acrylonitrile by method 624 are semi-quantitative screens only.
2. 1,2-Diphenylhydrazine is unstable and is reported as azobenzene.
3. N-nitrosodiphenylamine cannot be separated from diphenylamine.
4. 3-Methylphenol and 4-Methylphenol 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 an are matrix dependent.

COC No. A 61082

156 Starlite Drive
Marietta, OH 45750

KEMRON
ENVIRONMENTAL SERVICES
CHAIN-OF-CUSTODY RECORD

Phone: 740-373-4071
Fax: 740-373-4835

Company Name: CH2M Hill

Project Contact: John Ynfante
Contact Phone #: 713-462-0161

Turn Around Requirements: 14 Days
Location: Houston

Project #: 344479.FI.03
Project Name: State Marine

Sampler (print): Meredith C Harris
Signature: Meredith C. Harris

Program: ☐ NPDES ☐ AFCEE ☐ RCRA ☐ USAGE ☐ Other _____

Sample I.D. No.	Comp*	Grab	Date	Time	Protocol CWA	Protocol SW846	NUMBER OF CONTAINERS	Hold	PFLT	T1005	TCLP-VOC	TCLP (SVOC, pesticide, herbicide, metals)	Metals	SVOCs	ADDITIONAL REQUIREMENTS
IWSB01052406		X	05/24/06	1350			4		1	1	1	1			
SM142SB01052406		X	05/24/06	0920			2						1	1	
SM142SB02052406		X	05/24/06	0945			2						1	1	
SM141SB03052406		X	05/24/06	0825			2						1	1	
SM141FD03052406		X	05/24/06	0825			2						1	1	
SM141SB02052406		X	05/24/06	0815			2						1	1	
SM141SB01052406		X	05/24/06	0750			2						1	1	

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Relinquished by: (Signature)	Date	Time	Received by: (Signature)
Meredith C Harris	05/24/06	1730					

Relinquished by: (Signature)	Date	Time	Received for Laboratory by: (Signature)	Date	Time	Cooler Temp in °C	Remarks:
			Cara Strickler	5/25/06	1005	1°	C/C sealed, Sxls intact OLD

*Homogenize all composite samples prior to analysis

Page 1 of 1

SAMPLE RECEIPT FORM

156 STARLITE DRIVE
MARIETTA, OH
45750
(740) 373-4071

Date: 5/25/06 Client: CH2M HILL Texas

Shipped By: (✓) Fed-Ex ( ) UPS ( )DHL ( ) KEMRON ( ) Client ( ) Other 1005

Opened By: SRZ

Logged By: CJO Login # L06 5576

IR Temp Gun: (✓) D ( ) F

COOLER INFORMATION

Number	Cooler ID	Temp °C	Airbill#	COC#	Other
1	1163	1	856431636790		
2					
3					
4					
5					
6					

Were all coolers sealed?	(Y)	N	N/A
Were custody seals used on all coolers?	(Y)	N	N/A
Were custody seals intact?	(Y)	N	N/A
Was visible ice present?	(Y)	N	N/A
Were all coolers in the temperature range of 2-6C? (>6C*)	Y	(N)	N/A
Were the samples frozen?*	Y	(N)	N/A
Were COC papers provided?	(Y)	N	N/A
Were all sample containers intact?*	(Y)	N	N/A
Were all sample labels intact?	(Y)	N	N/A
Were all sample labels legible?*	(Y)	N	N/A
Did all sample labels match the COC?*	Y	(N)	N/A
Was the label information complete?*	(Y)	N	N/A
Were the correct containers used?*	(Y)	N	N/A
Were the correct preservatives added to water samples?*	Y	N	(N/A)
Was the pH tested on preserved water samples?	Y	N	(N/A)
Were pH ranges acceptable?*	Y	N	(N/A)
Was sufficient amount of sample provided?*	(Y)	N	N/A
Were bubbles present in VOA samples?*	Y	N	(N/A)
Were COC's signed and dated?	(Y)	N	N/A
Did samples arrive before hold time expired?*	(Y)	N	N/A
Are discrepancy forms attached?	(Y)	N	N/A

**Requires a discrepancy form*

Comments:_____

CRF #1
Revised 8/22/03

007135

KEMRON
ENVIRONMENTAL SERVICES

CRF#4

Sample Discrepancy Form

Client: CH2MNill- Project: _____

Date Received: 5-25-06

_____ Cooler temperature > than 6 degrees Celsius

Reason _____

_____ Samples received not on chain of custody

_____ Samples on chain of custody not received

✓ Information on sample containers different from chain of custody

SM141 SB01052406 1 jar = 0740 1 jar = 0750 Logged per COC.

_____ Sample containers received broken, leaking or not sealed (List sample ID)

_____ pH out (List sample ID, which container, pH prior to adjusting, amount of acid, preservative)

_____ Insufficient sample volume

_____ Air bubbles present in VOA vials (List sample ID)

_____ Hold time expired (List sample ID)

Service Representative:
Was client notified regarding information: **YES** **NO**
Name of Person contacted: _____ Company: _____
Service Representative: _____ Date: _____

Last Revised 08/22/03

KEMRON Environmental Services
Internal Chain of Custody Report
Login: L0605576
Account: 2736
Project: 2736.035
Samples: 7
Due Date: 05-JUN-2006

Samplenum	Container ID	Products
L0605576-01	240325	TC-EX

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish
1	LOGIN			25-MAY-2006 12:03	CLS	
2	PREP	W1	TCL	25-MAY-2006 12:56	RWC	BRG
3	STORE	TCL	A1	30-MAY-2006 12:44	CLS	EED

Samplenum	Container ID	Products
L0605576-01	240326	TC-ZHE

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish
1	LOGIN			25-MAY-2006 12:03	CLS	
2	PREP	W1	TCL	25-MAY-2006 12:56	RWC	BRG
3	STORE	TCL	A1	30-MAY-2006 12:44	CLS	EED

Samplenum	Container ID	Products
L0605576-01	240327	T1005

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish
1	LOGIN			25-MAY-2006 12:03	CLS	
2	PREP	V1	SEM	31-MAY-2006 10:57	HV	CLS

Samplenum	Container ID	Products
L0605576-01	240328	PCT-S PFLT

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish
1	LOGIN			25-MAY-2006 12:03	CLS	
2	ANALYZ	W1	WET	26-MAY-2006 09:57	DR	BRG
3	STORE	WET	A1	26-MAY-2006 14:25	BRG	TMM

Samplenum	Container ID	Products
L0605576-01	241044	827-TC

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish
1	LOGIN			30-MAY-2006 13:00	ED	

Bottle: 2

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish
1	LOGIN			30-MAY-2006 13:00	ED	

KEMRON Environmental Services
Internal Chain of Custody Report
Login: L0605576
Account: 2736
Project: 2736.035
Samples: 7
Due Date: 05-JUN-2006

Samplenum	Container ID	Products
L0605576-01	241047	8081-TC

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish
1	LOGIN			30-MAY-2006 13:03	ED	

Bottle: 2

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish
1	LOGIN			30-MAY-2006 13:03	ED	

Samplenum	Container ID	Products
L0605576-01	241049	8151-TC

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish
1	LOGIN			30-MAY-2006 13:07	ED	

Bottle: 2

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish
1	LOGIN			30-MAY-2006 13:07	ED	

Samplenum	Container ID	Products
L0605576-01	241052	826-TC

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish
1	LOGIN			30-MAY-2006 13:09	ED	

Bottle: 2

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish
1	LOGIN			30-MAY-2006 13:09	ED	

Samplenum	Container ID	Products
L0605576-01	241067	TC-AG TC-AS TC-BA TC-CD TC-CR TC-HG TC-PB TC-S

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish
1	LOGIN			30-MAY-2006 13:13	ED	

KEMRON Environmental Services
Internal Chain of Custody Report
Login: L0605576
Account: 2736
Project: 2736.035
Samples: 7
Due Date: 05-JUN-2006

Samplenum	Container ID	Products
L0605576-02	240329	AG-AX AL AS-AX BA BE CA CD-AX CO CR CU FE HG K

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish
1	LOGIN			25-MAY-2006 12:03	CLS	
2	PREP	W1	DIG	25-MAY-2006 13:27	REK	BRG
3	ANALYZ	DIG	WET	25-MAY-2006 16:12	TMM	EED
4	ANALYZ	WET	DIG	26-MAY-2006 11:03	REK	TMM
5	STORE	DIG	A1	26-MAY-2006 14:19	BRG	REK

Samplenum	Container ID	Products
L0605576-02	240330	827-SPE

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish
1	LOGIN			25-MAY-2006 12:03	CLS	
2	PREP	W1	EXT	25-MAY-2006 13:06	CEB	CLS
3	STORE	EXT	A1	25-MAY-2006 15:36	CLS	CEB

Samplenum	Container ID	Products
L0605576-03	240331	AG-AX AL AS-AX BA BE CA CD-AX CO CR CU FE HG K

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish
1	LOGIN			25-MAY-2006 12:03	CLS	
2	PREP	W1	DIG	25-MAY-2006 13:27	REK	BRG
3	ANALYZ	DIG	WET	25-MAY-2006 16:12	TMM	EED
4	ANALYZ	WET	DIG	26-MAY-2006 11:03	REK	TMM
5	STORE	DIG	A1	26-MAY-2006 14:19	BRG	REK

Samplenum	Container ID	Products
L0605576-03	240332	827-SPE

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish
1	LOGIN			25-MAY-2006 12:03	CLS	
2	PREP	W1	EXT	25-MAY-2006 13:06	CEB	CLS
3	STORE	EXT	A1	25-MAY-2006 15:36	CLS	CEB

KEMRON Environmental Services
Internal Chain of Custody Report
Login: L0605576
Account: 2736
Project: 2736.035
Samples: 7
Due Date: 05-JUN-2006

Samplenum	Container ID	Products
L0605576-04	240333	AG-AX AL AS-AX BA BE CA CD-AX CO CR CU FE HG K

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish
1	LOGIN			25-MAY-2006 12:03	CLS	
2	PREP	W1	DIG	25-MAY-2006 13:27	REK	BRG
3	ANALYZ	DIG	WET	25-MAY-2006 16:12	TMM	EED
4	ANALYZ	WET	DIG	26-MAY-2006 11:03	REK	TMM
5	STORE	DIG	A1	26-MAY-2006 14:19	BRG	REK

Samplenum	Container ID	Products
L0605576-04	240334	827-SPE

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish
1	LOGIN			25-MAY-2006 12:03	CLS	
2	PREP	W1	EXT	25-MAY-2006 13:05	CEB	CLS
3	STORE	EXT	A1	25-MAY-2006 15:36	CLS	CEB

Samplenum	Container ID	Products
L0605576-05	240335	AG-AX AL AS-AX BA BE CA CD-AX CO CR CU FE HG K

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish
1	LOGIN			25-MAY-2006 12:03	CLS	
2	PREP	W1	DIG	25-MAY-2006 13:27	REK	BRG
3	ANALYZ	DIG	WET	25-MAY-2006 16:12	TMM	EED
4	ANALYZ	WET	DIG	26-MAY-2006 11:03	REK	TMM
5	STORE	DIG	A1	26-MAY-2006 14:19	BRG	REK

Samplenum	Container ID	Products
L0605576-05	240336	827-SPE

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish
1	LOGIN			25-MAY-2006 12:03	CLS	
2	PREP	W1	EXT	25-MAY-2006 13:06	CEB	CLS
3	STORE	EXT	A1	25-MAY-2006 15:36	CLS	CEB

KEMRON Environmental Services
Internal Chain of Custody Report
Login: L0605576
Account: 2736
Project: 2736.035
Samples: 7
Due Date: 05-JUN-2006

Samplenum	Container ID	Products
L0605576-06	240337	AG-AX AL AS-AX BA BE CA CD-AX CO CR CU FE HG K

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish
1	LOGIN			25-MAY-2006 12:03	CLS	
2	PREP	W1	DIG	25-MAY-2006 13:27	REK	BRG
3	ANALYZ	DIG	WET	25-MAY-2006 16:12	TMM	EED
4	ANALYZ	WET	DIG	26-MAY-2006 11:03	REK	TMM
5	STORE	DIG	A1	26-MAY-2006 14:19	BRG	REK

Samplenum	Container ID	Products
L0605576-06	240338	827-SPE

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish
1	LOGIN			25-MAY-2006 12:03	CLS	
2	PREP	W1	EXT	25-MAY-2006 13:05	CEB	CLS
3	STORE	EXT	A1	25-MAY-2006 15:36	CLS	CEB

Samplenum	Container ID	Products
L0605576-07	240339	AG-AX AL AS-AX BA BE CA CD-AX CO CR CU FE HG K

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish
1	LOGIN			25-MAY-2006 12:03	CLS	
2	PREP	W1	DIG	25-MAY-2006 13:27	REK	BRG
3	ANALYZ	DIG	WET	25-MAY-2006 16:12	TMM	EED
4	ANALYZ	WET	DIG	26-MAY-2006 11:03	REK	TMM
5	STORE	DIG	A1	26-MAY-2006 14:19	BRG	REK

Samplenum	Container ID	Products
L0605576-07	240340	827-SPE

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish
1	LOGIN			25-MAY-2006 12:03	CLS	
2	PREP	W1	EXT	25-MAY-2006 13:06	CEB	CLS
3	STORE	EXT	A1	25-MAY-2006 15:36	CLS	CEB
4	PREP	A1	EXT	01-JUN-2006 08:06	CEB	CLS
5	STORE	EXT	A1	01-JUN-2006 09:34	CLS	CEB

KEMRON REPORT L0606049
PREPARED FOR CH2MHILL, Inc
WORK ID: STATE MARINE SUPERFUND SITE

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156 Starlite Drive, Marietta, OH 45750 ● TEL 740-373-4071 ● FAX 740-373-4835 ● http://www.kemron.com

Laboratory Report Number: L0606049

Please find enclosed the analytical results for the samples you submitted to KEMRON Environmental Services.

Review and compilation of your report was completed by KEMRON's Sales and Service Team. If you have questions, comments or require further assistance regarding this report, please contact your team member noted in the reviewed box bleow at 800-373-4071. Team member e-mail addresses also appear here for your convenience.

Debra Elliott - Team Leader
delliott@kemron-lab.com

Amanda Fickiesen - Client Services Specialist
afickiesen@kemron-lab.com

Cheryl Koelsch - Team Chemist/Data Specialist
ckoelsch@kemron-lab.com

Annie Bock - Client Services Specialist
abock@kemron-lab.com

Stephanie Mossburg - Team Chemist/Data Specialist
smossburg@kemron-lab.com

Kathy Albertson - Team Chemist/Data Specialist
kalbertson@kemron-lab.com

This report was reviewed on June 20, 2006.

CHERYL KOELSCH - Team Chemist/Data Specialist

I certify that all test results meet all of the requirements of the NELAP standards and other applicable contract terms and conditions. All results for soil samples are reported on a 'dry-weight' basis unless specified otherwise. Analytical results for water and wastes are reported on a 'as received' basis unless specified otherwise. A statement of uncertainty for each analysis is available upon request. This laboratory report shall not be reproduced, except in full, without the written approval of KEMRON Environmental Services.

This report was certified on June 20, 2006.

David Vandenberg - Vice President

FL DOH NELAP ID: E8755
This report contains a total of 302 pages.

Protecting Our Environmental Future

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1.0 Summary Report

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LABORATORY REPORT

L0606049

06/20/06 08:37

Submitted By

KEMRON Environmental Services
156 Starlite Drive
Marietta , OH 45750
(740) 373 - 4071

For

Account Name: CH2MHILL, Inc
7600 Tidwell Road
Suite 400
San Antonio, TX 77040
Attention: John Ynfante

Account Number: 2736
Work ID: STATE MARINE RI

P.O. Number: 915193

Sample Summary

Client ID	Lab ID	Date Collected	Date Received
IWGW01053106	L0606049-01	31-MAY-06	02-JUN-06

KEMRON FORMS - Modified 02/14/2006
Version 1.5 PDF File ID: 496631
Report generated 06/20/2006 08:37

KEMRON ENVIRONMENTAL SERVICES
REPORT NARRATIVE

KEMRON Login No.: L0606049

CHAIN OF CUSTODY: The chain of custody was nor numbered.

SHIPMENT CONDITIONS: The chain of custody forms were received sealed in a cooler. The cooler temperature was 2 degrees C.

SAMPLE MANAGEMENT: The COC stated that TCLP parameters should be analyzed, however totals will be analyzed per customer request. All samples received were intact.

L0606049-01 IWGW01053106

I certify that this data package is in compliance with the terms and conditions agreed to by the client and KEMRON Environmental Services, both technically and for completeness, except for the conditions noted above. Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or designated person, as verified by the following signature.

Approved: 05-JUN-06

1.1 Volatiles Data

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1.1.1 Volatiles GCMS Data (8260)

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KEMRON ENVIRONMENTAL SERVICES
GC/MS VOLATILE ORGANICS

KEMRON Login No.: L0606049

METHOD

Preparation: SW-846 5030B

Analysis: SW-846 8260B

HOLDING TIMES

Sample Preparation: All holding times were met.

Sample Analysis: All holding times were met.

PREPARATION

Sample preparation proceeded normally.

CALIBRATION

Initial Calibration: For all compounds which yielded a %RSD greater than 15%, linear or higher order equations were applied. All acceptance criteria were met.

Alternate Source Standards: All acceptance criteria were met.

Continuing Calibration and Tune: All acceptance criteria were met.

BATCH QA/QC

Method Blank: All acceptance criteria were met.

Laboratory Control Sample: All acceptance criteria were met.

Matrix Spike: The MS/MSD results were not associated with this sample delivery group (SDG), due to insufficient volume of sample. The laboratory included an LCS and LCS duplicate in the preparation batch in lieu of the NELAC prescribed MS/MSD. Kemron recommends site specific MS/MSD samples to avoid possible data qualifications.

SAMPLES

Internal Standards: All acceptance criteria were met.

Surrogates: All acceptance criteria were met.

Samples: All acceptance criteria were met.

I certify that this data package is in compliance with the terms and conditions agreed to by the client and KEMRON Environmental Services, both technically and for completeness, except for the conditions noted above. Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or designated person, as verified by the following signature.

Analyst: MES

Approved: 12-JUN-06

LABORATORY REPORT

L0606049

06/20/06 08:37

Submitted By

KEMRON Environmental Services
156 Starlite Drive
Marietta , OH 45750
(740) 373 - 4071

For

Account Name: CH2MHILL, Inc
7600 Tidwell Road
Suite 400
San Antonio, TX 77040
Attention: John Ynfante

Account Number: 2736
Work ID: STATE MARINE RI

P.O. Number: 915193

Sample Analysis Summary

Client ID	Lab ID	Method	Dilution	Date Received
IWGW01053106	L0606049-01	8260B	1	02-JUN-06

Report Number: **L0606049**
Report Date : **June 20, 2006**

Sample Number: **L0606049-01**
Client ID: **IWGW01053106**
Matrix: **Water**
Workgroup Number: **WG214936**
Collect Date: **05/31/2006 16:00**

PrePrep Method: **NONE**
Prep Method: **5030B**
Analytical Method: **8260B**
Analyst: **MES**
Dilution: **1**
Units: **ug/L**

Instrument: **HPMS10**
Prep Date: **06/09/2006 23:08**
Cal Date: **05/31/2006 20:02**
Run Date: **06/09/2006 23:08**
File ID: **10M46529**

Analyte	CAS. Number	Result	Qual	PQL	SQL
Benzene	71-43-2		U	5.00	0.125
Carbon tetrachloride	56-23-5		U	5.00	0.250
Chlorobenzene	108-90-7		U	5.00	0.125
Chloroform	67-66-3		U	5.00	0.125
1,2-Dichloroethane	107-06-2		U	5.00	0.250
1,1-Dichloroethene	75-35-4		U	5.00	0.500
Methyl Ethyl Ketone	78-93-3		U	10.0	2.50
Tetrachloroethene	127-18-4		U	5.00	0.250
Trichloroethene	79-01-6		U	5.00	0.250
Vinyl chloride	75-01-4		U	10.0	0.250
1,4-Dichlorobenzene	106-46-7		U	5.00	0.125

Surrogate	% Recovery	Lower	Upper	Qual
Dibromofluoromethane	102	86	118	
1,2-Dichloroethane-d4	113	80	120	
Toluene-d8	98.8	88	110	
4-Bromofluorobenzene	100	86	115	

U Not detected at or above the reporting limit

1.1.1.1 QC Summary

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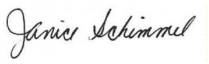
Checklist ID: 7813

KEMRON Environmental Services
Data Checklist

Date: 31-MAY-2006
Analyst: JLS
Analyst: NA
Method: 8260B/624
Instrument: HPMS10
Curve Workgroup: NA
Analytical Workgroups: WG214307

Runlog ID number:	10622
System Performance Check	X
BFB	X
Initial Calibration	X
Average RF	X
Linear Reg or Higher Order Curve	X
Second Source standard % Difference	X
Continuing Calibration /Check Standards	X
Project/Client Specific Requirements	X
Special Standards	X
Blanks	X
TCL's	X
Surrogates	X
LCS (Laboratory Control Sample)	NA
Recoveries	NA
Surrogates	NA
MS/MSD/Duplicates	NA
Samples	NA
TCL Hits	NA
Spectra of TCL Hits	NA
Surrogates	NA
Internal Standards Criteria	NA
Library Searches	NA
Calculations & Correct Factors	X
Dilutions Run	NA
Reruns	NA
Manual Integrations	X
Case Narrative	NA
Results Reporting/Data Qualifiers	NA
KOBRA Workgroup Data	X
Check for Completeness	X
Primary Reviewer	JLS
Secondary Reviewer	MDA
Check for compliance with method and project specific requirements	X
Check the completeness of reported information	X
Check the information for the report narrative	X
Check the reasonableness of the results	X

Primary Reviewer:
01-JUN-2006



Secondary Reviewer:
01-JUN-2006

Generated: JUN-01-2006 15:32:43

Checklist ID: 7942

KEMRON Environmental Services
Data Checklist

Date: 09-JUN-2006
Analyst: MES
Analyst: NA
Method: 8260/624
Instrument: HPMS10
Curve Workgroup: NA
Analytical Workgroups: WG214936

Runlog ID number:	10744
System Performance Check	NA
BFB	X
Initial Calibration	X
Average RF	X
Linear Reg or Higher Order Curve	X
Second Source standard % Difference	X
Continuing Calibration /Check Standards	X
Project/Client Specific Requirements	X
Special Standards	X
Blanks	X
TCL's	X
Surrogates	X
LCS (Laboratory Control Sample)	X
Recoveries	X
Surrogates	X
MS/MSD/Duplicates	NA
Samples	X
TCL Hits	X
Spectra of TCL Hits	X
Surrogates	X
Internal Standards Criteria	X
Library Searches	NA
Calculations & Correct Factors	X
Dilutions Run	X
Reruns	X
Manual Integrations	X
Case Narrative	X
Results Reporting/Data Qualifiers	X
KOBRA Workgroup Data	X
Check for Completeness	X
Primary Reviewer	MES
Secondary Reviewer	JLS
Check for compliance with method and project specific requirements	X
Check the completeness of reported information	X
Check the information for the report narrative	X
Check the reasonableness of the results	X

Primary Reviewer:

Secondary Reviewer:
12-JUN-2006

Generated: JUN-12-2006 15:29:31

Run Log ID: **10622**

KEMRON Environmental Services

Instrument Run Log

Instrument: HPMS10 Dataset: 053106
Analyst1: JLS Analyst2: NA
Method: 8260B SOP: MSV01 Rev: 8
Method: 624 SOP: MSV10 Rev: 6
Method: 5030B SOP: PAT01 Rev: 8

Internal Standard: STD12480 Surrogate Standard: STD12788
CCV: STD12828 LCS: STD12865 MS/MSD: NA

Column 1 ID: RTX502.2 Column 2 ID: NA

Workgroups: WG214307

Comments:

Seq.	File ID	Sample Information	pH	Mat	Dil	Reference	Date/Time
1	10M46331	WG214307-01 50ng BFB 8260	NA	1	1	STD12453	05/31/06 13:09
2	10M46332	WG214307-02 50ug/L STD 8260	NA	1	1	STD12828	05/31/06 13:31
3	10M46333	SYSTEM BLANK	NA	1	1		05/31/06 14:02
4	10M46334	SYSTEM BLANK	NA	1	1		05/31/06 14:32
5	10M46335	WG214307-02 .3ug/L STD 8260	NA	1	1	STD12828	05/31/06 15:58
6	10M46336	WG214307-03 .4ug/L STD 8260	NA	1	1	STD12828	05/31/06 16:29
7	10M46337	WG214307-04 1ug/L STD 8260	NA	1	1	STD12828	05/31/06 16:59
8	10M46338	WG214307-05 2ug/L STD 8260	NA	1	1	STD12828	05/31/06 17:30
9	10M46339	WG214307-06 5ug/L STD 8260	NA	1	1	STD12828	05/31/06 18:01
10	10M46340	WG214307-07 20ug/L STD 8260	NA	1	1	STD12828	05/31/06 18:31
11	10M46341	WG214307-08 50ug/L STD 8260	NA	1	1	STD12828	05/31/06 19:01
12	10M46342	WG214307-09 100ug/L STD 8260	NA	1	1	STD12828	05/31/06 19:32
13	10M46343	WG214307-10 200ug/L STD 8260	NA	1	1	STD12828	05/31/06 20:02
14	10M46344	SYSTEM BLANK	NA	1	1		05/31/06 20:33
15	10M46345	SYSTEM BLANK	NA	1	1		05/31/06 21:04
16	10M46346	WG214307-11 20ug/L ALT SOURCE 8260	NA	1	1	STD12718	05/31/06 21:34

Comments

Seq.	Rerun	Dil.	Reason	Analytes
2	X		Check Standard Failure	
File ID: 10M46332				
Run new ICAL.				

Approved: June 01, 2006

Page: 1 of 1

007161

Run Log ID:**10744**

KEMRON Environmental Services

Instrument Run Log

Instrument: HPMS10 Dataset: 060906
Analyst1: MES Analyst2: NA
Method: 8260B SOP: MSV01 Rev: 10
Method: 624 SOP: MSV10 Rev: 9
Method: 5030B SOP: PAT01 Rev: 9

Internal Standard: STD12619 Surrogate Standard: STD13056
CCV: STD13053/STD12897 LCS: STD12865 MS/MSD: NA

Column 1 ID: RTX502.2 Column 2 ID: NA

Workgroups: WG214936

Comments:

Seq.	File ID	Sample Information	pH	Mat	Dil	Reference	Date/Time
1	10M46500	WG214935-01 50NG BFB STD 8260	NA	1	1	STD12453	06/09/06 08:32
2	10M46501	WG214935-02 50ug/L WATER STD 8260	NA	1	1	STD12828	06/09/06 09:02
3	10M46502	WG214935-02 50ug/L WATER STD 8260	NA	1	1	STD12828	06/09/06 09:35
4	10M46503	SYSTEM CHECK	NA	1	1		06/09/06 10:06
5	10M46504	SYSTEM CHECK	NA	1	1		06/09/06 10:38
6	10M46505	SYSTEM BLANK	NA	1	1		06/09/06 11:08
7	10M46506	WG214935-01 50NG BFB STD 8260	NA	1	1	STD12977	06/09/06 11:44
8	10M46507	WG214935-02 50ug/L WATER STD 8260	NA	1	1	STD12828/STD12897	06/09/06 12:11
9	10M46508	WG214935-02 50ug/L WATER STD 8260	NA	1	1	STD12828/STD12897	06/09/06 12:43
10	10M46509	WG214936-01 VBLK0609 BLANK 8260	NA	1	1		06/09/06 13:22
11	10M46510	WG214936-01 VBLK0609 BLANK 8260	NA	1	1		06/09/06 13:52
12	10M46511	WG214936-02 20ug/L LCS 8260	NA	1	1	STD12865	06/09/06 14:24
13	10M46512	WG214935-01 50NG BFB STD 8260	NA	1	1	STD12977	06/09/06 14:50
14	10M46513	WG214935-01 50NG BFB STD 8260	NA	1	1	STD12977	06/09/06 15:02
15	10M46514	WG214935-02 50ug/L WATER STD 8260	NA	1	1	STD13053/STD12897	06/09/06 15:25
16	10M46515	WG214936-01 VBLK0609 BLANK 8260	NA	1	1		06/09/06 15:55
17	10M46516	WG214936-02 20ug/L LCS 8260	NA	1	1	STD12865	06/09/06 16:26
18	10M46517	WG214936-03 20ug/L LCSDUP 8260	NA	1	1	STD12865	06/09/06 16:56
19	10M46518	L0606033-01 B 100X 826-SPE	<2	1	100		06/09/06 17:27
20	10M46519	L0606004-01 B D1 100X 826-SPE	<2	1	100		06/09/06 17:58
21	10M46520	L0606115-01 A 826-SPE	<2	1	1		06/09/06 18:29
22	10M46521	L0606157-02 A 826-SPE	<2	1	1		06/09/06 18:59
23	10M46522	L0606002-02 A 826-LOW	<2	1	1		06/09/06 19:30
24	10M46523	L0606055-01 B 8260	<2	1	1		06/09/06 20:00
25	10M46524	L0606055-02 B 8260	<2	1	1		06/09/06 20:32
26	10M46525	L0606017-07 B 826-SPE	<2	1	1		06/09/06 21:03
27	10M46526	L0606017-08 B 826-SPE	<2	1	1		06/09/06 21:34
28	10M46527	L0606017-09 B 826-SPE	<2	1	1		06/09/06 22:05
29	10M46528	L0606017-10 B 826-SPE	<2	1	1		06/09/06 22:36
30	10M46529	L0606049-01 B 826-SPE	3	1	1		06/09/06 23:08
31	10M46530	L0606002-01 A 826-LOW	<2	1	1		06/09/06 23:39
32	10M46531	L0606115-02 A 826-SPE	<2	1	1		06/10/06 00:11

Approved:

Run Log ID: **10744**

KEMRON Environmental Services

Instrument Run Log

Instrument: HPMS10 Dataset: 060906
Analyst1: MES Analyst2: NA
Method: 8260B SOP: MSV01 Rev: 10
Method: 624 SOP: MSV10 Rev: 9
Method: 5030B SOP: PAT01 Rev: 9

Internal Standard: STD12619 Surrogate Standard: STD13056
CCV: STD13053/STD12897 LCS: STD12865 MS/MSD: NA

Column 1 ID: RTX502.2 Column 2 ID: NA

Workgroups: WG214936

Seq.	File ID	Sample Information	pH	Mat	Dil	Reference	Date/Time
33	10M46532	L0606157-01 A 826-SPE	<2	1	1		06/10/06 00:42
34	10M46533	L0606157-03 A 826-SPE	<2	1	1		06/10/06 01:14
35	10M46534	L0606170-01 A 826-SPE	<2	1	1		06/10/06 01:45
36	10M46535	L0606170-02 A 826-SPE	4	1	1		06/10/06 02:17
37	10M46536	L0606033-03 B 826-SPE	<2	1	1		06/10/06 02:49
38	10M46537	SYSTEM BLANK	NA	1	1		06/10/06 03:21
39	10M46538	WG214936-04 624 BLANK	NA	2	1		06/10/06 03:52
40	10M46539	L0606246-01 A 624-SPE1	5	2	1		06/10/06 04:24
41	10M46540	L0605602-01 A 826-REF-BLK	NA	1	1		06/10/06 04:56
42	10M46541	L0605602-02 A 826-REF-BLK	NA	1	1		06/10/06 05:27
43	10M46542	L0605602-03 A 826-REF-BLK	NA	1	1		06/10/06 05:59
44	10M46543	L0605602-04 A 826-REF-BLK	NA	1	1		06/10/06 06:31
45	10M46544	L0605602-05 A 826-REF-BLK	NA	1	1		06/10/06 07:03

Comments

Seq.	Rerun	Dil.	Reason	Analytes
2				
File ID: 10M46501				
	RR-IS is low, SS is high.			
3				
File ID: 10M46502				
	RR-IS is low, SS is high.			
8				
File ID: 10M46507				
	RR-IS is low, SS is high.			
9				
File ID: 10M46508				
	RR-IS is low, SS is high. On thursday I adjusted the valves controlling He pressure to the surrogate and IS vessels. This has messed up the IS/SS responses. Returned them to their original positions.			
13				
File ID: 10M46512				
	RR-BFB failed.			
19				

Approved:

Run Log ID: **10744**

KEMRON Environmental Services

Instrument Run Log

Instrument: HPMS10 Dataset: 060906

Analyst1: MES Analyst2: NA

Method: 8260B SOP: MSV01 Rev: 10

Method: 624 SOP: MSV10 Rev: 9

Method: 5030B SOP: PAT01 Rev: 9

Internal Standard: STD12619 Surrogate Standard: STD13056

CCV: STD13053/STD12897 LCS: STD12865 MS/MSD: NA

Column 1 ID: RTX502.2 Column 2 ID: NA

Workgroups: WG214936

Comments

Seq.	Rerun	Dil.	Reason	Analytes
File ID: 10M46518				
	Do not report-ran the wrong sample.			
34	X	10	Over Calibration Range	acetone
File ID: 10M46533				
37				
File ID: 10M46536				
	Do not report-not needed.			
41	X	1	Carry-over contamination	
File ID: 10M46540				
	Do not report.			
42	X	1	Carry-over contamination	
File ID: 10M46541				
	Do not report.			
43	X	1	Carry-over contamination	
File ID: 10M46542				
	Do not report.			

Approved:

KEMRON Environmental Services
HOLDING TIMES
EQUIVALENT TO AFCEE FORM 9

Analytical Method: 8260B **AAB#:** WG214936
Login Number: L0606049

Client ID	Date Collected	Date Received	Date Extracted	Max Hold Time Ext.	Time Held Ext.	Date Analyzed	Max Hold Time Anal	Time Held Anal.	Q
IWGW01053106	05/31/06	06/02/06	06/09/06	14	9.30	06/09/06	14	9.30	

* EXT = SEE PROJECT QAPP REQUIREMENTS
*ANAL = SEE PROJECT QAPP REQUIREMENTS

KEMRON FORMS - Modified 02/14/2006
Version 1.5 PDF File ID: 494363
Report generated 06/12/2006 16:14

KEMRON Environmental Services

SURROGATE STANDARDS

Login Number: L0606049
Instrument Id: HPMS10
Workgroup (AAB#): WG214936

Method: 8260
CAL ID: HPMS10-31-MAY-06
Matrix: WATER

Sample Number	Dilution	Tag	1	2	3	4
L0606049-01	1.00	01	113	102	100	98.8
WG214936-01	1.00	01	99.8	99.1	97.4	101
WG214936-02	1.00	01	101	100	97.3	99.9
WG214936-03	1.00	01	104	102	99.0	100
WG214936-04	1.00	01	101	95.4	96.5	99.1

Surrogates	Surrogate Limits		
1 - 1,2-Dichloroethane-d4	80	-	120
2 - Dibromofluoromethane	86	-	118
3 - 4-Bromofluorobenzene	86	-	115
4 - Toluene-d8	88	-	110

Underline = Result out of surrogate limits

DL = surrogate diluted out
ND = surrogate not detected

KEMRON FORMS - Modified 04/18/2006
Version 1.5 PDF File ID: 494373
Report generated 06/12/2006 16:14

KEMRON Environmental Services

METHOD BLANK SUMMARY

Login Number:	L0606049	Work Group:	WG214936
Blank File ID:	10M46515	Blank Sample ID:	WG214936-01
Date Analyzed:	06/09/06	Instrument ID:	HPMS10
Time Analyzed:	15:55	Method:	8260B
Analyst:	MES		

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG214936-02	10M46516	06/09/06 16:26	01
LCS2	WG214936-03	10M46517	06/09/06 16:56	01
IWGW01053106	L0606049-01	10M46529	06/09/06 23:08	01
BLANK2	WG214936-04	10M46538	06/10/06 03:52	01

KEMRON FORMS - Modified 03/06/2006
Version 1.5 PDF File ID: 494364
Report generated 06/12/2006 16:14

KEMRON Environmental Services

METHOD BLANK REPORT

Login Number: L0606049	Run Date: 06/09/2006	Sample ID: WG214936-01
Instrument ID: HPMS10	Run Time: 15:55	Prep Method: 5030B
File ID: 10M46515	Analyst: MES	Method: 8260B
Workgroup (AAB#): WG214936	Matrix: Water	Units: ug/L
Contract #:	Cal ID: HPMS10-31-MAY-06	

Analytes	SQL	PQL	Concentration	Dilution	Qualifier
Benzene	0.125	5.00	0.125	1	U
Carbon tetrachloride	0.250	5.00	0.250	1	U
Chlorobenzene	0.125	5.00	0.125	1	U
Chloroform	0.125	5.00	0.125	1	U
1,2-Dichloroethane	0.250	5.00	0.250	1	U
1,1-Dichloroethene	0.500	5.00	0.500	1	U
Methyl Ethyl Ketone	2.50	10.0	2.50	1	U
Tetrachloroethene	0.250	5.00	0.250	1	U
Trichloroethene	0.250	5.00	0.250	1	U
Vinyl chloride	0.250	10.0	0.250	1	U
1,4-Dichlorobenzene	0.125	5.00	0.125	1	U

Surrogates	% Recovery	Surrogate Limits			Qualifier
Dibromofluoromethane	99.1	86	-	118	PASS
1,2-Dichloroethane-d4	99.8	80	-	120	PASS
Toluene-d8	101	88	-	110	PASS
4-Bromofluorobenzene	97.4	86	-	115	PASS

MDL Method Detection Limit
RL Reporting/quantitation Limit

* Analyte concentration > RL

KEMRON FORMS - Modified 05/01/2006
Version 1.5 PDF File ID: 494365
Report generated 06/12/2006 16:14

KEMRON Environmental Services

LABORATORY CONTROL SAMPLE (LCS)

Login Number: L0606049 Analyst: MES Prep Method: 5030B
Instrument ID: HPMS10 Matrix: Water Method: 8260B
Workgroup (AAB#): WG214936 Units: ug/L
Sample ID: WG214936-02 LCS File ID: 10M46516 Run Date: 06/09/2006 16:26
Sample ID: WG214936-03 LCS2 File ID: 10M46517 Run Date: 06/09/2006 16:56

Analytes	LCS			LCS2			%RPD	%Rec Limits	RPD Lmt	Q
	Known	Found	% REC	Known	Found	% REC				
Benzene	20.0	20.4	102	20.0	19.8	98.9	3.27	80 - 121	20	
Carbon tetrachloride	20.0	22.7	114	20.0	21.7	109	4.51	65 - 140	20	
Chlorobenzene	20.0	21.2	106	20.0	20.5	103	3.23	80 - 120	20	
Chloroform	20.0	22.4	112	20.0	21.6	108	3.61	80 - 125	20	
1,2-Dichloroethane	20.0	22.6	113	20.0	22.4	112	0.912	80 - 129	20	
1,1-Dichloroethene	20.0	19.8	98.8	20.0	19.0	95.0	3.92	80 - 132	20	
Methyl Ethyl Ketone	20.0	20.2	101	20.0	21.3	107	5.70	30 - 150	20	
Tetrachloroethene	20.0	21.3	106	20.0	20.5	102	3.79	80 - 124	20	
Trichloroethene	20.0	21.2	106	20.0	20.3	102	3.99	80 - 122	20	
Vinyl chloride	20.0	18.6	93.1	20.0	17.7	88.6	4.96	65 - 140	20	
1,4-Dichlorobenzene	20.0	21.0	105	20.0	20.5	103	2.13	80 - 120	20	

Surogates	LCS	LCS2	Surrogate Limits	Qualifier
	% Recovery	% Recovery		
Dibromofluoromethane	100	102	86 - 118	PASS
1,2-Dichloroethane-d4	101	104	80 - 120	PASS
Toluene-d8	99.9	100	88 - 110	PASS
4-Bromofluorobenzene	97.3	99.0	86 - 115	PASS

* FAILS %REC LIMIT

\# FAILS RPD LIMIT

KEMRON FORMS - Modified 06/02/2006
Version 1.5 PDF File ID: 494366
Report generated 06/12/2006 16:14

KEMRON ENVIRONMENTAL SERVICES
ORGANIC INSTRUMENT CHECK

BFB

Login Number: L0606049 Tune ID: WG214307-01
Instrument: HPMS10 Run Date: 05/31/2006
Analyst: JLS Run Time: 13:09
Workgroup: WG214307 File ID: 10M46331
Cal ID: HPMS10-31-MAY-06

Target	Rel. to	Lower	Upper	Rel.	Raw	Result
50.0	95.0	15.0	40.0	19.4	9156	PASS
75.0	95.0	30.0	60.0	42.5	20008	PASS
95.0	95.0	100	100	100	47104	PASS
96.0	95.0	5.00	9.00	7.64	3597	PASS
173	174	0	2.00	0	0	PASS
174	95.0	50.0	100	79.3	37341	PASS
175	174	5.00	9.00	7.91	2953	PASS
176	174	95.0	101	97.5	36408	PASS
177	176	5.00	9.00	7.09	2582	PASS

This check relates to the following samples, MS, MSD:

Lab ID	Client ID	Tag	Date Analyzed	Q
WG214307-11	SSCV	01	05/31/2006 21:34	
WG214307-10	STD	01	05/31/2006 20:02	
WG214307-09	STD	01	05/31/2006 19:32	
WG214307-08	CCV	01	05/31/2006 19:01	
WG214307-07	STD	01	05/31/2006 18:31	
WG214307-06	STD	01	05/31/2006 18:01	
WG214307-05	STD	01	05/31/2006 17:30	
WG214307-04	STD	01	05/31/2006 16:59	
WG214307-03	STD	01	05/31/2006 16:29	
WG214307-02	STD	01	05/31/2006 15:58	

* Sample past 12 hour tune limit

KEMRON ENVIRONMENTAL SERVICES
ORGANIC INSTRUMENT CHECK

BFB

Login Number: L0606049 | Tune ID: WG214935-01
Instrument: HPMS10 | Run Date: 06/09/2006
Analyst: MES | Run Time: 15:02
Workgroup: WG214935 | File ID: 10M46513
Cal ID: HPMS10-31-MAY-06

Target	Rel. to	Lower	Upper	Rel.	Raw	Result
50.0	95.0	15.0	40.0	19.0	5605	PASS
75.0	95.0	30.0	60.0	44.7	13183	PASS
95.0	95.0	100	100	100	29490	PASS
96.0	95.0	5.00	9.00	7.12	2101	PASS
173	174	0	2.00	0	0	PASS
174	95.0	50.0	100	76.9	22672	PASS
175	174	5.00	9.00	7.95	1802	PASS
176	174	95.0	101	101	22818	PASS
177	176	5.00	9.00	7.05	1608	PASS

This check relates to the following CCV:

Lab ID	Client ID	Date Analyzed	
WG214935-02	CCV	06/09/2006 15:25	

This check relates to the following samples & batch QC:

Lab ID	Client ID	Tag	Date Analyzed	Q
WG214936-01	BLANK	01	06/09/2006 15:55	
WG214936-02	LCS	01	06/09/2006 16:26	
WG214936-03	LCS2	01	06/09/2006 16:56	
L0606049-01	IWGW01053106	01	06/09/2006 23:08	
WG214936-04	BLANK2	01	06/10/2006 03:52	*

* Sample past 12 hour tune limit

KEMRON FORMS - Modified 03/15/2006
Version 1.3 PDF File ID: 494370
Report generated 06/12/2006 16:14

KEMRON Environmental Services

INITIAL CALIBRATION SUMMARY

Login Number: L0606049 **Instrument ID:** HPMS10
Analytical Method: 8260B **Initial Calibration Date:** 31-MAY-06 20:02
ICAL Workgroup: WG214307 **Column ID:** F

Analyte		AVG RF	% RSD	LINEAR	QUAD
1,1-Dichloroethene	CCC	0.2423	3.79		
Chloroform	CCC	0.4335	3.50		
Vinyl Chloride	CCC	0.1312	17.3		1.00
1,1,2,2-Tetrachloroethane	SPCC	0.4284	3.62		
1,1-Dichloroethane	SPCC	0.4698	1.92		
Bromoform	SPCC	0.1293	18.7	0.999	
Chlorobenzene	SPCC	0.9329	5.23		
Chloromethane	SPCC	0.2064	19.8	0.996	
1,2-Dichloroethane		0.2957	2.92		
1,4-Dichlorobenzene		1.474	8.22		
2-Butanone		0.05202	3.15		
Benzene		0.9526	6.84		
Carbon Tetrachloride		0.3638	7.05		
Tetrachloroethene		0.2784	3.43		
Trichloroethene		0.2827	4.49		
cis-1,2-Dichloroethene		0.2656	2.59		
m-,p-Xylene		0.5556	5.86		
o-Xylene		0.5419	5.08		
trans-1,2-Dichloroethene		0.2607	2.44		
1,2-Dichloroethane-d4	SURR	0.2521	1.51		
Dibromofluoromethane	SURR	0.2629	2.96		
Toluene-d8	SURR	1.130	3.15		
p-Bromofluorobenzene	SURR	0.8953	3.82		

KEMRON Environmental Services

INITIAL CALIBRATION DATA

Login Number: L0606049 **Instrument ID:** HPMS10

Analytical Method: 8260B **Initial Calibration Date:** 31-MAY-06 20:02

Column ID: F

Analyte	WG214307-02			WG214307-03			WG214307-04		
	CONC	RESP	RF	CONC	RESP	RF	CONC	RESP	RF
1,1-Dichloroethene	NA	NA	NA	0.400	3958	0.2474	1.00	8943	0.2267
Chloroform	0.300	5270	0.4093	0.400	7382	0.4613	1.00	16903	0.4286
Vinyl Chloride	NA	NA	NA	NA	NA	NA	1.00	6411	0.1625
1,1,2,2-Tetrachloroethane	NA	NA	NA	0.400	2427	0.4261	1.00	5903	0.4232
1,1-Dichloroethane	NA	NA	NA	0.400	7488	0.4680	1.00	18351	0.4653
Bromoform	NA	NA	NA	NA	NA	NA	1.00	2719	0.09260
Chlorobenzene	NA	NA	NA	0.400	12066	1.013	1.00	27915	0.9511
Chloromethane	NA	NA	NA	0.400	4713	0.2945	1.00	8907	0.2258
1,2-Dichloroethane	NA	NA	NA	0.400	4789	0.2993	1.00	11656	0.2955
1,4-Dichlorobenzene	0.300	7584	1.703	0.400	9239	1.622	1.00	20368	1.460
2-Butanone	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene	NA	NA	NA	0.400	17147	1.072	1.00	38755	0.9826
Carbon Tetrachloride	NA	NA	NA	0.400	4950	0.3093	1.00	14325	0.3632
Tetrachloroethene	NA	NA	NA	0.400	3497	0.2937	1.00	8159	0.2780
Trichloroethene	NA	NA	NA	0.400	4942	0.3088	1.00	11306	0.2867
cis-1,2-Dichloroethene	NA	NA	NA	0.400	4254	0.2658	1.00	10092	0.2559
m-,p-Xylene	NA	NA	NA	0.800	13807	0.5797	2.00	34181	0.5823
o-Xylene	NA	NA	NA	0.400	7006	0.5883	1.00	14787	0.5038
trans-1,2-Dichloroethene	NA	NA	NA	0.400	4155	0.2597	1.00	10187	0.2583
1,2-Dichloroethane-d4	NA	NA	NA	NA	NA	NA	0.500	4942	0.2506
Dibromofluoromethane	NA	NA	NA	NA	NA	NA	0.500	4938	0.2504
Toluene-d8	NA	NA	NA	NA	NA	NA	0.500	16039	1.093
p-Bromofluorobenzene	NA	NA	NA	NA	NA	NA	0.500	6603	0.9467

KEMRON Environmental Services

INITIAL CALIBRATION DATA

Login Number: L0606049 **Instrument ID:** HPMS10

Analytical Method: 8260B **Initial Calibration Date:** 31-MAY-06 20:02

Column ID: F

Analyte	WG214307-05			WG214307-06			WG214307-07		
	CONC	RESP	RF	CONC	RESP	RF	CONC	RESP	RF
1,1-Dichloroethene	2.00	19689	0.2565	5.00	44721	0.2337	20.0	184873	0.2436
Chloroform	2.00	32479	0.4232	5.00	82169	0.4294	20.0	335413	0.4420
Vinyl Chloride	2.00	11720	0.1527	5.00	26175	0.1368	20.0	101428	0.1337
1,1,2,2-Tetrachloroethane	2.00	11294	0.4120	5.00	30214	0.4493	20.0	119113	0.4444
1,1-Dichloroethane	2.00	35999	0.4690	5.00	88369	0.4618	20.0	363151	0.4785
Bromoform	2.00	5890	0.1029	5.00	16994	0.1202	20.0	80687	0.1437
Chlorobenzene	2.00	53751	0.9393	5.00	132854	0.9399	20.0	527991	0.9400
Chloromethane	2.00	16228	0.2114	5.00	37195	0.1944	20.0	150515	0.1983
1,2-Dichloroethane	2.00	23085	0.3008	5.00	57121	0.2985	20.0	228667	0.3013
1,4-Dichlorobenzene	2.00	40741	1.486	5.00	98552	1.466	20.0	385563	1.439
2-Butanone	NA	NA	NA	5.00	9441	0.04930	20.0	39406	0.05190
Benzene	2.00	75267	0.9806	5.00	178950	0.9352	20.0	723083	0.9528
Carbon Tetrachloride	2.00	26946	0.3511	5.00	68876	0.3599	20.0	285721	0.3765
Tetrachloroethene	2.00	16204	0.2832	5.00	39824	0.2817	20.0	156969	0.2795
Trichloroethene	2.00	21458	0.2796	5.00	52713	0.2755	20.0	216887	0.2858
cis-1,2-Dichloroethene	2.00	19920	0.2595	5.00	49697	0.2597	20.0	205548	0.2708
m-,p-Xylene	4.00	65017	0.5681	10.0	158553	0.5609	40.0	639379	0.5692
o-Xylene	2.00	30320	0.5299	5.00	76526	0.5414	20.0	314005	0.5590
trans-1,2-Dichloroethene	2.00	19066	0.2484	5.00	49719	0.2598	20.0	201784	0.2659
1,2-Dichloroethane-d4	1.00	9712	0.2531	2.50	23656	0.2473	10.0	97013	0.2557
Dibromofluoromethane	1.00	9794	0.2552	2.50	25107	0.2624	10.0	101783	0.2682
Toluene-d8	1.00	33020	1.154	2.50	80839	1.144	10.0	327310	1.165
p-Bromofluorobenzene	1.00	12280	0.8960	2.50	30355	0.9029	10.0	123053	0.9182

KEMRON Environmental Services

INITIAL CALIBRATION DATA

Login Number: L0606049 **Instrument ID:** HPMS10

Analytical Method: 8260B **Initial Calibration Date:** 31-MAY-06 20:02

Column ID: F

Analyte	WG214307-08			WG214307-09			WG214307-10		
	CONC	RESP	RF	CONC	RESP	RF	CONC	RESP	RF
1,1-Dichloroethene	50.0	469926	0.2479	100	924284	0.2439	200	1781663	0.2390
Chloroform	50.0	848470	0.4475	100	1648753	0.4352	200	3170785	0.4254
Vinyl Chloride	50.0	231297	0.1220	100	433146	0.1143	200	717115	0.09620
1,1,2,2-Tetrachloroethane	50.0	302264	0.4406	100	584518	0.4260	200	1096606	0.4054
1,1-Dichloroethane	50.0	921943	0.4863	100	1786078	0.4714	200	3416306	0.4583
Bromoform	50.0	215993	0.1539	100	422928	0.1495	200	794355	0.1424
Chlorobenzene	50.0	1321440	0.9417	100	2536063	0.8963	200	4697021	0.8418
Chloromethane	50.0	357218	0.1884	100	675979	0.1784	200	1191649	0.1599
1,2-Dichloroethane	50.0	572536	0.3020	100	1107285	0.2922	200	2056455	0.2759
1,4-Dichlorobenzene	50.0	965183	1.407	100	1888885	1.377	200	3538132	1.308
2-Butanone	50.0	101311	0.05340	100	201703	0.05320	200	389649	0.05230
Benzene	50.0	1795592	0.9470	100	3426315	0.9043	200	6310918	0.8467
Carbon Tetrachloride	50.0	742521	0.3916	100	1453656	0.3837	200	2796248	0.3751
Tetrachloroethene	50.0	391309	0.2788	100	770282	0.2722	200	1451598	0.2602
Trichloroethene	50.0	536130	0.2828	100	1052329	0.2777	200	1971326	0.2645
cis-1,2-Dichloroethene	50.0	521998	0.2753	100	1030886	0.2721	200	1977471	0.2653
m-,p-Xylene	100	1591649	0.5671	200	3022535	0.5341	400	5398375	0.4837
o-Xylene	50.0	787946	0.5615	100	1525026	0.5390	200	2859925	0.5125
trans-1,2-Dichloroethene	50.0	512245	0.2702	100	998220	0.2635	200	1938569	0.2601
1,2-Dichloroethane-d4	25.0	244428	0.2578	50.0	477695	0.2522	100	925280	0.2483
Dibromofluoromethane	25.0	258684	0.2729	50.0	506300	0.2673	100	984249	0.2641
Toluene-d8	25.0	814221	1.160	50.0	1585325	1.121	100	2995633	1.074
p-Bromofluorobenzene	25.0	305364	0.8902	50.0	601007	0.8760	100	1132350	0.8372

KEMRON FORMS - Modified 03/06/2006
Version 1.6 PDF File ID: 494367
Report generated 06/12/2006 16:14

KEMRON Environmental Services

ALTERNATE SOURCE CALIBRATION REPORT

Login Number: L0606049 Run Date: 05/31/2006 Sample ID: WG214307-11
Instrument ID: HPMS10 Run Time: 21:34 Method: 8260B
File ID: 10M46346 Analyst: JLS
ICal Workgroup: WG214307 Cal ID: HPMS10 - 31-MAY-06

Analyte		Expected	Found	RF	%D	UNITS	Q
Chloroform	CCC	20	21.7	0.469	8.3	ug/L	
1,1-Dichloroethene	CCC	20	21.4	0.259	6.9	ug/L	
Vinyl Chloride	CCC	20	20.0	0.130	0	ug/L	
Chlorobenzene	SPCC	20	20.8	0.971	4.1	ug/L	
Chloromethane	SPCC	20	23.1	0.210	15.4	ug/L	
1,1,2,2-Tetrachloroethane	SPCC	20	22.1	0.474	10.6	ug/L	
Bromoform	SPCC	20	20.6	0.152	2.8	ug/L	
1,1-Dichloroethane	SPCC	20	21.8	0.512	9	ug/L	
Benzene		20	21.6	1.03	8	ug/L	
Carbon Tetrachloride		20	22.1	0.402	10.5	ug/L	
1,2-Dichloroethane		20	22.1	0.326	10.4	ug/L	
2-Butanone		20	23.0	0.0600	15.2	ug/L	
Tetrachloroethene		20	21.4	0.298	7	ug/L	
Trichloroethene		20	22.5	0.319	12.7	ug/L	
1,4-Dichlorobenzene		20	20.1	1.48	.3	ug/L	
trans-1,2-Dichloroethene		20	21.3	0.278	6.4	ug/L	
cis-1,2-Dichloroethene		20	22.3	0.297	11.7	ug/L	
m-,p-Xylene		40	42.9	0.597	7.4	ug/L	
o-Xylene		20	21.5	0.582	7.3	ug/L	

* Exceeds %D Limit

CCC Calibration Check Compounds
SPCC System Performance Check Compounds

KEMRON FORMS - Modified 04/11/2006
Version 1.5 PDF File ID: 494368
Report generated 06/12/2006 16:14

KEMRON Environmental Services

CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L0606049 Run Date: 06/09/2006 Sample ID: WG214935-02
Instrument ID: HPMS10 Run Time: 15:25 Method: 8260B
File ID: 10M46514 Analyst: MES
Workgroup (AAB#): WG214936 Cal ID: HPMS10 - 31-MAY-06

Analyte		Expected	Found	RF	%D	UNITS	Q
Chloroform	CCC	50	53.7	0.466	7.5	ug/L	
1,1-Dichloroethene	CCC	50	52.9	0.256	5.7	ug/L	
Vinyl Chloride	CCC	50	52.8	0.130	5.6	ug/L	
Chlorobenzene	SPCC	50	49.8	0.929	.4	ug/L	
Chloromethane	SPCC	50	51.2	0.193	2.4	ug/L	
1,1,2,2-Tetrachloroethane	SPCC	50	46.3	0.397	7.4	ug/L	
1,1-Dichloroethane	SPCC	50	52.7	0.495	5.4	ug/L	
Bromoform	SPCC	50	44.5	0.136	11	ug/L	
Benzene		50	50.0	0.953	0	ug/L	
Carbon Tetrachloride		50	56.3	0.410	12.7	ug/L	
1,2-Dichloroethane		50	52.9	0.313	5.8	ug/L	
2-Butanone		50	46.8	0.0487	6.3	ug/L	
Tetrachloroethene		50	51.1	0.285	2.3	ug/L	
Trichloroethene		50	50.7	0.287	1.5	ug/L	
1,4-Dichlorobenzene		50	48.3	1.42	3.4	ug/L	
Dibromofluoromethane	SURR	25	25.4	0.268	1.8	ug/L	
1,2-Dichloroethane-d4	SURR	25	24.5	0.248	1.8	ug/L	
Toluene-d8	SURR	25	25.1	1.14	.5	ug/L	
p-Bromofluorobenzene	SURR	25	23.9	0.857	4.2	ug/L	

* Exceeds %D Criteria

CCC Calibration Check Compounds
SPCC System Performance Check Compounds

KEMRON FORMS - Modified 04/19/2006
Version 1.3 PDF File ID: 494371
Report generated 06/12/2006 16:14

KEMRON ENVIRONMENTAL SERVICES
INTERNAL STANDARD AREA SUMMARY
(COMPARED TO CCV)

Login Number: L0606049
Instrument ID: HPMS10
Workgroup (AAB#): WG214936

CCV Number: WG214935-02
CAL ID: HPMS10-31-MAY-06
Matrix: WATER

Sample Number	Dilution	Tag	IS-1	IS-2	IS-3
WG214935-02	NA	NA	346711	730565	984608
Upper Limit	NA	NA	693422	1461130	1969216
Lower Limit	NA	NA	173356	365283	492304
L0606049-01	1.00	01	286031	610760	837246
WG214936-01	1.00	01	329147	704270	976267
WG214936-02	1.00	01	333273	707687	955532
WG214936-03	1.00	01	330147	703683	946500

IS-1 - 1,4-Dichlorobenzene-d4
IS-2 - Chlorobenzene-d5
IS-3 - Fluorobenzene

Underline = Response outside limits

KEMRON FORMS - Modified 04/18/2006
Version 1.3 PDF File ID: 494372
Report generated 06/12/2006 16:14

KEMRON ENVIRONMENTAL SERVICES
INTERNAL STANDARD RETENTION TIME SUMMARY
(COMPARED TO CCV)

Login Number:L0606049 CCV Number:WG214935-02
Instrument ID:HPMS10 CAL ID:HPMS10-31-MAY-06
Workgroup (AAB#):WG214936 Matrix:WATER

Sample Number	Dilution	Tag	IS-1	IS-2	IS-3
WG214935-02	NA	NA	15.53	12.56	8.71
Upper Limit	NA	NA	16.03	13.06	9.21
Lower Limit	NA	NA	15.03	12.06	8.21
L0606049-01	1.00	01	15.52	12.55	8.71
WG214936-01	1.00	01	15.53	12.55	8.72
WG214936-02	1.00	01	15.53	12.55	8.71
WG214936-03	1.00	01	15.53	12.55	8.72

IS-1 - 1,4-Dichlorobenzene-d4
IS-2 - Chlorobenzene-d5
IS-3 - Fluorobenzene

Underline = Response outside limits

KEMRON FORMS - Modified 04/18/2006
Version 1.3 PDF File ID:494374
Report generated 06/12/2006 16:14

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1.2 Semivolatiles Data

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1.2.1 Semivolatiles GC/MS Data (8270)

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KEMRON ENVIRONMENTAL SERVICES
GC/MS SEMIVOLATILE ORGANICS

KEMRON Login No.: L0606049

METHOD

Preparation: Soils - SW-846 3545; Waters - SW-846 3510C, 3520C

Analysis: SW-846 8270C

HOLDING TIMES

Sample Preparation: The second re-extraction of sample 01 was performed out of hold.

Sample Analysis: All holding times were met.

PREPARATION

Sample preparation proceeded normally.

CALIBRATION

Initial Calibration: For all compounds which yielded a %RSD greater than 15%, linear or higher order equations were applied. All acceptance criteria were met.

Alternate Source Standards: All acceptance criteria were met.

Continuing Calibration and Tune: All acceptance criteria were met.

BATCH QA/QC

Method Blank: All acceptance criteria were met.

Laboratory Control Sample: The LCS/LCS DUP extracted on 6/5/06 did not yield any recoveries for pyridine. Sample 01 was re-extracted in hold and the associated LCS yielded a % recovery for pyridine that was below the advisory limit. The sample was re-extracted a second time using method 3520C; the associated LCS yielded an acceptable recovery for pyridine. All other acceptance criteria were met.

Matrix Spikes: There were no MS/MSD results associated with this sample delivery group, due to insufficient volume of sample. The laboratory included an LCS and LCS duplicate in the preparation batch in lieu of the NELAC prescribed MS/MSD. KEMRON recommends site specific MS/MSD samples to avoid possible data qualification.

SAMPLES

Internal Standards: All acceptance criteria were met.

Surrogates: The second re-extraction of sample 01 yielded a recovery for p-terphenyl-d14 that was below the lower acceptance limit. All other acceptance criteria were met.

Samples: All acceptance criteria were met.

Manual Integration Reason Codes

KEMRON laboratory management has identified four general cases with valid reasons supporting the use of manual integration techniques.

Reason #1: Data System Fails to Select Correct Peak
In some cases the chromatography system selects and integrates the ”wrong peak”. In this case the analyst must correct the selection and force the system to integrate the proper peak. Other times the system may miss the peak completely.

Reason #2: Data System Splits the Peak Incorrectly or Integrates a False Peak as a Rider Peak.
This phenomena is common at low concentrations where the signal:noise ratio is low. A single compound (peak) is incorrectly split into multiple peaks or integrated as a main peak with one or more rider peaks resulting in low area counts for the target compound.

Reason #3: Improperly Integrated Isomers and/or coeluting compounds.
This system often fails to distinguish coeluting compounds and or isomers. The integration areas and concentrations are wrong, and they must be corrected by manual integration. Prime examples are benzo(k)fluoranthene and benzo(b)fluoranthene which are often unresolved and integrated improperly when both are present at low concentrations in standards or samples.

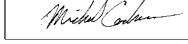
Reason #4: System Establishes Incorrect Baseline
There are numerous situations in chromatography where the system establishes the baseline incorrectly. Some baseline errors will be obvious to the analyst and should be corrected via manual procedures.

Reason #5: Miscellaneous
Other situations involving integration errors may require in-depth review and technical judgment. These cases should be brought to the attention of the laboratory management. If the form of manual integration is not clearly covered by these four cases, then review and approval by the Laboratory Director or the QA/QC Supervisor will be required.

I certify that this data package is in compliance with the terms and conditions agreed to by the client and KEMRON Environmental Services, both technically and for completeness, except for the conditions noted above. Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or designated person, as verified by the following signature.

Analyst: CLK

Approved: 13-JUN-06



LABORATORY REPORT

L0606049

06/20/06 08:37

Submitted By

KEMRON Environmental Services
156 Starlite Drive
Marietta , OH 45750
(740) 373 - 4071

For

Account Name: CH2MHILL, Inc
7600 Tidwell Road
Suite 400
San Antonio, TX 77040
Attention: John Ynfante

Account Number: 2736
Work ID: STATE MARINE RI

P.O. Number: 915193

Sample Analysis Summary

Client ID	Lab ID	Method	Dilution	Date Received
IWGW01053106	L0606049-01	8270C	1	02-JUN-06
IWGW01053106	L0606049-01	8270C	1	02-JUN-06
IWGW01053106	L0606049-01	8270C	1	02-JUN-06

Report Number: **L0606049**
Report Date : **June 20, 2006**

Sample Number: **L0606049-01**
Client ID: **IWGW01053106**
Matrix: **Water**
Workgroup Number: **WG214640**
Collect Date: **05/31/2006 16:00**

PrePrep Method: **NONE**
Prep Method: **3510C**
Analytical Method: **8270C**
Analyst: **CLK**
Dilution: **1**
Units: **ug/L**

Instrument: **HPMS4**
Prep Date: **06/05/2006 09:00**
Cal Date: **05/10/2006 17:31**
Run Date: **06/05/2006 20:01**
File ID: **4M33285**

Analyte	CAS. Number	Result	Qual	PQL	SQL
o-Cresol	95-48-7		U	52.1	26.0
m-,p-Cresol	106-44-5		U	52.1	26.0
1,4-Dichlorobenzene	106-46-7		U	52.1	26.0
2,4-Dinitrotoluene	121-14-2		U	52.1	26.0
Hexachlorobenzene	118-74-1		U	52.1	26.0
Hexachlorobutadiene	87-68-3		U	52.1	26.0
Hexachloroethane	67-72-1		U	52.1	26.0
Nitrobenzene	98-95-3		U	52.1	26.0
Pentachlorophenol	87-86-5		U	260	26.0
Pyridine	110-86-1		U	521	260
2,4,5-Trichlorophenol	95-95-4		U	260	26.0
2,4,6-Trichlorophenol	88-06-2		U	52.1	26.0

Surrogate	% Recovery	Lower	Upper	Qual
2-Fluorophenol	42.1	21	100	
Phenol-d5	31.3	10	94	
Nitrobenzene-d5	74.7	35	114	
2-Fluorobiphenyl	80.2	43	116	
2,4,6-Tribromophenol	96.4	10	123	
p-Terphenyl-d14	66.4	33	141	

U Not detected at or above the reporting limit

Report Number: **L0606049**
Report Date : **June 20, 2006**

Sample Number: **L0606049-01**
Client ID: **IWGW01053106**
Matrix: **Water**
Workgroup Number: **WG214748**
Collect Date: **05/31/2006 16:00**
Sample Tag: **RE**

PrePrep Method: **NONE**
Prep Method: **3510C**
Analytical Method: **8270C**
Analyst: **CLK**
Dilution: **1**
Units: **ug/L**

Instrument: **HPMS4**
Prep Date: **06/06/2006 11:00**
Cal Date: **05/10/2006 17:31**
Run Date: **06/06/2006 21:28**
File ID: **4M33310**

Analyte	CAS. Number	Result	Qual	PQL	SQL
o-Cresol	95-48-7		U	52.1	26.0
m-,p-Cresol	106-44-5		U	52.1	26.0
1,4-Dichlorobenzene	106-46-7		U	52.1	26.0
2,4-Dinitrotoluene	121-14-2		U	52.1	26.0
Hexachlorobenzene	118-74-1		U	52.1	26.0
Hexachlorobutadiene	87-68-3		U	52.1	26.0
Hexachloroethane	67-72-1		U	52.1	26.0
Nitrobenzene	98-95-3		U	52.1	26.0
Pentachlorophenol	87-86-5		U	260	26.0
Pyridine	110-86-1		U	521	260
2,4,5-Trichlorophenol	95-95-4		U	260	26.0
2,4,6-Trichlorophenol	88-06-2		U	52.1	26.0

Surrogate	% Recovery	Lower	Upper	Qual
2-Fluorophenol	56.3	21	100	
Phenol-d5	38.6	10	94	
Nitrobenzene-d5	101	35	114	
2-Fluorobiphenyl	96.4	43	116	
2,4,6-Tribromophenol	108	10	123	
p-Terphenyl-d14	61.7	33	141	

U Not detected at or above the reporting limit

Report Number: **L0606049**
Report Date : **June 20, 2006**

Sample Number: **L0606049-01**
Client ID: **IWGW01053106**
Matrix: **Water**
Workgroup Number: **WG215163**
Collect Date: **05/31/2006 16:00**
Sample Tag: **RE2**

PrePrep Method: **NONE**
Prep Method: **3520C**
Analytical Method: **8270C**
Analyst: **CLK**
Dilution: **1**
Units: **ug/L**

Instrument: **HPMS4**
Prep Date: **06/08/2006 14:35**
Cal Date: **05/10/2006 17:31**
Run Date: **06/12/2006 17:30**
File ID: **4M33324**

Analyte	CAS. Number	Result	Qual	PQL	SQL
Pyridine	110-86-1		U	581	291

Surrogate	% Recovery	Lower	Upper	Qual
Nitrobenzene-d5	85.6	35	114	
2-Fluorobiphenyl	88.1	43	116	
p-Terphenyl-d14	29.3	33	141	*

* Surrogate or spike compound out of range
U Not detected at or above the reporting limit

1.2.1.1 QC Summary

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Checklist ID: 7491

KEMRON Environmental Services
Data Checklist

Date: 10-MAY-2006
Analyst: CLK
Analyst: NA
Method: 8270
Instrument: HPMS4
Curve Workgroup: WG212888
Analytical Workgroups: ICAL GOOD FOR ACETOPHENONE AS WELL

Runlog ID number:	10322
System Performance Check	
DFTPP	X
Endrin/DDT Breakdown	X
Initial Calibration	X
Average RF	X
Linear Reg or Higher Order Curve	X
Second Source standard % Difference	X
Continuing Calibration /Check Standards	NA
Project/Client Specific Requirements	X
Special Standards	X
Blanks	NA
TCL's	NA
Surrogates	NA
LCS (Laboratory Control Sample)	NA
Recoveries	NA
Surrogates	NA
MS/MSD/Duplicates	NA
Samples	NA
TCL Hits	NA
Spectra of TCL Hits	NA
Surrogates	NA
Internal Standards Criteria	NA
Library Searches	NA
Calculations & Correct Factors	X
Dilutions Run	NA
Reruns	NA
Manual Integrations	X
Case Narrative	NA
Results Reporting/Data Qualifiers	X
KOBRA Workgroup Data	X
Check for Completeness	X
Primary Reviewer	CLK
Secondary Reviewer	MDC
Check for compliance with method and project specific requirements	X
Check the completeness of reported information	X
Check the information for the report narrative	NA
Check the resonableness of the results	X

Primary Reviewer:

Secondary Reviewer:
11-MAY-2006

Generated: MAY-11-2006 13:06:57

Checklist ID: 7552

KEMRON Environmental Services
Data Checklist

Date: 15-MAY-2006
Analyst: ALT
Analyst: NA
Method: 8270
Instrument: HPMS5
Curve Workgroup: NA
Analytical Workgroups: L0605260, L0605232

Runlog ID number:	10383
System Performance Check:	X
DFTPP	X
Endrin/DDT Breakdown	X
Initial Calibration:	NA
Average RF	NA
Linear Reg or Higher Order Curve	NA
Second Source standard % Difference	NA
Continuing Calibration /Check Standards:	X
Project/Client Specific Requirements	X
Special Standards	NA
Blanks:	X
TCL's	X
Surrogates	X
LCS (Laboratory Control Sample):	X
Recoveries	X
Surrogates	X
MS/MSD/Duplicates	X
Samples:	X
TCL Hits	X
Spectra of TCL Hits	X
Surrogates	X
Internal Standards Criteria	X
Library Searches	NA
Calculations & Correct Factors	NA
Dilutions Run	NA
Reruns	NA
Manual Integrations	X
Case Narrative	NA
Results Reporting/Data Qualifiers	X
KOBRA Workgroup Data	X
Check for Completeness	X
Primary Reviewer	ALT
Secondary Reviewer	MDC
Check for compliance with method and project specific requirements	X
Check the completeness of reported information	X
Check the information for the report narrative	NA
Check the resonableness of the results	X
Comments:	

Primary Reviewer:
16-MAY-2006

Secondary Reviewer:
16-MAY-2006

Generated: MAY-16-2006 14:21:51

Checklist ID: 7868

KEMRON Environmental Services
Data Checklist

Date: 05-JUN-2006
Analyst: ALT
Analyst: NA
Method: 8270
Instrument: HPMS5
Curve Workgroup: NA
Analytical Workgroups: L0605616, L0605683, L0606004, L0606031, L0606072

Runlog ID number:	10671
System Performance Check:	X
DFTPP	X
Endrin/DDT Breakdown	X
Initial Calibration:	NA
Average RF	NA
Linear Reg or Higher Order Curve	NA
Second Source standard % Difference	NA
Continuing Calibration /Check Standards:	X
Project/Client Specific Requirements	X
Special Standards	NA
Blanks:	X
TCL's	X
Surrogates	X
LCS (Laboratory Control Sample):	X
Recoveries	X
Surrogates	X
MS/MSD/Duplicates	X
Samples:	X
TCL Hits	X
Spectra of TCL Hits	X
Surrogates	X
Internal Standards Criteria	X
Library Searches	NA
Calculations & Correct Factors	NA
Dilutions Run	X
Reruns	NA
Manual Integrations	NA
Case Narrative	X
Results Reporting/Data Qualifiers	X
KOBRA Workgroup Data	X
Check for Completeness	X
Primary Reviewer	ALT
Secondary Reviewer	ECL
Check for compliance with method and project specific requirements	
Check the completeness of reported information	
Check the information for the report narrative	
Check the resonableness of the results	
Comments:	
L0606072-01 needs rerun at a dilution	

Primary Reviewer:
06-JUN-2006

Secondary Reviewer:
06-JUN-2006

Generated: JUN-06-2006 12:54:23

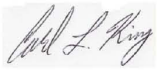
Checklist ID: 7867

KEMRON Environmental Services
Data Checklist

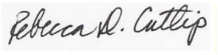
Date: 05-JUN-2006
Analyst: CLK
Analyst: NA
Method: 8270
Instrument: HPMS4
Curve Workgroup: NA
Analytical Workgroups: L0605599, 658, 659, 676, 678, 686, L0606002, 049, 056, 028

Runlog ID number:	10669
System Performance Check	
DFTPP	X
Endrin/DDT Breakdown	X
Initial Calibration	NA
Average RF	NA
Linear Reg or Higher Order Curve	NA
Second Source standard % Difference	NA
Continuing Calibration /Check Standards	X
Project/Client Specific Requirements	X
Special Standards	NA
Blanks	X
TCL's	X
Surrogates	X
LCS (Laboratory Control Sample)	NA
Recoveries	NA
Surrogates	NA
MS/MSD/Duplicates	NA
Samples	X
TCL Hits	X
Spectra of TCL Hits	X
Surrogates	X
Internal Standards Criteria	X
Library Searches	X
Calculations & Correct Factors	X
Dilutions Run	NA
Reruns	NA
Manual Integrations	X
Case Narrative	X
Results Reporting/Data Qualifiers	X
KOBRA Workgroup Data	X
Check for Completeness	X
Primary Reviewer	CLK
Secondary Reviewer	RDC
Check for compliance with method and project specific requirements	X
Check the completeness of reported information	X
Check the information for the report narrative	X
Check the resonableness of the results	X

Primary Reviewer:



Secondary Reviewer:
08-JUN-2006



Generated: JUN-08-2006 09:44:20

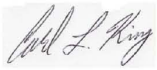
Checklist ID: 7883

KEMRON Environmental Services
Data Checklist

Date: 06-JUN-2006
Analyst: CLK
Analyst: NA
Method: 8270
Instrument: HPMS4
Curve Workgroup: NA
Analytical Workgroups: L0605659, L0605599, L0606085, L0606049(RE), L0605587(RE)

Runlog ID number:	10689
System Performance Check	
DFTPP	X
Endrin/DDT Breakdown	X
Initial Calibration	NA
Average RF	NA
Linear Reg or Higher Order Curve	NA
Second Source standard % Difference	NA
Continuing Calibration /Check Standards	X
Project/Client Specific Requirements	X
Special Standards	NA
Blanks	X
TCL's	X
Surrogates	X
LCS (Laboratory Control Sample)	X
Recoveries	X
Surrogates	X
MS/MSD/Duplicates	X
Samples	X
TCL Hits	X
Spectra of TCL Hits	X
Surrogates	X
Internal Standards Criteria	X
Library Searches	NA
Calculations & Correct Factors	X
Dilutions Run	X
Reruns	NA
Manual Integrations	X
Case Narrative	X
Results Reporting/Data Qualifiers	X
KOBRA Workgroup Data	X
Check for Completeness	X
Primary Reviewer	CLK
Secondary Reviewer	ECL
Check for compliance with method and project specific requirements	
Check the completeness of reported information	
Check the information for the report narrative	
Check the resonableness of the results	

Primary Reviewer:



Secondary Reviewer:
07-JUN-2006

Generated: JUN-07-2006 14:50:30

Run Log ID: **10322**

KEMRON Environmental Services

Instrument Run Log

Instrument: HPMS4 Dataset: 051006

Analyst1: CLK Analyst2: NA

Method: 8270C SOP: MSS01 Rev: 13

Method: 625 SOP: MSS02 Rev: 8

Column 1 ID: RTI-5MS Column 2 ID: NA

Workgroups:

Internal Standard: STD12522 Surrogate Standard: NA

Comments: ICAL Good for Acetophenone as well

Seq.	File ID	Sample Information	Mat	Dil	Reference	Date/Time
1	4M32961	WG212888-01 50PPM DFTPP	1	1	SOS78-44	05/10/06 13:03
2	4M32962	WG212888-02 50PPM BNA Megamix	1	1	STD12520	05/10/06 13:22
3	4M32963	WG212888-02 50PPM BNA Megamix	1	1	STD12520	05/10/06 13:58
4	4M32964	WG212888-03 3PPM BNA Megamix	1	1	STD12520	05/10/06 14:33
5	4M32965	WG212888-04 15PPM BNA Megamix	1	1	STD12520	05/10/06 15:08
6	4M32966	WG212888-05 25PPM BNA Megamix	1	1	STD12520	05/10/06 15:44
7	4M32967	WG212888-06 80PPM BNA Megamix	1	1	STD12520	05/10/06 16:20
8	4M32968	WG212888-07 120PPM BNA Megamix	1	1	STD12520	05/10/06 16:55
9	4M32969	WG212888-08 100PPM BNA Megamix	1	1	STD12520	05/10/06 17:31
10	4M32970	WG212888-09 50PPM Alt source BNA	1	1	STD12496	05/10/06 18:06
11	4M32971	50PPM Alt source TCL std.	1	1	SOS77-34-4	05/10/06 18:42

Comments

Seq.	Rerun	Dil.	Reason	Analytes
2				
	NA, Wrong STD			
10				
	Alt Source has (#26) Benzoic Acid, (#45) 3-Nitroaniline, and (#74) 3,3'-dichlorobenzidine >25%			
11				
	TCL Alt Source has (#2) Benzadehyde and (#9) Atrazine >25%			

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007198

Run Log ID: **10383**

KEMRON Environmental Services

Instrument Run Log

Instrument: HPMS5 Dataset: 051506

Analyst1: ALT Analyst2: NA

Method: 8270C SOP: MSS01 Rev: 13

Method: 625 SOP: MSS02 Rev: 8

Column 1 ID: DB-5MS Column 2 ID: NA

Workgroups: WG213277, WG213367

Internal Standard: STD12522 Surrogate Standard: NA

Comments: IML - 14067

Seq.	File ID	Sample Information	Mat	Dil	Reference	Date/Time
1	5M40735	WG213265-01 50PPM DFTPP	1	1	SOS78-44	05/15/06 08:53
2	5M40736	WG213265-02 50PPM BNA STD	1	1	STD12520	05/15/06 09:12
3	5M40737	WG213265-03 3PPM BNA STD	1	1	STD12520	05/15/06 09:43
4	5M40738	WG213265-02 50PPM BNA STD	1	1	SOS78-17	05/15/06 10:16
5	5M40739	WG213265-03 3PPM BNA STD	1	1	SOS78-17	05/15/06 10:48
6	5M40740	WG213265-04 15PPM BNA STD	1	1	SOS78-17	05/15/06 11:21
7	5M40741	WG213265-05 25PPM BNA STD	1	1	SOS78-17	05/15/06 11:52
8	5M40742	WG213265-06 80PPM BNA STD	1	1	SOS78-17	05/15/06 12:25
9	5M40743	WG213265-07 100PPM BNA STD	1	1	SOS78-17	05/15/06 12:58
10	5M40744	WG213265-08 120PPM BNA STD	1	1	SOS78-17	05/15/06 13:30
11	5M40745	WG213265-09 50PPM BNA STD	1	1	STD12496	05/15/06 14:02
12	5M40746	WG213078-02 BLK 5/11 EP261P29 RR	7	1	SOIL	05/15/06 14:35
13	5M40747	WG213078-03 LCS 5/11 EP261P29 RR	7	1	SOIL	05/15/06 15:08
14	5M40748	WG212996-01 BLK 5/10 EP260P93	1	1		05/15/06 15:41
15	5M40749	WG212996-02 LCS 5/10 EP260P93	1	1		05/15/06 16:14
16	5M40750	WG212996-03 LCSDUP 5/10 EP260P93	1	1		05/15/06 16:47
17	5M40751	WG213078-01 L0605260-01 SOIL	7	1	SOIL	05/15/06 17:20
18	5M40752	WG213078-04 L0605260-02 MS SOIL	7	1	SOIL	05/15/06 17:52
19	5M40753	WG213078-05 L0605260-03 MSD SOIL	7	1	SOIL	05/15/06 18:24
20	5M40754	L0605260-04 SOIL	7	1	SOIL	05/15/06 18:57
21	5M40755	L0605232-01	1	1		05/15/06 19:29
22	5M40756	BAKE OUT	1	1		05/15/06 20:01
23	5M40757	BAKE OUT	1	1		05/15/06 20:34
24	5M40758	BAKE OUT	1	1		05/15/06 21:07

Comments

Seq.	Rerun	Dil.	Reason	Analytes
2				
	WG213265-02 50PPM BNA STD - not required, not used for ICAL			
3				
	WG213265-03 3PPM BNA STD - not required, not used for ICAL			
13				
	WG213078-03 LCS - 6 compounds high - DOD criteria			
15				
	WG212996-02 LCS - benzoic acid yielded a %RPD beyond limit.			
18				
	WG213078-04 L0605260-02 MS SOIL - 1,2,4-trichlorobenzene low; 3 compounds %RPDs beyond limit			

Approved: 16-MAY-06

007199

Run Log ID: **10383**

KEMRON Environmental Services

Instrument Run Log

Instrument: HPMS5 Dataset: 051506

Analyst1: ALT Analyst2: NA

Method: 8270C SOP: MSS01 Rev: 13

Method: 625 SOP: MSS02 Rev: 8

Column 1 ID: DB-5MS Column 2 ID: NA

Workgroups: WG213277, WG213367

Internal Standard: STD12522 Surrogate Standard: NA

Comments

Seq.	Rerun	Dil.	Reason	Analytes
19				
	WG213078-05 L0605260-03 MSD SOIL - 3,3'-dichlorobenzidine and 2,4-dimethylphenol low			

Approved: 16-MAY-06

Run Log ID: **10671**

KEMRON Environmental Services

Instrument Run Log

Instrument: HPMS5 Dataset: 060506
Analyst1: ALT Analyst2: NA
Method: 8270C SOP: MSS01 Rev: 14
Method: 625 SOP: MSS02 Rev: 8

Column 1 ID: DB-5MS Column 2 ID: NA
Workgroups: WG214620, WG214640, WG214673
Internal Standard: STD12522 Surrogate Standard: NA

Comments: IML - 14247

Seq.	File ID	Sample Information	Mat	Dil	Reference	Date/Time
1	5M41013	WG214635-01 50PPM DFTPP	1	1	SOS78-44	06/05/06 13:04
2	5M41014	WG214635-02 50PPM BNA STD	1	1	SOS78-17	06/05/06 13:22
3	5M41015	3PPM MRL STD	1	1	SOS78-17	06/05/06 13:52
4	5M41016	WG214260-02 BLK 5/31 EP260P183	1	1		06/05/06 14:27
5	5M41017	WG214260-03 LCS 5/31 EP260P183	1	1		06/05/06 14:57
6	5M41018	L0605616-01	1	1		06/05/06 15:28
7	5M41019	L0605616-02	1	1		06/05/06 15:59
8	5M41020	L0605616-03	1	1		06/05/06 16:30
9	5M41021	WG214260-01 L0605616-04	1	1		06/05/06 17:01
10	5M41022	WG214260-04 L0605616-05 MS	1	1		06/05/06 17:30
11	5M41023	WG214260-05 L0605616-06 MSD	1	1		06/05/06 18:01
12	5M41024	3PPM ENDING MRL STD	1	1	SOS78-17	06/05/06 18:31
13	5M41025	WG214609-01 BLK 6/5 EP626P3	1	1		06/05/06 19:01
14	5M41026	WG214609-02 LCS 6/5 EP626P3	1	1		06/05/06 19:32
15	5M41027	WG214609-03 LCSDUP 6/5 EP626P3	1	1		06/05/06 20:03
16	5M41028	L0606072-01	1	1		06/05/06 20:33
17	5M41029	L0606031-01	2	1		06/05/06 21:04
18	5M41030	L0605683-05 5X	1	5		06/05/06 21:35
19	5M41031	L0606004-01 50X	1	50		06/05/06 22:06
20	5M41032	BAKE OUT	1	1		06/05/06 22:38
21	5M41033	BAKE OUT	1	1		06/05/06 23:09
22	5M41034	BAKE OUT	1	1		06/05/06 23:38

Comments

Seq.	Rerun	Dil.	Reason	Analytes
2				
	WG214635-02 50PPM BNA STD - benzoic acid > 20% but < 40%			
13				
	WG214609-01 BLK - SS 2 low - LR criteria only			
14				
	WG214609-02 LCS - SS 2 low - LR criteria only - pyridine missing, benzoic acid low			
15				
	WG214609-03 LCSDUP - SS 2 low - LR criteria only; benzoic acid missing, pyridine < MDL			
16	X	5	Over Calibration Range	naphthalene and 2-methylnaphthalene
	L0606072-01 - IS 1 and 2 low, SS 3 high - SMI			

Page: 1 of 1 Approved: 06-JUN-06

007201

Run Log ID: **10669**

KEMRON Environmental Services

Instrument Run Log

Instrument: HPMS4 Dataset: 060506

Analyst1: CLK Analyst2: NA

Method: 8270C SOP: MSS01 Rev: 14

Method: 625 SOP: MSS02 Rev: 8

Column 1 ID: RTI-5MS Column 2 ID: NA

Workgroups:

Internal Standard: STD12522 Surrogate Standard: NA

Comments:

Seq.	File ID	Sample Information	Mat	Dil	Reference	Date/Time
1	4M33273	WG214637-01 50PPM DFTPP	1	1	SOS78-44	06/05/06 13:37
2	4M33274	WG214637-01 50PPM DFTPP	1	1	SOS78-44	06/05/06 13:51
3	4M33275	WG214637-02 50PPM BNA Megamix	1	1	STD12520	06/05/06 14:09
4	4M33276	WG214609-01 BLK 6/5 EP0262P3 RR	1	1		06/05/06 14:45
5	4M33277	L0605599-10 TCLP 20X	17	20		06/05/06 15:20
6	4M33278	L0605658-01	1	1		06/05/06 15:55
7	4M33279	L0605659-01	1	1		06/05/06 16:30
8	4M33280	L0605659-03	1	1		06/05/06 17:06
9	4M33281	L0605659-04	1	1		06/05/06 17:41
10	4M33282	L0605659-05	1	1		06/05/06 18:16
11	4M33283	L0605659-07	1	1		06/05/06 18:51
12	4M33284	L0606002-01	1	1		06/05/06 19:26
13	4M33285	L0606049-01	1	1		06/05/06 20:01
14	4M33286	L0606056-01	1	1		06/05/06 20:36
15	4M33287	L0606056-02	1	1		06/05/06 21:12
16	4M33288	L0606028-01	2	1		06/05/06 21:48
17	4M33289	L0605676-01 TCLP	17	1		06/05/06 22:24
18	4M33290	L0605678-01 TCLP	17	1		06/05/06 23:00
19	4M33291	L0605686-22 TCLP	17	1		06/05/06 23:36
20	4M33292	L0605686-24 TCLP	17	1		06/06/06 00:12
21	4M33293	L0605686-26 TCLP	17	1		06/06/06 00:48
22	4M33294	BAKEOUT	1	1		06/06/06 01:24

Comments

Seq.	Rerun	Dil.	Reason	Analytes
1				
	Mass 441 Missing			
2				
	DFTPP Passes			
5				
	Not Reported, Dilution not high enough, Needs 40X (#50)			
6				
	SS 4 low			
7	X	5	Over Calibration Range	#8
8	X	5	Over Calibration Range	#13

Page: 1 of 2 Approved: 08-JUN-06

Rebecca D. Cutlip

007202

Run Log ID: **10669**

KEMRON Environmental Services

Instrument Run Log

Instrument: HPMS4 Dataset: 060506

Analyst1: CLK Analyst2: NA

Method: 8270C SOP: MSS01 Rev: 14

Method: 625 SOP: MSS02 Rev: 8

Column 1 ID: RTI-5MS Column 2 ID: NA

Workgroups:

Internal Standard: STD12522 Surrogate Standard: NA

Comments

Seq.	Rerun	Dil.	Reason	Analytes
10	X	10	Over Calibration Range	#5,8,30
	Will probably need 50X for (#30)			
13				
	Needs RE due to pyridine missing in LCS/LCS DUP			
16				
	SS 2 <10% (SMI)			

Approved: 08-JUN-06

Rebecca D. Cutlip

007203

Run Log ID: **10689**

KEMRON Environmental Services

Instrument Run Log

Instrument: HPMS4 Dataset: 060606

Analyst1: CLK Analyst2: NA

Method: 8270C SOP: MSS01 Rev: 14

Method: 625 SOP: MSS02 Rev: 8

Column 1 ID: RTI-5MS Column 2 ID: NA

Workgroups:

Internal Standard: STD12522 Surrogate Standard: NA

Comments:

Seq.	File ID	Sample Information	Mat	Dil	Reference	Date/Time
1	4M33295	WG214705-01 50PPM DFTPP	1	1	SOS78-44	06/06/06 12:57
2	4M33296	WG214705-02 50PPM BNA Megamix	1	1	STD12520	06/06/06 13:15
3	4M33297	L0605659-07 10X	1	10		06/06/06 13:50
4	4M33298	L0605659-07 50X	1	50		06/06/06 14:25
5	4M33299	L0605659-07 100X	1	100		06/06/06 15:00
6	4M33300	L0605599-10 TCLP 40X	17	40		06/06/06 15:36
7	4M33301	L0605659-01 5X	1	5		06/06/06 16:11
8	4M33302	L0605659-03 5X	1	5		06/06/06 16:46
9	4M33303	WG214691-02 BLK 6/6 EP0262P11	1	1		06/06/06 17:21
10	4M33304	WG214691-03 LCS 6/6 EP0262P11	1	1		06/06/06 17:56
11	4M33305	L0606085-09	1	1		06/06/06 18:32
12	4M33306	L0606085-10	1	1		06/06/06 19:07
13	4M33307	L0606085-11	1	1		06/06/06 19:42
14	4M33308	L0606085-12	1	1		06/06/06 20:17
15	4M33309	L0606085-13	1	1		06/06/06 20:52
16	4M33310	L0606049-01 RE	1	1		06/06/06 21:28
17	4M33311	L0605587-03 TCLP RE 10X	17	10		06/06/06 22:03
18	4M33312	WG214691-01 L0606085-01 REF 5X	1	5		06/06/06 22:39
19	4M33313	WG214691-04 L0606085-02 MS 5X	1	5		06/06/06 23:14
20	4M33314	WG214691-05 L0606085-03 MSD 5X	1	5		06/06/06 23:49
21	4M33315	L0606085-04 10X	1	10		06/07/06 00:24

Comments

Seq.	Rerun	Dil.	Reason	Analytes
3				
	Not Reported			
4				
	Not Reported			
5				
	Reported			
10				
	LCS had pyridine low			
16				
	Reported			
17				
	Reported, SS 1 low			

Approved: 07-JUN-06

Run Log ID: **10689**

KEMRON Environmental Services

Instrument Run Log

Instrument: HPMS4 Dataset: 060606

Analyst1: CLK Analyst2: NA

Method: 8270C SOP: MSS01 Rev: 14

Method: 625 SOP: MSS02 Rev: 8

Column 1 ID: RTI-5MS Column 2 ID: NA

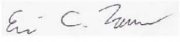
Workgroups:

Internal Standard: STD12522 Surrogate Standard: NA

Comments

Seq.	Rerun	Dil.	Reason	Analytes
18	X	100	Over Calibration Range	#44,50
21	X	100	Over Calibration Range	#44,50

Approved: 07-JUN-06



007205

Run Log ID: **10755**

KEMRON Environmental Services

Instrument Run Log

Instrument: HPMS4 Dataset: 061206

Analyst1: CLK Analyst2: NA

Method: 8270C SOP: MSS01 Rev: 14

Method: 625 SOP: MSS02 Rev: 8

Column 1 ID: RTI-5MS Column 2 ID: NA

Workgroups:

Internal Standard: STD12522 Surrogate Standard: NA

Comments:

Seq.	File ID	Sample Information	Mat	Dil	Reference	Date/Time
1	4M33316	WG215095-01 50PPM DFTPP	1	1	SOS78-44	06/12/06 13:25
2	4M33317	WG215095-01 50PPM DFTPP	1	1	SOS78-44	06/12/06 13:41
3	4M33318	WG215095-02 50PPM BNA Megamix	1	1	STD12520	06/12/06 14:00
4	4M33319	WG214960-02 BLK 6/9 EP0262P37 RR	1	1		06/12/06 14:35
5	4M33320	WG214893-01 BLK 6/8 EP0262P29	1	1		06/12/06 15:10
6	4M33321	WG214893-02 LCS 6/8 EP0262P29	1	1		06/12/06 15:45
7	4M33322	WG214893-03 LCS DUP 6/8 EP0262P29	1	1		06/12/06 16:20
8	4M33323	WG214904-01 FBLK 6/8 EP0262P37	17	1		06/12/06 16:55
9	4M33324	L0606049-01 RE	1	1		06/12/06 17:30
10	4M33325	WG214691-01 L0606085-01 100X	1	100		06/12/06 18:05
11	4M33326	L0606085-04 100X	1	100		06/12/06 18:40
12	4M33327	L0606098-01 TCLP	17	1		06/12/06 19:15
13	4M33328	L0606098-02 TCLP	17	1		06/12/06 19:51
14	4M33329	L0606098-03 TCLP	17	1		06/12/06 20:27
15	4M33330	L0606098-04 TCLP	17	1		06/12/06 21:03
16	4M33331	L0606098-05 TCLP	17	1		06/12/06 21:40
17	4M33332	L0606019-01 TCLP 10X	17	10		06/12/06 22:16

Comments

Seq.	Rerun	Dil.	Reason	Analytes
1				
	Mass 441 Missing			
2				
	DFTPP Passes			
3				
	CCV Fails (#26) Benzoic Acid, NA for samples analyzed			
9				
	Reported, SS 6 low			
10				
	Not Reported, Needs 200X (#44,50)			

Page: 1 of 1 Approved: 13-JUN-06

KEMRON Environmental Services
HOLDING TIMES
EQUIVALENT TO AFCEE FORM 9

Analytical Method: 8270C **AAB#:** WG214640
Login Number: L0606049

Client ID	Date Collected	Date Received	Date Extracted	Max Hold Time Ext.	Time Held Ext.	Date Analyzed	Max Hold Time Anal	Time Held Anal.	Q
IWGW01053106	05/31/06	06/02/06	06/05/06	7	4.71	06/05/06	40	0.459	

* EXT = SEE PROJECT QAPP REQUIREMENTS
*ANAL = SEE PROJECT QAPP REQUIREMENTS

KEMRON FORMS - Modified 02/14/2006
Version 1.5 PDF File ID: 491620
Report generated 06/20/2006 08:37

KEMRON Environmental Services
HOLDING TIMES
EQUIVALENT TO AFCEE FORM 9

Analytical Method: 8270C **AAB#:** WG214748
Login Number: L0606049

Client ID	Date Collected	Date Received	Date Extracted	Max Hold Time Ext.	Time Held Ext.	Date Analyzed	Max Hold Time Anal	Time Held Anal.	Q
IWGW01053106	05/31/06	06/02/06	06/06/06	7	5.79	06/06/06	40	0.436	

* EXT = SEE PROJECT QAPP REQUIREMENTS
*ANAL = SEE PROJECT QAPP REQUIREMENTS

KEMRON FORMS - Modified 02/14/2006
Version 1.5 PDF File ID: 491620
Report generated 06/20/2006 08:37

KEMRON Environmental Services
HOLDING TIMES
EQUIVALENT TO AFCEE FORM 9

Analytical Method: 8270C **AAB#:** WG215163
Login Number: L0606049

Client ID	Date Collected	Date Received	Date Extracted	Max Hold Time Ext.	Time Held Ext.	Date Analyzed	Max Hold Time Anal	Time Held Anal.	Q
IWGW01053106	05/31/06	06/02/06	06/08/06	7	7.94	06/12/06	40	4.12	*EXT

* EXT = SEE PROJECT QAPP REQUIREMENTS
*ANAL = SEE PROJECT QAPP REQUIREMENTS

KEMRON FORMS - Modified 02/14/2006
Version 1.5 PDF File ID: 491620
Report generated 06/20/2006 08:37

KEMRON Environmental Services

SURROGATE STANDARDS

Login Number: L0606049
Instrument Id: HPMS4
Workgroup (AAB#): WG214640

Method: 8270
CAL ID: HPMS4-10-MAY-06
Matrix: WATER

Sample Number	Dilution	Tag	1	2	3	4	5	6
L0606049-01	1.00	01	96.4	80.2	42.1	74.7	66.4	31.3

Surrogates	Surrogate Limits
1 - 2,4,6-Tribromophenol	10 - 123
2 - 2-Fluorobiphenyl	43 - 116
3 - 2-Fluorophenol	21 - 100
4 - Nitrobenzene-d5	35 - 114
5 - p-Terphenyl-d14	33 - 141
6 - Phenol-d5	10 - 94

Underline = Result out of surrogate limits

DL = surrogate diluted out
ND = surrogate not detected

KEMRON FORMS - Modified 04/18/2006
Version 1.5 PDF File ID: 490107
Report generated 06/13/2006 11:20

KEMRON Environmental Services

SURROGATE STANDARDS

Login Number: L0606049
Instrument Id: HPMS5
Workgroup (AAB#): WG214640

Method: 8270
CAL ID: HPMS5-15-MAY-06
Matrix: WATER

Sample Number	Dilution	Tag	1	2	3	4	5	6
WG214609-01	1.00	01	65.4	61.8	32.0	63.7	86.3	22.3
WG214609-02	1.00	01	86.7	69.0	34.7	62.5	77.6	25.2
WG214609-03	1.00	01	91.7	75.6	37.1	68.4	79.3	27.3

Surrogates	Surrogate Limits		
1 - 2,4,6-Tribromophenol	10	-	123
2 - 2-Fluorobiphenyl	43	-	116
3 - 2-Fluorophenol	21	-	100
4 - Nitrobenzene-d5	35	-	114
5 - p-Terphenyl-d14	33	-	141
6 - Phenol-d5	10	-	94

Underline = Result out of surrogate limits

DL = surrogate diluted out
ND = surrogate not detected

KEMRON FORMS - Modified 04/18/2006
Version 1.5 PDF File ID: 490107
Report generated 06/13/2006 11:20

KEMRON Environmental Services

SURROGATE STANDARDS

Login Number: L0606049
Instrument Id: HPMS4
Workgroup (AAB#): WG214748

Method: 8270
CAL ID: HPMS4-10-MAY-06
Matrix: WATER

Sample Number	Dilution	Tag	1	2	3	4	5	6
L0606049-01	1.00	02	108	96.4	56.3	101	61.7	38.6
WG214691-02	1.00	01	87.7	82.2	43.3	80.0	102	28.7
WG214691-03	1.00	01	94.3	85.1	44.1	71.9	99.9	31.1

Surrogates	Surrogate Limits
1 - 2,4,6-Tribromophenol	10 - 123
2 - 2-Fluorobiphenyl	43 - 116
3 - 2-Fluorophenol	21 - 100
4 - Nitrobenzene-d5	35 - 114
5 - p-Terphenyl-d14	33 - 141
6 - Phenol-d5	10 - 94

Underline = Result out of surrogate limits

DL = surrogate diluted out
ND = surrogate not detected

KEMRON FORMS - Modified 04/18/2006
Version 1.5 PDF File ID: 490107
Report generated 06/13/2006 11:20

KEMRON Environmental Services

SURROGATE STANDARDS

Login Number: L0606049
Instrument Id: HPMS4
Workgroup (AAB#): WG215163

Method: 8270
CAL ID: HPMS4-10-MAY-06
Matrix: WATER

Sample Number	Dilution	Tag	1	2	3
L0606049-01	1.00	RE2	88.1	85.6	29.3
WG214893-01	1.00	01	84.2	82.0	94.7
WG214893-02	1.00	01	81.0	68.9	88.4
WG214893-03	1.00	01	88.6	75.0	94.1

Surrogates	Surrogate Limits		
1 - 2-Fluorobiphenyl	43	-	116
2 - Nitrobenzene-d5	35	-	114
3 - p-Terphenyl-d14	33	-	141

Underline = Result out of surrogate limits

DL = surrogate diluted out
ND = surrogate not detected

KEMRON FORMS - Modified 04/18/2006
Version 1.5 PDF File ID: 490107
Report generated 06/13/2006 11:20

KEMRON Environmental Services

METHOD BLANK SUMMARY

Login Number:	L0606049	Work Group:	WG214640
Blank File ID:	5M41025	Blank Sample ID:	WG214609-01
Date Analyzed:	06/05/06	Instrument ID:	HPMS5
Time Analyzed:	19:01	Method:	8270C
Analyst:	ALT		

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG214609-02	5M41026	06/05/06 19:32	01
IWGW01053106	L0606049-01	4M33285	06/05/06 20:01	01
LCS2	WG214609-03	5M41027	06/05/06 20:03	01

KEMRON FORMS - Modified 03/06/2006
Version 1.5 PDF File ID: 491621
Report generated 06/13/2006 11:18

KEMRON Environmental Services

METHOD BLANK SUMMARY

Login Number:	L0606049	Work Group:	WG214748
Blank File ID:	4M33303	Blank Sample ID:	WG214691-02
Date Analyzed:	06/06/06	Instrument ID:	HPMS4
Time Analyzed:	17:21	Method:	8270C
Analyst:	CLK		

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG214691-03	4M33304	06/06/06 17:56	01
IWGW01053106	L0606049-01	4M33310	06/06/06 21:28	02

KEMRON FORMS - Modified 03/06/2006
Version 1.5 PDF File ID: 491621
Report generated 06/13/2006 11:18

KEMRON Environmental Services

METHOD BLANK SUMMARY

Login Number:	L0606049	Work Group:	WG215163
Blank File ID:	4M33320	Blank Sample ID:	WG214893-01
Date Analyzed:	06/12/06	Instrument ID:	HPMS4
Time Analyzed:	15:10	Method:	8270C
Analyst:	CLK		

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG214893-02	4M33321	06/12/06 15:45	01
LCS2	WG214893-03	4M33322	06/12/06 16:20	01
IWGW01053106	L0606049-01	4M33324	06/12/06 17:30	RE2

KEMRON FORMS - Modified 03/06/2006
Version 1.5 PDF File ID: 491621
Report generated 06/13/2006 11:18

KEMRON Environmental Services

METHOD BLANK REPORT

Login Number: L0606049	Run Date: 06/06/2006	Sample ID: WG214691-02
Instrument ID: HPMS4	Run Time: 17:21	Prep Method: 3510C
File ID: 4M33303	Analyst: CLK	Method: 8270C
Workgroup (AAB#): WG214748	Matrix: Water	Units: ug/L
Contract #:	Cal ID: HPMS4-10-MAY-06	

Analytes	SQL	PQL	Concentration	Dilution	Qualifier
o-Cresol	25.0	50.0	25.0	1	U
m-,p-Cresol	25.0	50.0	25.0	1	U
1,4-Dichlorobenzene	25.0	50.0	25.0	1	U
2,4-Dinitrotoluene	25.0	50.0	25.0	1	U
Hexachlorobenzene	25.0	50.0	25.0	1	U
Hexachlorobutadiene	25.0	50.0	25.0	1	U
Hexachloroethane	25.0	50.0	25.0	1	U
Nitrobenzene	25.0	50.0	25.0	1	U
Pentachlorophenol	25.0	250	25.0	1	U
Pyridine	250	500	250	1	U
2,4,5-Trichlorophenol	25.0	250	25.0	1	U
2,4,6-Trichlorophenol	25.0	50.0	25.0	1	U

Surrogates	% Recovery	Surrogate Limits			Qualifier
2-Fluorophenol	43.3	21	-	100	PASS
Phenol-d5	28.7	10	-	94	PASS
Nitrobenzene-d5	80.0	35	-	114	PASS
2-Fluorobiphenyl	82.2	43	-	116	PASS
2,4,6-Tribromophenol	87.7	10	-	123	PASS
p-Terphenyl-d14	102	33	-	141	PASS

MDL Method Detection Limit
RL Reporting/quantitation Limit

* Analyte concentration > RL

KEMRON FORMS - Modified 05/01/2006
Version 1.5 PDF File ID: 490103
Report generated 06/13/2006 11:18

KEMRON Environmental Services

METHOD BLANK REPORT

Login Number: L0606049	Run Date: 06/12/2006	Sample ID: WG214893-01
Instrument ID: HPMS4	Run Time: 15:10	Prep Method: 3520C
File ID: 4M33320	Analyst: CLK	Method: 8270C
Workgroup (AAB#): WG215163	Matrix: Water	Units: ug/L
Contract #:	Cal ID: HPMS4-10-MAY-06	

Analytes	SQL	PQL	Concentration	Dilution	Qualifier
Pyridine	250	500	250	1	U

Surrogates	% Recovery	Surrogate Limits	Qualifier
Nitrobenzene-d5	82.0	35 - 114	PASS
2-Fluorobiphenyl	84.2	43 - 116	PASS
p-Terphenyl-d14	94.7	33 - 141	PASS

MDL Method Detection Limit
RL Reporting/quantitation Limit

* Analyte concentration > RL

KEMRON FORMS - Modified 05/01/2006
Version 1.5 PDF File ID: 490103
Report generated 06/13/2006 11:18

KEMRON Environmental Services

METHOD BLANK REPORT

Login Number: L0606049	Run Date: 06/05/2006	Sample ID: WG214609-01
Instrument ID: HPMS5	Run Time: 19:01	Prep Method: 3510C
File ID: 5M41025	Analyst: ALT	Method: 8270C
Workgroup (AAB#): WG214640	Matrix: Water	Units: ug/L
Contract #:	Cal ID: HPMS5-15-MAY-06	

Analytes	SQL	PQL	Concentration	Dilution	Qualifier
o-Cresol	25.0	50.0	25.0	1	U
m-,p-Cresol	25.0	50.0	25.0	1	U
1,4-Dichlorobenzene	25.0	50.0	25.0	1	U
2,4-Dinitrotoluene	25.0	50.0	25.0	1	U
Hexachlorobenzene	25.0	50.0	25.0	1	U
Hexachlorobutadiene	25.0	50.0	25.0	1	U
Hexachloroethane	25.0	50.0	25.0	1	U
Nitrobenzene	25.0	50.0	25.0	1	U
Pentachlorophenol	25.0	250	25.0	1	U
Pyridine	250	500	250	1	U
2,4,5-Trichlorophenol	25.0	250	25.0	1	U
2,4,6-Trichlorophenol	25.0	50.0	25.0	1	U

Surrogates	% Recovery	Surrogate Limits	Qualifier
2-Fluorophenol	32.0	21 - 100	PASS
Phenol-d5	22.3	10 - 94	PASS
Nitrobenzene-d5	63.7	35 - 114	PASS
2-Fluorobiphenyl	61.8	43 - 116	PASS
2,4,6-Tribromophenol	65.4	10 - 123	PASS
p-Terphenyl-d14	86.3	33 - 141	PASS

MDL Method Detection Limit
RL Reporting/quantitation Limit

* Analyte concentration > RL

KEMRON FORMS - Modified 05/01/2006
Version 1.5 PDF File ID: 490103
Report generated 06/13/2006 11:18

KEMRON Environmental Services

LABORATORY CONTROL SAMPLE (LCS)

Login Number: L0606049 Run Date: 06/06/2006 Sample ID: WG214691-03
Instrument ID: HPMS4 Run Time: 17:56 Prep Method: 3510C
File ID: 4M33304 Analyst: CLK Method: 8270C
Workgroup (AAB#): WG214748 Matrix: Water Units: ug/L
Contract #: Cal ID: HPMS4-10-MAY-06

Analytes	Expected	Found	% Rec	LCS Limits	Q
o-Cresol	50.0	34.8	69.5	34 - 120	
m-,p-Cresol	50.0	35.5	71.1	30 - 110	
1,4-Dichlorobenzene	50.0	34.2	68.5	30 - 110	
2,4-Dinitrotoluene	50.0	52.0	104	50 - 139	
Hexachlorobenzene	50.0	45.6	91.2	50 - 130	
Hexachlorobutadiene	50.0	35.3	70.6	25 - 105	
Hexachloroethane	50.0	33.4	66.8	30 - 95	
Nitrobenzene	50.0	33.9	67.8	40 - 110	
Pentachlorophenol	50.0	54.4	109	40 - 140	
Pyridine	50.0	1.21	2.41	10 - 120	*
2,4,5-Trichlorophenol	50.0	46.8	93.6	40 - 120	
2,4,6-Trichlorophenol	50.0	44.3	88.6	40 - 120	

Surrogates	% Recovery	Surrogate Limits	Qualifier
2-Fluorophenol	44.1	21 - 100	PASS
Phenol-d5	31.1	10 - 94	PASS
Nitrobenzene-d5	71.9	35 - 114	PASS
2-Fluorobiphenyl	85.1	43 - 116	PASS
2,4,6-Tribromophenol	94.3	10 - 123	PASS
p-Terphenyl-d14	99.9	33 - 141	PASS

* FAILS %REC LIMIT

KEMRON FORMS - Modified 05/01/2006
Version 1.5 PDF File ID: 490104
Report generated 06/20/2006 08:37

KEMRON Environmental Services

LABORATORY CONTROL SAMPLE (LCS)

Login Number: L0606049 Run Date: 06/12/2006 Sample ID: WG214893-02
Instrument ID: HPMS4 Run Time: 15:45 Prep Method: 3520C
File ID: 4M33321 Analyst: CLK Method: 8270C
Workgroup (AAB#): WG215163 Matrix: Water Units: ug/L
Contract #: Cal ID: HPMS4-10-MAY-06

Analytes	Expected	Found	% Rec	LCS Limits	Q
Pyridine	50.0	27.8	55.7	10 - 120	

Surrogates	% Recovery	Surrogate Limits	Qualifier
Nitrobenzene-d5	68.9	35 - 114	PASS
2-Fluorobiphenyl	81.0	43 - 116	PASS
p-Terphenyl-d14	88.4	33 - 141	PASS

* FAILS %REC LIMIT

KEMRON FORMS - Modified 05/01/2006
Version 1.5 PDF File ID: 490104
Report generated 06/20/2006 08:37

KEMRON Environmental Services

LABORATORY CONTROL SAMPLE (LCS)

Login Number: L0606049 Run Date: 06/05/2006 Sample ID: WG214609-02
Instrument ID: HPMS5 Run Time: 19:32 Prep Method: 3510C
File ID: 5M41026 Analyst: ALT Method: 8270C
Workgroup (AAB#): WG214640 Matrix: Water Units: ug/L
Contract #: Cal ID: HPMS5-15-MAY-06

Analytes	Expected	Found	% Rec	LCS Limits	Q
o-Cresol	50.0	28.1	56.3	34 - 120	
m-,p-Cresol	50.0	27.2	54.3	30 - 110	
1,4-Dichlorobenzene	50.0	29.0	57.9	30 - 110	
2,4-Dinitrotoluene	50.0	43.4	86.8	50 - 139	
Hexachlorobenzene	50.0	40.2	80.4	50 - 130	
Hexachlorobutadiene	50.0	29.8	59.7	25 - 105	
Hexachloroethane	50.0	29.3	58.6	30 - 95	
Nitrobenzene	50.0	30.8	61.5	40 - 110	
Pentachlorophenol	50.0	41.4	82.8	40 - 140	
Pyridine	50.0		0	10 - 120	*
2,4,5-Trichlorophenol	50.0	35.0	70.0	40 - 120	
2,4,6-Trichlorophenol	50.0	34.4	68.9	40 - 120	

Surrogates	% Recovery	Surrogate Limits	Qualifier
2-Fluorophenol	34.7	21 - 100	PASS
Phenol-d5	25.2	10 - 94	PASS
Nitrobenzene-d5	62.5	35 - 114	PASS
2-Fluorobiphenyl	69.0	43 - 116	PASS
2,4,6-Tribromophenol	86.7	10 - 123	PASS
p-Terphenyl-d14	77.6	33 - 141	PASS

* FAILS %REC LIMIT

KEMRON FORMS - Modified 05/01/2006
Version 1.5 PDF File ID: 490104
Report generated 06/20/2006 08:37

KEMRON Environmental Services

LABORATORY CONTROL SAMPLE (LCS)

Login Number: L0606049 Analyst: ALT Prep Method: 3510C
Instrument ID: HPMS5 Matrix: Water Method: 8270C
Workgroup (AAB#): WG214640 Units: ug/L
Sample ID: WG214609-02 LCS File ID: 5M41026 Run Date: 06/05/2006 19:32
Sample ID: WG214609-03 LCS2 File ID: 5M41027 Run Date: 06/05/2006 20:03

Analytes	LCS			LCS2			%RPD	%Rec Limits	RPD Lmt	Q
	Known	Found	% REC	Known	Found	% REC				
o-Cresol	50.0	28.1	56.3	50.0	31.0	62.0	9.73	34 - 120	50	
m-,p-Cresol	50.0	27.2	54.3	50.0	30.1	60.2	10.2	30 - 110	35	
1,4-Dichlorobenzene	50.0	29.0	57.9	50.0	31.1	62.2	7.13	30 - 110	37	
2,4-Dinitrotoluene	50.0	43.4	86.8	50.0	45.6	91.2	5.03	50 - 139	56	
Hexachlorobenzene	50.0	40.2	80.4	50.0	42.6	85.1	5.68	50 - 130	55	
Hexachlorobutadiene	50.0	29.8	59.7	50.0	32.8	65.7	9.56	25 - 105	59	
Hexachloroethane	50.0	29.3	58.6	50.0	30.9	61.7	5.23	30 - 95	47	
Nitrobenzene	50.0	30.8	61.5	50.0	33.5	66.9	8.44	40 - 110	45	
Pentachlorophenol	50.0	41.4	82.8	50.0	42.5	84.9	2.53	40 - 140	60	
Pyridine	50.0	0.00	0.00	50.0	0.00	0.00	NA	10 - 120	38	*
2,4,5-Trichlorophenol	50.0	35.0	70.0	50.0	38.4	76.9	9.35	40 - 120	62	
2,4,6-Trichlorophenol	50.0	34.4	68.9	50.0	38.1	76.3	10.2	40 - 120	60	

Surogates	LCS	LCS2	Surrogate Limits	Qualifier
	% Recovery	% Recovery		
2-Fluorophenol	34.7	37.1	21 - 100	PASS
Phenol-d5	25.2	27.3	10 - 94	PASS
Nitrobenzene-d5	62.5	68.4	35 - 114	PASS
2-Fluorobiphenyl	69.0	75.6	43 - 116	PASS
2,4,6-Tribromophenol	86.7	91.7	10 - 123	PASS
p-Terphenyl-d14	77.6	79.3	33 - 141	PASS

* FAILS %REC LIMIT

FAILS RPD LIMIT

KEMRON FORMS - Modified 06/02/2006
Version 1.5 PDF File ID: 490105
Report generated 06/20/2006 08:37

KEMRON Environmental Services

LABORATORY CONTROL SAMPLE (LCS)

Login Number: L0606049 Analyst: CLK Prep Method: 3520C
Instrument ID: HPMS4 Matrix: Water Method: 8270C
Workgroup (AAB#): WG215163 Units: ug/L
Sample ID: WG214893-02 LCS File ID: 4M33321 Run Date: 06/12/2006 15:45
Sample ID: WG214893-03 LCS2 File ID: 4M33322 Run Date: 06/12/2006 16:20

Analytes	LCS			LCS2			%RPD	%Rec Limits	RPD Lmt	Q
	Known	Found	% REC	Known	Found	% REC				
Pyridine	50.0	27.8	55.7	50.0	34.3	68.6	20.8	10 - 120	38	

Surogates	LCS	LCS2	Surrogate Limits	Qualifier
	% Recovery	% Recovery		
Nitrobenzene-d5	68.9	75.0	35 - 114	PASS
2-Fluorobiphenyl	81.0	88.6	43 - 116	PASS
p-Terphenyl-d14	88.4	94.1	33 - 141	PASS

* FAILS %REC LIMIT

FAILS RPD LIMIT

KEMRON FORMS - Modified 06/02/2006
Version 1.5 PDF File ID: 490105
Report generated 06/20/2006 08:37

KEMRON ENVIRONMENTAL SERVICES
ORGANIC INSTRUMENT CHECK

DFTPP

Login Number: L0606049 Tune ID: WG212888-01
Instrument: HPMS4 Run Date: 05/10/2006
Analyst: CLK Run Time: 13:03
Workgroup: WG212888 File ID: 4M32961
Cal ID: HPMS4-10-MAY-06

Target	Rel. to	Lower	Upper	Rel.	Raw	Result
51.0	198	30.0	60.0	38.4	197430	PASS
68.0	69.0	0	2.00	0	0	PASS
69.0	198	0	100	38.8	199829	PASS
70.0	69.0	0	2.00	0.531	1061	PASS
127	198	40.0	60.0	51.3	264213	PASS
197	198	0	1.00	0	0	PASS
198	198	100	100	100	514581	PASS
199	198	5.00	9.00	6.63	34117	PASS
275	198	10.0	30.0	25.1	129296	PASS
365	198	1.00	100	2.75	14129	PASS
441	443	0.0100	100	80.4	63090	PASS
442	198	40.0	100	79.0	406762	PASS
443	442	17.0	23.0	19.3	78506	PASS

This check relates to the following samples, MS, MSD:

Lab ID	Client ID	Tag	Date Analyzed	Q
WG212888-09	SSCV	01	05/10/2006 18:06	
WG212888-08	STD	01	05/10/2006 17:31	
WG212888-07	STD	01	05/10/2006 16:55	
WG212888-06	STD	01	05/10/2006 16:20	
WG212888-05	STD	01	05/10/2006 15:44	
WG212888-04	STD	01	05/10/2006 15:08	
WG212888-03	STD	01	05/10/2006 14:33	
WG212888-02	CCV	01	05/10/2006 13:58	

* Sample past 12 hour tune limit

KEMRON FORMS - Modified 02/14/2006
Version 1.3 PDF File ID: 491624
Report generated 06/13/2006 11:19

KEMRON ENVIRONMENTAL SERVICES
ORGANIC INSTRUMENT CHECK

DFTPP

Login Number: L0606049 Tune ID: WG213265-01
Instrument: HPMS5 Run Date: 05/15/2006
Analyst: ALT Run Time: 08:53
Workgroup: WG213265 File ID: 5M40735
Cal ID: HPMS5-15-MAY-06

Target	Rel. to	Lower	Upper	Rel.	Raw	Result
51.0	198	30.0	60.0	45.1	139063	PASS
68.0	69.0	0	2.00	1.23	1488	PASS
69.0	198	0	100	39.1	120639	PASS
70.0	69.0	0	2.00	0.516	623	PASS
127	198	40.0	60.0	49.4	152320	PASS
197	198	0	1.00	0	0	PASS
198	198	100	100	100	308437	PASS
199	198	5.00	9.00	6.90	21282	PASS
275	198	10.0	30.0	20.1	62045	PASS
365	198	1.00	100	2.20	6778	PASS
441	443	0.0100	100	65.2	24142	PASS
442	198	40.0	100	60.4	186253	PASS
443	442	17.0	23.0	19.9	37024	PASS

This check relates to the following samples, MS, MSD:

Lab ID	Client ID	Tag	Date Analyzed	Q
WG213265-09	SSCV	01	05/15/2006 14:02	
WG213265-08	STD	01	05/15/2006 13:30	
WG213265-07	STD	01	05/15/2006 12:58	
WG213265-06	STD	01	05/15/2006 12:25	
WG213265-05	STD	01	05/15/2006 11:52	
WG213265-04	STD	01	05/15/2006 11:21	
WG213265-03	STD	01	05/15/2006 10:48	
WG213265-02	CCV	01	05/15/2006 10:16	

* Sample past 12 hour tune limit

KEMRON FORMS - Modified 02/14/2006
Version 1.3 PDF File ID: 491624
Report generated 06/13/2006 11:19

KEMRON ENVIRONMENTAL SERVICES
ORGANIC INSTRUMENT CHECK

DFTPP

Login Number: L0606049 Tune ID: WG214635-01
Instrument: HPMS5 Run Date: 06/05/2006
Analyst: ALT Run Time: 13:04
Workgroup: WG214635 File ID: 5M41013
Cal ID: HPMS5-15-MAY-06

Target	Rel. to	Lower	Upper	Rel.	Raw	Result
51.0	198	30.0	60.0	46.5	103923	PASS
68.0	69.0	0	2.00	1.12	1026	PASS
69.0	198	0	100	41.0	91632	PASS
70.0	69.0	0	2.00	0.633	580	PASS
127	198	40.0	60.0	52.2	116509	PASS
197	198	0	1.00	0.0698	156	PASS
198	198	100	100	100	223381	PASS
199	198	5.00	9.00	6.77	15131	PASS
275	198	10.0	30.0	20.5	45789	PASS
365	198	1.00	100	2.65	5925	PASS
441	443	0.0100	100	66.6	16146	PASS
442	198	40.0	100	56.8	126901	PASS
443	442	17.0	23.0	19.1	24241	PASS

This check relates to the following CCV:

Lab ID	Client ID	Date Analyzed	
WG214635-02	CCV	06/05/2006 13:22	

This check relates to the following samples & batch QC:

Lab ID	Client ID	Tag	Date Analyzed	Q
WG214609-01	BLANK	01	06/05/2006 19:01	
WG214609-02	LCS	01	06/05/2006 19:32	
WG214609-03	LCS2	01	06/05/2006 20:03	

* Sample past 12 hour tune limit

KEMRON FORMS - Modified 03/15/2006
Version 1.3 PDF File ID: 491625
Report generated 06/13/2006 11:19

KEMRON ENVIRONMENTAL SERVICES
ORGANIC INSTRUMENT CHECK

DFTPP

Login Number: L0606049 | Tune ID: WG214637-01
Instrument: HPMS4 | Run Date: 06/05/2006
Analyst: CLK | Run Time: 13:51
Workgroup: WG214637 | File ID: 4M33274
Cal ID: HPMS4 -10-MAY-06

Target	Rel. to	Lower	Upper	Rel.	Raw	Result
51.0	198	30.0	60.0	39.2	86315	PASS
68.0	69.0	0	2.00	0	0	PASS
69.0	198	0	100	40.5	89136	PASS
70.0	69.0	0	2.00	0.627	559	PASS
127	198	40.0	60.0	54.5	120061	PASS
197	198	0	1.00	0	0	PASS
198	198	100	100	100	220138	PASS
199	198	5.00	9.00	6.83	15026	PASS
275	198	10.0	30.0	24.4	53656	PASS
365	198	1.00	100	2.72	5984	PASS
441	443	0.0100	100	29.6	9448	PASS
442	198	40.0	100	74.6	164317	PASS
443	442	17.0	23.0	19.4	31898	PASS

This check relates to the following CCV:

Lab ID	Client ID	Date Analyzed	
WG214637-02	CCV	06/05/2006 14:09	

This check relates to the following samples & batch QC:

Lab ID	Client ID	Tag	Date Analyzed	Q
L0606049-01	IWGW01053106	01	06/05/2006 20:01	

*** Sample past 12 hour tune limit**

KEMRON FORMS - Modified 03/15/2006
Version 1.3 PDF File ID: 491625
Report generated 06/13/2006 11:19

KEMRON ENVIRONMENTAL SERVICES
ORGANIC INSTRUMENT CHECK

DFTPP

Login Number: L0606049 | Tune ID: WG214705-01
Instrument: HPMS4 | Run Date: 06/06/2006
Analyst: CLK | Run Time: 12:57
Workgroup: WG214705 | File ID: 4M33295
Cal ID: HPMS4 -10-MAY-06

Target	Rel. to	Lower	Upper	Rel.	Raw	Result
51.0	198	30.0	60.0	39.4	90134	PASS
68.0	69.0	0	2.00	0	0	PASS
69.0	198	0	100	40.3	92018	PASS
70.0	69.0	0	2.00	0.538	495	PASS
127	198	40.0	60.0	54.4	124221	PASS
197	198	0	1.00	0	0	PASS
198	198	100	100	100	228522	PASS
199	198	5.00	9.00	6.73	15378	PASS
275	198	10.0	30.0	24.3	55618	PASS
365	198	1.00	100	2.66	6089	PASS
441	443	0.0100	100	37.5	12005	PASS
442	198	40.0	100	72.5	165786	PASS
443	442	17.0	23.0	19.3	32029	PASS

This check relates to the following CCV:

Lab ID	Client ID	Date Analyzed	
WG214705-02	CCV	06/06/2006 13:15	

This check relates to the following samples & batch QC:

Lab ID	Client ID	Tag	Date Analyzed	Q
WG214691-02	BLANK	01	06/06/2006 17:21	
WG214691-03	LCS	01	06/06/2006 17:56	
L0606049-01	IWGW01053106	02	06/06/2006 21:28	

* Sample past 12 hour tune limit

KEMRON FORMS - Modified 03/15/2006
Version 1.3 PDF File ID: 491625
Report generated 06/13/2006 11:19

KEMRON ENVIRONMENTAL SERVICES
ORGANIC INSTRUMENT CHECK

DFTPP

Login Number: L0606049 | Tune ID: WG215095-01
Instrument: HPMS4 | Run Date: 06/12/2006
Analyst: CLK | Run Time: 13:41
Workgroup: WG215095 | File ID: 4M33317
Cal ID: HPMS4 -10-MAY-06

Target	Rel. to	Lower	Upper	Rel.	Raw	Result
51.0	198	30.0	60.0	38.4	88623	PASS
68.0	69.0	0	2.00	0	0	PASS
69.0	198	0	100	39.3	90689	PASS
70.0	69.0	0	2.00	0.621	563	PASS
127	198	40.0	60.0	53.9	124213	PASS
197	198	0	1.00	0	0	PASS
198	198	100	100	100	230634	PASS
199	198	5.00	9.00	6.72	15498	PASS
275	198	10.0	30.0	24.8	57130	PASS
365	198	1.00	100	2.78	6415	PASS
441	443	0.0100	100	31.8	10984	PASS
442	198	40.0	100	79.1	182544	PASS
443	442	17.0	23.0	18.9	34541	PASS

This check relates to the following CCV:

Lab ID	Client ID	Date Analyzed	
WG215095-02	CCV	06/12/2006 14:00	

This check relates to the following samples & batch QC:

Lab ID	Client ID	Tag	Date Analyzed	Q
WG214893-01	BLANK	01	06/12/2006 15:10	
WG214893-02	LCS	01	06/12/2006 15:45	
WG214893-03	LCS2	01	06/12/2006 16:20	
L0606049-01	IWGW01053106	RE2	06/12/2006 17:30	

***** Sample past 12 hour tune limit

KEMRON FORMS - Modified 03/15/2006
Version 1.3 PDF File ID: 491625
Report generated 06/13/2006 11:19

KEMRON Environmental Services

INITIAL CALIBRATION SUMMARY

Login Number: L0606049 **Instrument ID:** HPMS4
Analytical Method: 8270C **Initial Calibration Date:** 10-MAY-06 17:31
ICAL Workgroup: WG212888 **Column ID:** F

Analyte		AVG RF	% RSD	LINEAR	QUAD
1,4-Dichlorobenzene	CCC	1.555	4.45		
2,4,6-Trichlorophenol	CCC	0.3283	5.49		
Hexachlorobutadiene	CCC	0.1500	6.47		
Pentachlorophenol	CCC	0.1338	6.25		
2,4-Dinitrophenol	SPCC	0.1177	20.8	0.999	
4-Nitrophenol	SPCC	0.2111	3.85		
Hexachlorocyclopentadiene	SPCC	0.2264	20.9	0.999	
n-Nitrosodipropylamine	SPCC	0.8445	15.1		1.00
2,4,5-Trichlorophenol		0.3508	3.83		
2,4-Dinitrotoluene		0.3479	8.33		
2-Methylphenol		1.085	3.55		
3-,4-Methylphenol		1.430	3.31		
Hexachlorobenzene		0.2427	7.56		
Hexachloroethane		0.5807	2.90		
Nitrobenzene		0.3309	5.49		
Pyridine		1.482	1.89		
2,4,6-Tribromophenol	SURR	0.1557	5.93		
2-Fluorobiphenyl	SURR	1.211	9.02		
2-Fluorophenol	SURR	1.291	2.06		
Nitrobenzene-d5	SURR	0.3230	4.29		
Phenol-d5	SURR	1.516	4.39		
p-Terphenyl-d14	SURR	0.9339	8.86		

KEMRON Environmental Services

INITIAL CALIBRATION SUMMARY

Login Number: L0606049 **Instrument ID:** HPMS5
Analytical Method: 8270C **Initial Calibration Date:** 15-MAY-06 13:30
ICAL Workgroup: WG213265 **Column ID:** F

Analyte		AVG RF	% RSD	LINEAR	QUAD
1,4-Dichlorobenzene	CCC	1.651	3.96		
2,4,6-Trichlorophenol	CCC	0.3613	5.95		
Hexachlorobutadiene	CCC	0.1746	3.27		
Pentachlorophenol	CCC	0.1318	16.5	0.999	
2,4-Dinitrophenol	SPCC	0.1250	27.5	0.998	
4-Nitrophenol	SPCC	0.2516	4.24		
Hexachlorocyclopentadiene	SPCC	0.2231	17.8	0.999	
n-Nitrosodipropylamine	SPCC	0.8572	6.36		
2,4,5-Trichlorophenol		0.3930	5.37		
2,4-Dinitrotoluene		0.3794	9.28		
2-Methylphenol		1.023	3.29		
3-,4-Methylphenol		1.445	4.49		
Hexachlorobenzene		0.2322	2.75		
Hexachloroethane		0.5959	3.62		
Nitrobenzene		0.3723	3.80		
Pyridine		1.363	4.54		
2,4,6-Tribromophenol	SURR	0.1400	12.1		
2-Fluorobiphenyl	SURR	1.342	5.21		
2-Fluorophenol	SURR	1.284	2.54		
Nitrobenzene-d5	SURR	0.3796	3.16		
Phenol-d5	SURR	1.498	2.86		
p-Terphenyl-d14	SURR	1.018	3.12		

KEMRON Environmental Services

INITIAL CALIBRATION DATA

Login Number: L0606049 **Instrument ID:** HPMS4

Analytical Method: 8270C **Initial Calibration Date:** 10-MAY-06 17:31

Column ID: F

Analyte	WG212888-02			WG212888-03			WG212888-04		
	CONC	RESP	RF	CONC	RESP	RF	CONC	RESP	RF
1,4-Dichlorobenzene	50.0	1245020	1.530	3.00	79161	1.621	15.0	388518	1.632
2,4,6-Trichlorophenol	50.0	630279	0.3365	3.00	31348	0.2931	15.0	178627	0.3373
Hexachlorobutadiene	50.0	479552	0.1468	3.00	30534	0.1594	15.0	152479	0.1623
Pentachlorophenol	50.0	393132	0.1382	NA	NA	NA	15.0	94432	0.1181
2,4-Dinitrophenol	50.0	228051	0.1218	NA	NA	NA	15.0	41017	0.07750
4-Nitrophenol	50.0	401393	0.2143	NA	NA	NA	15.0	104092	0.1966
Hexachlorocyclopentadiene	50.0	471489	0.2518	3.00	13054	0.1220	15.0	117137	0.2212
n-Nitrosodipropylamine	50.0	682603	0.8387	3.00	48040	0.9839	15.0	233769	0.9821
2,4,5-Trichlorophenol	50.0	663501	0.3543	3.00	34799	0.3253	15.0	190453	0.3597
2,4-Dinitrotoluene	50.0	680558	0.3634	3.00	33714	0.3152	15.0	203197	0.3837
2-Methylphenol	50.0	874935	1.075	3.00	53823	1.102	15.0	271658	1.141
3-,4-Methylphenol	50.0	1157928	1.423	3.00	69532	1.424	15.0	357396	1.502
Hexachlorobenzene	50.0	669599	0.2353	3.00	42222	0.2670	15.0	209351	0.2618
Hexachloroethane	50.0	468256	0.5753	3.00	27768	0.5687	15.0	143822	0.6042
Nitrobenzene	50.0	1074250	0.3290	3.00	64104	0.3347	15.0	333993	0.3554
Pyridine	50.0	1183146	1.454	NA	NA	NA	15.0	361044	1.517
2,4,6-Tribromophenol	50.0	297521	0.1589	3.00	14684	0.1373	15.0	87429	0.1651
2-Fluorobiphenyl	50.0	2234703	1.193	3.00	143882	1.345	15.0	700636	1.323
2-Fluorophenol	50.0	1043671	1.282	3.00	61652	1.263	15.0	315552	1.326
Nitrobenzene-d5	50.0	1056262	0.3235	3.00	60193	0.3142	15.0	322497	0.3432
Phenol-d5	50.0	1237869	1.521	3.00	73918	1.514	15.0	380898	1.600
p-Terphenyl-d14	50.0	2380370	0.9222	3.00	149218	1.017	15.0	763744	1.030

KEMRON FORMS - Modified 03/06/2006
Version 1.6 PDF File ID: 491622
Report generated 06/13/2006 11:18

KEMRON Environmental Services

INITIAL CALIBRATION DATA

Login Number: L0606049 **Instrument ID:** HPMS4

Analytical Method: 8270C **Initial Calibration Date:** 10-MAY-06 17:31

Column ID: F

Analyte	WG212888-05			WG212888-06			WG212888-07		
	CONC	RESP	RF	CONC	RESP	RF	CONC	RESP	RF
1,4-Dichlorobenzene	25.0	638272	1.624	80.0	1940192	1.505	120	2862026	1.463
2,4,6-Trichlorophenol	25.0	311395	0.3500	80.0	998116	0.3281	120	1492493	0.3201
Hexachlorobutadiene	25.0	246283	0.1581	80.0	752608	0.1430	120	1107561	0.1378
Pentachlorophenol	25.0	175499	0.1306	80.0	636754	0.1380	120	967763	0.1397
2,4-Dinitrophenol	25.0	88287	0.09920	80.0	397232	0.1306	120	648660	0.1391
4-Nitrophenol	25.0	183609	0.2064	80.0	661051	0.2173	120	1010926	0.2168
Hexachlorocyclopentadiene	25.0	214645	0.2412	80.0	761240	0.2502	120	1135774	0.2436
n-Nitrosodipropylamine	25.0	370684	0.9430	80.0	982605	0.7624	120	1310833	0.6702
2,4,5-Trichlorophenol	25.0	326852	0.3674	80.0	1069734	0.3516	120	1600241	0.3432
2,4-Dinitrotoluene	25.0	338747	0.3807	80.0	1040606	0.3420	120	1458474	0.3128
2-Methylphenol	25.0	440527	1.121	80.0	1370410	1.063	120	2020568	1.033
3-,4-Methylphenol	25.0	582688	1.482	80.0	1810984	1.405	120	2667924	1.364
Hexachlorobenzene	25.0	344183	0.2562	80.0	1049100	0.2274	120	1548808	0.2236
Hexachloroethane	25.0	237474	0.6041	80.0	737832	0.5725	120	1099049	0.5619
Nitrobenzene	25.0	549893	0.3529	80.0	1686320	0.3204	120	2466127	0.3069
Pyridine	25.0	595702	1.516	80.0	1890289	1.467	120	2853726	1.459
2,4,6-Tribromophenol	25.0	145658	0.1637	80.0	473622	0.1557	120	712643	0.1528
2-Fluorobiphenyl	25.0	1144935	1.287	80.0	3463027	1.138	120	4950609	1.062
2-Fluorophenol	25.0	521667	1.327	80.0	1647246	1.278	120	2474996	1.266
Nitrobenzene-d5	25.0	531018	0.3408	80.0	1667522	0.3168	120	2465444	0.3068
Phenol-d5	25.0	629351	1.601	80.0	1910849	1.483	120	2774141	1.418
p-Terphenyl-d14	25.0	1238227	1.003	80.0	3639985	0.8770	120	5127227	0.8241

KEMRON Environmental Services

INITIAL CALIBRATION DATA

Login Number: L0606049 **Instrument ID:** HPMS4

Analytical Method: 8270C **Initial Calibration Date:** 10-MAY-06 17:31

Column ID: F

Analyte	WG212888-08		
	CONC	RESP	RF
1,4-Dichlorobenzene	100	2356522	1.510
2,4,6-Trichlorophenol	100	1231222	0.3328
Hexachlorobutadiene	100	911448	0.1427
Pentachlorophenol	100	777380	0.1383
2,4-Dinitrophenol	100	510127	0.1379
4-Nitrophenol	100	795194	0.2150
Hexachlorocyclopentadiene	100	941671	0.2546
n-Nitrosodipropylamine	100	1140909	0.7309
2,4,5-Trichlorophenol	100	1310165	0.3542
2,4-Dinitrotoluene	100	1248768	0.3376
2-Methylphenol	100	1647904	1.056
3-,4-Methylphenol	100	2197686	1.408
Hexachlorobenzene	100	1278359	0.2275
Hexachloroethane	100	902593	0.5782
Nitrobenzene	100	2026137	0.3171
Pyridine	100	2305939	1.477
2,4,6-Tribromophenol	100	577527	0.1561
2-Fluorobiphenyl	100	4162599	1.125
2-Fluorophenol	100	2022240	1.296
Nitrobenzene-d5	100	2018174	0.3159
Phenol-d5	100	2305608	1.477
p-Terphenyl-d14	100	4315298	0.8646

KEMRON Environmental Services

INITIAL CALIBRATION DATA

Login Number: L0606049 **Instrument ID:** HPMS5

Analytical Method: 8270C **Initial Calibration Date:** 15-MAY-06 13:30

Column ID: F

Analyte	WG213265-02			WG213265-03			WG213265-04		
	CONC	RESP	RF	CONC	RESP	RF	CONC	RESP	RF
1,4-Dichlorobenzene	50.0	946890	1.716	3.00	59193	1.720	15.0	296420	1.713
2,4,6-Trichlorophenol	50.0	470113	0.3841	3.00	23709	0.3160	15.0	138112	0.3594
Hexachlorobutadiene	50.0	369599	0.1796	3.00	22809	0.1790	15.0	117795	0.1818
Pentachlorophenol	50.0	246375	0.1399	NA	NA	NA	15.0	53845	0.09700
2,4-Dinitrophenol	50.0	162308	0.1326	NA	NA	NA	15.0	27873	0.07250
4-Nitrophenol	50.0	325731	0.2662	NA	NA	NA	15.0	90094	0.2345
Hexachlorocyclopentadiene	50.0	308574	0.2521	3.00	10548	0.1406	15.0	80590	0.2097
n-Nitrosodipropylamine	50.0	498828	0.9040	3.00	30637	0.8900	15.0	157145	0.9080
2,4,5-Trichlorophenol	50.0	509603	0.4164	3.00	26251	0.3499	15.0	150088	0.3906
2,4-Dinitrotoluene	50.0	501252	0.4096	3.00	22688	0.3024	15.0	148040	0.3853
2-Methylphenol	50.0	594350	1.077	3.00	35309	1.026	15.0	181784	1.050
3-,4-Methylphenol	50.0	843598	1.529	3.00	50400	1.464	15.0	261586	1.512
Hexachlorobenzene	50.0	426591	0.2422	3.00	25406	0.2385	15.0	129458	0.2333
Hexachloroethane	50.0	346564	0.6281	3.00	20587	0.5980	15.0	106202	0.6136
Nitrobenzene	50.0	804568	0.3909	3.00	47458	0.3725	15.0	249139	0.3845
Pyridine	50.0	766105	1.388	NA	NA	NA	15.0	215123	1.243
2,4,6-Tribromophenol	50.0	183489	0.1499	3.00	7739	0.1032	15.0	52870	0.1376
2-Fluorobiphenyl	50.0	1700510	1.390	3.00	107053	1.427	15.0	530844	1.382
2-Fluorophenol	50.0	738052	1.338	3.00	42559	1.236	15.0	224137	1.295
Nitrobenzene-d5	50.0	820344	0.3986	3.00	46586	0.3657	15.0	251412	0.3880
Phenol-d5	50.0	867625	1.572	3.00	51028	1.482	15.0	265006	1.531
p-Terphenyl-d14	50.0	1564961	1.038	3.00	92207	1.043	15.0	494872	1.059

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KEMRON Environmental Services

INITIAL CALIBRATION DATA

Login Number: L0606049 **Instrument ID:** HPMS5

Analytical Method: 8270C **Initial Calibration Date:** 15-MAY-06 13:30

Column ID: F

Analyte	WG213265-05			WG213265-06			WG213265-07		
	CONC	RESP	RF	CONC	RESP	RF	CONC	RESP	RF
1,4-Dichlorobenzene	25.0	484909	1.645	80.0	1477802	1.594	100	1839420	1.604
2,4,6-Trichlorophenol	25.0	234871	0.3655	80.0	742487	0.3652	100	934913	0.3733
Hexachlorobutadiene	25.0	189781	0.1745	80.0	577812	0.1686	100	729666	0.1717
Pentachlorophenol	25.0	105966	0.1132	80.0	421569	0.1409	100	549924	0.1498
2,4-Dinitrophenol	25.0	60060	0.09350	80.0	285314	0.1403	100	388552	0.1552
4-Nitrophenol	25.0	160927	0.2504	80.0	510755	0.2512	100	647867	0.2587
Hexachlorocyclopentadiene	25.0	142114	0.2211	80.0	494271	0.2431	100	629997	0.2516
n-Nitrosodipropylamine	25.0	263732	0.8944	80.0	754755	0.8143	100	936470	0.8167
2,4,5-Trichlorophenol	25.0	256265	0.3988	80.0	808630	0.3978	100	1019239	0.4070
2,4-Dinitrotoluene	25.0	250654	0.3901	80.0	786542	0.3869	100	999579	0.3991
2-Methylphenol	25.0	303694	1.030	80.0	919022	0.9916	100	1152799	1.005
3-,4-Methylphenol	25.0	432105	1.465	80.0	1291455	1.393	100	1602035	1.397
Hexachlorobenzene	25.0	212148	0.2266	80.0	671858	0.2246	100	851547	0.2320
Hexachloroethane	25.0	178079	0.6039	80.0	535456	0.5777	100	669603	0.5839
Nitrobenzene	25.0	413705	0.3805	80.0	1240572	0.3620	100	1551758	0.3652
Pyridine	25.0	402546	1.365	80.0	1264203	1.364	100	1619122	1.412
2,4,6-Tribromophenol	25.0	90877	0.1414	80.0	301261	0.1482	100	377228	0.1506
2-Fluorobiphenyl	25.0	882657	1.374	80.0	2630928	1.294	100	3254347	1.300
2-Fluorophenol	25.0	375355	1.273	80.0	1169041	1.261	100	1497073	1.306
Nitrobenzene-d5	25.0	419365	0.3857	80.0	1287277	0.3756	100	1602829	0.3772
Phenol-d5	25.0	444083	1.506	80.0	1357404	1.465	100	1704754	1.487
p-Terphenyl-d14	25.0	803943	1.024	80.0	2480798	0.9747	100	3123902	1.007

KEMRON Environmental Services

INITIAL CALIBRATION DATA

Login Number: L0606049 **Instrument ID:** HPMS5

Analytical Method: 8270C **Initial Calibration Date:** 15-MAY-06 13:30

Column ID: F

Analyte	WG213265-08		
	CONC	RESP	RF
1,4-Dichlorobenzene	120	2208926	1.564
2,4,6-Trichlorophenol	120	1153112	0.3657
Hexachlorobutadiene	120	880588	0.1672
Pentachlorophenol	120	683955	0.1498
2,4-Dinitrophenol	120	491795	0.1560
4-Nitrophenol	120	783422	0.2485
Hexachlorocyclopentadiene	120	766988	0.2432
n-Nitrosodipropylamine	120	1091482	0.7730
2,4,5-Trichlorophenol	120	1230792	0.3903
2,4-Dinitrotoluene	120	1206104	0.3825
2-Methylphenol	120	1385271	0.9810
3-,4-Methylphenol	120	1913453	1.355
Hexachlorobenzene	120	1042953	0.2285
Hexachloroethane	120	798928	0.5658
Nitrobenzene	120	1845062	0.3503
Pyridine	120	1983193	1.405
2,4,6-Tribromophenol	120	469858	0.1490
2-Fluorobiphenyl	120	3870224	1.227
2-Fluorophenol	120	1806608	1.279
Nitrobenzene-d5	120	1928850	0.3662
Phenol-d5	120	2040566	1.445
p-Terphenyl-d14	120	3800392	0.9814

KEMRON Environmental Services

ALTERNATE SOURCE CALIBRATION REPORT

Login Number:L0606049 Run Date:05/10/2006 Sample ID:WG212888-09
Instrument ID:HPMS4 Run Time:18:06 Method:8270C
File ID:4M32970 Analyst:CLK
ICal Workgroup:WG212888 Cal ID: HPMS4 - 10-MAY-06

Analyte		Expected	Found	RF	%D	UNITS	Q
1,4-Dichlorobenzene	CCC	50	49.6	1.54	.8	ug/mL	
Hexachlorobutadiene	CCC	50	54.1	0.162	8.3	ug/mL	
Pentachlorophenol	CCC	50	55.1	0.147	10.1	ug/mL	
2,4,6-Trichlorophenol	CCC	50	54.3	0.356	8.5	ug/mL	
n-Nitrosodipropylamine	SPCC	50	56.1	0.932	12.1	ug/mL	
4-Nitrophenol	SPCC	50	49.5	0.209	.9	ug/mL	
Hexachlorocyclopentadiene	SPCC	50	52.9	0.261	5.8	ug/mL	
2,4-Dinitrophenol	SPCC	50	54.5	0.138	9	ug/mL	
2-Methylphenol		50	52.2	1.13	4.3	ug/mL	
3-,4-Methylphenol		50	57.5	1.64	14.9	ug/mL	
2,4-Dinitrotoluene		50	53.3	0.371	6.7	ug/mL	
Hexachlorobenzene		50	49.8	0.242	.3	ug/mL	
Hexachloroethane		50	49.2	0.571	1.6	ug/mL	
Nitrobenzene		50	49.8	0.330	.4	ug/mL	
Pyridine		50	49.8	1.47	.5	ug/mL	
2,4,5-Trichlorophenol		50	55.0	0.386	10.1	ug/mL	

* Exceeds %D Limit

CCC Calibration Check Compounds
SPCC System Performance Check Compounds

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KEMRON Environmental Services

ALTERNATE SOURCE CALIBRATION REPORT

Login Number: L0606049 Run Date: 05/15/2006 Sample ID: WG213265-09
Instrument ID: HPMS5 Run Time: 14:02 Method: 8270C
File ID: 5M40745 Analyst: ALT
ICal Workgroup: WG213265 Cal ID: HPMS5 - 15-MAY-06

Analyte		Expected	Found	RF	%D	UNITS	Q
1,4-Dichlorobenzene	CCC	50	47.1	1.55	5.9	ug/mL	
Hexachlorobutadiene	CCC	50	50.4	0.176	.8	ug/mL	
Pentachlorophenol	CCC	50	47.0	0.128	5.9	ug/mL	
2,4,6-Trichlorophenol	CCC	50	48.5	0.351	3	ug/mL	
n-Nitrosodipropylamine	SPCC	50	51.3	0.879	2.6	ug/mL	
4-Nitrophenol	SPCC	50	49.4	0.249	1.1	ug/mL	
Hexachlorocyclopentadiene	SPCC	50	61.0	0.297	22.1	ug/mL	
2,4-Dinitrophenol	SPCC	50	51.3	0.139	2.7	ug/mL	
2-Methylphenol		50	48.9	1.00	2.1	ug/mL	
3-,4-Methylphenol		50	48.6	1.40	2.9	ug/mL	
2,4-Dinitrotoluene		50	50.7	0.385	1.5	ug/mL	
Hexachlorobenzene		50	45.9	0.213	8.2	ug/mL	
Hexachloroethane		50	47.6	0.568	4.7	ug/mL	
Nitrobenzene		50	48.0	0.357	4	ug/mL	
Pyridine		50	47.2	1.29	5.6	ug/mL	
2,4,5-Trichlorophenol		50	48.0	0.377	4	ug/mL	

* Exceeds %D Limit

CCC Calibration Check Compounds
SPCC System Performance Check Compounds

KEMRON FORMS - Modified 04/11/2006
Version 1.5 PDF File ID: 491623
Report generated 06/13/2006 11:19

KEMRON Environmental Services

CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L0606049 Run Date: 06/05/2006 Sample ID: WG214637-02
Instrument ID: HPMS4 Run Time: 14:09 Method: 8270C
File ID: 4M33275 Analyst: CLK
Workgroup (AAB#): WG214640 Cal ID: HPMS4 - 10-MAY-06

Analyte		Expected	Found	RF	%D	UNITS	Q
1,4-Dichlorobenzene	CCC	50	49.6	1.54	.7	ug/mL	
Hexachlorobutadiene	CCC	50	51.3	0.154	2.5	ug/mL	
Pentachlorophenol	CCC	50	44.2	0.118	11.5	ug/mL	
2,4,6-Trichlorophenol	CCC	50	50.5	0.331	.9	ug/mL	
n-Nitrosodipropylamine	SPCC	50	50.3	0.851	.5	ug/mL	
2,4-Dinitrophenol	SPCC	50	38.9	0.0913	22.2	ug/mL	
4-Nitrophenol	SPCC	50	46.4	0.196	7.3	ug/mL	
Hexachlorocyclopentadiene	SPCC	50	35.7	0.175	28.5	ug/mL	
2-Methylphenol		50	48.9	1.06	2.2	ug/mL	
3-,4-Methylphenol		50	49.6	1.42	.8	ug/mL	
2,4-Dinitrotoluene		50	52.5	0.365	5	ug/mL	
Hexachlorobenzene		50	47.8	0.232	4.4	ug/mL	
Hexachloroethane		50	51.1	0.594	2.3	ug/mL	
Nitrobenzene		50	48.7	0.323	2.5	ug/mL	
Pyridine		50	46.0	1.36	8	ug/mL	
2,4,5-Trichlorophenol		50	50.9	0.357	1.8	ug/mL	
2-Fluorophenol	SURR	50	49.6	1.28	.8	ug/mL	
Phenol-d5	SURR	50	49.0	1.49	1.9	ug/mL	
Nitrobenzene-d5	SURR	50	49.6	0.320	.8	ug/mL	
2-Fluorobiphenyl	SURR	50	48.1	1.16	3.9	ug/mL	
2,4,6-Tribromophenol	SURR	50	52.0	0.162	4.1	ug/mL	
p-Terphenyl-d14	SURR	50	48.7	0.909	2.7	ug/mL	

* Exceeds %D Criteria

CCC Calibration Check Compounds
SPCC System Performance Check Compounds

KEMRON FORMS - Modified 04/19/2006
Version 1.3 PDF File ID: 491626
Report generated 06/13/2006 11:19

KEMRON Environmental Services

CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L0606049 Run Date: 06/05/2006 Sample ID: WG214635-02
Instrument ID: HPMS5 Run Time: 13:22 Method: 8270C
File ID: 5M41014 Analyst: ALT
Workgroup (AAB#): WG214640 Cal ID: HPMS5 - 15-MAY-06

Analyte		Expected	Found	RF	%D	UNITS	Q
1,4-Dichlorobenzene	CCC	50	51.9	1.71	3.8	ug/mL	
Hexachlorobutadiene	CCC	50	55.5	0.194	10.9	ug/mL	
Pentachlorophenol	CCC	50	44.4	0.120	11.2	ug/mL	
2,4,6-Trichlorophenol	CCC	50	52.3	0.378	4.6	ug/mL	
n-Nitrosodipropylamine	SPCC	50	53.6	0.918	7.1	ug/mL	
2,4-Dinitrophenol	SPCC	50	49.5	0.132	1	ug/mL	
4-Nitrophenol	SPCC	50	53.9	0.271	7.7	ug/mL	
Hexachlorocyclopentadiene	SPCC	50	48.9	0.237	2.1	ug/mL	
2-Methylphenol		50	49.7	1.02	.5	ug/mL	
3-,4-Methylphenol		50	52.7	1.52	5.5	ug/mL	
2,4-Dinitrotoluene		50	53.7	0.407	7.3	ug/mL	
Hexachlorobenzene		50	51.7	0.240	3.4	ug/mL	
Hexachloroethane		50	54.8	0.653	9.6	ug/mL	
Nitrobenzene		50	53.4	0.398	6.9	ug/mL	
Pyridine		50	48.7	1.33	2.5	ug/mL	
2,4,5-Trichlorophenol		50	51.4	0.404	2.9	ug/mL	
2-Fluorophenol	SURR	50	49.3	1.27	1.4	ug/mL	
Phenol-d5	SURR	50	50.6	1.52	1.2	ug/mL	
Nitrobenzene-d5	SURR	50	54.3	0.413	8.7	ug/mL	
2-Fluorobiphenyl	SURR	50	52.8	1.42	5.7	ug/mL	
2,4,6-Tribromophenol	SURR	50	53.8	0.151	7.5	ug/mL	
p-Terphenyl-d14	SURR	50	49.6	1.01	.9	ug/mL	

* Exceeds %D Criteria

CCC Calibration Check Compounds
SPCC System Performance Check Compounds

KEMRON FORMS - Modified 04/19/2006
Version 1.3 PDF File ID: 491626
Report generated 06/13/2006 11:19

KEMRON Environmental Services

CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L0606049 Run Date: 06/06/2006 Sample ID: WG214705-02
Instrument ID: HPMS4 Run Time: 13:15 Method: 8270C
File ID: 4M33296 Analyst: CLK
Workgroup (AAB#): WG214748 Cal ID: HPMS4 - 10-MAY-06

Analyte		Expected	Found	RF	%D	UNITS	Q
1,4-Dichlorobenzene	CCC	50	49.6	1.54	.8	ug/mL	
Hexachlorobutadiene	CCC	50	50.2	0.151	.5	ug/mL	
Pentachlorophenol	CCC	50	46.9	0.126	6.1	ug/mL	
2,4,6-Trichlorophenol	CCC	50	52.0	0.342	4	ug/mL	
n-Nitrosodipropylamine	SPCC	50	49.3	0.837	1.4	ug/mL	
2,4-Dinitrophenol	SPCC	50	47.1	0.116	5.7	ug/mL	
4-Nitrophenol	SPCC	50	46.4	0.196	7.3	ug/mL	
Hexachlorocyclopentadiene	SPCC	50	39.5	0.194	21	ug/mL	
2-Methylphenol		50	49.1	1.06	1.8	ug/mL	
3-,4-Methylphenol		50	50.0	1.43	0	ug/mL	
2,4-Dinitrotoluene		50	52.3	0.364	4.6	ug/mL	
Hexachlorobenzene		50	48.0	0.233	3.9	ug/mL	
Hexachloroethane		50	51.1	0.593	2.2	ug/mL	
Nitrobenzene		50	49.0	0.324	2.1	ug/mL	
Pyridine		50	48.0	1.42	4	ug/mL	
2,4,5-Trichlorophenol		50	52.0	0.365	4.1	ug/mL	
2-Fluorophenol	SURR	50	50.4	1.30	.9	ug/mL	
Phenol-d5	SURR	50	49.7	1.51	.7	ug/mL	
Nitrobenzene-d5	SURR	50	49.9	0.322	.3	ug/mL	
2-Fluorobiphenyl	SURR	50	48.4	1.17	3.2	ug/mL	
2,4,6-Tribromophenol	SURR	50	52.1	0.162	4.1	ug/mL	
p-Terphenyl-d14	SURR	50	49.0	0.916	2	ug/mL	

* Exceeds %D Criteria

CCC Calibration Check Compounds
SPCC System Performance Check Compounds

KEMRON FORMS - Modified 04/19/2006
Version 1.3 PDF File ID: 491626
Report generated 06/13/2006 11:19

KEMRON Environmental Services

CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L0606049 Run Date: 06/12/2006 Sample ID: WG215095-02
Instrument ID: HPMS4 Run Time: 14:00 Method: 8270C
File ID: 4M33318 Analyst: CLK
Workgroup (AAB#): WG215163 Cal ID: HPMS4 - 10-MAY-06

Analyte		Expected	Found	RF	%D	UNITS	Q
n-Nitrosodipropylamine	SPCC	50	50.0	0.847	0	ug/mL	
Hexachlorocyclopentadiene	SPCC	50	39.6	0.194	20.9	ug/mL	
4-Nitrophenol	SPCC	50	44.2	0.187	11.5	ug/mL	
2,4-Dinitrophenol	SPCC	50	47.4	0.117	5.2	ug/mL	
Pyridine		50	47.2	1.40	5.7	ug/mL	
Nitrobenzene-d5	SURR	50	49.3	0.319	1.4	ug/mL	
2-Fluorobiphenyl	SURR	50	48.8	1.18	2.3	ug/mL	
p-Terphenyl-d14	SURR	50	48.9	0.913	2.3	ug/mL	

* Exceeds %D Criteria

CCC Calibration Check Compounds
SPCC System Performance Check Compounds

KEMRON FORMS - Modified 04/19/2006
Version 1.3 PDF File ID: 491626
Report generated 06/13/2006 11:19

KEMRON ENVIRONMENTAL SERVICES
INTERNAL STANDARD AREA SUMMARY
(COMPARED TO CCV)

Login Number: L0606049 CCV Number: WG214635-02
Instrument ID: HPMS5 CAL ID: HPMS5-15-MAY-06
Workgroup (AAB#): WG214640 Matrix: WATER

Sample Number	Dilution	Tag	IS-1	IS-2	IS-3	IS-4	IS-5	IS-6
WG214635-02	NA	NA	311633	707322	983916	1158273	775432	1052970
Upper Limit	NA	NA	623266	1414644	1967832	2316546	1550864	2105940
Lower Limit	NA	NA	155817	353661	491958	579137	387716	526485
WG214609-01	1.00	01	361857	808216	984574	1333358	854393	1190174
WG214609-02	1.00	01	364424	831021	1122083	1506809	908458	1215952
WG214609-03	1.00	01	362216	827194	1120587	1506519	884168	1209642

IS-1 - 1,4-Dichlorobenzene-d4
IS-2 - Acenaphthene-d10
IS-3 - Chrysene-d12
IS-4 - Naphthalene-d8
IS-5 - Perylene-d12
IS-6 - Phenanthrene-d10

Underline = Response outside limits

KEMRON FORMS - Modified 04/18/2006
Version 1.3 PDF File ID: 490106
Report generated 06/13/2006 11:19

KEMRON ENVIRONMENTAL SERVICES
INTERNAL STANDARD AREA SUMMARY
(COMPARED TO CCV)

Login Number: L0606049 CCV Number: WG214637-02
Instrument ID: HPMS4 CAL ID: HPMS4-10-MAY-06
Workgroup (AAB#): WG214640 Matrix: WATER

Sample Number	Dilution	Tag	IS-1	IS-2	IS-3	IS-4	IS-5	IS-6
WG214637-02	NA	NA	621872	1571906	2377116	2598512	2419639	2506569
Upper Limit	NA	NA	1243744	3143812	4754232	5197024	4839278	5013138
Lower Limit	NA	NA	310936	785953	1188558	1299256	1209820	1253285
L0606049-01	1.00	01	653584	1492178	2182075	2590228	2196174	2256319

IS-1 - 1,4-Dichlorobenzene-d4
IS-2 - Acenaphthene-d10
IS-3 - Chrysene-d12
IS-4 - Naphthalene-d8
IS-5 - Perylene-d12
IS-6 - Phenanthrene-d10

Underline = Response outside limits

KEMRON FORMS - Modified 04/18/2006
Version 1.3 PDF File ID: 490106
Report generated 06/13/2006 11:19

KEMRON ENVIRONMENTAL SERVICES
INTERNAL STANDARD AREA SUMMARY
(COMPARED TO CCV)

Login Number:L0606049 CCV Number:WG214705-02
Instrument ID:HPMS4 CAL ID: HPMS4-10-MAY-06
Workgroup (AAB#):WG214748 Matrix:WATER

Sample Number	Dilution	Tag	IS-1	IS-2	IS-3	IS-4	IS-5	IS-6
WG214705-02	NA	NA	699135	1708444	2433937	2894150	2362434	2678359
Upper Limit	NA	NA	1398270	3416888	4867874	5788300	4724868	5356718
Lower Limit	NA	NA	349568	854222	1216969	1447075	1181217	1339180
L0606049-01	1.00	02	628407	1395814	1956422	2449784	1941484	2089542
WG214691-02	1.00	01	664637	1450645	1991978	2569330	2026208	2151351
WG214691-03	1.00	01	680865	1586026	2246407	3096809	2247378	2407781

IS-1 - 1,4-Dichlorobenzene-d4
IS-2 - Acenaphthene-d10
IS-3 - Chrysene-d12
IS-4 - Naphthalene-d8
IS-5 - Perylene-d12
IS-6 - Phenanthrene-d10

Underline = Response outside limits

KEMRON FORMS - Modified 04/18/2006
Version 1.3 PDF File ID: 490106
Report generated 06/13/2006 11:19

KEMRON ENVIRONMENTAL SERVICES
INTERNAL STANDARD AREA SUMMARY
(COMPARED TO CCV)

Login Number: L0606049
Instrument ID: HPMS4
Workgroup (AAB#): WG215163

CCV Number: WG215095-02
CAL ID: HPMS4-10-MAY-06
Matrix: WATER

Sample Number	Dilution	Tag	IS-1	IS-2	IS-3	IS-4	IS-5	IS-6
WG215095-02	NA	NA	645457	1608468	2368732	2706563	2404891	2554342
Upper Limit	NA	NA	1290914	3216936	4737464	5413126	4809782	5108684
Lower Limit	NA	NA	322729	804234	1184366	1353282	1202446	1277171
L0606049-01	1.00	RE2	619769	1389040	1929459	2436375	1913943	2043231
WG214893-01	1.00	01	637373	1407927	1969619	2495184	1958479	2054981
WG214893-02	1.00	01	624611	1446502	2138699	2810534	2159449	2182759
WG214893-03	1.00	01	643156	1482063	2117772	2938869	2117288	2227519

IS-1 - 1,4-Dichlorobenzene-d4
IS-2 - Acenaphthene-d10
IS-3 - Chrysene-d12
IS-4 - Naphthalene-d8
IS-5 - Perylene-d12
IS-6 - Phenanthrene-d10

Underline = Response outside limits

KEMRON FORMS - Modified 04/18/2006
Version 1.3 PDF File ID: 490106
Report generated 06/13/2006 11:19

KEMRON ENVIRONMENTAL SERVICES
INTERNAL STANDARD RETENTION TIME SUMMARY
(COMPARED TO CCV)

Login Number: L0606049 CCV Number: WG214635-02
Instrument ID: HPMS5 CAL ID: HPMS5-15-MAY-06
Workgroup (AAB#): WG214640 Matrix: WATER

Sample Number	Dilution	Tag	IS-1	IS-2	IS-3	IS-4	IS-5	IS-6
WG214635-02	NA	NA	8.51	12.24	16.6	10.09	18.41	13.87
Upper Limit	NA	NA	9.01	12.74	17.1	10.59	18.91	14.37
Lower Limit	NA	NA	8.01	11.74	16.1	9.59	17.91	13.37
WG214609-01	1.00	01	8.51	12.24	16.6	10.1	18.41	13.87
WG214609-02	1.00	01	8.51	12.24	16.6	10.09	18.41	13.87
WG214609-03	1.00	01	8.51	12.24	16.6	10.1	18.41	13.87

IS-1 - 1,4-Dichlorobenzene-d4
IS-2 - Acenaphthene-d10
IS-3 - Chrysene-d12
IS-4 - Naphthalene-d8
IS-5 - Perylene-d12
IS-6 - Phenanthrene-d10

Underline = Response outside limits

KEMRON FORMS - Modified 04/18/2006
Version 1.3 PDF File ID: 491627
Report generated 06/13/2006 11:20

KEMRON ENVIRONMENTAL SERVICES
INTERNAL STANDARD RETENTION TIME SUMMARY
(COMPARED TO CCV)

Login Number:L0606049 CCV Number:WG214637-02
Instrument ID:HPMS4 CAL ID: HPMS4-10-MAY-06
Workgroup (AAB#):WG214640 Matrix:WATER

Sample Number	Dilution	Tag	IS-1	IS-2	IS-3	IS-4	IS-5	IS-6
WG214637-02	NA	NA	9.33	13.19	18.48	10.94	21.12	15.07
Upper Limit	NA	NA	9.83	13.69	18.98	11.44	21.62	15.57
Lower Limit	NA	NA	8.83	12.69	17.98	10.44	20.62	14.57
L0606049-01	1.00	01	9.33	13.19	18.48	10.94	21.12	15.07

IS-1 - 1,4-Dichlorobenzene-d4
IS-2 - Acenaphthene-d10
IS-3 - Chrysene-d12
IS-4 - Naphthalene-d8
IS-5 - Perylene-d12
IS-6 - Phenanthrene-d10

Underline = Response outside limits

KEMRON FORMS - Modified 04/18/2006
Version 1.3 PDF File ID: 491627
Report generated 06/13/2006 11:20

KEMRON ENVIRONMENTAL SERVICES
INTERNAL STANDARD RETENTION TIME SUMMARY
(COMPARED TO CCV)

Login Number: L0606049 **CCV Number:** WG214705-02
Instrument ID: HPMS4 **CAL ID:** HPMS4-10-MAY-06
Workgroup (AAB#): WG214748 **Matrix:** WATER

Sample Number	Dilution	Tag	IS-1	IS-2	IS-3	IS-4	IS-5	IS-6
WG214705-02	NA	NA	9.33	13.19	18.48	10.94	21.12	15.07
Upper Limit	NA	NA	9.83	13.69	18.98	11.44	21.62	15.57
Lower Limit	NA	NA	8.83	12.69	17.98	10.44	20.62	14.57
L0606049-01	1.00	02	9.33	13.19	18.48	10.94	21.11	15.06
WG214691-02	1.00	01	9.33	13.19	18.47	10.94	21.11	15.06
WG214691-03	1.00	01	9.33	13.19	18.48	10.94	21.11	15.07

IS-1 - 1,4-Dichlorobenzene-d4
IS-2 - Acenaphthene-d10
IS-3 - Chrysene-d12
IS-4 - Naphthalene-d8
IS-5 - Perylene-d12
IS-6 - Phenanthrene-d10

Underline = Response outside limits

KEMRON FORMS - Modified 04/18/2006
Version 1.3 PDF File ID: 491627
Report generated 06/13/2006 11:20

KEMRON ENVIRONMENTAL SERVICES
INTERNAL STANDARD RETENTION TIME SUMMARY
(COMPARED TO CCV)

Login Number:L0606049 CCV Number:WG215095-02
Instrument ID:HPMS4 CAL ID: HPMS4-10-MAY-06
Workgroup (AAB#):WG215163 Matrix:WATER

Sample Number	Dilution	Tag	IS-1	IS-2	IS-3	IS-4	IS-5	IS-6
WG215095-02	NA	NA	9.33	13.19	18.48	10.94	21.11	15.07
Upper Limit	NA	NA	9.83	13.69	18.98	11.44	21.61	15.57
Lower Limit	NA	NA	8.83	12.69	17.98	10.44	20.61	14.57
L0606049-01	1.00	RE2	9.34	13.19	18.48	10.94	21.11	15.06
WG214893-01	1.00	01	9.34	13.19	18.48	10.94	21.11	15.06
WG214893-02	1.00	01	9.33	13.19	18.48	10.94	21.11	15.07
WG214893-03	1.00	01	9.33	13.19	18.48	10.94	21.11	15.07

IS-1 - 1,4-Dichlorobenzene-d4
IS-2 - Acenaphthene-d10
IS-3 - Chrysene-d12
IS-4 - Naphthalene-d8
IS-5 - Perylene-d12
IS-6 - Phenanthrene-d10

Underline = Response outside limits

KEMRON FORMS - Modified 04/18/2006
Version 1.3 PDF File ID: 491627
Report generated 06/13/2006 11:20

1.2.2 Pesticide GC Data (8081)

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KEMRON ENVIRONMENTAL SERVICES
GC PESTICIDES

KEMRON Login No.: L0606049

METHOD

Preparation: SW- 846 3550B(Soils) 3510C(Waters)

Analysis: SW-846 8081

HOLDING TIMES

Sample Preparation: All holding times were met.

Sample Analysis: All holding times were met.

PREPARATION

Sample preparation proceeded normally.

CALIBRATION

Initial Calibration: For all compounds which yielded a %RSD greater than 20 %, linear or higher order equations were applied. All acceptance criteria were met.

Alternate Source Standards: All acceptance criteria were met.

Continuing Calibration: All acceptance criteria were met.

BATCH QA/QC

Method Blank: All acceptance criteria were met.

Labortory Control Sample: All acceptance criteria were met.

Matrix Spikes: There were no MS/MSD results associated with this sample delivery group, due to insufficient volume of sample. The laboratory included an LCS and LCS duplicate in the preparation batch in lieu of the NELAC prescribed MS/MSD. KEMRON recommends site specific MS/MSD samples to avoid possible data qualification.

SAMPLES

Surrogates: All acceptance criteria were met.

Endrin/DDT Breakdown: All acceptance criteria were met.

Samples: For all samples which yielded results with an RPD of greater than 40% between the primary and confirmation column the appropriate flag was applied. All acceptance criteria were met.

Manual Integration Reason Codes

KEMRON laboratory management has identified four general cases with valid reasons supporting the use of manual integration techniques.

007255

Reason #1: Data System Fails to Select Correct Peak
In some cases the chromatography system selects and integrates the ”wrong peak”. In this case the analyst must correct the selection and force the system to integrate the proper peak. Other times the system may miss the peak completely.

Reason #2: Data System Splits the Peak Incorrectly or Integrates a False Peak as a Rider Peak.
This phenomena is common at low concentrations where the signal:noise ratio is low. A single compound (peak) is incorrectly split into multiple peaks or integrated as a main peak with one or more rider peaks resulting in low area counts for the target compound.

Reason #3: Improperly Integrated Isomers and/or coeluting compounds.
This system often fails to distinguish coeluting compounds and or isomers. The integration areas and concentrations are wrong, and they must be corrected by manual integration. Prime examples are benzo(k)fluoranthene and benzo(b)fluoranthene which are often unresolved and integrated improperly when both are present at low concentrations in standards or samples.

Reason #4: System Establishes Incorrect Baseline
There are numerous situations in chromatography where the system establishes the baseline incorrectly. Some baseline errors will be obvious to the analyst and should be corrected via manual procedures.

Reason #5: Miscellaneous
Other situations involving integration errors may require in-depth review and technical judgment. These cases should be brought to the attention of the laboratory management. If the form of manual integration is not clearly covered by these four cases, then review and approval by the Laboratory Director or the QA/QC Supervisor will be required.

I certify that this data package is in compliance with the terms and conditions agreed to by the client and KEMRON Environmental Services, both technically and for completeness, except for the conditions noted above. Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or designated person, as verified by the following signature.

Analyst: ECL

Approved: 08-JUN-06

LABORATORY REPORT

L0606049

06/20/06 08:38

Submitted By

KEMRON Environmental Services
156 Starlite Drive
Marietta , OH 45750
(740) 373 - 4071

For

Account Name: CH2MHILL, Inc
7600 Tidwell Road
Suite 400
San Antonio, TX 77040
Attention: John Ynfante

Account Number: 2736
Work ID: STATE MARINE RI

P.O. Number: 915193

Sample Analysis Summary

Client ID	Lab ID	Method	Dilution	Date Received
IWGW01053106	L0606049-01	8081A	1	02-JUN-06
IWGW01053106	L0606049-01	8081A	1	02-JUN-06

Report Number: **L0606049**
Report Date : **June 20, 2006**

Sample Number: **L0606049-01**
Client ID: **IWGW01053106**
Matrix: **Water**
Workgroup Number: **WG214757**
Collect Date: **05/31/2006 16:00**

PrePrep Method: **NONE**
Prep Method: **3510C**
Analytical Method: **8081A**
Analyst: **ECL**
Dilution: **1**
Units: **ug/L**

Instrument: **HP9**
Prep Date: **06/06/2006 08:30**
Cal Date: **06/07/2006 17:52**
Run Date: **06/07/2006 20:13**
File ID: **9G35109.F**

Analyte	CAS. Number	Result	Qual	PQL	SQL
Endrin	72-20-8		U	0.515	0.103
Lindane	58-89-9		U	0.515	0.103
Methoxychlor	72-43-5		U	0.515	0.103
Toxaphene	8001-35-2		U	10.3	3.09
Chlordane	57-74-9		U	10.3	3.09
Heptachlor	76-44-8		U	0.515	0.103
Heptachlor Epoxide	1024-57-3		U	0.515	0.103

Surrogate	% Recovery	Lower	Upper	Qual
2,4,5,6-Tetrachloro-m-xylene	53.8	20	180	
Decachlorobiphenyl	35.1	25	140	

U Not detected at or above the reporting limit

Report Number: **L0606049**
Report Date : **June 20, 2006**

Sample Number: **L0606049-01**
Client ID: **IWGW01053106**
Matrix: **Water**
Workgroup Number: **WG214757**
Collect Date: **05/31/2006 16:00**
Sample Tag: **CF**

PrePrep Method: **NONE**
Prep Method: **3510C**
Analytical Method: **8081A**
Analyst: **ECL**
Dilution: **1**
Units: **ug/L**

Instrument: **HP9**
Prep Date: **06/06/2006 08:30**
Cal Date: **06/07/2006 17:52**
Run Date: **06/07/2006 20:41**
File ID: **9G35109.R**

Analyte	CAS. Number	Result	Qual	PQL	SQL
Endrin	72-20-8		U	0.515	0.103
Lindane	58-89-9		U	0.515	0.103
Methoxychlor	72-43-5		U	0.515	0.103
Toxaphene	8001-35-2		U	10.3	3.09
Chlordane	57-74-9		U	10.3	3.09
Heptachlor	76-44-8		U	0.515	0.103
Heptachlor Epoxide	1024-57-3		U	0.515	0.103

Surrogate	% Recovery	Lower	Upper	Qual
2,4,5,6-Tetrachloro-m-xylene	57.6	20	180	
Decachlorobiphenyl	33.9	25	140	

U Not detected at or above the reporting limit

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1.2.2.1 QC Summary

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Checklist ID: 7897

KEMRON Environmental Services
Data Checklist

Date: 07-JUN-2006
Analyst: ECL
Analyst: NA
Method: 8081
Instrument: HP9
Curve Workgroup: WG214776, WG214778
Analytical Workgroups: L0606049, L0606083, L0606084, L0606086

Runlog ID number:	10701
System Performance Check	NA
DFTPP	NA
Endrin/DDT Breakdown	X
Initial Calibration	X
Average RF	X
Linear Reg or Higher Order Curve	NA
Second Source standard % Difference	X
Continuing Calibration /Check Standards	X
Project/Client Specific Requirements	NA
Special Standards	NA
Blanks	X
TCL's	X
Surrogates	X
LCS (Laboratory Control Sample)	X
Recoveries	X
Surrogates	X
MS/MSD/Duplicates	NA
Samples	X
TCL Hits	X
Spectra of TCL Hits	NA
Surrogates	X
Internal Standards Criteria	NA
Library Searches	NA
Calculations & Correct Factors	X
Dilutions Run	NA
Reruns	NA
Manual Integrations	NA
Case Narrative	X
Results Reporting/Data Qualifiers	X
KOBRA Workgroup Data	X
Check for Completeness	X
Primary Reviewer	ECL
Secondary Reviewer	RDC
Check for compliance with method and project specific requirements	X
Check the completeness of reported information	X
Check the information for the report narrative	X
Check the resonableness of the results	X

Primary Reviewer:

Secondary Reviewer:
08-JUN-2006

Generated: JUN-08-2006 16:43:38

007263

Run Log ID: **10701**

KEMRON Environmental Services

Instrument Run Log

Instrument: HP9 Dataset: 060706

Analyst1: ECL Analyst2: NA

Method: 8081 SOP: GCS09 Rev: 7

Column 1 ID: RTX-CLP Column 2 ID: RTX-CLP2

Workgroups:

Internal Standard: NA Surrogate Standard: NA

Comments:

Seq.	File ID	Sample Information	Mat	Dil	Reference	Date/Time
1	9G35090.F	WG214779-01 ENDRIN/DDT	1	1	SOS79-14	06/07/06 10:25
2	9G35090.R	WG214779-01 ENDRIN/DDT	1	1	SOS79-14	06/07/06 10:53
3	9G35091.F	PEST CCV 20 PPB	1	1	SOS78-14	06/07/06 10:53
4	9G35091.R	PEST CCV 20 PPB	1	1	SOS78-14	06/07/06 11:21
5	9G35092.F	WG214776-01 TOX ICAL 2000 PPB	1	1	SOS78-08	06/07/06 12:13
6	9G35092.R	WG214776-01 TOX ICAL 2000 PPB	1	1	SOS78-08	06/07/06 12:41
7	9G35093.F	WG214776-02 TOX ICAL 1000 PPB	1	1	SOS78-08	06/07/06 12:41
8	9G35093.R	WG214776-02 TOX ICAL 1000 PPB	1	1	SOS78-08	06/07/06 13:09
9	9G35094.F	WG214776-03 TOX ICAL 500 PPB	1	1	SOS78-08	06/07/06 13:09
10	9G35094.R	WG214776-03 TOX ICAL 500 PPB	1	1	SOS78-08	06/07/06 13:38
11	9G35095.F	WG214776-04 TOX ICAL 250 PPB	1	1	SOS78-08	06/07/06 13:38
12	9G35095.R	WG214776-04 TOX ICAL 250 PPB	1	1	SOS78-08	06/07/06 14:07
13	9G35096.F	WG214776-05 TOX ICAL 100 PPB	1	1	SOS78-08	06/07/06 14:07
14	9G35096.R	WG214776-05 TOX ICAL 100 PPB	1	1	SOS78-08	06/07/06 14:35
15	9G35097.F	WG214776-06 TOX ALT 500 PPB	1	1	SOS78-12	06/07/06 14:35
16	9G35097.R	WG214776-06 TOX ALT 500 PPB	1	1	SOS78-12	06/07/06 15:03
17	9G35098.F	WG214778-01 PEST ICAL 200 PPB	1	1	SOS78-14	06/07/06 15:03
18	9G35098.R	WG214778-01 PEST ICAL 200 PPB	1	1	SOS78-14	06/07/06 15:32
19	9G35099.F	WG214778-02 PEST ICAL 50 PPB	1	1	SOS78-14	06/07/06 15:32
20	9G35099.R	WG214778-02 PEST ICAL 50 PPB	1	1	SOS78-14	06/07/06 16:00
21	9G35100.F	WG214778-03 PEST ICAL 20 PPB	1	1	SOS78-14	06/07/06 16:00
22	9G35100.R	WG214778-03 PEST ICAL 20 PPB	1	1	SOS78-14	06/07/06 16:28
23	9G35101.F	WG214778-04 PEST ICAL 10 PPB	1	1	SOS78-14	06/07/06 16:28
24	9G35101.R	WG214778-04 PEST ICAL 10 PPB	1	1	SOS78-14	06/07/06 16:56
25	9G35102.F	WG214778-05 PEST ICAL 4 PPB	1	1	SOS78-14	06/07/06 16:56
26	9G35102.R	WG214778-05 PEST ICAL 4 PPB	1	1	SOS78-14	06/07/06 17:24
27	9G35103.F	WG214778-06 PEST ICAL 1 PPB	1	1	SOS78-14	06/07/06 17:24
28	9G35103.R	WG214778-06 PEST ICAL 1 PPB	1	1	SOS78-14	06/07/06 17:52
29	9G35104.F	WG214778-07 PEST ALT 20 PPB	1	1	SOS78-11	06/07/06 17:52
30	9G35104.R	WG214778-07 PEST ALT 20 PPB	1	1	SOS78-11	06/07/06 18:20
31	9G35105.F	WG214659-01 BLANK V262 P09	1	1		06/07/06 18:20
32	9G35105.R	WG214659-01 BLANK V262 P09	1	1		06/07/06 18:49
33	9G35106.F	WG214659-02 LCS V262 P09	1	1		06/07/06 18:49
34	9G35106.R	WG214659-02 LCS V262 P09	1	1		06/07/06 19:17
35	9G35107.F	WG214659-03 LCS DUP V262 P09	1	1		06/07/06 19:17
36	9G35107.R	WG214659-03 LCS DUP V262 P09	1	1		06/07/06 19:45

Approved: 08-JUN-06

Rebecca D. Cattlip

007264

Run Log ID: **10701**

KEMRON Environmental Services

Instrument Run Log

Instrument: HP9 Dataset: 060706

Analyst1: ECL Analyst2: NA

Method: 8081 SOP: GCS09 Rev: 7

Column 1 ID: RTX-CLP Column 2 ID: RTX-CLP2

Workgroups:

Internal Standard: NA Surrogate Standard: NA

Seq.	File ID	Sample Information	Mat	Dil	Reference	Date/Time
37	9G35108.F	WG214659-04 TOX LCS V262 P09	1	1		06/07/06 19:45
38	9G35108.R	WG214659-04 TOX LCS V262 P09	1	1		06/07/06 20:13
39	9G35109.F	L0606049-01	1	1		06/07/06 20:13
40	9G35109.R	L0606049-01	1	1		06/07/06 20:41
41	9G35110.F	L0606083-09	2	1		06/07/06 20:41
42	9G35110.R	L0606083-09	2	1		06/07/06 21:09
43	9G35111.F	L0606084-10	2	1		06/07/06 21:09
44	9G35111.R	L0606084-10	2	1		06/07/06 21:38
45	9G35112.F	WG214779-02 ENDRIN/DDT	1	1	SOS79-14	06/07/06 21:38
46	9G35112.R	WG214779-02 ENDRIN/DDT	1	1	SOS79-14	06/07/06 22:06
47	9G35113.F	WG214779-03 PEST CCV 20 PPB	1	1	SOS78-14	06/07/06 22:06
48	9G35113.R	WG214779-03 PEST CCV 20 PPB	1	1	SOS78-14	06/07/06 22:34
49	9G35114.F	WG214777-01 TOX CCV 250 PPB	1	1	SOS78-08	06/07/06 22:34
50	9G35114.R	WG214777-01 TOX CCV 250 PPB	1	1	SOS78-08	06/07/06 23:02
51	9G35115.F	L0606086-01 MDL	1	1		06/07/06 23:02
52	9G35115.R	L0606086-01 MDL	1	1		06/07/06 23:30
53	9G35116.F	L0606086-02 MDL	1	1		06/07/06 23:30
54	9G35116.R	L0606086-02 MDL	1	1		06/07/06 23:58
55	9G35117.F	L0606086-03 MDL	1	1		06/07/06 23:58
56	9G35117.R	L0606086-03 MDL	1	1		06/08/06 00:26
57	9G35118.F	L0606086-04 MDL	1	1		06/08/06 00:26
58	9G35118.R	L0606086-04 MDL	1	1		06/08/06 00:55
59	9G35119.F	L0606086-05 MDL	1	1		06/08/06 00:55
60	9G35119.R	L0606086-05 MDL	1	1		06/08/06 01:23
61	9G35120.F	L0606086-06 MDL	1	1		06/08/06 01:23
62	9G35120.R	L0606086-06 MDL	1	1		06/08/06 01:51
63	9G35121.F	L0606086-07 MDL	1	1		06/08/06 01:51
64	9G35121.R	L0606086-07 MDL	1	1		06/08/06 02:19
65	9G35122.F	WG214779-04 PEST CCV 10 PPB	1	1	SOS78-14	06/08/06 02:19
66	9G35122.R	WG214779-04 PEST CCV 10 PPB	1	1	SOS78-14	06/08/06 02:47
67	9G35123.F	WG214777-02 TOX CCV 500 PPB	1	1	SOS78-08	06/08/06 02:47
68	9G35123.R	WG214777-02 TOX CCV 500 PPB	1	1	SOS78-08	06/08/06 03:15
69	9G35124.F	L0606086-08 TOX MDL	1	1		06/08/06 03:15
70	9G35124.R	L0606086-08 TOX MDL	1	1		06/08/06 03:43
71	9G35125.F	L0606086-09 TOX MDL	1	1		06/08/06 03:43
72	9G35125.R	L0606086-09 TOX MDL	1	1		06/08/06 04:12
73	9G35126.F	L0606086-10 TOX MDL	1	1		06/08/06 04:12
74	9G35126.R	L0606086-10 TOX MDL	1	1		06/08/06 04:40
75	9G35127.F	L0606086-11 TOX MDL	1	1		06/08/06 04:40

Approved: 08-JUN-06

Rebecca D. Cattlip

007265

Run Log ID: **10701**

KEMRON Environmental Services

Instrument Run Log

Instrument: HP9 Dataset: 060706

Analyst1: ECL Analyst2: NA

Method: 8081 SOP: GCS09 Rev: 7

Column 1 ID: RTX-CLP Column 2 ID: RTX-CLP2

Workgroups:

Internal Standard: NA Surrogate Standard: NA

Seq.	File ID	Sample Information	Mat	Dil	Reference	Date/Time
76	9G35127.R	L0606086-11 TOX MDL	1	1		06/08/06 05:08
77	9G35128.F	L0606086-12 TOX MDL	1	1		06/08/06 05:08
78	9G35128.R	L0606086-12 TOX MDL	1	1		06/08/06 05:36
79	9G35129.F	L0606086-13 TOX MDL	1	1		06/08/06 05:36
80	9G35129.R	L0606086-13 TOX MDL	1	1		06/08/06 06:04
81	9G35130.F	L0606086-14 TOX MDL	1	1		06/08/06 06:04
82	9G35130.R	L0606086-14 TOX MDL	1	1		06/08/06 06:32
83	9G35131.F	WG214777-03 TOX CCV 250 PPB	1	1	SOS78-08	06/08/06 06:32
84	9G35131.R	WG214777-03 TOX CCV 250 PPB	1	1	SOS78-08	06/08/06 07:01

Comments

Seq.	Rerun	Dil.	Reason	Analytes
3				
	Standard failed.			

Page: 3 of 3 Approved: 08-JUN-06

Rebecca D. Cutlip

007266

KEMRON Environmental Services
HOLDING TIMES
EQUIVALENT TO AFCEE FORM 9

Analytical Method: 8081A **AAB#:** WG214757
Login Number: L0606049

Client ID	Date Collected	Date Received	Date Extracted	Max Hold Time Ext.	Time Held Ext.	Date Analyzed	Max Hold Time Anal	Time Held Anal.	Q
IWGW01053106	05/31/06	06/02/06	06/06/06	7	5.69	06/07/06	40	1.49	
IWGW01053106	05/31/06	06/02/06	06/06/06	7	5.69	06/07/06	40	1.51	

* EXT = SEE PROJECT QAPP REQUIREMENTS
*ANAL = SEE PROJECT QAPP REQUIREMENTS

KEMRON FORMS - Modified 02/14/2006
Version 1.5 PDF File ID: 492144
Report generated 06/08/2006 10:04

KEMRON Environmental Services

SURROGATE STANDARDS

Login Number: L0606049
Instrument Id: HP9
Workgroup (AAB#): WG214757

Method: 8081
CAL ID: HP9-07-JUN-06
Matrix: WATER

Sample Number	Dilution	Tag	1	2
L0606049-01	1.00	01	53.8	35.1
L0606049-01	1.00	C201	57.6	33.9
WG214659-01	1.00	01	69.4	86.4
WG214659-01	1.00	C201	68.7	82.3
WG214659-02	1.00	01	68.9	87.3
WG214659-02	1.00	C201	70.6	86.5
WG214659-03	1.00	01	67.5	82.9
WG214659-03	1.00	C201	70.4	80.9
WG214659-04	1.00	01	69.8	81.2
WG214659-04	1.00	C201	71.4	77.4

Surrogates	Surrogate Limits		
1 - 2,4,5,6-Tetrachloro-m-xylene	20	-	180
2 - Decachlorobiphenyl	25	-	140

Underline = Result out of surrogate limits

DL = surrogate diluted out
ND = surrogate not detected

KEMRON FORMS - Modified 04/18/2006
Version 1.5 PDF File ID: 492152
Report generated 06/08/2006 10:05

KEMRON Environmental Services

METHOD BLANK SUMMARY

Login Number:	L0606049	Work Group:	WG214757
Blank File ID:	9G35105.F	Blank Sample ID:	WG214659-01
Date Analyzed:	06/07/06	Instrument ID:	HP9
Time Analyzed:	18:20	Method:	8081A
Analyst:	ECL		

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG214659-02	9G35106.F	06/07/06 18:49	01
LCS2	WG214659-03	9G35107.F	06/07/06 19:17	01
LCS	WG214659-04	9G35108.F	06/07/06 19:45	01
IWGW01053106	L0606049-01	9G35109.F	06/07/06 20:13	01

KEMRON FORMS - Modified 03/06/2006
Version 1.5 PDF File ID: 492145
Report generated 06/08/2006 10:04

KEMRON Environmental Services

METHOD BLANK SUMMARY

Login Number:	L0606049	Work Group:	WG214757
Blank File ID:	9G35105.R	Blank Sample ID:	WG214659-01
Date Analyzed:	06/07/06	Instrument ID:	HP9
Time Analyzed:	18:49	Method:	8081A
Analyst:	ECL		

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG214659-02	9G35106.R	06/07/06 19:17	C201
LCS2	WG214659-03	9G35107.R	06/07/06 19:45	C201
LCS	WG214659-04	9G35108.R	06/07/06 20:13	C201
IWGW01053106	L0606049-01	9G35109.R	06/07/06 20:41	C201

KEMRON FORMS - Modified 03/06/2006
Version 1.5 PDF File ID: 492145
Report generated 06/08/2006 10:04

KEMRON Environmental Services

METHOD BLANK REPORT

Login Number: L0606049	Run Date: 06/07/2006	Sample ID: WG214659-01
Instrument ID: HP9	Run Time: 18:20	Prep Method: 3510C
File ID: 9G35105.F	Analyst: ECL	Method: 8081A
Workgroup (AAB#): WG214757	Matrix: Water	Units: ug/L
Contract #:	Cal ID: HP9-07-JUN-06	

Analytes	SQL	PQL	Concentration	Dilution	Qualifier
Endrin	0.100	0.500	0.100	1	U
Lindane	0.100	0.500	0.100	1	U
Methoxychlor	0.100	0.500	0.100	1	U
Toxaphene	3.00	10.0	3.00	1	U
Chlordane	3.00	10.0	3.00	1	U
Heptachlor	0.100	0.500	0.100	1	U
Heptachlor Epoxide	0.100	0.500	0.100	1	U

Surrogates	% Recovery	Surrogate Limits	Qualifier
2,4,5,6-Tetrachloro-m-xylene	69.4	20 - 180	PASS
Decachlorobiphenyl	86.4	25 - 140	PASS

MDL Method Detection Limit
RL Reporting/quantitation Limit

* Analyte concentration > RL

KEMRON FORMS - Modified 05/01/2006
Version 1.5 PDF File ID: 492146
Report generated 06/08/2006 10:04

KEMRON Environmental Services

METHOD BLANK REPORT

Login Number: L0606049	Run Date: 06/07/2006	Sample ID: WG214659-01
Instrument ID: HP9	Run Time: 18:49	Prep Method: 3510C
File ID: 9G35105.R	Analyst: ECL	Method: 8081A
Workgroup (AAB#): WG214757	Matrix: Water	Units: ug/L
Contract #:	Cal ID: HP9-07-JUN-06	

Analytes	SQL	PQL	Concentration	Dilution	Qualifier
Endrin	0.100	0.500	0.100	1	U
Lindane	0.100	0.500	0.100	1	U
Methoxychlor	0.100	0.500	0.100	1	U
Toxaphene	3.00	10.0	3.00	1	U
Chlordane	3.00	10.0	3.00	1	U
Heptachlor	0.100	0.500	0.100	1	U
Heptachlor Epoxide	0.100	0.500	0.100	1	U

Surrogates	% Recovery	Surrogate Limits	Qualifier
2,4,5,6-Tetrachloro-m-xylene	68.7	20 - 180	PASS
Decachlorobiphenyl	82.3	25 - 140	PASS

MDL Method Detection Limit
RL Reporting/quantitation Limit

* Analyte concentration > RL

KEMRON FORMS - Modified 05/01/2006
Version 1.5 PDF File ID: 492146
Report generated 06/08/2006 10:04

KEMRON Environmental Services

LABORATORY CONTROL SAMPLE (LCS)

Login Number:L0606049 Analyst:ECL Prep Method:3510C
Instrument ID:HP9 Matrix:Water Method:8081A
Workgroup (AAB#):WG214757 Units:ug/L
Sample ID:WG214659-02 LCS File ID:9G35106.F Run Date:06/07/2006 18:49
Sample ID:WG214659-03 LCS2 File ID:9G35107.F Run Date:06/07/2006 19:17
Sample ID:WG214659-04 LCS File ID:9G35108.F Run Date:06/07/2006 19:45

Analytes	LCS			LCS2			LCS		
	Known	Found	% REC	Known	Found	% REC	Known	Found	% REC
Endrin	0.500	0.548	110	0.500	0.537	107			
Lindane	0.500	0.460	92.0	0.500	0.451	90.3			
Methoxychlor	0.500	0.539	108	0.500	0.524	105			
Toxaphene							2.00	2.06	103
Heptachlor	0.500	0.443	88.7	0.500	0.438	87.6			
Heptachlor Epoxide	0.500	0.484	96.7	0.500	0.481	96.3			

KEMRON FORMS - Modified 06/02/2006
Version 1.5 PDF File ID: 492147
Report generated 06/08/2006 10:04

KEMRON Environmental Services

LABORATORY CONTROL SAMPLE (LCS)

Login Number: L0606049 Analyst: ECL Prep Method: 3510C
Instrument ID: HP9 Matrix: Water Method: 8081A
Workgroup (AAB#): WG214757 Units: ug/L
Sample ID: WG214659-02 LCS File ID: 9G35106.F Run Date: 06/07/2006 18:49
Sample ID: WG214659-03 LCS2 File ID: 9G35107.F Run Date: 06/07/2006 19:17
Sample ID: WG214659-04 LCS File ID: 9G35108.F Run Date: 06/07/2006 19:45

Analytes	%RPD	%Rec Limits	RPD Lmt	Q
Endrin	1.92	50 - 150	40	
Lindane	1.90	50 - 120	40	
Methoxychlor	2.79	55 - 150	40	
Toxaphene	0.00	41 - 126	40	
Heptachlor	1.20	51 - 130	40	
Heptachlor Epoxide	0.460	62 - 130	40	

Surogates	LCS % Recovery	LCS2 % Recovery	LCS % Recovery	Surrogate Limits	Qualifier
Decachlorobiphenyl	87.3	82.9	81.2	25 - 140	PASS
2,4,5,6-Tetrachloro-m-xylene	68.9	67.5	69.8	20 - 180	PASS

* FAILS %REC LIMIT

\# FAILS RPD LIMIT

KEMRON FORMS - Modified 06/02/2006
Version 1.5 PDF File ID: 492147
Report generated 06/08/2006 10:04

KEMRON Environmental Services

LABORATORY CONTROL SAMPLE (LCS)

Login Number:L0606049 Analyst:ECL Prep Method:3510C
Instrument ID:HP9 Matrix:Water Method:8081A
Workgroup (AAB#):WG214757 Units:ug/L
Sample ID:WG214659-02 LCS File ID:9G35106.R Run Date:06/07/2006 19:17
Sample ID:WG214659-03 LCS2 File ID:9G35107.R Run Date:06/07/2006 19:45
Sample ID:WG214659-04 LCS File ID:9G35108.R Run Date:06/07/2006 20:13

Analytes	LCS			LCS2			LCS		
	Known	Found	% REC	Known	Found	% REC	Known	Found	% REC
Endrin	0.500	0.586	117	0.500	0.570	114			
Lindane	0.500	0.491	98.1	0.500	0.488	97.6			
Methoxychlor	0.500	0.570	114	0.500	0.544	109			
Toxaphene							2.00	2.66	133
Heptachlor	0.500	0.518	104	0.500	0.532	106			
Heptachlor Epoxide	0.500	0.520	104	0.500	0.516	103			

KEMRON FORMS - Modified 06/02/2006
Version 1.5 PDF File ID: 492147
Report generated 06/08/2006 10:04

KEMRON Environmental Services

LABORATORY CONTROL SAMPLE (LCS)

Login Number:L0606049 Analyst:ECL Prep Method:3510C
Instrument ID:HP9 Matrix:Water Method:8081A
Workgroup (AAB#):WG214757 Units:ug/L
Sample ID:WG214659-02 LCS File ID:9G35106.R Run Date:06/07/2006 19:17
Sample ID:WG214659-03 LCS2 File ID:9G35107.R Run Date:06/07/2006 19:45
Sample ID:WG214659-04 LCS File ID:9G35108.R Run Date:06/07/2006 20:13

Analytes	%RPD	%Rec Limits	RPD Lmt	Q
Endrin	2.69	50 - 150	40	
Lindane	0.570	50 - 120	40	
Methoxychlor	4.73	55 - 150	40	
Toxaphene	0.00	41 - 126	40	*
Heptachlor	2.70	51 - 130	40	
Heptachlor Epoxide	0.774	62 - 130	40	

Surogates	LCS % Recovery	LCS2 % Recovery	LCS % Recovery	Surrogate Limits	Qualifier
Decachlorobiphenyl	86.5	80.9	77.4	25 - 140	PASS
2,4,5,6-Tetrachloro-m-xylene	70.6	70.4	71.4	20 - 180	PASS

* FAILS %REC LIMIT

FAILS RPD LIMIT

KEMRON FORMS - Modified 06/02/2006
Version 1.5 PDF File ID: 492147
Report generated 06/08/2006 10:04

KEMRON Environmental Services

INITIAL CALIBRATION SUMMARY

Login Number: L0606049 **Instrument ID:** HP9
Analytical Method: 8081A **Initial Calibration Date:** 07-JUN-06 17:52
ICAL Workgroup: WG214778 **Column ID:** F

Analyte		AVG RF	% RSD	LINEAR	QUAD
Endrin		16760000	3.64		
Heptachlor		24370000	4.09		
Heptachlor Epoxide		24370000	5.37		
Methoxychlor		8436000	3.32		
gamma-BHC		28040000	5.34		
2,4,5,6-Tetrachloro-M-Xylene	SURR	23870000	5.56		
Decachlorobiphenyl	SURR	14280000	12.5		

KEMRON FORMS - Modified 03/06/2006
Version 1.5 PDF File ID: 492149
Report generated 06/08/2006 10:04

KEMRON Environmental Services

INITIAL CALIBRATION SUMMARY

Login Number: L0606049 **Instrument ID:** HP9
Analytical Method: 8081A **Initial Calibration Date:** 07-JUN-06 17:52
ICAL Workgroup: WG214778 **Column ID:** R

Analyte		AVG RF	% RSD	LINEAR	QUAD
Endrin		6718000	7.13		
Heptachlor		7773000	18.2		
Heptachlor Epoxide		11240000	5.17		
Methoxychlor		3213000	5.01		
gamma-BHC		13550000	10.2		
2,4,5,6-Tetrachloro-M-Xylene	SURR	11510000	3.12		
Decachlorobiphenyl	SURR	6409000	19.1		

KEMRON Environmental Services

INITIAL CALIBRATION DATA

Login Number: L0606049 **Instrument ID:** HP9

Analytical Method: 8081A **Initial Calibration Date:** 07-JUN-06 17:52

Column ID: F

Analyte	WG214778-01			WG214778-02			WG214778-03		
	CONC	RESP	RF	CONC	RESP	RF	CONC	RESP	RF
Endrin	200	3563509832	17820000	50.0	856306991	17130000	20.0	326069740	16300000
Heptachlor	200	5179446795	25900000	50.0	1266589973	25330000	20.0	472696744	23630000
Heptachlor Epoxide	200	4630770765	23150000	50.0	1192860112	23860000	20.0	465264663	23260000
Methoxychlor	200	1692002877	8460000	50.0	422011220	8440000	20.0	169083735	8454000
gamma-BHC	200	6024804297	30120000	50.0	1474419124	29490000	20.0	551932900	27600000
2,4,5,6-Tetrachloro-M-Xylene	200	4529116952	22650000	50.0	1153597107	23070000	20.0	453865435	22690000
Decachlorobiphenyl	200	2436592253	12180000	50.0	644758350	12900000	20.0	267498196	13370000

KEMRON Environmental Services

INITIAL CALIBRATION DATA

Login Number: L0606049 **Instrument ID:** HP9

Analytical Method: 8081A **Initial Calibration Date:** 07-JUN-06 17:52

Column ID: F

Analyte	WG214778-04			WG214778-05			WG214778-06		
	CONC	RESP	RF	CONC	RESP	RF	CONC	RESP	RF
Endrin	10.0	166164794	16620000	4.00	65747677	16440000	1.00	16232208	16230000
Heptachlor	10.0	240896440	24090000	4.00	94076783	23520000	1.00	23771511	23770000
Heptachlor Epoxide	10.0	243317840	24330000	4.00	99678470	24920000	1.00	26673012	26670000
Methoxychlor	10.0	88075124	8808000	4.00	34067173	8517000	1.00	7939546	7940000
gamma-BHC	10.0	279581151	27960000	4.00	107241200	26810000	1.00	26292373	26290000
2,4,5,6-Tetrachloro-M-Xylene	10.0	241818760	24180000	4.00	98401283	24600000	1.00	26029948	26030000
Decachlorobiphenyl	10.0	146318512	14630000	4.00	62887194	15720000	1.00	16852755	16850000

KEMRON Environmental Services

INITIAL CALIBRATION DATA

Login Number: L0606049 **Instrument ID:** HP9

Analytical Method: 8081A **Initial Calibration Date:** 07-JUN-06 17:52

Column ID: R

Analyte	WG214778-01			WG214778-02			WG214778-03		
	CONC	RESP	RF	CONC	RESP	RF	CONC	RESP	RF
Endrin	200	1499755770	7499000	50.0	334657201	6693000	20.0	122245333	6112000
Heptachlor	200	2063909346	10320000	50.0	416337028	8327000	20.0	140737742	7037000
Heptachlor Epoxide	200	2339549264	11700000	50.0	560981563	11220000	20.0	208152914	10410000
Methoxychlor	200	685036121	3425000	50.0	152510520	3050000	20.0	60143651	3007000
gamma-BHC	200	3180387813	15900000	50.0	728023758	14560000	20.0	258343865	12920000
2,4,5,6-Tetrachloro-M-Xylene	200	2413286865	12070000	50.0	579078752	11580000	20.0	220206858	11010000
Decachlorobiphenyl	200	1010842374	5054000	50.0	270246756	5405000	20.0	115624313	5781000

KEMRON FORMS - Modified 03/06/2006
Version 1.6 PDF File ID: 492149
Report generated 06/08/2006 10:04

KEMRON Environmental Services

INITIAL CALIBRATION DATA

Login Number: L0606049 **Instrument ID:** HP9

Analytical Method: 8081A **Initial Calibration Date:** 07-JUN-06 17:52

Column ID: R

Analyte	WG214778-04			WG214778-05			WG214778-06		
	CONC	RESP	RF	CONC	RESP	RF	CONC	RESP	RF
Endrin	10.0	63444851	6344000	4.00	27125793	6781000	1.00	6875834	6876000
Heptachlor	10.0	71245876	7125000	4.00	25200427	6300000	1.00	7527989	7528000
Heptachlor Epoxide	10.0	109135478	10910000	4.00	44536003	11130000	1.00	12056644	12060000
Methoxychlor	10.0	32312787	3231000	4.00	13344758	3336000	1.00	3227405	3227000
gamma-BHC	10.0	129193398	12920000	4.00	50058944	12510000	1.00	12457022	12460000
2,4,5,6-Tetrachloro-M-Xylene	10.0	116100805	11610000	4.00	44975586	11240000	1.00	11540258	11540000
Decachlorobiphenyl	10.0	65878645	6588000	4.00	29747656	7437000	1.00	8187428	8187000

KEMRON Environmental Services

ALTERNATE SOURCE CALIBRATION REPORT

Login Number: L0606049 Run Date: 06/07/2006 Sample ID: WG214778-07
Instrument ID: HP9 Run Time: 17:52 Method: 8081A
File ID: 9G35104.F Analyst: ECL
ICal Workgroup: WG214778 Cal ID: HP9 - 07-JUN-06

Analyte		Expected	Found	RF	%D	UNITS	Q
Endrin		20	18.9	15800000	5.7	ug/L	
gamma-BHC		20	19.5	27400000	2.4	ug/L	
Methoxychlor		20	19.3	8150000	3.4	ug/L	
Heptachlor		20	19.1	23300000	4.3	ug/L	
Heptachlor Epoxide		20	19.1	23200000	4.7	ug/L	

* Exceeds %D Limit

KEMRON FORMS - Modified 04/11/2006
Version 1.5 PDF File ID: 492150
Report generated 06/08/2006 10:04

KEMRON Environmental Services

ALTERNATE SOURCE CALIBRATION REPORT

Login Number: L0606049 Run Date: 06/07/2006 Sample ID: WG214778-07
Instrument ID: HP9 Run Time: 18:20 Method: 8081A
File ID: 9G35104.R Analyst: ECL
ICal Workgroup: WG214778 Cal ID: HP9 - 07-JUN-06

Analyte		Expected	Found	RF	%D	UNITS	Q
Endrin		20	18.3	6150000	8.5	ug/L	
gamma-BHC		20	19.6	13300000	2.1	ug/L	
Methoxychlor		20	18.7	3010000	6.3	ug/L	
Heptachlor		20	19.4	7540000	3	ug/L	
Heptachlor Epoxide		20	19.2	10800000	4	ug/L	

* Exceeds %D Limit

KEMRON FORMS - Modified 04/11/2006
Version 1.5 PDF File ID: 492150
Report generated 06/08/2006 10:04

KEMRON Environmental Services

CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L0606049 Run Date: 06/07/2006 Sample ID: WG214778-03
Instrument ID: HP9 Run Time: 16:00 Method: 8081A
File ID: 9G35100.F Analyst: ECL
Workgroup (AAB#): WG214757 Cal ID: HP9 - 07-JUN-06

Analyte		Expected	Found	RF	%D	UNITS	Q
Endrin		20	19.7	16300000	1.4	ug/L	
gamma-BHC		20	20.9	27600000	4.4	ug/L	
Methoxychlor		20	20.0	8450000	.2	ug/L	
Heptachlor		20	20.9	23600000	4.4	ug/L	
Heptachlor Epoxide		20	20.1	23300000	.6	ug/L	
2,4,5,6-Tetrachloro-M-Xylene	SURR	20	21.2	22700000	6	ug/L	
Decachlorobiphenyl	SURR	20	20.4	13400000	2.1	ug/L	

* Exceeds %D Criteria

KEMRON FORMS - Modified 04/19/2006
Version 1.3 PDF File ID: 492151
Report generated 06/08/2006 10:04

KEMRON Environmental Services

CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L0606049 Run Date: 06/07/2006 Sample ID: WG214778-03
Instrument ID: HP9 Run Time: 16:28 Method: 8081A
File ID: 9G35100.R Analyst: ECL
Workgroup (AAB#): WG214757 Cal ID: HP9 - 07-JUN-06

Analyte		Expected	Found	RF	%D	UNITS	Q
Endrin		20	17.6	6110000	12.1	ug/L	
gamma-BHC		20	19.8	12900000	1.2	ug/L	
Methoxychlor		20	18.3	3010000	8.4	ug/L	
Heptachlor		20	13.9	7040000	30.3	ug/L	*
Heptachlor Epoxide		20	19.6	10400000	2.1	ug/L	
2,4,5,6-Tetrachloro-M-Xylene	SURR	20	19.9	11000000	.4	ug/L	
Decachlorobiphenyl	SURR	20	19.8	5780000	.8	ug/L	

* Exceeds %D Criteria

KEMRON FORMS - Modified 04/19/2006
Version 1.3 PDF File ID: 492151
Report generated 06/08/2006 10:04

KEMRON Environmental Services

CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L0606049 Run Date: 06/07/2006 Sample ID: WG214779-03
Instrument ID: HP9 Run Time: 22:06 Method: 8081A
File ID: 9G35113.F Analyst: ECL
Workgroup (AAB#): WG214757 Cal ID: HP9 - 07-JUN-06

Analyte		Expected	Found	RF	%D	UNITS	Q
Endrin		20	19.9	16700000	.5	ug/L	
gamma-BHC		20	20.1	28200000	.7	ug/L	
Methoxychlor		20	20.4	8590000	1.8	ug/L	
Heptachlor		20	19.6	23800000	2.2	ug/L	
Heptachlor Epoxide		20	19.6	23900000	2.1	ug/L	
2,4,5,6-Tetrachloro-M-Xylene	SURR	20	19.4	23100000	3.1	ug/L	
Decachlorobiphenyl	SURR	20	19.1	13700000	4.3	ug/L	

* Exceeds %D Criteria

KEMRON FORMS - Modified 04/19/2006
Version 1.3 PDF File ID: 492151
Report generated 06/08/2006 10:04

KEMRON Environmental Services

CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L0606049 Run Date: 06/07/2006 Sample ID: WG214779-03
Instrument ID: HP9 Run Time: 22:34 Method: 8081A
File ID: 9G35113.R Analyst: ECL
Workgroup (AAB#): WG214757 Cal ID: HP9 - 07-JUN-06

Analyte		Expected	Found	RF	%D	UNITS	Q
Endrin		20	18.5	6200000	7.7	ug/L	
gamma-BHC		20	19.4	13100000	3.1	ug/L	
Methoxychlor		20	19.6	3140000	2.1	ug/L	
Heptachlor		20	21.5	8340000	7.3	ug/L	
Heptachlor Epoxide		20	18.5	10400000	7.7	ug/L	
2,4,5,6-Tetrachloro-M-Xylene	SURR	20	19.3	11100000	3.4	ug/L	
Decachlorobiphenyl	SURR	20	18.3	5880000	8.3	ug/L	

* Exceeds %D Criteria

KEMRON FORMS - Modified 04/19/2006
Version 1.3 PDF File ID: 492151
Report generated 06/08/2006 10:04

KEMRON Environmental Services

CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L0606049 Run Date: 06/07/2006 Sample ID: WG214777-01
Instrument ID: HP9 Run Time: 22:34 Method: 8081A
File ID: 9G35114.F Analyst: ECL
Workgroup (AAB#): WG214757 Cal ID: HP9 - 07-JUN-06

Analyte		Expected	Found	RF	%D	UNITS	Q
Toxaphene-1		250	275	130000	10.2	ug/L	
Toxaphene-2		250	269	139000	7.5	ug/L	
Toxaphene-3		250	271	426000	8.5	ug/L	
Toxaphene-4		250	278	188000	11	ug/L	
Toxaphene-5		250	270	163000	8.1	ug/L	

* Exceeds %D Criteria

KEMRON FORMS - Modified 04/19/2006
Version 1.3 PDF File ID: 492151
Report generated 06/08/2006 10:04

KEMRON Environmental Services

CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L0606049 Run Date: 06/07/2006 Sample ID: WG214777-01
Instrument ID: HP9 Run Time: 23:02 Method: 8081A
File ID: 9G35114.R Analyst: ECL
Workgroup (AAB#): WG214757 Cal ID: HP9 - 07-JUN-06

Analyte		Expected	Found	RF	%D	UNITS	Q
Toxaphene-1		250	265	101000	6.2	ug/L	
Toxaphene-2		250	235	93100	6.1	ug/L	
Toxaphene-3		250	260	179000	4	ug/L	
Toxaphene-4		250	260	93000	4.1	ug/L	
Toxaphene-5		250	273	41100	9.2	ug/L	

* Exceeds %D Criteria

KEMRON FORMS - Modified 04/19/2006
Version 1.3 PDF File ID: 492151
Report generated 06/08/2006 10:04

1.2.3 Herbicide GC Data (8151)

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1.2.3.1 QC Summary

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KEMRON ENVIRONMENTAL SERVICES
GC HERBICIDES

KEMRON Login No.: L0606049

METHOD

Preparation: SW- 846 3550B(Soils) 3510C(Waters)

Analysis: SW-846 8151

HOLDING TIMES

Sample Preparation: All holding times were met.

Sample Analysis: All holding times were met.

PREPARATION

Sample preparation proceeded normally.

CALIBRATION

Initial Calibration: For all compounds which yielded a %RSD greater than 15%, linear or higher order equations were applied. All acceptance criteria were met.

Alternate Source Standards: All acceptance criteria were met.

Continuing Calibraton: All acceptance criteria were met.

BATCH QA/QC

Method Blank: All acceptance criteria were met.

Laboratory Control Sample: All acceptance criteria were met.

Matrix Spikes: There were no MS/MSD results associated with this sample delivery group, due to insufficient volume of sample. The laboratory included an LCS and LCS duplicate in the preparation batch in lieu of the NELAC prescribed MS/MSD. KEMRON recommends site specific MS/MSD samples to avoid possible data qualification.

SAMPLES

Surrogates: All acceptance criteria were met.

Samples: For all samples which yielded results with an RPD of greater than 40% between the primary and confirmation column the appropriate flag was applied. All acceptance criteria were met.

Manual Integration Reason Codes

KEMRON laboratory management has identified four general cases with valid reasons supporting the use of manual integration techniques.

Reason #1: Data System Fails to Select Correct Peak
In some cases the chromatography system selects and integrates the ”wrong peak”. In this case the analyst must

correct the selection and force the system to integrate the proper peak. Other times the system may miss the peak completely.

Reason #2: Data System Splits the Peak Incorrectly or Integrates a False Peak as a Rider Peak.
This phenomena is common at low concentrations where the signal:noise ratio is low. A single compound (peak) is incorrectly split into multiple peaks or integrated as a main peak with one or more rider peaks resulting in low area counts for the target compound.

Reason #3: Improperly Integrated Isomers and/or coeluting compounds.
This system often fails to distinguish coeluting compounds and or isomers. The integration areas and concentrations are wrong, and they must be corrected by manual integration. Prime examples are benzo(k)fluoranthene and benzo(b)fluoranthene which are often unresolved and integrated improperly when both are present at low concentrations in standards or samples.

Reason #4: System Establishes Incorrect Baseline
There are numerous situations in chromatography where the system establishes the baseline incorrectly. Some baseline errors will be obvious to the analyst and should be corrected via manual procedures.

Reason #5: Miscellaneous
Other situations involving integration errors may require in-depth review and technical judgment. These cases should be brought to the attention of the laboratory management. If the form of manual integration is not clearly covered by these four cases, then review and approval by the Laboratory Director or the QA/QC Supervisor will be required.

I certify that this data package is in compliance with the terms and conditions agreed to by the client and KEMRON Environmental Services, both technically and for completeness, except for the conditions noted above. Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or designated person, as verified by the following signature.

Analyst: ECL

Approved: 12-JUN-06

LABORATORY REPORT

L0606049

06/20/06 08:38

Submitted By

KEMRON Environmental Services
156 Starlite Drive
Marietta , OH 45750
(740) 373 - 4071

For

Account Name: CH2MHILL, Inc
7600 Tidwell Road
Suite 400
San Antonio, TX 77040
Attention: John Ynfante

Account Number: 2736
Work ID: STATE MARINE RI

P.O. Number: 915193

Sample Analysis Summary

Client ID	Lab ID	Method	Dilution	Date Received
IWGW01053106	L0606049-01	8151A	1	02-JUN-06

Report Number: **L0606049**
Report Date : **June 20, 2006**

Sample Number: **L0606049-01**
Client ID: **IWGW01053106**
Matrix: **Water**
Workgroup Number: **WG214835**
Collect Date: **05/31/2006 16:00**

PrePrep Method: **NONE**
Prep Method: **METHOD**
Analytical Method: **8151A**
Analyst: **ECL**
Dilution: **1**
Units: **ug/L**

Instrument: **HP15**
Prep Date: **06/07/2006 08:15**
Cal Date: **06/02/2006 13:32**
Run Date: **06/08/2006 12:07**
File ID: **15G5529.F**

Analyte	CAS. Number	Result	Qual	PQL	SQL
2,4-D	94-75-7		U	2.08	1.04
2,4,5-TP (Silvex)	93-72-1		U	0.208	0.104

Surrogate	% Recovery	Lower	Upper	Qual
2,4-Dichlorophenylacetic acid	67.2	20	144	

U Not detected at or above the reporting limit

Checklist ID: 7842

KEMRON Environmental Services
Data Checklist

Date: 02-JUN-2006
Analyst: ECL
Analyst: NA
Method: 8151
Instrument: HP15
Curve Workgroup: WG214420
Analytical Workgroups: L0605576, L0605599, L0605622, L0605659

Runlog ID number:	10650
System Performance Check	NA
DFTPP	NA
Endrin/DDT Breakdown	NA
Initial Calibration	X
Average RF	X
Linear Reg or Higher Order Curve	NA
Second Source standard % Difference	X
Continuing Calibration /Check Standards	X
Project/Client Specific Requirements	NA
Special Standards	NA
Blanks	X
TCL's	X
Surrogates	X
LCS (Laboratory Control Sample)	X
Recoveries	X
Surrogates	X
MS/MSD/Duplicates	NA
Samples	X
TCL Hits	X
Spectra of TCL Hits	NA
Surrogates	X
Internal Standards Criteria	NA
Library Searches	NA
Calculations & Correct Factors	X
Dilutions Run	NA
Reruns	NA
Manual Integrations	NA
Case Narrative	X
Results Reporting/Data Qualifiers	X
KOBRA Workgroup Data	X
Check for Completeness	X
Primary Reviewer	ECL
Secondary Reviewer	RDC
Check for compliance with method and project specific requirements	X
Check the completeness of reported information	X
Check the information for the report narrative	X
Check the resonableness of the results	X

Primary Reviewer:

Secondary Reviewer:
07-JUN-2006

Generated: JUN-07-2006 14:36:24

007299

Checklist ID: 7916

KEMRON Environmental Services
Data Checklist

Date: 08-JUN-2006
Analyst: ECL
Analyst: NA
Method: 8151
Instrument: HP15
Curve Workgroup: NA
Analytical Workgroups: L0606049, L0606098

Runlog ID number:	10721
System Performance Check	NA
DFTPP	NA
Endrin/DDT Breakdown	NA
Initial Calibration	NA
Average RF	NA
Linear Reg or Higher Order Curve	NA
Second Source standard % Difference	NA
Continuing Calibration /Check Standards	X
Project/Client Specific Requirements	NA
Special Standards	NA
Blanks	X
TCL's	X
Surrogates	X
LCS (Laboratory Control Sample)	X
Recoveries	X
Surrogates	X
MS/MSD/Duplicates	NA
Samples	X
TCL Hits	X
Spectra of TCL Hits	NA
Surrogates	X
Internal Standards Criteria	NA
Library Searches	NA
Calculations & Correct Factors	X
Dilutions Run	NA
Reruns	NA
Manual Integrations	NA
Case Narrative	X
Results Reporting/Data Qualifiers	X
KOBRA Workgroup Data	X
Check for Completeness	X
Primary Reviewer	ECL
Secondary Reviewer	MDC
Check for compliance with method and project specific requirements	X
Check the completeness of reported information	X
Check the information for the report narrative	X
Check the resonableness of the results	X

Primary Reviewer:

Secondary Reviewer:
12-JUN-2006

Generated: JUN-12-2006 10:50:10

Run Log ID: **10650**

KEMRON Environmental Services

Instrument Run Log

Instrument: HP15 Dataset: 060206

Analyst1: ECL Analyst2: NA

Method: 8151 SOP: GCS04 Rev: 7

Column 1 ID: RTX-CLP Column 2 ID: RTX-CLP2

Workgroups:

Internal Standard: NA Surrogate Standard: NA

Comments:

Seq.	File ID	Sample Information	Mat	Dil	Reference	Date/Time
1	15G5488.F	WG214420-01 HERB ICAL \#5	1	1	SOS78-26	06/02/06 11:18
2	15G5488.R	WG214420-01 HERB ICAL \#5	1	1	SOS78-26	06/02/06 11:45
3	15G5489.F	WG214420-02 HERB ICAL \#4	1	1	SOS78-26	06/02/06 11:45
4	15G5489.R	WG214420-02 HERB ICAL \#4	1	1	SOS78-26	06/02/06 12:11
5	15G5490.F	WG214420-03 HERB ICAL \#3	1	1	SOS78-26	06/02/06 12:11
6	15G5490.R	WG214420-03 HERB ICAL \#3	1	1	SOS78-26	06/02/06 12:38
7	15G5491.F	WG214420-04 HERB ICAL \#2	1	1	SOS78-26	06/02/06 12:38
8	15G5491.R	WG214420-04 HERB ICAL \#2	1	1	SOS78-26	06/02/06 13:05
9	15G5492.F	WG214420-05 HERB ICAL \#1	1	1	SOS78-26	06/02/06 13:05
10	15G5492.R	WG214420-05 HERB ICAL \#1	1	1	SOS78-26	06/02/06 13:32
11	15G5493.F	WG214420-06 HERB ALT	1	1	SOS78-25	06/02/06 13:32
12	15G5493.R	WG214420-06 HERB ALT	1	1	SOS78-25	06/02/06 13:59
13	15G5494.F	WG214420-06 HERB ALT	1	1	SOS78-25	06/02/06 14:53
14	15G5494.R	WG214420-06 HERB ALT	1	1	SOS78-25	06/02/06 15:20
15	15G5495.F	WG214300-01 BLANK V260 P185	1	1		06/02/06 15:20
16	15G5495.R	WG214300-01 BLANK V260 P185	1	1		06/02/06 15:47
17	15G5496.F	WG214300-02 LCS V260 P185	1	1		06/02/06 15:47
18	15G5496.R	WG214300-02 LCS V260 P185	1	1		06/02/06 16:14
19	15G5497.F	WG214300-03 LCS DUP V260 P185	1	1		06/02/06 16:14
20	15G5497.R	WG214300-03 LCS DUP V260 P185	1	1		06/02/06 16:41
21	15G5498.F	L0605576-01	17	1		06/02/06 16:41
22	15G5498.R	L0605576-01	17	1		06/02/06 17:08
23	15G5499.F	L0605599-10	17	1		06/02/06 17:08
24	15G5499.R	L0605599-10	17	1		06/02/06 17:34
25	15G5500.F	L0605622-01	1	1		06/02/06 17:34
26	15G5500.R	L0605622-01	1	1		06/02/06 18:01
27	15G5501.F	L0605622-03	1	1		06/02/06 18:01
28	15G5501.R	L0605622-03	1	1		06/02/06 18:29
29	15G5502.F	L0605622-05	1	1		06/02/06 18:29
30	15G5502.R	L0605622-05	1	1		06/02/06 18:56
31	15G5503.F	L0605622-06	1	1		06/02/06 18:56
32	15G5503.R	L0605622-06	1	1		06/02/06 19:23
33	15G5504.F	WG214423-01 HERB CCV	1	1	SOS78-26	06/02/06 19:23
34	15G5504.R	WG214423-01 HERB CCV	1	1	SOS78-26	06/02/06 19:50
35	15G5505.F	L0605659-01	1	1		06/02/06 19:50
36	15G5505.R	L0605659-01	1	1		06/02/06 20:16

Approved: 07-JUN-06

Rebecca D. Cattlip

007301

Run Log ID: **10650**

KEMRON Environmental Services

Instrument Run Log

Instrument: HP15 Dataset: 060206

Analyst1: ECL Analyst2: NA

Method: 8151 SOP: GCS04 Rev: 7

Column 1 ID: RTX-CLP Column 2 ID: RTX-CLP2

Workgroups:

Internal Standard: NA Surrogate Standard: NA

Seq.	File ID	Sample Information	Mat	Dil	Reference	Date/Time
37	15G5506.F	L0605659-03	1	1		06/02/06 20:16
38	15G5506.R	L0605659-03	1	1		06/02/06 20:43
39	15G5507.F	L0605659-04	1	1		06/02/06 20:43
40	15G5507.R	L0605659-04	1	1		06/02/06 21:10
41	15G5508.F	L0605659-05	1	1		06/02/06 21:10
42	15G5508.R	L0605659-05	1	1		06/02/06 21:37
43	15G5509.F	L0605659-07	1	1		06/02/06 21:37
44	15G5509.R	L0605659-07	1	1		06/02/06 22:03
45	15G5510.F	WG214218-01 FBLANK 5/30	17	1		06/02/06 22:03
46	15G5510.R	WG214218-01 FBLANK 5/30	17	1		06/02/06 22:30
47	15G5511.F	LCS CHECK V260 P185	1	1	STD12832	06/02/06 22:30
48	15G5511.R	LCS CHECK V260 P185	1	1	STD12832	06/02/06 22:57
49	15G5512.F	WG214423-02 HERB CCV	1	1	SOS78-26	06/02/06 22:57
50	15G5512.R	WG214423-02 HERB CCV	1	1	SOS78-26	06/02/06 23:24

Comments

Seq.	Rerun	Dil.	Reason	Analytes
11	X		Check Standard Failure	

Page: 2 of 2 Approved: 07-JUN-06

Rebecca D. Cutlip

007302

Run Log ID: **10721**

KEMRON Environmental Services

Instrument Run Log

Instrument: HP15 Dataset: 060806

Analyst1: ECL Analyst2: NA

Method: 8151 SOP: GCS04 Rev: 7

Column 1 ID: RTX-CLP Column 2 ID: RTX-CLP2

Workgroups:

Internal Standard: NA Surrogate Standard: NA

Comments:

Seq.	File ID	Sample Information	Mat	Dil	Reference	Date/Time
1	15G5524.F	WG214867-01 HERB CCV	1	1	SOS78-26	06/08/06 09:19
2	15G5524.R	WG214867-01 HERB CCV	1	1	SOS78-26	06/08/06 09:46
3	15G5525.F	WG214739-01 BLANK V262 P13	1	1		06/08/06 10:20
4	15G5525.R	WG214739-01 BLANK V262 P13	1	1		06/08/06 10:47
5	15G5526.F	WG214739-02 LCS V262 P13	1	1		06/08/06 10:47
6	15G5526.R	WG214739-02 LCS V262 P13	1	1		06/08/06 11:14
7	15G5527.F	WG214739-03 LCS DUP V262 P13	1	1		06/08/06 11:14
8	15G5527.R	WG214739-03 LCS DUP V262 P13	1	1		06/08/06 11:40
9	15G5528.F	LCS CHECK V262 P13	1	1		06/08/06 11:40
10	15G5528.R	LCS CHECK V262 P13	1	1		06/08/06 12:07
11	15G5529.F	L0606049-01	1	1		06/08/06 12:07
12	15G5529.R	L0606049-01	1	1		06/08/06 12:28
13	15G5530.F	L0606098-01	17	1		06/08/06 12:28
14	15G5530.R	L0606098-01	17	1		06/08/06 12:56
15	15G5531.F	L0606098-02	17	1		06/08/06 12:56
16	15G5531.R	L0606098-02	17	1		06/08/06 13:23
17	15G5532.F	L0606098-03	17	1		06/08/06 13:23
18	15G5532.R	L0606098-03	17	1		06/08/06 13:49
19	15G5533.F	L0606098-04	17	1		06/08/06 13:49
20	15G5533.R	L0606098-04	17	1		06/08/06 14:16
21	15G5534.F	L0606098-05	17	1		06/08/06 14:16
22	15G5534.R	L0606098-05	17	1		06/08/06 14:43
23	15G5535.F	WG214867-02 HERB CCV	1	1	SOS78-26	06/08/06 14:43
24	15G5535.R	WG214867-02 HERB CCV	1	1	SOS78-26	06/08/06 15:10

Comments

Seq.	Rerun	Dil.	Reason	Analytes

Page: 1 of 1 Approved: 12-JUN-06

KEMRON Environmental Services
HOLDING TIMES
EQUIVALENT TO AFCEE FORM 9

Analytical Method: 8151A **AAB#:** WG214835
Login Number: L0606049

Client ID	Date Collected	Date Received	Date Extracted	Max Hold Time Ext.	Time Held Ext.	Date Analyzed	Max Hold Time Anal	Time Held Anal.	Q
IWGW01053106	05/31/06	06/02/06	06/07/06	7	6.68	06/08/06	40	1.16	

* EXT = SEE PROJECT QAPP REQUIREMENTS
*ANAL = SEE PROJECT QAPP REQUIREMENTS

KEMRON FORMS - Modified 02/14/2006
Version 1.5 PDF File ID: 492917
Report generated 06/12/2006 10:52

KEMRON Environmental Services

SURROGATE STANDARDS

Login Number: L0606049
Instrument Id: HP15
Workgroup (AAB#): WG214835

Method: 8151
CAL ID: HP15-02-JUN-06
Matrix: WATER

Sample Number	Dilution	Tag	1
L0606049-01	1.00	01	67.2
WG214739-01	1.00	01	54.9
WG214739-01	1.00	C201	53.0
WG214739-02	1.00	01	67.5
WG214739-02	1.00	C201	68.8
WG214739-03	1.00	01	64.2
WG214739-03	1.00	C201	65.3

Surrogates	Surrogate Limits		
1 - 2,4-Dichlorophenylacetic acid	20	-	144

Underline = Result out of surrogate limits

DL = surrogate diluted out
ND = surrogate not detected

KEMRON FORMS - Modified 04/18/2006
Version 1.5 PDF File ID: 492924
Report generated 06/12/2006 10:53

KEMRON Environmental Services

METHOD BLANK SUMMARY

Login Number:	L0606049	Work Group:	WG214835
Blank File ID:	15G5525.F	Blank Sample ID:	WG214739-01
Date Analyzed:	06/08/06	Instrument ID:	HP15
Time Analyzed:	10:20	Method:	8151A
Analyst:	ECL		

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG214739-02	15G5526.F	06/08/06 10:47	01
LCS2	WG214739-03	15G5527.F	06/08/06 11:14	01
IWGW01053106	L0606049-01	15G5529.F	06/08/06 12:07	01

KEMRON FORMS - Modified 03/06/2006
Version 1.5 PDF File ID: 492918
Report generated 06/12/2006 10:52

KEMRON Environmental Services

METHOD BLANK REPORT

Login Number: L0606049	Run Date: 06/08/2006	Sample ID: WG214739-01
Instrument ID: HP15	Run Time: 10:20	Prep Method: METHOD
File ID: 15G5525.F	Analyst: ECL	Method: 8151A
Workgroup (AAB#): WG214835	Matrix: Water	Units: ug/L
Contract #:	Cal ID: HP15-02-JUN-06	

Analytes	SQL	PQL	Concentration	Dilution	Qualifier
2,4-D	1.00	2.00	1.00	1	U
2,4,5-TP (Silvex)	0.100	0.200	0.100	1	U

Surrogates	% Recovery	Surrogate Limits	Qualifier
2,4-Dichlorophenylacetic acid	54.9	20 - 144	PASS

MDL Method Detection Limit
RL Reporting/quantitation Limit

* Analyte concentration > RL

KEMRON FORMS - Modified 05/01/2006
Version 1.5 PDF File ID: 492919
Report generated 06/12/2006 10:52

KEMRON Environmental Services

METHOD BLANK REPORT

Login Number: L0606049	Run Date: 06/08/2006	Sample ID: WG214739-01
Instrument ID: HP15	Run Time: 10:47	Prep Method: METHOD
File ID: 15G5525.R	Analyst: ECL	Method: 8151A
Workgroup (AAB#): WG214835	Matrix: Water	Units: ug/L
Contract #:	Cal ID: HP15-02-JUN-06	

Analytes	SQL	PQL	Concentration	Dilution	Qualifier
2,4-D	1.00	2.00	1.00	1	U
2,4,5-TP (Silvex)	0.100	0.200	0.100	1	U

Surrogates	% Recovery	Surrogate Limits	Qualifier
2,4-Dichlorophenylacetic acid	53.0	20 - 144	PASS

MDL Method Detection Limit
RL Reporting/quantitation Limit

* Analyte concentration > RL

KEMRON FORMS - Modified 05/01/2006
Version 1.5 PDF File ID: 492919
Report generated 06/12/2006 10:52

KEMRON Environmental Services

LABORATORY CONTROL SAMPLE (LCS)

Login Number: L0606049 Analyst: ECL Prep Method: METHOD
Instrument ID: HP15 Matrix: Water Method: 8151A
Workgroup (AAB#): WG214835 Units: ug/L
Sample ID: WG214739-02 LCS File ID: 15G5526.F Run Date: 06/08/2006 10:47
Sample ID: WG214739-03 LCS2 File ID: 15G5527.F Run Date: 06/08/2006 11:14

Analytes	LCS			LCS2			%RPD	%Rec Limits	RPD Lmt	Q
	Known	Found	% REC	Known	Found	% REC				
2,4-D	5.00	2.94	58.8	5.00	2.90	58.0	1.47	35 - 130	51	
2,4,5-TP (Silvex)	0.500	0.339	67.8	0.500	0.323	64.6	4.84	40 - 120	44	

Surogates	LCS	LCS2	Surrogate Limits	Qualifier
	% Recovery	% Recovery		
2,4-Dichlorophenylacetic acid	67.5	64.2	20 - 144	PASS

* FAILS %REC LIMIT

\# FAILS RPD LIMIT

KEMRON FORMS - Modified 06/02/2006
Version 1.5 PDF File ID: 492920
Report generated 06/12/2006 10:52

KEMRON Environmental Services

LABORATORY CONTROL SAMPLE (LCS)

Login Number: L0606049 Analyst: ECL Prep Method: METHOD
Instrument ID: HP15 Matrix: Water Method: 8151A
Workgroup (AAB#): WG214835 Units: ug/L
Sample ID: WG214739-02 LCS File ID: 15G5526.R Run Date: 06/08/2006 11:14
Sample ID: WG214739-03 LCS2 File ID: 15G5527.R Run Date: 06/08/2006 11:40

Analytes	LCS			LCS2			%RPD	%Rec Limits	RPD Lmt	Q
	Known	Found	% REC	Known	Found	% REC				
2,4-D	5.00	3.06	61.2	5.00	3.00	60.0	1.87	35 - 130	51	
2,4,5-TP (Silvex)	0.500	0.369	73.8	0.500	0.358	71.6	2.94	40 - 120	44	

Surogates	LCS	LCS2	Surrogate Limits	Qualifier
	% Recovery	% Recovery		
2,4-Dichlorophenylacetic acid	68.8	65.3	20 - 144	PASS

* FAILS %REC LIMIT

\# FAILS RPD LIMIT

KEMRON FORMS - Modified 06/02/2006
Version 1.5 PDF File ID: 492920
Report generated 06/12/2006 10:52

KEMRON Environmental Services

INITIAL CALIBRATION SUMMARY

Login Number: L0606049 **Instrument ID:** HP15
Analytical Method: 8151A **Initial Calibration Date:** 02-JUN-06 13:32
ICAL Workgroup: WG214420 **Column ID:** F

Analyte		AVG RF	% RSD	LINEAR	QUAD
2,4-D		939700	12.5		
Silvex		4931000	1.82		
2,4-Dichlorophenylacetic acid	SURR	686000	12.9		

KEMRON FORMS - Modified 06/12/2006
Version 1.5 PDF File ID: 492921
Report generated 06/12/2006 10:52

KEMRON Environmental Services

INITIAL CALIBRATION SUMMARY

Login Number: L0606049 **Instrument ID:** HP15
Analytical Method: 8151A **Initial Calibration Date:** 02-JUN-06 13:32
ICAL Workgroup: WG214420 **Column ID:** R

Analyte		AVG RF	% RSD	LINEAR	QUAD
2,4-D		1211000	10.3		
Silvex		6189000	2.65		
2,4-Dichlorophenylacetic acid	SURR	834200	11.0		

KEMRON FORMS - Modified 06/12/2006
Version 1.5 PDF File ID: 492921
Report generated 06/12/2006 10:52

KEMRON Environmental Services

INITIAL CALIBRATION DATA

Login Number: L0606049 **Instrument ID:** HP15

Analytical Method: 8151A **Initial Calibration Date:** 02-JUN-06 13:32

Column ID: F

Analyte	WG214420-01			WG214420-02			WG214420-03		
	CONC	RESP	RF	CONC	RESP	RF	CONC	RESP	RF
2,4-D	2000	1632384690	816200	1000	855174151	855200	500	459638333	919300
Silvex	200	987565717	4938000	100	496908441	4969000	50.0	252107110	5042000
2,4-Dichlorophenylacetic acid	2000	1176895773	588400	1000	616398397	616400	500	343262150	686500

KEMRON FORMS - Modified 03/06/2006
Version 1.6 PDF File ID: 492921
Report generated 06/12/2006 10:52

KEMRON Environmental Services

INITIAL CALIBRATION DATA

Login Number: L0606049 **Instrument ID:** HP15

Analytical Method: 8151A **Initial Calibration Date:** 02-JUN-06 13:32

Column ID: F

Analyte	WG214420-04			WG214420-05		
	CONC	RESP	RF	CONC	RESP	RF
2,4-D	250	248988480	996000	100	111188736	1112000
Silvex	25.0	122695272	4908000	10.0	47968712	4797000
2,4-Dichlorophenylacetic acid	250	182210380	728800	100	80962832	809600

KEMRON Environmental Services

INITIAL CALIBRATION DATA

Login Number: L0606049 **Instrument ID:** HP15

Analytical Method: 8151A **Initial Calibration Date:** 02-JUN-06 13:32

Column ID: R

Analyte	WG214420-01			WG214420-02			WG214420-03		
	CONC	RESP	RF	CONC	RESP	RF	CONC	RESP	RF
2,4-D	2000	2135146849	1068000	1000	1117753216	1118000	500	609570464	1219000
Silvex	200	1196079408	5980000	100	609268925	6093000	50.0	314227855	6285000
2,4-Dichlorophenylacetic acid	2000	1461596248	730800	1000	768158937	768200	500	415841609	831700

KEMRON FORMS - Modified 03/06/2006
Version 1.6 PDF File ID: 492921
Report generated 06/12/2006 10:52

KEMRON Environmental Services

INITIAL CALIBRATION DATA

Login Number: L0606049 **Instrument ID:** HP15

Analytical Method: 8151A **Initial Calibration Date:** 02-JUN-06 13:32

Column ID: R

Analyte	WG214420-04			WG214420-05		
	CONC	RESP	RF	CONC	RESP	RF
2,4-D	250	316809360	1267000	100	138520200	1385000
Silvex	25.0	154569950	6183000	10.0	64026526	6403000
2,4-Dichlorophenylacetic acid	250	219261197	877000	100	96356102	963600

KEMRON Environmental Services

ALTERNATE SOURCE CALIBRATION REPORT

Login Number: L0606049 Run Date: 06/02/2006 Sample ID: WG214420-06
Instrument ID: HP15 Run Time: 14:53 Method: 8151A
File ID: 15G5494.F Analyst: ECL
ICal Workgroup: WG214420 Cal ID: HP15 - 02-JUN-06

Analyte		Expected	Found	RF	%D	UNITS	Q
2,4-D		500	468	879000	6.5	ug/L	
Silvex		50	57.3	5650000	14.5	ug/L	

* Exceeds %D Limit

KEMRON FORMS - Modified 04/11/2006
Version 1.5 PDF File ID: 492922
Report generated 06/12/2006 10:52

KEMRON Environmental Services

ALTERNATE SOURCE CALIBRATION REPORT

Login Number: L0606049 Run Date: 06/02/2006 Sample ID: WG214420-06
Instrument ID: HP15 Run Time: 15:20 Method: 8151A
File ID: 15G5494.R Analyst: ECL
ICal Workgroup: WG214420 Cal ID: HP15 - 02-JUN-06

Analyte		Expected	Found	RF	%D	UNITS	Q
2,4-D		500	522	1260000	4.4	ug/L	
Silvex		50	57.3	7100000	14.7	ug/L	

* Exceeds %D Limit

KEMRON FORMS - Modified 04/11/2006
Version 1.5 PDF File ID: 492922
Report generated 06/12/2006 10:52

KEMRON Environmental Services

CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L0606049 Run Date: 06/08/2006 Sample ID: WG214867-01
Instrument ID: HP15 Run Time: 09:19 Method: 8151A
File ID: 15G5524.F Analyst: ECL
Workgroup (AAB#): WG214835 Cal ID: HP15 - 02-JUN-06

Analyte		Expected	Found	RF	%D	UNITS	Q
2,4-D		500	491	923000	1.7	ug/L	
Silvex		50	51.3	5060000	2.6	ug/L	
2,4-Dichlorophenylacetic acid	SURR	500	520	713000	4	ug/L	

* Exceeds %D Criteria

KEMRON FORMS - Modified 04/19/2006
Version 1.3 PDF File ID: 492923
Report generated 06/12/2006 10:52

KEMRON Environmental Services

CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L0606049 Run Date: 06/08/2006 Sample ID: WG214867-01
Instrument ID: HP15 Run Time: 09:46 Method: 8151A
File ID: 15G5524.R Analyst: ECL
Workgroup (AAB#): WG214835 Cal ID: HP15 - 02-JUN-06

Analyte		Expected	Found	RF	%D	UNITS	Q
2,4-D		500	515	1250000	3	ug/L	
Silvex		50	52.6	6510000	5.2	ug/L	
2,4-Dichlorophenylacetic acid	SURR	500	511	852000	2.2	ug/L	

* Exceeds %D Criteria

KEMRON FORMS - Modified 04/19/2006
Version 1.3 PDF File ID: 492923
Report generated 06/12/2006 10:52

KEMRON Environmental Services

CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L0606049 Run Date: 06/08/2006 Sample ID: WG214867-02
Instrument ID: HP15 Run Time: 14:43 Method: 8151A
File ID: 15G5535.F Analyst: ECL
Workgroup (AAB#): WG214835 Cal ID: HP15 - 02-JUN-06

Analyte		Expected	Found	RF	%D	UNITS	Q
2,4-D		500	511	960000	2.1	ug/L	
Silvex		50	53.1	5240000	6.2	ug/L	
2,4-Dichlorophenylacetic acid	SURR	500	525	720000	4.9	ug/L	

* Exceeds %D Criteria

KEMRON FORMS - Modified 04/19/2006
Version 1.3 PDF File ID: 492923
Report generated 06/12/2006 10:52

KEMRON Environmental Services

CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L0606049 Run Date: 06/08/2006 Sample ID: WG214867-02
Instrument ID: HP15 Run Time: 15:10 Method: 8151A
File ID: 15G5535.R Analyst: ECL
Workgroup (AAB#): WG214835 Cal ID: HP15 - 02-JUN-06

Analyte		Expected	Found	RF	%D	UNITS	Q
2,4-D		500	521	1260000	4.2	ug/L	
Silvex		50	53.2	6590000	6.4	ug/L	
2,4-Dichlorophenylacetic acid	SURR	500	517	863000	3.4	ug/L	

* Exceeds %D Criteria

KEMRON FORMS - Modified 04/19/2006
Version 1.3 PDF File ID: 492923
Report generated 06/12/2006 10:52

1.2.4 TPH GC Data (TNRCC1005)

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1.2.4.1 QC Summary

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KEMRON ENVIRONMENTAL SERVICES
GC TPH ORGANICS

KEMRON Login No.: L0606049

METHOD TNRCC method 1005

HOLDING TIMES

Sample Preparation: All holding times were met.

Sample Analysis: All holding times were met.

PREPARATION

Sample preparation proceeded normally.

CALIBRATION

Initial Calibration: For all compounds which yielded a %RSD greater than 20 %, linear or higher order equations were applied. All acceptance criteria were met.

Alternate Source Standards: All acceptance criteria were met.

Continuing Calibration: All acceptance criteria were met.

BATCH QA/QC

Method Blank: All acceptance criteria were met.

Laboratory Control Sample: All acceptance criteria were met.

Matrix Spike: The MS/MSD results were not associated with this sample delivery group.

SAMPLES

Samples: All acceptance criteria were met.

Surrogates: All acceptance criteria were met.

Manual Integration Reason Codes

KEMRON laboratory management has identified four general cases with valid reasons supporting the use of manual integration techniques.

Reason #1: Data System Fails to Select Correct Peak
In some cases the chromatography system selects and integrates the ”wrong peak”. In this case the analyst must correct the selection and force the system to integrate the proper peak. Other times the system may miss the peak completely.

Reason #2: Data System Splits the Peak Incorrectly or Integrates a False Peak as a Rider Peak.
This phenomena is common at low concentrations where the signal:noise ratio is low. A single compound (peak) is

incorrectly split into multiple peaks or integrated as a main peak with one or more rider peaks resulting in low area counts for the target compound.

Reason #3: Improperly Integrated Isomers and/or coeluting compounds.
This system often fails to distinguish coeluting compounds and or isomers. The integration areas and concentrations are wrong, and they must be corrected by manual integration. Prime examples are benzo(k)fluoranthene and benzo(b)fluoranthene which are often unresolved and integrated improperly when both are present at low concentrations in standards or samples.

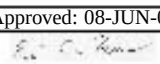
Reason #4: System Establishes Incorrect Baseline
There are numerous situations in chromatography where the system establishes the baseline incorrectly. Some baseline errors will be obvious to the analyst and should be corrected via manual procedures.

Reason #5: Miscellaneous
Other situations involving integration errors may require in-depth review and technical judgment. These cases should be brought to the attention of the laboratory management. If the form of manual integration is not clearly covered by these four cases, then review and approval by the Laboratory Director or the QA/QC Supervisor will be required.

I certify that this data package is in compliance with the terms and conditions agreed to by the client and KEMRON Environmental Services, both technically and for completeness, except for the conditions noted above. Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or designated person, as verified by the following signature.

Analyst: HAV

Approved: 08-JUN-06



LABORATORY REPORT

L0606049

06/20/06 08:38

Submitted By

KEMRON Environmental Services
156 Starlite Drive
Marietta , OH 45750
(740) 373 - 4071

For

Account Name: CH2MHILL, Inc
7600 Tidwell Road
Suite 400
San Antonio, TX 77040
Attention: John Ynfante

Account Number: 2736
Work ID: STATE MARINE RI

P.O. Number: 915193

Sample Analysis Summary

Client ID	Lab ID	Method	Dilution	Date Received
IWGW01053106	L0606049-01	T1005	1	02-JUN-06

Report Number: **L0606049**
Report Date : **June 20, 2006**

Sample Number: **L0606049-01**
Client ID: **IWGW01053106**
Matrix: **Water**
Workgroup Number: **WG214732**
Collect Date: **05/31/2006 16:00**

PrePrep Method: **NONE**
Prep Method: **METHOD**
Analytical Method: **T1005**
Analyst: **HV**
Dilution: **1**
Units: **mg/L**

Instrument: **HP14**
Prep Date: **06/06/2006 12:00**
Cal Date: **03/17/2006 13:21**
Run Date: **06/06/2006 22:49**
File ID: **14G9064**

Analyte	CAS. Number	Result	Qual	PQL	SQL
Carbon Range C6-C12			U	4.49	2.24
Carbon Range C12-C28			U	4.49	2.24
Carbon Range C28-C35			U	4.49	2.24
Carbon Range C6-C35			U	4.49	2.24

Surrogate	% Recovery	Lower	Upper	Qual
Chlorobenzene	102	31	130	
o-Terphenyl	109	70	130	

U Not detected at or above the reporting limit

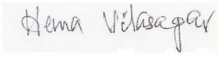
Checklist ID: 6524

KEMRON Environmental Services
Data Checklist

Date: 17-MAR-2006
Analyst: HAV
Analyst: NA
Method: TX-T1005
Instrument: HP14
Curve Workgroup: WG208825
Analytical Workgroups: L0601275, -360, L0602490, -491.

Runlog ID number:	9425
System Performance Check	NA
DFTPP	NA
Endrin/DDT Breakdown	NA
Initial Calibration	X
Average RF	X
Linear Reg or Higher Order Curve	X
Second Source standard % Difference	X
Continuing Calibration /Check Standards	X
Project/Client Specific Requirements	X
Special Standards	
Blanks	X
TCL's	X
Surrogates	X
LCS (Laboratory Control Sample)	
Recoveries	
Surrogates	
MS/MSD/Duplicates	
Samples	X
TCL Hits	X
Spectra of TCL Hits	NA
Surrogates	X
Internal Standards Criteria	NA
Library Searches	NA
Calculations & Correct Factors	X
Dilutions Run	
Reruns	X
Manual Integrations	NA
Case Narrative	
Results Reporting/Data Qualifiers	X
KOBRA Workgroup Data	X
Check for Completeness	X
Primary Reviewer	HAV
Secondary Reviewer	MDC
Check for compliance with method and project specific requirements	X
Check the completeness of reported information	X
Check the information for the report narrative	X
Check the resonableness of the results	X

Primary Reviewer:



Secondary Reviewer:
05-MAY-2006

Generated: MAY-05-2006 14:29:54

Checklist ID: 7895

KEMRON Environmental Services
Data Checklist

Date: 06-JUN-2006
Analyst: HAV
Analyst: NA
Method: TX-T1005
Instrument: HP14
Curve Workgroup: NA
Analytical Workgroups: L0606090, L0606076.

Runlog ID number:	10690
System Performance Check	NA
DFTPP	NA
Endrin/DDT Breakdown	NA
Initial Calibration	
Average RF	
Linear Reg or Higher Order Curve	
Second Source standard % Difference	
Continuing Calibration /Check Standards	X
Project/Client Specific Requirements	X
Special Standards	
Blanks	X
TCL's	X
Surrogates	X
LCS (Laboratory Control Sample)	X
Recoveries	X
Surrogates	X
MS/MSD/Duplicates	X
Samples	X
TCL Hits	X
Spectra of TCL Hits	NA
Surrogates	X
Internal Standards Criteria	NA
Library Searches	NA
Calculations & Correct Factors	X
Dilutions Run	
Reruns	
Manual Integrations	NA
Case Narrative	X
Results Reporting/Data Qualifiers	X
KOBRA Workgroup Data	X
Check for Completeness	X
Primary Reviewer	HAV
Secondary Reviewer	ECL
Check for compliance with method and project specific requirements	
Check the completeness of reported information	
Check the information for the report narrative	
Check the resonableness of the results	
Comments: As per client, all sample fractions which were >RL (L0604552) required T1006 anal	

Primary Reviewer:

Secondary Reviewer:
08-JUN-2006

Generated: JUN-08-2006 14:19:55

Run Log ID: **9425**

KEMRON Environmental Services

Instrument Run Log

Instrument: HP14 Dataset: 031706

Analyst1: HAV Analyst2: NA

Method: TX-T1005 SOP: GCSOP5 Rev: 4

Column 1 ID: RTX-5 Column 2 ID: NA

Workgroups:

Internal Standard: NA Surrogate Standard: NA

Comments:

Seq.	File ID	Sample Information	Mat	Dil	Reference	Date/Time
37	14G8803	pentane	1	1		03/17/06 08:49
1	14G8804	WIN DEF STD @20ppm	1	1	SOS78-19	03/17/06 09:27
2	14G8805	WG208825-01 TPH @10000ppm	1	1		03/17/06 10:05
3	14G8806	WG208825-02 TPH @5000ppm	1	1		03/17/06 10:44
4	14G8807	WG208825-03 TPH @2500ppm	1	1		03/17/06 11:23
5	14G8808	WG208825-04 TPH @1000ppm	1	1		03/17/06 12:02
6	14G8809	WG208825-05 TPH @500ppm	1	1		03/17/06 12:42
7	14G8810	WG208825-06 TPH @50ppm	1	1		03/17/06 13:21
8	14G8811	WG208825-07 ALT TPH @1000ppm	1	1		03/17/06 14:01
9	14G8812	L0601360-01 TPH water P\&A \#1	1	1		03/17/06 14:45
10	14G8813	L0601360-02 TPH water P\&A \#2	1	1		03/17/06 15:25
11	14G8814	L0601360-03 TPH water P\&A \#3	1	1		03/17/06 16:04
12	14G8815	L0601360-04 TPH water P\&A \#4	1	1		03/17/06 16:44
13	14G8816	WG208828-01 TPH water BLANK V13-P27	1	1		03/17/06 17:24
14	14G8817	WG208833-01 TPH water BLANK V13-P28	1	1		03/17/06 18:03
15	14G8818	L0602490-01 TPH water MDL \#1	1	1		03/17/06 18:42
16	14G8819	L0602490-02 TPH water MDL \#2	1	1		03/17/06 19:22
17	14G8820	L0602490-03 TPH water MDL \#3	1	1		03/17/06 20:01
18	14G8821	L0602490-04 TPH water MDL #4	1	1		03/17/06 20:40
19	14G8822	L0602490-05 TPH water MDL #5	1	1		03/17/06 21:19
20	14G8823	L0602490-06 TPH water MDL #6	1	1		03/17/06 21:58
21	14G8824	L0602490-07 TPH water MDL #7	1	1		03/17/06 22:37
22	14G8825	WG208826-01 TPH CCV @1000ppm	1	1		03/17/06 23:16
23	14G8826	WG208830-01 TPH soil BLANK V13-P29	7	1		03/17/06 23:54
24	14G8827	L0601275-01 TPH soil P&A #1	7	1		03/18/06 00:33
25	14G8828	L0601275-02 TPH soil P&A #2	7	1		03/18/06 01:12
26	14G8829	L0601275-03 TPH soil P&A #3	7	1		03/18/06 01:50
27	14G8830	L0601275-04 TPH soil P&A #4	7	1		03/18/06 02:29
28	14G8831	WG208834-01 TPH soil BLANK V13-P30	7	1		03/18/06 03:08
29	14G8832	L0602491-01 TPH soil MDL #1	7	1		03/18/06 03:46
30	14G8833	L0602491-02 TPH soil MDL #2	7	1		03/18/06 04:26
31	14G8834	L0602491-03 TPH soil MDL #3	7	1		03/18/06 05:04
32	14G8835	L0602491-04 TPH soil MDL #4	7	1		03/18/06 05:42
33	14G8836	L0602491-05 TPH soil MDL #5	7	1		03/18/06 06:21
34	14G8837	L0602491-06 TPH soil MDL #6	7	1		03/18/06 06:59
35	14G8838	L0602491-07 TPH soil MDL #7	7	1		03/18/06 07:38

Approved: 05-MAY-06

Run Log ID: **9425**

KEMRON Environmental Services

Instrument Run Log

Instrument: HP14 Dataset: 031706

Analyst1: HAV Analyst2: NA

Method: TX-T1005 SOP: GCSOP5 Rev: 4

Column 1 ID: RTX-5 Column 2 ID: NA

Workgroups:

Internal Standard: NA Surrogate Standard: NA

Seq.	File ID	Sample Information	Mat	Dil	Reference	Date/Time
36	14G8839	WG208826-02 TPH CCV @1000ppm	1	1		03/18/06 08:17

Comments

Seq.	Rerun	Dil.	Reason	Analytes

Approved: 05-MAY-06

Run Log ID: **10690**

KEMRON Environmental Services

Instrument Run Log

Instrument: HP14 Dataset: 060606

Analyst1: HAV Analyst2: NA

Method: TX-T1005 SOP: GCSOP5 Rev: 4

Column 1 ID: RTX-5 Column 2 ID: NA

Workgroups:

Internal Standard: NA Surrogate Standard: NA

Comments: Changed septum.

Seq.	File ID	Sample Information	Mat	Dil	Reference	Date/Time
1	14G9046	pentane	1	1		06/06/06 09:56
2	14G9047	pentane	1	1		06/06/06 10:38
3	14G9048	WIN DEF STD	1	1	SOS78-19	06/06/06 11:21
4	14G9049	WG214734-01 TPH CCV @1000ppm	1	1		06/06/06 12:03
5	14G9050	WG214731-01 TPH water BLANK V14-P03	1	1		06/06/06 13:08
6	14G9051	WG214731-02 TPH water LCS V14-P03	1	1		06/06/06 13:49
7	14G9052	L0606076-10 EB01	1	1		06/06/06 14:31
8	14G9053	WG214731-03 L0606076-03 REF	1	1		06/06/06 15:12
9	14G9054	WG214731-04 MS L0606076-08	1	1		06/06/06 15:53
10	14G9055	WG214731-05 MSD L0606076-09	1	1		06/06/06 16:35
11	14G9056	L0606076-01	1	1		06/06/06 17:17
12	14G9057	L0606076-02	1	1		06/06/06 17:58
13	14G9058	L0606076-04	1	1		06/06/06 18:40
14	14G9059	pentane	1	1		06/06/06 19:21
15	14G9060	WG214734-02 TPH CCV @1000ppm	1	1		06/06/06 20:03
16	14G9061	L0606076-05	1	1		06/06/06 20:44
17	14G9062	L0606076-06	1	1		06/06/06 21:26
18	14G9063	L0606076-07	1	1		06/06/06 22:07
19	14G9064	L0606049-01	1	1		06/06/06 22:49
20	14G9065	pentane	1	1		06/06/06 23:31
21	14G9066	WG214734-03 TPH CCV @1000ppm	1	1		06/07/06 00:13

Comments

Seq.	Rerun	Dil.	Reason	Analytes

Page: 1 of 1

Approved: 08-JUN-06

KEMRON Environmental Services
HOLDING TIMES
EQUIVALENT TO AFCEE FORM 9

Analytical Method: T1005 **AAB#:** WG214732
Login Number: L0606049

Client ID	Date Collected	Date Received	Date Extracted	Max Hold Time Ext.	Time Held Ext.	Date Analyzed	Max Hold Time Anal	Time Held Anal.	Q
IWGW01053106	05/31/06	06/02/06	06/06/06	14	5.83	06/06/06	14	0.451	

* EXT = SEE PROJECT QAPP REQUIREMENTS
*ANAL = SEE PROJECT QAPP REQUIREMENTS

KEMRON FORMS - Modified 02/14/2006
Version 1.5 PDF File ID: 491352
Report generated 06/08/2006 14:15

KEMRON Environmental Services

SURROGATE STANDARDS

Login Number: L0606049
Instrument Id: HP14
Workgroup (AAB#): WG214732

Method: T1005
CAL ID: HP14-17-MAR-06
Matrix: WATER

Sample Number	Dilution	Tag	1	2
L0606049-01	1.00	01	102	109
WG214731-01	1.00	01	102	108
WG214731-02	1.00	01	98.6	102

Surrogates	Surrogate Limits
1 - Chlorobenzene	31 - 130
2 - o-Terphenyl	70 - 130

Underline = Result out of surrogate limits

DL = surrogate diluted out
ND = surrogate not detected

KEMRON FORMS - Modified 04/18/2006
Version 1.5 PDF File ID: 491794
Report generated 06/08/2006 14:16

KEMRON Environmental Services

METHOD BLANK SUMMARY

Login Number:	L0606049	Work Group:	WG214732
Blank File ID:	14G9050	Blank Sample ID:	WG214731-01
Date Analyzed:	06/06/06	Instrument ID:	HP14
Time Analyzed:	13:08	Method:	T1005
Analyst:	HV		

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG214731-02	14G9051	06/06/06 13:49	01
IWGW01053106	L0606049-01	14G9064	06/06/06 22:49	01

KEMRON FORMS - Modified 03/06/2006
Version 1.5 PDF File ID: 491353
Report generated 06/08/2006 14:15

KEMRON Environmental Services

METHOD BLANK REPORT

Login Number: L0606049	Run Date: 06/06/2006	Sample ID: WG214731-01
Instrument ID: HP14	Run Time: 13:08	Prep Method: METHOD
File ID: 14G9050	Analyst: HV	Method: T1005
Workgroup (AAB#): WG214732	Matrix: Water	Units: mg/L
Contract #:	Cal ID: HP14-17-MAR-06	

Analytes	SQL	PQL	Concentration	Dilution	Qualifier
Carbon Range C6-C12	2.50	5.00	2.50	1	U
Carbon Range C12-C28	2.50	5.00	2.50	1	U
Carbon Range C28-C35	2.50	5.00	2.50	1	U
Carbon Range C6-C35	2.50	5.00	2.50	1	U

Surrogates	% Recovery	Surrogate Limits			Qualifier
Chlorobenzene	102	31	-	130	PASS
o-Terphenyl	108	70	-	130	PASS

MDL Method Detection Limit
RL Reporting/quantitation Limit

* Analyte concentration > RL

KEMRON FORMS - Modified 05/01/2006
Version 1.5 PDF File ID: 491357
Report generated 06/08/2006 14:15

KEMRON Environmental Services

LABORATORY CONTROL SAMPLE (LCS)

Login Number: L0606049	Run Date: 06/06/2006	Sample ID: WG214731-02
Instrument ID: HP14	Run Time: 13:49	Prep Method: METHOD
File ID: 14G9051	Analyst: HV	Method: T1005
Workgroup (AAB#): WG214732	Matrix: Water	Units: mg/L
Contract #:	Cal ID: HP14-17-MAR-06	

Analytes	Expected	Found	% Rec	LCS Limits	Q
Carbon Range C6-C35	100	98.0	98.0	75 - 125	

Surrogates	% Recovery	Surrogate Limits	Qualifier
Chlorobenzene	98.6	31 - 130	PASS
o-Terphenyl	102	70 - 130	PASS

* FAILS %REC LIMIT

KEMRON FORMS - Modified 05/01/2006
Version 1.5 PDF File ID: 491358
Report generated 06/08/2006 14:16

KEMRON Environmental Services

INITIAL CALIBRATION SUMMARY

Login Number: L0606049 **Instrument ID:** HP14
Analytical Method: T1005 **Initial Calibration Date:** 17-MAR-06 13:21
ICAL Workgroup: WG208825 **Column ID:** F

Analyte		AVG RF	% RSD	LINEAR	QUAD
Chlorobenzene	SURR	17620	5.08		
Carbon Range C12-C28		10940	4.93		
Carbon Range C28-C35		1576	166	0.151	
Carbon Range C6-C12		6862	6.44		
Carbon Range C6-C35		16640	7.62		
o-Terphenyl	SURR	28860	5.48		

KEMRON FORMS - Modified 03/06/2006
Version 1.5 PDF File ID: 491354
Report generated 06/08/2006 14:16

KEMRON Environmental Services

INITIAL CALIBRATION DATA

Login Number: L0606049 **Instrument ID:** HP14

Analytical Method: T1005 **Initial Calibration Date:** 17-MAR-06 13:21

Column ID: F

Analyte	WG208825-01			WG208825-02			WG208825-03		
	CONC	RESP	RF	CONC	RESP	RF	CONC	RESP	RF
Chlorobenzene	5000	90409324	18080	2500	41487995	16600	1250	20689126	16550
Carbon Range C12-C28	10000	115605234	11560	5000	52924184	10580	2500	26714510	10690
Carbon Range C28-C35	10000	177461	17.75	5000	573174	114.6	2500	727092	290.8
Carbon Range C6-C12	10000	71992049	7199	5000	31460644	6292	2500	16261890	6505
Carbon Range C6-C35	10000	166069931	16610	5000	75522269	15100	2500	38775438	15510
o-Terphenyl	500	14588286	29180	250	6746710	26990	125	3364018	26910

KEMRON Environmental Services

INITIAL CALIBRATION DATA

Login Number: L0606049 **Instrument ID:** HP14

Analytical Method: T1005 **Initial Calibration Date:** 17-MAR-06 13:21

Column ID: F

Analyte	WG208825-04			WG208825-05			WG208825-06		
	CONC	RESP	RF	CONC	RESP	RF	CONC	RESP	RF
Chlorobenzene	500	9047448	18090	250	4395436	17580	25.0	469847	18790
Carbon Range C12-C28	1000	11537238	11540	500	5534608	11070	50.0	511350	10230
Carbon Range C28-C35	1000	1507977	1508	500	357508	715.0	50.0	340440	6809
Carbon Range C6-C12	1000	7012888	7013	500	3351269	6703	50.0	373158	7463
Carbon Range C6-C35	1000	17183775	17180	500	8397689	16800	50.0	933078	18660
o-Terphenyl	50.0	1493686	29870	25.0	734330	29370	2.50	77029	30810

KEMRON FORMS - Modified 03/06/2006
Version 1.6 PDF File ID: 491354
Report generated 06/08/2006 14:16

KEMRON Environmental Services

ALTERNATE SOURCE CALIBRATION REPORT

Login Number: L0606049 Run Date: 03/17/2006 Sample ID: WG208825-07
Instrument ID: HP14 Run Time: 14:01 Method: T1005
File ID: 14G8811 Analyst: HV
ICal Workgroup: WG208825 Cal ID: HP14 - 17-MAR-06

Analyte		Expected	Found	RF	%D	UNITS	Q
Carbon Range C6-C12		1000	1020	17000	1.9	mg/L	
Carbon Range C12-C28		1000	1270	21100	26.7	mg/L	*
Carbon Range C28-C35		1000	38.3	638	96.2	mg/L	*
Carbon Range C6-C35		2000	2050	34100	2.4	mg/L	

* Exceeds %D Limit

KEMRON FORMS - Modified 04/11/2006
Version 1.5 PDF File ID: 491355
Report generated 06/08/2006 14:16

KEMRON Environmental Services

CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L0606049 Run Date: 06/06/2006 Sample ID: WG214734-01
Instrument ID: HP14 Run Time: 12:03 Method: T1005
File ID: 14G9049 Analyst: HV
Workgroup (AAB#): WG214732 Cal ID: HP14 - 17-MAR-06

Analyte		Expected	Found	RF	%D	UNITS	Q
Chlorobenzene	SURR	500	507	17900	1.5	mg/L	
Carbon Range C6-C12		1000	391	6510	60.9	mg/L	*
Carbon Range C12-C28		1000	696	11600	30.4	mg/L	*
Carbon Range C28-C35		1000	143	2380	85.7	mg/L	*
Carbon Range C6-C35		1000	1130	18800	12.9	mg/L	
o-Terphenyl	SURR	50	51.4	29700	2.9	mg/L	

* Exceeds %D Criteria

KEMRON FORMS - Modified 04/19/2006
Version 1.3 PDF File ID: 491356
Report generated 06/08/2006 14:16

KEMRON Environmental Services

CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L0606049 Run Date: 06/06/2006 Sample ID: WG214734-02
Instrument ID: HP14 Run Time: 20:03 Method: T1005
File ID: 14G9060 Analyst: HV
Workgroup (AAB#): WG214732 Cal ID: HP14 - 17-MAR-06

Analyte		Expected	Found	RF	%D	UNITS	Q
Chlorobenzene	SURR	500	552	19500	10.5	mg/L	
Carbon Range C6-C12		1000	436	7250	56.4	mg/L	*
Carbon Range C12-C28		1000	713	11900	28.7	mg/L	*
Carbon Range C28-C35		1000	21.6	359	97.8	mg/L	*
Carbon Range C6-C35		1000	1060	17600	5.9	mg/L	
o-Terphenyl	SURR	50	56.4	32600	12.9	mg/L	

* Exceeds %D Criteria

KEMRON FORMS - Modified 04/19/2006
Version 1.3 PDF File ID: 491356
Report generated 06/08/2006 14:16

KEMRON Environmental Services

CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L0606049 Run Date: 06/07/2006 Sample ID: WG214734-03
Instrument ID: HP14 Run Time: 00:13 Method: T1005
File ID: 14G9066 Analyst: HV
Workgroup (AAB#): WG214732 Cal ID: HP14 - 17-MAR-06

Analyte		Expected	Found	RF	%D	UNITS	Q
Chlorobenzene	SURR	500	574	20200	14.8	mg/L	
Carbon Range C6-C12		1000	458	7630	54.2	mg/L	*
Carbon Range C12-C28		1000	738	12300	26.2	mg/L	*
Carbon Range C28-C35		1000	64.8	1080	93.5	mg/L	*
Carbon Range C6-C35		1000	1090	18100	9	mg/L	
o-Terphenyl	SURR	50	59.0	34100	18	mg/L	

* Exceeds %D Criteria

KEMRON FORMS - Modified 04/19/2006
Version 1.3 PDF File ID: 491356
Report generated 06/08/2006 14:16

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1.3 Metals Data

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1.3.1 Metals I C P Data

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KEMRON ENVIRONMENTAL SERVICES
METALS

KEMRON Login No: L0606049

METHOD

Preparation: SW-846 3005A

Analysis: SW-846 6010

HOLDING TIMES

Sample Preparation: All holding times were met.

Sample Analysis: All holding times were met.

PREPARATION

Sample preparation proceeded normally.

CALIBRATION

Initial Calibrations: All acceptance criteria were met.

Alternate Source Standards: All acceptance criteria were met.

Continuing Calibration: All acceptance criteria were met.

BATCH QA/QC

Method Blank: All acceptance criteria were met.

Laboratory Control Sample: All acceptance criteria were met.

Serial Dilution/Post Digestion Spike: WG214736(6010) - All acceptance criteria were met.

SAMPLES

All acceptance criteria were met.

I certify that this data package is in compliance with the terms and conditions agreed to by the client and KEMRON Environmental Services, both technically and for completeness, except for the conditions noted above. Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or designated person, as verified by the following signature.

Analyst: KHR

Approved: 14-JUN-06
Maren Berry

LABORATORY REPORT

L0606049

06/20/06 08:38

Submitted By

KEMRON Environmental Services
156 Starlite Drive
Marietta , OH 45750
(740) 373 - 4071

For

Account Name: CH2MHILL, Inc
7600 Tidwell Road
Suite 400
San Antonio, TX 77040
Attention: John Ynfante

Account Number: 2736
Work ID: STATE MARINE RI

P.O. Number: 915193

Sample Analysis Summary

Client ID	Lab ID	Method	Dilution	Date Received
IWGW01053106	L0606049-01	6010B	1	02-JUN-06

Report Number: **L0606049**
Report Date : **June 20, 2006**

Sample Number: **L0606049-01**
Client ID: **IWGW01053106**
Matrix: **Water**
Workgroup Number: **WG214736**
Collect Date: **05/31/2006 16:00**

PrePrep Method: **NONE**
Prep Method: **3005A**
Analytical Method: **6010B**
Analyst: **KHR**
Dilution: **1**
Units: **mg/L**

Instrument: **PE-ICP2**
Prep Date: **06/05/2006 07:25**
Cal Date: **06/07/2006 09:19**
Run Date: **06/07/2006 13:22**
File ID: **P2.060706.132220**

Analyte	CAS. Number	Result	Qual	PQL	SQL
Silver, Total	7440-22-4		U	0.0100	0.00500
Arsenic, Total	7440-38-2	0.0358		0.0100	0.00200
Barium, Total	7440-39-3	0.357		0.0100	0.00250
Cadmium, Total	7440-43-9		U	0.0100	0.00250
Chromium, Total	7440-47-3		U	0.0200	0.00250
Lead, Total	7439-92-1	0.00404	J	0.00500	0.00250

J The analyte was positively identified, but the quantitation was below the RL
U Not detected at or above the reporting limit

1.3.1.1 QC Summary

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Checklist ID: 7869

KEMRON Environmental Services
Data Checklist

Date: 06-JUN-2006
Analyst: KHR
Analyst: MMB
Method: 6010B
Instrument: PE-ICP2
Curve Workgroup: 214697
Analytical Workgroups: 214623, 214725, 213611, 214736

Run Log ID:	10673
Calibration/Linearity	X
ICV/CCV	X
ICB/CCB	X
ICSA/ICSAB	X
CRI	X
Blank/LCS	X
MS/MSD	X
Post Spike/Serial Dilution	X
Upload Results	X
Data Qualifiers	
Generate PDF Instrument Data	X
Sign/Annotate PDF Data	X
Upload Curve Data	X
Workgroup Forms	X
Case Narrative	X
Client Forms	X
Level X	629
Level 3	
Level 4	616
Check for compliance with method and project specific requirements	X
Check the completeness of reported information	X
Check the information for the report narrative	X
Primary Reviewer	KHR
Secondary Reviewer	LSB
Comments	

Primary Reviewer:
06-JUN-2006

Secondary Reviewer:
07-JUN-2006

Generated: JUN-07-2006 08:45:17

Checklist ID: 7892

KEMRON Environmental Services
Data Checklist

Date: 07-JUN-2006
Analyst: KHR
Analyst: NA
Method: 6010B
Instrument: PE-ICP2
Curve Workgroup: 214791
Analytical Workgroups: 214623, 214725, 214736, 214792, 214793

Run Log ID:	10688
Calibration/Linearity	X
ICV/CCV	X
ICB/CCB	X
ICSA/ICSAB	X
CRI	
Blank/LCS	X
MS/MSD	X
Post Spike/Serial Dilution	X
Upload Results	X
Data Qualifiers	X
Generate PDF Instrument Data	X
Sign/Annotate PDF Data	X
Upload Curve Data	X
Workgroup Forms	X
Case Narrative	X
Client Forms	X
Level X	629
Level 3	002, 049
Level 4	05-642, 032, 045, 054, 053
Check for compliance with method and project specific requirements	X
Check the completeness of reported information	X
Check the information for the report narrative	X
Primary Reviewer	KHR
Secondary Reviewer	LSB
Comments	

Primary Reviewer:
08-JUN-2006

Secondary Reviewer:
08-JUN-2006

Generated: JUN-08-2006 10:15:28

Run Log ID:**10673**

KEMRON Environmental Services

Instrument Run Log

Instrument: PE-ICP2 Dataset: 060606H.CSV
Analyst1: KHR Analyst2: MMB
Method: 6010B SOP: ME600E Rev: 6

Calibration Std: STD12709 ICV/CCV Std: STD12974 Post Spike: STD12434
ICSA: STD12943 ICSAB: STD12913

Workgroups: 214623, 214725, 213611, 214736

Comments:

Seq.	File ID	Sample	ID	Prep	Dil	Reference	Date/Time
1	P2.060606.084218	WG214697-01	Calibration Point		1		06/06/06 08:42
2	P2.060606.084841	WG214697-02	Calibration Point		1		06/06/06 08:48
3	P2.060606.085511	WG214697-03	Calibration Point		1		06/06/06 08:55
4	P2.060606.090145	WG214697-04	Calibration Point		1		06/06/06 09:01
5	P2.060606.090810	WG214697-05	Calibration Point		1		06/06/06 09:08
6	P2.060606.091436	WG214697-06	Initial Calibration Verification		1		06/06/06 09:14
7	P2.060606.092100	WG214697-07	Initial Calib Blank		1		06/06/06 09:21
8	P2.060606.092753	WG214697-08	Interference Check		1		06/06/06 09:27
9	P2.060606.093417	WG214697-09	Interference Check		1		06/06/06 09:34
10	P2.060606.094038	WG214697-10	CCV		1		06/06/06 09:40
11	P2.060606.094707	WG214697-11	CCB		1		06/06/06 09:47
12	P2.060606.095108	QCMRL	QCMRL		1		06/06/06 09:51
13	P2.060606.095726	WG214267-02	Method/Prep Blank	50/50	1		06/06/06 09:57
14	P2.060606.100350	WG214267-03	Laboratory Control S	50/50	1		06/06/06 10:03
15	P2.060606.101016	L0605616-01	RVS-MW15	50/50	1		06/06/06 10:10
16	P2.060606.101635	L0605616-02	RVS-DUP1	50/50	1		06/06/06 10:16
17	P2.060606.102257	WG214623-03	Post Digestion Spike		1	L0605616-02	06/06/06 10:22
18	P2.060606.102920	L0605616-03	RVS-MW01	50/50	1		06/06/06 10:29
19	P2.060606.103534	WG214697-12	CCV		1		06/06/06 10:35
20	P2.060606.104201	WG214697-13	CCB		1		06/06/06 10:42
21	P2.060606.104829	L0605616-05	RVS-MW13		1		06/06/06 10:48
22	P2.060606.105446	WG214267-04	Matrix Spike	50/50	1	L0605616-06	06/06/06 10:54
23	P2.060606.110117	WG214267-05	Matrix Spike Duplica	50/50	1	L0605616-07	06/06/06 11:01
24	P2.060606.110756	QCMRL	QCMRL		1		06/06/06 11:07
25	P2.060606.111414	MDL CHECK	MDL CHECK		1		06/06/06 11:14
26	P2.060606.112038	WG214697-14	CCV		1		06/06/06 11:20
27	P2.060606.112703	WG214697-15	CCB		1		06/06/06 11:27
28	P2.060606.113328	L0605622-02	W-24	50/50	1		06/06/06 11:33
29	P2.060606.113948	L0605622-04	W-35WB	50/50	1		06/06/06 11:39
30	P2.060606.114614	L0605622-05	W-10R	50/50	1		06/06/06 11:46
31	P2.060606.115249	L0605622-06	W-43WTR	50/50	1		06/06/06 11:52
32	P2.060606.115928	L0605629-01	MW-1	50/50	1		06/06/06 11:59
33	P2.060606.120613	WG214697-16	CCV		1		06/06/06 12:06
34	P2.060606.121250	WG214697-17	CCB		1		06/06/06 12:12
35	P2.060606.121911	L0605629-02	MW-2	50/50	1		06/06/06 12:19
36	P2.060606.122534	L0605629-03	MW-3	50/50	1		06/06/06 12:25
37	P2.060606.123159	L0605629-04	EQUIP BLANK	50/50	1		06/06/06 12:31

Approved: June 07, 2006

Run Log ID:**10673**

KEMRON Environmental Services

Instrument Run Log

Instrument: PE-ICP2 Dataset: 060606H.CSV
Analyst1: KHR Analyst2: MMB
Method: 6010B SOP: ME600E Rev: 6

Calibration Std: STD12709 ICV/CCV Std: STD12974 Post Spike: STD12434
ICSA: STD12943 ICSAB: STD12913

Workgroups: 214623, 214725, 213611, 214736

Comments:

Seq.	File ID	Sample	ID	Prep	Dil	Reference	Date/Time
38	P2.060606.123816	L0605629-05	MW-4	50/50	1		06/06/06 12:38
39	P2.060606.124437	L0605629-06	MW-4D	50/50	1		06/06/06 12:44
40	P2.060606.125102	L0605659-02	W-23	50/50	1		06/06/06 12:51
41	P2.060606.125726	L0605659-03	W-32WT	50/50	1		06/06/06 12:57
42	P2.060606.130356	L0605659-04	W-32WB	50/50	1		06/06/06 13:03
43	P2.060606.131020	L0605659-06	W-32B	50/50	1		06/06/06 13:10
44	P2.060606.131639	L0605659-08	W-46WB	50/50	1		06/06/06 13:16
45	P2.060606.132306	WG214697-18	CCV		1		06/06/06 13:23
46	P2.060606.132931	WG214697-19	CCB		1		06/06/06 13:29
47	P2.060606.133742	L0605622-02	W-24		5		06/06/06 13:37
48	P2.060606.134401	L0605622-04	W-35WB		5		06/06/06 13:44
49	P2.060606.135021	L0605622-05	W-10R		5		06/06/06 13:50
50	P2.060606.135646	L0605622-06	W-43WTR		5		06/06/06 13:56
51	P2.060606.140304	L0605629-01	MW-1	50/50	5		06/06/06 14:03
52	P2.060606.140929	L0605629-02	MW-2		5		06/06/06 14:09
53	P2.060606.141553	L0605629-03	MW-3		5		06/06/06 14:15
54	P2.060606.142210	L0605629-04	EQUIP BLANK	50/50	5		06/06/06 14:22
55	P2.060606.142843	WG214697-20	CCV		1		06/06/06 14:28
56	P2.060606.143507	WG214697-21	CCB		1		06/06/06 14:35
57	P2.060606.144126	L0605629-05	MW-4		5		06/06/06 14:41
58	P2.060606.144753	L0605629-06	MW-4D		5		06/06/06 14:47
59	P2.060606.145416	L0605659-03	W-32WT		5		06/06/06 14:54
60	P2.060606.150035	L0605659-04	W-32WB		5		06/06/06 15:00
61	P2.060606.150656	L0605659-06	W-32B		5		06/06/06 15:06
62	P2.060606.151321	L0605659-08	W-46WB		5		06/06/06 15:13
63	P2.060606.151939	WG214697-22	CCV		1		06/06/06 15:19
64	P2.060606.152610	WG214697-23	CCB		1		06/06/06 15:26
65	P2.060606.154543	L0605622-02	W-24		10		06/06/06 15:45
66	P2.060606.155201	L0605622-04	W-35WB		10		06/06/06 15:52
67	P2.060606.155821	L0605622-05	W-10R		10		06/06/06 15:58
68	P2.060606.160446	L0605622-06	W-43WTR	50/50	10		06/06/06 16:04
69	P2.060606.161104	L0605629-02	MW-2	50/50	10		06/06/06 16:11
70	P2.060606.161728	L0605629-03	MW-3		10		06/06/06 16:17
71	P2.060606.162352	WG214697-24	CCV		1		06/06/06 16:23
72	P2.060606.163015	WG214697-25	CCB		1		06/06/06 16:30
73	P2.060606.163635	L0605629-05	MW-4		10		06/06/06 16:36
74	P2.060606.164258	L0605629-06	MW-4D	50/50	10		06/06/06 16:42

Approved: June 07, 2006

007361

Run Log ID:**10673**

KEMRON Environmental Services

Instrument Run Log

Instrument: PE-ICP2 Dataset: 060606H.CSV
Analyst1: KHR Analyst2: MMB
Method: 6010B SOP: ME600E Rev: 6

Calibration Std: STD12709 ICV/CCV Std: STD12974 Post Spike: STD12434
ICSA: STD12943 ICSAB: STD12913

Workgroups: 214623, 214725, 213611, 214736

Comments:

Seq.	File ID	Sample	ID	Prep	Dil	Reference	Date/Time
75	P2.060606.164916	L0605659-03	W-32WT		10		06/06/06 16:49
76	P2.060606.165543	L0605659-04	W-32WB		10		06/06/06 16:55
77	P2.060606.170207	L0605659-06	W-32B		10		06/06/06 17:02
78	P2.060606.170825	L0605659-08	W-46WB		10		06/06/06 17:08
79	P2.060606.171453	WG214697-26	CCV		1		06/06/06 17:14
80	P2.060606.172118	WG214697-27	CCB		1		06/06/06 17:21
81	P2.060606.172737	WG214506-02	Method/Prep Blank	50/50	1		06/06/06 17:27
82	P2.060606.173400	WG214506-03	Laboratory Control S	50/50	1		06/06/06 17:34
83	P2.060606.174027	WG214506-01	Reference Sample		1	L0606024-01	06/06/06 17:40
84	P2.060606.174651	WG214506-04	Matrix Spike	50/50	1		06/06/06 17:46
85	P2.060606.175315	WG214506-05	Matrix Spike Duplica	50/50	1		06/06/06 17:53
86	P2.060606.175940	L0605670-01	OHIO RIVER \#1	50/50	10		06/06/06 17:59
87	P2.060606.180559	L0606024-03	EFFLUENT	50/50	1		06/06/06 18:05
88	P2.060606.181217	L0606024-02	OUTFALL 003	50/50	1		06/06/06 18:12
89	P2.060606.181842	WG214725-01	Post Digestion Spike		1	L0606024-02	06/06/06 18:18
90	P2.060606.182514	WG214725-02	Serial Dilution		5	L0606024-02	06/06/06 18:25
91	P2.060606.183140	WG214697-28	CCV		1		06/06/06 18:31
92	P2.060606.183807	WG214697-29	CCB		1		06/06/06 18:38
93	P2.060606.184427	L0605673-01	72 FLUME	5/50	1		06/06/06 18:44
94	P2.060606.185046	L0605673-02	AFC EFFLUENT	5/50	1		06/06/06 18:50
95	P2.060606.185713	L0605673-03	AFC BLEED	5/50	1		06/06/06 18:57
96	P2.060606.190341	L0605682-02	OUTFALL 002/COMP	50/50	1		06/06/06 19:03
97	P2.060606.191000	L0605682-04	OUTFALL 003/COMP	50/50	1		06/06/06 19:10
98	P2.060606.191637	L0605682-06	OUTFALL 800/COMP	50/50	1		06/06/06 19:16
99	P2.060606.192302	L0606014-01	001/COMP.	50/50	1		06/06/06 19:23
100	P2.060606.192925	L0606028-01	NMEFF001/Z06063	50/50	1		06/06/06 19:29
101	P2.060606.193550	L0606029-03	RANNEY WELL/Z06065	50/50	1		06/06/06 19:35
102	P2.060606.194215	L0606029-04	OHIO RIVER/Z06064	50/50	1		06/06/06 19:42
103	P2.060606.194841	WG214697-30	CCV		1		06/06/06 19:48
104	P2.060606.195504	WG214697-31	CCB		1		06/06/06 19:55
105	P2.060606.200126	L0603018-01	MDL-1	50/50	1		06/06/06 20:01
106	P2.060606.200745	L0603018-02	MDL-2	50/50	1		06/06/06 20:07
107	P2.060606.201409	L0603018-03	MDL-3	50/50	1		06/06/06 20:14
108	P2.060606.202033	L0603018-04	MDL-4	50/50	1		06/06/06 20:20
109	P2.060606.202652	L0603018-05	MDL-5	50/50	1		06/06/06 20:26
110	P2.060606.203317	L0603018-06	MDL-6	50/50	1		06/06/06 20:33
111	P2.060606.203940	L0603018-07	MDL-7	50/50	1		06/06/06 20:39

Approved: June 07, 2006

Run Log ID:**10673**

KEMRON Environmental Services

Instrument Run Log

Instrument: PE-ICP2 Dataset: 060606H.CSV
Analyst1: KHR Analyst2: MMB
Method: 6010B SOP: ME600E Rev: 6

Calibration Std: STD12709 ICV/CCV Std: STD12974 Post Spike: STD12434
ICSA: STD12943 ICSAB: STD12913

Workgroups: 214623, 214725, 213611, 214736

Comments:

Seq.	File ID	Sample	ID	Prep	Dil	Reference	Date/Time
112	P2.060606.204605	WG214697-32	CCV		1		06/06/06 20:46
113	P2.060606.205230	WG214697-33	CCB		1		06/06/06 20:52
114	P2.060606.205658	WG214616-02	Method/Prep Blank	50/50	1		06/06/06 20:56
115	P2.060606.210317	WG214616-03	Laboratory Control S	50/50	1		06/06/06 21:03
116	P2.060606.210951	L0606052-01	FINAL		1		06/06/06 21:09
117	P2.060606.211607	WG214616-04	Matrix Spike	50/50	1		06/06/06 21:16
118	P2.060606.212233	WG214616-05	Matrix Spike Duplica	50/50	1		06/06/06 21:22
119	P2.060606.212912	L0606057-01	FINAL	50/50	1		06/06/06 21:29
120	P2.060606.213532	WG214736-01	Post Digestion Spike		1	L0606057-01	06/06/06 21:35
121	P2.060606.214158	WG214736-02	Serial Dilution		5	L0606057-01	06/06/06 21:41
122	P2.060606.214833	WG214697-34	CCV		1		06/06/06 21:48
123	P2.060606.215459	WG214697-35	CCB		1		06/06/06 21:54

Approved: June 07, 2006

Run Log ID:**10688**

KEMRON Environmental Services

Instrument Run Log

Instrument: PE-ICP2 Dataset: 060706H.CSV
Analyst1: KHR Analyst2: N/A
Method: 6010B SOP: ME600E Rev: 6

Calibration Std: STD12709 ICV/CCV Std: STD12974 Post Spike: STD12434
ICSA: STD12943 ICSAB: STD12913

Workgroups: 214623, 214725, 214736, 214792, 214793

Comments:

Seq.	File ID	Sample	ID	Prep	Dil	Reference	Date/Time
1	P2.060706.085422	WG214791-01	Calibration Point		1		06/07/06 08:54
2	P2.060706.090044	WG214791-02	Calibration Point		1		06/07/06 09:00
3	P2.060706.090656	WG214791-03	Calibration Point		1		06/07/06 09:06
4	P2.060706.091315	WG214791-04	Calibration Point		1		06/07/06 09:13
5	P2.060706.091939	WG214791-05	Calibration Point		1		06/07/06 09:19
6	P2.060706.092609	WG214791-06	Initial Calibration Verification		1		06/07/06 09:26
7	P2.060706.093231	WG214791-07	Initial Calib Blank		1		06/07/06 09:32
8	P2.060706.093851	WG214791-08	Interference Check		1		06/07/06 09:38
9	P2.060706.094519	WG214791-09	Interference Check		1		06/07/06 09:45
10	P2.060706.095050	WG214791-10	CCV		1		06/07/06 09:50
11	P2.060706.095720	WG214791-11	CCB		1		06/07/06 09:57
12	P2.060706.100346	L0605622-02	W-24		20		06/07/06 10:03
13	P2.060706.101009	L0605622-04	W-35WB	50/50	20		06/07/06 10:10
14	P2.060706.101631	L0605622-05	W-10R	50/50	20		06/07/06 10:16
15	P2.060706.102247	L0605629-03	MW-3	50/50	20		06/07/06 10:22
16	P2.060706.102913	L0605629-05	MW-4	50/50	20		06/07/06 10:29
17	P2.060706.103537	L0605659-03	W-32WT	50/50	20		06/07/06 10:35
18	P2.060706.104153	L0605659-04	W-32WB	50/50	20		06/07/06 10:41
19	P2.060706.104826	L0605659-06	W-32B	50/50	20		06/07/06 10:48
20	P2.060706.105452	L0605659-08	W-46WB		20		06/07/06 10:54
21	P2.060706.110109	WG214791-12	CCV		1		06/07/06 11:01
22	P2.060706.110745	WG214791-13	CCB		1		06/07/06 11:07
23	P2.060706.111326	L0605622-02	W-24	50/50	50		06/07/06 11:13
24	P2.060706.111944	L0605659-08	W-46WB	50/50	50		06/07/06 11:19
25	P2.060706.112610	L0606024-01	OUTFALL 001		5		06/07/06 11:26
26	P2.060706.113235	WG214506-04	Matrix Spike	50/50	5		06/07/06 11:32
27	P2.060706.113852	WG214506-05	Matrix Spike Duplica	50/50	5		06/07/06 11:38
28	P2.060706.114516	L0606024-02	OUTFALL 003		5		06/07/06 11:45
29	P2.060706.115239	WG214725-01	Post Digestion Spike		5	L0606024-02	06/07/06 11:52
30	P2.060706.115859	L0606024-03	EFFLUENT	50/50	5		06/07/06 11:58
31	P2.060706.120523	WG214791-14	CCV		1		06/07/06 12:05
32	P2.060706.121145	WG214791-15	CCB		1		06/07/06 12:11
33	P2.060706.121804	L0606002-01	EFF53106	50/50	1		06/07/06 12:18
34	P2.060706.122434	L0606032-02	AV-GW-ON-MW12-053006	50/50	1		06/07/06 12:24
35	P2.060706.123056	L0606032-04	AV-GW-ON-129-053106	50/50	1		06/07/06 12:30
36	P2.060706.123717	L0606032-06	AV-GW-ON-029-053106	50/50	1		06/07/06 12:37
37	P2.060706.124345	L0606045-02	AV-GW-ON-012-0531106	50/50	1		06/07/06 12:43

Approved: June 08, 2006

007364

Run Log ID:**10688**

KEMRON Environmental Services

Instrument Run Log

Instrument: PE-ICP2 Dataset: 060706H.CSV

Analyst1: KHR Analyst2: N/A

Method: 6010B SOP: ME600E Rev: 6

Calibration Std: STD12709 ICV/CCV Std: STD12974 Post Spike: STD12434

ICSA: STD12943 ICSAB: STD12913

Workgroups: 214623, 214725, 214736, 214792, 214793

Comments:

Seq.	File ID	Sample	ID	Prep	Dil	Reference	Date/Time
38	P2.060706.125013	L0606045-04	AV-GW-ON-112-053106	50/50	1		06/07/06 12:50
39	P2.060706.125636	L0606045-06	AV-GW-ON-108-060106	50/50	1		06/07/06 12:56
40	P2.060706.130302	L0606045-08	AV-GW-ON-118-060106	50/50	1		06/07/06 13:03
41	P2.060706.130935	WG214791-16	CCV		1		06/07/06 13:09
42	P2.060706.131559	WG214791-17	CCB		1		06/07/06 13:15
43	P2.060706.132220	L0606049-01	IWGW01053106	50/50	1		06/07/06 13:22
44	P2.060706.132852	L0606054-01	19-R2	50/50	1		06/07/06 13:28
45	P2.060706.133515	L0606054-02	20-R2	50/50	1		06/07/06 13:35
46	P2.060706.134144	L0606054-03	23-R2	50/50	1		06/07/06 13:41
47	P2.060706.134716	L0606054-04	24-R2	50/50	1		06/07/06 13:47
48	P2.060706.140035	L0606024-02	OUTFALL 003		10		06/07/06 14:00
49	P2.060706.140939	L0606024-02	OUTFALL 003	50/50	20		06/07/06 14:09
50	P2.060706.141604	WG214736-01	Post Digestion Spike		20	L0606057-01	06/07/06 14:16
51	P2.060706.142231	L0606032-02	AV-GW-ON-MW12-053006	50/50	50		06/07/06 14:22
52	P2.060706.142855	WG214791-18	CCV		1		06/07/06 14:28
53	P2.060706.143527	WG214791-19	CCB		1		06/07/06 14:35
54	P2.060706.145523	WG214615-02	Method/Prep Blank	50/50	1		06/07/06 14:55
55	P2.060706.150147	WG214615-03	Laboratory Control S	50/50	1		06/07/06 15:01
56	P2.060706.150839	L0606042-01	OUTFALL 001		1		06/07/06 15:08
57	P2.060706.151500	WG214615-04	Matrix Spike	50/50	1		06/07/06 15:15
58	P2.060706.152125	WG214615-05	Matrix Spike Duplica	50/50	1		06/07/06 15:21
59	P2.060706.152818	L0606070-02	OUTFALL 001/COMP.	50/50	1		06/07/06 15:28
60	P2.060706.153449	L0606064-02	GN060064	50/50	1		06/07/06 15:34
61	P2.060706.154123	WG214793-01	Post Digestion Spike		1	L0606064-02	06/07/06 15:41
62	P2.060706.154801	WG214793-02	Serial Dilution		5	L0606064-02	06/07/06 15:48
63	P2.060706.155427	WG214791-20	CCV		1		06/07/06 15:54
64	P2.060706.160050	WG214791-21	CCB		1		06/07/06 16:00
65	P2.060706.160709	WG214617-02	Method/Prep Blank	50/50	1		06/07/06 16:07
66	P2.060706.161333	WG214617-03	Laboratory Control S	50/50	1		06/07/06 16:13
67	P2.060706.162004	L0605642-04	1011MW01	50/50	1		06/07/06 16:20
68	P2.060706.162719	WG214617-01	Reference Sample		1	L0606053-04	06/07/06 16:27
69	P2.060706.163344	WG214617-06	Duplicate	50/50	1	L0606053-05	06/07/06 16:33
70	P2.060706.164010	WG214617-04	Matrix Spike	50/50	1	L0606053-06	06/07/06 16:40
71	P2.060706.164636	WG214617-05	Matrix Spike Duplica	50/50	1	L0606053-07	06/07/06 16:46
72	P2.060706.165303	WG214792-01	Post Digestion Spike		1	L0606053-04	06/07/06 16:53
73	P2.060706.165929	WG214792-02	Serial Dilution		5	L0606053-04	06/07/06 16:59
74	P2.060706.170554	WG214791-22	CCV		1		06/07/06 17:05

Approved: June 08, 2006

Run Log ID:**10688**

KEMRON Environmental Services

Instrument Run Log

Instrument: PE-ICP2 Dataset: 060706H.CSV

Analyst1: KHR Analyst2: N/A

Method: 6010B SOP: ME600E Rev: 6

Calibration Std: STD12709 ICV/CCV Std: STD12974 Post Spike: STD12434

ICSA: STD12943 ICSAB: STD12913

Workgroups: 214623, 214725, 214736, 214792, 214793

Comments:

Seq.	File ID	Sample	ID	Prep	Dil	Reference	Date/Time
75	P2.060706.171222	WG214791-23	CCB		1		06/07/06 17:12

Approved: June 08, 2006

007366

KEMRON Environmental Services
HOLDING TIMES
EQUIVALENT TO AFCEE FORM 9

Analytical Method: 6010B **AAB#:** WG214736
Login Number: L0606049

Client ID	Date Collected	Date Received	Date Extracted	Max Hold Time Ext.	Time Held Ext.	Date Analyzed	Max Hold Time Anal	Time Held Anal.	Q
IWGW01053106	05/31/06	06/02/06	06/05/06	180	4.64	06/07/06	180	2.25	

* EXT = SEE PROJECT QAPP REQUIREMENTS
*ANAL = SEE PROJECT QAPP REQUIREMENTS

KEMRON FORMS - Modified 02/14/2006
Version 1.5 PDF File ID: 491761
Report generated 06/07/2006 15:36

KEMRON Environmental Services

METHOD BLANK SUMMARY

Login Number:	L0606049	Work Group:	WG214736
Blank File ID:	P2.060606.205658	Blank Sample ID:	WG214616-02
Date Analyzed:	06/06/06	Instrument ID:	PE-ICP2
Time Analyzed:	20:56	Method:	6010B
Analyst:	KHR		

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG214616-03	P2.060606.210317	06/06/06 21:03	01
IWGW01053106	L0606049-01	P2.060706.132220	06/07/06 13:22	01

KEMRON FORMS - Modified 03/06/2006
Version 1.5 PDF File ID: 491762
Report generated 06/07/2006 15:37

KEMRON Environmental Services

METHOD BLANK REPORT

Login Number:	L0606049	Run Date:	06/06/2006	Sample ID:	WG214616-02
Instrument ID:	PE-ICP2	Run Time:	20:56	Prep Method:	3005A
File ID:	P2.060606.205658	Analyst:	KHR	Method:	6010B
Workgroup (AAB#):	WG214736	Matrix:	Water	Units:	mg/L
Contract #:		Cal ID:	PE-ICP-06-JUN-06		

Analytes	SQL	PQL	Concentration	Dilution	Qualifier
Silver	0.00500	0.0100	0.00500	1	U
Arsenic	0.00200	0.0100	0.00200	1	U
Barium	0.00250	0.0100	0.00250	1	U
Cadmium	0.00250	0.0100	0.00250	1	U
Chromium	0.00250	0.0200	0.00250	1	U
Lead	0.00250	0.00500	0.00250	1	U

MDL Method Detection Limit
RL Reporting/quantitation Limit

* Analyte concentration > RL

KEMRON FORMS - Modified 05/01/2006
Version 1.5 PDF File ID: 491763
Report generated 06/07/2006 15:37

KEMRON Environmental Services

LABORATORY CONTROL SAMPLE (LCS)

Login Number: L0606049	Run Date: 06/06/2006	Sample ID: WG214616-03
Instrument ID: PE-ICP2	Run Time: 21:03	Prep Method: 3005A
File ID: P2.060606.210317	Analyst: KHR	Method: 6010B
Workgroup (AAB#): WG214736	Matrix: Water	Units: mg/L
Contract #:	Cal ID: PE-ICP-06-JUN-06	

Analytes	Expected	Found	% Rec	LCS Limits	Q
Silver	0.200	0.209	104	85 - 115	
Arsenic	0.200	0.205	102	85 - 115	
Barium	0.500	0.527	105	85 - 115	
Cadmium	0.0250	0.0251	101	85 - 115	
Chromium	0.250	0.260	104	85 - 115	
Lead	0.250	0.261	105	85 - 115	

KEMRON FORMS - Modified 05/01/2006
Version 1.5 PDF File ID: 491764
Report generated 06/07/2006 15:38

KEMRON Environmental Services

MATRIX SPIKE AND MATRIX SPIKE DUP (MS/MSD)

Loginnum:L0606049 Cal ID: PE-ICP2- Worknum:WG214736
Instrument ID:PE-ICP2 Contract #: Method:6010B
Parent ID:WG214616-01 File ID:P2.060606.210951 Dil:1 Matrix:WATER
Sample ID:WG214616-04 MS File ID:P2.060606.211607 Dil:1 Units:mg/L
Sample ID:WG214616-05 MSD File ID:P2.060606.212233 Dil:1

Analyte	Parent	MS Spiked	MS Found	MS %Rec	MSD Spiked	MSD Found	MSD %Rec	%RPD	%Rec Limits	RPD Limit	Q
Arsenic, Total	0.0156	0.200	0.209	96.7	0.200	0.207	95.7	0.962	75 - 125	20	
Barium, Total	0.112	0.500	0.630	104	0.500	0.634	104	0.492	75 - 125	20	
Cadmium, Total	ND	0.0250	0.0246	98.5	0.0250	0.0243	97.1	1.48	75 - 125	20	
Chromium, Total	ND	0.250	0.253	101	0.250	0.253	101	0.227	75 - 125	20	
Lead, Total	0.00304	0.250	0.258	102	0.250	0.252	99.5	2.37	75 - 125	20	
Silver, Total	ND	0.200	0.204	102	0.200	0.205	102	0.310	75 - 125	20	

* FAILS %REC LIMIT

FAILS RPD LIMIT

NOTE: This is an internal quality control sample.

KEMRON FORMS - Modified 03/16/2006
Version 1.5 PDF File ID: 491765
Report generated 06/07/2006 15:38

KEMRON ENVIRONMENTAL SERVICES
SERIAL DILUTION REPORT

Sample Login ID: L0606049 Worknum: WG214736
Instrument ID: PE-ICP2 Method: 6010B
Sample ID: L0606057-01 File ID: P2.060606.212912 Dil: 1 Units: mg/L
Serial Dilution ID: WG214736-02 File ID: P2.060606.214158 Dil: 5

Analyte	Sample	C	Serial Dilution	C	% Difference	Q
Arsenic	0.0176	X	0.0272	F	54.5	
Barium	0.124	X	0.110	X	11.3	
Cadmium	ND	U	ND	U		
Chromium	ND	U	ND	U		
Lead	0.00820	X	ND	U	100	
Silver	ND	U	ND	U		

U = Result is below MDL
F = Result is between MDL and RL
X = Result is greater than RL and less than 50 times the MDL
E = %D exceeds control limit of 10% and initial
sample result is greater than or equal to 50 times the MDL

KEMRON FORMS - Modified 02/14/2006
Version 1.3 PDF File ID: 491759
Report generated 06/07/2006 15:37

KEMRON ENVIRONMENTAL SERVICES
POST SPIKE REPORT

Sample Login ID: L0606049 **Worknum:** WG214736
Instrument ID: PE-ICP2 **Method:** 6010B
Post Spike ID: WG214736-01 **File ID:** P2.060606.213532 **Dil:** 1 **Units:** mg/L
Sample ID: L0606057-01 **File ID:** P2.060606.212912 **Dil:** 1 **Matrix:** Water

Analyte	Control Limit %R	Post Spike Result	C	Sample Result	C	Spike Added(SA)	% R	Q
ARSENIC	75 - 125	0.209		0.0176		0.200	96.6	
BARIUM	75 - 125	0.607		0.124		0.500	99.1	
CADMIUM	75 - 125	0.0237		ND	U	0.0250	94.8	
CHROMIUM	75 - 125	0.244		ND	U	0.250	97.6	
LEAD	75 - 125	0.253		0.00820		0.250	98.2	
SILVER	75 - 125	0.198		ND	U	0.200	99.0	

N = % Recovery exceeds control limits of 75% - 125%
F = Result is between MDL and RL
U = Sample result is below MDL. A value of zero is used in the calculation.

KEMRON FORMS - Modified 02/14/2006
Version 2.0 PDF File ID: 491760
Report generated 06/07/2006 15:37

KEMRON Environmental Services

INITIAL CALIBRATION SUMMARY

Login Number: L0606049 **Workgroup (AAB#):** WG214736
Analytical Method: 6010B **Instrument ID:** PE-ICP2
ICAL Worknum: WG214697 **Initial Calibration Date:** 06-JUN-2006 09:08

Analyte	WG214697-01		WG214697-02		WG214697-03		WG214697-04		WG214697-05		R	Q
	STD	INT	STD	INT	STD	INT	STD	INT	STD	INT		
Arsenic	NA	-12.2 NA 31415	NA	NA	NA 8	4.62 NA 6196	NA 1	249.0 NA 32919	NA 2	495.3 NA 92798	0.999991	
Barium	NA	-89.5 NA 09226	NA 1	729.0 NA 88212	NA 2	1474 NA 73489	NA 1	7135 NA 86274	NA 2	1397 NA 4.48	0.999947	
Cadmium	NA	51.9 NA 18255	NA 05	15.9 NA 94696	NA 1	38.4 NA 2218	NA 5	1626 NA 14296	NA 1	3207 NA 87828	0.999976	
Chromium	NA	47.4 NA 35535	NA 5	208.3 NA 41018	NA 1	422.0 NA 01927	NA 5	2005 NA 30178	NA 1	3954 NA 02667	0.999977	
Lead	NA	7.87 NA 88142	NA	10.9 NA 86849	NA 1	24.6 NA 32189	NA 5	1174 NA 07986	NA 1	2308 NA 37236	0.999962	
Silver	NA	-277 NA 70293	NA 4	522.9 NA 44652	NA 8	1083 NA 26891	NA 1	4516 NA 1475	NA 2	8900 NA 09892	0.999976	

INT = Instrument intensity
R = Coefficient of correlation
Q = Data Qualifier
*** = Out of Compliance; R < 0.995**

KEMRON FORMS - Modified 03/03/2006
Version 1.5 PDF File ID: 491768
Report generated 06/07/2006 15:37

KEMRON Environmental Services

INITIAL CALIBRATION SUMMARY

Login Number: L0606049 **Workgroup (AAB#):** WG214736
Analytical Method: 6010B **Instrument ID:** PE-ICP2
ICAL Worknum: WG214791 **Initial Calibration Date:** 07-JUN-2006 09:19

Analyte	WG214791-01		WG214791-02		WG214791-03		WG214791-04		WG214791-05		R	Q
	STD	INT	STD	INT	STD	INT	STD	INT	STD	INT		
Arsenic	NA	-11.3 NA 97923	NA	NA	.0 NA 8	4.30 NA 13071	NA	248.2 NA 02834	NA	496.5 NA 63482	0.999999	
Barium	NA	-91.4 NA 52480	NA	726.1 NA 93693	NA	1474 NA 80392	NA	7088 NA 49409	NA	14115 NA 2905	0.999998	
Cadmium	NA	49.14 NA 04616	.0 NA 05	15.94 NA 13642	.0 NA 1	33.65 NA 43485	NA	1600 NA 16812	NA	3144 NA 38173	0.999963	
Chromium	NA	44.53 NA 21379	.0 NA 5	209.0 NA 04035	NA	415.8 NA 27326	NA	1992 NA 46889	NA	39649 NA 51214	0.999997	
Lead	NA	6.534 NA 93651	NA	11.60 NA 56799	NA	26.80 NA 25815	NA	1172 NA 68775	NA	2294 NA 62894	0.999945	
Silver	NA	-291 NA 39391	.0 NA 4	509.4 NA 49877	.0 NA 8	987.4 NA 87822	NA	4499 NA 02413	NA	89829 NA 14626	0.999999	

INT = Instrument intensity
R = Coefficient of correlation
Q = Data Qualifier
*** = Out of Compliance; R < 0.995**

KEMRON FORMS - Modified 03/03/2006
Version 1.5 PDF File ID: 491768
Report generated 06/07/2006 15:37

KEMRON Environmental Services

INITIAL CALIBRATION BLANK (ICB)

Login Number: L0606049 Run Date: 06/06/2006 Sample ID: WG214697-07
Instrument ID: PE-ICP2 Run Time: 09:21 Method: 6010B
File ID: P2.060606.092100 Analyst: KHR Units: mg/L
Workgroup (AAB#): WG214736 Cal ID: PE-ICP - 06-JUN-06

Analytes	MDL	RDL	Concentration	Dilution	Qualifier
Silver	0.00500	0.0100	.000217	1	U
Arsenic	0.00200	0.0100	.00291	1	F
Barium	0.00250	0.0100	-.00314	1	F
Cadmium	0.00250	0.0100	-.000209	1	U
Chromium	0.00250	0.0200	-.00115	1	U
Lead	0.00250	0.00500	-.00161	1	U

U = Result is less than MDL
F = Result is between MDL and RL

KEMRON FORMS - Modified 03/06/2006
Version 1.5 PDF File ID: 491770
Report generated 06/07/2006 15:37

KEMRON Environmental Services

INITIAL CALIBRATION BLANK (ICB)

Login Number: L0606049 Run Date: 06/07/2006 Sample ID: WG214791-07
Instrument ID: PE-ICP2 Run Time: 09:32 Method: 6010B
File ID: P2.060706.093231 Analyst: KHR Units: mg/L
Workgroup (AAB#): WG214736 Cal ID: PE-ICP - 07-JUN-06

Analytes	MDL	RDL	Concentration	Dilution	Qualifier
Silver	0.00500	0.0100	-.000289	1	U
Arsenic	0.00200	0.0100	.00306	1	F
Barium	0.00250	0.0100	-.000926	1	U
Cadmium	0.00250	0.0100	-.000168	1	U
Chromium	0.00250	0.0200	-.000656	1	U
Lead	0.00250	0.00500	-.00161	1	U

U = Result is less than MDL
F = Result is between MDL and RL

KEMRON FORMS - Modified 03/06/2006
Version 1.5 PDF File ID: 491770
Report generated 06/07/2006 15:37

KEMRON Environmental Services

CONTINUING CALIBRATION BLANK (CCB)

Login Number: L0606049 Run Date: 06/06/2006 Sample ID: WG214697-11
Instrument ID: PE-ICP2 Run Time: 09:47 Method: 6010B
File ID: P2.060606.094707 Analyst: KHR Units: mg/L
Workgroup (AAB#): WG214736 Cal ID: PE-ICP - 06-JUN-06

Analytes	MDL	RDL	Concentration	Dilution	Qualifier
Silver	0.00500	0.0100	-0.00118	1	U
Arsenic	0.00200	0.0100	0.00142	1	U
Barium	0.00250	0.0100	0.000769	1	U
Cadmium	0.00250	0.0100	-0.000244	1	U
Chromium	0.00250	0.0200	-0.00127	1	U
Lead	0.00250	0.00500	-0.000953	1	U

U = Result is less than MDL
F = Result is between MDL and RL

KEMRON FORMS - Modified 04/19/2006
Version 1.5 PDF File ID: 491773
Report generated 06/07/2006 15:37

KEMRON Environmental Services

CONTINUING CALIBRATION BLANK (CCB)

Login Number:L0606049 Run Date:06/06/2006 Sample ID:WG214697-33
Instrument ID:PE-ICP2 Run Time:20:52 Method:6010B
File ID:P2.060606.205230 Analyst:KHR Units:mg/L
Workgroup (AAB#):WG214736 Cal ID:PE-ICP - 06-JUN-06

Analytes	MDL	RDL	Concentration	Dilution	Qualifier
Silver	0.00500	0.0100	-0.00184	1	U
Arsenic	0.00200	0.0100	0.000744	1	U
Barium	0.00250	0.0100	-0.00303	1	F
Cadmium	0.00250	0.0100	-0.000381	1	U
Chromium	0.00250	0.0200	-0.00124	1	U
Lead	0.00250	0.00500	-0.00151	1	U

U = Result is less than MDL
F = Result is between MDL and RL

KEMRON FORMS - Modified 04/19/2006
Version 1.5 PDF File ID: 491773
Report generated 06/07/2006 15:37

KEMRON Environmental Services

CONTINUING CALIBRATION BLANK (CCB)

Login Number:L0606049 Run Date:06/06/2006 Sample ID:WG214697-35
Instrument ID:PE-ICP2 Run Time:21:54 Method:6010B
File ID:P2.060606.215459 Analyst:KHR Units:mg/L
Workgroup (AAB#):WG214736 Cal ID:PE-ICP - 06-JUN-06

Analytes	MDL	RDL	Concentration	Dilution	Qualifier
Silver	0.00500	0.0100	-0.00148	1	U
Arsenic	0.00200	0.0100	0.00164	1	U
Barium	0.00250	0.0100	-0.00303	1	F
Cadmium	0.00250	0.0100	-0.000371	1	U
Chromium	0.00250	0.0200	-0.00121	1	U
Lead	0.00250	0.00500	-0.00250	1	F

U = Result is less than MDL
F = Result is between MDL and RL

KEMRON FORMS - Modified 04/19/2006
Version 1.5 PDF File ID: 491773
Report generated 06/07/2006 15:37

KEMRON Environmental Services

CONTINUING CALIBRATION BLANK (CCB)

Login Number: L0606049 Run Date: 06/07/2006 Sample ID: WG214791-11
Instrument ID: PE-ICP2 Run Time: 09:57 Method: 6010B
File ID: P2.060706.095720 Analyst: KHR Units: mg/L
Workgroup (AAB#): WG214736 Cal ID: PE-ICP - 07-JUN-06

Analytes	MDL	RDL	Concentration	Dilution	Qualifier
Silver	0.00500	0.0100	0.00100	1	U
Arsenic	0.00200	0.0100	-0.000156	1	U
Barium	0.00250	0.0100	-0.000945	1	U
Cadmium	0.00250	0.0100	-0.000356	1	U
Chromium	0.00250	0.0200	-0.000419	1	U
Lead	0.00250	0.00500	-0.000437	1	U

U = Result is less than MDL
F = Result is between MDL and RL

KEMRON FORMS - Modified 04/19/2006
Version 1.5 PDF File ID: 491773
Report generated 06/07/2006 15:37

KEMRON Environmental Services

CONTINUING CALIBRATION BLANK (CCB)

Login Number:L0606049 Run Date:06/07/2006 Sample ID:WG214791-17
Instrument ID:PE-ICP2 Run Time:13:15 Method:6010B
File ID:P2.060706.131559 Analyst:KHR Units:mg/L
Workgroup (AAB#):WG214736 Cal ID:PE-ICP - 07-JUN-06

Analytes	MDL	RDL	Concentration	Dilution	Qualifier
Silver	0.00500	0.0100	0.000898	1	U
Arsenic	0.00200	0.0100	0.00213	1	F
Barium	0.00250	0.0100	-0.000897	1	U
Cadmium	0.00250	0.0100	-0.000297	1	U
Chromium	0.00250	0.0200	-0.000398	1	U
Lead	0.00250	0.00500	-0.000731	1	U

U = Result is less than MDL
F = Result is between MDL and RL

KEMRON FORMS - Modified 04/19/2006
Version 1.5 PDF File ID: 491773
Report generated 06/07/2006 15:37

KEMRON Environmental Services

CONTINUING CALIBRATION BLANK (CCB)

Login Number:L0606049 Run Date:06/07/2006 Sample ID:WG214791-19
Instrument ID:PE-ICP2 Run Time:14:35 Method:6010B
File ID:P2.060706.143527 Analyst:KHR Units:mg/L
Workgroup (AAB#):WG214736 Cal ID:PE-ICP - 07-JUN-06

Analytes	MDL	RDL	Concentration	Dilution	Qualifier
Silver	0.00500	0.0100	0.000503	1	U
Arsenic	0.00200	0.0100	0.0000291	1	U
Barium	0.00250	0.0100	-0.000890	1	U
Cadmium	0.00250	0.0100	-0.000125	1	U
Chromium	0.00250	0.0200	-0.000486	1	U
Lead	0.00250	0.00500	-0.00118	1	U

U = Result is less than MDL
F = Result is between MDL and RL

KEMRON FORMS - Modified 04/19/2006
Version 1.5 PDF File ID: 491773
Report generated 06/07/2006 15:37

KEMRON Environmental Services

INITIAL CALIBRATION VERIFICATION (ICV)

Login Number: L0606049 Run Date: 06/06/2006 Sample ID: WG214697-06
Instrument ID: PE-ICP2 Run Time: 09:14 Method: 6010B
File ID: P2.060606.091436 Analyst: KHR Units: mg/L
Workgroup (AAB#): WG214736 Cal ID: PE-ICP - 06-JUN-06

Analyte		Expected	Found	%REC	LIMITS	Q
Silver		.4	0.412	103	90 - 110	
Arsenic		.4	0.409	102	90 - 110	
Barium		1	1.03	103	90 - 110	
Cadmium		.05	0.0512	102	90 - 110	
Chromium		.5	0.509	102	90 - 110	
Lead		.5	0.524	105	90 - 110	

* Exceeds LIMITS Limit

KEMRON FORMS - Modified 03/03/2006
Version 1.3 PDF File ID: 491769
Report generated 06/07/2006 15:37

KEMRON Environmental Services

INITIAL CALIBRATION VERIFICATION (ICV)

Login Number: L0606049 Run Date: 06/07/2006 Sample ID: WG214791-06
Instrument ID: PE-ICP2 Run Time: 09:26 Method: 6010B
File ID: P2.060706.092609 Analyst: KHR Units: mg/L
Workgroup (AAB#): WG214736 Cal ID: PE-ICP - 07-JUN-06

Analyte		Expected	Found	%REC	LIMITS	Q
Silver		.4	0.403	101	90 - 110	
Arsenic		.4	0.402	100	90 - 110	
Barium		1	1.02	102	90 - 110	
Cadmium		.05	0.0503	101	90 - 110	
Chromium		.5	0.506	101	90 - 110	
Lead		.5	0.521	104	90 - 110	

* Exceeds LIMITS Limit

KEMRON FORMS - Modified 03/03/2006
Version 1.3 PDF File ID: 491769
Report generated 06/07/2006 15:37

KEMRON Environmental Services

CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L0606049 Run Date: 06/06/2006 Sample ID: WG214697-10
Instrument ID: PE-ICP2 Run Time: 09:40 Method: 6010B
File ID: P2.060606.094038 Analyst: KHR
Workgroup (AAB#): WG214736 Cal ID: PE-ICP - 06-JUN-06

Analyte		Expected	Found	%REC	LIMITS	UNITS	Q
Silver		.4	0.416	104	90 - 110	mg/L	
Arsenic		.4	0.397	99.3	90 - 110	mg/L	
Barium		1	1.05	105	90 - 110	mg/L	
Cadmium		.05	0.0499	99.7	90 - 110	mg/L	
Chromium		.5	0.525	105	90 - 110	mg/L	
Lead		.5	0.524	105	90 - 110	mg/L	

* Exceeds LIMITS Criteria

KEMRON FORMS - Modified 04/19/2006
Version 1.3 PDF File ID: 491772
Report generated 06/07/2006 15:37

KEMRON Environmental Services

CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L0606049 Run Date: 06/06/2006 Sample ID: WG214697-32
Instrument ID: PE-ICP2 Run Time: 20:46 Method: 6010B
File ID: P2.060606.204605 Analyst: KHR
Workgroup (AAB#): WG214736 Cal ID: PE-ICP - 06-JUN-06

Analyte		Expected	Found	%REC	LIMITS	UNITS	Q
Silver		.4	0.407	102	90 - 110	mg/L	
Arsenic		.4	0.395	98.8	90 - 110	mg/L	
Barium		1	1.03	103	90 - 110	mg/L	
Cadmium		.05	0.0491	98.2	90 - 110	mg/L	
Chromium		.5	0.503	101	90 - 110	mg/L	
Lead		.5	0.513	103	90 - 110	mg/L	

* Exceeds LIMITS Criteria

KEMRON FORMS - Modified 04/19/2006
Version 1.3 PDF File ID: 491772
Report generated 06/07/2006 15:37

KEMRON Environmental Services

CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L0606049 Run Date: 06/06/2006 Sample ID: WG214697-34
Instrument ID: PE-ICP2 Run Time: 21:48 Method: 6010B
File ID: P2.060606.214833 Analyst: KHR
Workgroup (AAB#): WG214736 Cal ID: PE-ICP - 06-JUN-06

Analyte		Expected	Found	%REC	LIMITS	UNITS	Q
Silver		.4	0.404	101	90 - 110	mg/L	
Arsenic		.4	0.396	99.0	90 - 110	mg/L	
Barium		1	1.03	103	90 - 110	mg/L	
Cadmium		.05	0.0492	98.5	90 - 110	mg/L	
Chromium		.5	0.507	101	90 - 110	mg/L	
Lead		.5	0.515	103	90 - 110	mg/L	

* Exceeds LIMITS Criteria

KEMRON FORMS - Modified 04/19/2006
Version 1.3 PDF File ID: 491772
Report generated 06/07/2006 15:37

KEMRON Environmental Services

CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L0606049 Run Date: 06/07/2006 Sample ID: WG214791-10
Instrument ID: PE-ICP2 Run Time: 09:50 Method: 6010B
File ID: P2.060706.095050 Analyst: KHR
Workgroup (AAB#): WG214736 Cal ID: PE-ICP - 07-JUN-06

Analyte		Expected	Found	%REC	LIMITS	UNITS	Q
Silver		.4	0.398	99.5	90 - 110	mg/L	
Arsenic		.4	0.391	97.7	90 - 110	mg/L	
Barium		1	1.01	101	90 - 110	mg/L	
Cadmium		.05	0.0502	100	90 - 110	mg/L	
Chromium		.5	0.500	99.9	90 - 110	mg/L	
Lead		.5	0.518	104	90 - 110	mg/L	

* Exceeds LIMITS Criteria

KEMRON FORMS - Modified 04/19/2006
Version 1.3 PDF File ID: 491772
Report generated 06/07/2006 15:37

KEMRON Environmental Services

CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L0606049 Run Date: 06/07/2006 Sample ID: WG214791-16
Instrument ID: PE-ICP2 Run Time: 13:09 Method: 6010B
File ID: P2.060706.130935 Analyst: KHR
Workgroup (AAB#): WG214736 Cal ID: PE-ICP - 07-JUN-06

Analyte		Expected	Found	%REC	LIMITS	UNITS	Q
Silver		.4	0.408	102	90 - 110	mg/L	
Arsenic		.4	0.399	99.8	90 - 110	mg/L	
Barium		1	1.03	103	90 - 110	mg/L	
Cadmium		.05	0.0509	102	90 - 110	mg/L	
Chromium		.5	0.509	102	90 - 110	mg/L	
Lead		.5	0.522	104	90 - 110	mg/L	

* Exceeds LIMITS Criteria

KEMRON FORMS - Modified 04/19/2006
Version 1.3 PDF File ID: 491772
Report generated 06/07/2006 15:37

KEMRON Environmental Services

CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L0606049 Run Date: 06/07/2006 Sample ID: WG214791-18
Instrument ID: PE-ICP2 Run Time: 14:28 Method: 6010B
File ID: P2.060706.142855 Analyst: KHR
Workgroup (AAB#): WG214736 Cal ID: PE-ICP - 07-JUN-06

Analyte		Expected	Found	%REC	LIMITS	UNITS	Q
Silver		.4	0.397	99.2	90 - 110	mg/L	
Arsenic		.4	0.392	97.9	90 - 110	mg/L	
Barium		1	1.01	101	90 - 110	mg/L	
Cadmium		.05	0.0500	100	90 - 110	mg/L	
Chromium		.5	0.501	100	90 - 110	mg/L	
Lead		.5	0.520	104	90 - 110	mg/L	

* Exceeds LIMITS Criteria

KEMRON FORMS - Modified 04/19/2006
Version 1.3 PDF File ID: 491772
Report generated 06/07/2006 15:37

KEMRON ENVIRONMENTAL SERVICES
INTERFERENCE CHECK SAMPLES

Login number: L0606049 **Workgroup (AAB#):** WG214736
Instrument ID: PE-ICP2 **Method:** 6010B
Sol. A : WG214697-08 **File ID:** P2.060606.092753 **Units:** mg/L
Sol. AB : WG214697-09 **File ID:** P2.060606.093417

	Sol. A			Sol. AB			
ANALYTE	True	Found	%Recovery	True	Found	%Recovery	Q
Arsenic	NS	-0.00391	NS	0.250	0.235	94.0	
Barium	NS	-0.00170	NS	0.250	0.250	100	
Cadmium	NS	-0.000240	NS	0.500	0.457	91.4	
Chromium	NS	0.000110	NS	0.250	0.251	100	
Lead	NS	-0.000450	NS	0.500	0.483	96.6	
Silver	NS	-0.000690	NS	0.500	0.519	104	

NS = Not spiked
*** = Recovery of spiked element is outside acceptance limit of 80% - 120% of true value.**
 # = Result for unspiked element is outside the acceptance limits of (+/-) the project reporting limit (RL).

KEMRON FORMS - Modified 02/22/2006
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KEMRON ENVIRONMENTAL SERVICES
INTERFERENCE CHECK SAMPLES

Login number: L0606049 **Workgroup (AAB#):** WG214736
Instrument ID: PE-ICP2 **Method:** 6010B
Sol. A : WG214791-08 **File ID:** P2.060706.093851 **Units:** mg/L
Sol. AB : WG214791-09 **File ID:** P2.060706.094519

	Sol. A			Sol. AB			
ANALYTE	True	Found	%Recovery	True	Found	%Recovery	Q
Arsenic	NS	-0.00438	NS	0.250	0.243	97.2	
Barium	NS	0.000630	NS	0.250	0.248	99.2	
Cadmium	NS	-0.000150	NS	0.500	0.461	92.2	
Chromium	NS	0.00118	NS	0.250	0.249	99.6	
Lead	NS	0.00100	NS	0.500	0.484	96.8	
Silver	NS	-0.00156	NS	0.500	0.509	102	

NS = Not spiked
*** = Recovery of spiked element is outside acceptance limit of 80% - 120% of true value.**
 # = Result for unspiked element is outside the acceptance limits of (+/-) the project reporting limit (RL).

KEMRON Environmental Services

INTERELEMENT CORRECTION FACTORS (ANNUALLY)

Login Number: L0606049 **Date:** 04/29/2005
Insturment ID: PE-ICP2 **Method:** 6010B

Analyte	Wave Length	AG	AL	AS	B	BA
ALUMINUM	396.15	0	0	0	0	0
ANTIMONY	206.84	0	0.0346	0	0	0
ARSENIC	188.98	0	0	0	0	0
BARIUM	233.53	0	0	0	0	0
BERYLLIUM	313.11	0	-0.00123	0	0	0
BORON	249.68	0	0.123	0	0	0
CADMIUM	228.80	0	0	8.00	0	4.00
CALCIUM	317.93	0	0	6.00	0	0
CHROMIUM	267.72	0	0	0	0	0
COBALT	228.62	0	0	0	0	0
COPPER	327.39	0.687	0	0	0	0
GALLIUM	417.21	0	0	0	0	0
IRON	239.56	0	0	0	0	0
LEAD	220.35	0	-0.136	0	0	0
MAGNESIUM	279.08	0	0	0	0	0
MANGANESE	257.61	0	0	0	0	0
MOLYBDENUM	202.03	0	0	0	0	0
NICKEL	231.60	0	0	0	0	0
POTASSIUM	766.49	0	0	0	0	0
SELENIUM	196.03	0.863	0	0.170	0	0.536
SILICON	251.61	0	0	0	0	0
SILVER	328.07	0	0	0	0	0
SODIUM	589.59	0	0	0	0	0
STRONTIUM	407.77	0	0	0	0	0
THALLIUM	190.80	0	-0.0203	0	0	0
TIN	189.93	0	0	0	0	5.80
TITANIUM	334.94	0	0	0	0	0
VANADIUM	290.88	0	0	0	0	0
YTTRIUM	371.03	0	0	0	0	0
ZINC	206.20	0	0	0.161	0	0

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KEMRON Environmental Services

INTERELEMENT CORRECTION FACTORS (ANNUALLY)

Login Number: L0606049 **Date:** 04/29/2005
Insturment ID: PE-ICP2 **Method:** 6010B

Analyte	Wave Length	BE	CA	CD	CO	CR
ALUMINUM	396.15	0	-0.184	0	0	0
ANTIMONY	206.84	0	0	1.19	0	15.0
ARSENIC	188.98	0	0.100	0	0	-9.80
BARIUM	233.53	0	0	0	0	0
BERYLLIUM	313.11	0	0	0	0	0
BORON	249.68	-2.00	0.0498	0	4.62	0
CADMIUM	228.80	0	0	0	-6.10	0
CALCIUM	317.93	5.00	0	0	200	0
CHROMIUM	267.72	0	0	0	0	0
COBALT	228.62	0	0	0	0	0
COPPER	327.39	0	-0.0134	0	0.335	0
GALLIUM	417.21	0	0	0	0	0
IRON	239.56	0	0	0	2.03	0
LEAD	220.35	0	-0.00533	0	0	-0.103
MAGNESIUM	279.08	0	0	0	0	0
MANGANESE	257.61	0	0	0	0	0
MOLYBDENUM	202.03	0	0	0	0	0
NICKEL	231.60	0	0	0	1.08	0
POTASSIUM	766.49	0	0	0	0	0
SELENIUM	196.03	0	-0.150	0.704	-0.254	0
SILICON	251.61	0	0	0	0	0
SILVER	328.07	0	-0.00558	0	0	0
SODIUM	589.59	0	0	0	0	0
STRONTIUM	407.77	0	0	0	0	0
THALLIUM	190.80	0	-0.0138	0	-0.813	0.119
TIN	189.93	0	-0.0407	0	0	0
TITANIUM	334.94	0	-0.00758	0	0	0.231
VANADIUM	290.88	0	0	0	0	-1.54
YTTRIUM	371.03	0	0	0	0	0
ZINC	206.20	0	0	0	0	-4.93

KEMRON Environmental Services

INTERELEMENT CORRECTION FACTORS (ANNUALLY)

Login Number: L0606049 **Date:** 04/29/2005
Insturment ID: PE-ICP2 **Method:** 6010B

Analyte	Wave Length	CU	FE	GA	K	MG
ALUMINUM	396.15	0	0	0	0	0
ANTIMONY	206.84	0	0	0	0	0
ARSENIC	188.98	0	-0.260	0	0	0
BARIUM	233.53	0	0.0139	0	0	0
BERYLLIUM	313.11	0	0	0	0	0
BORON	249.68	0	-3.51	0	0.833	0.106
CADMIUM	228.80	0	0	0	0	0
CALCIUM	317.93	0	0	0	0	0.700
CHROMIUM	267.72	0	0.0244	0	0	0
COBALT	228.62	0	0	0	0	0
COPPER	327.39	0	-0.0158	0	0	0
GALLIUM	417.21	0	0	0	0	0
IRON	239.56	0	0	0	0	0
LEAD	220.35	0.744	0	0	0	0
MAGNESIUM	279.08	0	-0.289	0	0	0
MANGANESE	257.61	0	0	0	0	0.0164
MOLYBDENUM	202.03	0	-0.0391	0	0	0
NICKEL	231.60	0	0.0163	0	0	0
POTASSIUM	766.49	0	0	0	0	1.70
SELENIUM	196.03	0	-0.193	0	0	0
SILICON	251.61	0	0	0	0	0
SILVER	328.07	0	-0.200	0	0	0
SODIUM	589.59	0	4.00	0	0	0.210
STRONTIUM	407.77	0	0	0	0	0
THALLIUM	190.80	0	-0.0470	0	0	0
TIN	189.93	0.589	-0.119	0	0	0
TITANIUM	334.94	0	0	0	0	0.0211
VANADIUM	290.88	0	0.120	0	0	0
YTTRIUM	371.03	0	0	0	0	0
ZINC	206.20	0	0.0100	0	0	0

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KEMRON Environmental Services

INTERELEMENT CORRECTION FACTORS (ANNUALLY)

Login Number: L0606049 **Date:** 04/29/2005
Insturment ID: PE-ICP2 **Method:** 6010B

Analyte	Wave Length	MN	MO	NA	NI	PB
ALUMINUM	396.15	0	45.4	0	0	0
ANTIMONY	206.84	0	-1.54	0	-0.653	0
ARSENIC	188.98	0	2.53	0	0	0
BARIUM	233.53	0	0.171	0	0	0
BERYLLIUM	313.11	0	0	0	0	0
BORON	249.68	1.95	-2.54	0.751	0	1.40
CADMIUM	228.80	0	0	0	-0.0800	0
CALCIUM	317.93	0	-15.0	0	-1000	0
CHROMIUM	267.72	0.231	0.187	0	0	0
COBALT	228.62	0	-0.272	0	0.157	0
COPPER	327.39	0	-0.108	0	0.279	0
GALLIUM	417.21	0	0	0	0	0
IRON	239.56	-1.63	0	0	0	0
LEAD	220.35	0	-2.54	0	0	0
MAGNESIUM	279.08	-4.45	-5.59	0	0	0
MANGANESE	257.61	0	0	0	0	0
MOLYBDENUM	202.03	0	0	0	0	0
NICKEL	231.60	0	0	0	0	0
POTASSIUM	766.49	0	0	0	0	0
SELENIUM	196.03	0.633	0.253	0	0	0
SILICON	251.61	0	12.2	0	0	0
SILVER	328.07	0.201	-0.122	0	0	0
SODIUM	589.59	0	3.16	0	0	0
STRONTIUM	407.77	0	0	0	0	0
THALLIUM	190.80	-1.38	1.73	0	0	0
TIN	189.93	0	0	0	0.316	0
TITANIUM	334.94	0	0	0	0	0
VANADIUM	290.88	0	0.900	0	0	0
YTTRIUM	371.03	0	0	0	0	0
ZINC	206.20	0	0	0	0.169	0

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KEMRON Environmental Services

INTERELEMENT CORRECTION FACTORS (ANNUALLY)

Login Number: L0606049 **Date:** 04/29/2005

Insturment ID: PE-ICP2 **Method:** 6010B

Analyte	Wave Length	SB	SE	SI	SN	SR
ALUMINUM	396.15	0	0	0	0	0
ANTIMONY	206.84	0	0.732	0	-4.23	0
ARSENIC	188.98	0	0	0	0	0
BARIUM	233.53	0	0	0	0	0
BERYLLIUM	313.11	0	0	0	0	0
BORON	249.68	0	0	7.59	0	23.5
CADMIUM	228.80	0	0	0	0	0
CALCIUM	317.93	0	5.00	0	0	0
CHROMIUM	267.72	0	0	0	0	0
COBALT	228.62	1.37	0	0	0	0
COPPER	327.39	0.176	0.116	0	0	0
GALLIUM	417.21	0	0	0	0	0
IRON	239.56	0	0	0	0	0
LEAD	220.35	-0.157	0	0	0	0
MAGNESIUM	279.08	0	0	0	0	0
MANGANESE	257.61	0	0	0	0	0
MOLYBDENUM	202.03	0	0	0	0	0
NICKEL	231.60	-0.285	0	0	0	0
POTASSIUM	766.49	0	0	0	0	0
SELENIUM	196.03	0.159	0	0	0	0
SILICON	251.61	0	0	0	3.24	0
SILVER	328.07	0	0	0	0	0
SODIUM	589.59	0	0	0	0	0
STRONTIUM	407.77	0	0	0	0	0
THALLIUM	190.80	0	0	0	0	0
TIN	189.93	0.300	0.246	0	0	0
TITANIUM	334.94	0	0	0	0	0
VANADIUM	290.88	0	0	0	0	0
YTTRIUM	371.03	0	0	0	0	0
ZINC	206.20	0	0	0	0	0

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KEMRON Environmental Services

INTERELEMENT CORRECTION FACTORS (ANNUALLY)

Login Number: L0606049 **Date:** 04/29/2005

Insturment ID: PE-ICP2 **Method:** 6010B

Analyte	Wave Length	TI	TL	V	ZN
ALUMINUM	396.15	0	0	0	0
ANTIMONY	206.84	-0.330	0.264	-2.66	0
ARSENIC	188.98	0	0	0	0
BARIUM	233.53	0	0	-2.23	0
BERYLLIUM	313.11	-3.58	0	-0.0257	0
BORON	249.68	5.10	0	0	1.45
CADMIUM	228.80	0	0	0.0859	0
CALCIUM	317.93	0	0	16.0	0
CHROMIUM	267.72	0	0	-0.433	0
COBALT	228.62	2.12	0	0	0
COPPER	327.39	-0.770	0.112	-0.223	0
GALLIUM	417.21	0	0	0	0
IRON	239.56	0	0	0	0
LEAD	220.35	0	0	0	0
MAGNESIUM	279.08	0	0	0	0
MANGANESE	257.61	0	0	0	0
MOLYBDENUM	202.03	0.861	0	-0.196	0
NICKEL	231.60	0	0.309	0	0
POTASSIUM	766.49	0	0	0	0
SELENIUM	196.03	0	0.248	0.398	0
SILICON	251.61	7.31	0	0	0
SILVER	328.07	0	0	-3.90	0
SODIUM	589.59	0	0	0	0
STRONTIUM	407.77	0	0	0	0
THALLIUM	190.80	-4.51	0	-0.742	0
TIN	189.93	-5.54	0	0	0
TITANIUM	334.94	0	0	0	0
VANADIUM	290.88	0	0	0	0
YTTRIUM	371.03	0	0	0	0
ZINC	206.20	0	0	0	0

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Report generated 06/07/2006 15:37

KEMRON Environmental Services

LINEAR RANGE (QUARTERLY)

Login Number: L0606049 **Date:** 03/08/2006

Insturment ID: PE-ICP2 **Method:** 6010B

Analyte	Integration Time (Sec.)	Concentration (mg/L)
Aluminum	10.00	500.0
Antimony	10.00	40.0
Arsenic	10.00	10.0
Barium	10.00	10.0
Beryllium	10.00	2.0
Boron	10.00	20.0
Cadmium	10.00	3.0
Calcium	10.00	500.0
Chromium	10.00	50.0
Cobalt	10.00	50.0
Copper	10.00	50.0
Iron	10.00	400.0
Lead	10.00	50.0
Lithium	10.00	2.0
Magnesium	10.00	500.0
Manganese	10.00	30.0
Molybdenum	10.00	50.0
Nickel	10.00	50.0
Potassium	10.00	100.0
Selenium	10.00	50.0
Silicon	10.00	10.0
Silver	10.00	10.0
Sodium	10.00	200.0
Strontium	10.00	3.0
Thallium	10.00	50.0
Tin	10.00	50.0
Titanium	10.00	10.0
Vanadium	10.00	50.0
Zinc	10.00	40.0

Comments:

1.3.2 Metals ICP-MS Data

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KEMRON ENVIRONMENTAL SERVICES
METALS

KEMRON Login No: L0606049

METHOD

Preparation: SW-846 3015

Analysis: SW-846 6020

HOLDING TIMES

Sample Preparation: All holding times were met.

Sample Analysis: All holding times were met.

PREPARATION

Sample preparation proceeded normally.

CALIBRATION

Initial Calibrations: All acceptance criteria were met.

Alternate Source Standards: All acceptance criteria were met.

Continuing Calibration: All acceptance criteria were met.

BATCH QA/QC

Method Blank: All acceptance criteria were met.

Laboratory Control Sample: All acceptance criteria were met.

Serial Dilution/Post Digestion Spike: WG214859(6020) - All acceptance criteria were met.

SAMPLES

WG214859(6020) - Due to high levels of mineral in the digestates, batch QA/QC samples L0606053-04, -06(MS), and -(07)MSD were analyzed at five-fold dilutions for selenium.

I certify that this data package is in compliance with the terms and conditions agreed to by the client and KEMRON Environmental Services, both technically and for completeness, except for the conditions noted above. Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or designated person, as verified by the following signature.

Analyst: JYH

Approved: 14-JUN-06
Maren Berry

LABORATORY REPORT

L0606049

06/20/06 08:38

Submitted By

KEMRON Environmental Services
156 Starlite Drive
Marietta , OH 45750
(740) 373 - 4071

For

Account Name: CH2MHILL, Inc
7600 Tidwell Road
Suite 400
San Antonio, TX 77040
Attention: John Ynfante

Account Number: 2736
Work ID: STATE MARINE RI

P.O. Number: 915193

Sample Analysis Summary

Client ID	Lab ID	Method	Dilution	Date Received
IWGW01053106	L0606049-01	6020	1	02-JUN-06

KEMRON ENVIRONMENTAL SERVICES

Report Number: **L0606049**
Report Date : **June 20, 2006**

Sample Number: **L0606049-01**
Client ID: **IWGW01053106**
Matrix: **Water**
Workgroup Number: **WG214859**
Collect Date: **05/31/2006 16:00**

PrePrep Method: **NONE**
Prep Method: **3015**
Analytical Method: **6020**
Analyst: **JYH**
Dilution: **1**
Units: **mg/L**

Instrument: **ELAN-ICP**
Prep Date: **06/05/2006 09:45**
Cal Date: **06/12/2006 09:13**
Run Date: **06/12/2006 12:32**
File ID: **EL.061206.123254**

Analyte	CAS. Number	Result	Qual	PQL	SQL
Selenium, Total	**7782-49-2**	**0.0240**		**0.00100**	**0.000500**

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1.3.2.1 QC Summary

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Checklist ID: 7929

KEMRON Environmental Services
Data Checklist

Date: 09-JUN-2006
Analyst: JYH
Analyst: NA
Method: 6020
Instrument: ELAN-ICP
Curve Workgroup: 214990
Analytical Workgroups: 214859,214720

Run Log ID:	10730
Calibration/Linearity	X
ICV/CCV	X
ICB/CCB	X
ICSA/ICSAB	X
CRI	X
Blank/LCS	X
MS/MSD	X
Post Spike/Serial Dilution	X
Upload Results	X
Data Qualifiers	
Generate PDF Instrument Data	X
Sign/Annotate PDF Data	X
Upload Curve Data	X
Workgroup Forms	
Case Narrative	053,011
Client Forms	
Level X	
Level 3	
Level 4	053,011
Check for compliance with method and project specific requirements	X
Check the completeness of reported information	X
Check the information for the report narrative	X
Primary Reviewer	JYH
Secondary Reviewer	MMB
Comments	

Primary Reviewer:

Secondary Reviewer:
12-JUN-2006

Generated: JUN-12-2006 11:34:45

Checklist ID: 7944

KEMRON Environmental Services
Data Checklist

Date: 12-JUN-2006
Analyst: JYH
Analyst: NA
Method: 6020
Instrument: ELAN-ICP
Curve Workgroup: 215090
Analytical Workgroups: 214859

Run Log ID:	10741
Calibration/Linearity	X
ICV/CCV	X
ICB/CCB	X
ICSA/ICSAB	X
CRI	X
Blank/LCS	X
MS/MSD	X
Post Spike/Serial Dilution	X
Upload Results	X
Data Qualifiers	
Generate PDF Instrument Data	X
Sign/Annotate PDF Data	X
Upload Curve Data	X
Workgroup Forms	
Case Narrative	053,032,045,049
Client Forms	
Level X	
Level 3	049
Level 4	053,032,045
Check for compliance with method and project specific requirements	X
Check the completeness of reported information	X
Check the information for the report narrative	X
Primary Reviewer	JYH
Secondary Reviewer	MMB
Comments	

Primary Reviewer:

Secondary Reviewer:
13-JUN-2006

Generated: JUN-13-2006 11:25:10

Run Log ID:**10730**

KEMRON Environmental Services

Instrument Run Log

Instrument: ELAN-ICP Dataset: 060906B.REP
Analyst1: JYH Analyst2: N/A
Method: 6020 SOP: ME700 Rev: 3

Calibration Std: STD12844 ICV/CCV Std: STD12969 Post Spike: COA11342
ICSA: STD12448 ICSAB: STD12742

Workgroups: 214859,214720

Comments:

Seq.	File ID	Sample	ID	Prep	Dil	Reference	Date/Time
1	EL.060906.103720	Blank	Blank		1		06/09/06 10:37
2	EL.060906.104323	WG214990-01	Calibration Point		1		06/09/06 10:43
3	EL.060906.104925	WG214990-02	Calibration Point		1		06/09/06 10:49
4	EL.060906.105529	WG214990-03	Calibration Point		1		06/09/06 10:55
5	EL.060906.110134	WG214990-04	Calibration Point		1		06/09/06 11:01
6	EL.060906.110739	WG214990-05	Initial Calibration Verification		1		06/09/06 11:07
7	EL.060906.111353	WG214990-06	Initial Calib Blank		1		06/09/06 11:13
8	EL.060906.112009	WG214990-07	CRQL Check Solid		1		06/09/06 11:20
9	EL.060906.112628	WG214990-08	CRQL Check Water		1		06/09/06 11:26
10	EL.060906.113245	WG214990-09	Interference Check		1		06/09/06 11:32
11	EL.060906.113902	WG214990-10	Interference Check		1		06/09/06 11:39
12	EL.060906.114519	WG214990-11	CCV		1		06/09/06 11:45
13	EL.060906.115133	WG214990-12	CCB		1		06/09/06 11:51
14	EL.060906.115746	100 PPB	100 PPB		1		06/09/06 11:57
15	EL.060906.120711	IDL1	IDL1		1		06/09/06 12:07
16	EL.060906.121305	IDL2	IDL2		1		06/09/06 12:13
17	EL.060906.121900	IDL3	IDL3		1		06/09/06 12:19
18	EL.060906.122455	IDL4	IDL4		1		06/09/06 12:24
19	EL.060906.123050	IDL5	IDL5		1		06/09/06 12:30
20	EL.060906.123646	IDL6	IDL6		1		06/09/06 12:36
21	EL.060906.124243	IDL7	IDL7		1		06/09/06 12:42
22	EL.060906.124838	WG214990-13	CCV		1		06/09/06 12:48
23	EL.060906.125453	WG214990-14	CCB		1		06/09/06 12:54
24	EL.060906.130105	WG214622-02	Method/Prep Blank	40/100	1		06/09/06 13:01
25	EL.060906.130658	WG214622-03	Laboratory Control S	40/100	1		06/09/06 13:06
26	EL.060906.131251	WG214622-01	Reference Sample		1	L0606053-04	06/09/06 13:12
27	EL.060906.131844	L0606053-05	1011MW05FD	40/100	1		06/09/06 13:18
28	EL.060906.132438	WG214622-04	Matrix Spike	40/100	1	L0606053-06	06/09/06 13:24
29	EL.060906.133032	WG214622-05	Matrix Spike Duplica	40/100	1	L0606053-07	06/09/06 13:30
30	EL.060906.133627	WG214859-01	Post Digestion Spike		1	L0606053-04	06/09/06 13:36
31	EL.060906.134221	WG214859-02	Serial Dilution		5	L0606053-04	06/09/06 13:42
32	EL.060906.134817	WG214990-15	CCV		1		06/09/06 13:48
33	EL.060906.135431	WG214990-16	CCB		1		06/09/06 13:54
34	EL.060906.140044	L0606049-01	IWGW01053106		1		06/09/06 14:00
35	EL.060906.140709	WG214990-17	Interference Check		1		06/09/06 14:07
36	EL.060906.141325	WG214990-18	Interference Check		1		06/09/06 14:13
37	EL.060906.141940	WG214990-19	CCV		1		06/09/06 14:19

Approved: June 12, 2006

Maren Berry

Run Log ID:**10730**

KEMRON Environmental Services

Instrument Run Log

Instrument: ELAN-ICP Dataset: 060906B.REP
Analyst1: JYH Analyst2: N/A
Method: 6020 SOP: ME700 Rev: 3

Calibration Std: STD12844 ICV/CCV Std: STD12969 Post Spike: COA11342
ICSA: STD12448 ICSAB: STD12742

Workgroups: 214859,214720

Comments:

Seq.	File ID	Sample	ID	Prep	Dil	Reference	Date/Time
38	EL.060906.142554	WG214990-20	CCB		1		06/09/06 14:25
39	EL.060906.143207	WG214622-01	Reference Sample		5	L0606053-04	06/09/06 14:32
40	EL.060906.143800	L0606053-05	1011MW05FD		5		06/09/06 14:38
41	EL.060906.144354	WG214622-04	Matrix Spike		5	L0606053-06	06/09/06 14:43
42	EL.060906.144948	WG214622-05	Matrix Spike Duplica		5	L0606053-07	06/09/06 14:49
43	EL.060906.145543	WG214859-01	Post Digestion Spike		5	L0606053-04	06/09/06 14:55
44	EL.060906.150137	WG214859-02	Serial Dilution		25	L0606053-04	06/09/06 15:01
45	EL.060906.150732	WG214990-21	CCV		1		06/09/06 15:07
46	EL.060906.151346	WG214990-22	CCB		1		06/09/06 15:13
47	EL.060906.152000	WG214990-23	Interference Check		1		06/09/06 15:20
48	EL.060906.152616	WG214990-24	Interference Check		1		06/09/06 15:26
49	EL.060906.153232	WG214990-25	Interference Check		1		06/09/06 15:32
50	EL.060906.153848	WG214990-26	CCV		1		06/09/06 15:38
51	EL.060906.154502	WG214990-27	CCB		1		06/09/06 15:45
52	EL.060906.155116	L0606011-12	C12-F280-053006	.512/200	1		06/09/06 15:51
53	EL.060906.155711	L0606011-13	C15-SRTD-053106	.513/200	1		06/09/06 15:57
54	EL.060906.160307	L0606011-14	C15-F150-053106	.503/200	1		06/09/06 16:03
55	EL.060906.160903	L0606011-15	C15-320-053106	.523/200	1		06/09/06 16:09
56	EL.060906.161459	L0606011-12	C12-F280-053006	.512/200	5		06/09/06 16:14
57	EL.060906.162131	WG214990-28	CCV		1		06/09/06 16:21
58	EL.060906.162745	WG214990-29	CCB		1		06/09/06 16:27

Approved: June 12, 2006

Maren Berry

007412

Run Log ID:**10741**

KEMRON Environmental Services

Instrument Run Log

Instrument: ELAN-ICP Dataset: 061206.REP
Analyst1: JYH Analyst2: N/A
Method: 6020 SOP: ME700 Rev: 3

Calibration Std: STD12844 ICV/CCV Std: STD12969 Post Spike: COA11342
ICSA: STD13104 ICSAB: STD12742

Workgroups: 214859

Comments:

Seq.	File ID	Sample	ID	Prep	Dil	Reference	Date/Time
1	EL.061206.084907	Blank	Blank		1		06/12/06 08:49
2	EL.061206.085509	WG215090-01	Calibration Point		1		06/12/06 08:55
3	EL.061206.090112	WG215090-02	Calibration Point		1		06/12/06 09:01
4	EL.061206.090716	WG215090-03	Calibration Point		1		06/12/06 09:07
5	EL.061206.091320	WG215090-04	Calibration Point		1		06/12/06 09:13
6	EL.061206.091925	WG215090-05	Initial Calibration Verification		1		06/12/06 09:19
7	EL.061206.092539	WG215090-06	Initial Calib Blank		1		06/12/06 09:25
8	EL.061206.093154	WG215090-07	CRQL Check Solid		1		06/12/06 09:31
9	EL.061206.093813	WG215090-08	CRQL Check Water		1		06/12/06 09:38
10	EL.061206.094431	WG215090-09	Interference Check		1		06/12/06 09:44
11	EL.061206.095047	WG215090-10	Interference Check		1		06/12/06 09:50
12	EL.061206.095703	WG215090-11	CCV		1		06/12/06 09:57
13	EL.061206.100318	WG215090-12	CCB		1		06/12/06 10:03
14	EL.061206.100930	WG214622-02	Method/Prep Blank	40/100	1		06/12/06 10:09
15	EL.061206.101523	WG214622-03	Laboratory Control S	40/100	1		06/12/06 10:15
16	EL.061206.102116	WG214622-01	Reference Sample		5	L0606053-04	06/12/06 10:21
17	EL.061206.102710	L0606053-05	1011MW05FD	40/100	5		06/12/06 10:27
18	EL.061206.103304	WG214622-04	Matrix Spike	40/100	5	L0606053-06	06/12/06 10:33
19	EL.061206.103858	WG214622-05	Matrix Spike Duplica	40/100	5	L0606053-07	06/12/06 10:38
20	EL.061206.104453	WG214859-01	Post Digestion Spike		5	L0606053-04	06/12/06 10:44
21	EL.061206.105048	WG214859-02	Serial Dilution		25	L0606053-04	06/12/06 10:50
22	EL.061206.105643	WG215090-13	CCV		1		06/12/06 10:56
23	EL.061206.110257	WG215090-14	CCB		1		06/12/06 11:02
24	EL.061206.112659	WG215090-15	Interference Check		1		06/12/06 11:26
25	EL.061206.113316	WG215090-16	Interference Check		1		06/12/06 11:33
26	EL.061206.113932	WG215090-17	CCV		1		06/12/06 11:39
27	EL.061206.114547	WG215090-18	CCB		1		06/12/06 11:45
28	EL.061206.115159	L0606032-02	AV-GW-ON-MW12-053006	40/100	1		06/12/06 11:51
29	EL.061206.115752	L0606032-04	AV-GW-ON-129-053106	40/100	1		06/12/06 11:57
30	EL.061206.120346	L0606032-06	AV-GW-ON-029-053106	40/100	1		06/12/06 12:03
31	EL.061206.120940	WG215090-19	CCV		1		06/12/06 12:09
32	EL.061206.121554	WG215090-20	CCB		1		06/12/06 12:15
33	EL.061206.123254	L0606049-01	IWGW01053106	40/100	1		06/12/06 12:32
34	EL.061206.123848	L0606045-02	AV-GW-ON-012-0531106	40/100	1		06/12/06 12:38
35	EL.061206.124443	L0606045-04	AV-GW-ON-112-053106	40/100	1		06/12/06 12:44
36	EL.061206.125039	L0606045-06	AV-GW-ON-108-060106	40/100	1		06/12/06 12:50
37	EL.061206.125638	L0606045-08	AV-GW-ON-118-060106	40/100	1		06/12/06 12:56

Approved: June 13, 2006

Maren Berry

007413

Run Log ID:**10741**

KEMRON Environmental Services

Instrument Run Log

Instrument: ELAN-ICP Dataset: 061206.REP

Analyst1: JYH Analyst2: N/A

Method: 6020 SOP: ME700 Rev: 3

Calibration Std: STD12844 ICV/CCV Std: STD12969 Post Spike: COA11342

ICSA: STD13104 ICSAB: STD12742

Workgroups: 214859

Comments:

Seq.	File ID	Sample	ID	Prep	Dil	Reference	Date/Time
38	EL.061206.130233	WG215090-21	CCV		1		06/12/06 13:02
39	EL.061206.130848	WG215090-22	CCB		1		06/12/06 13:08

Approved: June 13, 2006

Maren Berry

007414

KEMRON Environmental Services
HOLDING TIMES
EQUIVALENT TO AFCEE FORM 9

Analytical Method: 6020 **AAB#:** WG214859
Login Number: L0606049

Client ID	Date Collected	Date Received	Date Extracted	Max Hold Time Ext.	Time Held Ext.	Date Analyzed	Max Hold Time Anal	Time Held Anal.	Q
IWGW01053106	05/31/06	06/02/06	06/05/06	180	4.74	06/12/06	180	7.12	

* EXT = SEE PROJECT QAPP REQUIREMENTS
*ANAL = SEE PROJECT QAPP REQUIREMENTS

KEMRON FORMS - Modified 02/14/2006
Version 1.5 PDF File ID: 494695
Report generated 06/13/2006 10:15

KEMRON Environmental Services

METHOD BLANK SUMMARY

Login Number:	L0606049	Work Group:	WG214859
Blank File ID:	EL.061206.100930	Blank Sample ID:	WG214622-02
Date Analyzed:	06/12/06	Instrument ID:	ELAN-ICP
Time Analyzed:	10:09	Method:	6020
Analyst:	JYH		

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG214622-03	EL.060906.130658	06/09/06 13:06	01
LCS	WG214622-03	EL.061206.101523	06/12/06 10:15	02
IWGW01053106	L0606049-01	EL.061206.123254	06/12/06 12:32	01

KEMRON FORMS - Modified 03/06/2006
Version 1.5 PDF File ID: 494696
Report generated 06/13/2006 10:15

KEMRON Environmental Services

METHOD BLANK REPORT

Login Number: L0606049	Run Date: 06/12/2006	Sample ID: WG214622-02
Instrument ID: ELAN-ICP	Run Time: 10:09	Prep Method: 3015
File ID: EL.061206.100930	Analyst: JYH	Method: 6020
Workgroup (AAB#): WG214859	Matrix: Water	Units: mg/L
Contract #:	Cal ID: ELAN-I-12-JUN-06	

Analytes	SQL	PQL	Concentration	Dilution	Qualifier
Selenium	0.000500	0.00100	0.000500	1	U

MDL Method Detection Limit
RL Reporting/quantitation Limit

* Analyte concentration > RL

KEMRON FORMS - Modified 05/01/2006
Version 1.5 PDF File ID: 494697
Report generated 06/13/2006 10:15

KEMRON Environmental Services

LABORATORY CONTROL SAMPLE (LCS)

Login Number: L0606049	Run Date: 06/12/2006	Sample ID: WG214622-03
Instrument ID: ELAN-ICP	Run Time: 10:15	Prep Method: 3015
File ID: EL.061206.101523	Analyst: JYH	Method: 6020
Workgroup (AAB#): WG214859	Matrix: Water	Units: mg/L
Contract #:	Cal ID: ELAN-I-12-JUN-06	

Analytes	Expected	Found	% Rec	LCS Limits	Q
Selenium	0.0625	0.0672	107	80 - 120	

KEMRON FORMS - Modified 05/01/2006
Version 1.5 PDF File ID: 494698
Report generated 06/13/2006 10:15

KEMRON Environmental Services

MATRIX SPIKE AND MATRIX SPIKE DUP (MS/MSD)

Loginnum:L0606049 Cal ID: ELAN-ICP- Worknum:WG214859
Instrument ID:ELAN-ICP Contract #: Method:6020
Parent ID:WG214622-01 File ID:EL.061206.102116 Dil:5 Matrix:WATER
Sample ID:WG214622-04 MS File ID:EL.061206.103304 Dil:5 Units:mg/L
Sample ID:WG214622-05 MSD File ID:EL.061206.103858 Dil:5

Analyte	Parent	MS Spiked	MS Found	MS %Rec	MSD Spiked	MSD Found	MSD %Rec	%RPD	%Rec Limits	RPD Limit	Q
Selenium	0.00417	0.0625	0.0653	97.8	0.0625	0.0694	104	6.01	75 - 125	20	

* FAILS %REC LIMIT

FAILS RPD LIMIT

NOTE: This is an internal quality control sample.

KEMRON FORMS - Modified 03/16/2006
Version 1.5 PDF File ID: 494699
Report generated 06/13/2006 10:15

KEMRON ENVIRONMENTAL SERVICES
SERIAL DILUTION REPORT

Sample Login ID: L0606049 Worknum: WG214859
Instrument ID: ELAN-ICP Method: 6020
Sample ID: L0606053-04 File ID: EL.061206.102116 Dil: 5 Units: ug/L
Serial Dilution ID: WG214859-02 File ID: EL.061206.105048 Dil: 25

Analyte	Sample	C	Serial Dilution	C	% Difference	Q
Selenium	1.67	F	0	U	100	

U = Result is below MDL
F = Result is between MDL and RL
X = Result is greater than RL and less than 100 times the MDL
E = %D exceeds control limit of 10% and initial
sample result is greater than or equal to 100 times the MDL

KEMRON FORMS - Modified 02/14/2006
Version 1.3 PDF File ID: 494693
Report generated 06/13/2006 10:15

KEMRON ENVIRONMENTAL SERVICES
POST SPIKE REPORT

Sample Login ID: L0606049 **Worknum:** WG214859
Instrument ID: ELAN-ICP **Method:** 6020
Post Spike ID: WG214859-01 **File ID:** EL.061206.104453 **Dil:** 5 **Units:** ug/L
Sample ID: L0606053-04 **File ID:** EL.061206.102116 **Dil:** 5 **Matrix:** Water

Analyte	Control Limit %R	Post Spike Result	C	Sample Result	C	Spike Added(SA)	% R	Q
SELENIUM	75 - 125	262		1.67	F	250	104	

N = % Recoverv exceeds control limits of 75% - 125%
F = Result is between MDL and RL
U = Sample result is below MDL. A value of zero is used in the calculation.

KEMRON FORMS - Modified 02/14/2006
Version 2.0 PDF File ID: 494694
Report generated 06/13/2006 10:15

KEMRON Environmental Services

INITIAL CALIBRATION SUMMARY

Login Number: L0606049 **Workgroup (AAB#):** WG214859

Analytical Method: 6020 **Instrument ID:** ELAN-ICP

ICAL Worknum: WG215090 **Initial Calibration Date:** 12-JUN-2006 09:13

Analyte	WG215090-01		WG215090-02		WG215090-03		WG215090-04			
	STD	INT	STD	INT	STD	INT	STD	INT	R	Q
Selenium	NA	12NA49	NA	84NA29	NA	764NA791	1NA0	1523NA685	0.999780	

INT = Instrument intensity
R = Coefficient of correlation
Q = Data Qualifier
* = Out of Compliance; R < 0.995

KEMRON FORMS - Modified 03/03/2006
Version 1.5 PDF File ID: 494701
Report generated 06/13/2006 10:15

KEMRON Environmental Services

INITIAL CALIBRATION BLANK (ICB)

Login Number: L0606049 Run Date: 06/12/2006 Sample ID: WG215090-06
Instrument ID: ELAN-ICP Run Time: 09:25 Method: 6020
File ID: EL.061206.092539 Analyst: JYH Units: ug/L
Workgroup (AAB#): WG214859 Cal ID: ELAN-I - 12-JUN-06

Analytes	MDL	RDL	Concentration	Dilution	Qualifier
Selenium	0.200	0.400	-.0407	1	U

U = Result is less than MDL
F = Result is between MDL and RL

KEMRON FORMS - Modified 03/06/2006
Version 1.5 PDF File ID: 494703
Report generated 06/13/2006 10:15

KEMRON Environmental Services

CONTINUING CALIBRATION BLANK (CCB)

Login Number:L0606049 Run Date:06/12/2006 Sample ID:WG215090-12
Instrument ID:ELAN-ICP Run Time:10:03 Method:6020
File ID:EL.061206.100318 Analyst:JYH Units:ug/L
Workgroup (AAB#):WG214859 Cal ID:ELAN-I - 12-JUN-06

Analytes	MDL	RDL	Concentration	Dilution	Qualifier
Selenium	0.200	0.400	-0.0431	1	U

U = Result is less than MDL
F = Result is between MDL and RL

KEMRON FORMS - Modified 04/19/2006
Version 1.5 PDF File ID: 494706
Report generated 06/13/2006 10:15

KEMRON Environmental Services

CONTINUING CALIBRATION BLANK (CCB)

Login Number:L0606049 Run Date:06/12/2006 Sample ID:WG215090-14
Instrument ID:ELAN-ICP Run Time:11:02 Method:6020
File ID:EL.061206.110257 Analyst:JYH Units:ug/L
Workgroup (AAB#):WG214859 Cal ID:ELAN-I - 12-JUN-06

Analytes	MDL	RDL	Concentration	Dilution	Qualifier
Selenium	0.200	0.400	-0.00260	1	U

U = Result is less than MDL
F = Result is between MDL and RL

KEMRON FORMS - Modified 04/19/2006
Version 1.5 PDF File ID: 494706
Report generated 06/13/2006 10:15

KEMRON Environmental Services

CONTINUING CALIBRATION BLANK (CCB)

Login Number:L0606049 Run Date:06/12/2006 Sample ID:WG215090-18
Instrument ID:ELAN-ICP Run Time:11:45 Method:6020
File ID:EL.061206.114547 Analyst:JYH Units:ug/L
Workgroup (AAB#):WG214859 Cal ID:ELAN-I - 12-JUN-06

Analytes	MDL	RDL	Concentration	Dilution	Qualifier
Selenium	0.200	0.400	-0.0947	1	U

U = Result is less than MDL
F = Result is between MDL and RL

KEMRON FORMS - Modified 04/19/2006
Version 1.5 PDF File ID: 494706
Report generated 06/13/2006 10:15

KEMRON Environmental Services

CONTINUING CALIBRATION BLANK (CCB)

Login Number:L0606049 Run Date:06/12/2006 Sample ID:WG215090-20
Instrument ID:ELAN-ICP Run Time:12:15 Method:6020
File ID:EL.061206.121554 Analyst:JYH Units:ug/L
Workgroup (AAB#):WG214859 Cal ID:ELAN-I - 12-JUN-06

Analytes	MDL	RDL	Concentration	Dilution	Qualifier
Selenium	0.200	0.400	-0.110	1	U

U = Result is less than MDL
F = Result is between MDL and RL

KEMRON FORMS - Modified 04/19/2006
Version 1.5 PDF File ID: 494706
Report generated 06/13/2006 10:15

KEMRON Environmental Services

CONTINUING CALIBRATION BLANK (CCB)

Login Number:L0606049 Run Date:06/12/2006 Sample ID:WG215090-22
Instrument ID:ELAN-ICP Run Time:13:08 Method:6020
File ID:EL.061206.130848 Analyst:JYH Units:ug/L
Workgroup (AAB#):WG214859 Cal ID:ELAN-I - 12-JUN-06

Analytes	MDL	RDL	Concentration	Dilution	Qualifier
Selenium	0.200	0.400	-0.0396	1	U

U = Result is less than MDL
F = Result is between MDL and RL

KEMRON FORMS - Modified 04/19/2006
Version 1.5 PDF File ID: 494706
Report generated 06/13/2006 10:15

KEMRON Environmental Services

INITIAL CALIBRATION VERIFICATION (ICV)

Login Number: L0606049 Run Date: 06/12/2006 Sample ID: WG215090-05
Instrument ID: ELAN-ICP Run Time: 09:19 Method: 6020
File ID: EL.061206.091925 Analyst: JYH Units: ug/L
Workgroup (AAB#): WG214859 Cal ID: ELAN-I - 12-JUN-06

Analyte		Expected	Found	%REC	LIMITS	Q
Selenium		50	51.1	102	90 - 110	

* Exceeds LIMITS Limit

KEMRON FORMS - Modified 03/03/2006
Version 1.3 PDF File ID: 494702
Report generated 06/13/2006 10:15

KEMRON Environmental Services

CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L0606049 Run Date: 06/12/2006 Sample ID: WG215090-11
Instrument ID: ELAN-ICP Run Time: 09:57 Method: 6020
File ID: EL.061206.095703 Analyst: JYH
Workgroup (AAB#): WG214859 Cal ID: ELAN-I - 12-JUN-06

Analyte		Expected	Found	%REC	LIMITS	UNITS	Q
Selenium		50	49.2	98.4	90 - 110	ug/L	

* Exceeds LIMITS Criteria

KEMRON FORMS - Modified 04/19/2006
Version 1.3 PDF File ID: 494705
Report generated 06/13/2006 10:15

KEMRON Environmental Services

CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L0606049 Run Date: 06/12/2006 Sample ID: WG215090-13
Instrument ID: ELAN-ICP Run Time: 10:56 Method: 6020
File ID: EL.061206.105643 Analyst: JYH
Workgroup (AAB#): WG214859 Cal ID: ELAN-I - 12-JUN-06

Analyte		Expected	Found	%REC	LIMITS	UNITS	Q
Selenium		50	51.0	102	90 - 110	ug/L	

* Exceeds LIMITS Criteria

KEMRON FORMS - Modified 04/19/2006
Version 1.3 PDF File ID: 494705
Report generated 06/13/2006 10:15

KEMRON Environmental Services

CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L0606049 Run Date: 06/12/2006 Sample ID: WG215090-17
Instrument ID: ELAN-ICP Run Time: 11:39 Method: 6020
File ID: EL.061206.113932 Analyst: JYH
Workgroup (AAB#): WG214859 Cal ID: ELAN-I - 12-JUN-06

Analyte		Expected	Found	%REC	LIMITS	UNITS	Q
Selenium		50	51.1	102	90 - 110	ug/L	

* Exceeds LIMITS Criteria

KEMRON FORMS - Modified 04/19/2006
Version 1.3 PDF File ID: 494705
Report generated 06/13/2006 10:15

KEMRON Environmental Services

CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L0606049 Run Date: 06/12/2006 Sample ID: WG215090-19
Instrument ID: ELAN-ICP Run Time: 12:09 Method: 6020
File ID: EL.061206.120940 Analyst: JYH
Workgroup (AAB#): WG214859 Cal ID: ELAN-I - 12-JUN-06

Analyte		Expected	Found	%REC	LIMITS	UNITS	Q
Selenium		50	51.8	104	90 - 110	ug/L	

* Exceeds LIMITS Criteria

KEMRON FORMS - Modified 04/19/2006
Version 1.3 PDF File ID: 494705
Report generated 06/13/2006 10:15

KEMRON Environmental Services

CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L0606049 Run Date: 06/12/2006 Sample ID: WG215090-21
Instrument ID: ELAN-ICP Run Time: 13:02 Method: 6020
File ID: EL.061206.130233 Analyst: JYH
Workgroup (AAB#): WG214859 Cal ID: ELAN-I - 12-JUN-06

Analyte		Expected	Found	%REC	LIMITS	UNITS	Q
Selenium		50	49.1	98.2	90 - 110	ug/L	

* Exceeds LIMITS Criteria

KEMRON FORMS - Modified 04/19/2006
Version 1.3 PDF File ID: 494705
Report generated 06/13/2006 10:15

KEMRON ENVIRONMENTAL SERVICES
INTERFERENCE CHECK SAMPLES

Login number: L0606049 **Workgroup (AAB#):** WG214859
Instrument ID: ELAN-ICP **Method:** 6020
Sol. A : WG215090-09 **File ID:** EL.061206.094431 **Units:** ug/L
Sol. AB : WG215090-10 **File ID:** EL.061206.095047

	Sol. A			Sol. AB			
ANALYTE	True	Found	%Recovery	True	Found	%Recovery	Q
Selenium	NS	-0.245	NS	100	102	102	

NS = Not spiked
*** = Recovery of spiked element is outside acceptance limit of 80% - 120% of true value.**
 # = Result for unspiked element is outside the acceptance limits of (+/-) the project reporting limit (RL).

KEMRON ENVIRONMENTAL SERVICES
INTERFERENCE CHECK SAMPLES

Login number: L0606049 **Workgroup (AAB#):** WG214859
Instrument ID: ELAN-ICP **Method:** 6020
Sol. A : WG215090-15 **File ID:** EL.061206.112659 **Units:** ug/L
Sol. AB : WG215090-16 **File ID:** EL.061206.113316

	Sol. A			Sol. AB			
ANALYTE	True	Found	%Recovery	True	Found	%Recovery	Q
Selenium	NS	-0.107	NS	100	100	100	

NS = Not spiked
*** = Recovery of spiked element is outside acceptance limit of 80% - 120% of true value.**
 # = Result for unspiked element is outside the acceptance limits of (+/-) the project reporting limit (RL).

KEMRON Environmental Services

LINEAR RANGE (QUARTERLY)

Login Number: L0606049 **Date:** 03/02/2006

Insturment ID: ELAN-ICP **Method:** 6020

Analyte	Integration Time (Sec.)	Concentration (ug/L)
Antimony	1.00	100.0
Arsenic	1.00	100.0
Barium	1.00	100.0
Cadmium	1.00	100.0
Chromium	1.00	100.0
Cobalt	1.00	100.0
Copper	1.00	100.0
Lead	1.00	100.0
Manganese	1.00	100.0
Nickel	1.00	100.0
Selenium	1.00	100.0
Silver	1.00	100.0
Thallium	1.00	100.0
Vanadium	1.00	100.0
Zinc	1.00	100.0

Comments:

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1.3.3 Metals CVAA Data (Mercury)

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KEMRON ENVIRONMENTAL SERVICES
METALS

KEMRON Login No: L0606049

METHOD

Preparation: SW-846 7470A

Analysis: SW-846 7470A

HOLDING TIMES

Sample Preparation: All holding times were met.

Sample Analysis: All holding times were met.

PREPARATION

Sample preparation proceeded normally.

CALIBRATION

Initial Calibrations: All acceptance criteria were met.

Alternate Source Standards: All acceptance criteria were met.

Continuing Calibration: All acceptance criteria were met.

BATCH QA/QC

Method Blank: All acceptance criteria were met.

Laboratory Control Sample: All acceptance criteria were met.

Serial Dilution/Post Digestion Spike: WG214641(7470A) - All acceptance criteria were met.

SAMPLES

All acceptance criteria were met.

I certify that this data package is in compliance with the terms and conditions agreed to by the client and KEMRON Environmental Services, both technically and for completeness, except for the conditions noted above. Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or designated person, as verified by the following signature.

Analyst: PAS

Approved: 14-JUN-06
Maren Berry

LABORATORY REPORT

L0606049

06/20/06 08:38

Submitted By

KEMRON Environmental Services
156 Starlite Drive
Marietta , OH 45750
(740) 373 - 4071

For

Account Name: CH2MHILL, Inc
7600 Tidwell Road
Suite 400
San Antonio, TX 77040
Attention: John Ynfante

Account Number: 2736
Work ID: STATE MARINE RI

P.O. Number: 915193

Sample Analysis Summary

Client ID	Lab ID	Method	Dilution	Date Received
IWGW01053106	L0606049-01	7470A	1	02-JUN-06

Report Number: **L0606049**
Report Date : **June 20, 2006**

Sample Number:	L0606049-01	PrePrep Method:	NONE	Instrument:	HYDRA
Client ID:	IWGW01053106	Prep Method:	METHOD	Prep Date:	06/05/2006 09:15
Matrix:	Water	Analytical Method:	7470A	Cal Date:	06/05/2006 15:18
Workgroup Number:	WG214641	Analyst:	PAS	Run Date:	06/05/2006 15:43
Collect Date:	05/31/2006 16:00	Dilution:	1	File ID:	HY.060506.154312
		Units:	mg/L		

Analyte	CAS. Number	Result	Qual	PQL	SQL
Mercury	7439-97-6		U	0.000200	0.000100

U Not detected at or above the reporting limit

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1.3.3.1 QC Summary

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Checklist ID: 7864

KEMRON Environmental Services
Data Checklist

Date: 05-JUN-2006
Analyst: PAS
Analyst: NA
Method: 7470A
Instrument: HYDRA
Curve Workgroup: 214693
Analytical Workgroups: 214641

Run Log ID:	10665
Calibration/Linearity	X
ICV/CCV	X
ICB/CCB	X
ICSA/ICSAB	
CRI	
Blank/LCS	X
MS/MSD	X
Post Spike/Serial Dilution	X
Upload Results	X
Data Qualifiers	
Generate PDF Instrument Data	X
Sign/Annotate PDF Data	X
Upload Curve Data	
Workgroup Forms	X
Case Narrative	06-032, 045, 049, 053
Client Forms	X
Level X	
Level 3	06-049
Level 4	06-032, 045, 053
Check for compliance with method and project specific requirements	X
Check the completeness of reported information	X
Check the information for the report narrative	X
Primary Reviewer	PAS
Secondary Reviewer	LSB
Comments	

Primary Reviewer:
06-JUN-2006

Secondary Reviewer:
06-JUN-2006

Generated: JUN-13-2006 15:34:52

007447

Run Log ID:**10665**

KEMRON Environmental Services

Instrument Run Log

Instrument: HYDRA Dataset: 060506F.PRN
Analyst1: PAS Analyst2: N/A
Method: 7470A SOP: 404 Rev: 9

Calibration Std: STD12959 ICV/CCV Std: STD12953 Post Spike: STD12959
ICSA: N/A ICSAB: N/A

Workgroups: WG214641

Comments:

Seq.	File ID	Sample	ID	Prep	Dil	Reference	Date/Time
1	HY.060506.150858	WG214693-01	Calibration Point		1		06/05/06 15:08
2	HY.060506.151111	WG214693-02	Calibration Point		1		06/05/06 15:11
3	HY.060506.151303	WG214693-03	Calibration Point		1		06/05/06 15:13
4	HY.060506.151442	WG214693-04	Calibration Point		1		06/05/06 15:14
5	HY.060506.151632	WG214693-05	Calibration Point		1		06/05/06 15:16
6	HY.060506.151813	WG214693-06	Calibration Point		1		06/05/06 15:18
7	HY.060506.152013	WG214693-07	Initial Calibration Verification		1		06/05/06 15:20
8	HY.060506.152152	WG214693-08	Initial Calib Blank		1		06/05/06 15:21
9	HY.060506.152344	WG214693-09	CCV		1		06/05/06 15:23
10	HY.060506.152532	WG214693-10	CCB		1		06/05/06 15:25
11	HY.060506.152713	WG214619-02	Method/Prep Blank	40/40	1		06/05/06 15:27
12	HY.060506.152849	WG214619-03	Laboratory Control Sample	40/40	1		06/05/06 15:28
13	HY.060506.153112	L0606032-02	AV-GW-ON-MW12-053006	40/40	1		06/05/06 15:31
14	HY.060506.153301	L0606032-04	AV-GW-ON-129-053106	40/40	1		06/05/06 15:33
15	HY.060506.153448	L0606032-06	AV-GW-ON-029-053106	40/40	1		06/05/06 15:34
16	HY.060506.153626	L0606045-02	AV-GW-ON-012-0531106	40/40	1		06/05/06 15:36
17	HY.060506.153803	L0606045-04	AV-GW-ON-112-053106	40/40	1		06/05/06 15:38
18	HY.060506.153941	L0606045-06	AV-GW-ON-108-060106	40/40	1		06/05/06 15:39
19	HY.060506.154132	L0606045-08	AV-GW-ON-118-060106	40/40	1		06/05/06 15:41
20	HY.060506.154312	L0606049-01	IWGW01053106	40/40	1		06/05/06 15:43
21	HY.060506.154509	WG214693-11	CCV		1		06/05/06 15:45
22	HY.060506.154650	WG214693-12	CCB		1		06/05/06 15:46
23	HY.060506.154848	L0606053-04	1011MW05		1		06/05/06 15:48
24	HY.060506.155040	WG214641-01	Post Digestion Spike		1		06/05/06 15:50
25	HY.060506.155223	WG214619-04	Duplicate	40/40	1		06/05/06 15:52
26	HY.060506.155401	WG214619-05	Matrix Spike	36/40	1		06/05/06 15:54
27	HY.060506.155548	WG214619-06	Matrix Spike Duplicate	36/40	1		06/05/06 15:55
28	HY.060506.155750	L0606070-01	OUTFALL 001/GRAB	40/40	1		06/05/06 15:57
29	HY.060506.155928	WG214693-13	CCV		1		06/05/06 15:59
30	HY.060506.160105	WG214693-14	CCB		1		06/05/06 16:01

Page: 1 of 1 Approved: June 06, 2006

007448

KEMRON Environmental Services
HOLDING TIMES
EQUIVALENT TO AFCEE FORM 9

Analytical Method: 7470A **AAB#:** WG214641
Login Number: L0606049

Client ID	Date Collected	Date Received	Date Extracted	Max Hold Time Ext.	Time Held Ext.	Date Analyzed	Max Hold Time Anal	Time Held Anal.	Q
IWGW01053106	05/31/06	06/02/06	06/05/06	28	4.72	06/05/06	28	0.270	

* EXT = SEE PROJECT QAPP REQUIREMENTS
*ANAL = SEE PROJECT QAPP REQUIREMENTS

KEMRON FORMS - Modified 02/14/2006
Version 1.5 PDF File ID: 490201
Report generated 06/06/2006 10:20

KEMRON Environmental Services

METHOD BLANK SUMMARY

Login Number:	L0606049	Work Group:	WG214641
Blank File ID:	HY.060506.152713	Blank Sample ID:	WG214619-02
Date Analyzed:	06/05/06	Instrument ID:	HYDRA
Time Analyzed:	15:27	Method:	7470A
Analyst:	PAS		

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG214619-03	HY.060506.152849	06/05/06 15:28	01
IWGW01053106	L0606049-01	HY.060506.154312	06/05/06 15:43	01
DUP	WG214619-04	HY.060506.155223	06/05/06 15:52	01

KEMRON FORMS - Modified 03/06/2006
Version 1.5 PDF File ID: 490202
Report generated 06/06/2006 10:20

KEMRON Environmental Services

METHOD BLANK REPORT

Login Number: L0606049	Run Date: 06/05/2006	Sample ID: WG214619-02
Instrument ID: HYDRA	Run Time: 15:27	Prep Method: METHOD
File ID: HY.060506.152713	Analyst: PAS	Method: 7470A
Workgroup (AAB#): WG214641	Matrix: Water	Units: mg/L
Contract #:	Cal ID: HYDRA-05-JUN-06	

Analytes	SQL	PQL	Concentration	Dilution	Qualifier
Mercury	0.000100	0.000200	0.000100	1	U

MDL Method Detection Limit
RL Reporting/quantitation Limit

* Analyte concentration > RL

KEMRON FORMS - Modified 05/01/2006
Version 1.5 PDF File ID: 490203
Report generated 06/06/2006 10:20

KEMRON Environmental Services

LABORATORY CONTROL SAMPLE (LCS)

Login Number:	L0606049	Run Date:	06/05/2006	Sample ID:	WG214619-03
Instrument ID:	HYDRA	Run Time:	15:28	Prep Method:	METHOD
File ID:	HY.060506.152849	Analyst:	PAS	Method:	7470A
Workgroup (AAB#):	WG214641	Matrix:	Water	Units:	mg/L
Contract #:		Cal ID:	HYDRA-05-JUN-06		

Analytes	Expected	Found	% Rec	LCS Limits	Q
Mercury	0.00400	0.00355	88.8	85 - 115	

KEMRON FORMS - Modified 05/01/2006
Version 1.5 PDF File ID: 490204
Report generated 06/06/2006 10:20

KEMRON Environmental Services

MATRIX SPIKE AND MATRIX SPIKE DUP (MS/MSD)

Loginnum:L0606049 Cal ID: HYDRA- Worknum:WG214641
Instrument ID:HYDRA Contract #: Method:7470A
Parent ID:WG214619-01 File ID:HY.060506.154848 Dil:1 Matrix:WATER
Sample ID:WG214619-05 MS File ID:HY.060506.155401 Dil:1 Units:mg/L
Sample ID:WG214619-06 MSD File ID:HY.060506.155548 Dil:1

Analyte	Parent	MS Spiked	MS Found	MS %Rec	MSD Spiked	MSD Found	MSD %Rec	%RPD	%Rec Limits	RPD Limit	Q
Mercury	ND	0.00444	0.00459	103	0.00444	0.00434	97.7	5.47	85 - 115	20	

* FAILS %REC LIMIT

FAILS RPD LIMIT

NOTE: This is an internal quality control sample.

KEMRON FORMS - Modified 03/16/2006
Version 1.5 PDF File ID: 490205
Report generated 06/06/2006 10:20

KEMRON ENVIRONMENTAL SERVICES
POST SPIKE REPORT

Sample Login ID: L0606049 **Worknum:** WG214641
Instrument ID: HYDRA **Method:** 7470A
Post Spike ID: WG214641-01 **File ID:** HY.060506.155040 **Dil:** 1 **Units:** ug/L
Sample ID: L0606053-04 **File ID:** HY.060506.154848 **Dil:** 1 **Matrix:** Water

Analyte	Control Limit %R	Post Spike Result	C	Sample Result	C	Spike Added(SA)	% R	Q
MERCURY	85 - 115	1.14		ND	U	1.00	114	

N = % Recoverv exceeds control limits of 85% - 115%
F = Result is between MDL and RL
U = Sample result is below MDL. A value of zero is used in the calculation.

KEMRON FORMS - Modified 02/14/2006
Version 2.0 PDF File ID: 490200
Report generated 06/06/2006 10:20

KEMRON Environmental Services

INITIAL CALIBRATION SUMMARY

Login Number: L0606049 **Instrument ID:** HYDRA

Analytical Method: 7470A **Initial Calibration Date:** 06/05/2006 15:18

Initial Calibration Time: 15:18

Analyte	WG214693-01		WG214693-02		WG214693-03		WG214693-04		WG214693-05		WG214693-06	
	STD	INT	STD	INT	STD	INT	STD	INT	STD	INT	STD	INT
Mercury	0	-354	0.200	12966	1.00	50224	2.00	101889	5.00	263938	10.0	517643

INT = Instrument intensity
R = Coefficient of correlation
Q = Data Qualifier
*** = Out of Compliance; R < 0.995**

KEMRON FORMS - Modified 03/03/2006
Version 1.5 PDF File ID: 490206
Report generated 06/06/2006 10:20

KEMRON Environmental Services

INITIAL CALIBRATION SUMMARY

Analyte	R	Q
Mercury	0.9999	

INT = Instrument intensity
R = Coefficient of correlation
Q = Data Qualifier
*** = Out of Compliance; R < 0.995**

KEMRON FORMS - Modified 03/03/2006
Version 1.5 PDF File ID: 490206
Report generated 06/06/2006 10:20

KEMRON Environmental Services

INITIAL CALIBRATION BLANK (ICB)

Login Number: L0606049 Run Date: 06/05/2006 Sample ID: WG214693-08
Instrument ID: HYDRA Run Time: 15:21 Method: 7470A
File ID: HY.060506.152152 Analyst: PAS Units: ug/L
Workgroup (AAB#): WG214641 Cal ID: HYDRA - 05-JUN-06

Analytes	MDL	RDL	Concentration	Dilution	Qualifier
Mercury	0.100	0.200	-.031	1	U

U = Result is less than MDL
F = Result is between MDL and RL

KEMRON FORMS - Modified 03/06/2006
Version 1.5 PDF File ID: 490208
Report generated 06/06/2006 10:20

KEMRON Environmental Services

CONTINUING CALIBRATION BLANK (CCB)

Login Number:L0606049 Run Date:06/05/2006 Sample ID:WG214693-10
Instrument ID:HYDRA Run Time:15:25 Method:7470A
File ID:HY.060506.152532 Analyst:PAS Units:ug/L
Workgroup (AAB#):WG214641 Cal ID: HYDRA - 05-JUN-06

Analytes	MDL	RDL	Concentration	Dilution	Qualifier
Mercury	0.100	0.200	0.0660	1	U

U = Result is less than MDL
F = Result is between MDL and RL

KEMRON FORMS - Modified 04/19/2006
Version 1.5 PDF File ID: 490210
Report generated 06/06/2006 10:20

KEMRON Environmental Services

CONTINUING CALIBRATION BLANK (CCB)

Login Number:L0606049 Run Date:06/05/2006 Sample ID:WG214693-12
Instrument ID:HYDRA Run Time:15:46 Method:7470A
File ID:HY.060506.154650 Analyst:PAS Units:ug/L
Workgroup (AAB#):WG214641 Cal ID: HYDRA - 05-JUN-06

Analytes	MDL	RDL	Concentration	Dilution	Qualifier
Mercury	0.100	0.200	-0.0360	1	U

U = Result is less than MDL
F = Result is between MDL and RL

KEMRON FORMS - Modified 04/19/2006
Version 1.5 PDF File ID: 490210
Report generated 06/06/2006 10:20

KEMRON Environmental Services

CONTINUING CALIBRATION BLANK (CCB)

Login Number:L0606049 Run Date:06/05/2006 Sample ID:WG214693-14
Instrument ID:HYDRA Run Time:16:01 Method:7470A
File ID:HY.060506.160105 Analyst:PAS Units:ug/L
Workgroup (AAB#):WG214641 Cal ID: HYDRA - 05-JUN-06

Analytes	MDL	RDL	Concentration	Dilution	Qualifier
Mercury	0.100	0.200	-0.0450	1	U

U = Result is less than MDL
F = Result is between MDL and RL

KEMRON FORMS - Modified 04/19/2006
Version 1.5 PDF File ID: 490210
Report generated 06/06/2006 10:20

KEMRON Environmental Services

INITIAL CALIBRATION VERIFICATION (ICV)

Login Number: L0606049 Run Date: 06/05/2006 Sample ID: WG214693-07
Instrument ID: HYDRA Run Time: 15:20 Method: 7470A
File ID: HY.060506.152013 Analyst: PAS Units: ug/L
Workgroup (AAB#): WG214641 Cal ID: HYDRA - 05-JUN-06

Analyte		Expected	Found	%REC	LIMITS	Q
Mercury		2	2.06	103	90 - 110	

* Exceeds LIMITS Limit

KEMRON FORMS - Modified 03/03/2006
Version 1.3 PDF File ID: 490207
Report generated 06/06/2006 10:20

KEMRON Environmental Services

CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L0606049 Run Date: 06/05/2006 Sample ID: WG214693-09
Instrument ID: HYDRA Run Time: 15:23 Method: 7470A
File ID: HY.060506.152344 Analyst: PAS
Workgroup (AAB#): WG214641 Cal ID: HYDRA - 05-JUN-06

Analyte		Expected	Found	%REC	LIMITS	UNITS	Q
Mercury		2	2.08	104	80 - 120	ug/L	

* Exceeds LIMITS Criteria

KEMRON FORMS - Modified 04/19/2006
Version 1.3 PDF File ID: 490209
Report generated 06/06/2006 10:20

KEMRON Environmental Services

CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L0606049 Run Date: 06/05/2006 Sample ID: WG214693-11
Instrument ID: HYDRA Run Time: 15:45 Method: 7470A
File ID: HY.060506.154509 Analyst: PAS
Workgroup (AAB#): WG214641 Cal ID: HYDRA - 05-JUN-06

Analyte		Expected	Found	%REC	LIMITS	UNITS	Q
Mercury		2	1.98	99.0	80 - 120	ug/L	

* Exceeds LIMITS Criteria

KEMRON FORMS - Modified 04/19/2006
Version 1.3 PDF File ID: 490209
Report generated 06/06/2006 10:20

KEMRON Environmental Services

CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L0606049 Run Date: 06/05/2006 Sample ID: WG214693-13
Instrument ID: HYDRA Run Time: 15:59 Method: 7470A
File ID: HY.060506.155928 Analyst: PAS
Workgroup (AAB#): WG214641 Cal ID: HYDRA - 05-JUN-06

Analyte		Expected	Found	%REC	LIMITS	UNITS	Q
Mercury		2	2.06	103	80 - 120	ug/L	

* Exceeds LIMITS Criteria

KEMRON FORMS - Modified 04/19/2006
Version 1.3 PDF File ID: 490209
Report generated 06/06/2006 10:20

2.0 Attachments

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Kemron Environmental Services
Analyst Listing
June 20, 2006

AJF - AMANDA J. FICKIESEN	ALB - ANNIE L. BOCK	ALT - ANN L. THAYER
BRG - BRENDA R. GREGORY	CAF - CHERYL A. FLOWERS	CAK - CHERYL A. KOELSCH
CEB - CHAD E. BARNES	CLC - CHRYS L. CRAWFORD	CLK - CARL L. KING
CLS - CARA L. STRICKLER	CLW - CHARISSA L. WINTERS	CM - CHARLIE MARTIN
CMS - CRYSTAL M. STEPHENS	CPD - CHAD P. DAVIS	CRC - CARLA R. COCHRAN
CSA - LUCINDA S. ARNOLD	CSH - CHRIS S. HILL	DAS - DALLAS A. SULLIVAN
DD - DIANE M. DENNIS	DDE - DEBRA D. ELLIOTT	DEL - DON E. LIGHTFRITZ
DEV - DAVID E. VANDENBERG	DGB - DOUGLAS G. BUTCHER	DIH - DEANNA I. HESSON
DLB - DAVID L. BUMGARNER	DLP - DOROTHY L. PAYNE	DLR - DIANNA L. RAUCH
DR - DEANNA ROBERTS	DSM - DAVID S. MOSSOR	DST - DENNIS S. TEPE
ECL - ERIC C. LAWSON	ED - EMILY E. DECKER	HAV - HEMA VILASAGAR
JAL - JOHN A. LENT	JKT - JANE K. THOMPSON	JLS - JANICE L. SCHIMMEL
JNB - JOSHUA N. BOOTH	JWR - JOHN W. RICHARDS	JWS - JACK W. SHEAVES
JYH - JI Y. HU	KCZ - KEVIN C. ZUMBRO	KEB - KATHRYN E. BARNES
KHR - KIM H. RHODES	KRA - KATHY R. ALBERTSON	LKN - LINDA K. NEDEFF
LSB - LESLIE S. BUCINA	MDA - MIKE D. ALBERTSON	MDC - MICHAEL D. COCHRAN
MES - MARY E. SCHILLING	MKZ - MARILYN K. ZUMBRO	MLR - MARY L. ROCHOTTE
MLS - MICHAEL L. SCHIMMEL	MMB - MAREN M. BEERY	MSW - MATT S. WILSON
NJB - NATALIE J. BOOTH	OGT - OKEY G. TUCKER	PAS - PATRICK A. STREET
PJM - PAUL J. MILLER	RB - ROBERT BUCHANAN	RDC - REBECCA D. CUTLIP
REK - ROBERT E. KYER	RWC - RODNEY W. CAMPBELL	SCM - SUSAN C. MOELLENDICK
SLM - STEPHANIE L. MOSSBURG	SLP - SHERI L. PFALZGRAF	SMH - SHAUNA M. HYDE
TMB - TIFFANY M. BAILEY	TMM - TAMMY M. MORRIS	VC - VICKI COLLIER
WFM - WALTER F. MARTIN		

CHAIN OF CUSTODY

ACCUTEST Laboratories
10165 Harwin Drive, Ste. 150, Houston, TX 77036
TEL. 713-271-4700 FAX: 713-271-4770
www.accutest.com

FED-EX Tracking # | Bottle Order Control #
Accutest Quote # | Accutest Job #

Client / Reporting Information

Company Name: CH2M Hill
Address: 7600 W. Tidwell Rd ste 600
City: Houston State: TX Zip: 77040
Project Contact: John Yntante E-mail:
Phone #: 713-462-0161
Sampler's Name:

Project Information

Project Name: State Marine RI
Street:
City: State:
Project #: 344479.FI.01
Fax #: 713-462-0165
Client Purchase Order #:

Requested Analysis

Matrix Codes

DW - Drinking Water
GW - Ground Water
WW - Water
SW - Surface Water
SO - Soil
SL - Sludge
OI - Oil
LIQ - Other Liquid
AIR - Air
SOL - Other Solid
WP - Wipe

Accutest Sample #	Field ID / Point of Collection	SLMMA # / MEOH Vial #	Collection Date	Time	Sampled By	Matrix	# of bottles	Number of preserved Bottles: HCl	NaOH	HNO3	H2SO4	NONE	NaHSO4	MEOH	ENCORE	TCLP-SVOCs	TCLP-Pesticide	TCLP-Herbicide	TCLP-Metals	TPH (GRO-DRO) Tloos	TCLP-VOC (8260)						LAB USE ONLY
	FWGW01053106		05/31/06	1600	MH-VM	GW	12	5		1						2	1	2	1	3	2						

Turnaround Time (Business Days)

- ☐ 10 Day *STANDARD*
- ☐ 5 Day *RUSH*
- ☐ 3 Day *EMERGENCY*
- ☐ 2 Day *EMERGENCY*
- ☐ 1 Day *EMERGENCY*
- ☐ Other 14Day TAT

Approved By: / Date:

Emergency & Rush T/A data available VIA LabLink

Data Deliverable Information

- ☐ Commercial "A"
- ☐ Commercial "B"
- ☐ Reduced Tier 1
- ☐ Full Tier 1
- ☐ TRRP13
- ☐ EDD Format _____

Commercial "A" = Results Only

Comments / Remarks

C/C sealed, Sx's intact
Cooler temp = 2°
CHP

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Sampler:	Date Time:	Received by:	Relinquished by:	Date Time:	Received by:
1 Meredith C Harris	05/01/06 0900	1 Cara Strickler	2		2
3		3	4		4
5		5	Custody Seal #	Preserved where applicable ☐	On Ice ☐ Cooler Temp

12/06 1010

007468

SAMPLE RECEIPT FORM

156 STARLITE DRIVE
MARIETTA, OH
45750
(740) 373-4071

Date: 10/2/06 Client: CHamHill - State Maine

Shipped By: (✓) Fed-Ex ( ) UPS ( )DHL ( ) KEMRON ( ) Client ( ) Other 10.10

Opened By: CAD

Logged By: CAD Login # L06 10-049

IR Temp Gun: (✓) D ( ) F

COOLER INFORMATION

Number	Cooler ID	Temp °C	Airbill#	COC#	Other
1	1327	2	856431636826		
2					
3					
4					
5					
6					

Were all coolers sealed?	(Y)	N	N/A
Were custody seals used on all coolers?	(Y)	N	N/A
Were custody seals intact?	(Y)	N	N/A
Was visible ice present?	(Y)	N	N/A
Were all coolers in the temperature range of 2-6C? (>6C*)	(Y)	N	N/A
Were the samples frozen?*	Y	(N)	N/A
Were COC papers provided?	(Y)	N	N/A
Were all sample containers intact?*	(Y)	N	N/A
Were all sample labels intact?	(Y)	N	N/A
Were all sample labels legible?*	(Y)	N	N/A
Did all sample labels match the COC?*	(Y)	N	N/A
Was the label information complete?*	(Y)	N	N/A
Were the correct containers used?*	(Y)	N	N/A
Were the correct preservatives added to water samples?*	(Y)	N	N/A
Was the pH tested on preserved water samples?	(Y)	N	N/A
Were pH ranges acceptable?*	(Y)	N	N/A
Was sufficient amount of sample provided?*	(Y)	N	N/A
Were bubbles present in VOA samples?*	Y	(N)	N/A
Were COC's signed and dated?	(Y)	N	N/A
Did samples arrive before hold time expired?*	(Y)	N	N/A
Are discrepancy forms attached?	Y	N	(N/A)

Requires a discrepancy form

Comments:_____

CRF #1
Revised 8/22/03

007469

KEMRON Environmental Services
Internal Chain of Custody Report
Login: L0606049
Account: 2736
Project: 2736.035
Samples: 1
Due Date: 13-JUN-2006

Samplenum	Container ID	Products
L0606049-01	241992	8151-SPE

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish
1	LOGIN			02-JUN-2006 12:55	CLS	
2	PREP	W1	EXT	07-JUN-2006 07:21	CEB	CLS
3	DISP	EXT	DISP	09-JUN-2006 08:09	BRG	BRG

Bottle: 2

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish
1	LOGIN			02-JUN-2006 12:55	CLS	
2	STORE	W1	A1	13-JUN-2006 18:31	CSH	CSH

Samplenum	Container ID	Products
L0606049-01	241993	826-SPE

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish
1	LOGIN			02-JUN-2006 12:55	CLS	
2	ANALYZ	V1	ORG4	06-JUN-2006 10:27	CMS	CLS

Bottle: 2

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish
1	LOGIN			02-JUN-2006 12:55	CLS	
2	ANALYZ	V1	ORG4	06-JUN-2006 10:27	CMS	CLS

Samplenum	Container ID	Products
L0606049-01	241994	827-SPE2

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish
1	LOGIN			02-JUN-2006 12:55	CLS	
2	PREP	W1	EXT	05-JUN-2006 09:00	CEB	CLS
3	DISP	EXT	DISP	06-JUN-2006 07:02	BRG	BRG

Bottle: 2

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish
1	LOGIN			02-JUN-2006 12:55	CLS	
2	PREP	W1	EXT	06-JUN-2006 14:46	JKT	CEB
3	DISP	EXT	DISP	09-JUN-2006 08:09	BRG	BRG

KEMRON Environmental Services
Internal Chain of Custody Report
Login: L0606049
Account: 2736
Project: 2736.035
Samples: 1
Due Date: 13-JUN-2006

Samplenum	Container ID	Products
L0606049-01	241995	T1005

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish
1	LOGIN			02-JUN-2006 12:55	CLS	
2	PREP	V1	SEM	06-JUN-2006 08:03	HV	JKT

Bottle: 2

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish
1	LOGIN			02-JUN-2006 12:55	CLS	
2	PREP	V1	SEM	06-JUN-2006 08:03	HV	JKT

Bottle: 3

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish
1	LOGIN			02-JUN-2006 12:55	CLS	
2	PREP	V1	SEM	06-JUN-2006 08:03	HV	JKT

Samplenum	Container ID	Products
L0606049-01	241996	AG AS-AX BA CD CR HG PB-AX SE-MS

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish
1	LOGIN			02-JUN-2006 12:55	CLS	
2	PREP	W1	DIG	05-JUN-2006 06:44	EED	CLS
3	STORE	DIG	A1	05-JUN-2006 10:50	BRG	REK

Samplenum	Container ID	Products
L0606049-01	241997	8081-SPE

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish
1	LOGIN			02-JUN-2006 12:55	CLS	
2	PREP	W1	EXT	06-JUN-2006 06:38	CEB	CLS
3	DISP	EXT	DISP	09-JUN-2006 08:09	BRG	BRG

Bottle: 2

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish
1	LOGIN			02-JUN-2006 12:55	CLS	
2	PREP	W1	EXT	08-JUN-2006 14:21	CEB	CLS
3	DISP	EXT	DISP	09-JUN-2006 08:09	BRG	BRG

KEMRON REPORT L0606267
PREPARED FOR CH2MHILL, Inc
WORK ID: STATE MARINE SUPERFUND SITE

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156 Starlite Drive, Marietta, OH 45750 ● TEL 740-373-4071 ● FAX 740-373-4835 ● http://www.kemron.com

Laboratory Report Number: L0606267

Please find enclosed the analytical results for the samples you submitted to KEMRON Environmental Services.

Review and compilation of your report was completed by KEMRON's Sales and Service Team. If you have questions, comments or require further assistance regarding this report, please contact your team member noted in the reviewed box bleow at 800-373-4071. Team member e-mail addresses also appear here for your convenience.

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Kathy Albertson - Team Chemist/Data Specialist
kalbertson@kemron-lab.com

This report was reviewed on June 19, 2006.

CHERYL KOELSCH - Team Chemist/Data Specialist

I certify that all test results meet all of the requirements of the NELAP standards and other applicable contract terms and conditions. All results for soil samples are reported on a 'dry-weight' basis unless specified otherwise. Analytical results for water and wastes are reported on a 'as received' basis unless specified otherwise. A statement of uncertainty for each analysis is available upon request. This laboratory report shall not be reproduced, except in full, without the written approval of KEMRON Environmental Services.

This report was certified on June 19, 2006.

David Vandenberg - Vice President

FL DOH NELAP ID: E8755
This report contains a total of 287 pages.

Protecting Our Environmental Future

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1.0 Summary Report

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LABORATORY REPORT

L0606267

06/19/06 11:25

Submitted By

KEMRON Environmental Services
156 Starlite Drive
Marietta , OH 45750
(740) 373 - 4071

For

Account Name: CH2MHILL, Inc
7600 Tidwell Road
Suite 400
San Antonio, TX 77040
Attention: John Ynfante

Account Number: 2736
Work ID: STATE MARINE SUPERFUND SITE

P.O. Number: 915193

Sample Summary

Client ID	Lab ID	Date Collected	Date Received
A-SD-01	L0606267-01	08-JUN-06	10-JUN-06
B-SD-02	L0606267-02	08-JUN-06	10-JUN-06
C-SD-03	L0606267-03	08-JUN-06	10-JUN-06
D-SD-04	L0606267-04	08-JUN-06	10-JUN-06
E-SD-05	L0606267-05	08-JUN-06	10-JUN-06
F-SD-06	L0606267-06	08-JUN-06	10-JUN-06
G-SD-07	L0606267-07	09-JUN-06	10-JUN-06
H-SD-08	L0606267-08	09-JUN-06	10-JUN-06
I-SD-09	L0606267-09	09-JUN-06	10-JUN-06
FD-01	L0606267-10	09-JUN-06	10-JUN-06
C-SD-03-MS	L0606267-11	08-JUN-06	10-JUN-06
C-SD-03-MSD	L0606267-12	08-JUN-06	10-JUN-06

KEMRON FORMS - Modified 02/14/2006
Version 1.5 PDF File ID: 499829
Report generated 06/19/2006 11:25

007477

KEMRON ENVIRONMENTAL SERVICES
REPORT NARRATIVE

KEMRON Login No.: L0606267

CHAIN OF CUSTODY: The chain of custody was not numbered.

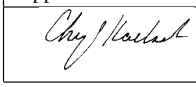
SHIPMENT CONDITIONS: The chain of custody forms were received sealed in a cooler. The cooler temperature was 2 degrees C.

SAMPLE MANAGEMENT: All samples received were intact.

L0606267-02	B-SD-02
L0606267-03	C-SD-03
L0606267-01	A-SD-01
L0606267-04	D-SD-04
L0606267-05	E-SD-05
L0606267-06	F-SD-06
L0606267-07	G-SD-07
L0606267-08	H-SD-08
L0606267-09	I-SD-09
L0606267-10	FD-01
L0606267-11	C-SD-03-MS
L0606267-12	C-SD-03-MSD

I certify that this data package is in compliance with the terms and conditions agreed to by the client and KEMRON Environmental Services, both technically and for completeness, except for the conditions noted above. Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or designated person, as verified by the following signature.

Approved: 13-JUN-06



1.1 Semivolatiles Data

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1.1.2 Semivolatiles GC/MS Data (8270)

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KEMRON ENVIRONMENTAL SERVICES
GC/MS SEMIVOLATILE ORGANICS

KEMRON Login No.: L0606267

METHOD

Preparation: Soils - SW-846 3545; Waters - SW-846 3510C or 3520C

Analysis: SW-846 8270C

HOLDING TIMES

Sample Preparation: All holding times were met.

Sample Analysis: All holding times were met.

PREPARATION

Sample preparation proceeded normally.

CALIBRATION

Initial Calibration: For all compounds which yielded a %RSD greater than 15%, linear or higher order equations were applied. All acceptance criteria were met.

Alternate Source Standards: All acceptance criteria were met.

Continuing Calibration and Tune: All acceptance criteria were met.

BATCH QA/QC

Method Blank: All acceptance criteria were met.

Laboratory Control Sample: All acceptance criteria were met.

Matrix Spikes: Sample 03 was chosen by the client for MS/MSD analysis. Sample 11 (MS) and 12 (MSD) yielded percent recoveries for hexachlorocyclopentadiene and 2,4-dinitrophenol that were below the lower advisory limits. All other acceptance criteria were met.

SAMPLES

Internal Standards: All acceptance criteria were met.

Surrogates: All acceptance criteria were met.

Samples: Sample 05 was initially analyzed at a 2x dilution due to sample viscosity. All acceptance criteria were met.

Manual Integration Reason Codes

KEMRON laboratory management has identified four general cases with valid reasons supporting the use of manual integration techniques.

Reason #1: Data System Fails to Select Correct Peak
In some cases the chromatography system selects and integrates the ”wrong peak”. In this case the analyst must correct the selection and force the system to integrate the proper peak. Other times the system may miss the peak completely.

Reason #2: Data System Splits the Peak Incorrectly or Integrates a False Peak as a Rider Peak.
This phenomena is common at low concentrations where the signal:noise ratio is low. A single compound (peak) is incorrectly split into multiple peaks or integrated as a main peak with one or more rider peaks resulting in low area counts for the target compound.

Reason #3: Improperly Integrated Isomers and/or coeluting compounds.
This system often fails to distinguish coeluting compounds and or isomers. The integration areas and concentrations are wrong, and they must be corrected by manual integration. Prime examples are benzo(k)fluoranthene and benzo(b)fluoranthene which are often unresolved and integrated improperly when both are present at low concentrations in standards or samples.

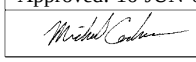
Reason #4: System Establishes Incorrect Baseline
There are numerous situations in chromatography where the system establishes the baseline incorrectly. Some baseline errors will be obvious to the analyst and should be corrected via manual procedures.

Reason #5: Miscellaneous
Other situations involving integration errors may require in-depth review and technical judgment. These cases should be brought to the attention of the laboratory management. If the form of manual integration is not clearly covered by these four cases, then review and approval by the Laboratory Director or the QA/QC Supervisor will be required.

I certify that this data package is in compliance with the terms and conditions agreed to by the client and KEMRON Environmental Services, both technically and for completeness, except for the conditions noted above. Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or designated person, as verified by the following signature.

Analyst: ALT

Approved: 16-JUN-06



LABORATORY REPORT

L0606267

06/19/06 11:25

Submitted By

KEMRON Environmental Services
156 Starlite Drive
Marietta , OH 45750
(740) 373 - 4071

For

Account Name: CH2MHILL, Inc
7600 Tidwell Road
Suite 400
San Antonio, TX 77040
Attention: John Ynfante

Account Number: 2736
Work ID: STATE MARINE SUPERFUND SITE

P.O. Number: 915193

Sample Analysis Summary

Client ID	Lab ID	Method	Dilution	Date Received
A-SD-01	L0606267-01	8270C	1	10-JUN-06
B-SD-02	L0606267-02	8270C	1	10-JUN-06
C-SD-03	L0606267-03	8270C	1	10-JUN-06
D-SD-04	L0606267-04	8270C	1	10-JUN-06
E-SD-05	L0606267-05	8270C	2	10-JUN-06
F-SD-06	L0606267-06	8270C	1	10-JUN-06
G-SD-07	L0606267-07	8270C	1	10-JUN-06
H-SD-08	L0606267-08	8270C	1	10-JUN-06
I-SD-09	L0606267-09	8270C	1	10-JUN-06
FD-01	L0606267-10	8270C	1	10-JUN-06
C-SD-03-MS	L0606267-11	8270C	1	10-JUN-06
C-SD-03-MSD	L0606267-12	8270C	1	10-JUN-06

Report Number: **L0606267**
Report Date : **June 19, 2006**

Sample Number: **L0606267-01**
Client ID: **A-SD-01**
Matrix: **Soil**
Workgroup Number: **WG215434**
Collect Date: **06/08/2006 11:00**
Sample Tag: **01**

PrePrep Method: **NONE**
Prep Method: **3545**
Analytical Method: **8270C**
Analyst: **ALT**
Dilution: **1**
Units: **ug/kg**

Instrument: **HPMS4**
Prep Date: **06/13/2006 12:45**
Cal Date: **05/10/2006 17:31**
Run Date: **06/15/2006 19:21**
File ID: **4M33343**
Percent Solid: **49.9**

Analyte	CAS. Number	Result	Qual	PQL	SQL
Benzaldehyde	100-52-7		U	331	165
Phenol	108-95-2		U	387	194
Bis(2-Chloroethyl)ether	111-44-4		U	387	194
2-Chlorophenol	95-57-8		U	387	194
2-Methylphenol	95-48-7		U	387	194
Acetophenone	98-86-2		U	387	194
bis(2-Chloroisopropyl)ether	39638-32-9		U	387	194
3-,4-Methylphenol	106-44-5		U	387	194
N-Nitroso-di-n-propylamine	621-64-7		U	387	194
Hexachloroethane	67-72-1		U	387	194
Nitrobenzene	98-95-3		U	387	194
Isophorone	78-59-1		U	387	194
2-Nitrophenol	88-75-5		U	387	194
2,4-Dimethylphenol	105-67-9		U	387	194
Bis(2-Chloroethoxy)Methane	111-91-1		U	387	194
2,4-Dichlorophenol	120-83-2		U	387	194
4-Chloroaniline	106-47-8		U	387	194
Hexachlorobutadiene	87-68-3		U	387	194
Caprolactam	105-60-2		U	331	165
4-Chloro-3-methylphenol	59-50-7		U	387	194
Hexachlorocyclopentadiene	77-47-4		U	387	194
2,4,6-Trichlorophenol	88-06-2		U	387	194
2,4,5-Trichlorophenol	95-95-4		U	387	194
1,1'-Biphenyl	92-52-4		U	331	165
2-Chloronaphthalene	91-58-7		U	387	194
2-Nitroaniline	88-74-4		U	1940	775
Dimethylphthalate	131-11-3		U	387	194
2,6-Dinitrotoluene	606-20-2		U	387	194
3-Nitroaniline	99-09-2		U	1940	775
2,4-Dinitrophenol	51-28-5		U	1940	775
4-Nitrophenol	100-02-7		U	1940	775
Dibenzofuran	132-64-9		U	387	194
2,4-Dinitrotoluene	121-14-2		U	387	194
Diethylphthalate	84-66-2		U	387	194
4-Chlorophenyl-phenyl ether	7005-72-3		U	387	194
4-Nitroaniline	100-01-6		U	1940	775
4,6-Dinitro-2-methylphenol	534-52-1		U	1940	775
N-Nitrosodiphenylamine	86-30-6		U	387	194
4-Bromophenyl-phenylether	101-55-3		U	387	194
Hexachlorobenzene	118-74-1		U	387	194
Atrazine	1912-24-9		U	331	165
Pentachlorophenol	87-86-5		U	1940	775
Carbazole	86-74-8		U	387	194
Di-N-Butylphthalate	84-74-2		U	387	194
Butylbenzylphthalate	85-68-7		U	387	194
3,3'-Dichlorobenzidine	91-94-1		U	775	387
bis(2-Ethylhexyl)phthalate	117-81-7		U	387	194
Di-n-octylphthalate	117-84-0		U	387	194

007486

Report Number: **L0606267**
Report Date : **June 19, 2006**

Sample Number: **L0606267-01**
Client ID: **A-SD-01**
Matrix: **Soil**
Workgroup Number: **WG215434**
Collect Date: **06/08/2006 11:00**
Sample Tag: **01**

PrePrep Method: **NONE**
Prep Method: **3545**
Analytical Method: **8270C**
Analyst: **ALT**
Dilution: **1**
Units: **ug/kg**

Instrument: **HPMS4**
Prep Date: **06/13/2006 12:45**
Cal Date: **05/10/2006 17:31**
Run Date: **06/15/2006 19:21**
File ID: **4M33343**
Percent Solid: **49.9**

Analyte	CAS. Number	Result	Qual	PQL	SQL
1,2,4,5-Tetrachlorobenzene	95-94-3		U	387	194

Surrogate	% Recovery	Lower	Upper	Qual
2-Fluorophenol	57.9	25	121	
Phenol-d5	64.3	24	113	
Nitrobenzene-d5	63.9	23	120	
2-Fluorobiphenyl	48.3	30	115	
2,4,6-Tribromophenol	70.3	19	122	
P-Terphenyl-d14	83.5	18	137	

U Not detected at or above the reporting limit

Report Number: **L0606267**
Report Date : **June 19, 2006**

Sample Number: **L0606267-02**
Client ID: **B-SD-02**
Matrix: **Soil**
Workgroup Number: **WG215434**
Collect Date: **06/08/2006 12:05**
Sample Tag: **01**

PrePrep Method: **NONE**
Prep Method: **3545**
Analytical Method: **8270C**
Analyst: **ALT**
Dilution: **1**
Units: **ug/kg**

Instrument: **HPMS4**
Prep Date: **06/13/2006 12:45**
Cal Date: **05/10/2006 17:31**
Run Date: **06/15/2006 20:31**
File ID: **4M33345**
Percent Solid: **59.7**

Analyte	CAS. Number	Result	Qual	PQL	SQL
Benzaldehyde	100-52-7		U	277	138
Phenol	108-95-2		U	325	163
Bis(2-Chloroethyl)ether	111-44-4		U	325	163
2-Chlorophenol	95-57-8		U	325	163
2-Methylphenol	95-48-7		U	325	163
Acetophenone	98-86-2		U	325	163
bis(2-Chloroisopropyl)ether	39638-32-9		U	325	163
3-,4-Methylphenol	106-44-5		U	325	163
N-Nitroso-di-n-propylamine	621-64-7		U	325	163
Hexachloroethane	67-72-1		U	325	163
Nitrobenzene	98-95-3		U	325	163
Isophorone	78-59-1		U	325	163
2-Nitrophenol	88-75-5		U	325	163
2,4-Dimethylphenol	105-67-9		U	325	163
Bis(2-Chloroethoxy)Methane	111-91-1		U	325	163
2,4-Dichlorophenol	120-83-2		U	325	163
4-Chloroaniline	106-47-8		U	325	163
Hexachlorobutadiene	87-68-3		U	325	163
Caprolactam	105-60-2		U	277	138
4-Chloro-3-methylphenol	59-50-7		U	325	163
Hexachlorocyclopentadiene	77-47-4		U	325	163
2,4,6-Trichlorophenol	88-06-2		U	325	163
2,4,5-Trichlorophenol	95-95-4		U	325	163
1,1'-Biphenyl	92-52-4		U	277	138
2-Chloronaphthalene	91-58-7		U	325	163
2-Nitroaniline	88-74-4		U	1630	650
Dimethylphthalate	131-11-3		U	325	163
2,6-Dinitrotoluene	606-20-2		U	325	163
3-Nitroaniline	99-09-2		U	1630	650
2,4-Dinitrophenol	51-28-5		U	1630	650
4-Nitrophenol	100-02-7		U	1630	650
Dibenzofuran	132-64-9		U	325	163
2,4-Dinitrotoluene	121-14-2		U	325	163
Diethylphthalate	84-66-2		U	325	163
4-Chlorophenyl-phenyl ether	7005-72-3		U	325	163
4-Nitroaniline	100-01-6		U	1630	650
4,6-Dinitro-2-methylphenol	534-52-1		U	1630	650
N-Nitrosodiphenylamine	86-30-6		U	325	163
4-Bromophenyl-phenylether	101-55-3		U	325	163
Hexachlorobenzene	118-74-1		U	325	163
Atrazine	1912-24-9		U	277	138
Pentachlorophenol	87-86-5		U	1630	650
Carbazole	86-74-8		U	325	163
Di-N-Butylphthalate	84-74-2		U	325	163
Butylbenzylphthalate	85-68-7		U	325	163
3,3'-Dichlorobenzidine	91-94-1		U	650	325
bis(2-Ethylhexyl)phthalate	117-81-7		U	325	163
Di-n-octylphthalate	117-84-0		U	325	163

Report Number: **L0606267**
Report Date : **June 19, 2006**

Sample Number: **L0606267-02**
Client ID: **B-SD-02**
Matrix: **Soil**
Workgroup Number: **WG215434**
Collect Date: **06/08/2006 12:05**
Sample Tag: **01**

PrePrep Method: **NONE**
Prep Method: **3545**
Analytical Method: **8270C**
Analyst: **ALT**
Dilution: **1**
Units: **ug/kg**

Instrument: **HPMS4**
Prep Date: **06/13/2006 12:45**
Cal Date: **05/10/2006 17:31**
Run Date: **06/15/2006 20:31**
File ID: **4M33345**
Percent Solid: **59.7**

Analyte	CAS. Number	Result	Qual	PQL	SQL
1,2,4,5-Tetrachlorobenzene	95-94-3		U	325	163

Surrogate	% Recovery	Lower	Upper	Qual
2-Fluorophenol	61.5	25	121	
Phenol-d5	67.7	24	113	
Nitrobenzene-d5	65.8	23	120	
2-Fluorobiphenyl	44.1	30	115	
2,4,6-Tribromophenol	73.3	19	122	
P-Terphenyl-d14	75.9	18	137	

U Not detected at or above the reporting limit

Report Number: **L0606267**
Report Date : **June 19, 2006**

Sample Number: **L0606267-03**
Client ID: **C-SD-03**
Matrix: **Soil**
Workgroup Number: **WG215434**
Collect Date: **06/08/2006 15:30**

PrePrep Method: **NONE**
Prep Method: **3545**
Analytical Method: **8270C**
Analyst: **ALT**
Dilution: **1**
Units: **ug/kg**

Instrument: **HPMS4**
Prep Date: **06/13/2006 12:45**
Cal Date: **05/10/2006 17:31**
Run Date: **06/15/2006 15:50**
File ID: **4M33337**
Percent Solid: **48.8**

Analyte	CAS. Number	Result	Qual	PQL	SQL
Benzaldehyde	100-52-7		U	338	169
Phenol	108-95-2		U	396	198
Bis(2-Chloroethyl)ether	111-44-4		U	396	198
2-Chlorophenol	95-57-8		U	396	198
2-Methylphenol	95-48-7		U	396	198
Acetophenone	98-86-2		U	396	198
bis(2-Chloroisopropyl)ether	39638-32-9		U	396	198
3-,4-Methylphenol	106-44-5		U	396	198
N-Nitroso-di-n-propylamine	621-64-7		U	396	198
Hexachloroethane	67-72-1		U	396	198
Nitrobenzene	98-95-3		U	396	198
Isophorone	78-59-1		U	396	198
2-Nitrophenol	88-75-5		U	396	198
2,4-Dimethylphenol	105-67-9		U	396	198
Bis(2-Chloroethoxy)Methane	111-91-1		U	396	198
2,4-Dichlorophenol	120-83-2		U	396	198
4-Chloroaniline	106-47-8		U	396	198
Hexachlorobutadiene	87-68-3		U	396	198
Caprolactam	105-60-2		U	338	169
4-Chloro-3-methylphenol	59-50-7		U	396	198
Hexachlorocyclopentadiene	77-47-4		U	396	198
2,4,6-Trichlorophenol	88-06-2		U	396	198
2,4,5-Trichlorophenol	95-95-4		U	396	198
1,1'-Biphenyl	92-52-4		U	338	169
2-Chloronaphthalene	91-58-7		U	396	198
2-Nitroaniline	88-74-4		U	1980	792
Dimethylphthalate	131-11-3		U	396	198
2,6-Dinitrotoluene	606-20-2		U	396	198
3-Nitroaniline	99-09-2		U	1980	792
2,4-Dinitrophenol	51-28-5		U	1980	792
4-Nitrophenol	100-02-7		U	1980	792
Dibenzofuran	132-64-9		U	396	198
2,4-Dinitrotoluene	121-14-2		U	396	198
Diethylphthalate	84-66-2		U	396	198
4-Chlorophenyl-phenyl ether	7005-72-3		U	396	198
4-Nitroaniline	100-01-6		U	1980	792
4,6-Dinitro-2-methylphenol	534-52-1		U	1980	792
N-Nitrosodiphenylamine	86-30-6		U	396	198
4-Bromophenyl-phenylether	101-55-3		U	396	198
Hexachlorobenzene	118-74-1		U	396	198
Atrazine	1912-24-9		U	338	169
Pentachlorophenol	87-86-5		U	1980	792
Carbazole	86-74-8		U	396	198
Di-N-Butylphthalate	84-74-2		U	396	198
Butylbenzylphthalate	85-68-7		U	396	198
3,3'-Dichlorobenzidine	91-94-1		U	792	396
bis(2-Ethylhexyl)phthalate	117-81-7		U	396	198
Di-n-octylphthalate	117-84-0		U	396	198

Report Number: **L0606267**
Report Date : **June 19, 2006**

Sample Number: **L0606267-03**
Client ID: **C-SD-03**
Matrix: **Soil**
Workgroup Number: **WG215434**
Collect Date: **06/08/2006 15:30**

PrePrep Method: **NONE**
Prep Method: **3545**
Analytical Method: **8270C**
Analyst: **ALT**
Dilution: **1**
Units: **ug/kg**

Instrument: **HPMS4**
Prep Date: **06/13/2006 12:45**
Cal Date: **05/10/2006 17:31**
Run Date: **06/15/2006 15:50**
File ID: **4M33337**
Percent Solid: **48.8**

Analyte	CAS. Number	Result	Qual	PQL	SQL
1,2,4,5-Tetrachlorobenzene	95-94-3		U	396	198

Surrogate	% Recovery	Lower	Upper	Qual
2-Fluorophenol	52.7	25	121	
Phenol-d5	57.8	24	113	
Nitrobenzene-d5	58.0	23	120	
2-Fluorobiphenyl	42.7	30	115	
2,4,6-Tribromophenol	59.9	19	122	
P-Terphenyl-d14	69.6	18	137	

U Not detected at or above the reporting limit

Report Number: **L0606267**
Report Date : **June 19, 2006**

Sample Number: **L0606267-04**
Client ID: **D-SD-04**
Matrix: **Soil**
Workgroup Number: **WG215434**
Collect Date: **06/08/2006 16:40**

PrePrep Method: **NONE**
Prep Method: **3545**
Analytical Method: **8270C**
Analyst: **ALT**
Dilution: **1**
Units: **ug/kg**

Instrument: **HPMS4**
Prep Date: **06/13/2006 12:45**
Cal Date: **05/10/2006 17:31**
Run Date: **06/15/2006 21:06**
File ID: **4M33346**
Percent Solid: **62.1**

Analyte	CAS. Number	Result	Qual	PQL	SQL
Benzaldehyde	100-52-7		U	266	133
Phenol	108-95-2		U	312	156
Bis(2-Chloroethyl)ether	111-44-4		U	312	156
2-Chlorophenol	95-57-8		U	312	156
2-Methylphenol	95-48-7		U	312	156
Acetophenone	98-86-2		U	312	156
bis(2-Chloroisopropyl)ether	39638-32-9		U	312	156
3-,4-Methylphenol	106-44-5		U	312	156
N-Nitroso-di-n-propylamine	621-64-7		U	312	156
Hexachloroethane	67-72-1		U	312	156
Nitrobenzene	98-95-3		U	312	156
Isophorone	78-59-1		U	312	156
2-Nitrophenol	88-75-5		U	312	156
2,4-Dimethylphenol	105-67-9		U	312	156
Bis(2-Chloroethoxy)Methane	111-91-1		U	312	156
2,4-Dichlorophenol	120-83-2		U	312	156
4-Chloroaniline	106-47-8		U	312	156
Hexachlorobutadiene	87-68-3		U	312	156
Caprolactam	105-60-2		U	266	133
4-Chloro-3-methylphenol	59-50-7		U	312	156
Hexachlorocyclopentadiene	77-47-4		U	312	156
2,4,6-Trichlorophenol	88-06-2		U	312	156
2,4,5-Trichlorophenol	95-95-4		U	312	156
1,1'-Biphenyl	92-52-4		U	266	133
2-Chloronaphthalene	91-58-7		U	312	156
2-Nitroaniline	88-74-4		U	1560	625
Dimethylphthalate	131-11-3		U	312	156
2,6-Dinitrotoluene	606-20-2		U	312	156
3-Nitroaniline	99-09-2		U	1560	625
2,4-Dinitrophenol	51-28-5		U	1560	625
4-Nitrophenol	100-02-7		U	1560	625
Dibenzofuran	132-64-9		U	312	156
2,4-Dinitrotoluene	121-14-2		U	312	156
Diethylphthalate	84-66-2		U	312	156
4-Chlorophenyl-phenyl ether	7005-72-3		U	312	156
4-Nitroaniline	100-01-6		U	1560	625
4,6-Dinitro-2-methylphenol	534-52-1		U	1560	625
N-Nitrosodiphenylamine	86-30-6		U	312	156
4-Bromophenyl-phenylether	101-55-3		U	312	156
Hexachlorobenzene	118-74-1		U	312	156
Atrazine	1912-24-9		U	266	133
Pentachlorophenol	87-86-5		U	1560	625
Carbazole	86-74-8		U	312	156
Di-N-Butylphthalate	84-74-2		U	312	156
Butylbenzylphthalate	85-68-7		U	312	156
3,3'-Dichlorobenzidine	91-94-1		U	625	312
bis(2-Ethylhexyl)phthalate	117-81-7		U	312	156
Di-n-octylphthalate	117-84-0		U	312	156

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Report Number: **L0606267**
Report Date : **June 19, 2006**

Sample Number: **L0606267-04**
Client ID: **D-SD-04**
Matrix: **Soil**
Workgroup Number: **WG215434**
Collect Date: **06/08/2006 16:40**

PrePrep Method: **NONE**
Prep Method: **3545**
Analytical Method: **8270C**
Analyst: **ALT**
Dilution: **1**
Units: **ug/kg**

Instrument: **HPMS4**
Prep Date: **06/13/2006 12:45**
Cal Date: **05/10/2006 17:31**
Run Date: **06/15/2006 21:06**
File ID: **4M33346**
Percent Solid: **62.1**

Analyte	CAS. Number	Result	Qual	PQL	SQL
1,2,4,5-Tetrachlorobenzene	95-94-3		U	312	156

Surrogate	% Recovery	Lower	Upper	Qual
2-Fluorophenol	61.0	25	121	
Phenol-d5	66.4	24	113	
Nitrobenzene-d5	66.3	23	120	
2-Fluorobiphenyl	53.9	30	115	
2,4,6-Tribromophenol	76.2	19	122	
P-Terphenyl-d14	97.7	18	137	

U Not detected at or above the reporting limit

Report Number: **L0606267**
Report Date : **June 19, 2006**

Sample Number: **L0606267-05**
Client ID: **E-SD-05**
Matrix: **Soil**
Workgroup Number: **WG215434**
Collect Date: **06/08/2006 14:20**
Sample Tag: **DL**

PrePrep Method: **NONE**
Prep Method: **3545**
Analytical Method: **8270C**
Analyst: **ALT**
Dilution: **2**
Units: **ug/kg**

Instrument: **HPMS4**
Prep Date: **06/13/2006 12:45**
Cal Date: **05/10/2006 17:31**
Run Date: **06/15/2006 22:17**
File ID: **4M33348**
Percent Solid: **74.8**

Analyte	CAS. Number	Result	Qual	PQL	SQL
Benzaldehyde	100-52-7		U	441	220
Phenol	108-95-2		U	516	258
Bis(2-Chloroethyl)ether	111-44-4		U	516	258
2-Chlorophenol	95-57-8		U	516	258
2-Methylphenol	95-48-7		U	516	258
Acetophenone	98-86-2		U	516	258
bis(2-Chloroisopropyl)ether	39638-32-9		U	516	258
3-,4-Methylphenol	106-44-5		U	516	258
N-Nitroso-di-n-propylamine	621-64-7		U	516	258
Hexachloroethane	67-72-1		U	516	258
Nitrobenzene	98-95-3		U	516	258
Isophorone	78-59-1		U	516	258
2-Nitrophenol	88-75-5		U	516	258
2,4-Dimethylphenol	105-67-9		U	516	258
Bis(2-Chloroethoxy)Methane	111-91-1		U	516	258
2,4-Dichlorophenol	120-83-2		U	516	258
4-Chloroaniline	106-47-8		U	516	258
Hexachlorobutadiene	87-68-3		U	516	258
Caprolactam	105-60-2		U	441	220
4-Chloro-3-methylphenol	59-50-7		U	516	258
Hexachlorocyclopentadiene	77-47-4		U	516	258
2,4,6-Trichlorophenol	88-06-2		U	516	258
2,4,5-Trichlorophenol	95-95-4		U	516	258
1,1'-Biphenyl	92-52-4		U	441	220
2-Chloronaphthalene	91-58-7		U	516	258
2-Nitroaniline	88-74-4		U	2580	1030
Dimethylphthalate	131-11-3		U	516	258
2,6-Dinitrotoluene	606-20-2		U	516	258
3-Nitroaniline	99-09-2		U	2580	1030
2,4-Dinitrophenol	51-28-5		U	2580	1030
4-Nitrophenol	100-02-7		U	2580	1030
Dibenzofuran	132-64-9		U	516	258
2,4-Dinitrotoluene	121-14-2		U	516	258
Diethylphthalate	84-66-2		U	516	258
4-Chlorophenyl-phenyl ether	7005-72-3		U	516	258
4-Nitroaniline	100-01-6		U	2580	1030
4,6-Dinitro-2-methylphenol	534-52-1		U	2580	1030
N-Nitrosodiphenylamine	86-30-6		U	516	258
4-Bromophenyl-phenylether	101-55-3		U	516	258
Hexachlorobenzene	118-74-1		U	516	258
Atrazine	1912-24-9		U	441	220
Pentachlorophenol	87-86-5		U	2580	1030
Carbazole	86-74-8		U	516	258
Di-N-Butylphthalate	84-74-2		U	516	258
Butylbenzylphthalate	85-68-7		U	516	258
3,3'-Dichlorobenzidine	91-94-1		U	1030	516
bis(2-Ethylhexyl)phthalate	117-81-7		U	516	258
Di-n-octylphthalate	117-84-0		U	516	258

Report Number: **L0606267**
Report Date : **June 19, 2006**

Sample Number: **L0606267-05**
Client ID: **E-SD-05**
Matrix: **Soil**
Workgroup Number: **WG215434**
Collect Date: **06/08/2006 14:20**
Sample Tag: **DL**

PrePrep Method: **NONE**
Prep Method: **3545**
Analytical Method: **8270C**
Analyst: **ALT**
Dilution: **2**
Units: **ug/kg**

Instrument: **HPMS4**
Prep Date: **06/13/2006 12:45**
Cal Date: **05/10/2006 17:31**
Run Date: **06/15/2006 22:17**
File ID: **4M33348**
Percent Solid: **74.8**

Analyte	CAS. Number	Result	Qual	PQL	SQL
1,2,4,5-Tetrachlorobenzene	95-94-3		U	516	258

Surrogate	% Recovery	Lower	Upper	Qual
2-Fluorophenol	67.3	25	121	
Phenol-d5	75.4	24	113	
Nitrobenzene-d5	73.5	23	120	
2-Fluorobiphenyl	72.8	30	115	
2,4,6-Tribromophenol	85.9	19	122	
P-Terphenyl-d14	106	18	137	

U Not detected at or above the reporting limit

Report Number: **L0606267**
Report Date : **June 19, 2006**

Sample Number: **L0606267-06**
Client ID: **F-SD-06**
Matrix: **Soil**
Workgroup Number: **WG215434**
Collect Date: **06/08/2006 17:25**

PrePrep Method: **NONE**
Prep Method: **3545**
Analytical Method: **8270C**
Analyst: **ALT**
Dilution: **1**
Units: **ug/kg**

Instrument: **HPMS4**
Prep Date: **06/13/2006 12:45**
Cal Date: **05/10/2006 17:31**
Run Date: **06/15/2006 21:41**
File ID: **4M33347**
Percent Solid: **72.4**

Analyte	CAS. Number	Result	Qual	PQL	SQL
Benzaldehyde	100-52-7		U	228	114
Phenol	108-95-2		U	268	134
Bis(2-Chloroethyl)ether	111-44-4		U	268	134
2-Chlorophenol	95-57-8		U	268	134
2-Methylphenol	95-48-7		U	268	134
Acetophenone	98-86-2		U	268	134
bis(2-Chloroisopropyl)ether	39638-32-9		U	268	134
3-,4-Methylphenol	106-44-5		U	268	134
N-Nitroso-di-n-propylamine	621-64-7		U	268	134
Hexachloroethane	67-72-1		U	268	134
Nitrobenzene	98-95-3		U	268	134
Isophorone	78-59-1		U	268	134
2-Nitrophenol	88-75-5		U	268	134
2,4-Dimethylphenol	105-67-9		U	268	134
Bis(2-Chloroethoxy)Methane	111-91-1		U	268	134
2,4-Dichlorophenol	120-83-2		U	268	134
4-Chloroaniline	106-47-8		U	268	134
Hexachlorobutadiene	87-68-3		U	268	134
Caprolactam	105-60-2		U	228	114
4-Chloro-3-methylphenol	59-50-7		U	268	134
Hexachlorocyclopentadiene	77-47-4		U	268	134
2,4,6-Trichlorophenol	88-06-2		U	268	134
2,4,5-Trichlorophenol	95-95-4		U	268	134
1,1'-Biphenyl	92-52-4		U	228	114
2-Chloronaphthalene	91-58-7		U	268	134
2-Nitroaniline	88-74-4		U	1340	535
Dimethylphthalate	131-11-3		U	268	134
2,6-Dinitrotoluene	606-20-2		U	268	134
3-Nitroaniline	99-09-2		U	1340	535
2,4-Dinitrophenol	51-28-5		U	1340	535
4-Nitrophenol	100-02-7		U	1340	535
Dibenzofuran	132-64-9		U	268	134
2,4-Dinitrotoluene	121-14-2		U	268	134
Diethylphthalate	84-66-2		U	268	134
4-Chlorophenyl-phenyl ether	7005-72-3		U	268	134
4-Nitroaniline	100-01-6		U	1340	535
4,6-Dinitro-2-methylphenol	534-52-1		U	1340	535
N-Nitrosodiphenylamine	86-30-6		U	268	134
4-Bromophenyl-phenylether	101-55-3		U	268	134
Hexachlorobenzene	118-74-1		U	268	134
Atrazine	1912-24-9		U	228	114
Pentachlorophenol	87-86-5		U	1340	535
Carbazole	86-74-8		U	268	134
Di-N-Butylphthalate	84-74-2		U	268	134
Butylbenzylphthalate	85-68-7		U	268	134
3,3'-Dichlorobenzidine	91-94-1		U	535	268
bis(2-Ethylhexyl)phthalate	117-81-7		U	268	134
Di-n-octylphthalate	117-84-0		U	268	134

Report Number: **L0606267**
Report Date : **June 19, 2006**

Sample Number: **L0606267-06**
Client ID: **F-SD-06**
Matrix: **Soil**
Workgroup Number: **WG215434**
Collect Date: **06/08/2006 17:25**

PrePrep Method: **NONE**
Prep Method: **3545**
Analytical Method: **8270C**
Analyst: **ALT**
Dilution: **1**
Units: **ug/kg**

Instrument: **HPMS4**
Prep Date: **06/13/2006 12:45**
Cal Date: **05/10/2006 17:31**
Run Date: **06/15/2006 21:41**
File ID: **4M33347**
Percent Solid: **72.4**

Analyte	CAS. Number	Result	Qual	PQL	SQL
1,2,4,5-Tetrachlorobenzene	95-94-3		U	268	134

Surrogate	% Recovery	Lower	Upper	Qual
2-Fluorophenol	62.2	25	121	
Phenol-d5	69.7	24	113	
Nitrobenzene-d5	66.8	23	120	
2-Fluorobiphenyl	57.8	30	115	
2,4,6-Tribromophenol	80.6	19	122	
P-Terphenyl-d14	95.4	18	137	

U Not detected at or above the reporting limit

Report Number: **L0606267**
Report Date : **June 19, 2006**

Sample Number: **L0606267-07**
Client ID: **G-SD-07**
Matrix: **Soil**
Workgroup Number: **WG215434**
Collect Date: **06/09/2006 10:50**

PrePrep Method: **NONE**
Prep Method: **3545**
Analytical Method: **8270C**
Analyst: **ALT**
Dilution: **1**
Units: **ug/kg**

Instrument: **HPMS4**
Prep Date: **06/13/2006 12:45**
Cal Date: **05/10/2006 17:31**
Run Date: **06/15/2006 17:35**
File ID: **4M33340**
Percent Solid: **51.8**

Analyte	CAS. Number	Result	Qual	PQL	SQL
Benzaldehyde	100-52-7		U	318	159
Phenol	108-95-2		U	372	186
Bis(2-Chloroethyl)ether	111-44-4		U	372	186
2-Chlorophenol	95-57-8		U	372	186
2-Methylphenol	95-48-7		U	372	186
Acetophenone	98-86-2		U	372	186
bis(2-Chloroisopropyl)ether	39638-32-9		U	372	186
3-,4-Methylphenol	106-44-5		U	372	186
N-Nitroso-di-n-propylamine	621-64-7		U	372	186
Hexachloroethane	67-72-1		U	372	186
Nitrobenzene	98-95-3		U	372	186
Isophorone	78-59-1		U	372	186
2-Nitrophenol	88-75-5		U	372	186
2,4-Dimethylphenol	105-67-9		U	372	186
Bis(2-Chloroethoxy)Methane	111-91-1		U	372	186
2,4-Dichlorophenol	120-83-2		U	372	186
4-Chloroaniline	106-47-8		U	372	186
Hexachlorobutadiene	87-68-3		U	372	186
Caprolactam	105-60-2		U	318	159
4-Chloro-3-methylphenol	59-50-7		U	372	186
Hexachlorocyclopentadiene	77-47-4		U	372	186
2,4,6-Trichlorophenol	88-06-2		U	372	186
2,4,5-Trichlorophenol	95-95-4		U	372	186
1,1'-Biphenyl	92-52-4		U	318	159
2-Chloronaphthalene	91-58-7		U	372	186
2-Nitroaniline	88-74-4		U	1860	745
Dimethylphthalate	131-11-3		U	372	186
2,6-Dinitrotoluene	606-20-2		U	372	186
3-Nitroaniline	99-09-2		U	1860	745
2,4-Dinitrophenol	51-28-5		U	1860	745
4-Nitrophenol	100-02-7		U	1860	745
Dibenzofuran	132-64-9		U	372	186
2,4-Dinitrotoluene	121-14-2		U	372	186
Diethylphthalate	84-66-2		U	372	186
4-Chlorophenyl-phenyl ether	7005-72-3		U	372	186
4-Nitroaniline	100-01-6		U	1860	745
4,6-Dinitro-2-methylphenol	534-52-1		U	1860	745
N-Nitrosodiphenylamine	86-30-6		U	372	186
4-Bromophenyl-phenylether	101-55-3		U	372	186
Hexachlorobenzene	118-74-1		U	372	186
Atrazine	1912-24-9		U	318	159
Pentachlorophenol	87-86-5		U	1860	745
Carbazole	86-74-8		U	372	186
Di-N-Butylphthalate	84-74-2		U	372	186
Butylbenzylphthalate	85-68-7		U	372	186
3,3'-Dichlorobenzidine	91-94-1		U	745	372
bis(2-Ethylhexyl)phthalate	117-81-7		U	372	186
Di-n-octylphthalate	117-84-0		U	372	186

Report Number: **L0606267**
Report Date : **June 19, 2006**

Sample Number: **L0606267-07**
Client ID: **G-SD-07**
Matrix: **Soil**
Workgroup Number: **WG215434**
Collect Date: **06/09/2006 10:50**

PrePrep Method: **NONE**
Prep Method: **3545**
Analytical Method: **8270C**
Analyst: **ALT**
Dilution: **1**
Units: **ug/kg**

Instrument: **HPMS4**
Prep Date: **06/13/2006 12:45**
Cal Date: **05/10/2006 17:31**
Run Date: **06/15/2006 17:35**
File ID: **4M33340**
Percent Solid: **51.8**

Analyte	CAS. Number	Result	Qual	PQL	SQL
1,2,4,5-Tetrachlorobenzene	95-94-3		U	372	186

Surrogate	% Recovery	Lower	Upper	Qual
2-Fluorophenol	48.9	25	121	
Phenol-d5	54.6	24	113	
Nitrobenzene-d5	54.3	23	120	
2-Fluorobiphenyl	31.3	30	115	
2,4,6-Tribromophenol	57.5	19	122	
P-Terphenyl-d14	76.8	18	137	

U Not detected at or above the reporting limit

Report Number: **L0606267**
Report Date : **June 19, 2006**

Sample Number: **L0606267-08**
Client ID: **H-SD-08**
Matrix: **Soil**
Workgroup Number: **WG215434**
Collect Date: **06/09/2006 10:15**

PrePrep Method: **NONE**
Prep Method: **3545**
Analytical Method: **8270C**
Analyst: **ALT**
Dilution: **1**
Units: **ug/kg**

Instrument: **HPMS4**
Prep Date: **06/13/2006 12:45**
Cal Date: **05/10/2006 17:31**
Run Date: **06/15/2006 18:10**
File ID: **4M33341**
Percent Solid: **56.6**

Analyte	CAS. Number	Result	Qual	PQL	SQL
Benzaldehyde	100-52-7		U	291	146
Phenol	108-95-2		U	341	170
Bis(2-Chloroethyl)ether	111-44-4		U	341	170
2-Chlorophenol	95-57-8		U	341	170
2-Methylphenol	95-48-7		U	341	170
Acetophenone	98-86-2		U	341	170
bis(2-Chloroisopropyl)ether	39638-32-9		U	341	170
3-,4-Methylphenol	106-44-5		U	341	170
N-Nitroso-di-n-propylamine	621-64-7		U	341	170
Hexachloroethane	67-72-1		U	341	170
Nitrobenzene	98-95-3		U	341	170
Isophorone	78-59-1		U	341	170
2-Nitrophenol	88-75-5		U	341	170
2,4-Dimethylphenol	105-67-9		U	341	170
Bis(2-Chloroethoxy)Methane	111-91-1		U	341	170
2,4-Dichlorophenol	120-83-2		U	341	170
4-Chloroaniline	106-47-8		U	341	170
Hexachlorobutadiene	87-68-3		U	341	170
Caprolactam	105-60-2		U	291	146
4-Chloro-3-methylphenol	59-50-7		U	341	170
Hexachlorocyclopentadiene	77-47-4		U	341	170
2,4,6-Trichlorophenol	88-06-2		U	341	170
2,4,5-Trichlorophenol	95-95-4		U	341	170
1,1'-Biphenyl	92-52-4		U	291	146
2-Chloronaphthalene	91-58-7		U	341	170
2-Nitroaniline	88-74-4		U	1700	682
Dimethylphthalate	131-11-3		U	341	170
2,6-Dinitrotoluene	606-20-2		U	341	170
3-Nitroaniline	99-09-2		U	1700	682
2,4-Dinitrophenol	51-28-5		U	1700	682
4-Nitrophenol	100-02-7		U	1700	682
Dibenzofuran	132-64-9		U	341	170
2,4-Dinitrotoluene	121-14-2		U	341	170
Diethylphthalate	84-66-2		U	341	170
4-Chlorophenyl-phenyl ether	7005-72-3		U	341	170
4-Nitroaniline	100-01-6		U	1700	682
4,6-Dinitro-2-methylphenol	534-52-1		U	1700	682
N-Nitrosodiphenylamine	86-30-6		U	341	170
4-Bromophenyl-phenylether	101-55-3		U	341	170
Hexachlorobenzene	118-74-1		U	341	170
Atrazine	1912-24-9		U	291	146
Pentachlorophenol	87-86-5		U	1700	682
Carbazole	86-74-8		U	341	170
Di-N-Butylphthalate	84-74-2		U	341	170
Butylbenzylphthalate	85-68-7		U	341	170
3,3'-Dichlorobenzidine	91-94-1		U	682	341
bis(2-Ethylhexyl)phthalate	117-81-7		U	341	170
Di-n-octylphthalate	117-84-0		U	341	170

Report Number: **L0606267**
Report Date : **June 19, 2006**

Sample Number: **L0606267-08**
Client ID: **H-SD-08**
Matrix: **Soil**
Workgroup Number: **WG215434**
Collect Date: **06/09/2006 10:15**

PrePrep Method: **NONE**
Prep Method: **3545**
Analytical Method: **8270C**
Analyst: **ALT**
Dilution: **1**
Units: **ug/kg**

Instrument: **HPMS4**
Prep Date: **06/13/2006 12:45**
Cal Date: **05/10/2006 17:31**
Run Date: **06/15/2006 18:10**
File ID: **4M33341**
Percent Solid: **56.6**

Analyte	CAS. Number	Result	Qual	PQL	SQL
1,2,4,5-Tetrachlorobenzene	95-94-3		U	341	170

Surrogate	% Recovery	Lower	Upper	Qual
2-Fluorophenol	56.5	25	121	
Phenol-d5	62.5	24	113	
Nitrobenzene-d5	60.4	23	120	
2-Fluorobiphenyl	43.9	30	115	
2,4,6-Tribromophenol	55.9	19	122	
P-Terphenyl-d14	75.7	18	137	

U Not detected at or above the reporting limit

Report Number: **L0606267**
Report Date : **June 19, 2006**

Sample Number: **L0606267-09**
Client ID: **I-SD-09**
Matrix: **Soil**
Workgroup Number: **WG215434**
Collect Date: **06/09/2006 11:45**

PrePrep Method: **NONE**
Prep Method: **3545**
Analytical Method: **8270C**
Analyst: **ALT**
Dilution: **1**
Units: **ug/kg**

Instrument: **HPMS4**
Prep Date: **06/13/2006 12:45**
Cal Date: **05/10/2006 17:31**
Run Date: **06/15/2006 19:56**
File ID: **4M33344**
Percent Solid: **77.3**

Analyte	CAS. Number	Result	Qual	PQL	SQL
Benzaldehyde	100-52-7		U	214	107
Phenol	108-95-2		U	248	124
Bis(2-Chloroethyl)ether	111-44-4		U	248	124
2-Chlorophenol	95-57-8		U	248	124
2-Methylphenol	95-48-7		U	248	124
Acetophenone	98-86-2		U	248	124
bis(2-Chloroisopropyl)ether	39638-32-9		U	248	124
3-,4-Methylphenol	106-44-5		U	248	124
N-Nitroso-di-n-propylamine	621-64-7		U	248	124
Hexachloroethane	67-72-1		U	248	124
Nitrobenzene	98-95-3		U	248	124
Isophorone	78-59-1		U	248	124
2-Nitrophenol	88-75-5		U	248	124
2,4-Dimethylphenol	105-67-9		U	248	124
Bis(2-Chloroethoxy)Methane	111-91-1		U	248	124
2,4-Dichlorophenol	120-83-2		U	248	124
4-Chloroaniline	106-47-8		U	248	124
Hexachlorobutadiene	87-68-3		U	248	124
Caprolactam	105-60-2		U	214	107
4-Chloro-3-methylphenol	59-50-7		U	248	124
Hexachlorocyclopentadiene	77-47-4		U	248	124
2,4,6-Trichlorophenol	88-06-2		U	248	124
2,4,5-Trichlorophenol	95-95-4		U	248	124
1,1'-Biphenyl	92-52-4		U	214	107
2-Chloronaphthalene	91-58-7		U	248	124
2-Nitroaniline	88-74-4		U	1240	495
Dimethylphthalate	131-11-3		U	248	124
2,6-Dinitrotoluene	606-20-2		U	248	124
3-Nitroaniline	99-09-2		U	1240	495
2,4-Dinitrophenol	51-28-5		U	1240	495
4-Nitrophenol	100-02-7		U	1240	495
Dibenzofuran	132-64-9		U	248	124
2,4-Dinitrotoluene	121-14-2		U	248	124
Diethylphthalate	84-66-2		U	248	124
4-Chlorophenyl-phenyl ether	7005-72-3		U	248	124
4-Nitroaniline	100-01-6		U	1240	495
4,6-Dinitro-2-methylphenol	534-52-1		U	1240	495
N-Nitrosodiphenylamine	86-30-6		U	248	124
4-Bromophenyl-phenylether	101-55-3		U	248	124
Hexachlorobenzene	118-74-1		U	248	124
Atrazine	1912-24-9		U	214	107
Pentachlorophenol	87-86-5		U	1240	495
Carbazole	86-74-8		U	248	124
Di-N-Butylphthalate	84-74-2		U	248	124
Butylbenzylphthalate	85-68-7		U	248	124
3,3'-Dichlorobenzidine	91-94-1		U	495	248
bis(2-Ethylhexyl)phthalate	117-81-7		U	248	124
Di-n-octylphthalate	117-84-0		U	248	124

Report Number: **L0606267**
Report Date : **June 19, 2006**

Sample Number: **L0606267-09**
Client ID: **I-SD-09**
Matrix: **Soil**
Workgroup Number: **WG215434**
Collect Date: **06/09/2006 11:45**

PrePrep Method: **NONE**
Prep Method: **3545**
Analytical Method: **8270C**
Analyst: **ALT**
Dilution: **1**
Units: **ug/kg**

Instrument: **HPMS4**
Prep Date: **06/13/2006 12:45**
Cal Date: **05/10/2006 17:31**
Run Date: **06/15/2006 19:56**
File ID: **4M33344**
Percent Solid: **77.3**

Analyte	CAS. Number	Result	Qual	PQL	SQL
1,2,4,5-Tetrachlorobenzene	95-94-3		U	248	124

Surrogate	% Recovery	Lower	Upper	Qual
2-Fluorophenol	58.0	25	121	
Phenol-d5	63.4	24	113	
Nitrobenzene-d5	62.8	23	120	
2-Fluorobiphenyl	56.2	30	115	
2,4,6-Tribromophenol	59.4	19	122	
P-Terphenyl-d14	83.7	18	137	

U Not detected at or above the reporting limit

Report Number: **L0606267**
Report Date : **June 19, 2006**

Sample Number: **L0606267-10**
Client ID: **FD-01**
Matrix: **Soil**
Workgroup Number: **WG215434**
Collect Date: **06/09/2006 10:15**

PrePrep Method: **NONE**
Prep Method: **3545**
Analytical Method: **8270C**
Analyst: **ALT**
Dilution: **1**
Units: **ug/kg**

Instrument: **HPMS4**
Prep Date: **06/13/2006 12:45**
Cal Date: **05/10/2006 17:31**
Run Date: **06/15/2006 18:46**
File ID: **4M33342**
Percent Solid: **56.6**

Analyte	CAS. Number	Result	Qual	PQL	SQL
Benzaldehyde	100-52-7		U	291	146
Phenol	108-95-2		U	340	170
Bis(2-Chloroethyl)ether	111-44-4		U	340	170
2-Chlorophenol	95-57-8		U	340	170
2-Methylphenol	95-48-7		U	340	170
Acetophenone	98-86-2		U	340	170
bis(2-Chloroisopropyl)ether	39638-32-9		U	340	170
3-,4-Methylphenol	106-44-5		U	340	170
N-Nitroso-di-n-propylamine	621-64-7		U	340	170
Hexachloroethane	67-72-1		U	340	170
Nitrobenzene	98-95-3		U	340	170
Isophorone	78-59-1		U	340	170
2-Nitrophenol	88-75-5		U	340	170
2,4-Dimethylphenol	105-67-9		U	340	170
Bis(2-Chloroethoxy)Methane	111-91-1		U	340	170
2,4-Dichlorophenol	120-83-2		U	340	170
4-Chloroaniline	106-47-8		U	340	170
Hexachlorobutadiene	87-68-3		U	340	170
Caprolactam	105-60-2		U	291	146
4-Chloro-3-methylphenol	59-50-7		U	340	170
Hexachlorocyclopentadiene	77-47-4		U	340	170
2,4,6-Trichlorophenol	88-06-2		U	340	170
2,4,5-Trichlorophenol	95-95-4		U	340	170
1,1'-Biphenyl	92-52-4		U	291	146
2-Chloronaphthalene	91-58-7		U	340	170
2-Nitroaniline	88-74-4		U	1700	680
Dimethylphthalate	131-11-3		U	340	170
2,6-Dinitrotoluene	606-20-2		U	340	170
3-Nitroaniline	99-09-2		U	1700	680
2,4-Dinitrophenol	51-28-5		U	1700	680
4-Nitrophenol	100-02-7		U	1700	680
Dibenzofuran	132-64-9		U	340	170
2,4-Dinitrotoluene	121-14-2		U	340	170
Diethylphthalate	84-66-2		U	340	170
4-Chlorophenyl-phenyl ether	7005-72-3		U	340	170
4-Nitroaniline	100-01-6		U	1700	680
4,6-Dinitro-2-methylphenol	534-52-1		U	1700	680
N-Nitrosodiphenylamine	86-30-6		U	340	170
4-Bromophenyl-phenylether	101-55-3		U	340	170
Hexachlorobenzene	118-74-1		U	340	170
Atrazine	1912-24-9		U	291	146
Pentachlorophenol	87-86-5		U	1700	680
Carbazole	86-74-8		U	340	170
Di-N-Butylphthalate	84-74-2		U	340	170
Butylbenzylphthalate	85-68-7		U	340	170
3,3'-Dichlorobenzidine	91-94-1		U	680	340
bis(2-Ethylhexyl)phthalate	117-81-7		U	340	170
Di-n-octylphthalate	117-84-0		U	340	170

Report Number: **L0606267**
Report Date : **June 19, 2006**

Sample Number: **L0606267-10**
Client ID: **FD-01**
Matrix: **Soil**
Workgroup Number: **WG215434**
Collect Date: **06/09/2006 10:15**

PrePrep Method: **NONE**
Prep Method: **3545**
Analytical Method: **8270C**
Analyst: **ALT**
Dilution: **1**
Units: **ug/kg**

Instrument: **HPMS4**
Prep Date: **06/13/2006 12:45**
Cal Date: **05/10/2006 17:31**
Run Date: **06/15/2006 18:46**
File ID: **4M33342**
Percent Solid: **56.6**

Analyte	CAS. Number	Result	Qual	PQL	SQL
1,2,4,5-Tetrachlorobenzene	95-94-3		U	340	170

Surrogate	% Recovery	Lower	Upper	Qual
2-Fluorophenol	61.0	25	121	
Phenol-d5	67.3	24	113	
Nitrobenzene-d5	63.7	23	120	
2-Fluorobiphenyl	49.4	30	115	
2,4,6-Tribromophenol	56.7	19	122	
P-Terphenyl-d14	97.7	18	137	

U Not detected at or above the reporting limit

Report Number: **L0606267**
Report Date : **June 19, 2006**

Sample Number: **L0606267-11**
Client ID: **C-SD-03-MS**
Matrix: **Soil**
Workgroup Number: **WG215434**
Collect Date: **06/08/2006 15:30**

PrePrep Method: **NONE**
Prep Method: **3545**
Analytical Method: **8270C**
Analyst: **ALT**
Dilution: **1**
Units: **ug/kg**

Instrument: **HPMS4**
Prep Date: **06/13/2006 12:45**
Cal Date: **05/10/2006 17:31**
Run Date: **06/15/2006 16:25**
File ID: **4M33338**
Percent Solid: **48.8**

Analyte	CAS. Number	Result	Qual	PQL	SQL
Benzaldehyde	100-52-7		U	338	169
Phenol	108-95-2	4570		396	198
Bis(2-Chloroethyl)ether	111-44-4	3740		396	198
2-Chlorophenol	95-57-8	3350		396	198
2-Methylphenol	95-48-7	3760		396	198
Acetophenone	98-86-2	3410		338	169
bis(2-Chloroisopropyl)ether	39638-32-9	2990		396	198
3-,4-Methylphenol	106-44-5	4120		396	198
N-Nitroso-di-n-propylamine	621-64-7	3520		396	198
Hexachloroethane	67-72-1	2620		396	198
Nitrobenzene	98-95-3	3350		396	198
Isophorone	78-59-1	3630		396	198
2-Nitrophenol	88-75-5	3110		396	198
2,4-Dimethylphenol	105-67-9	3430		396	198
Bis(2-Chloroethoxy)Methane	111-91-1	2810		396	198
2,4-Dichlorophenol	120-83-2	3330		396	198
4-Chloroaniline	106-47-8	2770		396	198
Hexachlorobutadiene	87-68-3	2550		396	198
Caprolactam	105-60-2		U	338	169
4-Chloro-3-methylphenol	59-50-7	3990		396	198
Hexachlorocyclopentadiene	77-47-4		U	396	198
2,4,6-Trichlorophenol	88-06-2	3710		396	198
2,4,5-Trichlorophenol	95-95-4	4130		396	198
1,1'-Biphenyl	92-52-4		U	338	169
2-Chloronaphthalene	91-58-7	2850		396	198
2-Nitroaniline	88-74-4	5160		1980	792
Dimethylphthalate	131-11-3	4630		396	198
2,6-Dinitrotoluene	606-20-2	4520		396	198
3-Nitroaniline	99-09-2	5410		1980	792
2,4-Dinitrophenol	51-28-5		U	1980	792
4-Nitrophenol	100-02-7	6710		1980	792
Dibenzofuran	132-64-9	3770		396	198
2,4-Dinitrotoluene	121-14-2	6290		396	198
Diethylphthalate	84-66-2	5650		396	198
4-Chlorophenyl-phenyl ether	7005-72-3	3640		396	198
4-Nitroaniline	100-01-6	6040		1980	792
4,6-Dinitro-2-methylphenol	534-52-1	4120		1980	792
N-Nitrosodiphenylamine	86-30-6	4490		396	198
4-Bromophenyl-phenylether	101-55-3	3850		396	198
Hexachlorobenzene	118-74-1	4580		396	198
Atrazine	1912-24-9		U	338	169
Pentachlorophenol	87-86-5	7440		1980	792
Carbazole	86-74-8	6610		396	198
Di-N-Butylphthalate	84-74-2	6160		396	198
Butylbenzylphthalate	85-68-7	7270		396	198
3,3'-Dichlorobenzidine	91-94-1	3180		792	396
bis(2-Ethylhexyl)phthalate	117-81-7	6340		396	198
Di-n-octylphthalate	117-84-0	6750		396	198

Report Number: **L0606267**
Report Date : **June 19, 2006**

Sample Number: **L0606267-11**
Client ID: **C-SD-03-MS**
Matrix: **Soil**
Workgroup Number: **WG215434**
Collect Date: **06/08/2006 15:30**

PrePrep Method: **NONE**
Prep Method: **3545**
Analytical Method: **8270C**
Analyst: **ALT**
Dilution: **1**
Units: **ug/kg**

Instrument: **HPMS4**
Prep Date: **06/13/2006 12:45**
Cal Date: **05/10/2006 17:31**
Run Date: **06/15/2006 16:25**
File ID: **4M33338**
Percent Solid: **48.8**

Analyte	CAS. Number	Result	Qual	PQL	SQL
1,2,4,5-Tetrachlorobenzene	95-94-3		U	338	169

Surrogate	% Recovery	Lower	Upper	Qual
2-Fluorophenol	54.8	25	121	
Phenol-d5	60.2	24	113	
Nitrobenzene-d5	55.7	23	120	
2-Fluorobiphenyl	54.1	30	115	
2,4,6-Tribromophenol	85.9	19	122	
P-Terphenyl-d14	102	18	137	

U Not detected at or above the reporting limit

Report Number: **L0606267**
Report Date : **June 19, 2006**

Sample Number: **L0606267-12**
Client ID: **C-SD-03-MSD**
Matrix: **Soil**
Workgroup Number: **WG215434**
Collect Date: **06/08/2006 15:30**

PrePrep Method: **NONE**
Prep Method: **3545**
Analytical Method: **8270C**
Analyst: **ALT**
Dilution: **1**
Units: **ug/kg**

Instrument: **HPMS4**
Prep Date: **06/13/2006 12:45**
Cal Date: **05/10/2006 17:31**
Run Date: **06/15/2006 17:00**
File ID: **4M33339**
Percent Solid: **48.8**

Analyte	CAS. Number	Result	Qual	PQL	SQL
Benzaldehyde	100-52-7		U	338	169
Phenol	108-95-2	4480		396	198
Bis(2-Chloroethyl)ether	111-44-4	3620		396	198
2-Chlorophenol	95-57-8	3250		396	198
2-Methylphenol	95-48-7	3540		396	198
Acetophenone	98-86-2	3230		338	169
bis(2-Chloroisopropyl)ether	39638-32-9	2870		396	198
3-,4-Methylphenol	106-44-5	3910		396	198
N-Nitroso-di-n-propylamine	621-64-7	3320		396	198
Hexachloroethane	67-72-1	2300		396	198
Nitrobenzene	98-95-3	3170		396	198
Isophorone	78-59-1	3410		396	198
2-Nitrophenol	88-75-5	2570		396	198
2,4-Dimethylphenol	105-67-9	3290		396	198
Bis(2-Chloroethoxy)Methane	111-91-1	2690		396	198
2,4-Dichlorophenol	120-83-2	3160		396	198
4-Chloroaniline	106-47-8	2660		396	198
Hexachlorobutadiene	87-68-3	2230		396	198
Caprolactam	105-60-2		U	338	169
4-Chloro-3-methylphenol	59-50-7	3740		396	198
Hexachlorocyclopentadiene	77-47-4		U	396	198
2,4,6-Trichlorophenol	88-06-2	3460		396	198
2,4,5-Trichlorophenol	95-95-4	3790		396	198
1,1'-Biphenyl	92-52-4		U	338	169
2-Chloronaphthalene	91-58-7	2460		396	198
2-Nitroaniline	88-74-4	5250		1980	792
Dimethylphthalate	131-11-3	4390		396	198
2,6-Dinitrotoluene	606-20-2	3920		396	198
3-Nitroaniline	99-09-2	5450		1980	792
2,4-Dinitrophenol	51-28-5		U	1980	792
4-Nitrophenol	100-02-7	6220		1980	792
Dibenzofuran	132-64-9	3190		396	198
2,4-Dinitrotoluene	121-14-2	5640		396	198
Diethylphthalate	84-66-2	5180		396	198
4-Chlorophenyl-phenyl ether	7005-72-3	2980		396	198
4-Nitroaniline	100-01-6	6140		1980	792
4,6-Dinitro-2-methylphenol	534-52-1	3030		1980	792
N-Nitrosodiphenylamine	86-30-6	4040		396	198
4-Bromophenyl-phenylether	101-55-3	3150		396	198
Hexachlorobenzene	118-74-1	3960		396	198
Atrazine	1912-24-9		U	338	169
Pentachlorophenol	87-86-5	6830		1980	792
Carbazole	86-74-8	6100		396	198
Di-N-Butylphthalate	84-74-2	5120		396	198
Butylbenzylphthalate	85-68-7	5990		396	198
3,3'-Dichlorobenzidine	91-94-1	2820		792	396
bis(2-Ethylhexyl)phthalate	117-81-7	5840		396	198
Di-n-octylphthalate	117-84-0	6210		396	198

Report Number: **L0606267**
Report Date : **June 19, 2006**

Sample Number: **L0606267-12**
Client ID: **C-SD-03-MSD**
Matrix: **Soil**
Workgroup Number: **WG215434**
Collect Date: **06/08/2006 15:30**

PrePrep Method: **NONE**
Prep Method: **3545**
Analytical Method: **8270C**
Analyst: **ALT**
Dilution: **1**
Units: **ug/kg**

Instrument: **HPMS4**
Prep Date: **06/13/2006 12:45**
Cal Date: **05/10/2006 17:31**
Run Date: **06/15/2006 17:00**
File ID: **4M33339**
Percent Solid: **48.8**

Analyte	CAS. Number	Result	Qual	PQL	SQL
1,2,4,5-Tetrachlorobenzene	95-94-3		U	338	169

Surrogate	% Recovery	Lower	Upper	Qual
2-Fluorophenol	52.9	25	121	
Phenol-d5	57.5	24	113	
Nitrobenzene-d5	52.6	23	120	
2-Fluorobiphenyl	45.1	30	115	
2,4,6-Tribromophenol	78.2	19	122	
P-Terphenyl-d14	94.0	18	137	

U Not detected at or above the reporting limit

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1.1.2.1 QC Summary

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Checklist ID: 7491

KEMRON Environmental Services
Data Checklist

Date: 10-MAY-2006
Analyst: CLK
Analyst: NA
Method: 8270
Instrument: HPMS4
Curve Workgroup: WG212888
Analytical Workgroups: ICAL GOOD FOR ACETOPHENONE AS WELL

Runlog ID number:	10322
System Performance Check	
DFTPP	X
Endrin/DDT Breakdown	X
Initial Calibration	X
Average RF	X
Linear Reg or Higher Order Curve	X
Second Source standard % Difference	X
Continuing Calibration /Check Standards	NA
Project/Client Specific Requirements	X
Special Standards	X
Blanks	NA
TCL's	NA
Surrogates	NA
LCS (Laboratory Control Sample)	NA
Recoveries	NA
Surrogates	NA
MS/MSD/Duplicates	NA
Samples	NA
TCL Hits	NA
Spectra of TCL Hits	NA
Surrogates	NA
Internal Standards Criteria	NA
Library Searches	NA
Calculations & Correct Factors	X
Dilutions Run	NA
Reruns	NA
Manual Integrations	X
Case Narrative	NA
Results Reporting/Data Qualifiers	X
KOBRA Workgroup Data	X
Check for Completeness	X
Primary Reviewer	CLK
Secondary Reviewer	MDC
Check for compliance with method and project specific requirements	X
Check the completeness of reported information	X
Check the information for the report narrative	NA
Check the resonableness of the results	X

Primary Reviewer:

Secondary Reviewer:
11-MAY-2006

Generated: MAY-11-2006 13:06:57

Checklist ID: 8026

KEMRON Environmental Services
Data Checklist

Date: 15-JUN-2006
Analyst: ALT
Analyst: NA
Method: 8270
Instrument: HPMS4
Curve Workgroup: NA
Analytical Workgroups: L0606267

Runlog ID number:	10816
System Performance Check:	X
DFTPP	X
Endrin/DDT Breakdown	X
Initial Calibration:	NA
Average RF	NA
Linear Reg or Higher Order Curve	NA
Second Source standard % Difference	NA
Continuing Calibration /Check Standards:	X
Project/Client Specific Requirements	X
Special Standards	NA
Blanks:	X
TCL's	X
Surrogates	X
LCS (Laboratory Control Sample):	X
Recoveries	X
Surrogates	X
MS/MSD/Duplicates	X
Samples:	X
TCL Hits	X
Spectra of TCL Hits	X
Surrogates	X
Internal Standards Criteria	X
Library Searches	NA
Calculations & Correct Factors	NA
Dilutions Run	X
Reruns	NA
Manual Integrations	NA
Case Narrative	X
Results Reporting/Data Qualifiers	X
KOBRA Workgroup Data	X
Check for Completeness	X
Primary Reviewer	ALT
Secondary Reviewer	MDC
Check for compliance with method and project specific requirements	X
Check the completeness of reported information	X
Check the information for the report narrative	X
Check the reasonableness of the results	X
Comments:	

Primary Reviewer:
16-JUN-2006

Secondary Reviewer:
16-JUN-2006

Generated: JUN-16-2006 13:22:15

Run Log ID: **10322**

KEMRON Environmental Services

Instrument Run Log

Instrument: HPMS4 Dataset: 051006

Analyst1: CLK Analyst2: NA

Method: 8270C SOP: MSS01 Rev: 13

Method: 625 SOP: MSS02 Rev: 8

Column 1 ID: RTI-5MS Column 2 ID: NA

Workgroups:

Internal Standard: STD12522 Surrogate Standard: NA

Comments: ICAL Good for Acetophenone as well

Seq.	File ID	Sample Information	Mat	Dil	Reference	Date/Time
1	4M32961	WG212888-01 50PPM DFTPP	1	1	SOS78-44	05/10/06 13:03
2	4M32962	WG212888-02 50PPM BNA Megamix	1	1	STD12520	05/10/06 13:22
3	4M32963	WG212888-02 50PPM BNA Megamix	1	1	STD12520	05/10/06 13:58
4	4M32964	WG212888-03 3PPM BNA Megamix	1	1	STD12520	05/10/06 14:33
5	4M32965	WG212888-04 15PPM BNA Megamix	1	1	STD12520	05/10/06 15:08
6	4M32966	WG212888-05 25PPM BNA Megamix	1	1	STD12520	05/10/06 15:44
7	4M32967	WG212888-06 80PPM BNA Megamix	1	1	STD12520	05/10/06 16:20
8	4M32968	WG212888-07 120PPM BNA Megamix	1	1	STD12520	05/10/06 16:55
9	4M32969	WG212888-08 100PPM BNA Megamix	1	1	STD12520	05/10/06 17:31
10	4M32970	WG212888-09 50PPM Alt source BNA	1	1	STD12496	05/10/06 18:06
11	4M32971	50PPM Alt source TCL std.	1	1	SOS77-34-4	05/10/06 18:42

Comments

Seq.	Rerun	Dil.	Reason	Analytes
2				
	NA, Wrong STD			
10				
	Alt Source has (#26) Benzoic Acid, (#45) 3-Nitroaniline, and (#74) 3,3'-dichlorobenzidine >25%			
11				
	TCL Alt Source has (#2) Benzadehyde and (#9) Atrazine >25%			

Page: 1 of 1 Approved: 11-MAY-06

007515

Run Log ID: **10816**

KEMRON Environmental Services

Instrument Run Log

Instrument: HPMS4 Dataset: 061506

Analyst1: ALT Analyst2: NA

Method: 8270C SOP: MSS01 Rev: 14

Method: 625 SOP: MSS02 Rev: 8

Column 1 ID: DB-5MS Column 2 ID: NA

Workgroups: WG215434

Internal Standard: STD12522 Surrogate Standard: NA

Comments: IML - 14335

Seq.	File ID	Sample Information	Mat	Dil	Reference	Date/Time
1	4M33333	WG215391-01 50PPM DFTPP	1	1	SOS78-44	06/15/06 13:46
2	4M33334	WG215391-02 50PPM BNA Megamix	1	1	STD12520	06/15/06 14:04
3	4M33335	WG215136-02 BLK 6/13 EP261P149	7	1	SOIL	06/15/06 14:39
4	4M33336	WG215136-03 LCS 6/13 EP261P149	7	1	SOIL	06/15/06 15:14
5	4M33337	WG215136-01 L0606267-03 SOIL	7	1	SOIL	06/15/06 15:50
6	4M33338	WG215136-04 L0606267-11 MS SOIL	7	1	SOIL	06/15/06 16:25
7	4M33339	WG215136-05 L0606267-12 MSD SOIL	7	1	SOIL	06/15/06 17:00
8	4M33340	L0606267-07 SOIL	7	1	SOIL	06/15/06 17:35
9	4M33341	L0606267-08 SOIL	7	1	SOIL	06/15/06 18:10
10	4M33342	L0606267-10 SOIL	7	1	SOIL	06/15/06 18:46
11	4M33343	L0606267-01 SOIL	7	1	SOIL	06/15/06 19:21
12	4M33344	L0606267-09 SOIL	7	1	SOIL	06/15/06 19:56
13	4M33345	L0606267-02 SOIL	7	1	SOIL	06/15/06 20:31
14	4M33346	L0606267-04 SOIL	7	1	SOIL	06/15/06 21:06
15	4M33347	L0606267-06 SOIL	7	1	SOIL	06/15/06 21:41
16	4M33348	L0606267-05 2X SOIL	7	2	SOIL	06/15/06 22:17

Comments

Seq.	Rerun	Dil.	Reason	Analytes
2				
	WG215391-02 50PPM BNA Megamix - hexachlorocyclopentadiene > 20% biased low			
6				
	WG215136-04 L0606267-11 MS SOIL - hexachlorocyclopentadiene and 2,4-dinitrophenol missine			
7				
	WG215136-05 L0606267-12 MSD SOIL - hexachlorocyclopentadiene and 2,4-dinitrophenol missine			
16				
	L0606267-05 2X SOIL - diluted due to sample viscosity			

Page: 1 of 1 Approved: 16-JUN-06

KEMRON Environmental Services
HOLDING TIMES
EQUIVALENT TO AFCEE FORM 9

Analytical Method: 8270C **AAB#:** WG215434
Login Number: L0606267

Client ID	Date Collected	Date Received	Date Extracted	Max Hold Time Ext.	Time Held Ext.	Date Analyzed	Max Hold Time Anal	Time Held Anal.	Q
A-SD-01	06/08/06	06/10/06	06/13/06	14	5.07	06/15/06	40	2.28	
B-SD-02	06/08/06	06/10/06	06/13/06	14	5.03	06/15/06	40	2.32	
C-SD-03	06/08/06	06/10/06	06/13/06	14	4.89	06/15/06	40	2.13	
D-SD-04	06/08/06	06/10/06	06/13/06	14	4.84	06/15/06	40	2.35	
E-SD-05	06/08/06	06/10/06	06/13/06	14	4.93	06/15/06	40	2.40	
F-SD-06	06/08/06	06/10/06	06/13/06	14	4.81	06/15/06	40	2.37	
G-SD-07	06/09/06	06/10/06	06/13/06	14	4.08	06/15/06	40	2.20	
H-SD-08	06/09/06	06/10/06	06/13/06	14	4.10	06/15/06	40	2.23	
I-SD-09	06/09/06	06/10/06	06/13/06	14	4.04	06/15/06	40	2.30	
FD-01	06/09/06	06/10/06	06/13/06	14	4.10	06/15/06	40	2.25	
C-SD-03-MS	06/08/06	06/10/06	06/13/06	14	4.89	06/15/06	40	2.15	
C-SD-03-MSD	06/08/06	06/10/06	06/13/06	14	4.89	06/15/06	40	2.18	

* EXT = SEE PROJECT QAPP REQUIREMENTS
*ANAL = SEE PROJECT QAPP REQUIREMENTS

KEMRON FORMS - Modified 02/14/2006
Version 1.5 PDF File ID: 498309
Report generated 06/16/2006 11:13

KEMRON Environmental Services

SURROGATE STANDARDS

Login Number: L0606267
Instrument Id: HPMS4
Workgroup (AAB#): WG215434

Method: 8270
CAL ID: HPMS4-10-MAY-06
Matrix: SOLID

Sample Number	Dilution	Tag	1	2	3	4	5	6
L0606267-01	1.00	01	70.3	48.3	57.9	63.9	83.5	64.3
L0606267-02	1.00	01	73.3	44.1	61.5	65.8	75.9	67.7
L0606267-03	1.00	01	59.9	42.7	52.7	58.0	69.6	57.8
L0606267-04	1.00	01	76.2	53.9	61.0	66.3	97.7	66.4
L0606267-05	2.00	DL01	85.9	72.8	67.3	73.5	106	75.4
L0606267-06	1.00	01	80.6	57.8	62.2	66.8	95.4	69.7
L0606267-07	1.00	01	57.5	31.3	48.9	54.3	76.8	54.6
L0606267-08	1.00	01	55.9	43.9	56.5	60.4	75.7	62.5
L0606267-09	1.00	01	59.4	56.2	58.0	62.8	83.7	63.4
L0606267-10	1.00	01	56.7	49.4	61.0	63.7	97.7	67.3
L0606267-11	1.00	01	85.9	54.1	54.8	55.7	102	60.2
L0606267-12	1.00	01	78.2	45.1	52.9	52.6	94.0	57.5
WG215136-02	1.00	01	69.2	65.5	59.4	69.1	97.1	66.4
WG215136-03	1.00	01	82.6	64.6	57.2	59.1	103	63.5

Surrogates	Surrogate Limits
1 - 2,4,6-Tribromophenol	19 - 122
2 - 2-Fluorobiphenyl	30 - 115
3 - 2-Fluorophenol	25 - 121
4 - Nitrobenzene-d5	23 - 120
5 - P-Terphenyl-d14	18 - 137
6 - Phenol-d5	24 - 113

Underline = Result out of surrogate limits

DL = surrogate diluted out
ND = surrogate not detected

KEMRON FORMS - Modified 04/18/2006
Version 1.5 PDF File ID: 498312
Report generated 06/16/2006 11:16

KEMRON Environmental Services

METHOD BLANK SUMMARY

Login Number:	L0606267	Work Group:	WG215434
Blank File ID:	4M33335	Blank Sample ID:	WG215136-02
Date Analyzed:	06/15/06	Instrument ID:	HPMS4
Time Analyzed:	14:39	Method:	8270C
Analyst:	ALT		

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG215136-03	4M33336	06/15/06 15:14	01
C-SD-03	L0606267-03	4M33337	06/15/06 15:50	01
C-SD-03-MS	L0606267-11	4M33338	06/15/06 16:25	01
C-SD-03-MSD	L0606267-12	4M33339	06/15/06 17:00	01
G-SD-07	L0606267-07	4M33340	06/15/06 17:35	01
H-SD-08	L0606267-08	4M33341	06/15/06 18:10	01
FD-01	L0606267-10	4M33342	06/15/06 18:46	01
A-SD-01	L0606267-01	4M33343	06/15/06 19:21	01
I-SD-09	L0606267-09	4M33344	06/15/06 19:56	01
B-SD-02	L0606267-02	4M33345	06/15/06 20:31	01
D-SD-04	L0606267-04	4M33346	06/15/06 21:06	01
F-SD-06	L0606267-06	4M33347	06/15/06 21:41	01
E-SD-05	L0606267-05	4M33348	06/15/06 22:17	DL01

KEMRON Environmental Services

METHOD BLANK REPORT

Login Number: L0606267	Run Date: 06/15/2006	Sample ID: WG215136-02
Instrument ID: HPMS4	Run Time: 14:39	Prep Method: 3545
File ID: 4M33335	Analyst: ALT	Method: 8270C
Workgroup (AAB#): WG215434	Matrix: Solid	Units: ug/kg
Contract #:	Cal ID: HPMS4-10-MAY-06	

Analytes	SQL	PQL	Concentration	Dilution	Qualifier
Phenol	82.5	165	82.5	1	U
Bis(2-Chloroethyl)ether	82.5	165	82.5	1	U
2-Chlorophenol	82.5	165	82.5	1	U
2-Methylphenol	82.5	165	82.5	1	U
Acetophenone	82.5	165	82.5	1	U
bis(2-Chloroisopropyl)ether	82.5	165	82.5	1	U
3-,4-Methylphenol	82.5	165	82.5	1	U
N-Nitroso-di-n-propylamine	82.5	165	82.5	1	U
Hexachloroethane	82.5	165	82.5	1	U
Nitrobenzene	82.5	165	82.5	1	U
Isophorone	82.5	165	82.5	1	U
2-Nitrophenol	82.5	165	82.5	1	U
2,4-Dimethylphenol	82.5	165	82.5	1	U
Bis(2-Chloroethoxy)Methane	82.5	165	82.5	1	U
2,4-Dichlorophenol	82.5	165	82.5	1	U
4-Chloroaniline	82.5	165	82.5	1	U
Hexachlorobutadiene	82.5	165	82.5	1	U
4-Chloro-3-methylphenol	82.5	165	82.5	1	U
Hexachlorocyclopentadiene	82.5	165	82.5	1	U
2,4,6-Trichlorophenol	82.5	165	82.5	1	U
2,4,5-Trichlorophenol	82.5	165	82.5	1	U
2-Chloronaphthalene	82.5	165	82.5	1	U
2-Nitroaniline	330	825	330	1	U
Dimethylphthalate	82.5	165	82.5	1	U
2,6-Dinitrotoluene	82.5	165	82.5	1	U
3-Nitroaniline	330	825	330	1	U
2,4-Dinitrophenol	330	825	330	1	U
4-Nitrophenol	330	825	330	1	U
Dibenzofuran	82.5	165	82.5	1	U
2,4-Dinitrotoluene	82.5	165	82.5	1	U
Diethylphthalate	82.5	165	82.5	1	U
4-Chlorophenyl-phenyl ether	82.5	165	82.5	1	U
4-Nitroaniline	330	825	330	1	U
4,6-Dinitro-2-methylphenol	330	825	330	1	U
N-Nitrosodiphenylamine	82.5	165	82.5	1	U
4-Bromophenyl-phenylether	82.5	165	82.5	1	U
Hexachlorobenzene	82.5	165	82.5	1	U
Pentachlorophenol	330	825	330	1	U
Carbazole	82.5	165	82.5	1	U
Di-N-Butylphthalate	82.5	165	82.5	1	U
Butylbenzylphthalate	82.5	165	82.5	1	U
3,3'-Dichlorobenzidine	165	330	165	1	U

KEMRON FORMS - Modified 05/01/2006
Version 1.5 PDF File ID: 498092
Report generated 06/16/2006 11:13

KEMRON Environmental Services

METHOD BLANK REPORT

Login Number:	L0606267	Run Date:	06/15/2006	Sample ID:	WG215136-02
Instrument ID:	HPMS4	Run Time:	14:39	Prep Method:	3545
File ID:	4M33335	Analyst:	ALT	Method:	8270C
Workgroup (AAB#):	WG215434	Matrix:	Solid	Units:	ug/kg
Contract #:		Cal ID:	HPMS4-10-MAY-06		

Analytes	SQL	PQL	Concentration	Dilution	Qualifier
bis(2-Ethylhexyl)phthalate	82.5	165	82.5	1	U
Di-n-octylphthalate	82.5	165	82.5	1	U
1,2,4,5-Tetrachlorobenzene	82.5	165	82.5	1	U

Surrogates	% Recovery	Surrogate Limits			Qualifier
2-Fluorophenol	59.4	25	-	121	PASS
Phenol-d5	66.4	24	-	113	PASS
Nitrobenzene-d5	69.1	23	-	120	PASS
2-Fluorobiphenyl	65.5	30	-	115	PASS
2,4,6-Tribromophenol	69.2	19	-	122	PASS
P-Terphenyl-d14	97.1	18	-	137	PASS

MDL Method Detection Limit
RL Reporting/quantitation Limit

* Analyte concentration > RL

KEMRON FORMS - Modified 05/01/2006
Version 1.5 PDF File ID: 498092
Report generated 06/16/2006 11:13

KEMRON Environmental Services

LABORATORY CONTROL SAMPLE (LCS)

Login Number: L0606267 Run Date: 06/15/2006 Sample ID: WG215136-03
Instrument ID: HPMS4 Run Time: 15:14 Prep Method: 3545
File ID: 4M33336 Analyst: ALT Method: 8270C
Workgroup (AAB#): WG215434 Matrix: Solid Units: ug/kg
Contract #: Cal ID: HPMS4-10-MAY-06

Analytes	Expected	Found	% Rec	LCS Limits	Q
Phenol	2500	1570	62.7	35 - 100	
Bis(2-Chloroethyl)ether	2500	1610	64.3	30 - 100	
2-Chlorophenol	2500	1430	57.4	35 - 105	
2-Methylphenol	2500	1580	63.4	35 - 100	
Acetophenone	2500	1250	49.9	40 - 140	
bis(2-Chloroisopropyl)ether	2500	1300	52.2	20 - 115	
3-,4-Methylphenol	2500	1790	71.5	35 - 105	
N-Nitroso-di-n-propylamine	2500	1590	63.8	35 - 110	
Hexachloroethane	2500	1400	55.8	30 - 100	
Nitrobenzene	2500	1460	58.3	35 - 100	
Isophorone	2500	1630	65.1	35 - 100	
2-Nitrophenol	2500	1430	57.2	35 - 100	
2,4-Dimethylphenol	2500	1440	57.4	30 - 105	
Bis(2-Chloroethoxy)Methane	2500	1230	49.2	30 - 100	
2,4-Dichlorophenol	2500	1460	58.3	35 - 110	
4-Chloroaniline	2500	1310	52.3	35 - 100	
Hexachlorobutadiene	2500	1340	53.5	30 - 100	
4-Chloro-3-methylphenol	2500	1690	67.7	40 - 100	
Hexachlorocyclopentadiene	2500	1030	41.1	30 - 110	
2,4,6-Trichlorophenol	2500	1690	67.4	40 - 110	
2,4,5-Trichlorophenol	2500	1730	69.3	40 - 110	
2-Chloronaphthalene	2500	1370	54.8	40 - 105	
2-Nitroaniline	2500	2070	82.9	45 - 120	
Dimethylphthalate	2500	1990	79.7	45 - 115	
2,6-Dinitrotoluene	2500	1980	79.3	50 - 125	
3-Nitroaniline	2500	1980	79.3	50 - 130	
2,4-Dinitrophenol	2500	2280	91.4	40 - 130	
4-Nitrophenol	2500	2880	115	45 - 140	
Dibenzofuran	2500	1770	70.7	35 - 110	
2,4-Dinitrotoluene	2500	2690	108	50 - 130	
Diethylphthalate	2500	2360	94.5	50 - 130	
4-Chlorophenyl-phenyl ether	2500	1730	69.3	40 - 110	
4-Nitroaniline	2500	2530	101	35 - 140	
4,6-Dinitro-2-methylphenol	2500	2580	103	45 - 130	
N-Nitrosodiphenylamine	2500	1880	75.2	50 - 130	
4-Bromophenyl-phenylether	2500	1740	69.6	40 - 115	
Hexachlorobenzene	2500	2070	82.7	45 - 120	
Pentachlorophenol	2500	3090	124	50 - 150	
Carbazole	2500	2640	105	50 - 140	
Di-N-Butylphthalate	2500	2900	116	55 - 140	
Butylbenzylphthalate	2500	3480	139	50 - 150	

KEMRON FORMS - Modified 05/01/2006
Version 1.5 PDF File ID: 498095
Report generated 06/16/2006 13:17

KEMRON Environmental Services

LABORATORY CONTROL SAMPLE (LCS)

Login Number: L0606267 Run Date: 06/15/2006 Sample ID: WG215136-03
Instrument ID: HPMS4 Run Time: 15:14 Prep Method: 3545
File ID: 4M33336 Analyst: ALT Method: 8270C
Workgroup (AAB#): WG215434 Matrix: Solid Units: ug/kg
Contract #: Cal ID: HPMS4-10-MAY-06

Analytes	Expected	Found	% Rec	LCS Limits	Q
3,3'-Dichlorobenzidine	2500	1640	65.5	40 - 140	
bis(2-Ethylhexyl)phthalate	2500	2930	117	50 - 150	
Di-n-octylphthalate	2500	3130	125	40 - 145	

Surrogates	% Recovery	Surrogate Limits	Qualifier
2-Fluorophenol	57.2	25 - 121	PASS
Phenol-d5	63.5	24 - 113	PASS
Nitrobenzene-d5	59.1	23 - 120	PASS
2-Fluorobiphenyl	64.6	30 - 115	PASS
2,4,6-Tribromophenol	82.6	19 - 122	PASS
P-Terphenyl-d14	103	18 - 137	PASS

* FAILS %REC LIMIT

KEMRON FORMS - Modified 05/01/2006
Version 1.5 PDF File ID: 498095
Report generated 06/16/2006 13:17

KEMRON Environmental Services

MS/MSD REPORT

Loginnum:L0606267 Cal ID:HPMS4-10-MAY-06 Worknum:WG215434
Instrument ID:HPMS4 Contract #: Prep Method:3545
Parent ID:L0606267-03 File ID:4M33337 Dil:1 Method:8270C
Sample ID:L0606267-11 MS File ID:4M33338 Dil:1 Matrix:Soil
Sample ID:L0606267-12 MSD File ID:4M33339 Dil:1 Units:ug/kg
Percent Solid:48.8

Analyte	Parent	MS Spiked	MS Found	MS %Rec	MSD Spiked	MSD Found	MSD %Rec	%RPD	%Rec Limits	RPD Limit	Q
Phenol	U	6000	4570	76.1	6000	4480	74.7	1.94	35 - 100	51	
Bis(2-Chloroethyl)ether	U	6000	3740	62.4	6000	3620	60.4	3.23	30 - 100	52	
2-Chlorophenol	U	6000	3350	55.9	6000	3250	54.2	3.18	35 - 105	47	
2-Methylphenol	U	6000	3760	62.6	6000	3540	59.1	5.86	35 - 100	52	
Acetophenone	U	6000	3410	56.9	6000	3230	53.9	5.40	40 - 140	40	
bis(2-Chloroisopropyl)ether	U	6000	2990	49.9	6000	2870	47.8	4.31	20 - 115	49	
3-,4-Methylphenol	U	6000	4120	68.7	6000	3910	65.2	5.14	35 - 105	52	
N-Nitroso-di-n-propylamine	U	6000	3520	58.6	6000	3320	55.3	5.85	35 - 110	59	
Hexachloroethane	U	6000	2620	43.6	6000	2300	38.3	13.0	30 - 100	47	
Nitrobenzene	U	6000	3350	55.9	6000	3170	52.8	5.55	35 - 100	50	
Isophorone	U	6000	3630	60.5	6000	3410	56.9	6.08	35 - 100	62	
2-Nitrophenol	U	6000	3110	51.8	6000	2570	42.9	18.8	35 - 100	60	
2,4-Dimethylphenol	U	6000	3430	57.2	6000	3290	54.8	4.38	30 - 105	57	
Bis(2-Chloroethoxy)Methane	U	6000	2810	46.8	6000	2690	44.8	4.44	30 - 100	53	
2,4-Dichlorophenol	U	6000	3330	55.5	6000	3160	52.7	5.05	35 - 110	53	
4-Chloroaniline	U	6000	2770	46.1	6000	2660	44.3	4.05	35 - 100	73	
Hexachlorobutadiene	U	6000	2550	42.6	6000	2230	37.2	13.5	30 - 100	52	
4-Chloro-3-methylphenol	U	6000	3990	66.5	6000	3740	62.3	6.44	40 - 100	62	
Hexachlorocyclopentadiene	U	6000	0	0	6000	0	0	NA	30 - 110	60	*
2,4,6-Trichlorophenol	U	6000	3710	61.8	6000	3460	57.7	6.79	40 - 110	63	
2,4,5-Trichlorophenol	U	6000	4130	68.8	6000	3790	63.1	8.56	40 - 110	63	
2-Chloronaphthalene	U	6000	2850	47.6	6000	2460	41.0	14.8	40 - 105	50	
2-Nitroaniline	U	6000	5160	86.1	6000	5250	87.5	1.66	45 - 120	67	
Dimethylphthalate	U	6000	4630	77.1	6000	4390	73.1	5.28	45 - 115	63	
2,6-Dinitrotoluene	U	6000	4520	75.3	6000	3920	65.4	14.1	50 - 125	69	
3-Nitroaniline	U	6000	5410	90.2	6000	5450	90.8	0.613	50 - 130	86	
2,4-Dinitrophenol	U	6000	0	0	6000	0	0	NA	40 - 130	72	*
4-Nitrophenol	U	6000	6710	112	6000	6220	104	7.65	45 - 140	99	
Dibenzofuran	U	6000	3770	62.8	6000	3190	53.2	16.6	35 - 110	55	
2,4-Dinitrotoluene	U	6000	6290	105	6000	5640	94.1	10.9	50 - 130	75	
Diethylphthalate	U	6000	5650	94.1	6000	5180	86.4	8.53	50 - 130	70	
4-Chlorophenyl-phenyl ether	U	6000	3640	60.6	6000	2980	49.7	19.8	40 - 110	64	
4-Nitroaniline	U	6000	6040	101	6000	6140	102	1.73	35 - 140	95	
4,6-Dinitro-2-methylphenol	U	6000	4120	68.7	6000	3030	50.6	30.4	45 - 130	86	
N-Nitrosodiphenylamine	U	6000	4490	74.9	6000	4040	67.3	10.6	50 - 130	65	
4-Bromophenyl-phenylether	U	6000	3850	64.2	6000	3150	52.6	20.0	40 - 115	58	
Hexachlorobenzene	U	6000	4580	76.4	6000	3960	66.0	14.5	45 - 120	68	
Pentachlorophenol	U	6000	7440	124	6000	6830	114	8.53	50 - 150	77	
Carbazole	U	6000	6610	110	6000	6100	102	7.98	50 - 140	99	
Di-N-Butylphthalate	U	6000	6160	103	6000	5120	85.3	18.5	55 - 140	82	
Butylbenzylphthalate	U	6000	7270	121	6000	5990	99.8	19.4	50 - 150	86	

KEMRON FORMS - Modified 06/02/2006
Version 1.5 PDF File ID:498096
Report generated 06/16/2006 13:16

KEMRON Environmental Services

MS/MSD REPORT

Loginnum:L0606267 Cal ID:HPMS4 10-MAY-06 Worknum:WG215434
Instrument ID:HPMS4 Contract #: Prep Method:3545
Parent ID:L0606267-03 File ID:4M33337 Dil:1 Method:8270C
Sample ID:L0606267-11 MS File ID:4M33338 Dil:1 Matrix:Soil
Sample ID:L0606267-12 MSD File ID:4M33339 Dil:1 Units:ug/kg
Percent Solid:48.8

Analyte	Parent	MS Spiked	MS Found	MS %Rec	MSD Spiked	MSD Found	MSD %Rec	%RPD	%Rec Limits	RPD Limit	Q
3,3'-Dichlorobenzidine	U	6000	3180	53.0	6000	2820	46.9	12.1	40 - 140	135	
bis(2-Ethylhexyl)phthalate	U	6000	6340	106	6000	5840	97.3	8.29	50 - 150	83	
Di-n-octylphthalate	U	6000	6750	112	6000	6210	104	8.33	40 - 145	96	

* FAILS %REC LIMIT

FAILS RPD LIMIT

KEMRON FORMS - Modified 06/02/2006
Version 1.5 PDF File ID: 498096
Report generated 06/16/2006 13:16

KEMRON ENVIRONMENTAL SERVICES
ORGANIC INSTRUMENT CHECK

DFTPP

Login Number: L0606267 Tune ID: WG212888-01
Instrument: HPMS4 Run Date: 05/10/2006
Analyst: CLK Run Time: 13:03
Workgroup: WG212888 File ID: 4M32961
Cal ID: HPMS4-10-MAY-06

Target	Rel. to	Lower	Upper	Rel.	Raw	Result
51.0	198	30.0	60.0	38.4	197430	PASS
68.0	69.0	0	2.00	0	0	PASS
69.0	198	0	100	38.8	199829	PASS
70.0	69.0	0	2.00	0.531	1061	PASS
127	198	40.0	60.0	51.3	264213	PASS
197	198	0	1.00	0	0	PASS
198	198	100	100	100	514581	PASS
199	198	5.00	9.00	6.63	34117	PASS
275	198	10.0	30.0	25.1	129296	PASS
365	198	1.00	100	2.75	14129	PASS
441	443	0.0100	100	80.4	63090	PASS
442	198	40.0	100	79.0	406762	PASS
443	442	17.0	23.0	19.3	78506	PASS

This check relates to the following samples, MS, MSD:

Lab ID	Client ID	Tag	Date Analyzed	Q
WG212888-09	SSCV	01	05/10/2006 18:06	
WG212888-08	STD	01	05/10/2006 17:31	
WG212888-07	STD	01	05/10/2006 16:55	
WG212888-06	STD	01	05/10/2006 16:20	
WG212888-05	STD	01	05/10/2006 15:44	
WG212888-04	STD	01	05/10/2006 15:08	
WG212888-03	STD	01	05/10/2006 14:33	
WG212888-02	CCV	01	05/10/2006 13:58	

* Sample past 12 hour tune limit

KEMRON FORMS - Modified 02/14/2006
Version 1.3 PDF File ID: 498631
Report generated 06/16/2006 11:15

KEMRON ENVIRONMENTAL SERVICES
ORGANIC INSTRUMENT CHECK

DFTPP

Login Number: L0606267 | Tune ID: WG215391-01
Instrument: HPMS4 | Run Date: 06/15/2006
Analyst: ALT | Run Time: 13:46
Workgroup: WG215391 | File ID: 4M33333
Cal ID: HPMS4 -10-MAY-06

Target	Rel. to	Lower	Upper	Rel.	Raw	Result
51.0	198	30.0	60.0	40.0	71091	PASS
68.0	69.0	0	2.00	0	0	PASS
69.0	198	0	100	41.1	73118	PASS
70.0	69.0	0	2.00	0.152	111	PASS
127	198	40.0	60.0	55.4	98478	PASS
197	198	0	1.00	0	0	PASS
198	198	100	100	100	177728	PASS
199	198	5.00	9.00	6.61	11753	PASS
275	198	10.0	30.0	22.8	40570	PASS
365	198	1.00	100	2.49	4429	PASS
441	443	0.0100	100	80.4	17742	PASS
442	198	40.0	100	63.0	111936	PASS
443	442	17.0	23.0	19.7	22059	PASS

This check relates to the following CCV:

Lab ID	Client ID	Date Analyzed	
WG215391-02	CCV	06/15/2006 14:04	

This check relates to the following samples & batch QC:

Lab ID	Client ID	Tag	Date Analyzed	Q
WG215136-02	BLANK	01	06/15/2006 14:39	
WG215136-03	LCS	01	06/15/2006 15:14	
L0606267-03	C-SD-03	01	06/15/2006 15:50	
L0606267-11	C-SD-03-MS	01	06/15/2006 16:25	
L0606267-12	C-SD-03-MSD	01	06/15/2006 17:00	
L0606267-07	G-SD-07	01	06/15/2006 17:35	
L0606267-08	H-SD-08	01	06/15/2006 18:10	
L0606267-10	FD-01	01	06/15/2006 18:46	
L0606267-01	A-SD-01	01	06/15/2006 19:21	
L0606267-09	I-SD-09	01	06/15/2006 19:56	
L0606267-02	B-SD-02	01	06/15/2006 20:31	
L0606267-04	D-SD-04	01	06/15/2006 21:06	
L0606267-06	F-SD-06	01	06/15/2006 21:41	
L0606267-05	E-SD-05	DL01	06/15/2006 22:17	

*** Sample past 12 hour tune limit**

KEMRON FORMS - Modified 03/15/2006
Version 1.3 PDF File ID: 498632
Report generated 06/16/2006 11:15

KEMRON Environmental Services

INITIAL CALIBRATION SUMMARY

Login Number: L0606267 **Instrument ID:** HPMS4
Analytical Method: 8270C **Initial Calibration Date:** 10-MAY-06 17:31
ICAL Workgroup: WG212888 **Column ID:** F

Analyte		AVG RF	% RSD	LINEAR	QUAD
2,4,6-Trichlorophenol	CCC	0.3283	5.49		
2,4-Dichlorophenol	CCC	0.2681	3.67		
2-Nitrophenol	CCC	0.1847	5.51		
4-Chloro-3-Methylphenol	CCC	0.2730	4.09		
Di-n-Octyl Phthalate	CCC	1.580	5.20		
Hexachlorobutadiene	CCC	0.1500	6.47		
Pentachlorophenol	CCC	0.1338	6.25		
Phenol	CCC	1.636	4.78		
n-Nitrosodiphenylamine	CCC	0.7356	8.20		
2,4-Dinitrophenol	SPCC	0.1177	20.8	0.999	
4-Nitrophenol	SPCC	0.2111	3.85		
Hexachlorocyclopentadiene	SPCC	0.2264	20.9	0.999	
n-Nitrosodipropylamine	SPCC	0.8445	15.1		1.00
2,4,5-Trichlorophenol		0.3508	3.83		
2,4-Dimethylphenol		0.3152	7.28		
2,4-Dinitrotoluene		0.3479	8.33		
2,6-Dinitrotoluene		0.3049	3.86		
2-Chloronaphthalene		1.260	9.11		
2-Chlorophenol		1.443	2.61		
2-Methylphenol		1.085	3.55		
2-Nitroaniline		0.3072	4.63		
3,3'-Dichlorobenzidine		0.4577	5.51		
3-,4-Methylphenol		1.430	3.31		
3-Nitroaniline		0.3325	1.30		
4,6-Dinitro-2-Methylphenol		0.1368	10.3		
4-Bromophenyl Phenyl Ether		0.2312	6.48		
4-Chloroaniline		0.4339	5.74		
4-Chlorophenyl Phenyl Ether		0.5924	11.5		
4-Nitroaniline		0.3427	3.15		
Butyl Benzyl Phthalate		0.6078	17.6		0.999
Carbazole		1.119	7.89		
Di-n-Butyl Phthalate		1.383	10.4		
Dibenzofuran		1.494	12.9		
Diethylphthalate		1.235	7.42		
Dimethylphthalate		1.229	7.69		
Hexachlorobenzene		0.2427	7.56		
Hexachloroethane		0.5807	2.90		
Isophorone		0.5845	6.16		
Nitrobenzene		0.3309	5.49		
bis(2-Chloroethoxy)methane		0.4697	14.0		
bis(2-Chloroethyl)ether		0.9052	10.3		
bis(2-Chloroisopropyl)ether		2.179	8.93		
bis(2-Ethylhexyl)phthalate		0.9425	6.50		
2,4,6-Tribromophenol	SURR	0.1557	5.93		
2-Fluorobiphenyl	SURR	1.211	9.02		

KEMRON FORMS - Modified 06/12/2006
Version 1.5 PDF File ID: 498629
Report generated 06/16/2006 11:14

KEMRON Environmental Services

INITIAL CALIBRATION SUMMARY

Login Number: L0606267 **Instrument ID:** HPMS4
Analytical Method: 8270C **Initial Calibration Date:** 10-MAY-06 17:31
ICAL Workgroup: WG212888 **Column ID:** F

Analyte		AVG RF	% RSD	LINEAR	QUAD
2-Fluorophenol	SURR	1.291	2.06		
Nitrobenzene-d5	SURR	0.3230	4.29		
Phenol-d5	SURR	1.516	4.39		
p-Terphenyl-d14	SURR	0.9339	8.86		

KEMRON Environmental Services

INITIAL CALIBRATION DATA

Login Number:L0606267 **Instrument ID:HPMS4**

Analytical Method:8270C **Initial Calibration Date:10-MAY-06 17:31**

Column ID:F

Analyte	WG212888-02			WG212888-03			WG212888-04		
	CONC	RESP	RF	CONC	RESP	RF	CONC	RESP	RF
2,4,6-Trichlorophenol	50.0	630279	0.3365	3.00	31348	0.2931	15.0	178627	0.3373
2,4-Dichlorophenol	50.0	878638	0.2691	3.00	49586	0.2589	15.0	264718	0.2817
2-Nitrophenol	50.0	631206	0.1933	3.00	32361	0.1689	15.0	180942	0.1926
4-Chloro-3-Methylphenol	50.0	888302	0.2720	3.00	53608	0.2799	15.0	268804	0.2861
Di-n-Octyl Phthalate	50.0	4205428	1.629	3.00	215811	1.436	15.0	1241745	1.643
Hexachlorobutadiene	50.0	479552	0.1468	3.00	30534	0.1594	15.0	152479	0.1623
Pentachlorophenol	50.0	393132	0.1382	NA	NA	NA	15.0	94432	0.1181
Phenol	50.0	1330683	1.635	3.00	81437	1.668	15.0	412478	1.733
n-Nitrosodiphenylamine	50.0	2074115	0.7289	3.00	125691	0.7949	15.0	644347	0.8058
2,4-Dinitrophenol	50.0	228051	0.1218	NA	NA	NA	15.0	41017	0.07750
4-Nitrophenol	50.0	401393	0.2143	NA	NA	NA	15.0	104092	0.1966
Hexachlorocyclopentadiene	50.0	471489	0.2518	3.00	13054	0.1220	15.0	117137	0.2212
n-Nitrosodipropylamine	50.0	682603	0.8387	3.00	48040	0.9839	15.0	233769	0.9821
2,4,5-Trichlorophenol	50.0	663501	0.3543	3.00	34799	0.3253	15.0	190453	0.3597
2,4-Dimethylphenol	50.0	1033755	0.3166	3.00	63111	0.3295	15.0	321073	0.3417
2,4-Dinitrotoluene	50.0	680558	0.3634	3.00	33714	0.3152	15.0	203197	0.3837
2,6-Dinitrotoluene	50.0	578499	0.3089	3.00	30470	0.2849	15.0	168306	0.3179
2-Chloronaphthalene	50.0	2337322	1.248	3.00	147933	1.383	15.0	735348	1.389
2-Chlorophenol	50.0	1169446	1.437	3.00	69809	1.430	15.0	355937	1.495
2-Methylphenol	50.0	874935	1.075	3.00	53823	1.102	15.0	271658	1.141
2-Nitroaniline	50.0	576672	0.3079	NA	NA	NA	15.0	171269	0.3235
3,3'-Dichlorobenzidine	50.0	1153440	0.4468	3.00	72787	0.4959	15.0	357767	0.4826
3-,4-Methylphenol	50.0	1157928	1.423	3.00	69532	1.424	15.0	357396	1.502
3-Nitroaniline	50.0	626849	0.3347	NA	NA	NA	15.0	173677	0.3280
4,6-Dinitro-2-Methylphenol	50.0	394637	0.1387	NA	NA	NA	15.0	89871	0.1124
4-Bromophenyl Phenyl Ether	50.0	639414	0.2247	3.00	38885	0.2459	15.0	200545	0.2508
4-Chloroaniline	50.0	1360479	0.4166	3.00	82641	0.4314	15.0	442043	0.4704
4-Chlorophenyl Phenyl Ether	50.0	1107453	0.5913	3.00	70157	0.6559	15.0	354279	0.6691
4-Nitroaniline	50.0	645443	0.3446	NA	NA	NA	15.0	187737	0.3546
Butyl Benzyl Phthalate	50.0	1565537	0.6065	3.00	106532	0.7258	15.0	534491	0.7210
Carbazole	50.0	3176297	1.116	3.00	190284	1.204	15.0	967614	1.210
Di-n-Butyl Phthalate	50.0	3940512	1.385	3.00	235552	1.490	15.0	1242185	1.554
Dibenzofuran	50.0	2774947	1.482	3.00	183177	1.713	15.0	901459	1.703
Diethylphthalate	50.0	2292294	1.224	3.00	141660	1.324	15.0	711737	1.344
Dimethylphthalate	50.0	2267472	1.211	3.00	141172	1.320	15.0	711131	1.343
Hexachlorobenzene	50.0	669599	0.2353	3.00	42222	0.2670	15.0	209351	0.2618
Hexachloroethane	50.0	468256	0.5753	3.00	27768	0.5687	15.0	143822	0.6042
Isophorone	50.0	1893412	0.5798	3.00	117025	0.6109	15.0	589466	0.6273
Nitrobenzene	50.0	1074250	0.3290	3.00	64104	0.3347	15.0	333993	0.3554
bis(2-Chloroethoxy)methane	50.0	1528958	0.4682	3.00	102820	0.5368	15.0	508843	0.5415
bis(2-Chloroethyl)ether	50.0	733062	0.9007	3.00	48143	0.9860	15.0	242051	1.017
bis(2-Chloroisopropyl)ether	50.0	1753265	2.154	3.00	117049	2.397	15.0	571151	2.400

KEMRON FORMS - Modified 03/06/2006
Version 1.6 PDF File ID: 498629
Report generated 06/16/2006 11:14

KEMRON Environmental Services

INITIAL CALIBRATION DATA

Login Number:L0606267 **Instrument ID:HPMS4**

Analytical Method:8270C **Initial Calibration Date:10-MAY-06 17:31**

Column ID:F

Analyte	WG212888-05			WG212888-06			WG212888-07		
	CONC	RESP	RF	CONC	RESP	RF	CONC	RESP	RF
2,4,6-Trichlorophenol	25.0	311395	0.3500	80.0	998116	0.3281	120	1492493	0.3201
2,4-Dichlorophenol	25.0	438016	0.2811	80.0	1385801	0.2633	120	2070102	0.2576
2-Nitrophenol	25.0	306170	0.1965	80.0	964395	0.1832	120	1406275	0.1750
4-Chloro-3-Methylphenol	25.0	444575	0.2853	80.0	1399916	0.2660	120	2063145	0.2567
Di-n-Octyl Phthalate	25.0	2086119	1.670	80.0	6557748	1.585	120	9415402	1.507
Hexachlorobutadiene	25.0	246283	0.1581	80.0	752608	0.1430	120	1107561	0.1378
Pentachlorophenol	25.0	175499	0.1306	80.0	636754	0.1380	120	967763	0.1397
Phenol	25.0	677563	1.724	80.0	2048646	1.590	120	2972416	1.520
n-Nitrosodiphenylamine	25.0	1055245	0.7854	80.0	3203270	0.6945	120	4524416	0.6533
2,4-Dinitrophenol	25.0	88287	0.09920	80.0	397232	0.1306	120	648660	0.1391
4-Nitrophenol	25.0	183609	0.2064	80.0	661051	0.2173	120	1010926	0.2168
Hexachlorocyclopentadiene	25.0	214645	0.2412	80.0	761240	0.2502	120	1135774	0.2436
n-Nitrosodipropylamine	25.0	370684	0.9430	80.0	982605	0.7624	120	1310833	0.6702
2,4,5-Trichlorophenol	25.0	326852	0.3674	80.0	1069734	0.3516	120	1600241	0.3432
2,4-Dimethylphenol	25.0	527833	0.3388	80.0	1583213	0.3008	120	2254654	0.2806
2,4-Dinitrotoluene	25.0	338747	0.3807	80.0	1040606	0.3420	120	1458474	0.3128
2,6-Dinitrotoluene	25.0	282891	0.3179	80.0	923633	0.3036	120	1381899	0.2964
2-Chloronaphthalene	25.0	1202533	1.352	80.0	3590772	1.180	120	5160451	1.107
2-Chlorophenol	25.0	586570	1.492	80.0	1828909	1.419	120	2725154	1.393
2-Methylphenol	25.0	440527	1.121	80.0	1370410	1.063	120	2020568	1.033
2-Nitroaniline	25.0	287901	0.3236	80.0	916917	0.3014	120	1342068	0.2879
3,3'-Dichlorobenzidine	25.0	579744	0.4694	80.0	1807706	0.4355	120	2671145	0.4294
3-,4-Methylphenol	25.0	582688	1.482	80.0	1810984	1.405	120	2667924	1.364
3-Nitroaniline	25.0	299832	0.3370	80.0	1011692	0.3325	120	1522681	0.3266
4,6-Dinitro-2-Methylphenol	25.0	172341	0.1283	80.0	668341	0.1449	120	1028982	0.1486
4-Bromophenyl Phenyl Ether	25.0	327452	0.2437	80.0	1014606	0.2200	120	1497900	0.2163
4-Chloroaniline	25.0	726612	0.4663	80.0	2232903	0.4243	120	3255219	0.4051
4-Chlorophenyl Phenyl Ether	25.0	578545	0.6502	80.0	1677628	0.5514	120	2298777	0.4930
4-Nitroaniline	25.0	315510	0.3546	80.0	1023582	0.3365	120	1526265	0.3274
Butyl Benzyl Phthalate	25.0	853531	0.6911	80.0	2202921	0.5308	120	2879231	0.4628
Carbazole	25.0	1614383	1.202	80.0	4892866	1.061	120	6902707	0.9968
Di-n-Butyl Phthalate	25.0	2043202	1.521	80.0	5958995	1.292	120	8214523	1.186
Dibenzofuran	25.0	1449562	1.629	80.0	4171217	1.371	120	5711615	1.225
Diethylphthalate	25.0	1163784	1.308	80.0	3569642	1.173	120	5166610	1.108
Dimethylphthalate	25.0	1165011	1.309	80.0	3537120	1.163	120	5134460	1.101
Hexachlorobenzene	25.0	344183	0.2562	80.0	1049100	0.2274	120	1548808	0.2236
Hexachloroethane	25.0	237474	0.6041	80.0	737832	0.5725	120	1099049	0.5619
Isophorone	25.0	968975	0.6219	80.0	2949627	0.5605	120	4300715	0.5352
Nitrobenzene	25.0	549893	0.3529	80.0	1686320	0.3204	120	2466127	0.3069
bis(2-Chloroethoxy)methane	25.0	815826	0.5236	80.0	2250533	0.4276	120	3034222	0.3776
bis(2-Chloroethyl)ether	25.0	387651	0.9862	80.0	1087006	0.8434	120	1519410	0.7769
bis(2-Chloroisopropyl)ether	25.0	910538	2.317	80.0	2651303	2.057	120	3749588	1.917

KEMRON Environmental Services

INITIAL CALIBRATION DATA

Login Number: L0606267 **Instrument ID:** HPMS4

Analytical Method: 8270C **Initial Calibration Date:** 10-MAY-06 17:31

Column ID: F

Analyte	WG212888-08		
	CONC	RESP	RF
2,4,6-Trichlorophenol	100	1231222	0.3328
2,4-Dichlorophenol	100	1694676	0.2653
2-Nitrophenol	100	1171313	0.1833
4-Chloro-3-Methylphenol	100	1692604	0.2649
Di-n-Octyl Phthalate	100	7926368	1.588
Hexachlorobutadiene	100	911448	0.1427
Pentachlorophenol	100	777380	0.1383
Phenol	100	2469344	1.582
n-Nitrosodiphenylamine	100	3857905	0.6864
2,4-Dinitrophenol	100	510127	0.1379
4-Nitrophenol	100	795194	0.2150
Hexachlorocyclopentadiene	100	941671	0.2546
n-Nitrosodipropylamine	100	1140909	0.7309
2,4,5-Trichlorophenol	100	1310165	0.3542
2,4-Dimethylphenol	100	1905067	0.2982
2,4-Dinitrotoluene	100	1248768	0.3376
2,6-Dinitrotoluene	100	1128410	0.3050
2-Chloronaphthalene	100	4310104	1.165
2-Chlorophenol	100	2237290	1.433
2-Methylphenol	100	1647904	1.056
2-Nitroaniline	100	1105111	0.2987
3,3'-Dichlorobenzidine	100	2215872	0.4440
3-,4-Methylphenol	100	2197686	1.408
3-Nitroaniline	100	1243105	0.3360
4,6-Dinitro-2-Methylphenol	100	830250	0.1477
4-Bromophenyl Phenyl Ether	100	1220359	0.2171
4-Chloroaniline	100	2704555	0.4233
4-Chlorophenyl Phenyl Ether	100	1982867	0.5360
4-Nitroaniline	100	1250955	0.3382
Butyl Benzyl Phthalate	100	2579054	0.5167
Carbazole	100	5850640	1.041
Di-n-Butyl Phthalate	100	7042671	1.253
Dibenzofuran	100	4940502	1.336
Diethylphthalate	100	4301637	1.163
Dimethylphthalate	100	4287057	1.159
Hexachlorobenzene	100	1278359	0.2275
Hexachloroethane	100	902593	0.5782
Isophorone	100	3552172	0.5560
Nitrobenzene	100	2026137	0.3171
bis(2-Chloroethoxy)methane	100	2634100	0.4123
bis(2-Chloroethyl)ether	100	1290087	0.8264
bis(2-Chloroisopropyl)ether	100	3140966	2.012

KEMRON Environmental Services

INITIAL CALIBRATION DATA

Login Number: L0606267 **Instrument ID:** HPMS4

Analytical Method: 8270C **Initial Calibration Date:** 10-MAY-06 17:31

Column ID: F

Analyte	WG212888-02			WG212888-03			WG212888-04		
	CONC	RESP	RF	CONC	RESP	RF	CONC	RESP	RF
bis(2-Ethylhexyl)phthalate	50.0	2426220	0.9399	3.00	142563	0.9713	15.0	756033	1.020
2,4,6-Tribromophenol	50.0	297521	0.1589	3.00	14684	0.1373	15.0	87429	0.1651
2-Fluorobiphenyl	50.0	2234703	1.193	3.00	143882	1.345	15.0	700636	1.323
2-Fluorophenol	50.0	1043671	1.282	3.00	61652	1.263	15.0	315552	1.326
Nitrobenzene-d5	50.0	1056262	0.3235	3.00	60193	0.3142	15.0	322497	0.3432
Phenol-d5	50.0	1237869	1.521	3.00	73918	1.514	15.0	380898	1.600
p-Terphenyl-d14	50.0	2380370	0.9222	3.00	149218	1.017	15.0	763744	1.030

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KEMRON Environmental Services

INITIAL CALIBRATION DATA

Login Number: L0606267 **Instrument ID:** HPMS4

Analytical Method: 8270C **Initial Calibration Date:** 10-MAY-06 17:31

Column ID: F

Analyte	WG212888-05			WG212888-06			WG212888-07		
	CONC	RESP	RF	CONC	RESP	RF	CONC	RESP	RF
bis(2-Ethylhexyl)phthalate	25.0	1245494	1.009	80.0	3740854	0.9013	120	5301814	0.8522
2,4,6-Tribromophenol	25.0	145658	0.1637	80.0	473622	0.1557	120	712643	0.1528
2-Fluorobiphenyl	25.0	1144935	1.287	80.0	3463027	1.138	120	4950609	1.062
2-Fluorophenol	25.0	521667	1.327	80.0	1647246	1.278	120	2474996	1.266
Nitrobenzene-d5	25.0	531018	0.3408	80.0	1667522	0.3168	120	2465444	0.3068
Phenol-d5	25.0	629351	1.601	80.0	1910849	1.483	120	2774141	1.418
p-Terphenyl-d14	25.0	1238227	1.003	80.0	3639985	0.8770	120	5127227	0.8241

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KEMRON Environmental Services

INITIAL CALIBRATION DATA

Login Number: L0606267
Analytical Method: 8270C
Instrument ID: HPMS4
Initial Calibration Date: 10-MAY-06 17:31
Column ID: F

Analyte	WG212888-08		
	CONC	RESP	RF
bis(2-Ethylhexyl)phthalate	100	4512407	0.9041
2,4,6-Tribromophenol	100	577527	0.1561
2-Fluorobiphenyl	100	4162599	1.125
2-Fluorophenol	100	2022240	1.296
Nitrobenzene-d5	100	2018174	0.3159
Phenol-d5	100	2305608	1.477
p-Terphenyl-d14	100	4315298	0.8646

KEMRON Environmental Services

ALTERNATE SOURCE CALIBRATION REPORT

Login Number:L0606267 Run Date:05/10/2006 Sample ID:WG212888-09
Instrument ID:HPMS4 Run Time:18:06 Method:8270C
File ID:4M32970 Analyst:CLK
ICal Workgroup:WG212888 Cal ID: HPMS4 - 10-MAY-06

Analyte		Expected	Found	RF	%D	UNITS	Q
Phenol	CCC	50	51.7	1.69	3.4	ug/mL	
2-Nitrophenol	CCC	50	53.5	0.198	7	ug/mL	
2,4-Dichlorophenol	CCC	50	53.9	0.289	7.7	ug/mL	
Hexachlorobutadiene	CCC	50	54.1	0.162	8.3	ug/mL	
4-Chloro-3-Methylphenol	CCC	50	52.2	0.285	4.5	ug/mL	
2,4,6-Trichlorophenol	CCC	50	54.3	0.356	8.5	ug/mL	
n-Nitrosodiphenylamine	CCC	50	42.3	0.623	15.3	ug/mL	
Pentachlorophenol	CCC	50	55.1	0.147	10.1	ug/mL	
Di-n-Octyl Phthalate	CCC	50	52.5	1.66	5	ug/mL	
n-Nitrosodipropylamine	SPCC	50	56.1	0.932	12.1	ug/mL	
Hexachlorocyclopentadiene	SPCC	50	52.9	0.261	5.8	ug/mL	
2,4-Dinitrophenol	SPCC	50	54.5	0.138	9	ug/mL	
4-Nitrophenol	SPCC	50	49.5	0.209	.9	ug/mL	
bis(2-Chloroethyl)ether		50	54.4	0.985	8.8	ug/mL	
2-Chlorophenol		50	52.1	1.50	4.3	ug/mL	
2-Methylphenol		50	52.2	1.13	4.3	ug/mL	
bis(2-Chloroisopropyl)ether		50	49.5	2.16	.9	ug/mL	
3-,4-Methylphenol		50	57.5	1.64	14.9	ug/mL	
Hexachloroethane		50	49.2	0.571	1.6	ug/mL	
Nitrobenzene		50	49.8	0.330	.4	ug/mL	
Isophorone		50	53.6	0.626	7.1	ug/mL	
2,4-Dimethylphenol		50	52.4	0.330	4.8	ug/mL	
bis(2-Chloroethoxy)methane		50	44.6	0.419	10.8	ug/mL	
4-Chloroaniline		50	37.5	0.326	25	ug/mL	
2,4,5-Trichlorophenol		50	55.0	0.386	10.1	ug/mL	
2-Chloronaphthalene		50	43.5	1.10	12.9	ug/mL	
2-Nitroaniline		50	51.5	0.316	3	ug/mL	
Dimethylphthalate		50	49.4	1.21	1.2	ug/mL	
2,6-Dinitrotoluene		50	48.8	0.298	2.3	ug/mL	
3-Nitroaniline		50	37.2	0.248	25.5	ug/mL	*
Dibenzofuran		50	50.4	1.51	.8	ug/mL	
2,4-Dinitrotoluene		50	53.3	0.371	6.7	ug/mL	
Diethylphthalate		50	48.8	1.20	2.4	ug/mL	
4-Chlorophenyl Phenyl Ether		50	50.3	0.596	.5	ug/mL	
4-Nitroaniline		50	41.2	0.283	17.5	ug/mL	
4,6-Dinitro-2-Methylphenol		50	56.6	0.155	13.2	ug/mL	
4-Bromophenyl Phenyl Ether		50	44.3	0.205	11.3	ug/mL	
Hexachlorobenzene		50	49.8	0.242	.3	ug/mL	
Carbazole		50	47.8	1.07	4.4	ug/mL	
Di-n-Butyl Phthalate		50	51.2	1.42	2.5	ug/mL	
Butyl Benzyl Phthalate		50	61.8	0.720	23.5	ug/mL	
3,3'-Dichlorobenzidine		50	33.0	0.302	34	ug/mL	*

KEMRON FORMS - Modified 04/11/2006
Version 1.5 PDF File ID: 498630
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KEMRON Environmental Services

ALTERNATE SOURCE CALIBRATION REPORT

Login Number: L0606267 Run Date: 05/10/2006 Sample ID: WG212888-09
Instrument ID: HPMS4 Run Time: 18:06 Method: 8270C
File ID: 4M32970 Analyst: CLK
ICal Workgroup: WG212888 Cal ID: HPMS4 - 10-MAY-06

Analyte		Expected	Found	RF	%D	UNITS	Q
bis(2-Ethylhexyl)phthalate		50	51.3	0.967	2.6	ug/mL	

* Exceeds %D Limit

CCC Calibration Check Compounds
SPCC System Performance Check Compounds

KEMRON FORMS - Modified 04/11/2006
Version 1.5 PDF File ID: 498630
Report generated 06/16/2006 11:14

KEMRON Environmental Services

CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number:L0606267 Run Date:06/15/2006 Sample ID:WG215391-02
Instrument ID:HPMS4 Run Time:14:04 Method:8270C
File ID:4M33334 Analyst:ALT
Workgroup (AAB#):WG215434 Cal ID: HPMS4 - 10-MAY-06

Analyte		Expected	Found	RF	%D	UNITS	Q
Phenol	CCC	50	49.5	1.62	.9	ug/mL	
2-Nitrophenol	CCC	50	51.1	0.189	2.2	ug/mL	
2,4-Dichlorophenol	CCC	50	49.8	0.267	.4	ug/mL	
Hexachlorobutadiene	CCC	50	48.5	0.146	2.9	ug/mL	
4-Chloro-3-Methylphenol	CCC	50	53.8	0.294	7.5	ug/mL	
2,4,6-Trichlorophenol	CCC	50	50.0	0.328	.1	ug/mL	
n-Nitrosodiphenylamine	CCC	50	49.4	0.727	1.1	ug/mL	
Pentachlorophenol	CCC	50	49.5	0.133	.9	ug/mL	
Di-n-Octyl Phthalate	CCC	50	56.1	1.77	12.1	ug/mL	
n-Nitrosodipropylamine	SPCC	50	52.6	0.884	5.2	ug/mL	
Hexachlorocyclopentadiene	SPCC	50	38.8	0.190	22.5	ug/mL	
2,4-Dinitrophenol	SPCC	50	51.8	0.130	3.6	ug/mL	
4-Nitrophenol	SPCC	50	55.9	0.236	11.9	ug/mL	
bis(2-Chloroethyl)ether		50	48.8	0.884	2.4	ug/mL	
2-Chlorophenol		50	48.6	1.40	2.8	ug/mL	
2-Methylphenol		50	51.4	1.11	2.8	ug/mL	
bis(2-Chloroisopropyl)ether		50	42.7	1.86	14.5	ug/mL	
3-,4-Methylphenol		50	50.9	1.45	1.7	ug/mL	
Hexachloroethane		50	52.8	0.613	5.6	ug/mL	
Nitrobenzene		50	51.6	0.342	3.3	ug/mL	
Isophorone		50	51.4	0.601	2.7	ug/mL	
2,4-Dimethylphenol		50	50.6	0.319	1.1	ug/mL	
bis(2-Chloroethoxy)methane		50	51.5	0.483	2.9	ug/mL	
4-Chloroaniline		50	49.9	0.433	.3	ug/mL	
2,4,5-Trichlorophenol		50	49.4	0.347	1.1	ug/mL	
2-Chloronaphthalene		50	48.5	1.22	3	ug/mL	
2-Nitroaniline		50	52.1	0.320	4.3	ug/mL	
Dimethylphthalate		50	49.4	1.22	1.1	ug/mL	
2,6-Dinitrotoluene		50	49.9	0.304	.2	ug/mL	
3-Nitroaniline		50	47.0	0.313	6	ug/mL	
Dibenzofuran		50	50.1	1.50	.2	ug/mL	
2,4-Dinitrotoluene		50	54.5	0.379	9	ug/mL	
Diethylphthalate		50	51.3	1.27	2.6	ug/mL	
4-Chlorophenyl Phenyl Ether		50	48.2	0.571	3.6	ug/mL	
4-Nitroaniline		50	51.0	0.350	2.1	ug/mL	
4,6-Dinitro-2-Methylphenol		50	50.8	0.139	1.5	ug/mL	
4-Bromophenyl Phenyl Ether		50	47.0	0.217	6	ug/mL	
Hexachlorobenzene		50	46.1	0.224	7.8	ug/mL	
Carbazole		50	51.0	1.14	2	ug/mL	
Di-n-Butyl Phthalate		50	52.4	1.45	4.9	ug/mL	
Butyl Benzyl Phthalate		50	57.5	0.680	15	ug/mL	
3,3'-Dichlorobenzidine		50	42.3	0.387	15.4	ug/mL	

KEMRON FORMS - Modified 04/19/2006
Version 1.3 PDF File ID: 498633
Report generated 06/16/2006 11:15

KEMRON Environmental Services

CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L0606267 Run Date: 06/15/2006 Sample ID: WG215391-02
Instrument ID: HPMS4 Run Time: 14:04 Method: 8270C
File ID: 4M33334 Analyst: ALT
Workgroup (AAB#): WG215434 Cal ID: HPMS4 - 10-MAY-06

Analyte		Expected	Found	RF	%D	UNITS	Q
bis(2-Ethylhexyl)phthalate		50	53.3	1.00	6.6	ug/mL	
2-Fluorophenol	SURR	50	48.3	1.25	3.4	ug/mL	
Phenol-d5	SURR	50	48.6	1.48	2.7	ug/mL	
Nitrobenzene-d5	SURR	50	51.5	0.333	3	ug/mL	
2-Fluorobiphenyl	SURR	50	49.0	1.19	2	ug/mL	
2,4,6-Tribromophenol	SURR	50	49.5	0.154	1.1	ug/mL	
p-Terphenyl-d14	SURR	50	47.9	0.895	4.2	ug/mL	

* Exceeds %D Criteria

CCC Calibration Check Compounds
SPCC System Performance Check Compounds

KEMRON FORMS - Modified 04/19/2006
Version 1.3 PDF File ID: 498633
Report generated 06/16/2006 11:15

KEMRON ENVIRONMENTAL SERVICES
INTERNAL STANDARD AREA SUMMARY
(COMPARED TO CCV)

Login Number: L0606267 — CCV Number: WG215391-02
Instrument ID: HPMS4 — CAL ID: HPMS4-10-MAY-06
Workgroup (AAB#): WG215434 — Matrix: SOLID

Sample Number	Dilution	Tag	IS-1	IS-2	IS-3	IS-4	IS-5	IS-6
WG215391-02	NA	NA	459908	1147366	1586297	1912324	1571213	1748000
Upper Limit	NA	NA	919816	2294732	3172594	3824648	3142426	3496000
Lower Limit	NA	NA	229954	573683	793149	956162	785607	874000
L0606267-01	1.00	01	426754	952653	1271835	1712160	1208455	1380064
L0606267-02	1.00	01	402925	899581	1187699	1615987	1171273	1307355
L0606267-03	1.00	01	406075	894180	1157557	1605963	1149987	1293439
L0606267-04	1.00	01	411565	921793	1207946	1646321	1208193	1333241
L0606267-05	2.00	DL01	380369	845328	1136119	1533416	1128837	1228972
L0606267-06	1.00	01	407463	909528	1209996	1633206	1209361	1314039
L0606267-07	1.00	01	429912	952289	1253044	1716886	1245638	1386173
L0606267-08	1.00	01	416543	922999	1252375	1668563	1249783	1332653
L0606267-09	1.00	01	418207	930930	1226791	1670479	1219545	1356416
L0606267-10	1.00	01	404649	906581	1186794	1635107	1185172	1309718
L0606267-11	1.00	01	404037	931147	1263159	1788240	1238235	1376995
L0606267-12	1.00	01	396535	915540	1224184	1740305	1199609	1341686
WG215136-02	1.00	01	432579	961667	1259492	1701727	1244447	1382037
WG215136-03	1.00	01	434463	1003675	1364443	1943789	1327815	1481493

IS-1 - 1,4-Dichlorobenzene-d4
IS-2 - Acenaphthene-d10
IS-3 - Chrysene-d12
IS-4 - Naphthalene-d8
IS-5 - Perylene-d12
IS-6 - Phenanthrene-d10

Underline = Response outside limits

KEMRON FORMS - Modified 04/18/2006
Version 1.3 PDF File ID: 498311
Report generated 06/16/2006 11:15

KEMRON ENVIRONMENTAL SERVICES
INTERNAL STANDARD RETENTION TIME SUMMARY
(COMPARED TO CCV)

Login Number:L0606267 CCV Number:WG215391-02
Instrument ID:HPMS4 CAL ID: HPMS4-10-MAY-06
Workgroup (AAB#):WG215434 Matrix:SOLID

Sample Number	Dilution	Tag	IS-1	IS-2	IS-3	IS-4	IS-5	IS-6
WG215391-02	NA	NA	9.29	13.14	18.42	10.89	21.01	15.01
Upper Limit	NA	NA	9.79	13.64	18.92	11.39	21.51	15.51
Lower Limit	NA	NA	8.79	12.64	17.92	10.39	20.51	14.51
L0606267-01	1.00	01	9.29	13.13	18.41	10.89	21	15.01
L0606267-02	1.00	01	9.29	13.13	18.41	10.89	21	15.01
L0606267-03	1.00	01	9.29	13.14	18.41	10.89	21	15.01
L0606267-04	1.00	01	9.29	13.13	18.41	10.89	21	15.01
L0606267-05	2.00	DL01	9.29	13.13	18.41	10.89	21	15.01
L0606267-06	1.00	01	9.29	13.13	18.41	10.89	21	15.01
L0606267-07	1.00	01	9.29	13.13	18.41	10.89	21	15.01
L0606267-08	1.00	01	9.29	13.13	18.41	10.89	21	15.01
L0606267-09	1.00	01	9.29	13.13	18.41	10.89	21	15.01
L0606267-10	1.00	01	9.29	13.13	18.41	10.89	21	15.01
L0606267-11	1.00	01	9.29	13.13	18.42	10.89	21	15.01
L0606267-12	1.00	01	9.29	13.14	18.42	10.89	21	15.01
WG215136-02	1.00	01	9.29	13.13	18.41	10.89	21	15.01
WG215136-03	1.00	01	9.29	13.14	18.42	10.89	21.01	15.01

IS-1 - 1,4-Dichlorobenzene-d4
IS-2 - Acenaphthene-d10
IS-3 - Chrysene-d12
IS-4 - Naphthalene-d8
IS-5 - Perylene-d12
IS-6 - Phenanthrene-d10

Underline = Response outside limits

KEMRON FORMS - Modified 04/18/2006
Version 1.3 PDF File ID: 498634
Report generated 06/16/2006 11:16

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1.1.1 Semivolatiles GC/MS Data (827-PAHL)

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1.1.1.1 QC Summary

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KEMRON ENVIRONMENTAL SERVICES
GC/MS SEMIVOLATILE ORGANICS

KEMRON Login No.: L0606267

METHOD

Preparation: 3545 (soils) or 3510 (waters)

Analysis: SW-846 8270C PAHL

HOLDING TIMES

Sample Preparation: All holding times were met.

Sample Analysis: All holding times were met.

PREPARATION

Sample preparation proceeded normally.

CALIBRATION

Initial Calibration: For all compounds which yielded a %RSD greater than 15%, linear or higher order equations were applied. All acceptance criteria were met.

Alternate Source Standards: All acceptance criteria were met.

Continuing Calibration and Tune: All acceptance criteria were met.

BATCH QA/QC

Method Blank: All acceptance criteria were met.

Laboratory Control Sample: All acceptance criteria were met.

Matrix Spikes: The MS yielded a percent recovery for acenaphthylene that was below the advisory limit. All other acceptance criteria were met.

SAMPLES

Internal Standards: All acceptance criteria were met.

Surrogates: All acceptance criteria were met.

Samples: Sample fractions 01, 02, and 04 through 06 were analyzed at a dilution due to the appearance of the extract. All acceptance criteria were met.

Manual Integration Reason Codes

KEMRON laboratory management has identified four general cases with valid reasons supporting the use of manual integration techniques.

Reason #1: Data System Fails to Select Correct Peak
In some cases the chromatography system selects and integrates the ”wrong peak”. In this case the analyst must correct the selection and force the system to integrate the proper peak. Other times the system may miss the peak completely.

Reason #2: Data System Splits the Peak Incorrectly or Integrates a False Peak as a Rider Peak.
This phenomena is common at low concentrations where the signal:noise ratio is low. A single compound (peak) is incorrectly split into multiple peaks or integrated as a main peak with one or more rider peaks resulting in low area counts for the target compound.

Reason #3: Improperly Integrated Isomers and/or coeluting compounds.
This system often fails to distinguish coeluting compounds and or isomers. The integration areas and concentrations are wrong, and they must be corrected by manual integration. Prime examples are benzo(k)fluoranthene and benzo(b)fluoranthene which are often unresolved and integrated improperly when both are present at low concentrations in standards or samples.

Reason #4: System Establishes Incorrect Baseline
There are numerous situations in chromatography where the system establishes the baseline incorrectly. Some baseline errors will be obvious to the analyst and should be corrected via manual procedures.

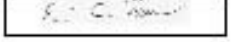
Reason #5: Miscellaneous
Other situations involving integration errors may require in-depth review and technical judgment. These cases should be brought to the attention of the laboratory management. If the form of manual integration is not clearly covered by these four cases, then review and approval by the Laboratory Director or the QA/QC Supervisor will be required.

MI-REASONS-SAMPLES

I certify that this data package is in compliance with the terms and conditions agreed to by the client and KEMRON Environmental Services, both technically and for completeness, except for the conditions noted above. Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or designated person, as verified by the following signature.

Analyst: CLK,RDC

Approved: 19-JUN-06



LABORATORY REPORT

L0606267

06/19/06 11:25

Submitted By

KEMRON Environmental Services
156 Starlite Drive
Marietta , OH 45750
(740) 373 - 4071

For

Account Name: CH2MHILL, Inc
7600 Tidwell Road
Suite 400
San Antonio, TX 77040
Attention: John Ynfante

Account Number: 2736
Work ID: STATE MARINE SUPERFUND SITE

P.O. Number: 915193

Sample Analysis Summary

Client ID	Lab ID	Method	Dilution	Date Received
A-SD-01	L0606267-01	8270C	5	10-JUN-06
B-SD-02	L0606267-02	8270C	2	10-JUN-06
C-SD-03	L0606267-03	8270C	1	10-JUN-06
D-SD-04	L0606267-04	8270C	2	10-JUN-06
E-SD-05	L0606267-05	8270C	5	10-JUN-06
F-SD-06	L0606267-06	8270C	2	10-JUN-06
G-SD-07	L0606267-07	8270C	1	10-JUN-06
H-SD-08	L0606267-08	8270C	1	10-JUN-06
I-SD-09	L0606267-09	8270C	1	10-JUN-06
FD-01	L0606267-10	8270C	1	10-JUN-06
C-SD-03-MS	L0606267-11	8270C	1	10-JUN-06
C-SD-03-MSD	L0606267-12	8270C	1	10-JUN-06

Report Number: **L0606267**
Report Date : **June 19, 2006**

Sample Number: **L0606267-01**
Client ID: **A-SD-01**
Matrix: **Soil**
Workgroup Number: **WG215457**
Collect Date: **06/08/2006 11:00**
Sample Tag: **DL01**

PrePrep Method: **NONE**
Prep Method: **3545**
Analytical Method: **8270C**
Analyst: **hav/rdc**
Dilution: **5**
Units: **ug/kg**

Instrument: **HPMS7**
Prep Date: **06/13/2006 12:45**
Cal Date: **05/11/2006 10:28**
Run Date: **06/15/2006 12:51**
File ID: **7M29707**
Percent Solid: **49.9**

Analyte	CAS. Number	Result	Qual	PQL	SQL
Naphthalene	91-20-3		U	58.9	29.4
Acenaphthylene	208-96-8		U	58.9	29.4
Acenaphthene	83-32-9		U	58.9	29.4
Fluorene	86-73-7		U	58.9	29.4
Phenanthrene	85-01-8	58.9		58.9	29.4
Anthracene	120-12-7		U	58.9	29.4
Fluoranthene	206-44-0	170		58.9	29.4
Pyrene	129-00-0	104		58.9	29.4
Benzo(a)anthracene	56-55-3	56.0	J	58.9	29.4
Chrysene	218-01-9	82.6		58.9	29.4
Benzo(b)fluoranthene	205-99-2	143		58.9	29.4
Benzo(k)fluoranthene	207-08-9	29.8	J	58.9	29.4
Benzo(a)pyrene	50-32-8	54.8	J	58.9	29.4
Indeno(1,2,3-cd)pyrene	193-39-5		U	58.9	29.4
Dibenzo(a,h)anthracene	53-70-3		U	58.9	29.4
Benzo(g,h,i)perylene	191-24-2		U	58.9	29.4
2-Methylnaphthalene	91-57-6		U	58.9	29.4

Surrogate	% Recovery	Lower	Upper	Qual
Nitrobenzene-d5	73.0	23	120	
2-Fluorobiphenyl	53.9	30	115	
p-Terphenyl-d14	75.5	18	137	

J The analyte was positively identified, but the quantitation was below the RL
U Not detected at or above the reporting limit

Report Number: **L0606267**
Report Date : **June 19, 2006**

Sample Number: **L0606267-02**
Client ID: **B-SD-02**
Matrix: **Soil**
Workgroup Number: **WG215457**
Collect Date: **06/08/2006 12:05**
Sample Tag: **DL01**

PrePrep Method: **NONE**
Prep Method: **3545**
Analytical Method: **8270C**
Analyst: **hav/rdc**
Dilution: **2**
Units: **ug/kg**

Instrument: **HPMS7**
Prep Date: **06/13/2006 12:45**
Cal Date: **06/16/2006 14:54**
Run Date: **06/16/2006 18:32**
File ID: **7M29741**
Percent Solid: **59.7**

Analyte	CAS. Number	Result	Qual	PQL	SQL
Naphthalene	91-20-3		U	19.7	9.85
Acenaphthylene	208-96-8		U	19.7	9.85
Acenaphthene	83-32-9		U	19.7	9.85
Fluorene	86-73-7		U	19.7	9.85
Phenanthrene	85-01-8	13.7	J	19.7	9.85
Anthracene	120-12-7	10.0	J	19.7	9.85
Fluoranthene	206-44-0	33.5		19.7	9.85
Pyrene	129-00-0	44.2		19.7	9.85
Benzo(a)anthracene	56-55-3	20.3		19.7	9.85
Chrysene	218-01-9	29.6		19.7	9.85
Benzo(b)fluoranthene	205-99-2	26.3		19.7	9.85
Benzo(k)fluoranthene	207-08-9		U	19.7	9.85
Benzo(a)pyrene	50-32-8	20.4		19.7	9.85
Indeno(1,2,3-cd)pyrene	193-39-5	10.9	J	19.7	9.85
Dibenzo(a,h)anthracene	53-70-3		U	19.7	9.85
Benzo(g,h,i)perylene	191-24-2	16.6	J	19.7	9.85
2-Methylnaphthalene	91-57-6		U	19.7	9.85

Surrogate	% Recovery	Lower	Upper	Qual
Nitrobenzene-d5	57.4	23	120	
2-Fluorobiphenyl	46.7	30	115	
p-Terphenyl-d14	69.5	18	137	

J The analyte was positively identified, but the quantitation was below the RL
U Not detected at or above the reporting limit

Report Number: **L0606267**
Report Date : **June 19, 2006**

Sample Number: **L0606267-03**
Client ID: **C-SD-03**
Matrix: **Soil**
Workgroup Number: **WG215457**
Collect Date: **06/08/2006 15:30**
Sample Tag: **01**

PrePrep Method: **NONE**
Prep Method: **3545**
Analytical Method: **8270C**
Analyst: **hav/rdc**
Dilution: **1**
Units: **ug/kg**

Instrument: **HPMS7**
Prep Date: **06/13/2006 12:45**
Cal Date: **05/11/2006 10:28**
Run Date: **06/15/2006 11:02**
File ID: **7M29703**
Percent Solid: **48.8**

Analyte	CAS. Number	Result	Qual	PQL	SQL
Naphthalene	91-20-3		U	11.9	5.96
Acenaphthylene	208-96-8		U	11.9	5.96
Acenaphthene	83-32-9		U	11.9	5.96
Fluorene	86-73-7		U	11.9	5.96
Phenanthrene	85-01-8	9.67	J	11.9	5.96
Anthracene	120-12-7		U	11.9	5.96
Fluoranthene	206-44-0	11.0	J	11.9	5.96
Pyrene	129-00-0	14.4		11.9	5.96
Benzo(a)anthracene	56-55-3	8.23	J	11.9	5.96
Chrysene	218-01-9	8.09	J	11.9	5.96
Benzo(b)fluoranthene	205-99-2	10.5	J	11.9	5.96
Benzo(k)fluoranthene	207-08-9		U	11.9	5.96
Benzo(a)pyrene	50-32-8	9.20	J	11.9	5.96
Indeno(1,2,3-cd)pyrene	193-39-5		U	11.9	5.96
Dibenzo(a,h)anthracene	53-70-3		U	11.9	5.96
Benzo(g,h,i)perylene	191-24-2		U	11.9	5.96
2-Methylnaphthalene	91-57-6		U	11.9	5.96

Surrogate	% Recovery	Lower	Upper	Qual
Nitrobenzene-d5	84.1	23	120	
2-Fluorobiphenyl	56.6	30	115	
p-Terphenyl-d14	69.8	18	137	

J The analyte was positively identified, but the quantitation was below the RL
U Not detected at or above the reporting limit

Report Number: **L0606267**
Report Date : **June 19, 2006**

Sample Number: **L0606267-04**
Client ID: **D-SD-04**
Matrix: **Soil**
Workgroup Number: **WG215457**
Collect Date: **06/08/2006 16:40**
Sample Tag: **DL01**

PrePrep Method: **NONE**
Prep Method: **3545**
Analytical Method: **8270C**
Analyst: **hav/rdc**
Dilution: **2**
Units: **ug/kg**

Instrument: **HPMS7**
Prep Date: **06/13/2006 12:45**
Cal Date: **06/16/2006 14:54**
Run Date: **06/16/2006 18:59**
File ID: **7M29742**
Percent Solid: **62.1**

Analyte	CAS. Number	Result	Qual	PQL	SQL
Naphthalene	91-20-3		U	18.9	9.47
Acenaphthylene	208-96-8		U	18.9	9.47
Acenaphthene	83-32-9		U	18.9	9.47
Fluorene	86-73-7		U	18.9	9.47
Phenanthrene	85-01-8		U	18.9	9.47
Anthracene	120-12-7		U	18.9	9.47
Fluoranthene	206-44-0	12.8	J	18.9	9.47
Pyrene	129-00-0	19.8		18.9	9.47
Benzo(a)anthracene	56-55-3	10.8	J	18.9	9.47
Chrysene	218-01-9	11.8	J	18.9	9.47
Benzo(b)fluoranthene	205-99-2	15.7	J	18.9	9.47
Benzo(k)fluoranthene	207-08-9		U	18.9	9.47
Benzo(a)pyrene	50-32-8	12.3	J	18.9	9.47
Indeno(1,2,3-cd)pyrene	193-39-5		U	18.9	9.47
Dibenzo(a,h)anthracene	53-70-3		U	18.9	9.47
Benzo(g,h,i)perylene	191-24-2	9.92	J	18.9	9.47
2-Methylnaphthalene	91-57-6		U	18.9	9.47

Surrogate	% Recovery	Lower	Upper	Qual
Nitrobenzene-d5	42.8	23	120	
2-Fluorobiphenyl	32.8	30	115	
p-Terphenyl-d14	65.7	18	137	

J The analyte was positively identified, but the quantitation was below the RL
U Not detected at or above the reporting limit

Report Number: **L0606267**
Report Date : **June 19, 2006**

Sample Number: **L0606267-05**
Client ID: **E-SD-05**
Matrix: **Soil**
Workgroup Number: **WG215457**
Collect Date: **06/08/2006 14:20**
Sample Tag: **DL01**

PrePrep Method: **NONE**
Prep Method: **3545**
Analytical Method: **8270C**
Analyst: **hav/rdc**
Dilution: **5**
Units: **ug/kg**

Instrument: **HPMS7**
Prep Date: **06/13/2006 12:45**
Cal Date: **05/11/2006 10:28**
Run Date: **06/15/2006 15:17**
File ID: **7M29712**
Percent Solid: **74.8**

Analyte	CAS. Number	Result	Qual	PQL	SQL
Naphthalene	91-20-3		U	39.3	19.6
Acenaphthylene	208-96-8		U	39.3	19.6
Acenaphthene	83-32-9		U	39.3	19.6
Fluorene	86-73-7		U	39.3	19.6
Phenanthrene	85-01-8	23.4	J	39.3	19.6
Anthracene	120-12-7		U	39.3	19.6
Fluoranthene	206-44-0	47.4		39.3	19.6
Pyrene	129-00-0	49.0		39.3	19.6
Benzo(a)anthracene	56-55-3	25.0	J	39.3	19.6
Chrysene	218-01-9	19.9	J	39.3	19.6
Benzo(b)fluoranthene	205-99-2		U	39.3	19.6
Benzo(k)fluoranthene	207-08-9		U	39.3	19.6
Benzo(a)pyrene	50-32-8		U	39.3	19.6
Indeno(1,2,3-cd)pyrene	193-39-5		U	39.3	19.6
Dibenzo(a,h)anthracene	53-70-3		U	39.3	19.6
Benzo(g,h,i)perylene	191-24-2		U	39.3	19.6
2-Methylnaphthalene	91-57-6		U	39.3	19.6

Surrogate	% Recovery	Lower	Upper	Qual
Nitrobenzene-d5	73.5	23	120	
2-Fluorobiphenyl	64.6	30	115	
p-Terphenyl-d14	92.2	18	137	

J The analyte was positively identified, but the quantitation was below the RL
U Not detected at or above the reporting limit

Report Number: **L0606267**
Report Date : **June 19, 2006**

Sample Number: **L0606267-06**
Client ID: **F-SD-06**
Matrix: **Soil**
Workgroup Number: **WG215457**
Collect Date: **06/08/2006 17:25**
Sample Tag: **DL01**

PrePrep Method: **NONE**
Prep Method: **3545**
Analytical Method: **8270C**
Analyst: **hav/rdc**
Dilution: **2**
Units: **ug/kg**

Instrument: **HPMS7**
Prep Date: **06/13/2006 12:45**
Cal Date: **06/16/2006 14:54**
Run Date: **06/16/2006 19:27**
File ID: **7M29743**
Percent Solid: **72.4**

Analyte	CAS. Number	Result	Qual	PQL	SQL
Naphthalene	91-20-3	10.6	J	16.2	8.11
Acenaphthylene	208-96-8		U	16.2	8.11
Acenaphthene	83-32-9		U	16.2	8.11
Fluorene	86-73-7		U	16.2	8.11
Phenanthrene	85-01-8	8.76	J	16.2	8.11
Anthracene	120-12-7		U	16.2	8.11
Fluoranthene	206-44-0	14.8	J	16.2	8.11
Pyrene	129-00-0	33.7		16.2	8.11
Benzo(a)anthracene	56-55-3	12.6	J	16.2	8.11
Chrysene	218-01-9	10.6	J	16.2	8.11
Benzo(b)fluoranthene	205-99-2	13.7	J	16.2	8.11
Benzo(k)fluoranthene	207-08-9		U	16.2	8.11
Benzo(a)pyrene	50-32-8	11.7	J	16.2	8.11
Indeno(1,2,3-cd)pyrene	193-39-5		U	16.2	8.11
Dibenzo(a,h)anthracene	53-70-3		U	16.2	8.11
Benzo(g,h,i)perylene	191-24-2	9.06	J	16.2	8.11
2-Methylnaphthalene	91-57-6	17.9		16.2	8.11

Surrogate	% Recovery	Lower	Upper	Qual
Nitrobenzene-d5	59.7	23	120	
2-Fluorobiphenyl	46.4	30	115	
p-Terphenyl-d14	62.4	18	137	

J The analyte was positively identified, but the quantitation was below the RL
U Not detected at or above the reporting limit

Report Number: **L0606267**
Report Date : **June 19, 2006**

Sample Number: **L0606267-07**
Client ID: **G-SD-07**
Matrix: **Soil**
Workgroup Number: **WG215457**
Collect Date: **06/09/2006 10:50**

PrePrep Method: **NONE**
Prep Method: **3545**
Analytical Method: **8270C**
Analyst: **hav/rdc**
Dilution: **1**
Units: **ug/kg**

Instrument: **HPMS7**
Prep Date: **06/13/2006 12:45**
Cal Date: **05/11/2006 10:28**
Run Date: **06/15/2006 09:40**
File ID: **7M29700**
Percent Solid: **51.8**

Analyte	CAS. Number	Result	Qual	PQL	SQL
Naphthalene	91-20-3		U	11.3	5.67
Acenaphthylene	208-96-8		U	11.3	5.67
Acenaphthene	83-32-9		U	11.3	5.67
Fluorene	86-73-7		U	11.3	5.67
Phenanthrene	85-01-8		U	11.3	5.67
Anthracene	120-12-7		U	11.3	5.67
Fluoranthene	206-44-0	5.73	J	11.3	5.67
Pyrene	129-00-0		U	11.3	5.67
Benzo(a)anthracene	56-55-3		U	11.3	5.67
Chrysene	218-01-9		U	11.3	5.67
Benzo(b)fluoranthene	205-99-2		U	11.3	5.67
Benzo(k)fluoranthene	207-08-9		U	11.3	5.67
Benzo(a)pyrene	50-32-8		U	11.3	5.67
Indeno(1,2,3-cd)pyrene	193-39-5		U	11.3	5.67
Dibenzo(a,h)anthracene	53-70-3		U	11.3	5.67
Benzo(g,h,i)perylene	191-24-2		U	11.3	5.67
2-Methylnaphthalene	91-57-6		U	11.3	5.67

Surrogate	% Recovery	Lower	Upper	Qual
Nitrobenzene-d5	94.8	23	120	
2-Fluorobiphenyl	53.7	30	115	
p-Terphenyl-d14	50.5	18	137	

J The analyte was positively identified, but the quantitation was below the RL
U Not detected at or above the reporting limit

Report Number: **L0606267**
Report Date : **June 19, 2006**

Sample Number: **L0606267-08**
Client ID: **H-SD-08**
Matrix: **Soil**
Workgroup Number: **WG215457**
Collect Date: **06/09/2006 10:15**

PrePrep Method: **NONE**
Prep Method: **3545**
Analytical Method: **8270C**
Analyst: **hav/rdc**
Dilution: **1**
Units: **ug/kg**

Instrument: **HPMS7**
Prep Date: **06/13/2006 12:45**
Cal Date: **05/11/2006 10:28**
Run Date: **06/15/2006 10:07**
File ID: **7M29701**
Percent Solid: **56.6**

Analyte	CAS. Number	Result	Qual	PQL	SQL
Naphthalene	91-20-3		U	10.4	5.19
Acenaphthylene	208-96-8		U	10.4	5.19
Acenaphthene	83-32-9		U	10.4	5.19
Fluorene	86-73-7		U	10.4	5.19
Phenanthrene	85-01-8		U	10.4	5.19
Anthracene	120-12-7		U	10.4	5.19
Fluoranthene	206-44-0		U	10.4	5.19
Pyrene	129-00-0		U	10.4	5.19
Benzo(a)anthracene	56-55-3		U	10.4	5.19
Chrysene	218-01-9		U	10.4	5.19
Benzo(b)fluoranthene	205-99-2		U	10.4	5.19
Benzo(k)fluoranthene	207-08-9		U	10.4	5.19
Benzo(a)pyrene	50-32-8		U	10.4	5.19
Indeno(1,2,3-cd)pyrene	193-39-5		U	10.4	5.19
Dibenzo(a,h)anthracene	53-70-3		U	10.4	5.19
Benzo(g,h,i)perylene	191-24-2		U	10.4	5.19
2-Methylnaphthalene	91-57-6		U	10.4	5.19

Surrogate	% Recovery	Lower	Upper	Qual
Nitrobenzene-d5	66.2	23	120	
2-Fluorobiphenyl	43.5	30	115	
p-Terphenyl-d14	67.4	18	137	

U Not detected at or above the reporting limit

Report Number: **L0606267**
Report Date : **June 19, 2006**

Sample Number: **L0606267-09**
Client ID: **I-SD-09**
Matrix: **Soil**
Workgroup Number: **WG215457**
Collect Date: **06/09/2006 11:45**

PrePrep Method: **NONE**
Prep Method: **3545**
Analytical Method: **8270C**
Analyst: **hav/rdc**
Dilution: **1**
Units: **ug/kg**

Instrument: **HPMS7**
Prep Date: **06/13/2006 12:45**
Cal Date: **06/16/2006 14:54**
Run Date: **06/16/2006 19:54**
File ID: **7M29744**
Percent Solid: **77.3**

Analyte	CAS. Number	Result	Qual	PQL	SQL
Naphthalene	91-20-3		U	7.54	3.77
Acenaphthylene	208-96-8		U	7.54	3.77
Acenaphthene	83-32-9		U	7.54	3.77
Fluorene	86-73-7		U	7.54	3.77
Phenanthrene	85-01-8		U	7.54	3.77
Anthracene	120-12-7		U	7.54	3.77
Fluoranthene	206-44-0		U	7.54	3.77
Pyrene	129-00-0		U	7.54	3.77
Benzo(a)anthracene	56-55-3		U	7.54	3.77
Chrysene	218-01-9		U	7.54	3.77
Benzo(b)fluoranthene	205-99-2		U	7.54	3.77
Benzo(k)fluoranthene	207-08-9		U	7.54	3.77
Benzo(a)pyrene	50-32-8		U	7.54	3.77
Indeno(1,2,3-cd)pyrene	193-39-5		U	7.54	3.77
Dibenzo(a,h)anthracene	53-70-3		U	7.54	3.77
Benzo(g,h,i)perylene	191-24-2		U	7.54	3.77
2-Methylnaphthalene	91-57-6		U	7.54	3.77

Surrogate	% Recovery	Lower	Upper	Qual
Nitrobenzene-d5	49.5	23	120	
2-Fluorobiphenyl	44.5	30	115	
p-Terphenyl-d14	60.8	18	137	

U Not detected at or above the reporting limit

Report Number: **L0606267**
Report Date : **June 19, 2006**

Sample Number: **L0606267-10**
Client ID: **FD-01**
Matrix: **Soil**
Workgroup Number: **WG215457**
Collect Date: **06/09/2006 10:15**

PrePrep Method: **NONE**
Prep Method: **3545**
Analytical Method: **8270C**
Analyst: **hav/rdc**
Dilution: **1**
Units: **ug/kg**

Instrument: **HPMS7**
Prep Date: **06/13/2006 12:45**
Cal Date: **05/11/2006 10:28**
Run Date: **06/15/2006 10:34**
File ID: **7M29702**
Percent Solid: **56.6**

Analyte	CAS. Number	Result	Qual	PQL	SQL
Naphthalene	91-20-3		U	10.3	5.17
Acenaphthylene	208-96-8		U	10.3	5.17
Acenaphthene	83-32-9		U	10.3	5.17
Fluorene	86-73-7		U	10.3	5.17
Phenanthrene	85-01-8		U	10.3	5.17
Anthracene	120-12-7		U	10.3	5.17
Fluoranthene	206-44-0		U	10.3	5.17
Pyrene	129-00-0		U	10.3	5.17
Benzo(a)anthracene	56-55-3		U	10.3	5.17
Chrysene	218-01-9		U	10.3	5.17
Benzo(b)fluoranthene	205-99-2		U	10.3	5.17
Benzo(k)fluoranthene	207-08-9		U	10.3	5.17
Benzo(a)pyrene	50-32-8		U	10.3	5.17
Indeno(1,2,3-cd)pyrene	193-39-5		U	10.3	5.17
Dibenzo(a,h)anthracene	53-70-3		U	10.3	5.17
Benzo(g,h,i)perylene	191-24-2		U	10.3	5.17
2-Methylnaphthalene	91-57-6		U	10.3	5.17

Surrogate	% Recovery	Lower	Upper	Qual
Nitrobenzene-d5	82.0	23	120	
2-Fluorobiphenyl	54.5	30	115	
p-Terphenyl-d14	76.2	18	137	

U Not detected at or above the reporting limit

Report Number: **L0606267**
Report Date : **June 19, 2006**

Sample Number: **L0606267-11**
Client ID: **C-SD-03-MS**
Matrix: **Soil**
Workgroup Number: **WG215457**
Collect Date: **06/08/2006 15:30**

PrePrep Method: **NONE**
Prep Method: **3545**
Analytical Method: **8270C**
Analyst: **hav/rdc**
Dilution: **1**
Units: **ug/kg**

Instrument: **HPMS7**
Prep Date: **06/13/2006 12:45**
Cal Date: **05/11/2006 10:28**
Run Date: **06/15/2006 11:29**
File ID: **7M29704**
Percent Solid: **48.8**

Analyte	CAS. Number	Result	Qual	PQL	SQL
Naphthalene	91-20-3	79.0		11.9	5.96
Acenaphthylene	208-96-8		U	11.9	5.96
Acenaphthene	83-32-9	77.0		11.9	5.96
Fluorene	86-73-7	83.1		11.9	5.96
Phenanthrene	85-01-8	109		11.9	5.96
Anthracene	120-12-7	85.2		11.9	5.96
Fluoranthene	206-44-0	107		11.9	5.96
Pyrene	129-00-0	109		11.9	5.96
Benzo(a)anthracene	56-55-3	95.2		11.9	5.96
Chrysene	218-01-9	95.4		11.9	5.96
Benzo(b)fluoranthene	205-99-2	89.4		11.9	5.96
Benzo(k)fluoranthene	207-08-9	79.2		11.9	5.96
Benzo(a)pyrene	50-32-8	84.5		11.9	5.96
Indeno(1,2,3-cd)pyrene	193-39-5	81.5		11.9	5.96
Dibenzo(a,h)anthracene	53-70-3	75.6		11.9	5.96
Benzo(g,h,i)perylene	191-24-2	82.0		11.9	5.96
2-Methylnaphthalene	91-57-6	75.3		11.9	5.96

Surrogate	% Recovery	Lower	Upper	Qual
Nitrobenzene-d5	65.3	23	120	
2-Fluorobiphenyl	55.9	30	115	
p-Terphenyl-d14	59.4	18	137	

U Not detected at or above the reporting limit

Report Number: **L0606267**
Report Date : **June 19, 2006**

Sample Number: **L0606267-12**
Client ID: **C-SD-03-MSD**
Matrix: **Soil**
Workgroup Number: **WG215457**
Collect Date: **06/08/2006 15:30**

PrePrep Method: **NONE**
Prep Method: **3545**
Analytical Method: **8270C**
Analyst: **hav/rdc**
Dilution: **1**
Units: **ug/kg**

Instrument: **HPMS7**
Prep Date: **06/13/2006 12:45**
Cal Date: **05/11/2006 10:28**
Run Date: **06/15/2006 11:57**
File ID: **7M29705**
Percent Solid: **48.8**

Analyte	CAS. Number	Result	Qual	PQL	SQL
Naphthalene	91-20-3	77.0		11.9	5.96
Acenaphthylene	208-96-8	10.8	J	11.9	5.96
Acenaphthene	83-32-9	75.9		11.9	5.96
Fluorene	86-73-7	75.1		11.9	5.96
Phenanthrene	85-01-8	111		11.9	5.96
Anthracene	120-12-7	81.3		11.9	5.96
Fluoranthene	206-44-0	130		11.9	5.96
Pyrene	129-00-0	137		11.9	5.96
Benzo(a)anthracene	56-55-3	118		11.9	5.96
Chrysene	218-01-9	112		11.9	5.96
Benzo(b)fluoranthene	205-99-2	117		11.9	5.96
Benzo(k)fluoranthene	207-08-9	86.2		11.9	5.96
Benzo(a)pyrene	50-32-8	98.3		11.9	5.96
Indeno(1,2,3-cd)pyrene	193-39-5	87.7		11.9	5.96
Dibenzo(a,h)anthracene	53-70-3	74.0		11.9	5.96
Benzo(g,h,i)perylene	191-24-2	92.8		11.9	5.96
2-Methylnaphthalene	91-57-6	75.2		11.9	5.96

Surrogate	% Recovery	Lower	Upper	Qual
Nitrobenzene-d5	64.7	23	120	
2-Fluorobiphenyl	53.8	30	115	
p-Terphenyl-d14	54.2	18	137	

J The analyte was positively identified, but the quantitation was below the RL

Checklist ID: 7528

KEMRON Environmental Services
Data Checklist

Date: 12-MAY-2006
Analyst: CLK
Analyst: RDC
Method: 8270L
Instrument: HPMS7
Curve Workgroup: WG213057
Analytical Workgroups: L0605006, L0605144, L0605145

Runlog ID number:	10361
System Performance Check	
DFTPP	X
Endrin/DDT Breakdown	NA
Initial Calibration	X
Average RF	X
Linear Reg or Higher Order Curve	X
Second Source standard % Difference	X
Continuing Calibration /Check Standards	X
Project/Client Specific Requirements	X
Special Standards	NA
Blanks	X
TCL's	X
Surrogates	X
LCS (Laboratory Control Sample)	X
Recoveries	X
Surrogates	X
MS/MSD/Duplicates	NA
Samples	X
TCL Hits	X
Spectra of TCL Hits	X
Surrogates	X
Internal Standards Criteria	X
Library Searches	NA
Calculations & Correct Factors	X
Dilutions Run	X
Reruns	NA
Manual Integrations	X
Case Narrative	X
Results Reporting/Data Qualifiers	X
KOBRA Workgroup Data	X
Check for Completeness	X
Primary Reviewer	CLK
Secondary Reviewer	MDC
Check for compliance with method and project specific requirements	X
Check the completeness of reported information	X
Check the information for the report narrative	X
Check the resonableness of the results	X

Primary Reviewer:

Secondary Reviewer:
15-MAY-2006

Generated: MAY-15-2006 15:27:31

Checklist ID: 8057

KEMRON Environmental Services
Data Checklist

Date: 06-JUN-2006
Analyst: RDC
Analyst: NA
Method: 8270L
Instrument: HPMS7
Curve Workgroup: NA
Analytical Workgroups: L0606267, L0606216, L0606219, L0606289

Runlog ID number:	10831
System Performance Check	
DFTPP	X
Endrin/DDT Breakdown	NA
Initial Calibration	X
Average RF	X
Linear Reg or Higher Order Curve	NA
Second Source standard % Difference	X
Continuing Calibration /Check Standards	NA
Project/Client Specific Requirements	X
Special Standards	NA
Blanks	X
TCL's	X
Surrogates	X
LCS (Laboratory Control Sample)	X
Recoveries	X
Surrogates	X
MS/MSD/Duplicates	X
Samples	X
TCL Hits	X
Spectra of TCL Hits	X
Surrogates	X
Internal Standards Criteria	X
Library Searches	X
Calculations & Correct Factors	X
Dilutions Run	NA
Reruns	X
Manual Integrations	X
Case Narrative	X
Results Reporting/Data Qualifiers	X
KOBRA Workgroup Data	X
Check for Completeness	X
Primary Reviewer	RDC
Secondary Reviewer	ECL
Check for compliance with method and project specific requirements	
Check the completeness of reported information	
Check the information for the report narrative	
Check the resonableness of the results	

Primary Reviewer:
19-JUN-2006
Rebecca D. Cattlip

Secondary Reviewer:
19-JUN-2006
Eric C. Zamm

Generated: JUN-19-2006 11:20:18

Run Log ID: **10361**

KEMRON Environmental Services

Instrument Run Log

Instrument: HPMS7 Dataset: 051106

Analyst1: CLK Analyst2: RDC

Method: 8270L SOP: MSS03 Rev: 5

Column 1 ID: DB5-MS Column 2 ID: NA

Workgroups:

Internal Standard: STD12529 Surrogate Standard: NA

Comments:

Seq.	File ID	Sample Information	Mat	Dil	Reference	Date/Time
1	7M29443	WG213057-01 5ppm DFTPP	1	1	SOS78-45	05/11/06 07:53
2	7M29444	WG213057-02 2.5ppm PAHL STD	1	1	SOS78-27	05/11/06 08:09
3	7M29445	WG213057-03 10ppm PAHL STD	1	1	SOS78-27	05/11/06 08:37
4	7M29446	WG213057-04 5ppm PAHL STD	1	1	SOS78-27	05/11/06 09:05
5	7M29447	WG213057-05 1ppm PAHL STD	1	1	SOS78-27	05/11/06 09:33
6	7M29448	WG213057-06 0.5ppm PAHL STD	1	1	SOS78-27	05/11/06 10:00
7	7M29449	WG213057-07 0.1ppm PAHL STD	1	1	SOS78-27	05/11/06 10:28
8	7M29450	WG213057-08 2.5ppm Alt Source PAHL STD	1	1	STD12549	05/11/06 10:56
9	7M29451	WG212733-01 BLK 5/8 EP0261P1	7	1	SOIL	05/11/06 11:24
10	7M29452	WG212733-02 LCS 5/8 EP0261P1	7	1	SOIL	05/11/06 11:51
11	7M29453	WG212733-03 LCS DUP 5/8 EP0261P1	7	1	SOIL	05/11/06 12:19
12	7M29454	PAHL SPK @ 2X (STD12446)	1	2		05/11/06 12:46
13	7M29455	L0605006-01 SOIL 5X	7	5	SOIL	05/11/06 13:14
14	7M29456	L0605144-04 SOIL 10X	7	10	SOIL	05/11/06 13:42
15	7M29457	L0605144-05 SOIL 10X	7	10	SOIL	05/11/06 14:10
16	7M29458	L0605144-06 SOIL 10X	7	10	SOIL	05/11/06 14:38
17	7M29459	L0605144-02 SOIL 10X	7	10	SOIL	05/11/06 15:06
18	7M29460	L0605144-03 SOIL 10X	7	10	SOIL	05/11/06 15:34
19	7M29461	L0605145-01 SOIL 10X	7	10	SOIL	05/11/06 16:01
20	7M29462	L0605145-02 SOIL 10X	7	10	SOIL	05/11/06 16:29
21	7M29463	L0605145-03 SOIL 10X	7	10	SOIL	05/11/06 16:57
22	7M29464	L0605144-01 SOIL 10X	7	10	SOIL	05/11/06 17:24
23	7M29465	L0605144-01 SOIL 50X	7	50	SOIL	05/11/06 17:52
24	7M29466	L0605144-04 SOIL 50X	7	50	SOIL	05/11/06 18:20
25	7M29467	L0605144-05 SOIL 50X	7	50	SOIL	05/11/06 18:48
26	7M29468	L0605144-06 SOIL 50X	7	50	SOIL	05/11/06 19:16
27	7M29469	L0605144-02 SOIL 50X	7	50	SOIL	05/11/06 19:44
28	7M29470	BAKEOUT	1	1		05/11/06 20:11
29	7M29471	WG213132-01 5ppm DFTPP CHK	1	1	SOS78-45	05/11/06 22:25
30	7M29472	WG213132-02 2.5ppm PAHL STD	1	1	SOS78-27	05/11/06 22:42
31	7M29473	L0605144-03 SOIL 50X	7	50	SOIL	05/11/06 23:11
32	7M29474	L0605145-01 SOIL 50X	7	50	SOIL	05/11/06 23:46
33	7M29475	L0605145-02 SOIL 50X	7	50	SOIL	05/12/06 00:14
34	7M29476	L0605145-03 SOIL 50X	7	50	SOIL	05/12/06 00:42
35	7M29477	L0605144-01 SOIL 100X	7	100	SOIL	05/12/06 01:10
36	7M29478	BAKEOUT	1	1		05/12/06 01:37

Approved: 15-MAY-06

007564

Run Log ID: **10361**

KEMRON Environmental Services

Instrument Run Log

Instrument: HPMS7 Dataset: 051106

Analyst1: CLK Analyst2: RDC

Method: 8270L SOP: MSS03 Rev: 5

Column 1 ID: DB5-MS Column 2 ID: NA

Workgroups:

Internal Standard: STD12529 Surrogate Standard: NA

Comments

Seq.	Rerun	Dil.	Reason	Analytes
12				
	Good			
14	X	50	Over Calibration Range	#12,14
15	X	50	Over Calibration Range	Several
16	X	50	Over Calibration Range	Several
17	X	50	Over Calibration Range	Several
18	X	50	Over Calibration Range	Several
19	X	50	Over Calibration Range	Several
20	X	50	Over Calibration Range	Several
21	X	50	Over Calibration Range	Several
22	X	100	Over Calibration Range	Several
23				
	Not Reported, Needs RR @ 100X			

Approved: 15-MAY-06

007565

Run Log ID: **10822**

KEMRON Environmental Services

Instrument Run Log

Instrument: HPMS7 Dataset: 061506

Analyst1: CLK Analyst2: NA

Method: 8270L SOP: MSS03 Rev: 5

Column 1 ID: DB5-MS Column 2 ID: NA

Workgroups:

Internal Standard: STD12529 Surrogate Standard: NA

Comments:

Seq.	File ID	Sample Information	Mat	Dil	Reference	Date/Time
1	7M29695	WG215338-01 5PPM DFTPP	1	1	SOS78-45	06/15/06 07:32
2	7M29696	WG215338-02 2.5PPM PAHL STD	1	1	SOS78-27	06/15/06 07:48
3	7M29697	WG215137-02 BLK 6/12 EP0261P147	7	1	SOIL	06/15/06 08:18
4	7M29698	WG215137-03 LCS 6/12 EP0261P147	7	1	SOIL	06/15/06 08:45
5	7M29699	L0606138-08 SOIL 10X RE	7	10		06/15/06 09:13
6	7M29700	L0606267-07 SOIL	7	1	SOIL	06/15/06 09:40
7	7M29701	L0606267-08 SOIL	7	1	SOIL	06/15/06 10:07
8	7M29702	L0606267-10 SOIL	7	1	SOIL	06/15/06 10:34
9	7M29703	WG215137-01 L0606267-03 SOIL	7	1	SOIL	06/15/06 11:02
10	7M29704	WG215137-04 L0606267-11 SOIL MS	7	1	SOIL	06/15/06 11:29
11	7M29705	WG215137-05 L0606267-12 SOIL MSD	7	1	SOIL	06/15/06 11:57
12	7M29706	L0606214-06 SOIL 10X	7	10	SOIL	06/15/06 12:24
13	7M29707	L0606267-01 SOIL 5X	7	5	SOIL	06/15/06 12:51
14	7M29708	L0606267-02 SOIL 5X	7	5	SOIL	06/15/06 13:18
15	7M29709	L0606267-09 SOIL 5X	7	5	SOIL	06/15/06 13:55
16	7M29710	L0606267-04 SOIL 5X	7	5	SOIL	06/15/06 14:22
17	7M29711	L0606267-06 SOIL 5X	7	5	SOIL	06/15/06 14:49
18	7M29712	L0606267-05 SOIL 5X	7	5	SOIL	06/15/06 15:17
19	7M29713	L0606216-04 SOIL 10X	7	10	SOIL	06/15/06 15:45
20	7M29714	L0606216-08 SOIL 10X	7	10	SOIL	06/15/06 16:12
21	7M29715	L0606216-02 SOIL 10X	7	10	SOIL	06/15/06 16:39
22	7M29716	L0606270-02 SOIL	7	1	SOIL	06/15/06 17:07
23	7M29717	L0606216-03 SOIL 20X	7	20	SOIL	06/15/06 17:34
24	7M29718	L0606270-01 SOIL 50X	7	50	SOIL	06/15/06 18:01
25	7M29719	BAKEOUT	1	1		06/15/06 18:29
26	7M29720	BAKEOUT	1	1		06/15/06 18:56
27	7M29721	BAKEOUT	1	1		06/15/06 19:24

Comments

Seq.	Rerun	Dil.	Reason	Analytes
14				
	Needs RR @ 2X			
15				
	Needs RR @ 1X			
16				
	Needs RR @ 2X			

Approved: 16-JUN-06

007566

Run Log ID: **10822**

KEMRON Environmental Services

Instrument Run Log

Instrument: HPMS7 Dataset: 061506

Analyst1: CLK Analyst2: NA

Method: 8270L SOP: MSS03 Rev: 5

Column 1 ID: DB5-MS Column 2 ID: NA

Workgroups:

Internal Standard: STD12529 Surrogate Standard: NA

Comments

Seq.	Rerun	Dil.	Reason	Analytes
17				
	Needs RR @ 2X			
19				
	Needs RR @ 2X			
20				
	Needs RR @ 2X			
21				
	Needs RR @ 2X			
23				
	SS DL			
24				
	SS DL			

Approved: 16-JUN-06

007567

Run Log ID: **10831**

KEMRON Environmental Services

Instrument Run Log

Instrument: HPMS7 Dataset: 061606

Analyst1: HAV Analyst2: RDC

Method: 8270L SOP: MSS03 Rev: 5

Column 1 ID: DB5-MS Column 2 ID: NA

Workgroups:

Internal Standard: STD12529 Surrogate Standard: NA

Comments:

Seq.	File ID	Sample Information	Mat	Dil	Reference	Date/Time
1	7M29722	BLK INSTD	1	1	SOS78-45	06/16/06 09:14
2	7M29723	WG21501 5PPM DFTPP	1	1	SOS78-45	06/16/06 09:54
3	7M29724	WG215-02 2.5PPM PAHL STD	1	1	SOS78-27	06/16/06 10:10
4	7M29725	WG215-02 2.5PPM PAHL STD	1	1	SOS78-27	06/16/06 10:38
5	7M29726	WG215484-01 5PPM DFTPP	1	1	SOS78-45	06/16/06 11:25
6	7M29727	WG215-02 2.5PPM PAHL STD	1	1	SOS78-27	06/16/06 11:42
7	7M29728	WG215484-02 2.5PPM PAHL STD	1	1	SOS78-27	06/16/06 12:12
8	7M29729	WG215484-03 10PPM PAHL STD	1	1	SOS78-27	06/16/06 13:05
9	7M29730	WG215484-04 5PPM PAHL STD	1	1	SOS78-27	06/16/06 13:32
10	7M29731	WG215484-05 1PPM PAHL STD	1	1	SOS78-27	06/16/06 13:59
11	7M29732	WG215484-06 0.5PPM PAHL STD	1	1	SOS78-27	06/16/06 14:26
12	7M29733	WG215484-07 0.1PPM PAHL STD	1	1	SOS78-27	06/16/06 14:54
13	7M29734	WG215484-08 2.5PPM PAHL ALT STD	1	1	STD12549	06/16/06 15:21
14	7M29735	WG215134-02 BLK 6/13 EP261P143	7	1		06/16/06 15:48
15	7M29736	WG215134-03 LCS 6/13 EP261P143	7	1	SOIL	06/16/06 16:16
16	7M29737	L0606219-01	7	1	SOIL	06/16/06 16:43
17	7M29738	WG215279-02 BLK 6/13 EP262P57	1	1		06/16/06 17:10
18	7M29739	WG215279-03 LCS 6/13 EP262P57	1	1		06/16/06 17:38
19	7M29740	L0606289-04	1	1		06/16/06 18:05
20	7M29741	L0606267-02 2X	7	2	SOIL	06/16/06 18:32
21	7M29742	L0606267-04 2X	7	2	SOIL	06/16/06 18:59
22	7M29743	L0606267-06 2X	7	2	SOIL	06/16/06 19:27
23	7M29744	L0606267-09	7	1	SOIL	06/16/06 19:54
24	7M29745	L0606216-04 2X	7	2	SOIL	06/16/06 20:21
25	7M29746	L0606216-02 2X	7	2	SOIL	06/16/06 20:48
26	7M29747	L0606216-06 10X	7	10	SOIL	06/16/06 21:16
27	7M29748	L0606216-07 10X	7	10	SOIL	06/16/06 21:43
28	7M29749	L0606216-09 20X	7	20	SOIL	06/16/06 22:11
29	7M29750	L0606216-05 20X	7	20	SOIL	06/16/06 22:38
30	7M29751	L0606216-01 20X	7	20	SOIL	06/16/06 23:05
31	7M29752	BAKEOUT	1	1		06/16/06 23:33
32	7M29753	BAKEOUT	1	1		06/17/06 00:00
33	7M29754	BAKEOUT	1	1		06/17/06 00:28

Comments

Seq.	Rerun	Dil.	Reason	Analytes

Approved: 19-JUN-06

007568

Run Log ID: **10831**

KEMRON Environmental Services

Instrument Run Log

Instrument: HPMS7 Dataset: 061606

Analyst1: HAV Analyst2: RDC

Method: 8270L SOP: MSS03 Rev: 5

Column 1 ID: DB5-MS Column 2 ID: NA

Workgroups:

Internal Standard: STD12529 Surrogate Standard: NA

Comments

Seq.	Rerun	Dil.	Reason	Analytes
2				
	NR			
3	X		Check Standard Failure	
4	X		Check Standard Failure	
6	X		Check Standard Failure	

Page: 2 of 2 Approved: 19-JUN-06

007569

KEMRON Environmental Services
HOLDING TIMES
EQUIVALENT TO AFCEE FORM 9

Analytical Method: 8270C **AAB#:** WG215457
Login Number: L0606267

Client ID	Date Collected	Date Received	Date Extracted	Max Hold Time Ext.	Time Held Ext.	Date Analyzed	Max Hold Time Anal	Time Held Anal.	Q
A-SD-01	06/08/06	06/10/06	06/13/06	14	5.07	06/15/06	40	2.00	
B-SD-02	06/08/06	06/10/06	06/13/06	14	5.03	06/16/06	40	3.24	
C-SD-03	06/08/06	06/10/06	06/13/06	14	4.89	06/15/06	40	1.93	
D-SD-04	06/08/06	06/10/06	06/13/06	14	4.84	06/16/06	40	3.26	
E-SD-05	06/08/06	06/10/06	06/13/06	14	4.93	06/15/06	40	2.11	
F-SD-06	06/08/06	06/10/06	06/13/06	14	4.81	06/16/06	40	3.28	
G-SD-07	06/09/06	06/10/06	06/13/06	14	4.08	06/15/06	40	1.87	
H-SD-08	06/09/06	06/10/06	06/13/06	14	4.10	06/15/06	40	1.89	
I-SD-09	06/09/06	06/10/06	06/13/06	14	4.04	06/16/06	40	3.30	
FD-01	06/09/06	06/10/06	06/13/06	14	4.10	06/15/06	40	1.91	
C-SD-03-MS	06/08/06	06/10/06	06/13/06	14	4.89	06/15/06	40	1.95	
C-SD-03-MSD	06/08/06	06/10/06	06/13/06	14	4.89	06/15/06	40	1.97	

* EXT = SEE PROJECT QAPP REQUIREMENTS
*ANAL = SEE PROJECT QAPP REQUIREMENTS

KEMRON FORMS - Modified 02/14/2006
Version 1.5 PDF File ID: 499572
Report generated 06/19/2006 08:58

KEMRON Environmental Services

SURROGATE STANDARDS

Login Number: L0606267
Instrument Id: HPMS7
Workgroup (AAB#): WG215457

Method: 8270L
CAL ID: HPMS7-11-MAY-06
Matrix: SOLID

Sample Number	Dilution	Tag	1	2	3
L0606267-01	5.00	DL01	53.9	73.0	75.5
L0606267-03	1.00	01	56.6	84.1	69.8
L0606267-05	5.00	DL01	64.6	73.5	92.2
L0606267-07	1.00	01	53.7	94.8	50.5
L0606267-08	1.00	01	43.5	66.2	67.4
L0606267-10	1.00	01	54.5	82.0	76.2
L0606267-11	1.00	01	55.9	65.3	59.4
L0606267-12	1.00	01	53.8	64.7	54.2
WG215137-02	1.00	01	68.2	81.8	98.7
WG215137-03	1.00	01	64.5	70.9	94.3

Surrogates	Surrogate Limits		
1 - 2-Fluorobiphenyl	30	-	115
2 - Nitrobenzene-d5	23	-	120
3 - p-Terphenyl-d14	18	-	137

Underline = Result out of surrogate limits

DL = surrogate diluted out
ND = surrogate not detected

KEMRON FORMS - Modified 04/18/2006
Version 1.5 PDF File ID: 499639
Report generated 06/19/2006 09:44

KEMRON Environmental Services

SURROGATE STANDARDS

Login Number: L0606267
Instrument Id: HPMS7
Workgroup (AAB#): WG215457

Method: 8270L
CAL ID: HPMS7-16-JUN-06
Matrix: SOLID

Sample Number	Dilution	Tag	1	2	3
L0606267-02	2.00	DL01	46.7	57.4	69.5
L0606267-04	2.00	DL01	32.8	42.8	65.7
L0606267-06	2.00	DL01	46.4	59.7	62.4
L0606267-09	1.00	01	44.5	49.5	60.8

Surrogates	Surrogate Limits		
1 - 2-Fluorobiphenyl	30	-	115
2 - Nitrobenzene-d5	23	-	120
3 - p-Terphenyl-d14	18	-	137

Underline = Result out of surrogate limits

DL = surrogate diluted out
ND = surrogate not detected

KEMRON FORMS - Modified 04/18/2006
Version 1.5 PDF File ID: 499639
Report generated 06/19/2006 09:44

KEMRON Environmental Services

METHOD BLANK SUMMARY

Login Number:	L0606267	Work Group:	WG215457
Blank File ID:	7M29697	Blank Sample ID:	WG215137-02
Date Analyzed:	06/15/06	Instrument ID:	HPMS7
Time Analyzed:	08:18	Method:	8270C
Analyst:	hav/rdc		

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG215137-03	7M29698	06/15/06 08:45	01
G-SD-07	L0606267-07	7M29700	06/15/06 09:40	01
H-SD-08	L0606267-08	7M29701	06/15/06 10:07	01
FD-01	L0606267-10	7M29702	06/15/06 10:34	01
C-SD-03	L0606267-03	7M29703	06/15/06 11:02	01
C-SD-03-MS	L0606267-11	7M29704	06/15/06 11:29	01
C-SD-03-MSD	L0606267-12	7M29705	06/15/06 11:57	01
A-SD-01	L0606267-01	7M29707	06/15/06 12:51	DL01
E-SD-05	L0606267-05	7M29712	06/15/06 15:17	DL01
B-SD-02	L0606267-02	7M29741	06/16/06 18:32	DL01
D-SD-04	L0606267-04	7M29742	06/16/06 18:59	DL01
F-SD-06	L0606267-06	7M29743	06/16/06 19:27	DL01
I-SD-09	L0606267-09	7M29744	06/16/06 19:54	01

KEMRON FORMS - Modified 03/06/2006
Version 1.5 PDF File ID: 499573
Report generated 06/19/2006 08:58

KEMRON Environmental Services

METHOD BLANK REPORT

Login Number: L0606267	Run Date: 06/15/2006	Sample ID: WG215137-02
Instrument ID: HPMS7	Run Time: 08:18	Prep Method: 3545
File ID: 7M29697	Analyst: hav/rdc	Method: 8270C
Workgroup (AAB#): WG215457	Matrix: Solid	Units: ug/kg
Contract #:	Cal ID: HPMS7-11-MAY-06	

Analytes	SQL	PQL	Concentration	Dilution	Qualifier
Naphthalene	2.50	5.00	2.50	1	U
Acenaphthylene	2.50	5.00	2.50	1	U
Acenaphthene	2.50	5.00	2.50	1	U
Fluorene	2.50	5.00	2.50	1	U
Phenanthrene	2.50	5.00	2.50	1	U
Anthracene	2.50	5.00	2.50	1	U
Fluoranthene	2.50	5.00	2.50	1	U
Pyrene	2.50	5.00	2.50	1	U
Benzo(a)anthracene	2.50	5.00	2.50	1	U
Chrysene	2.50	5.00	2.50	1	U
Benzo(b)fluoranthene	2.50	5.00	2.50	1	U
Benzo(k)fluoranthene	2.50	5.00	2.50	1	U
Benzo(a)pyrene	2.50	5.00	2.50	1	U
Indeno(1,2,3-cd)pyrene	2.50	5.00	2.50	1	U
Dibenzo(a,h)anthracene	2.50	5.00	2.50	1	U
Benzo(g,h,i)perylene	2.50	5.00	2.50	1	U
2-Methylnaphthalene	2.50	5.00	2.50	1	U

Surrogates	% Recovery	Surrogate Limits			Qualifier
Nitrobenzene-d5	81.8	23	-	120	PASS
2-Fluorobiphenyl	68.2	30	-	115	PASS
p-Terphenyl-d14	98.7	18	-	137	PASS

MDL Method Detection Limit
RL Reporting/quantitation Limit

* Analyte concentration > RL

KEMRON FORMS - Modified 05/01/2006
Version 1.5 PDF File ID: 499574
Report generated 06/19/2006 08:58

KEMRON Environmental Services

LABORATORY CONTROL SAMPLE (LCS)

Login Number: L0606267 Run Date: 06/15/2006 Sample ID: WG215137-03
Instrument ID: HPMS7 Run Time: 08:45 Prep Method: 3545
File ID: 7M29698 Analyst: hav/rdc Method: 8270C
Workgroup (AAB#): WG215457 Matrix: Solid Units: ug/kg
Contract #: Cal ID: HPMS7-11-MAY-06

Analytes	Expected	Found	% Rec	LCS Limits	Q
Naphthalene	50.0	36.2	72.3	30 - 100	
Acenaphthylene	50.0	37.4	74.9	35 - 100	
Acenaphthene	50.0	35.6	71.1	35 - 100	
Fluorene	50.0	36.9	73.9	35 - 100	
Phenanthrene	50.0	39.6	79.2	35 - 110	
Anthracene	50.0	38.0	76.0	35 - 105	
Fluoranthene	50.0	52.5	105	40 - 130	
Pyrene	50.0	52.9	106	35 - 140	
Benzo(a)anthracene	50.0	59.2	118	50 - 150	
Chrysene	50.0	58.3	117	40 - 140	
Benzo(b)fluoranthene	50.0	59.9	120	40 - 150	
Benzo(k)fluoranthene	50.0	61.4	123	40 - 140	
Benzo(a)pyrene	50.0	55.8	112	50 - 140	
Indeno(1,2,3-cd)pyrene	50.0	60.4	121	40 - 145	
Dibenzo(a,h)anthracene	50.0	59.9	120	40 - 145	
Benzo(g,h,i)perylene	50.0	60.9	122	40 - 150	
2-Methylnaphthalene	50.0	36.2	72.5	30 - 110	

Surrogates	% Recovery	Surrogate Limits	Qualifier
Nitrobenzene-d5	70.9	23 - 120	PASS
2-Fluorobiphenyl	64.5	30 - 115	PASS
p-Terphenyl-d14	94.3	18 - 137	PASS

* FAILS %REC LIMIT

KEMRON FORMS - Modified 05/01/2006
Version 1.5 PDF File ID: 499575
Report generated 06/19/2006 08:59

KEMRON Environmental Services

MS/MSD REPORT

Loginnum:L0606267 Cal ID:HPMS7-11-MAY-06 Worknum:WG215457
Instrument ID:HPMS7 Contract #: Prep Method:3545
Parent ID:L0606267-03 File ID:7M29703 Dil:1 Method:8270C
Sample ID:L0606267-11 MS File ID:7M29704 Dil:1 Matrix:Soil
Sample ID:L0606267-12 MSD File ID:7M29705 Dil:1 Units:ug/kg
Percent Solid:48.8

Analyte	Parent	MS Spiked	MS Found	MS %Rec	MSD Spiked	MSD Found	MSD %Rec	%RPD	%Rec Limits	RPD Limit	Q
Naphthalene	U	119	79.0	66.2	119	77.0	64.5	2.62	30 - 100	40	
Acenaphthylene	U	119	0	0	119	10.8	9.08	200	35 - 100	40	*
Acenaphthene	U	119	77.0	64.6	119	75.9	63.6	1.55	35 - 100	40	
Fluorene	U	119	83.1	69.7	119	75.1	63.0	10.1	35 - 100	40	
Phenanthrene	9.67	119	109	83.4	119	111	85.0	1.71	35 - 110	40	
Anthracene	U	119	85.2	71.4	119	81.3	68.2	4.72	35 - 105	40	
Fluoranthene	11.0	119	107	80.8	119	130	99.9	19.1	40 - 130	40	
Pyrene	14.4	119	109	79.0	119	137	103	23.1	35 - 140	40	
Benzo(a)anthracene	8.23	119	95.2	72.9	119	118	91.8	21.2	50 - 150	40	
Chrysene	8.09	119	95.4	73.2	119	112	87.2	16.2	40 - 140	40	
Benzo(b)fluoranthene	10.5	119	89.4	66.2	119	117	89.2	26.6	40 - 150	40	
Benzo(k)fluoranthene	U	119	79.2	66.4	119	86.2	72.2	8.49	40 - 140	40	
Benzo(a)pyrene	9.20	119	84.5	63.2	119	98.3	74.7	15.1	50 - 140	40	
Indeno(1,2,3-cd)pyrene	U	119	81.5	68.4	119	87.7	73.5	7.29	40 - 145	40	
Dibenzo(a,h)anthracene	U	119	75.6	63.4	119	74.0	62.0	2.17	40 - 145	40	
Benzo(g,h,i)perylene	U	119	82.0	68.8	119	92.8	77.8	12.3	40 - 150	40	
2-Methylnaphthalene	U	119	75.3	63.1	119	75.2	63.1	0.0720	30 - 110	40	

* FAILS %REC LIMIT

FAILS RPD LIMIT

KEMRON FORMS - Modified 06/02/2006
Version 1.5 PDF File ID:499716
Report generated 06/19/2006 10:58

KEMRON ENVIRONMENTAL SERVICES
ORGANIC INSTRUMENT CHECK

DFTPP

Login Number: L0606267 Tune ID: WG213057-01
Instrument: HPMS7 Run Date: 05/11/2006
Analyst: CLK Run Time: 07:53
Workgroup: WG213057 File ID: 7M29443
Cal ID: HPMS7-11-MAY-06

Target	Rel. to	Lower	Upper	Rel.	Raw	Result
51.0	198	30.0	60.0	41.6	365196	PASS
68.0	69.0	0	2.00	0	0	PASS
69.0	198	0	100	47.0	412629	PASS
70.0	69.0	0	2.00	0.216	891	PASS
127	198	40.0	60.0	48.9	429173	PASS
197	198	0	1.00	0	0	PASS
198	198	100	100	100	878144	PASS
199	198	5.00	9.00	7.30	64141	PASS
275	198	10.0	30.0	25.1	220117	PASS
365	198	1.00	100	2.63	23129	PASS
441	443	0.0100	100	74.5	94184	PASS
442	198	40.0	100	70.4	618368	PASS
443	442	17.0	23.0	20.4	126338	PASS

This check relates to the following samples, MS, MSD:

Lab ID	Client ID	Tag	Date Analyzed	Q
WG213057-08	SSCV	01	05/11/2006 10:56	
WG213057-07	STD	01	05/11/2006 10:28	
WG213057-06	STD	01	05/11/2006 10:00	
WG213057-05	STD	01	05/11/2006 09:33	
WG213057-04	STD	01	05/11/2006 09:05	
WG213057-03	STD	01	05/11/2006 08:37	
WG213057-02	CCV	01	05/11/2006 08:09	

* Sample past 12 hour tune limit

KEMRON FORMS - Modified 02/14/2006
Version 1.3 PDF File ID: 499628
Report generated 06/19/2006 09:38

KEMRON ENVIRONMENTAL SERVICES
ORGANIC INSTRUMENT CHECK

DFTPP

Login Number: L0606267 Tune ID: WG215484-01
Instrument: HPMS7 Run Date: 06/16/2006
Analyst: hav/rdc Run Time: 11:25
Workgroup: WG215484 File ID: 7M29726
Cal ID: HPMS7-16-JUN-06

Target	Rel. to	Lower	Upper	Rel.	Raw	Result
51.0	198	30.0	60.0	50.1	393481	PASS
68.0	69.0	0	2.00	0	0	PASS
69.0	198	0	100	52.2	410322	PASS
70.0	69.0	0	2.00	0.864	3544	PASS
127	198	40.0	60.0	50.0	393161	PASS
197	198	0	1.00	0	0	PASS
198	198	100	100	100	786117	PASS
199	198	5.00	9.00	6.87	54013	PASS
275	198	10.0	30.0	24.5	192832	PASS
365	198	1.00	100	2.72	21365	PASS
441	443	0.0100	100	77.5	80624	PASS
442	198	40.0	100	66.8	525056	PASS
443	442	17.0	23.0	19.8	104002	PASS

This check relates to the following samples, MS, MSD:

Lab ID	Client ID	Tag	Date Analyzed	Q
WG215484-08	SSCV	01	06/16/2006 15:21	
WG215484-07	STD	01	06/16/2006 14:54	
WG215484-06	STD	01	06/16/2006 14:26	
WG215484-05	STD	01	06/16/2006 13:59	
WG215484-04	STD	01	06/16/2006 13:32	
WG215484-03	STD	01	06/16/2006 13:05	
WG215484-02	CCV	01	06/16/2006 12:12	

* Sample past 12 hour tune limit

KEMRON FORMS - Modified 02/14/2006
Version 1.3 PDF File ID: 499628
Report generated 06/19/2006 09:38

KEMRON ENVIRONMENTAL SERVICES
ORGANIC INSTRUMENT CHECK

DFTPP

Login Number: L0606267
Instrument: HPMS7
Analyst: hav/rdc
Workgroup: WG215338

Tune ID: WG215338-01
Run Date: 06/15/2006
Run Time: 07:32
File ID: 7M29695
Cal ID: HPMS7-11-MAY-06

Target	Rel. to	Lower	Upper	Rel.	Raw	Result
51.0	198	30.0	60.0	50.1	376780	PASS
68.0	69.0	0	2.00	0	0	PASS
69.0	198	0	100	51.6	387874	PASS
70.0	69.0	0	2.00	0	0	PASS
127	198	40.0	60.0	50.6	380286	PASS
197	198	0	1.00	0	0	PASS
198	198	100	100	100	751604	PASS
199	198	5.00	9.00	7.09	53313	PASS
275	198	10.0	30.0	24.7	185952	PASS
365	198	1.00	100	2.70	20303	PASS
441	443	0.0100	100	70.6	68317	PASS
442	198	40.0	100	62.1	466837	PASS
443	442	17.0	23.0	20.7	96800	PASS

This check relates to the following CCV:

Lab ID	Client ID	Date Analyzed	
WG215338-02	CCV	06/15/2006 07:48	

This check relates to the following samples & batch QC:

Lab ID	Client ID	Tag	Date Analyzed	Q
WG215137-02	BLANK	01	06/15/2006 08:18	
WG215137-03	LCS	01	06/15/2006 08:45	
L0606267-07	G-SD-07	01	06/15/2006 09:40	
L0606267-08	H-SD-08	01	06/15/2006 10:07	
L0606267-10	FD-01	01	06/15/2006 10:34	
L0606267-03	C-SD-03	01	06/15/2006 11:02	
L0606267-11	C-SD-03-MS	01	06/15/2006 11:29	
L0606267-12	C-SD-03-MSD	01	06/15/2006 11:57	
L0606267-01	A-SD-01	DL01	06/15/2006 12:51	
L0606267-05	E-SD-05	DL01	06/15/2006 15:17	

* Sample past 12 hour tune limit

KEMRON FORMS - Modified 03/15/2006
Version 1.3 PDF File ID: 499630
Report generated 06/19/2006 09:38

KEMRON ENVIRONMENTAL SERVICES
ORGANIC INSTRUMENT CHECK

DFTPP

Login Number: L0606267 | Tune ID: WG215484-01
Instrument: HPMS7 | Run Date: 06/16/2006
Analyst: hav/rdc | Run Time: 11:25
Workgroup: WG215484 | File ID: 7M29726
Cal ID: HPMS7-16-JUN-06

Target	Rel. to	Lower	Upper	Rel.	Raw	Result
51.0	198	30.0	60.0	50.1	393481	PASS
68.0	69.0	0	2.00	0	0	PASS
69.0	198	0	100	52.2	410322	PASS
70.0	69.0	0	2.00	0.864	3544	PASS
127	198	40.0	60.0	50.0	393161	PASS
197	198	0	1.00	0	0	PASS
198	198	100	100	100	786117	PASS
199	198	5.00	9.00	6.87	54013	PASS
275	198	10.0	30.0	24.5	192832	PASS
365	198	1.00	100	2.72	21365	PASS
441	443	0.0100	100	77.5	80624	PASS
442	198	40.0	100	66.8	525056	PASS
443	442	17.0	23.0	19.8	104002	PASS

This check relates to the following CCV:

Lab ID	Client ID	Date Analyzed	
WG215484-02	CCV	06/16/2006 12:12	

This check relates to the following samples & batch QC:

Lab ID	Client ID	Tag	Date Analyzed	Q
L0606267-02	B-SD-02	DL01	06/16/2006 18:32	
L0606267-04	D-SD-04	DL01	06/16/2006 18:59	
L0606267-06	F-SD-06	DL01	06/16/2006 19:27	
L0606267-09	I-SD-09	01	06/16/2006 19:54	

* Sample past 12 hour tune limit

KEMRON FORMS - Modified 03/15/2006
Version 1.3 PDF File ID: 499630
Report generated 06/19/2006 09:38

KEMRON Environmental Services

INITIAL CALIBRATION SUMMARY

Login Number: L0606267 **Instrument ID:** HPMS7
Analytical Method: 8270C **Initial Calibration Date:** 11-MAY-06 10:28
ICAL Workgroup: WG213057 **Column ID:** F

Analyte		AVG RF	% RSD	LINEAR	QUAD
Acenaphthene	CCC	1.019	5.11		
Benzo[a]pyrene	CCC	1.255	2.53		
Fluoranthene	CCC	1.241	8.34		
2-Methylnaphthalene		0.5921	3.85		
Acenaphthylene		1.572	8.75		
Anthracene		1.137	8.19		
Benzo[a]anthracene		1.228	4.65		
Benzo[b]fluoranthene		1.284	4.56		
Benzo[ghi]perylene		1.174	2.00		
Benzo[k]fluoranthene		1.319	4.29		
Chrysene		1.244	9.20		
Dibenz[ah]anthracene		1.173	3.79		
Fluorene		1.172	5.55		
Indeno[1,2,3-cd]pyrene		1.388	5.13		
Naphthalene		0.9333	8.39		
Phenanthrene		1.132	8.25		
Pyrene		1.331	7.28		
2-Fluorobiphenyl	SURR	1.175	5.53		
Nitrobenzene-d5	SURR	0.3300	7.45		
p-Terphenyl-d14	SURR	0.9039	4.38		

KEMRON Environmental Services

INITIAL CALIBRATION SUMMARY

Login Number: L0606267 **Instrument ID:** HPMS7
Analytical Method: 8270C **Initial Calibration Date:** 16-JUN-06 14:54
ICAL Workgroup: WG215484 **Column ID:** F

Analyte		AVG RF	% RSD	LINEAR	QUAD
Acenaphthene	CCC	1.048	2.42		
Benzo[a]pyrene	CCC	1.265	2.99		
Fluoranthene	CCC	1.262	7.21		
2-Methylnaphthalene		0.6078	3.92		
Acenaphthylene		1.602	8.56		
Anthracene		1.151	8.93		
Benzo[a]anthracene		1.263	6.82		
Benzo[b]fluoranthene		1.325	4.86		
Benzo[ghi]perylene		1.217	2.48		
Benzo[k]fluoranthene		1.276	4.29		
Chrysene		1.220	8.46		
Dibenz[ah]anthracene		1.230	4.05		
Fluorene		1.184	4.71		
Indeno[1,2,3-cd]pyrene		1.477	3.08		
Naphthalene		0.9595	8.76		
Phenanthrene		1.178	6.72		
Pyrene		1.280	7.39		
2-Fluorobiphenyl	SURR	1.214	3.82		
Nitrobenzene-d5	SURR	0.3673	10.0		
p-Terphenyl-d14	SURR	0.8640	5.38		

KEMRON Environmental Services

INITIAL CALIBRATION DATA

Login Number: L0606267 **Instrument ID:** HPMS7

Analytical Method: 8270C **Initial Calibration Date:** 11-MAY-06 10:28

Column ID: F

Analyte	WG213057-02			WG213057-03			WG213057-04		
	CONC	RESP	RF	CONC	RESP	RF	CONC	RESP	RF
Acenaphthene	2.50	1800856	1.036	10.0	6477327	0.9232	5.00	3510658	1.004
Benzo[a]pyrene	2.50	3087325	1.273	10.0	11708043	1.201	5.00	6080017	1.275
Fluoranthene	2.50	3394355	1.304	10.0	11156226	1.040	5.00	6529550	1.228
2-Methylnaphthalene	2.50	1910602	0.6132	10.0	6748562	0.5523	5.00	3680634	0.5983
Acenaphthylene	2.50	2972142	1.709	10.0	9697849	1.382	5.00	5650209	1.616
Anthracene	2.50	3173547	1.219	10.0	10499373	0.9786	5.00	6035735	1.136
Benzo[a]anthracene	2.50	3233656	1.270	10.0	11148065	1.115	5.00	6265396	1.249
Benzo[b]fluoranthene	2.50	3245432	1.338	10.0	11789425	1.210	5.00	6246073	1.310
Benzo[ghi]perylene	2.50	2829126	1.166	10.0	11318307	1.161	5.00	5744592	1.205
Benzo[k]fluoranthene	2.50	3210188	1.323	10.0	11832503	1.214	5.00	6350377	1.332
Chrysene	2.50	3129478	1.229	10.0	10458681	1.046	5.00	6048014	1.206
Dibenz[ah]anthracene	2.50	2902128	1.196	10.0	11461133	1.176	5.00	5880238	1.233
Fluorene	2.50	2144032	1.233	10.0	7561646	1.078	5.00	4114352	1.177
Indeno[1,2,3-cd]pyrene	2.50	3446334	1.421	10.0	13551700	1.390	5.00	6918791	1.451
Naphthalene	2.50	2963368	0.9511	10.0	9654075	0.7901	5.00	5621455	0.9138
Phenanthrene	2.50	3070463	1.179	10.0	10227311	0.9533	5.00	5917860	1.113
Pyrene	2.50	3551071	1.395	10.0	11499346	1.150	5.00	6632114	1.322
2-Fluorobiphenyl	2.50	2130008	1.225	10.0	7427892	1.059	5.00	4069988	1.164
Nitrobenzene-d5	2.50	1089523	0.3497	10.0	4222394	0.3456	5.00	2139250	0.3478
p-Terphenyl-d14	2.50	2393295	0.9400	10.0	8468163	0.8467	5.00	4617001	0.9205

KEMRON Environmental Services

INITIAL CALIBRATION DATA

Login Number: L0606267 **Instrument ID:** HPMS7

Analytical Method: 8270C **Initial Calibration Date:** 11-MAY-06 10:28

Column ID: F

Analyte	WG213057-05			WG213057-06			WG213057-07		
	CONC	RESP	RF	CONC	RESP	RF	CONC	RESP	RF
Acenaphthene	1.00	699316	1.028	0.500	350510	1.061	0.100	70036	1.064
Benzo[a]pyrene	1.00	1162460	1.253	0.500	570485	1.239	0.100	115188	1.289
Fluoranthene	1.00	1338440	1.313	0.500	658007	1.301	0.100	121063	1.260
2-Methylnaphthalene	1.00	718234	0.6106	0.500	350424	0.5980	0.100	63973	0.5799
Acenaphthylene	1.00	1122862	1.651	0.500	547433	1.657	0.100	93138	1.416
Anthracene	1.00	1222823	1.199	0.500	610378	1.207	0.100	104091	1.084
Benzo[a]anthracene	1.00	1248475	1.260	0.500	605373	1.231	0.100	118329	1.242
Benzo[b]fluoranthene	1.00	1241602	1.338	0.500	595720	1.294	0.100	108388	1.213
Benzo[ghi]perylene	1.00	1066581	1.149	0.500	533715	1.159	0.100	107387	1.202
Benzo[k]fluoranthene	1.00	1217106	1.312	0.500	633891	1.377	0.100	121174	1.356
Chrysene	1.00	1273081	1.285	0.500	657753	1.337	0.100	129862	1.363
Dibenz[ah]anthracene	1.00	1095701	1.181	0.500	530327	1.152	0.100	98364	1.101
Fluorene	1.00	812567	1.195	0.500	408707	1.237	0.100	73080	1.111
Indeno[1,2,3-cd]pyrene	1.00	1311332	1.413	0.500	645549	1.402	0.100	111561	1.249
Naphthalene	1.00	1137232	0.9668	0.500	560472	0.9565	0.100	112696	1.022
Phenanthrene	1.00	1190469	1.168	0.500	591183	1.169	0.100	116514	1.213
Pyrene	1.00	1384970	1.398	0.500	690861	1.404	0.100	125736	1.320
2-Fluorobiphenyl	1.00	809707	1.190	0.500	410951	1.244	0.100	77086	1.172
Nitrobenzene-d5	1.00	399458	0.3396	0.500	175397	0.2993	0.100	32841	0.2977
p-Terphenyl-d14	1.00	923211	0.9318	0.500	454240	0.9233	0.100	82047	0.8612

KEMRON Environmental Services

INITIAL CALIBRATION DATA

Login Number: L0606267 **Instrument ID:** HPMS7

Analytical Method: 8270C **Initial Calibration Date:** 16-JUN-06 14:54

Column ID: F

Analyte	WG215484-02			WG215484-03			WG215484-04		
	CONC	RESP	RF	CONC	RESP	RF	CONC	RESP	RF
Acenaphthene	2.50	1860175	1.072	10.0	6720571	1.002	5.00	3492350	1.068
Benzo[a]pyrene	2.50	3346907	1.324	10.0	12110755	1.207	5.00	6170934	1.276
Fluoranthene	2.50	3434204	1.367	10.0	10976649	1.104	5.00	6125429	1.290
2-Methylnaphthalene	2.50	2048211	0.6390	10.0	7142613	0.5667	5.00	3732703	0.6092
Acenaphthylene	2.50	3067919	1.768	10.0	9816165	1.463	5.00	5595879	1.711
Anthracene	2.50	3203467	1.275	10.0	10323641	1.038	5.00	5746735	1.210
Benzo[a]anthracene	2.50	3533034	1.359	10.0	11293957	1.102	5.00	6199811	1.258
Benzo[b]fluoranthene	2.50	3522750	1.394	10.0	12218608	1.218	5.00	6533037	1.351
Benzo[ghi]perylene	2.50	3199484	1.266	10.0	12029003	1.199	5.00	5954103	1.231
Benzo[k]fluoranthene	2.50	3451953	1.366	10.0	12034954	1.200	5.00	6182245	1.278
Chrysene	2.50	3213610	1.236	10.0	10526928	1.027	5.00	5897186	1.196
Dibenz[ah]anthracene	2.50	3259801	1.290	10.0	12491087	1.245	5.00	6080055	1.257
Fluorene	2.50	2175037	1.253	10.0	7703461	1.148	5.00	4040350	1.235
Indeno[1,2,3-cd]pyrene	2.50	3928514	1.554	10.0	14750364	1.470	5.00	7219501	1.493
Naphthalene	2.50	3214523	1.003	10.0	10035082	0.7962	5.00	5773027	0.9422
Phenanthrene	2.50	3120547	1.242	10.0	10156302	1.021	5.00	5647096	1.189
Pyrene	2.50	3540519	1.361	10.0	11246041	1.097	5.00	6319321	1.282
2-Fluorobiphenyl	2.50	2200788	1.268	10.0	7583102	1.130	5.00	3988458	1.219
Nitrobenzene-d5	2.50	1286641	0.4014	10.0	4807961	0.3814	5.00	2404541	0.3924
p-Terphenyl-d14	2.50	2372785	0.9123	10.0	8350375	0.8147	5.00	4357061	0.8837

KEMRON Environmental Services

INITIAL CALIBRATION DATA

Login Number: L0606267 **Instrument ID:** HPMS7

Analytical Method: 8270C **Initial Calibration Date:** 16-JUN-06 14:54

Column ID: F

Analyte	WG215484-05			WG215484-06			WG215484-07		
	CONC	RESP	RF	CONC	RESP	RF	CONC	RESP	RF
Acenaphthene	1.00	674028	1.056	0.500	336041	1.051	0.100	63540	1.040
Benzo[a]pyrene	1.00	1166913	1.270	0.500	571672	1.253	0.100	110183	1.262
Fluoranthene	1.00	1173189	1.292	0.500	590301	1.303	0.100	103856	1.218
2-Methylnaphthalene	1.00	718786	0.6146	0.500	357952	0.6163	0.100	67054	0.6010
Acenaphthylene	1.00	1054093	1.651	0.500	510942	1.598	0.100	86753	1.420
Anthracene	1.00	1066535	1.175	0.500	541897	1.196	0.100	86522	1.015
Benzo[a]anthracene	1.00	1180046	1.290	0.500	597212	1.297	0.100	111333	1.273
Benzo[b]fluoranthene	1.00	1239419	1.348	0.500	620856	1.361	0.100	111781	1.280
Benzo[ghi]perylene	1.00	1095551	1.192	0.500	541300	1.187	0.100	107019	1.226
Benzo[k]fluoranthene	1.00	1164879	1.267	0.500	571208	1.252	0.100	113148	1.296
Chrysene	1.00	1172910	1.282	0.500	579851	1.260	0.100	115318	1.319
Dibenz[ah]anthracene	1.00	1111713	1.209	0.500	562510	1.233	0.100	99891	1.144
Fluorene	1.00	758644	1.188	0.500	376978	1.179	0.100	67258	1.101
Indeno[1,2,3-cd]pyrene	1.00	1353599	1.473	0.500	665174	1.458	0.100	123671	1.416
Naphthalene	1.00	1165717	0.9968	0.500	590715	1.017	0.100	111755	1.002
Phenanthrene	1.00	1080938	1.190	0.500	548930	1.212	0.100	103382	1.212
Pyrene	1.00	1203644	1.316	0.500	615785	1.338	0.100	112509	1.287
2-Fluorobiphenyl	1.00	768253	1.203	0.500	393085	1.229	0.100	75484	1.236
Nitrobenzene-d5	1.00	431138	0.3686	0.500	209664	0.3610	0.100	33324	0.2987
p-Terphenyl-d14	1.00	811160	0.8865	0.500	409451	0.8895	0.100	69687	0.7970

KEMRON FORMS - Modified 03/06/2006
Version 1.6 PDF File ID: 499578
Report generated 06/19/2006 09:32

KEMRON Environmental Services

ALTERNATE SOURCE CALIBRATION REPORT

Login Number: L0606267 Run Date: 05/11/2006 Sample ID: WG213057-08
Instrument ID: HPMS7 Run Time: 10:56 Method: 8270C
File ID: 7M29450 Analyst: CLK
ICal Workgroup: WG213057 Cal ID: HPMS7 - 11-MAY-06

Analyte		Expected	Found	RF	%D	UNITS	Q
Acenaphthene	CCC	2.5	2.67	1.09	6.8	ug/mL	
Fluoranthene	CCC	2.5	2.66	1.32	6.6	ug/mL	
Benzo[a]pyrene	CCC	2.5	2.69	1.35	7.7	ug/mL	
Naphthalene		2.5	2.64	0.985	5.5	ug/mL	
Acenaphthylene		2.5	2.80	1.76	12	ug/mL	
Fluorene		2.5	2.74	1.28	9.4	ug/mL	
Phenanthrene		2.5	2.67	1.21	6.8	ug/mL	
Anthracene		2.5	2.73	1.24	9.2	ug/mL	
Pyrene		2.5	2.75	1.46	9.9	ug/mL	
Benzo[a]anthracene		2.5	2.70	1.33	8	ug/mL	
Chrysene		2.5	2.68	1.33	7.1	ug/mL	
Benzo[b]fluoranthene		2.5	2.72	1.40	8.7	ug/mL	
Benzo[k]fluoranthene		2.5	2.74	1.45	9.7	ug/mL	
Indeno[1,2,3-cd]pyrene		2.5	2.58	1.43	3.2	ug/mL	
Dibenz[ah]anthracene		2.5	2.68	1.26	7.4	ug/mL	
Benzo[ghi]perylene		2.5	2.66	1.25	6.4	ug/mL	
2-Methylnaphthalene		2.5	2.76	0.653	10.3	ug/mL	

* Exceeds %D Limit

CCC Calibration Check Compounds
SPCC System Performance Check Compounds

KEMRON FORMS - Modified 04/11/2006
Version 1.5 PDF File ID: 499579
Report generated 06/19/2006 09:36

KEMRON Environmental Services

ALTERNATE SOURCE CALIBRATION REPORT

Login Number: L0606267 Run Date: 06/16/2006 Sample ID: WG215484-08
Instrument ID: HPMS7 Run Time: 15:21 Method: 8270C
File ID: 7M29734 Analyst: hav/rdc
ICal Workgroup: WG215484 Cal ID: HPMS7 - 16-JUN-06

Analyte		Expected	Found	RF	%D	UNITS	Q
Acenaphthene	CCC	2.5	2.67	1.12	6.9	ug/mL	
Fluoranthene	CCC	2.5	2.68	1.35	7.2	ug/mL	
Benzo[a]pyrene	CCC	2.5	2.69	1.36	7.8	ug/mL	
Naphthalene		2.5	2.68	1.03	7.2	ug/mL	
Acenaphthylene		2.5	2.82	1.80	12.6	ug/mL	
Fluorene		2.5	2.73	1.30	9.4	ug/mL	
Phenanthrene		2.5	2.71	1.28	8.6	ug/mL	
Anthracene		2.5	2.80	1.29	12	ug/mL	
Pyrene		2.5	2.70	1.38	8.1	ug/mL	
Benzo[a]anthracene		2.5	2.64	1.34	5.7	ug/mL	
Chrysene		2.5	2.71	1.32	8.4	ug/mL	
Benzo[b]fluoranthene		2.5	2.63	1.40	5.3	ug/mL	
Benzo[k]fluoranthene		2.5	2.82	1.44	12.8	ug/mL	
Indeno[1,2,3-cd]pyrene		2.5	2.55	1.50	1.8	ug/mL	
Dibenz[ah]anthracene		2.5	2.66	1.31	6.2	ug/mL	
Benzo[ghi]perylene		2.5	2.68	1.30	7.2	ug/mL	
2-Methylnaphthalene		2.5	2.74	0.667	9.7	ug/mL	

* Exceeds %D Limit

CCC Calibration Check Compounds
SPCC System Performance Check Compounds

KEMRON FORMS - Modified 04/11/2006
Version 1.5 PDF File ID: 499579
Report generated 06/19/2006 09:36

KEMRON Environmental Services

CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L0606267 Run Date: 06/15/2006 Sample ID: WG215338-02
Instrument ID: HPMS7 Run Time: 07:48 Method: 8270C
File ID: 7M29696 Analyst: hav/rdc
Workgroup (AAB#): WG215457 Cal ID: HPMS7 - 11-MAY-06

Analyte		Expected	Found	RF	%D	UNITS	Q
Acenaphthene	CCC	2.5	2.69	1.10	7.4	ug/mL	
Fluoranthene	CCC	2.5	2.77	1.37	10.7	ug/mL	
Benzo[a]pyrene	CCC	2.5	2.58	1.29	3	ug/mL	
Naphthalene		2.5	2.72	1.01	8.6	ug/mL	
Acenaphthylene		2.5	2.78	1.75	11.3	ug/mL	
Fluorene		2.5	2.68	1.26	7.2	ug/mL	
Phenanthrene		2.5	2.68	1.22	7.4	ug/mL	
Anthracene		2.5	2.78	1.26	11	ug/mL	
Pyrene		2.5	2.60	1.39	4.2	ug/mL	
Benzo[a]anthracene		2.5	2.68	1.32	7.3	ug/mL	
Chrysene		2.5	2.57	1.28	2.9	ug/mL	
Benzo[b]fluoranthene		2.5	2.61	1.34	4.4	ug/mL	
Benzo[k]fluoranthene		2.5	2.57	1.35	2.6	ug/mL	
Indeno[1,2,3-cd]pyrene		2.5	2.60	1.44	4.1	ug/mL	
Dibenz[ah]anthracene		2.5	2.57	1.20	2.7	ug/mL	
Benzo[ghi]perylene		2.5	2.56	1.20	2.3	ug/mL	
2-Methylnaphthalene		2.5	2.72	0.645	8.9	ug/mL	
Nitrobenzene-d5	SURR	2.5	2.97	0.392	18.9	ug/mL	
2-Fluorobiphenyl	SURR	2.5	2.62	1.23	4.7	ug/mL	
p-Terphenyl-d14	SURR	2.5	2.56	0.927	2.6	ug/mL	

* Exceeds %D Criteria

CCC Calibration Check Compounds
SPCC System Performance Check Compounds

KEMRON FORMS - Modified 04/19/2006
Version 1.3 PDF File ID: 499715
Report generated 06/19/2006 10:57

KEMRON Environmental Services

CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L0606267 Run Date: 06/16/2006 Sample ID: WG215484-02
Instrument ID: HPMS7 Run Time: 12:12 Method: 8270C
File ID: 7M29728 Analyst: hav/rdc
Workgroup (AAB#): WG215457 Cal ID: HPMS7 - 11-MAY-06

Analyte		Expected	Found	RF	%D	UNITS	Q
Acenaphthene	CCC	2.5	2.63	1.07	5.1	ug/mL	
Fluoranthene	CCC	2.5	2.75	1.37	10.1	ug/mL	
Benzo[a]pyrene	CCC	2.5	2.64	1.32	5.5	ug/mL	
Naphthalene		2.5	2.69	1.00	7.5	ug/mL	
Acenaphthylene		2.5	2.81	1.77	12.5	ug/mL	
Fluorene		2.5	2.67	1.25	7	ug/mL	
Phenanthrene		2.5	2.74	1.24	9.7	ug/mL	
Anthracene		2.5	2.80	1.27	12.1	ug/mL	
Pyrene		2.5	2.56	1.36	2.2	ug/mL	
Benzo[a]anthracene		2.5	2.77	1.36	10.6	ug/mL	
Chrysene		2.5	2.48	1.24	.7	ug/mL	
Benzo[b]fluoranthene		2.5	2.71	1.39	8.6	ug/mL	
Benzo[k]fluoranthene		2.5	2.59	1.37	3.6	ug/mL	
Indeno[1,2,3-cd]pyrene		2.5	2.80	1.55	12	ug/mL	
Dibenz[ah]anthracene		2.5	2.75	1.29	9.9	ug/mL	
Benzo[ghi]perylene		2.5	2.70	1.27	7.9	ug/mL	
2-Methylnaphthalene		2.5	2.70	0.639	7.9	ug/mL	
Nitrobenzene-d5	SURR	2.5	3.04	0.401	21.7	ug/mL	
2-Fluorobiphenyl	SURR	2.5	2.70	1.27	7.9	ug/mL	
p-Terphenyl-d14	SURR	2.5	2.52	0.912	.9	ug/mL	

* Exceeds %D Criteria

CCC Calibration Check Compounds
SPCC System Performance Check Compounds

KEMRON FORMS - Modified 04/19/2006
Version 1.3 PDF File ID: 499715
Report generated 06/19/2006 10:57

KEMRON ENVIRONMENTAL SERVICES
INTERNAL STANDARD AREA SUMMARY
(COMPARED TO CCV)

Login Number: L0606267
Instrument ID: HPMS7
Workgroup (AAB#): WG215457

CCV Number: WG215338-02
CAL ID: HPMS7-11-MAY-06
Matrix: SOLID

Sample Number	Dilution	Tag	IS-1	IS-2	IS-3	IS-4	IS-5
WG215338-02	NA	NA	683819	1025267	1231694	1020461	990186
Upper Limit	NA	NA	1367638	2050534	2463388	2040922	1980372
Lower Limit	NA	NA	341910	512634	615847	510231	495093
L0606267-01	5.00	DL01	543749	784867	913997	755226	790186
L0606267-03	1.00	01	575130	774871	1028504	800435	829528
L0606267-05	5.00	DL01	506949	706076	854313	697401	717283
L0606267-07	1.00	01	543316	736171	959528	783666	789589
L0606267-08	1.00	01	548997	766642	968529	820554	793864
L0606267-10	1.00	01	559569	764789	985517	791473	819272
L0606267-11	1.00	01	577848	784698	1050011	821553	855104
L0606267-12	1.00	01	568432	793948	1031696	814872	846272
WG215137-02	1.00	01	565718	785554	985623	790633	801660
WG215137-03	1.00	01	565191	808537	1010433	793137	819988

IS-1 - Acenaphthene-d10
IS-2 - Chrysene-d12
IS-3 - Naphthalene-d8
IS-4 - Perylene-d12
IS-5 - Phenanthrene-d10

Underline = Response outside limits

KEMRON FORMS - Modified 04/18/2006
Version 1.3 PDF File ID: 499691
Report generated 06/19/2006 10:55

KEMRON ENVIRONMENTAL SERVICES
INTERNAL STANDARD AREA SUMMARY
(COMPARED TO CCV)

Login Number: L0606267
Instrument ID: HPMS7
Workgroup (AAB#): WG215457

CCV Number: WG215484-02
CAL ID: HPMS7-16-JUN-06
Matrix: SOLID

Sample Number	Dilution	Tag	IS-1	IS-2	IS-3	IS-4	IS-5
WG215484-02	NA	NA	694281	1040303	1282086	1010919	1005109
Upper Limit	NA	NA	1388562	2080606	2564172	2021838	2010218
Lower Limit	NA	NA	347141	520152	641043	505460	502555
L0606267-02	2.00	DL01	619417	796321	1118452	861196	885425
L0606267-04	2.00	DL01	623766	897834	1139311	930100	927390
L0606267-06	2.00	DL01	635699	885853	1171738	933886	932413
L0606267-09	1.00	01	648776	893775	1184739	957408	972368

IS-1 - Acenaphthene-d10
IS-2 - Chrysene-d12
IS-3 - Naphthalene-d8
IS-4 - Perylene-d12
IS-5 - Phenanthrene-d10

Underline = Response outside limits

KEMRON FORMS - Modified 04/18/2006
Version 1.3 PDF File ID: 499691
Report generated 06/19/2006 10:55

KEMRON ENVIRONMENTAL SERVICES
INTERNAL STANDARD RETENTION TIME SUMMARY
(COMPARED TO CCV)

Login Number: L0606267 — CCV Number: WG215338-02
Instrument ID: HPMS7 — CAL ID: HPMS7-11-MAY-06
Workgroup (AAB#): WG215457 — Matrix: SOLID

Sample Number	Dilution	Tag	IS-1	IS-2	IS-3	IS-4	IS-5
WG215338-02	NA	NA	8.46	13.72	6.27	16.17	10.35
Upper Limit	NA	NA	8.96	14.22	6.77	16.67	10.85
Lower Limit	NA	NA	7.96	13.22	5.77	15.67	9.85
L0606267-01	5.00	DL01	8.45	13.72	6.27	16.18	10.35
L0606267-03	1.00	01	8.45	13.72	6.27	16.18	10.35
L0606267-05	5.00	DL01	8.45	13.72	6.27	16.18	10.35
L0606267-07	1.00	01	8.45	13.72	6.26	16.17	10.35
L0606267-08	1.00	01	8.45	13.72	6.27	16.17	10.35
L0606267-10	1.00	01	8.46	13.72	6.27	16.17	10.35
L0606267-11	1.00	01	8.46	13.72	6.27	16.18	10.35
L0606267-12	1.00	01	8.46	13.72	6.27	16.17	10.35
WG215137-02	1.00	01	8.46	13.72	6.27	16.18	10.35
WG215137-03	1.00	01	8.46	13.72	6.27	16.17	10.35

IS-1 - Acenaphthene-d10
IS-2 - Chrysene-d12
IS-3 - Naphthalene-d8
IS-4 - Perylene-d12
IS-5 - Phenanthrene-d10

Underline = Response outside limits

KEMRON FORMS - Modified 04/18/2006
Version 1.3 PDF File ID: 499699
Report generated 06/19/2006 10:56

KEMRON ENVIRONMENTAL SERVICES
INTERNAL STANDARD RETENTION TIME SUMMARY
(COMPARED TO CCV)

Login Number: L0606267 — CCV Number: WG215484-02
Instrument ID: HPMS7 — CAL ID: HPMS7-16-JUN-06
Workgroup (AAB#): WG215457 — Matrix: SOLID

Sample Number	Dilution	Tag	IS-1	IS-2	IS-3	IS-4	IS-5
WG215484-02	NA	NA	8.44	13.69	6.25	16.13	10.33
Upper Limit	NA	NA	8.94	14.19	6.75	16.63	10.83
Lower Limit	NA	NA	7.94	13.19	5.75	15.63	9.83
L0606267-02	2.00	DL01	8.44	13.69	6.25	16.13	10.33
L0606267-04	2.00	DL01	8.44	13.69	6.25	16.14	10.33
L0606267-06	2.00	DL01	8.43	13.69	6.25	16.13	10.33
L0606267-09	1.00	01	8.44	13.69	6.25	16.13	10.33

IS-1 - Acenaphthene-d10
IS-2 - Chrysene-d12
IS-3 - Naphthalene-d8
IS-4 - Perylene-d12
IS-5 - Phenanthrene-d10

Underline = Response outside limits

KEMRON FORMS - Modified 04/18/2006
Version 1.3 PDF File ID: 499699
Report generated 06/19/2006 10:56

1.2 Metals Data

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1.2.1 Metals I C P Data

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KEMRON ENVIRONMENTAL SERVICES
METALS

KEMRON Login No: L0606267

METHOD

Preparation: SW-846 3050B

Analysis: SW-846 6010

HOLDING TIMES

Sample Preparation: All holding times were met.

Sample Analysis: All holding times were met.

PREPARATION

Sample preparation proceeded normally.

CALIBRATION

Initial Calibrations: All acceptance criteria were met.

Alternate Source Standards: All acceptance criteria were met.

Continuing Calibration: All acceptance criteria were met.

BATCH QA/QC

Method Blank: WG215212(6010) - The method blank associated with client samples 01 through 12 yielded a result for iron which exceeded the reporting detection limit. However, all of the client samples contained iron at concentrations greater than ten times that in the method blank. The iron results were reported with 'B' qualifiers to indicate the association with the noncompliant method blank.

Laboratory Control Sample: All acceptance criteria were met.

MS/MSD: WG215212(6010) - Sample 03 was chosen by the client for MS/MSD analysis. Samples 11(MS) and 12(MSD) yielded % recoveries out of limits for nine elements.

Serial Dilution/Post Digestion Spike: WG215212(6010) - Manganese was reported from the five-fold dilution where the 25-fold serial dilution was compliant.

SAMPLES

All acceptance criteria were met.

I certify that this data package is in compliance with the terms and conditions agreed to by the client and KEMRON Environmental Services, both technically and for completeness, except for the conditions noted above. Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or designated person, as verified by the following signature.

Analyst: SLP

Approved: 16-JUN-06
Maren Beery

LABORATORY REPORT

L0606267

06/19/06 11:25

Submitted By

KEMRON Environmental Services
156 Starlite Drive
Marietta , OH 45750
(740) 373 - 4071

For

Account Name: CH2MHILL, Inc
7600 Tidwell Road
Suite 400
San Antonio, TX 77040
Attention: John Ynfante

Account Number: 2736
Work ID: STATE MARINE SUPERFUND SITE

P.O. Number: 915193

Sample Analysis Summary

Client ID	Lab ID	Method	Dilution	Date Received
A-SD-01	L0606267-01	6010B	1	10-JUN-06
A-SD-01	L0606267-01	6010B	5	10-JUN-06
B-SD-02	L0606267-02	6010B	1	10-JUN-06
C-SD-03	L0606267-03	6010B	1	10-JUN-06
D-SD-04	L0606267-04	6010B	1	10-JUN-06
E-SD-05	L0606267-05	6010B	1	10-JUN-06
F-SD-06	L0606267-06	6010B	1	10-JUN-06
G-SD-07	L0606267-07	6010B	1	10-JUN-06
H-SD-08	L0606267-08	6010B	1	10-JUN-06
I-SD-09	L0606267-09	6010B	1	10-JUN-06
FD-01	L0606267-10	6010B	1	10-JUN-06
C-SD-03-MS	L0606267-11	6010B	1	10-JUN-06
C-SD-03-MSD	L0606267-12	6010B	1	10-JUN-06

Report Number: **L0606267**
Report Date : **June 19, 2006**

Sample Number: **L0606267-01**
Client ID: **A-SD-01**
Matrix: **Soil**
Workgroup Number: **WG215212**
Collect Date: **06/08/2006 11:00**
Sample Tag: **01**

PrePrep Method: **NONE**
Prep Method: **3050B**
Analytical Method: **6010B**
Analyst: **SLP**
Dilution: **1**
Units: **mg/kg**

Instrument: **IRIS-ICP**
Prep Date: **06/13/2006 06:55**
Cal Date: **06/14/2006 10:24**
Run Date: **06/14/2006 11:37**
File ID: **IR.061406.113700**
Percent Solid: **49.9**

Analyte	CAS. Number	Result	Qual	PQL	SQL
Aluminum, Total	7429-90-5	13000		27.6	13.8
Silver, Total	7440-22-4		U	0.691	0.346
Arsenic, Total	7440-38-2	6.00		1.38	0.691
Barium, Total	7440-39-3	191		0.691	0.138
Beryllium, Total	7440-41-7	0.737		0.691	0.0166
Calcium, Total	7440-70-2	2820		13.8	6.91
Cadmium, Total	7440-43-9	0.108	J	0.138	0.0691
Cobalt, Total	7440-48-4	6.37		1.38	0.166
Chromium, Total	7440-47-3	15.1		1.38	0.166
Copper, Total	7440-50-8	15.2		1.38	0.691
Iron, Total	7439-89-6	16700	B	2.76	1.38
Potassium, Total	7440-09-7	2880		69.1	34.6
Magnesium, Total	7439-95-4	4230		34.6	16.6
Sodium, Total	7440-23-5	5250		34.6	6.91
Nickel, Total	7440-02-0	12.4		2.76	0.691
Lead, Total	7439-92-1	18.7		6.91	0.691
Selenium, Total	7782-49-2	4.66		1.38	0.691
Vanadium, Total	7440-62-2	25.5		0.691	0.346
Zinc, Total	7440-66-6	94.7		1.38	0.691

B Analyte present in method blank
J The analyte was positively identified, but the quantitation was below the RL
U Not detected at or above the reporting limit

Report Number: **L0606267**
Report Date : **June 19, 2006**

Sample Number: **L0606267-01**
Client ID: **A-SD-01**
Matrix: **Soil**
Workgroup Number: **WG215212**
Collect Date: **06/08/2006 11:00**
Sample Tag: **DL01**

PrePrep Method: **NONE**
Prep Method: **3050B**
Analytical Method: **6010B**
Analyst: **SLP**
Dilution: **5**
Units: **mg/kg**

Instrument: **IRIS-ICP**
Prep Date: **06/13/2006 06:55**
Cal Date: **06/14/2006 10:24**
Run Date: **06/14/2006 11:43**
File ID: **IR.061406.114300**
Percent Solid: **49.9**

Analyte	CAS. Number	Result	Qual	PQL	SQL
Manganese, Total	**7439-96-5**	**297**		**3.46**	**0.691**

Report Number: **L0606267**
Report Date : **June 19, 2006**

Sample Number: **L0606267-02**
Client ID: **B-SD-02**
Matrix: **Soil**
Workgroup Number: **WG215212**
Collect Date: **06/08/2006 12:05**
Sample Tag: **01**

PrePrep Method: **NONE**
Prep Method: **3050B**
Analytical Method: **6010B**
Analyst: **SLP**
Dilution: **1**
Units: **mg/kg**

Instrument: **IRIS-ICP**
Prep Date: **06/13/2006 06:55**
Cal Date: **06/14/2006 10:24**
Run Date: **06/14/2006 12:00**
File ID: **IR.061406.120000**
Percent Solid: **59.7**

Analyte	CAS. Number	Result	Qual	PQL	SQL
Aluminum, Total	7429-90-5	9130		23.0	11.5
Silver, Total	7440-22-4		U	0.574	0.287
Arsenic, Total	7440-38-2	4.50		1.15	0.574
Barium, Total	7440-39-3	135		0.574	0.115
Beryllium, Total	7440-41-7	0.527	J	0.574	0.0138
Calcium, Total	7440-70-2	1430		11.5	5.74
Cadmium, Total	7440-43-9	0.0913	J	0.115	0.0574
Cobalt, Total	7440-48-4	4.78		1.15	0.138
Chromium, Total	7440-47-3	11.6		1.15	0.138
Copper, Total	7440-50-8	7.82		1.15	0.574
Iron, Total	7439-89-6	12600	B	2.30	1.15
Potassium, Total	7440-09-7	2010		57.4	28.7
Magnesium, Total	7439-95-4	2820		28.7	13.8
Manganese, Total	7439-96-5	173		0.574	0.115
Sodium, Total	7440-23-5	3320		28.7	5.74
Nickel, Total	7440-02-0	8.59		2.30	0.574
Lead, Total	7439-92-1	15.8		5.74	0.574
Selenium, Total	7782-49-2	3.15		1.15	0.574
Vanadium, Total	7440-62-2	18.8		0.574	0.287
Zinc, Total	7440-66-6	63.2		1.15	0.574

B Analyte present in method blank
J The analyte was positively identified, but the quantitation was below the RL
U Not detected at or above the reporting limit

Report Number: **L0606267**
Report Date : **June 19, 2006**

Sample Number: **L0606267-03**
Client ID: **C-SD-03**
Matrix: **Soil**
Workgroup Number: **WG215212**
Collect Date: **06/08/2006 15:30**
Sample Tag: **01**

PrePrep Method: **NONE**
Prep Method: **3050B**
Analytical Method: **6010B**
Analyst: **SLP**
Dilution: **1**
Units: **mg/kg**

Instrument: **IRIS-ICP**
Prep Date: **06/13/2006 06:55**
Cal Date: **06/14/2006 10:24**
Run Date: **06/14/2006 12:18**
File ID: **IR.061406.121800**
Percent Solid: **48.8**

Analyte	CAS. Number	Result	Qual	PQL	SQL
Aluminum, Total	7429-90-5	15500		31.3	15.7
Silver, Total	7440-22-4		U	0.783	0.391
Arsenic, Total	7440-38-2	5.73		1.57	0.783
Barium, Total	7440-39-3	264		0.783	0.157
Beryllium, Total	7440-41-7	0.768	J	0.783	0.0188
Calcium, Total	7440-70-2	2560		15.7	7.83
Cadmium, Total	7440-43-9	0.100	J	0.157	0.0783
Cobalt, Total	7440-48-4	6.70		1.57	0.188
Chromium, Total	7440-47-3	16.6		1.57	0.188
Copper, Total	7440-50-8	8.62		1.57	0.783
Iron, Total	7439-89-6	17100	B	3.13	1.57
Potassium, Total	7440-09-7	3200		78.3	39.1
Magnesium, Total	7439-95-4	4620		39.1	18.8
Manganese, Total	7439-96-5	405		0.783	0.157
Sodium, Total	7440-23-5	7290		39.1	7.83
Nickel, Total	7440-02-0	12.2		3.13	0.783
Lead, Total	7439-92-1	15.7		7.83	0.783
Selenium, Total	7782-49-2	3.69		1.57	0.783
Vanadium, Total	7440-62-2	30.2		0.783	0.391
Zinc, Total	7440-66-6	59.7		1.57	0.783

B Analyte present in method blank
J The analyte was positively identified, but the quantitation was below the RL
U Not detected at or above the reporting limit

Report Number: **L0606267**
Report Date : **June 19, 2006**

Sample Number: **L0606267-04**
Client ID: **D-SD-04**
Matrix: **Soil**
Workgroup Number: **WG215212**
Collect Date: **06/08/2006 16:40**
Sample Tag: **01**

PrePrep Method: **NONE**
Prep Method: **3050B**
Analytical Method: **6010B**
Analyst: **SLP**
Dilution: **1**
Units: **mg/kg**

Instrument: **IRIS-ICP**
Prep Date: **06/13/2006 06:55**
Cal Date: **06/14/2006 10:24**
Run Date: **06/14/2006 12:24**
File ID: **IR.061406.122400**
Percent Solid: **62.1**

Analyte	CAS. Number	Result	Qual	PQL	SQL
Aluminum, Total	7429-90-5	16200		23.0	11.5
Silver, Total	7440-22-4		U	0.575	0.288
Arsenic, Total	7440-38-2	5.29		1.15	0.575
Barium, Total	7440-39-3	43.5		0.575	0.115
Beryllium, Total	7440-41-7	0.826		0.575	0.0138
Calcium, Total	7440-70-2	938		11.5	5.75
Cadmium, Total	7440-43-9	0.0846	J	0.115	0.0575
Cobalt, Total	7440-48-4	5.58		1.15	0.138
Chromium, Total	7440-47-3	17.3		1.15	0.138
Copper, Total	7440-50-8	6.04		1.15	0.575
Iron, Total	7439-89-6	14100	B	2.30	1.15
Potassium, Total	7440-09-7	2970		57.5	28.8
Magnesium, Total	7439-95-4	3510		28.8	13.8
Manganese, Total	7439-96-5	65.7		0.575	0.115
Sodium, Total	7440-23-5	3940		28.8	5.75
Nickel, Total	7440-02-0	11.3		2.30	0.575
Lead, Total	7439-92-1	11.5		5.75	0.575
Selenium, Total	7782-49-2	2.22		1.15	0.575
Vanadium, Total	7440-62-2	26.5		0.575	0.288
Zinc, Total	7440-66-6	44.4		1.15	0.575

B Analyte present in method blank
J The analyte was positively identified, but the quantitation was below the RL
U Not detected at or above the reporting limit

Report Number: **L0606267**
Report Date : **June 19, 2006**

Sample Number: **L0606267-05**
Client ID: **E-SD-05**
Matrix: **Soil**
Workgroup Number: **WG215212**
Collect Date: **06/08/2006 14:20**
Sample Tag: **01**

PrePrep Method: **NONE**
Prep Method: **3050B**
Analytical Method: **6010B**
Analyst: **SLP**
Dilution: **1**
Units: **mg/kg**

Instrument: **IRIS-ICP**
Prep Date: **06/13/2006 06:55**
Cal Date: **06/14/2006 10:24**
Run Date: **06/14/2006 12:30**
File ID: **IR.061406.123000**
Percent Solid: **74.8**

Analyte	CAS. Number	Result	Qual	PQL	SQL
Aluminum, Total	7429-90-5	4360		20.4	10.2
Silver, Total	7440-22-4		U	0.510	0.255
Arsenic, Total	7440-38-2	4.12		1.02	0.510
Barium, Total	7440-39-3	27.7		0.510	0.102
Beryllium, Total	7440-41-7	0.284	J	0.510	0.0122
Calcium, Total	7440-70-2	1040		10.2	5.10
Cadmium, Total	7440-43-9	0.0989	J	0.102	0.0510
Cobalt, Total	7440-48-4	3.18		1.02	0.122
Chromium, Total	7440-47-3	6.32		1.02	0.122
Copper, Total	7440-50-8	18.3		1.02	0.510
Iron, Total	7439-89-6	11100	B	2.04	1.02
Potassium, Total	7440-09-7	717		51.0	25.5
Magnesium, Total	7439-95-4	1050		25.5	12.2
Manganese, Total	7439-96-5	127		0.510	0.102
Sodium, Total	7440-23-5	1610		25.5	5.10
Nickel, Total	7440-02-0	8.07		2.04	0.510
Lead, Total	7439-92-1	15.8		5.10	0.510
Selenium, Total	7782-49-2	3.85		1.02	0.510
Vanadium, Total	7440-62-2	9.89		0.510	0.255
Zinc, Total	7440-66-6	71.2		1.02	0.510

B Analyte present in method blank
J The analyte was positively identified, but the quantitation was below the RL
U Not detected at or above the reporting limit

Report Number: **L0606267**
Report Date : **June 19, 2006**

Sample Number: **L0606267-06**
Client ID: **F-SD-06**
Matrix: **Soil**
Workgroup Number: **WG215212**
Collect Date: **06/08/2006 17:25**
Sample Tag: **01**

PrePrep Method: **NONE**
Prep Method: **3050B**
Analytical Method: **6010B**
Analyst: **SLP**
Dilution: **1**
Units: **mg/kg**

Instrument: **IRIS-ICP**
Prep Date: **06/13/2006 06:55**
Cal Date: **06/14/2006 10:24**
Run Date: **06/14/2006 12:36**
File ID: **IR.061406.123600**
Percent Solid: **72.4**

Analyte	CAS. Number	Result	Qual	PQL	SQL
Aluminum, Total	7429-90-5	4040		20.3	10.2
Silver, Total	7440-22-4	0.263	J	0.508	0.254
Arsenic, Total	7440-38-2	3.59		1.02	0.508
Barium, Total	7440-39-3	44.4		0.508	0.102
Beryllium, Total	7440-41-7	0.266	J	0.508	0.0122
Calcium, Total	7440-70-2	556		10.2	5.08
Cadmium, Total	7440-43-9		U	0.102	0.0508
Cobalt, Total	7440-48-4	3.13		1.02	0.122
Chromium, Total	7440-47-3	6.70		1.02	0.122
Copper, Total	7440-50-8	7.39		1.02	0.508
Iron, Total	7439-89-6	9840	B	2.03	1.02
Potassium, Total	7440-09-7	793		50.8	25.4
Magnesium, Total	7439-95-4	1150		25.4	12.2
Manganese, Total	7439-96-5	123		0.508	0.102
Sodium, Total	7440-23-5	2050		25.4	5.08
Nickel, Total	7440-02-0	5.38		2.03	0.508
Lead, Total	7439-92-1	10.9		5.08	0.508
Selenium, Total	7782-49-2	2.41		1.02	0.508
Vanadium, Total	7440-62-2	10.5		0.508	0.254
Zinc, Total	7440-66-6	27.2		1.02	0.508

B Analyte present in method blank
J The analyte was positively identified, but the quantitation was below the RL
U Not detected at or above the reporting limit

Report Number: **L0606267**
Report Date : **June 19, 2006**

Sample Number: **L0606267-07**
Client ID: **G-SD-07**
Matrix: **Soil**
Workgroup Number: **WG215212**
Collect Date: **06/09/2006 10:50**

PrePrep Method: **NONE**
Prep Method: **3050B**
Analytical Method: **6010B**
Analyst: **SLP**
Dilution: **1**
Units: **mg/kg**

Instrument: **IRIS-ICP**
Prep Date: **06/13/2006 06:55**
Cal Date: **06/14/2006 10:24**
Run Date: **06/14/2006 12:42**
File ID: **IR.061406.124200**
Percent Solid: **51.8**

Analyte	CAS. Number	Result	Qual	PQL	SQL
Aluminum, Total	7429-90-5	11400		26.3	13.1
Silver, Total	7440-22-4		U	0.656	0.328
Arsenic, Total	7440-38-2	5.32		1.31	0.656
Barium, Total	7440-39-3	36.6		0.656	0.131
Beryllium, Total	7440-41-7	0.747		0.656	0.0158
Calcium, Total	7440-70-2	1670		13.1	6.56
Cadmium, Total	7440-43-9	0.133		0.131	0.0656
Cobalt, Total	7440-48-4	4.37		1.31	0.158
Chromium, Total	7440-47-3	12.7		1.31	0.158
Copper, Total	7440-50-8	8.85		1.31	0.656
Iron, Total	7439-89-6	12600	B	2.63	1.31
Potassium, Total	7440-09-7	2190		65.6	32.8
Magnesium, Total	7439-95-4	3430		32.8	15.8
Manganese, Total	7439-96-5	165		0.656	0.131
Sodium, Total	7440-23-5	4720		32.8	6.56
Nickel, Total	7440-02-0	10.6		2.63	0.656
Lead, Total	7439-92-1	12.5		6.56	0.656
Selenium, Total	7782-49-2	2.96		1.31	0.656
Vanadium, Total	7440-62-2	23.7		0.656	0.328
Zinc, Total	7440-66-6	36.8		1.31	0.656

B Analyte present in method blank
U Not detected at or above the reporting limit

Report Number: **L0606267**
Report Date : **June 19, 2006**

Sample Number: **L0606267-08**
Client ID: **H-SD-08**
Matrix: **Soil**
Workgroup Number: **WG215212**
Collect Date: **06/09/2006 10:15**

PrePrep Method: **NONE**
Prep Method: **3050B**
Analytical Method: **6010B**
Analyst: **SLP**
Dilution: **1**
Units: **mg/kg**

Instrument: **IRIS-ICP**
Prep Date: **06/13/2006 06:55**
Cal Date: **06/14/2006 10:24**
Run Date: **06/14/2006 12:48**
File ID: **IR.061406.124800**
Percent Solid: **56.6**

Analyte	CAS. Number	Result	Qual	PQL	SQL
Aluminum, Total	7429-90-5	11000		25.2	12.6
Silver, Total	7440-22-4		U	0.631	0.315
Arsenic, Total	7440-38-2	4.19		1.26	0.631
Barium, Total	7440-39-3	37.8		0.631	0.126
Beryllium, Total	7440-41-7	0.625	J	0.631	0.0151
Calcium, Total	7440-70-2	1440		12.6	6.31
Cadmium, Total	7440-43-9	0.158		0.126	0.0631
Cobalt, Total	7440-48-4	6.09		1.26	0.151
Chromium, Total	7440-47-3	12.0		1.26	0.151
Copper, Total	7440-50-8	5.24		1.26	0.631
Iron, Total	7439-89-6	15000	B	2.52	1.26
Potassium, Total	7440-09-7	2030		63.1	31.5
Magnesium, Total	7439-95-4	2930		31.5	15.1
Manganese, Total	7439-96-5	138		0.631	0.126
Sodium, Total	7440-23-5	3810		31.5	6.31
Nickel, Total	7440-02-0	9.15		2.52	0.631
Lead, Total	7439-92-1	12.1		6.31	0.631
Selenium, Total	7782-49-2	3.87		1.26	0.631
Vanadium, Total	7440-62-2	21.8		0.631	0.315
Zinc, Total	7440-66-6	84.1		1.26	0.631

B Analyte present in method blank
J The analyte was positively identified, but the quantitation was below the RL
U Not detected at or above the reporting limit

Report Number: **L0606267**
Report Date : **June 19, 2006**

Sample Number: **L0606267-09**
Client ID: **I-SD-09**
Matrix: **Soil**
Workgroup Number: **WG215212**
Collect Date: **06/09/2006 11:45**

PrePrep Method: **NONE**
Prep Method: **3050B**
Analytical Method: **6010B**
Analyst: **SLP**
Dilution: **1**
Units: **mg/kg**

Instrument: **IRIS-ICP**
Prep Date: **06/13/2006 06:55**
Cal Date: **06/14/2006 10:24**
Run Date: **06/14/2006 12:54**
File ID: **IR.061406.125400**
Percent Solid: **77.3**

Analyte	CAS. Number	Result	Qual	PQL	SQL
Aluminum, Total	7429-90-5	752		18.6	9.31
Silver, Total	7440-22-4		U	0.466	0.233
Arsenic, Total	7440-38-2	1.23		0.931	0.466
Barium, Total	7440-39-3	5.53		0.466	0.0931
Beryllium, Total	7440-41-7	0.0698	J	0.466	0.0112
Calcium, Total	7440-70-2	149		9.31	4.66
Cadmium, Total	7440-43-9		U	0.0931	0.0466
Cobalt, Total	7440-48-4	1.07		0.931	0.112
Chromium, Total	7440-47-3	1.42		0.931	0.112
Copper, Total	7440-50-8		U	0.931	0.466
Iron, Total	7439-89-6	2320	B	1.86	0.931
Potassium, Total	7440-09-7	179		46.6	23.3
Magnesium, Total	7439-95-4	286		23.3	11.2
Manganese, Total	7439-96-5	22.1		0.466	0.0931
Sodium, Total	7440-23-5	1050		23.3	4.66
Nickel, Total	7440-02-0	0.876	J	1.86	0.466
Lead, Total	7439-92-1	2.28	J	4.66	0.466
Selenium, Total	7782-49-2	0.549	J	0.931	0.466
Vanadium, Total	7440-62-2	3.07		0.466	0.233
Zinc, Total	7440-66-6	5.07		0.931	0.466

B Analyte present in method blank
J The analyte was positively identified, but the quantitation was below the RL
U Not detected at or above the reporting limit

Report Number: **L0606267**
Report Date : **June 19, 2006**

Sample Number: **L0606267-10**
Client ID: **FD-01**
Matrix: **Soil**
Workgroup Number: **WG215212**
Collect Date: **06/09/2006 10:15**

PrePrep Method: **NONE**
Prep Method: **3050B**
Analytical Method: **6010B**
Analyst: **SLP**
Dilution: **1**
Units: **mg/kg**

Instrument: **IRIS-ICP**
Prep Date: **06/13/2006 06:55**
Cal Date: **06/14/2006 10:24**
Run Date: **06/14/2006 13:00**
File ID: **IR.061406.130000**
Percent Solid: **56.6**

Analyte	CAS. Number	Result	Qual	PQL	SQL
Aluminum, Total	7429-90-5	10200		25.2	12.6
Silver, Total	7440-22-4		U	0.631	0.315
Arsenic, Total	7440-38-2	5.03		1.26	0.631
Barium, Total	7440-39-3	40.4		0.631	0.126
Beryllium, Total	7440-41-7	0.625	J	0.631	0.0151
Calcium, Total	7440-70-2	1480		12.6	6.31
Cadmium, Total	7440-43-9	0.131		0.126	0.0631
Cobalt, Total	7440-48-4	7.01		1.26	0.151
Chromium, Total	7440-47-3	11.3		1.26	0.151
Copper, Total	7440-50-8	5.64		1.26	0.631
Iron, Total	7439-89-6	14300	B	2.52	1.26
Potassium, Total	7440-09-7	1940		63.1	31.5
Magnesium, Total	7439-95-4	2840		31.5	15.1
Manganese, Total	7439-96-5	149		0.631	0.126
Sodium, Total	7440-23-5	3590		31.5	6.31
Nickel, Total	7440-02-0	9.37		2.52	0.631
Lead, Total	7439-92-1	13.0		6.31	0.631
Selenium, Total	7782-49-2	3.63		1.26	0.631
Vanadium, Total	7440-62-2	20.6		0.631	0.315
Zinc, Total	7440-66-6	66.0		1.26	0.631

B Analyte present in method blank
J The analyte was positively identified, but the quantitation was below the RL
U Not detected at or above the reporting limit

Report Number: **L0606267**
Report Date : **June 19, 2006**

Sample Number: **L0606267-11**
Client ID: **C-SD-03-MS**
Matrix: **Soil**
Workgroup Number: **WG215212**
Collect Date: **06/08/2006 15:30**

PrePrep Method: **NONE**
Prep Method: **3050B**
Analytical Method: **6010B**
Analyst: **SLP**
Dilution: **1**
Units: **mg/kg**

Instrument: **IRIS-ICP**
Prep Date: **06/13/2006 06:55**
Cal Date: **06/14/2006 10:24**
Run Date: **06/14/2006 13:06**
File ID: **IR.061406.130600**
Percent Solid: **48.8**

Analyte	CAS. Number	Result	Qual	PQL	SQL
Aluminum, Total	7429-90-5	23700		31.3	15.7
Silver, Total	7440-22-4	15.3		0.783	0.391
Arsenic, Total	7440-38-2	20.1		1.57	0.783
Barium, Total	7440-39-3	160		0.783	0.157
Beryllium, Total	7440-41-7	2.84		0.783	0.0188
Calcium, Total	7440-70-2	3490		15.7	7.83
Cadmium, Total	7440-43-9	2.03		0.157	0.0783
Cobalt, Total	7440-48-4	14.2		1.57	0.188
Chromium, Total	7440-47-3	40.0		1.57	0.188
Copper, Total	7440-50-8	27.6		1.57	0.783
Iron, Total	7439-89-6	18100	B	3.13	1.57
Potassium, Total	7440-09-7	5860		78.3	39.1
Magnesium, Total	7439-95-4	5400		39.1	18.8
Manganese, Total	7439-96-5	399		0.783	0.157
Sodium, Total	7440-23-5	9890		39.1	7.83
Nickel, Total	7440-02-0	31.0		3.13	0.783
Lead, Total	7439-92-1	32.9		7.83	0.783
Selenium, Total	7782-49-2	17.3		1.57	0.783
Vanadium, Total	7440-62-2	80.3		0.783	0.391
Zinc, Total	7440-66-6	93.7		1.57	0.783

B Analyte present in method blank

Report Number: **L0606267**
Report Date : **June 19, 2006**

Sample Number: **L0606267-12**
Client ID: **C-SD-03-MSD**
Matrix: **Soil**
Workgroup Number: **WG215212**
Collect Date: **06/08/2006 15:30**

PrePrep Method: **NONE**
Prep Method: **3050B**
Analytical Method: **6010B**
Analyst: **SLP**
Dilution: **1**
Units: **mg/kg**

Instrument: **IRIS-ICP**
Prep Date: **06/13/2006 06:55**
Cal Date: **06/14/2006 10:24**
Run Date: **06/14/2006 13:12**
File ID: **IR.061406.131200**
Percent Solid: **48.8**

Analyte	CAS. Number	Result	Qual	PQL	SQL
Aluminum, Total	7429-90-5	24600		31.3	15.7
Silver, Total	7440-22-4	14.8		0.783	0.391
Arsenic, Total	7440-38-2	20.4		1.57	0.783
Barium, Total	7440-39-3	172		0.783	0.157
Beryllium, Total	7440-41-7	2.83		0.783	0.0188
Calcium, Total	7440-70-2	2830		15.7	7.83
Cadmium, Total	7440-43-9	1.96		0.157	0.0783
Cobalt, Total	7440-48-4	14.4		1.57	0.188
Chromium, Total	7440-47-3	40.2		1.57	0.188
Copper, Total	7440-50-8	27.1		1.57	0.783
Iron, Total	7439-89-6	18200	B	3.13	1.57
Potassium, Total	7440-09-7	5850		78.3	39.1
Magnesium, Total	7439-95-4	5480		39.1	18.8
Manganese, Total	7439-96-5	588		0.783	0.157
Sodium, Total	7440-23-5	8780		39.1	7.83
Nickel, Total	7440-02-0	31.3		3.13	0.783
Lead, Total	7439-92-1	33.5		7.83	0.783
Selenium, Total	7782-49-2	17.3		1.57	0.783
Vanadium, Total	7440-62-2	81.1		0.783	0.391
Zinc, Total	7440-66-6	94.6		1.57	0.783

B Analyte present in method blank

1.2.1.1 QC Summary

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Checklist ID: 7989

KEMRON Environmental Services
Data Checklist

Date: 14-JUN-2006
Analyst: SLP
Analyst: NA
Method: 6010B
Instrument: IRIS-ICP
Curve Workgroup: 215283
Analytical Workgroups: 215212, 215107

Run Log ID:	10788
Calibration/Linearity	X
ICV/CCV	X
ICB/CCB	X
ICSA/ICSAB	X
CRI	
Blank/LCS	X
MS/MSD	X
Post Spike/Serial Dilution	X
Upload Results	X
Data Qualifiers	X
Generate PDF Instrument Data	X
Sign/Annotate PDF Data	X
Upload Curve Data	X
Workgroup Forms	X
Case Narrative	259, 267, 251
Client Forms	X
Level X	
Level 3	267
Level 4	259, 251
Check for compliance with method and project specific requirements	X
Check the completeness of reported information	X
Check the information for the report narrative	X
Primary Reviewer	SLP
Secondary Reviewer	MMB
Comments	

Primary Reviewer: Sheri L. Babcock

Secondary Reviewer: 16-JUN-2006
Maren Berry

Generated: JUN-16-2006 10:08:26

Run Log ID:**10788**

KEMRON Environmental Services

Instrument Run Log

Instrument: IRIS-ICP Dataset: 20060614.1
Analyst1: SLP Analyst2: N/A
Method: 6010B SOP: ME600F Rev: 5

Calibration Std: STD13108 ICV/CCV Std: STD13107 Post Spike: STD12687
ICSA: STD13102 ICSAB: STD12975

Workgroups: 215212, 215107

Comments:

Seq.	File ID	Sample	ID	Prep	Dil	Reference	Date/Time
1	IR.061406.095400	WG215283-01	Calibration Point		1		06/14/06 09:54
2	IR.061406.100000	WG215283-02	Calibration Point		1		06/14/06 10:00
3	IR.061406.100600	WG215283-03	Calibration Point		1		06/14/06 10:06
4	IR.061406.101200	WG215283-04	Calibration Point		1		06/14/06 10:12
5	IR.061406.101800	WG215283-05	Calibration Point		1		06/14/06 10:18
6	IR.061406.102400	WG215283-06	Calibration Point		1		06/14/06 10:24
7	IR.061406.103100	WG215283-07	Initial Calibration Verification		1		06/14/06 10:31
8	IR.061406.103600	WG215283-08	Initial Calib Blank		1		06/14/06 10:36
9	IR.061406.104200	WG215283-09	Interference Check		1		06/14/06 10:42
10	IR.061406.104800	WG215283-10	Interference Check		1		06/14/06 10:48
11	IR.061406.105400	WG215283-11	CCV		1		06/14/06 10:54
12	IR.061406.110000	WG215283-12	CCB		1		06/14/06 11:00
13	IR.061406.110600	WG215159-03	Method/Prep Blank	1/50	1		06/14/06 11:06
14	IR.061406.111200	WG215159-04	Laboratory Control S	1/50	1		06/14/06 11:12
15	IR.061406.111800	L0606213-01	SOIL	1.43/50	1		06/14/06 11:18
16	IR.061406.112400	L0606259-01	SE0173-EW1A-20-22	1.43/50	1		06/14/06 11:24
17	IR.061406.113000	L0606259-02	SE0173-EW1A-18-20	1.42/50	1		06/14/06 11:30
18	IR.061406.113700	L0606267-01	A-SD-01	1.45/50	1		06/14/06 11:37
19	IR.061406.114300	WG215212-02	Serial Dilution		5	L0606267-01	06/14/06 11:43
20	IR.061406.114900	WG215212-02	Serial Dilution		25	L0606267-01	06/14/06 11:49
21	IR.061406.115400	WG215212-01	Post Digestion Spike		1	L0606267-01	06/14/06 11:54
22	IR.061406.120000	L0606267-02	B-SD-02	1.46/50	1		06/14/06 12:00
23	IR.061406.120600	WG215283-13	CCV		1		06/14/06 12:06
24	IR.061406.121200	WG215283-14	CCB		1		06/14/06 12:12
25	IR.061406.121800	WG215159-01	Reference Sample		1	L0606267-03	06/14/06 12:18
26	IR.061406.122400	L0606267-04	D-SD-04	1.4/50	1		06/14/06 12:24
27	IR.061406.123000	L0606267-05	E-SD-05	1.31/50	1		06/14/06 12:30
28	IR.061406.123600	L0606267-06	F-SD-06	1.36/50	1		06/14/06 12:36
29	IR.061406.124200	L0606267-07	G-SD-07	1.47/50	1		06/14/06 12:42
30	IR.061406.124800	L0606267-08	H-SD-08	1.4/50	1		06/14/06 12:48
31	IR.061406.125400	L0606267-09	I-SD-09	1.39/50	1		06/14/06 12:54
32	IR.061406.130000	L0606267-10	FD-01	1.4/50	1		06/14/06 13:00
33	IR.061406.130600	WG215159-05	Matrix Spike	1.31/50	1	L0606267-11	06/14/06 13:06
34	IR.061406.131200	WG215159-06	Matrix Spike Duplica	1.31/50	1	L0606267-12	06/14/06 13:12
35	IR.061406.131800	WG215283-15	CCV		1		06/14/06 13:18
36	IR.061406.132400	WG215283-16	CCB		1		06/14/06 13:24
37	IR.061406.133000	WG215027-02	Method/Prep Blank	1/50	1		06/14/06 13:30

Approved: June 16, 2006

Maren Berry

007618

Run Log ID:**10788**

KEMRON Environmental Services

Instrument Run Log

Instrument: IRIS-ICP Dataset: 20060614.1
Analyst1: SLP Analyst2: N/A
Method: 6010B SOP: ME600F Rev: 5

Calibration Std: STD13108 ICV/CCV Std: STD13107 Post Spike: STD12687
ICSA: STD13102 ICSAB: STD12975

Workgroups: 215212, 215107

Comments:

Seq.	File ID	Sample	ID	Prep	Dil	Reference	Date/Time
38	IR.061406.133600	WG215027-03	Laboratory Control S	1/50	1		06/14/06 13:36
39	IR.061406.134200	L0606251-01	1011FT22E1	1.42/50	1		06/14/06 13:42
40	IR.061406.134800	WG215107-02	Serial Dilution	1.42/50	5	L0606251-01	06/14/06 13:48
41	IR.061406.135400	WG215107-02	Serial Dilution		25	L0606251-01	06/14/06 13:54
42	IR.061406.140000	WG215107-01	Post Digestion Spike		1	L0606251-01	06/14/06 14:00
43	IR.061406.140600	L0606251-02	1011FT29E1	1.4/50	1		06/14/06 14:06
44	IR.061406.141200	L0606251-03	1011FT16E1	1.3/50	1		06/14/06 14:12
45	IR.061406.141800	L0606251-04	1011FT11E1	1.35/50	1		06/14/06 14:18
46	IR.061406.142400	WG215027-01	Reference Sample		1	L0606251-05	06/14/06 14:24
47	IR.061406.143000	WG215283-17	CCV		1		06/14/06 14:30
48	IR.061406.143600	WG215283-18	CCB		1		06/14/06 14:36
49	IR.061406.144200	WG215027-04	Duplicate	1.35/50	1	L0606251-06	06/14/06 14:42
50	IR.061406.144800	WG215027-05	Matrix Spike	1.35/50	1		06/14/06 14:48
51	IR.061406.145400	WG215027-06	Matrix Spike Duplica	1.35/50	1		06/14/06 14:54
52	IR.061406.150000	L0606210-01	25 BOILER BOTTOM ASH B	1.47/50	1		06/14/06 15:00
53	IR.061406.150600	L0606210-02	25 BOILER FLY ASH BASEL	1.32/50	1		06/14/06 15:06
54	IR.061406.151100	WG215283-19	CCV		1		06/14/06 15:11
55	IR.061406.151700	WG215283-20	CCB		1		06/14/06 15:17
56	IR.061406.153200	L0606251-02	1011FT29E1	1.4/50	10		06/14/06 15:32
57	IR.061406.153800	WG215027-01	Reference Sample		2	L0606251-05	06/14/06 15:38
58	IR.061406.154400	WG215027-04	Duplicate	1.35/50	2	L0606251-06	06/14/06 15:44
59	IR.061406.155000	WG215027-05	Matrix Spike	1.35/50	2		06/14/06 15:50
60	IR.061406.155600	WG215027-06	Matrix Spike Duplica	1.35/50	2		06/14/06 15:56
61	IR.061406.160200	WG215283-21	CCV		1		06/14/06 16:02
62	IR.061406.160800	WG215283-22	CCB		1		06/14/06 16:08

Comments

Seq.	Rerun	Dil.	Reason	Analytes
43			Cu OLR; reanalyzed @ dil. for Cu.	
46			Cu OLR; reanalyzed @ dil. for Cu.	
49			Cu OLR; reanalyzed @ dil. for Cu.	

Approved: June 16, 2006

Maren Berry

007619

KEMRON Environmental Services
HOLDING TIMES
EQUIVALENT TO AFCEE FORM 9

Analytical Method: 6010B **AAB#:** WG215212
Login Number: L0606267

Client ID	Date Collected	Date Received	Date Extracted	Max Hold Time Ext.	Time Held Ext.	Date Analyzed	Max Hold Time Anal	Time Held Anal.	Q
A-SD-01	06/08/06	06/10/06	06/13/06	180	4.83	06/14/06	180	1.20	
A-SD-01	06/08/06	06/10/06	06/13/06	180	4.83	06/14/06	180	1.20	
B-SD-02	06/08/06	06/10/06	06/13/06	180	4.78	06/14/06	180	1.21	
C-SD-03	06/08/06	06/10/06	06/13/06	180	4.64	06/14/06	180	1.22	
D-SD-04	06/08/06	06/10/06	06/13/06	180	4.59	06/14/06	180	1.23	
E-SD-05	06/08/06	06/10/06	06/13/06	180	4.69	06/14/06	180	1.23	
F-SD-06	06/08/06	06/10/06	06/13/06	180	4.56	06/14/06	180	1.24	
G-SD-07	06/09/06	06/10/06	06/13/06	180	3.84	06/14/06	180	1.24	
H-SD-08	06/09/06	06/10/06	06/13/06	180	3.86	06/14/06	180	1.25	
I-SD-09	06/09/06	06/10/06	06/13/06	180	3.80	06/14/06	180	1.25	
FD-01	06/09/06	06/10/06	06/13/06	180	3.86	06/14/06	180	1.25	
C-SD-03-MS	06/08/06	06/10/06	06/13/06	180	4.64	06/14/06	180	1.26	
C-SD-03-MSD	06/08/06	06/10/06	06/13/06	180	4.64	06/14/06	180	1.26	

* EXT = SEE PROJECT QAPP REQUIREMENTS
*ANAL = SEE PROJECT QAPP REQUIREMENTS

KEMRON FORMS - Modified 02/14/2006
Version 1.5 PDF File ID: 496189
Report generated 06/14/2006 13:47

KEMRON Environmental Services

METHOD BLANK SUMMARY

Login Number: L0606267
Work Group: WG215212
Blank File ID: IR.061406.110600
Blank Sample ID: WG215159-03
Date Analyzed: 06/14/06
Instrument ID: IRIS-ICP
Time Analyzed: 11:06
Method: 6010B
Analyst: SLP

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG215159-04	IR.061406.111200	06/14/06 11:12	01
A-SD-01	L0606267-01	IR.061406.113700	06/14/06 11:37	01
A-SD-01	L0606267-01	IR.061406.114300	06/14/06 11:43	DL01
B-SD-02	L0606267-02	IR.061406.120000	06/14/06 12:00	01
C-SD-03	L0606267-03	IR.061406.121800	06/14/06 12:18	01
D-SD-04	L0606267-04	IR.061406.122400	06/14/06 12:24	01
E-SD-05	L0606267-05	IR.061406.123000	06/14/06 12:30	01
F-SD-06	L0606267-06	IR.061406.123600	06/14/06 12:36	01
G-SD-07	L0606267-07	IR.061406.124200	06/14/06 12:42	01
H-SD-08	L0606267-08	IR.061406.124800	06/14/06 12:48	01
I-SD-09	L0606267-09	IR.061406.125400	06/14/06 12:54	01
FD-01	L0606267-10	IR.061406.130000	06/14/06 13:00	01
C-SD-03-MS	L0606267-11	IR.061406.130600	06/14/06 13:06	01
C-SD-03-MSD	L0606267-12	IR.061406.131200	06/14/06 13:12	01

KEMRON FORMS - Modified 03/06/2006
Version 1.5 PDF File ID: 496190
Report generated 06/14/2006 13:47

KEMRON Environmental Services

METHOD BLANK REPORT

Login Number: L0606267	Run Date: 06/14/2006	Sample ID: WG215159-03
Instrument ID: IRIS-ICP	Run Time: 11:06	Prep Method: 3050B
File ID: IR.061406.110600	Analyst: SLP	Method: 6010B
Workgroup (AAB#): WG215212	Matrix: Solid	Units: mg/kg
Contract #:	Cal ID: IRIS-I-14-JUN-06	

Analytes	SQL	PQL	Concentration	Dilution	Qualifier
Aluminum, Total	10.0	20.0	10.0	1	U
Silver, Total	0.250	0.500	0.250	1	U
Arsenic, Total	0.500	1.00	0.500	1	U
Barium, Total	0.100	0.500	0.100	1	U
Beryllium, Total	0.0120	0.500	0.0120	1	U
Calcium, Total	5.00	10.0	5.00	1	U
Cadmium, Total	0.0500	0.100	0.0500	1	U
Cobalt, Total	0.120	1.00	0.120	1	U
Chromium, Total	0.120	1.00	0.120	1	U
Copper, Total	0.500	1.00	0.500	1	U
Iron, Total	1.00	2.00	3.13	1	*
Potassium, Total	25.0	50.0	25.0	1	U
Magnesium, Total	12.0	25.0	12.0	1	U
Manganese, Total	0.100	0.500	0.100	1	U
Sodium, Total	5.00	25.0	5.00	1	U
Nickel, Total	0.500	2.00	0.500	1	U
Lead, Total	0.500	5.00	0.500	1	U
Selenium, Total	0.500	1.00	0.500	1	U
Vanadium, Total	0.250	0.500	0.250	1	U
Zinc, Total	0.500	1.00	0.500	1	U

MDL Method Detection Limit
RL Reporting/quantitation Limit

* Analyte concentration > RL

KEMRON FORMS - Modified 05/01/2006
Version 1.5 PDF File ID: 496191
Report generated 06/14/2006 13:47

KEMRON Environmental Services

LABORATORY CONTROL SAMPLE (LCS)

Login Number: L0606267	Run Date: 06/14/2006	Sample ID: WG215159-04
Instrument ID: IRIS-ICP	Run Time: 11:12	Prep Method: 3050B
File ID: IR.061406.111200	Analyst: SLP	Method: 6010B
Workgroup (AAB#): WG215212	Matrix: Solid	Units: mg/kg
Contract #:	Cal ID: IRIS-I-14-JUN-06	

Analytes	Expected	Found	% Rec	LCS Limits	Q
Aluminum, Total	250	245	98.0	80 - 120	
Silver, Total	10.0	9.90	99.0	80 - 120	
Arsenic, Total	10.0	9.91	99.1	80 - 120	
Barium, Total	25.0	24.5	98.0	80 - 120	
Beryllium, Total	1.25	1.23	98.5	80 - 120	
Calcium, Total	250	246	98.4	80 - 120	
Cadmium, Total	1.25	1.24	99.0	80 - 120	
Cobalt, Total	5.00	5.03	101	80 - 120	
Chromium, Total	12.5	12.4	99.3	80 - 120	
Copper, Total	12.5	12.3	98.8	80 - 120	
Iron, Total	100	101	101	80 - 120	
Potassium, Total	1250	1260	101	80 - 120	
Magnesium, Total	250	244	97.6	80 - 120	
Manganese, Total	12.5	12.6	101	80 - 120	
Sodium, Total	1250	1290	103	80 - 120	
Nickel, Total	12.5	12.3	98.0	80 - 120	
Lead, Total	12.5	12.2	97.4	80 - 120	
Selenium, Total	10.0	10.2	102	80 - 120	
Vanadium, Total	25.0	24.6	98.4	80 - 120	
Zinc, Total	25.0	24.7	98.7	80 - 120	

KEMRON FORMS - Modified 05/01/2006
Version 1.5 PDF File ID: 496192
Report generated 06/14/2006 13:47

KEMRON Environmental Services

MS/MSD REPORT

Loginnum:L0606267 Cal ID: IRIS-ICP-14-JUN-06 Worknum:WG215212
Instrument ID:IRIS-ICP Contract #: Prep Method:3050B
Parent ID:L0606267-03 File ID:IR.061406.121800 Dil:1 Method:6010B
Sample ID:L0606267-11 MS File ID:IR.061406.130600 Dil:1 Matrix:Soil
Sample ID:L0606267-12 MSD File ID:IR.061406.131200 Dil:1 Units:mg/kg
Percent Solid:48.8

Analyte	Parent	MS Spiked	MS Found	MS %Rec	MSD Spiked	MSD Found	MSD %Rec	%RPD	%Rec Limits	RPD Limit	Q
Aluminum, Total	15500	391	23700	2080	391	24600	2300	3.64	75 - 125	20	*
Silver, Total	U	15.7	15.3	97.7	15.7	14.8	94.6	3.30	75 - 125	20	
Arsenic, Total	5.73	15.7	20.1	91.9	15.7	20.4	93.5	1.24	75 - 125	20	
Barium, Total	264	39.1	160	-265	39.1	172	-233	7.32	75 - 125	20	*
Beryllium, Total	0.768	1.96	2.84	106	1.96	2.83	105	0.415	75 - 125	20	
Calcium, Total	2560	391	3490	238	391	2830	70.1	20.7	75 - 125	20	*
Cadmium, Total	0.100	1.96	2.03	98.7	1.96	1.96	94.9	3.69	75 - 125	20	
Cobalt, Total	6.70	7.83	14.2	96.4	7.83	14.4	98.5	1.14	75 - 125	20	
Chromium, Total	16.6	19.6	40.0	120	19.6	40.2	120	0.347	75 - 125	20	
Copper, Total	8.62	19.6	27.6	97.2	19.6	27.1	94.4	1.99	75 - 125	20	
Iron, Total	17100	157	18100	627	157	18200	711	0.726	75 - 125	20	*
Potassium, Total	3200	1960	5860	136	1960	5850	135	0.155	75 - 125	20	*
Magnesium, Total	4620	391	5400	199	391	5480	220	1.50	75 - 125	20	*
Manganese, Total	405	19.6	399	-31.3	19.6	588	935	38.3	75 - 125	20	*
Sodium, Total	7290	1960	9890	133	1960	8780	76.0	11.9	75 - 125	20	*
Nickel, Total	12.2	19.6	31.0	95.8	19.6	31.3	97.5	1.07	75 - 125	20	
Lead, Total	15.7	19.6	32.9	88.3	19.6	33.5	90.9	1.54	75 - 125	20	
Selenium, Total	3.69	15.7	17.3	86.6	15.7	17.3	87.1	0.435	75 - 125	20	
Vanadium, Total	30.2	39.1	80.3	128	39.1	81.1	130	1.01	75 - 125	20	*
Zinc, Total	59.7	39.1	93.7	87.0	39.1	94.6	89.3	0.956	75 - 125	20	

* FAILS %REC LIMIT

\# FAILS RPD LIMIT

KEMRON FORMS - Modified 06/02/2006
Version 1.5 PDF File ID:496202
Report generated 06/14/2006 13:48

KEMRON ENVIRONMENTAL SERVICES
SERIAL DILUTION REPORT

Sample Login ID: L0606267 Worknum: WG215212
Instrument ID: IRIS-ICP Method: 6010B
Sample ID: L0606267-01 File ID: IR.061406.113700 Dil: 1 Units: mg/kg
Serial Dilution ID: WG215212-02 File ID: IR.061406.114300 Dil: 5

Analyte	Sample	C	Serial Dilution	C	% Difference	Q
Aluminum	189		185		2.12	
Arsenic	0.0869	X	0.0844	F	2.88	
Barium	2.77		2.64		4.69	
Beryllium	0.0107	X	0.0103	F	3.74	
Cadmium	0.00157	F	0	U	100	
Calcium	40.8		39.4		3.43	
Chromium	0.218		0.230	X	5.50	
Cobalt	0.0922	X	0.110	X	19.3	
Copper	0.220	X	0.212	X	3.64	
Iron	242		259		7.02	
Lead	0.271	X	0.286	F	5.54	
Magnesium	61.2		62.0		1.31	
Manganese	3.85		4.30		11.7	E
Nickel	0.179	X	0.186	F	3.91	
Potassium	41.7		39.1	X	6.24	
Selenium	0.0674	X	0	U	100	
Silver	ND	U	ND	U		
Sodium	76.0		71.4		6.05	
Vanadium	0.369		0.353	X	4.34	
Zinc	1.37		1.36	X	0.730	

U = Result is below MDL
F = Result is between MDL and RL
X = Result is greater than RL and less than 50 times the MDL
E = %D exceeds control limit of 10% and initial
sample result is greater than or equal to 50 times the MDL

KEMRON FORMS - Modified 02/14/2006
Version 1.3 PDF File ID: 496187
Report generated 06/14/2006 13:47

KEMRON ENVIRONMENTAL SERVICES
SERIAL DILUTION REPORT

Sample Login ID: L0606267 Worknum: WG215212
Instrument ID: IRIS-ICP Method: 6010B
Sample ID: L0606267-01 File ID: IR.061406.114300 Dil: 5 Units: mg/kg
Serial Dilution ID: WG215212-02 File ID: IR.061406.114900 Dil: 25

Analyte	Sample	C	Serial Dilution	C	% Difference	Q
Aluminum	185		188	X	1.62	
Arsenic	0.0844	F	0	U	100	
Barium	2.64		2.70		2.27	
Beryllium	0.0103	F	0.0115	F	11.7	
Cadmium	0	U	0	U		
Calcium	39.4		40.3	X	2.28	
Chromium	0.230	X	0.239	F	3.91	
Cobalt	0.110	X	0.176	F	60.0	
Copper	0.212	X	0	U	100	
Iron	259		260		0.386	
Lead	0.286	F	0	U	100	
Magnesium	62.0		61.7	X	0.484	
Manganese	4.30		4.45		3.49	
Nickel	0.186	F	0	U	100	
Potassium	39.1	X	37.1	X	5.12	
Selenium	0	U	0	U		
Silver	ND	U	0	U		
Sodium	71.4		72.0	X	0.840	
Vanadium	0.353	X	0.396	X	12.2	
Zinc	1.36	X	1.43	X	5.15	

U = Result is below MDL
F = Result is between MDL and RL
X = Result is greater than RL and less than 50 times the MDL
E = %D exceeds control limit of 10% and initial
sample result is greater than or equal to 50 times the MDL

KEMRON FORMS - Modified 02/14/2006
Version 1.3 PDF File ID: 496187
Report generated 06/14/2006 13:47

007626

KEMRON ENVIRONMENTAL SERVICES
POST SPIKE REPORT

Sample Login ID: L0606267 **Worknum:** WG215212
Instrument ID: IRIS-ICP **Method:** 6010B
Post Spike ID: WG215212-01 **File ID:** IR.061406.115400 **Dil:** 1 **Units:** mg/kg
Sample ID: L0606267-01 **File ID:** IR.061406.113700 **Dil:** 1 **Matrix:** Soil

Analyte	Control Limit %R	Post Spike Result	C	Sample Result	C	Spike Added(SA)	% R	Q
ALUMINUM	75 - 125	171		189		5.00	18.0	N
ARSENIC	75 - 125	0.279		0.0869		0.200	100	
BARIUM	75 - 125	2.95		2.77		0.500	91.4	
BERYLLIUM	75 - 125	0.0349		0.0107		0.0250	101	
CADMIUM	75 - 125	0.0267		0.00157	F	0.0250	101	
CALCIUM	75 - 125	41.2		40.8		5.00	89.6	
CHROMIUM	75 - 125	0.435		0.218		0.250	95.5	
COBALT	75 - 125	0.180		0.0922		0.100	97.0	
COPPER	75 - 125	0.445		0.220		0.250	98.8	
IRON	75 - 125	216		242		2.00	-90.0	N
LEAD	75 - 125	0.475		0.271		0.250	92.4	
MAGNESIUM	75 - 125	58.9		61.2		5.00	76.4	
MANGANESE	75 - 125	3.64		3.85		0.250	70.0	N
NICKEL	75 - 125	0.392		0.179		0.250	92.4	
POTASSIUM	75 - 125	62.2		41.7		25.0	98.7	
SELENIUM	75 - 125	0.264		0.0674		0.200	102	
SILVER	75 - 125	0.203		ND	U	0.200	102	
SODIUM	75 - 125	91.5		76.0		25.0	92.4	
VANADIUM	75 - 125	0.835		0.369		0.500	101	
ZINC	75 - 125	1.70		1.37		0.500	93.4	

N = % Recoverv exceeds control limits of 75% - 125%
F = Result is between MDL and RL
U = Sample result is below MDL. A value of zero is used in the calculation.

KEMRON FORMS - Modified 02/14/2006
Version 2.0 PDF File ID: 496188
Report generated 06/14/2006 13:47

KEMRON Environmental Services

INITIAL CALIBRATION SUMMARY

Login Number: L0606267 **Workgroup (AAB#):** WG215212

Analytical Method: 6010B **Instrument ID:** IRIS-ICP

ICAL Worknum: WG215283 **Initial Calibration Date:** 14-JUN-2006 10:24

Analyte	WG215283-01		WG215283-02		WG215283-03		WG215283-04		WG215283-05		WG215283-06	
	STD	INT	STD	INT	STD	INT	STD	INT	STD	INT	STD	INT
Aluminum	NA	.0NA27	NA	.1NA86	NA	.3NA41	NA	7.NA63	NA	15NA03	NA	30NA21
Arsenic	NA	-.0NA298	NA	NA	.NA8	.0NA12	NA	1.NA98	NA	3.NA45	NA	6.NA68
Barium	NA	1.NA97	NA	5.NA49	NA	10NA13	NA	22NA.9	NA	45NA71	NA	91NA31
Beryllium	NA	.2NA45	.0NA05	1.NA73	.NA1	1.NA73	.NA5	40NA58	NA	84NA38	NA	16NA98
Cadmium	NA	.6NA28	NA	NA	.NA1	.7NA43	.NA5	3.NA05	NA	5.NA62	NA	10NA01
Calcium	NA	.7NA31	NA	2.NA41	NA	3.NA08	NA	56NA84	NA	11NA06	NA	22NA22
Chromium	NA	1.NA23	.0NA5	2.NA62	NA	2.NA67	NA	42NA47	NA	85NA62	NA	16NA91
Cobalt	NA	.7NA16	NA	NA	.NA4	1.NA62	NA	10NA75	NA	21NA02	NA	40NA49
Copper	NA	.1NA29	NA	NA	NA	.5NA38	NA	8.NA04	NA	17NA82	NA	34NA27
Iron	NA	.0NA19	NA	.4NA56	NA	.8NA43	NA	19NA96	NA	40NA45	NA	80NA77
Lead	NA	.0NA05	NA	NA	NA	.2NA63	NA	4.NA98	NA	8.NA64	NA	17NA24
Magnesium	NA	.0NA53	NA	NA	NA	.2NA51	NA	4.NA98	NA	8.NA25	NA	17NA67
Manganese	NA	.0NA28	.0NA5	7.NA59	NA	13NA84	NA	33NA89	NA	67NA.7	NA	13NA.9
Nickel	NA	.7NA79	NA	NA	NA	1.NA48	NA	22NA72	NA	44NA47	NA	88NA95
Potassium	NA	-1.NA255	NA	2.NA72	NA	6.NA37	NA	22NA57	NA	45NA96	NA	89NA41
Selenium	NA	.1NA48	NA	NA	.NA8	.1NA11	NA	1.NA89	NA	1.NA06	NA	3.NA47
Silver	NA	.0NA67	NA	NA	.NA8	.1NA79	NA	5.NA29	NA	12NA35	NA	24NA49
Sodium	NA	-1.NA193	NA	25NA38	NA	50NA54	NA	1NA89	NA	25NA.1	NA	50NA.6
Vanadium	NA	1.NA96	NA	1.NA54	NA	1.NA81	NA	20NA22	NA	40NA67	NA	80NA12
Zinc	NA	.4NA52	NA	2.NA93	NA	4.NA95	NA	84NA18	NA	17NA49	NA	33NA78

INT = Instrument intensity
R = Coefficient of correlation
Q = Data Qualifier
*** = Out of Compliance; R < 0.995**

KEMRON FORMS - Modified 03/03/2006
Version 1.5 PDF File ID: 496196
Report generated 06/14/2006 13:47

KEMRON Environmental Services

INITIAL CALIBRATION SUMMARY

Analyte	R	Q
Aluminum	0.999936	
Arsenic	0.999810	
Barium	0.999932	
Beryllium	0.999944	
Cadmium	0.999769	
Calcium	0.999856	
Chromium	0.999981	
Cobalt	0.999934	
Copper	0.999940	
Iron	0.999953	
Lead	0.999984	
Magnesium	0.999893	
Manganese	0.999968	
Nickel	0.999992	
Potassium	0.999947	
Selenium	0.999899	
Silver	0.999548	
Sodium	0.999943	
Vanadium	0.999949	
Zinc	0.999711	

INT = Instrument intensity
R = Coefficient of correlation
Q = Data Qualifier
*** = Out of Compliance; R < 0.995**

KEMRON Environmental Services

INITIAL CALIBRATION BLANK (ICB)

Login Number:L0606267 Run Date:06/14/2006 Sample ID:WG215283-08
Instrument ID:IRIS-ICP Run Time:10:36 Method:6010B
File ID:IR.061406.103600 Analyst:SLP Units:mg/L
Workgroup (AAB#):WG215212 Cal ID:IRIS-I - 14-JUN-06

Analytes	MDL	RDL	Concentration	Dilution	Qualifier
Aluminum	0.200	0.400	.00679	1	U
Silver	0.00500	0.0100	.0023	1	U
Arsenic	0.0100	0.0200	-.00048	1	U
Barium	0.00200	0.0100	-.00022	1	U
Beryllium	0.000240	0.0100	.00002	1	U
Calcium	0.100	0.200	-.00048	1	U
Cadmium	0.00100	0.00200	.00004	1	U
Cobalt	0.00240	0.0200	.00036	1	U
Chromium	0.00240	0.0200	-.00018	1	U
Copper	0.0100	0.0200	.00031	1	U
Iron	0.0200	0.0400	-.00087	1	U
Potassium	0.500	1.00	-.0378	1	U
Magnesium	0.240	0.500	.105	1	U
Manganese	0.00200	0.0100	-.00001	1	U
Sodium	0.100	0.500	.00575	1	U
Nickel	0.0100	0.0400	.00008	1	U
Lead	0.0100	0.100	-.00194	1	U
Selenium	0.0100	0.0200	.00452	1	U
Vanadium	0.00500	0.0100	-.00074	1	U
Zinc	0.0100	0.0200	-.00006	1	U

U = Result is less than MDL
F = Result is between MDL and RL

KEMRON FORMS - Modified 03/06/2006
Version 1.5 PDF File ID: 496198
Report generated 06/14/2006 13:47

KEMRON Environmental Services

CONTINUING CALIBRATION BLANK (CCB)

Login Number:L0606267 Run Date:06/14/2006 Sample ID:WG215283-12
Instrument ID:IRIS-ICP Run Time:11:00 Method:6010B
File ID:IR.061406.110000 Analyst:SLP Units:mg/L
Workgroup (AAB#):WG215212 Cal ID:IRIS-I - 14-JUN-06

Analytes	MDL	RDL	Concentration	Dilution	Qualifier
Aluminum	0.200	0.400	0.0291	1	U
Silver	0.00500	0.0100	-0.00325	1	U
Arsenic	0.0100	0.0200	-0.000960	1	U
Barium	0.00200	0.0100	-0.000320	1	U
Beryllium	0.000240	0.0100	0.0000100	1	U
Calcium	0.100	0.200	-0.0184	1	U
Cadmium	0.00100	0.00200	-0.0000900	1	U
Cobalt	0.00240	0.0200	0.0000200	1	U
Chromium	0.00240	0.0200	-0.000280	1	U
Copper	0.0100	0.0200	-0.000590	1	U
Iron	0.0200	0.0400	0.00110	1	U
Potassium	0.500	1.00	-0.0567	1	U
Magnesium	0.240	0.500	0.0329	1	U
Manganese	0.00200	0.0100	-0.0000300	1	U
Sodium	0.100	0.500	0.0177	1	U
Nickel	0.0100	0.0400	0.0000100	1	U
Lead	0.0100	0.100	-0.000290	1	U
Selenium	0.0100	0.0200	-0.00106	1	U
Vanadium	0.00500	0.0100	0.00179	1	U
Zinc	0.0100	0.0200	-0.0000300	1	U

U = Result is less than MDL
F = Result is between MDL and RL

KEMRON FORMS - Modified 04/19/2006
Version 1.5 PDF File ID: 496201
Report generated 06/14/2006 13:47

KEMRON Environmental Services

CONTINUING CALIBRATION BLANK (CCB)

Login Number:L0606267 Run Date:06/14/2006 Sample ID:WG215283-14
Instrument ID:IRIS-ICP Run Time:12:12 Method:6010B
File ID:IR.061406.121200 Analyst:SLP Units:mg/L
Workgroup (AAB#):WG215212 Cal ID:IRIS-I - 14-JUN-06

Analytes	MDL	RDL	Concentration	Dilution	Qualifier
Aluminum	0.200	0.400	0.00558	1	U
Silver	0.00500	0.0100	0.0000900	1	U
Arsenic	0.0100	0.0200	-0.00231	1	U
Barium	0.00200	0.0100	-0.000320	1	U
Beryllium	0.000240	0.0100	0.0000300	1	U
Calcium	0.100	0.200	-0.00260	1	U
Cadmium	0.00100	0.00200	0.000540	1	U
Cobalt	0.00240	0.0200	0.000360	1	U
Chromium	0.00240	0.0200	-0.0000800	1	U
Copper	0.0100	0.0200	0.000910	1	U
Iron	0.0200	0.0400	-0.00258	1	U
Potassium	0.500	1.00	-0.0308	1	U
Magnesium	0.240	0.500	0.0443	1	U
Manganese	0.00200	0.0100	-0.0000300	1	U
Sodium	0.100	0.500	0.0129	1	U
Nickel	0.0100	0.0400	0.0000900	1	U
Lead	0.0100	0.100	-0.00139	1	U
Selenium	0.0100	0.0200	0.00383	1	U
Vanadium	0.00500	0.0100	0.000110	1	U
Zinc	0.0100	0.0200	-0.000320	1	U

U = Result is less than MDL
F = Result is between MDL and RL

KEMRON Environmental Services

CONTINUING CALIBRATION BLANK (CCB)

Login Number:L0606267 Run Date:06/14/2006 Sample ID:WG215283-16
Instrument ID:IRIS-ICP Run Time:13:24 Method:6010B
File ID:IR.061406.132400 Analyst:SLP Units:mg/L
Workgroup (AAB#):WG215212 Cal ID:IRIS-I - 14-JUN-06

Analytes	MDL	RDL	Concentration	Dilution	Qualifier
Aluminum	0.200	0.400	-0.0118	1	U
Silver	0.00500	0.0100	-0.00314	1	U
Arsenic	0.0100	0.0200	-0.000610	1	U
Barium	0.00200	0.0100	-0.000250	1	U
Beryllium	0.000240	0.0100	0.0000100	1	U
Calcium	0.100	0.200	-0.0210	1	U
Cadmium	0.00100	0.00200	-0.000350	1	U
Cobalt	0.00240	0.0200	0.000460	1	U
Chromium	0.00240	0.0200	-0.000220	1	U
Copper	0.0100	0.0200	-0.000380	1	U
Iron	0.0200	0.0400	-0.00113	1	U
Potassium	0.500	1.00	0.00110	1	U
Magnesium	0.240	0.500	0.0756	1	U
Manganese	0.00200	0.0100	0.0000200	1	U
Sodium	0.100	0.500	0.0102	1	U
Nickel	0.0100	0.0400	0.000100	1	U
Lead	0.0100	0.100	0.000570	1	U
Selenium	0.0100	0.0200	0.00735	1	U
Vanadium	0.00500	0.0100	0.00104	1	U
Zinc	0.0100	0.0200	-0.000290	1	U

U = Result is less than MDL
F = Result is between MDL and RL

KEMRON FORMS - Modified 04/19/2006
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Report generated 06/14/2006 13:47

KEMRON Environmental Services

INITIAL CALIBRATION VERIFICATION (ICV)

Login Number:L0606267 Run Date:06/14/2006 Sample ID:WG215283-07
Instrument ID:IRIS-ICP Run Time:10:31 Method:6010B
File ID:IR.061406.103100 Analyst:SLP Units:mg/L
Workgroup (AAB#):WG215212 Cal ID:IRIS-I - 14-JUN-06

Analyte		Expected	Found	%REC	LIMITS	Q
Aluminum		10	9.90	99.0	90 - 110	
Silver		.4	0.401	100	90 - 110	
Arsenic		.4	0.406	102	90 - 110	
Barium		1	0.980	98.0	90 - 110	
Beryllium		.05	0.0499	99.9	90 - 110	
Calcium		10	9.80	98.0	90 - 110	
Cadmium		.05	0.0505	101	90 - 110	
Cobalt		.2	0.201	101	90 - 110	
Chromium		.5	0.494	98.9	90 - 110	
Copper		.5	0.494	98.8	90 - 110	
Iron		4	3.93	98.1	90 - 110	
Potassium		50	50.1	100	90 - 110	
Magnesium		10	10.1	101	90 - 110	
Manganese		.5	0.500	99.9	90 - 110	
Sodium		50	50.8	102	90 - 110	
Nickel		.5	0.485	96.9	90 - 110	
Lead		.5	0.486	97.1	90 - 110	
Selenium		.4	0.397	99.3	90 - 110	
Vanadium		1	0.996	99.6	90 - 110	
Zinc		1	0.995	99.5	90 - 110	

* Exceeds LIMITS Limit

KEMRON FORMS - Modified 03/03/2006
Version 1.3 PDF File ID: 496197
Report generated 06/14/2006 13:47

KEMRON Environmental Services

CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L0606267 Run Date: 06/14/2006 Sample ID: WG215283-11
Instrument ID: IRIS-ICP Run Time: 10:54 Method: 6010B
File ID: IR.061406.105400 Analyst: SLP
Workgroup (AAB#): WG215212 Cal ID: IRIS-I - 14-JUN-06

Analyte		Expected	Found	%REC	LIMITS	UNITS	Q
Aluminum		10	10.0	100	90 - 110	mg/L	
Silver		.4	0.403	101	90 - 110	mg/L	
Arsenic		.4	0.405	101	90 - 110	mg/L	
Barium		1	0.985	98.5	90 - 110	mg/L	
Beryllium		.05	0.0502	100	90 - 110	mg/L	
Calcium		10	9.84	98.4	90 - 110	mg/L	
Cadmium		.05	0.0505	101	90 - 110	mg/L	
Cobalt		.2	0.203	101	90 - 110	mg/L	
Chromium		.5	0.496	99.2	90 - 110	mg/L	
Copper		.5	0.496	99.2	90 - 110	mg/L	
Iron		4	3.97	99.3	90 - 110	mg/L	
Potassium		50	50.2	100	90 - 110	mg/L	
Magnesium		10	9.97	99.7	90 - 110	mg/L	
Manganese		.5	0.502	100	90 - 110	mg/L	
Sodium		50	50.9	102	90 - 110	mg/L	
Nickel		.5	0.489	97.7	90 - 110	mg/L	
Lead		.5	0.493	98.6	90 - 110	mg/L	
Selenium		.4	0.401	100	90 - 110	mg/L	
Vanadium		1	1.01	101	90 - 110	mg/L	
Zinc		1	1.00	100	90 - 110	mg/L	

* Exceeds LIMITS Criteria

KEMRON FORMS - Modified 04/19/2006
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KEMRON Environmental Services

CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L0606267 Run Date: 06/14/2006 Sample ID: WG215283-13
Instrument ID: IRIS-ICP Run Time: 12:06 Method: 6010B
File ID: IR.061406.120600 Analyst: SLP
Workgroup (AAB#): WG215212 Cal ID: IRIS-I - 14-JUN-06

Analyte		Expected	Found	%REC	LIMITS	UNITS	Q
Aluminum		10	10.0	100	90 - 110	mg/L	
Silver		.4	0.401	100	90 - 110	mg/L	
Arsenic		.4	0.407	102	90 - 110	mg/L	
Barium		1	0.994	99.4	90 - 110	mg/L	
Beryllium		.05	0.0501	100	90 - 110	mg/L	
Calcium		10	9.88	98.8	90 - 110	mg/L	
Cadmium		.05	0.0511	102	90 - 110	mg/L	
Cobalt		.2	0.203	101	90 - 110	mg/L	
Chromium		.5	0.494	98.9	90 - 110	mg/L	
Copper		.5	0.500	99.9	90 - 110	mg/L	
Iron		4	3.96	99.1	90 - 110	mg/L	
Potassium		50	50.7	101	90 - 110	mg/L	
Magnesium		10	9.91	99.1	90 - 110	mg/L	
Manganese		.5	0.501	100	90 - 110	mg/L	
Sodium		50	51.5	103	90 - 110	mg/L	
Nickel		.5	0.484	96.9	90 - 110	mg/L	
Lead		.5	0.490	98.0	90 - 110	mg/L	
Selenium		.4	0.400	100	90 - 110	mg/L	
Vanadium		1	1.02	102	90 - 110	mg/L	
Zinc		1	0.991	99.1	90 - 110	mg/L	

* Exceeds LIMITS Criteria

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KEMRON Environmental Services

CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L0606267 Run Date: 06/14/2006 Sample ID: WG215283-15
Instrument ID: IRIS-ICP Run Time: 13:18 Method: 6010B
File ID: IR.061406.131800 Analyst: SLP
Workgroup (AAB#): WG215212 Cal ID: IRIS-I - 14-JUN-06

Analyte		Expected	Found	%REC	LIMITS	UNITS	Q
Aluminum		10	10.2	102	90 - 110	mg/L	
Silver		.4	0.402	101	90 - 110	mg/L	
Arsenic		.4	0.410	102	90 - 110	mg/L	
Barium		1	0.993	99.3	90 - 110	mg/L	
Beryllium		.05	0.0500	100	90 - 110	mg/L	
Calcium		10	9.91	99.1	90 - 110	mg/L	
Cadmium		.05	0.0512	102	90 - 110	mg/L	
Cobalt		.2	0.205	102	90 - 110	mg/L	
Chromium		.5	0.496	99.1	90 - 110	mg/L	
Copper		.5	0.500	100	90 - 110	mg/L	
Iron		4	4.00	100	90 - 110	mg/L	
Potassium		50	50.8	102	90 - 110	mg/L	
Magnesium		10	9.84	98.4	90 - 110	mg/L	
Manganese		.5	0.504	101	90 - 110	mg/L	
Sodium		50	51.7	103	90 - 110	mg/L	
Nickel		.5	0.488	97.6	90 - 110	mg/L	
Lead		.5	0.497	99.5	90 - 110	mg/L	
Selenium		.4	0.415	104	90 - 110	mg/L	
Vanadium		1	1.02	102	90 - 110	mg/L	
Zinc		1	0.994	99.4	90 - 110	mg/L	

* Exceeds LIMITS Criteria

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KEMRON ENVIRONMENTAL SERVICES
INTERFERENCE CHECK SAMPLES

Login number: L0606267 **Workgroup (AAB#):** WG215212
Instrument ID: IRIS-ICP **Method:** 6010B
Sol. A : WG215283-09 **File ID:** IR.061406.104200 **Units:** mg/L
Sol. AB : WG215283-10 **File ID:** IR.061406.104800

	Sol. A			Sol. AB			
ANALYTE	True	Found	%Recovery	True	Found	%Recovery	Q
Aluminum	250	257	103	250	249	99.6	
Arsenic	NS	-0.00345	NS	0.250	0.242	96.8	
Barium	NS	-0.000280	NS	0.250	0.244	97.6	
Beryllium	NS	-0.000110	NS	0.250	0.251	100	
Cadmium	NS	0.000480	NS	0.500	0.486	97.2	
Calcium	250	245	98.0	250	239	95.6	
Chromium	NS	0.000870	NS	0.250	0.231	92.4	
Cobalt	NS	0.000310	NS	0.250	0.231	92.4	
Copper	NS	0.00193	NS	0.250	0.248	99.2	
Iron	100	92.4	92.4	100	95.2	95.2	
Lead	NS	0.0101	NS	0.500	0.467	93.4	
Magnesium	250	243	97.2	250	236	94.4	
Manganese	NS	0.00153	NS	0.250	0.222	88.8	
Nickel	NS	0.00448	NS	0.500	0.454	90.8	
Potassium	NS	0.00963	NS	5.00	5.14	103	
Selenium	NS	-0.00306	NS	0.250	0.240	96.0	
Silver	NS	0.000230	NS	0.500	0.515	103	
Sodium	NS	0.0311	NS	5.00	5.19	104	
Vanadium	NS	0.00117	NS	0.250	0.246	98.4	
Zinc	NS	-0.000210	NS	0.500	0.486	97.2	

NS = Not spiked
*** = Recovery of spiked element is outside acceptance limit of 80% - 120% of true value.**
 # = Result for unspiked element is outside the acceptance limits of (+/-) the project reporting limit (RL).

KEMRON Environmental Services

INTERELEMENT CORRECTION FACTORS (ANNUALLY)

Login Number: L0606267 **Date:** 06/08/2006
Insturment ID: IRIS-ICP **Method:** 6010B

Analyte	Wave Length	AL	AS	B	BA	BE
ALUMINUM	308.20	0	0	0	0	0
ANTIMONY	206.80	-0.00000400	-0.00000300	0	0	0
ARSENIC	189.00	0.0000100	0	0	0	0
BARIUM	455.40	0	0	0	0	0
BERYLLIUM	313.00	0	0	0	0	0
BORON	249.70	0	0	0	0	0
CADMIUM	228.80	0.00000100	0.0160	0	-0.00181	0
CALCIUM	373.70	0	0	0	0	0
CHROMIUM	267.70	0	0	0	0	0
COBALT	228.60	0	0	0	0	0
COPPER	324.70	0	0	0	0	0
IRON	271.40	0	0	0	0	0
LEAD	220.30	0.000500	0	0	0	0
LITHIUM	670.80	0	0	0	0	0
MAGNESIUM	277.90	0	-0.0432	0	0	0
MANGANESE	257.60	0	0	0	0	0
MOLYBDENUM	202.03	0	0	0	0	0
NICKEL	231.60	0	0	0	0	0.00830
POTASSIUM	766.40	0	0	0	-0.0660	0
SELENIUM	196.00	0.000156	0	0	0	0
SILICON	251.60	0	0	-0.0157	0	0
SILVER	328.00	0.00000100	0	0	0	0
SODIUM	589.50	0	0	0	0	0
STRONTIUM	215.20	0	0	0	0	0
THALLIUM	190.80	-0.0000300	0	0	0	0
TIN	189.90	0	0	0	0	0
TITANIUM	334.90	0	0	0	0	0
VANADIUM	310.20	-0.0000260	0	0	0	0.00900
ZINC	213.80	0	0	0	0	0

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KEMRON Environmental Services

INTERELEMENT CORRECTION FACTORS (ANNUALLY)

Login Number: L0606267 **Date:** 06/08/2006
Insturment ID: IRIS-ICP **Method:** 6010B

Analyte	Wave Length	CA	CO	CR	CU	FE
ALUMINUM	308.20	0	-0.00524	0	0	0
ANTIMONY	206.80	0	0	0.0230	0	0.00000500
ARSENIC	189.00	0	0	0.000280	0	-0.000110
BARIUM	455.40	0	0	0	0	0
BERYLLIUM	313.00	0	0	0	0	0
BORON	249.70	0	0.00160	0	0	0
CADMIUM	228.80	0.00000200	0	0	0	0.00000300
CALCIUM	373.70	0	0	0	0	0.00400
CHROMIUM	267.70	0	0	0	0	-0.0000100
COBALT	228.60	0	0	0.0000450	0	0.0000150
COPPER	324.70	0	0	-0.000150	0	0.0000390
IRON	271.40	0.00160	0.0969	0	0	0
LEAD	220.30	0	-0.000300	-0.000220	0	0.0000170
LITHIUM	670.80	-0.0000500	0	0	0	0
MAGNESIUM	277.90	0	0	-0.00436	0	0
MANGANESE	257.60	0	0	0	0	-0.0000180
MOLYBDENUM	202.03	0	0	0	0	0
NICKEL	231.60	0	0.000400	0	0	0.00000700
POTASSIUM	766.40	0	0	0	0	0
SELENIUM	196.00	0	0.00419	0	0	-0.00100
SILICON	251.60	0	0	0	0	0
SILVER	328.00	0	0	-0.0000420	0	0.00000100
SODIUM	589.50	0	0	0	0	0
STRONTIUM	215.20	0	0.0000600	0	0	-0.000392
THALLIUM	190.80	0	0.00649	0.000190	0	-0.0000800
TIN	189.90	0	0	0	0	0
TITANIUM	334.90	-0.0000300	0	0.000300	0	0
VANADIUM	310.20	0	0	-0.000646	0	-0.0000100
ZINC	213.80	0	0	0	0.000250	0.0000600

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KEMRON Environmental Services

INTERELEMENT CORRECTION FACTORS (ANNUALLY)

Login Number: L0606267 **Date:** 06/08/2006
Insturment ID: IRIS-ICP **Method:** 6010B

Analyte	Wave Length	LI	MG	MN	MO	NI
ALUMINUM	308.20	0	0	0.00180	0.0300	0
ANTIMONY	206.80	0	0	0	-0.00800	-0.000100
ARSENIC	189.00	0	0	0	0.00108	0
BARIUM	455.40	0	0	0	0	0
BERYLLIUM	313.00	0	0	0	-0.0000500	0
BORON	249.70	0	0	0	0	0
CADMIUM	228.80	0	0	0	0	-0.0000250
CALCIUM	373.70	0	0	0.00160	0	0.00195
CHROMIUM	267.70	0	0	0.000510	0	0
COBALT	228.60	0	0	0	0	0
COPPER	324.70	0	0	0	0	0
IRON	271.40	0	0	-0.000500	-0.00740	0
LEAD	220.30	0	0	0	-0.00300	0.000489
LITHIUM	670.80	0	0	0	0	0
MAGNESIUM	277.90	0	0	0.00132	-0.120	0
MANGANESE	257.60	0	0	0	0	0
MOLYBDENUM	202.03	0	0	0	0	0
NICKEL	231.60	0	0	0	0	0
POTASSIUM	766.40	0	0	0	0	0
SELENIUM	196.00	0	0	0.000260	-0.000660	0
SILICON	251.60	0	0	0	0.00800	0
SILVER	328.00	0	0	0.0000800	-0.000290	0
SODIUM	589.50	0	0	0	0	0
STRONTIUM	215.20	0	0	0	-0.0000800	0
THALLIUM	190.80	0	0	0.00130	-0.00710	0
TIN	189.90	0	0	0	0	0
TITANIUM	334.90	-0.00250	0	0	0	0
VANADIUM	310.20	0	-0.00000400	0	0	0
ZINC	213.80	0	0.0000180	0.000279	0	0.00635

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KEMRON Environmental Services

INTERELEMENT CORRECTION FACTORS (ANNUALLY)

Login Number: L0606267 **Date:** 06/08/2006
Insturment ID: IRIS-ICP **Method:** 6010B

Analyte	Wave Length	SB	SN	TI	V	ZN
ALUMINUM	308.20	0	0	-0.00200	0.00930	0
ANTIMONY	206.80	0	0	0.000620	0.0000700	0
ARSENIC	189.00	-0.000420	0	0	0	0
BARIUM	455.40	0	0	0	0	0
BERYLLIUM	313.00	0	0	0	0.00120	0
BORON	249.70	0	0	0	0	0
CADMIUM	228.80	0	0	0	0.0000360	0
CALCIUM	373.70	0	0	0	0	0
CHROMIUM	267.70	0	0	0	0.000100	0
COBALT	228.60	0	-0.00339	0.00180	0	-0.00100
COPPER	324.70	0	0	-0.000950	-0.00383	0
IRON	271.40	0	0	0	-0.0430	0
LEAD	220.30	0	0	0	0	0
LITHIUM	670.80	0	0	0	0	0
MAGNESIUM	277.90	0	0	0	0.00570	0
MANGANESE	257.60	0	0	0	-0.0000750	0
MOLYBDENUM	202.03	0	0	0	-0.000247	0.00200
NICKEL	231.60	0	0	0	0	0
POTASSIUM	766.40	0	0	0	0	0
SELENIUM	196.00	0	0	0	0	0.0140
SILICON	251.60	0	0	0.00665	0	0
SILVER	328.00	0	0	0.00268	-0.0143	0
SODIUM	589.50	0	0	0	0	0
STRONTIUM	215.20	0	0	0	0	0.000768
THALLIUM	190.80	-0.000146	0	0.00180	0.00321	0
TIN	189.90	0	0	0	0	0
TITANIUM	334.90	0	0		0	0
VANADIUM	310.20	0	0	0	0	0
ZINC	213.80	0	0	0	0	0

KEMRON FORMS - Modified 02/14/2006
Version 1.5 PDF File ID: 496195
Report generated 06/14/2006 13:47

KEMRON Environmental Services

LINEAR RANGE (QUARTERLY)

Login Number: L0606267 **Date:** 06/06/2006

Insturment ID: IRIS-ICP **Method:** 6010B

Analyte	Integration Time (Sec.)	Concentration (mg/L)
Aluminum	10.00	800.0
Antimony	55.00	50.0
Arsenic	55.00	100.0
Barium	10.00	20.0
Beryllium	10.00	4.0
Boron	55.00	100.0
Cadmium	55.00	30.0
Calcium	10.00	500.0
Chromium	55.00	20.0
Cobalt	55.00	100.0
Copper	10.00	50.0
Iron	55.00	900.0
Lead	55.00	200.0
Lithium	10.00	10.0
Magnesium	55.00	1000.0
Manganese	55.00	20.0
Molybdenum	55.00	30.0
Nickel	55.00	100.0
Potassium	10.00	200.0
Selenium	55.00	20.0
Silicon	55.00	50.0
Silver	10.00	10.0
Sodium	10.00	150.0
Strontium	55.00	30.0
Thallium	55.00	20.0
Tin	55.00	30.0
Titanium	10.00	25.0
Vanadium	10.00	100.0
Zinc	55.00	20.0

Comments:

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1.2.2 Metals ICP-MS Data

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KEMRON ENVIRONMENTAL SERVICES
METALS

KEMRON Login No: L0606267

METHOD

Preparation: SW-846 3051

Analysis: SW-846 6020

HOLDING TIMES

Sample Preparation: All holding times were met.

Sample Analysis: All holding times were met.

PREPARATION

Sample preparation proceeded normally.

CALIBRATION

Initial Calibrations: All acceptance criteria were met.

Alternate Source Standards: All acceptance criteria were met.

Continuing Calibration: All acceptance criteria were met.

BATCH QA/QC

Method Blank: All acceptance criteria were met.

Laboratory Control Sample: All acceptance criteria were met.

MS/MSD: WG215208(6020) - Sample 03 was chosen by the client for MS/MSD analysis. Samples 11(MS) and 12(MSD) yielded % recoveries out of limits for antimony.

Serial Dilution/Post Digestion Spike: WG215208(6020) - All acceptance criteria were met.

SAMPLES

All acceptance criteria were met.

I certify that this data package is in compliance with the terms and conditions agreed to by the client and KEMRON Environmental Services, both technically and for completeness, except for the conditions noted above. Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or designated person, as verified by the following signature.

Analyst: JYH

Approved: 16-JUN-06
Maren Beery

LABORATORY REPORT

L0606267

06/19/06 11:25

Submitted By

KEMRON Environmental Services
156 Starlite Drive
Marietta , OH 45750
(740) 373 - 4071

For

Account Name: CH2MHILL, Inc
7600 Tidwell Road
Suite 400
San Antonio, TX 77040
Attention: John Ynfante

Account Number: 2736
Work ID: STATE MARINE SUPERFUND SITE

P.O. Number: 915193

Sample Analysis Summary

Client ID	Lab ID	Method	Dilution	Date Received
A-SD-01	L0606267-01	6020	1	10-JUN-06
B-SD-02	L0606267-02	6020	1	10-JUN-06
C-SD-03	L0606267-03	6020	1	10-JUN-06
D-SD-04	L0606267-04	6020	1	10-JUN-06
E-SD-05	L0606267-05	6020	1	10-JUN-06
F-SD-06	L0606267-06	6020	1	10-JUN-06
G-SD-07	L0606267-07	6020	1	10-JUN-06
H-SD-08	L0606267-08	6020	1	10-JUN-06
I-SD-09	L0606267-09	6020	1	10-JUN-06
FD-01	L0606267-10	6020	1	10-JUN-06
C-SD-03-MS	L0606267-11	6020	1	10-JUN-06
C-SD-03-MSD	L0606267-12	6020	1	10-JUN-06

Report Number: **L0606267**
Report Date : **June 19, 2006**

Sample Number: **L0606267-01**
Client ID: **A-SD-01**
Matrix: **Soil**
Workgroup Number: **WG215208**
Collect Date: **06/08/2006 11:00**
Sample Tag: **01**

PrePrep Method: **NONE**
Prep Method: **3051**
Analytical Method: **6020**
Analyst: **JYH**
Dilution: **1**
Units: **mg/kg**

Instrument: **ELAN-ICP**
Prep Date: **06/13/2006 08:40**
Cal Date: **06/13/2006 10:17**
Run Date: **06/13/2006 15:31**
File ID: **EL.061306.153153**
Percent Solid: **49.9**

Analyte	CAS. Number	Result	Qual	PQL	SQL
Antimony, Total	7440-36-0		U	0.189	0.0947
Thallium, Total	7440-28-0	0.280		0.0379	0.0189

U Not detected at or above the reporting limit

Report Number: **L0606267**
Report Date : **June 19, 2006**

Sample Number: **L0606267-02**
Client ID: **B-SD-02**
Matrix: **Soil**
Workgroup Number: **WG215208**
Collect Date: **06/08/2006 12:05**
Sample Tag: **01**

PrePrep Method: **NONE**
Prep Method: **3051**
Analytical Method: **6020**
Analyst: **JYH**
Dilution: **1**
Units: **mg/kg**

Instrument: **ELAN-ICP**
Prep Date: **06/13/2006 08:40**
Cal Date: **06/13/2006 10:17**
Run Date: **06/13/2006 16:02**
File ID: **EL.061306.160207**
Percent Solid: **59.7**

Analyte	CAS. Number	Result	Qual	PQL	SQL
Antimony, Total	7440-36-0	0.121	J	0.153	0.0765
Thallium, Total	7440-28-0	0.0752		0.0306	0.0153

J The analyte was positively identified, but the quantitation was below the RL

Report Number: **L0606267**
Report Date : **June 19, 2006**

Sample Number: **L0606267-03**
Client ID: **C-SD-03**
Matrix: **Soil**
Workgroup Number: **WG215208**
Collect Date: **06/08/2006 15:30**
Sample Tag: **01**

PrePrep Method: **NONE**
Prep Method: **3051**
Analytical Method: **6020**
Analyst: **JYH**
Dilution: **1**
Units: **mg/kg**

Instrument: **ELAN-ICP**
Prep Date: **06/13/2006 08:40**
Cal Date: **06/13/2006 10:17**
Run Date: **06/13/2006 15:14**
File ID: **EL.061306.151405**
Percent Solid: **48.8**

Analyte	CAS. Number	Result	Qual	PQL	SQL
Antimony, Total	7440-36-0	0.237		0.205	0.102
Thallium, Total	7440-28-0	0.0966		0.0409	0.0205

Report Number: **L0606267**
Report Date : **June 19, 2006**

Sample Number: **L0606267-04**
Client ID: **D-SD-04**
Matrix: **Soil**
Workgroup Number: **WG215208**
Collect Date: **06/08/2006 16:40**
Sample Tag: **01**

PrePrep Method: **NONE**
Prep Method: **3051**
Analytical Method: **6020**
Analyst: **JYH**
Dilution: **1**
Units: **mg/kg**

Instrument: **ELAN-ICP**
Prep Date: **06/13/2006 08:40**
Cal Date: **06/13/2006 10:17**
Run Date: **06/13/2006 16:08**
File ID: **EL.061306.160800**
Percent Solid: **62.1**

Analyte	CAS. Number	Result	Qual	PQL	SQL
Antimony, Total	7440-36-0		U	0.160	0.0801
Thallium, Total	7440-28-0	0.0826		0.0320	0.0160

U Not detected at or above the reporting limit

Report Number: **L0606267**
Report Date : **June 19, 2006**

Sample Number: **L0606267-05**
Client ID: **E-SD-05**
Matrix: **Soil**
Workgroup Number: **WG215208**
Collect Date: **06/08/2006 14:20**
Sample Tag: **01**

PrePrep Method: **NONE**
Prep Method: **3051**
Analytical Method: **6020**
Analyst: **JYH**
Dilution: **1**
Units: **mg/kg**

Instrument: **ELAN-ICP**
Prep Date: **06/13/2006 08:40**
Cal Date: **06/13/2006 10:17**
Run Date: **06/13/2006 16:13**
File ID: **EL.061306.161354**
Percent Solid: **74.8**

Analyte	CAS. Number	Result	Qual	PQL	SQL
Antimony, Total	7440-36-0		U	0.127	0.0634
Thallium, Total	7440-28-0	0.0347		0.0254	0.0127

U Not detected at or above the reporting limit

Report Number: **L0606267**
Report Date : **June 19, 2006**

Sample Number:	L0606267-06	PrePrep Method:	NONE	Instrument:	ELAN-ICP
Client ID:	F-SD-06	Prep Method:	3051	Prep Date:	06/13/2006 08:40
Matrix:	Soil	Analytical Method:	6020	Cal Date:	06/13/2006 10:17
Workgroup Number:	WG215208	Analyst:	JYH	Run Date:	06/13/2006 16:19
Collect Date:	06/08/2006 17:25	Dilution:	1	File ID:	EL.061306.161949
Sample Tag:	01	Units:	mg/kg	Percent Solid:	72.4

Analyte	CAS. Number	Result	Qual	PQL	SQL
Antimony, Total	7440-36-0		U	0.131	0.0653
Thallium, Total	7440-28-0	0.0436		0.0261	0.0131

U Not detected at or above the reporting limit

Report Number: **L0606267**
Report Date : **June 19, 2006**

Sample Number: **L0606267-07**
Client ID: **G-SD-07**
Matrix: **Soil**
Workgroup Number: **WG215208**
Collect Date: **06/09/2006 10:50**
Sample Tag: **01**

PrePrep Method: **NONE**
Prep Method: **3051**
Analytical Method: **6020**
Analyst: **JYH**
Dilution: **1**
Units: **mg/kg**

Instrument: **ELAN-ICP**
Prep Date: **06/13/2006 08:40**
Cal Date: **06/13/2006 10:17**
Run Date: **06/13/2006 16:25**
File ID: **EL.061306.162544**
Percent Solid: **51.8**

Analyte	CAS. Number	Result	Qual	PQL	SQL
Antimony, Total	7440-36-0		U	0.193	0.0963
Thallium, Total	7440-28-0	0.0837		0.0385	0.0193

U Not detected at or above the reporting limit

Report Number: **L0606267**
Report Date : **June 19, 2006**

Sample Number:	L0606267-08	PrePrep Method:	NONE	Instrument:	ELAN-ICP
Client ID:	H-SD-08	Prep Method:	3051	Prep Date:	06/13/2006 08:40
Matrix:	Soil	Analytical Method:	6020	Cal Date:	06/13/2006 10:17
Workgroup Number:	WG215208	Analyst:	JYH	Run Date:	06/13/2006 16:31
Collect Date:	06/09/2006 10:15	Dilution:	1	File ID:	EL.061306.163139
Sample Tag:	01	Units:	mg/kg	Percent Solid:	56.6

Analyte	CAS. Number	Result	Qual	PQL	SQL
Antimony, Total	7440-36-0		U	0.177	0.0883
Thallium, Total	7440-28-0	0.0851		0.0353	0.0177

U Not detected at or above the reporting limit

Report Number: **L0606267**
Report Date : **June 19, 2006**

Sample Number:	L0606267-09	PrePrep Method:	NONE	Instrument:	ELAN-ICP
Client ID:	I-SD-09	Prep Method:	3051	Prep Date:	06/13/2006 08:40
Matrix:	Soil	Analytical Method:	6020	Cal Date:	06/13/2006 10:17
Workgroup Number:	WG215208	Analyst:	JYH	Run Date:	06/13/2006 16:37
Collect Date:	06/09/2006 11:45	Dilution:	1	File ID:	EL.061306.163735
Sample Tag:	01	Units:	mg/kg	Percent Solid:	77.3

Analyte	CAS. Number	Result	Qual	PQL	SQL
Antimony, Total	7440-36-0		U	0.126	0.0629
Thallium, Total	7440-28-0		U	0.0252	0.0126

U Not detected at or above the reporting limit

Report Number: **L0606267**
Report Date : **June 19, 2006**

Sample Number: **L0606267-10**
Client ID: **FD-01**
Matrix: **Soil**
Workgroup Number: **WG215208**
Collect Date: **06/09/2006 10:15**
Sample Tag: **01**

PrePrep Method: **NONE**
Prep Method: **3051**
Analytical Method: **6020**
Analyst: **JYH**
Dilution: **1**
Units: **mg/kg**

Instrument: **ELAN-ICP**
Prep Date: **06/13/2006 08:40**
Cal Date: **06/13/2006 10:17**
Run Date: **06/13/2006 16:43**
File ID: **EL.061306.164331**
Percent Solid: **56.6**

Analyte	CAS. Number	Result	Qual	PQL	SQL
Antimony, Total	7440-36-0		U	0.177	0.0883
Thallium, Total	7440-28-0	0.0806		0.0353	0.0177

U Not detected at or above the reporting limit

Report Number: **L0606267**
Report Date : **June 19, 2006**

Sample Number: **L0606267-11**
Client ID: **C-SD-03-MS**
Matrix: **Soil**
Workgroup Number: **WG215208**
Collect Date: **06/08/2006 15:30**
Sample Tag: **01**

PrePrep Method: **NONE**
Prep Method: **3051**
Analytical Method: **6020**
Analyst: **JYH**
Dilution: **1**
Units: **mg/kg**

Instrument: **ELAN-ICP**
Prep Date: **06/13/2006 08:40**
Cal Date: **06/13/2006 10:17**
Run Date: **06/13/2006 15:20**
File ID: **EL.061306.152001**
Percent Solid: **48.8**

Analyte	CAS. Number	Result	Qual	PQL	SQL
Antimony, Total	7440-36-0	0.291		0.205	0.102
Thallium, Total	7440-28-0	18.8		0.0409	0.0205

Report Number: **L0606267**
Report Date : **June 19, 2006**

Sample Number: **L0606267-12**
Client ID: **C-SD-03-MSD**
Matrix: **Soil**
Workgroup Number: **WG215208**
Collect Date: **06/08/2006 15:30**
Sample Tag: **01**

PrePrep Method: **NONE**
Prep Method: **3051**
Analytical Method: **6020**
Analyst: **JYH**
Dilution: **1**
Units: **mg/kg**

Instrument: **ELAN-ICP**
Prep Date: **06/13/2006 08:40**
Cal Date: **06/13/2006 10:17**
Run Date: **06/13/2006 15:25**
File ID: **EL.061306.152557**
Percent Solid: **48.8**

Analyte	CAS. Number	Result	Qual	PQL	SQL
Antimony, Total	7440-36-0	0.233		0.205	0.102
Thallium, Total	7440-28-0	18.5		0.0409	0.0205

1.2.2.1 QC Summary

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Checklist ID: 7968

KEMRON Environmental Services
Data Checklist

Date: 13-JUN-2006
Analyst: JYH
Analyst: NA
Method: 6020
Instrument: ELAN-ICP
Curve Workgroup: 215198
Analytical Workgroups: 214859,215194,215208

Run Log ID:	10767
Calibration/Linearity	X
ICV/CCV	X
ICB/CCB	X
ICSA/ICSAB	X
CRI	X
Blank/LCS	X
MS/MSD	X
Post Spike/Serial Dilution	X
Upload Results	X
Data Qualifiers	
Generate PDF Instrument Data	X
Sign/Annotate PDF Data	X
Upload Curve Data	X
Workgroup Forms	
Case Narrative	045,003,033,062,267
Client Forms	
Level X	
Level 3	
Level 4	045,003,033,062,267
Check for compliance with method and project specific requirements	X
Check the completeness of reported information	X
Check the information for the report narrative	X
Primary Reviewer	JYH
Secondary Reviewer	SLP
Comments	

Primary Reviewer:

Secondary Reviewer:
15-JUN-2006

Generated: JUN-15-2006 11:28:53

Run Log ID:**10767**

KEMRON Environmental Services

Instrument Run Log

Instrument: ELAN-ICP Dataset: 061306A.REP
Analyst1: JYH Analyst2: N/A
Method: 6020 SOP: ME700 Rev: 3

Calibration Std: STD12844 ICV/CCV Std: STD12969 Post Spike: COA11342
ICSA: STD13105 ICSAB: STD12742

Workgroups: 214859,215194,215208

Comments:

Seq.	File ID	Sample	ID	Prep	Dil	Reference	Date/Time
1	EL.061306.095320	Blank	Blank		1		06/13/06 09:53
2	EL.061306.095922	WG215198-01	Calibration Point		1		06/13/06 09:59
3	EL.061306.100525	WG215198-02	Calibration Point		1		06/13/06 10:05
4	EL.061306.101128	WG215198-03	Calibration Point		1		06/13/06 10:11
5	EL.061306.101733	WG215198-04	Calibration Point		1		06/13/06 10:17
6	EL.061306.102338	WG215198-05	Initial Calibration Verification		1		06/13/06 10:23
7	EL.061306.102952	WG215198-06	Initial Calib Blank		1		06/13/06 10:29
8	EL.061306.103608	WG215198-07	CRQL Check Solid		1		06/13/06 10:36
9	EL.061306.104226	WG215198-08	CRQL Check Water		1		06/13/06 10:42
10	EL.061306.104844	WG215198-09	Interference Check		1		06/13/06 10:48
11	EL.061306.105501	WG215198-10	Interference Check		1		06/13/06 10:55
12	EL.061306.110117	WG215198-11	CCV		1		06/13/06 11:01
13	EL.061306.110732	WG215198-12	CCB		1		06/13/06 11:07
14	EL.061306.111345	IDL1	IDL1		1		06/13/06 11:13
15	EL.061306.111939	IDL2	IDL2		1		06/13/06 11:19
16	EL.061306.112533	IDL3	IDL3		1		06/13/06 11:25
17	EL.061306.113128	IDL4	IDL4		1		06/13/06 11:31
18	EL.061306.113723	IDL5	IDL5		1		06/13/06 11:37
19	EL.061306.114318	IDL6	IDL6		1		06/13/06 11:43
20	EL.061306.114913	IDL7	IDL7		1		06/13/06 11:49
21	EL.061306.115509	WG215198-13	CCV		1		06/13/06 11:55
22	EL.061306.120123	WG215198-14	CCB		1		06/13/06 12:01
23	EL.061306.120735	L0606045-02	AV-GW-ON-012-0531106	40/100	1		06/13/06 12:07
24	EL.061306.121330	L0606045-04	AV-GW-ON-112-053106	40/100	1		06/13/06 12:13
25	EL.061306.121924	L0606045-06	AV-GW-ON-108-060106	40/100	1		06/13/06 12:19
26	EL.061306.122519	L0606045-08	AV-GW-ON-118-060106	40/100	1		06/13/06 12:25
27	EL.061306.123115	WG215198-15	CCV		1		06/13/06 12:31
28	EL.061306.123728	WG215198-16	CCB		1		06/13/06 12:37
29	EL.061306.124341	WG214625-02	Method/Prep Blank	40/100	1		06/13/06 12:43
30	EL.061306.124933	WG214625-03	Laboratory Control S	40/100	1		06/13/06 12:49
31	EL.061306.125526	WG214625-01	Reference Sample		1	L0606003-02	06/13/06 12:55
32	EL.061306.130120	WG214625-04	Matrix Spike	40/100	1	L0606003-03	06/13/06 13:01
33	EL.061306.130714	WG214625-05	Matrix Spike Duplica	40/100	1	L0606003-04	06/13/06 13:07
34	EL.061306.131308	L0606003-05	BA0054	40/100	1		06/13/06 13:13
35	EL.061306.131902	WG215194-01	Post Digestion Spike		1	L0606003-05	06/13/06 13:19
36	EL.061306.132457	WG215194-02	Serial Dilution		5	L0606003-05	06/13/06 13:24
37	EL.061306.133054	WG215198-17	CCV		1		06/13/06 13:30

Approved: June 15, 2006

Sheri L. Blaylock

007664

Run Log ID:**10767**

KEMRON Environmental Services

Instrument Run Log

Instrument: ELAN-ICP Dataset: 061306A.REP
Analyst1: JYH Analyst2: N/A
Method: 6020 SOP: ME700 Rev: 3

Calibration Std: STD12844 ICV/CCV Std: STD12969 Post Spike: COA11342
ICSA: STD13105 ICSAB: STD12742

Workgroups: 214859,215194,215208

Comments:

Seq.	File ID	Sample	ID	Prep	Dil	Reference	Date/Time
38	EL.061306.133708	WG215198-18	CCB		1		06/13/06 13:37
39	EL.061306.134321	L0606003-06	BA0055	40/100	1		06/13/06 13:43
40	EL.061306.134917	L0606033-03	BA0045	40/100	1		06/13/06 13:49
41	EL.061306.135512	L0606033-04	BA0046	40/100	1		06/13/06 13:55
42	EL.061306.140149	L0606062-02	2492MW02		1		06/13/06 14:01
43	EL.061306.140929	L0606062-02	2492MW02	40/100	100		06/13/06 14:09
44	EL.061306.141522	L0606062-06	2492MW09	40/100	100		06/13/06 14:15
45	EL.061306.142116	L0606062-08	2492MW10	40/100	100		06/13/06 14:21
46	EL.061306.142710	L0606062-11	DUPE01	40/100	100		06/13/06 14:27
47	EL.061306.143634	L0606033-05	BA0051	40/100	1		06/13/06 14:36
48	EL.061306.144229	L0606033-06	BA0052	40/100	1		06/13/06 14:42
49	EL.061306.144823	WG215198-19	CCV		1		06/13/06 14:48
50	EL.061306.145437	WG215198-20	CCB		1		06/13/06 14:54
51	EL.061306.150214	WG215189-03	Method/Prep Blank	.5/200	1		06/13/06 15:02
52	EL.061306.150809	WG215189-04	Laboratory Control S	.5/200	1		06/13/06 15:08
53	EL.061306.151405	WG215189-01	Reference Sample		1	L0606267-03	06/13/06 15:14
54	EL.061306.152001	WG215189-05	Matrix Spike	.501/200	1	L0606267-11	06/13/06 15:20
55	EL.061306.152557	WG215189-06	Matrix Spike Duplica	.501/200	1	L0606267-12	06/13/06 15:25
56	EL.061306.153153	L0606267-01	A-SD-01	.529/200	1		06/13/06 15:31
57	EL.061306.153750	WG215208-01	Post Digestion Spike		1	L0606267-01	06/13/06 15:37
58	EL.061306.154345	WG215208-02	Serial Dilution		5	L0606267-01	06/13/06 15:43
59	EL.061306.154940	WG215198-21	CCV		1		06/13/06 15:49
60	EL.061306.155554	WG215198-22	CCB		1		06/13/06 15:55
61	EL.061306.160207	L0606267-02	B-SD-02	.548/200	1		06/13/06 16:02
62	EL.061306.160800	L0606267-04	D-SD-04	.503/200	1		06/13/06 16:08
63	EL.061306.161354	L0606267-05	E-SD-05	.527/200	1		06/13/06 16:13
64	EL.061306.161949	L0606267-06	F-SD-06	.529/200	1		06/13/06 16:19
65	EL.061306.162544	L0606267-07	G-SD-07	.501/200	1		06/13/06 16:25
66	EL.061306.163139	L0606267-08	H-SD-08	.5/200	1		06/13/06 16:31
67	EL.061306.163735	L0606267-09	I-SD-09	.514/200	1		06/13/06 16:37
68	EL.061306.164331	L0606267-10	FD-01	.5/200	1		06/13/06 16:43
69	EL.061306.164926	WG215198-23	CCV		1		06/13/06 16:49
70	EL.061306.165540	WG215198-24	CCB		1		06/13/06 16:55

Approved: June 15, 2006

Sheri L. Babcock

007665

KEMRON Environmental Services
HOLDING TIMES
EQUIVALENT TO AFCEE FORM 9

Analytical Method: 6020 **AAB#:** WG215208
Login Number: L0606267

Client ID	Date Collected	Date Received	Date Extracted	Max Hold Time Ext.	Time Held Ext.	Date Analyzed	Max Hold Time Anal	Time Held Anal.	Q
A-SD-01	06/08/06	06/10/06	06/13/06	180	4.90	06/13/06	180	0.286	
B-SD-02	06/08/06	06/10/06	06/13/06	180	4.86	06/13/06	180	0.307	
C-SD-03	06/08/06	06/10/06	06/13/06	180	4.72	06/13/06	180	0.274	
D-SD-04	06/08/06	06/10/06	06/13/06	180	4.67	06/13/06	180	0.311	
E-SD-05	06/08/06	06/10/06	06/13/06	180	4.76	06/13/06	180	0.315	
F-SD-06	06/08/06	06/10/06	06/13/06	180	4.64	06/13/06	180	0.319	
G-SD-07	06/09/06	06/10/06	06/13/06	180	3.91	06/13/06	180	0.323	
H-SD-08	06/09/06	06/10/06	06/13/06	180	3.93	06/13/06	180	0.328	
I-SD-09	06/09/06	06/10/06	06/13/06	180	3.87	06/13/06	180	0.332	
FD-01	06/09/06	06/10/06	06/13/06	180	3.93	06/13/06	180	0.336	
C-SD-03-MS	06/08/06	06/10/06	06/13/06	180	4.72	06/13/06	180	0.278	
C-SD-03-MSD	06/08/06	06/10/06	06/13/06	180	4.72	06/13/06	180	0.282	

* EXT = SEE PROJECT QAPP REQUIREMENTS
*ANAL = SEE PROJECT QAPP REQUIREMENTS

KEMRON FORMS - Modified 02/14/2006
Version 1.5 PDF File ID: 495962
Report generated 06/14/2006 11:04

KEMRON Environmental Services

METHOD BLANK SUMMARY

Login Number:	L0606267	Work Group:	WG215208
Blank File ID:	EL.061306.150214	Blank Sample ID:	WG215189-03
Date Analyzed:	06/13/06	Instrument ID:	ELAN-ICP
Time Analyzed:	15:02	Method:	6020
Analyst:	JYH		

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG215189-04	EL.061306.150809	06/13/06 15:08	01
C-SD-03	L0606267-03	EL.061306.151405	06/13/06 15:14	01
C-SD-03-MS	L0606267-11	EL.061306.152001	06/13/06 15:20	01
C-SD-03-MSD	L0606267-12	EL.061306.152557	06/13/06 15:25	01
A-SD-01	L0606267-01	EL.061306.153153	06/13/06 15:31	01
B-SD-02	L0606267-02	EL.061306.160207	06/13/06 16:02	01
D-SD-04	L0606267-04	EL.061306.160800	06/13/06 16:08	01
E-SD-05	L0606267-05	EL.061306.161354	06/13/06 16:13	01
F-SD-06	L0606267-06	EL.061306.161949	06/13/06 16:19	01
G-SD-07	L0606267-07	EL.061306.162544	06/13/06 16:25	01
H-SD-08	L0606267-08	EL.061306.163139	06/13/06 16:31	01
I-SD-09	L0606267-09	EL.061306.163735	06/13/06 16:37	01
FD-01	L0606267-10	EL.061306.164331	06/13/06 16:43	01

KEMRON Environmental Services

METHOD BLANK REPORT

Login Number: L0606267	Run Date: 06/13/2006	Sample ID: WG215189-03
Instrument ID: ELAN-ICP	Run Time: 15:02	Prep Method: 3051
File ID: EL.061306.150214	Analyst: JYH	Method: 6020
Workgroup (AAB#): WG215208	Matrix: Solid	Units: mg/kg
Contract #:	Cal ID: ELAN-I-13-JUN-06	

Analytes	SQL	PQL	Concentration	Dilution	Qualifier
Antimony, Total	0.0500	0.100	0.0500	1	U
Thallium, Total	0.0100	0.0200	0.0100	1	U

MDL Method Detection Limit
RL Reporting/quantitation Limit

* Analyte concentration > RL

KEMRON FORMS - Modified 05/01/2006
Version 1.5 PDF File ID: 495964
Report generated 06/14/2006 11:04

KEMRON Environmental Services

LABORATORY CONTROL SAMPLE (LCS)

Login Number: L0606267	Run Date: 06/13/2006	Sample ID: WG215189-04
Instrument ID: ELAN-ICP	Run Time: 15:08	Prep Method: 3051
File ID: EL.061306.150809	Analyst: JYH	Method: 6020
Workgroup (AAB#): WG215208	Matrix: Solid	Units: mg/kg
Contract #:	Cal ID: ELAN-I-13-JUN-06	

Analytes	Expected	Found	% Rec	LCS Limits	Q
Antimony, Total	10.0	9.44	94.4	80 - 120	
Thallium, Total	10.0	9.61	96.1	80 - 120	

KEMRON FORMS - Modified 05/01/2006
Version 1.5 PDF File ID: 495965
Report generated 06/14/2006 11:04

KEMRON Environmental Services

MS/MSD REPORT

Loginnum:L0606267 Cal ID: ELAN-ICP-13-JUN-06 Worknum:WG215208
Instrument ID:ELAN-ICP Contract #: Prep Method:3051
Parent ID:L0606267-03 File ID:EL.061306.151405 Dil:1 Method:6020
Sample ID:L0606267-11 MS File ID:EL.061306.152001 Dil:1 Matrix:Soil
Sample ID:L0606267-12 MSD File ID:EL.061306.152557 Dil:1 Units:mg/kg
Percent Solid:48.8

Analyte	Parent	MS Spiked	MS Found	MS %Rec	MSD Spiked	MSD Found	MSD %Rec	%RPD	%Rec Limits	RPD Limit	Q
Antimony, Total	0.237	20.5	0.291	0.266	20.5	0.233	-0.0168	22.1	75 - 125	20	*
Thallium, Total	0.0966	20.5	18.8	91.6	20.5	18.5	89.8	2.03	75 - 125	20	

* FAILS %REC LIMIT

FAILS RPD LIMIT

KEMRON FORMS - Modified 06/02/2006
Version 1.5 PDF File ID:495966
Report generated 06/14/2006 11:04

KEMRON ENVIRONMENTAL SERVICES
SERIAL DILUTION REPORT

Sample Login ID: L0606267 Worknum: WG215208
Instrument ID: ELAN-ICP Method: 6020
Sample ID: L0606267-01 File ID: EL.061306.153153 Dil: 1 Units: ug/kg
Serial Dilution ID: WG215208-02 File ID: EL.061306.154345 Dil: 5

Analyte	Sample	C	Serial Dilution	C	% Difference	Q
Antimony	0	U	0.963	F	666	
Thallium	0.370	X	0	U	100	

U = Result is below MDL
F = Result is between MDL and RL
X = Result is greater than RL and less than 100 times the MDL
E = %D exceeds control limit of 10% and initial
sample result is greater than or equal to 100 times the MDL

KEMRON FORMS - Modified 02/14/2006
Version 1.3 PDF File ID: 495960
Report generated 06/14/2006 11:04

KEMRON ENVIRONMENTAL SERVICES
POST SPIKE REPORT

Sample Login ID: L0606267 **Worknum:** WG215208
Instrument ID: ELAN-ICP **Method:** 6020
Post Spike ID: WG215208-01 **File ID:** EL.061306.153750 **Dil:** 1 **Units:** ug/kg
Sample ID: L0606267-01 **File ID:** EL.061306.153153 **Dil:** 1 **Matrix:** Soil

Analyte	Control Limit %R	Post Spike Result	C	Sample Result	C	Spike Added(SA)	% R	Q
ANTIMONY	75 - 125	50.2		0	U	50.0	100	
THALLIUM	75 - 125	49.5		0.370		50.0	98.3	

N = % Recoverv exceeds control limits of 75% - 125%
F = Result is between MDL and RL
U = Sample result is below MDL. A value of zero is used in the calculation.

KEMRON FORMS - Modified 02/14/2006
Version 2.0 PDF File ID: 495961
Report generated 06/14/2006 11:04

KEMRON Environmental Services

INITIAL CALIBRATION SUMMARY

Login Number: L0606267 **Workgroup (AAB#):** WG215208

Analytical Method: 6020 **Instrument ID:** ELAN-ICP

ICAL Worknum: WG215198 **Initial Calibration Date:** 13-JUN-2006 10:17

Analyte	WG215198-01		WG215198-02		WG215198-03		WG215198-04			
	STD	INT	STD	INT	STD	INT	STD	INT	R	Q
Antimony	NA	34NA59	NA	179NA084	NA	2710NA.724	100	5260NA.071	1.00000	
Thallium	NA	43NA34	NA	369NA181	NA	4518NA.903	100	8749NA.025	0.999869	

INT = Instrument intensity
R = Coefficient of correlation
Q = Data Qualifier
*** = Out of Compliance; R < 0.995**

KEMRON FORMS - Modified 03/03/2006
Version 1.5 PDF File ID: 495969
Report generated 06/14/2006 11:04

KEMRON Environmental Services

INITIAL CALIBRATION BLANK (ICB)

Login Number: L0606267 Run Date: 06/13/2006 Sample ID: WG215198-06
Instrument ID: ELAN-ICP Run Time: 10:29 Method: 6020
File ID: EL.061306.102952 Analyst: JYH Units: ug/L
Workgroup (AAB#): WG215208 Cal ID: ELAN-I - 13-JUN-06

Analytes	MDL	RDL	Concentration	Dilution	Qualifier
Antimony	0.125	0.250	.233	1	F
Thallium	0.0250	0.0500	-.007	1	U

U = Result is less than MDL
F = Result is between MDL and RL

KEMRON FORMS - Modified 03/06/2006
Version 1.5 PDF File ID: 495971
Report generated 06/14/2006 11:04

KEMRON Environmental Services

CONTINUING CALIBRATION BLANK (CCB)

Login Number:L0606267 Run Date:06/13/2006 Sample ID:WG215198-12
Instrument ID:ELAN-ICP Run Time:11:07 Method:6020
File ID:EL.061306.110732 Analyst:JYH Units:ug/L
Workgroup (AAB#):WG215208 Cal ID:ELAN-I - 13-JUN-06

Analytes	MDL	RDL	Concentration	Dilution	Qualifier
Antimony	0.125	0.250	0.231	1	F
Thallium	0.0250	0.0500	-0.00440	1	U

U = Result is less than MDL
F = Result is between MDL and RL

KEMRON FORMS - Modified 04/19/2006
Version 1.5 PDF File ID: 495974
Report generated 06/14/2006 11:04

KEMRON Environmental Services

CONTINUING CALIBRATION BLANK (CCB)

Login Number:L0606267 Run Date:06/13/2006 Sample ID:WG215198-20
Instrument ID:ELAN-ICP Run Time:14:54 Method:6020
File ID:EL.061306.145437 Analyst:JYH Units:ug/L
Workgroup (AAB#):WG215208 Cal ID:ELAN-I - 13-JUN-06

Analytes	MDL	RDL	Concentration	Dilution	Qualifier
Antimony	0.125	0.250	0.235	1	F
Thallium	0.0250	0.0500	-0.00230	1	U

U = Result is less than MDL
F = Result is between MDL and RL

KEMRON FORMS - Modified 04/19/2006
Version 1.5 PDF File ID: 495974
Report generated 06/14/2006 11:04

KEMRON Environmental Services

CONTINUING CALIBRATION BLANK (CCB)

Login Number:L0606267 Run Date:06/13/2006 Sample ID:WG215198-22
Instrument ID:ELAN-ICP Run Time:15:55 Method:6020
File ID:EL.061306.155554 Analyst:JYH Units:ug/L
Workgroup (AAB#):WG215208 Cal ID:ELAN-I - 13-JUN-06

Analytes	MDL	RDL	Concentration	Dilution	Qualifier
Antimony	0.125	0.250	0.215	1	F
Thallium	0.0250	0.0500	-0.00400	1	U

U = Result is less than MDL
F = Result is between MDL and RL

KEMRON FORMS - Modified 04/19/2006
Version 1.5 PDF File ID: 495974
Report generated 06/14/2006 11:04

KEMRON Environmental Services

CONTINUING CALIBRATION BLANK (CCB)

Login Number:L0606267 Run Date:06/13/2006 Sample ID:WG215198-24
Instrument ID:ELAN-ICP Run Time:16:55 Method:6020
File ID:EL.061306.165540 Analyst:JYH Units:ug/L
Workgroup (AAB#):WG215208 Cal ID:ELAN-I - 13-JUN-06

Analytes	MDL	RDL	Concentration	Dilution	Qualifier
Antimony	0.125	0.250	0.201	1	F
Thallium	0.0250	0.0500	-0.00500	1	U

U = Result is less than MDL
F = Result is between MDL and RL

KEMRON FORMS - Modified 04/19/2006
Version 1.5 PDF File ID: 495974
Report generated 06/14/2006 11:04

KEMRON Environmental Services

INITIAL CALIBRATION VERIFICATION (ICV)

Login Number: L0606267 Run Date: 06/13/2006 Sample ID: WG215198-05
Instrument ID: ELAN-ICP Run Time: 10:23 Method: 6020
File ID: EL.061306.102338 Analyst: JYH Units: ug/L
Workgroup (AAB#): WG215208 Cal ID: ELAN-I - 13-JUN-06

Analyte		Expected	Found	%REC	LIMITS	Q
Antimony		50	50.5	101	90 - 110	
Thallium		50	49.2	98.4	90 - 110	

* Exceeds LIMITS Limit

KEMRON FORMS - Modified 03/03/2006
Version 1.3 PDF File ID: 495970
Report generated 06/14/2006 11:04

KEMRON Environmental Services

CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L0606267 Run Date: 06/13/2006 Sample ID: WG215198-11
Instrument ID: ELAN-ICP Run Time: 11:01 Method: 6020
File ID: EL.061306.110117 Analyst: JYH
Workgroup (AAB#): WG215208 Cal ID: ELAN-I - 13-JUN-06

Analyte		Expected	Found	%REC	LIMITS	UNITS	Q
Antimony		50	49.2	98.4	90 - 110	ug/L	
Thallium		50	49.6	99.1	90 - 110	ug/L	

* Exceeds LIMITS Criteria

KEMRON FORMS - Modified 04/19/2006
Version 1.3 PDF File ID: 495973
Report generated 06/14/2006 11:04

KEMRON Environmental Services

CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L0606267 Run Date: 06/13/2006 Sample ID: WG215198-19
Instrument ID: ELAN-ICP Run Time: 14:48 Method: 6020
File ID: EL.061306.144823 Analyst: JYH
Workgroup (AAB#): WG215208 Cal ID: ELAN-I - 13-JUN-06

Analyte		Expected	Found	%REC	LIMITS	UNITS	Q
Antimony		50	49.5	99.1	90 - 110	ug/L	
Thallium		50	47.3	94.5	90 - 110	ug/L	

* Exceeds LIMITS Criteria

KEMRON FORMS - Modified 04/19/2006
Version 1.3 PDF File ID: 495973
Report generated 06/14/2006 11:04

KEMRON Environmental Services

CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L0606267 Run Date: 06/13/2006 Sample ID: WG215198-21
Instrument ID: ELAN-ICP Run Time: 15:49 Method: 6020
File ID: EL.061306.154940 Analyst: JYH
Workgroup (AAB#): WG215208 Cal ID: ELAN-I - 13-JUN-06

Analyte		Expected	Found	%REC	LIMITS	UNITS	Q
Antimony		50	47.8	95.6	90 - 110	ug/L	
Thallium		50	50.0	100	90 - 110	ug/L	

* Exceeds LIMITS Criteria

KEMRON FORMS - Modified 04/19/2006
Version 1.3 PDF File ID: 495973
Report generated 06/14/2006 11:04

KEMRON Environmental Services

CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L0606267 Run Date: 06/13/2006 Sample ID: WG215198-23
Instrument ID: ELAN-ICP Run Time: 16:49 Method: 6020
File ID: EL.061306.164926 Analyst: JYH
Workgroup (AAB#): WG215208 Cal ID: ELAN-I - 13-JUN-06

Analyte		Expected	Found	%REC	LIMITS	UNITS	Q
Antimony		50	49.0	97.9	90 - 110	ug/L	
Thallium		50	49.1	98.2	90 - 110	ug/L	

* Exceeds LIMITS Criteria

KEMRON FORMS - Modified 04/19/2006
Version 1.3 PDF File ID: 495973
Report generated 06/14/2006 11:04

KEMRON ENVIRONMENTAL SERVICES
INTERFERENCE CHECK SAMPLES

Login number: L0606267 **Workgroup (AAB#):** WG215208
Instrument ID: ELAN-ICP **Method:** 6020
Sol. A : WG215198-09 **File ID:** EL.061306.104844 **Units:** ug/L
Sol. AB : WG215198-10 **File ID:** EL.061306.105501

	Sol. A			Sol. AB			
ANALYTE	True	Found	%Recovery	True	Found	%Recovery	Q
Antimony	NS	0.116	NS	100	104	104	
Thallium	NS	-0.00760	NS	100	97.6	97.6	

NS = Not spiked
*** = Recovery of spiked element is outside acceptance limit of 80% - 120% of true value.**
 # = Result for unspiked element is outside the acceptance limits of (+/-) the project reporting limit (RL).

KEMRON Environmental Services

CRI SAMPLE

Login Number: L0606267	Run Date: 06/13/2006	Sample ID: WG215198-07
Instrument ID: ELAN-ICP	Run Time: 10:36	Prep Method: 3051
File ID: EL.061306.103608	Analyst: JYH	Method: 6020
Workgroup (AAB#): WG215198	Matrix: Soil	Units: ug/L
Contract #:	Cal ID: ELAN-ICP-13-JUN-2006 10:17	

Analytes	Expected	Found	% Rec	Limits	Q
Antimony, Total	0.250	0.329	132	50 - 150	
Thallium, Total	0.0500	0.0474	94.8	50 - 150	

KEMRON FORMS - Modified 02/14/2006
Version 1.5 PDF File ID: 495959
Report generated 06/14/2006 11:04

KEMRON Environmental Services

LINEAR RANGE (QUARTERLY)

Login Number: L0606267 **Date:** 03/02/2006

Insturment ID: ELAN-ICP **Method:** 6020

Analyte	Integration Time (Sec.)	Concentration (ug/L)
Antimony	1.00	100.0
Arsenic	1.00	100.0
Barium	1.00	100.0
Cadmium	1.00	100.0
Chromium	1.00	100.0
Cobalt	1.00	100.0
Copper	1.00	100.0
Lead	1.00	100.0
Manganese	1.00	100.0
Nickel	1.00	100.0
Selenium	1.00	100.0
Silver	1.00	100.0
Thallium	1.00	100.0
Vanadium	1.00	100.0
Zinc	1.00	100.0

Comments:

1.2.3 Metals CVAA Data (Mercury)

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KEMRON ENVIRONMENTAL SERVICES
METALS

KEMRON Login No: L0606267

METHOD

Preparation: SW-846 7471A

Analysis: SW-846 7471A

HOLDING TIMES

Sample Preparation: All holding times were met.

Sample Analysis: All holding times were met.

PREPARATION

Sample preparation proceeded normally.

CALIBRATION

Initial Calibrations: All acceptance criteria were met.

Alternate Source Standards: All acceptance criteria were met.

Continuing Calibration: All acceptance criteria were met.

BATCH QA/QC

Method Blank: All acceptance criteria were met.

Laboratory Control Sample: All acceptance criteria were met.

MS/MSD: WG215204(7471A) - Sample 03 was chosen by the client for MS/MSD analysis. Samples 11 (MS) and 12(MSD) met all acceptance criteria.

Serial Dilution/Post Digestion Spike: WG215204(7471A) - All acceptance criteria were met.

SAMPLES

All acceptance criteria were met.

I certify that this data package is in compliance with the terms and conditions agreed to by the client and KEMRON Environmental Services, both technically and for completeness, except for the conditions noted above. Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or designated person, as verified by the following signature.

Analyst: PAS

Approved: 16-JUN-06
Maren Beery

LABORATORY REPORT

L0606267

06/19/06 11:25

Submitted By

KEMRON Environmental Services
156 Starlite Drive
Marietta , OH 45750
(740) 373 - 4071

For

Account Name: CH2MHILL, Inc
7600 Tidwell Road
Suite 400
San Antonio, TX 77040
Attention: John Ynfante

Account Number: 2736
Work ID: STATE MARINE SUPERFUND SITE

P.O. Number: 915193

Sample Analysis Summary

Client ID	Lab ID	Method	Dilution	Date Received
A-SD-01	L0606267-01	7471A	1	10-JUN-06
B-SD-02	L0606267-02	7471A	1	10-JUN-06
C-SD-03	L0606267-03	7471A	1	10-JUN-06
D-SD-04	L0606267-04	7471A	1	10-JUN-06
E-SD-05	L0606267-05	7471A	1	10-JUN-06
F-SD-06	L0606267-06	7471A	1	10-JUN-06
G-SD-07	L0606267-07	7471A	1	10-JUN-06
H-SD-08	L0606267-08	7471A	1	10-JUN-06
I-SD-09	L0606267-09	7471A	1	10-JUN-06
FD-01	L0606267-10	7471A	1	10-JUN-06
C-SD-03-MS	L0606267-11	7471A	1	10-JUN-06
C-SD-03-MSD	L0606267-12	7471A	1	10-JUN-06

Report Number: **L0606267**
Report Date : **June 19, 2006**

Sample Number:	L0606267-01	PrePrep Method:	NONE	Instrument:	HYDRA
Client ID:	A-SD-01	Prep Method:	METHOD	Prep Date:	06/13/2006 09:00
Matrix:	Soil	Analytical Method:	7471A	Cal Date:	06/13/2006 15:05
Workgroup Number:	WG215204	Analyst:	PAS	Run Date:	06/13/2006 15:18
Collect Date:	06/08/2006 11:00	Dilution:	1	File ID:	HY.061306.151854
Sample Tag:	01	Units:	mg/kg	Percent Solid:	49.9

Analyte	CAS. Number	Result	Qual	PQL	SQL
Mercury, Total	7439-97-6	0.0396	J	0.476	0.0190

J The analyte was positively identified, but the quantitation was below the RL

Report Number: **L0606267**
Report Date : **June 19, 2006**

Sample Number: **L0606267-02**
Client ID: **B-SD-02**
Matrix: **Soil**
Workgroup Number: **WG215204**
Collect Date: **06/08/2006 12:05**
Sample Tag: **01**

PrePrep Method: **NONE**
Prep Method: **METHOD**
Analytical Method: **7471A**
Analyst: **PAS**
Dilution: **1**
Units: **mg/kg**

Instrument: **HYDRA**
Prep Date: **06/13/2006 09:00**
Cal Date: **06/13/2006 15:05**
Run Date: **06/13/2006 15:22**
File ID: **HY.061306.152242**
Percent Solid: **59.7**

Analyte	CAS. Number	Result	Qual	PQL	SQL
Mercury, Total	7439-97-6	0.0288	J	0.419	0.0168

J The analyte was positively identified, but the quantitation was below the RL

Report Number: **L0606267**
Report Date : **June 19, 2006**

Sample Number: **L0606267-03**
Client ID: **C-SD-03**
Matrix: **Soil**
Workgroup Number: **WG215204**
Collect Date: **06/08/2006 15:30**
Sample Tag: **01**

PrePrep Method: **NONE**
Prep Method: **METHOD**
Analytical Method: **7471A**
Analyst: **PAS**
Dilution: **1**
Units: **mg/kg**

Instrument: **HYDRA**
Prep Date: **06/13/2006 09:00**
Cal Date: **06/13/2006 15:05**
Run Date: **06/13/2006 15:24**
File ID: **HY.061306.152420**
Percent Solid: **48.8**

Analyte	CAS. Number	Result	Qual	PQL	SQL
Mercury, Total	7439-97-6	0.0405	J	0.488	0.0195

J The analyte was positively identified, but the quantitation was below the RL

Report Number: **L0606267**
Report Date : **June 19, 2006**

Sample Number:	L0606267-04	PrePrep Method:	NONE	Instrument:	HYDRA
Client ID:	D-SD-04	Prep Method:	METHOD	Prep Date:	06/13/2006 09:00
Matrix:	Soil	Analytical Method:	7471A	Cal Date:	06/13/2006 15:05
Workgroup Number:	WG215204	Analyst:	PAS	Run Date:	06/13/2006 15:26
Collect Date:	06/08/2006 16:40	Dilution:	1	File ID:	HY.061306.152601
Sample Tag:	01	Units:	mg/kg	Percent Solid:	62.1

Analyte	CAS. Number	Result	Qual	PQL	SQL
Mercury, Total	7439-97-6	0.0201	J	0.382	0.0153

J The analyte was positively identified, but the quantitation was below the RL

Report Number: **L0606267**
Report Date : **June 19, 2006**

Sample Number: **L0606267-05**
Client ID: **E-SD-05**
Matrix: **Soil**
Workgroup Number: **WG215204**
Collect Date: **06/08/2006 14:20**
Sample Tag: **01**

PrePrep Method: **NONE**
Prep Method: **METHOD**
Analytical Method: **7471A**
Analyst: **PAS**
Dilution: **1**
Units: **mg/kg**

Instrument: **HYDRA**
Prep Date: **06/13/2006 09:00**
Cal Date: **06/13/2006 15:05**
Run Date: **06/13/2006 15:27**
File ID: **HY.061306.152754**
Percent Solid: **74.8**

Analyte	CAS. Number	Result	Qual	PQL	SQL
Mercury, Total	7439-97-6	0.0376	J	0.321	0.0128

J The analyte was positively identified, but the quantitation was below the RL

Report Number: **L0606267**
Report Date : **June 19, 2006**

Sample Number:	L0606267-06	PrePrep Method:	NONE	Instrument:	HYDRA
Client ID:	F-SD-06	Prep Method:	METHOD	Prep Date:	06/13/2006 09:00
Matrix:	Soil	Analytical Method:	7471A	Cal Date:	06/13/2006 15:05
Workgroup Number:	WG215204	Analyst:	PAS	Run Date:	06/13/2006 15:29
Collect Date:	06/08/2006 17:25	Dilution:	1	File ID:	HY.061306.152951
Sample Tag:	01	Units:	mg/kg	Percent Solid:	72.4

Analyte	CAS. Number	Result	Qual	PQL	SQL
Mercury, Total	7439-97-6	0.0232	J	0.336	0.0135

J The analyte was positively identified, but the quantitation was below the RL

Report Number: **L0606267**
Report Date : **June 19, 2006**

Sample Number: **L0606267-07**
Client ID: **G-SD-07**
Matrix: **Soil**
Workgroup Number: **WG215204**
Collect Date: **06/09/2006 10:50**
Sample Tag: **01**

PrePrep Method: **NONE**
Prep Method: **METHOD**
Analytical Method: **7471A**
Analyst: **PAS**
Dilution: **1**
Units: **mg/kg**

Instrument: **HYDRA**
Prep Date: **06/13/2006 09:00**
Cal Date: **06/13/2006 15:05**
Run Date: **06/13/2006 15:31**
File ID: **HY.061306.153141**
Percent Solid: **51.8**

Analyte	CAS. Number	Result	Qual	PQL	SQL
Mercury, Total	7439-97-6	0.0215	J	0.472	0.0189

J The analyte was positively identified, but the quantitation was below the RL

Report Number: **L0606267**
Report Date : **June 19, 2006**

Sample Number:	L0606267-08	PrePrep Method:	NONE	Instrument:	HYDRA
Client ID:	H-SD-08	Prep Method:	METHOD	Prep Date:	06/13/2006 09:00
Matrix:	Soil	Analytical Method:	7471A	Cal Date:	06/13/2006 15:05
Workgroup Number:	WG215204	Analyst:	PAS	Run Date:	06/13/2006 15:37
Collect Date:	06/09/2006 10:15	Dilution:	1	File ID:	HY.061306.153700
Sample Tag:	01	Units:	mg/kg	Percent Solid:	56.6

Analyte	CAS. Number	Result	Qual	PQL	SQL
Mercury, Total	7439-97-6	0.0215	J	0.415	0.0166

J The analyte was positively identified, but the quantitation was below the RL

Report Number: **L0606267**
Report Date : **June 19, 2006**

Sample Number: **L0606267-09**
Client ID: **I-SD-09**
Matrix: **Soil**
Workgroup Number: **WG215204**
Collect Date: **06/09/2006 11:45**
Sample Tag: **01**

PrePrep Method: **NONE**
Prep Method: **METHOD**
Analytical Method: **7471A**
Analyst: **PAS**
Dilution: **1**
Units: **mg/kg**

Instrument: **HYDRA**
Prep Date: **06/13/2006 09:00**
Cal Date: **06/13/2006 15:05**
Run Date: **06/13/2006 15:38**
File ID: **HY.061306.153849**
Percent Solid: **77.3**

Analyte	CAS. Number	Result	Qual	PQL	SQL
Mercury, Total	7439-97-6		U	0.312	0.0125

U Not detected at or above the reporting limit

Report Number: **L0606267**
Report Date : **June 19, 2006**

Sample Number: **L0606267-10**
Client ID: **FD-01**
Matrix: **Soil**
Workgroup Number: **WG215204**
Collect Date: **06/09/2006 10:15**
Sample Tag: **01**

PrePrep Method: **NONE**
Prep Method: **METHOD**
Analytical Method: **7471A**
Analyst: **PAS**
Dilution: **1**
Units: **mg/kg**

Instrument: **HYDRA**
Prep Date: **06/13/2006 09:00**
Cal Date: **06/13/2006 15:05**
Run Date: **06/13/2006 15:40**
File ID: **HY.061306.154032**
Percent Solid: **56.6**

Analyte	CAS. Number	Result	Qual	PQL	SQL
Mercury, Total	7439-97-6	0.0246	J	0.420	0.0168

J The analyte was positively identified, but the quantitation was below the RL

Report Number: **L0606267**
Report Date : **June 19, 2006**

Sample Number: **L0606267-11**
Client ID: **C-SD-03-MS**
Matrix: **Soil**
Workgroup Number: **WG215204**
Collect Date: **06/08/2006 15:30**
Sample Tag: **01**

PrePrep Method: **NONE**
Prep Method: **METHOD**
Analytical Method: **7471A**
Analyst: **PAS**
Dilution: **1**
Units: **mg/kg**

Instrument: **HYDRA**
Prep Date: **06/13/2006 09:00**
Cal Date: **06/13/2006 15:05**
Run Date: **06/13/2006 15:42**
File ID: **HY.061306.154209**
Percent Solid: **48.8**

Analyte	CAS. Number	Result	Qual	PQL	SQL
Mercury, Total	7439-97-6	0.611		0.488	0.0195

Report Number: **L0606267**
Report Date : **June 19, 2006**

Sample Number: **L0606267-12**
Client ID: **C-SD-03-MSD**
Matrix: **Soil**
Workgroup Number: **WG215204**
Collect Date: **06/08/2006 15:30**
Sample Tag: **01**

PrePrep Method: **NONE**
Prep Method: **METHOD**
Analytical Method: **7471A**
Analyst: **PAS**
Dilution: **1**
Units: **mg/kg**

Instrument: **HYDRA**
Prep Date: **06/13/2006 09:00**
Cal Date: **06/13/2006 15:05**
Run Date: **06/13/2006 15:43**
File ID: **HY.061306.154355**
Percent Solid: **48.8**

Analyte	CAS. Number	Result	Qual	PQL	SQL
Mercury, Total	7439-97-6	0.615		0.487	0.0195

1.2.3.1 QC Summary

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Checklist ID: 7975

KEMRON Environmental Services
Data Checklist

Date: 13-JUN-2006
Analyst: PAS
Analyst: NA
Method: 7471A
Instrument: HYDRA
Curve Workgroup: 215215
Analytical Workgroups: 215204

Run Log ID:	10773
Calibration/Linearity	X
ICV/CCV	X
ICB/CCB	X
ICSA/ICSAB	
CRI	
Blank/LCS	X
MS/MSD	X
Post Spike/Serial Dilution	X
Upload Results	X
Data Qualifiers	
Generate PDF Instrument Data	X
Sign/Annotate PDF Data	X
Upload Curve Data	
Workgroup Forms	X
Case Narrative	06-267
Client Forms	X
Level X	
Level 3	06-267
Level 4	
Check for compliance with method and project specific requirements	X
Check the completeness of reported information	X
Check the information for the report narrative	X
Primary Reviewer	PAS
Secondary Reviewer	MMB
Comments	

Primary Reviewer:
13-JUN-2006

Secondary Reviewer:
16-JUN-2006

Generated: JUN-16-2006 09:15:33

Run Log ID:**10773**

KEMRON Environmental Services

Instrument Run Log

Instrument: HYDRA Dataset: 061306A.PRN
Analyst1: PAS Analyst2: N/A
Method: 7471A SOP: 405 Rev: 7

Calibration Std: STD13170 ICV/CCV Std: STD13171 Post Spike: STD13170
ICSA: N/A ICSAB: N/A

Workgroups: 215204

Comments:

Seq.	File ID	Sample	ID	Prep	Dil	Reference	Date/Time
1	HY.061306.145627	WG215215-01	Calibration Point		1		06/13/06 14:56
2	HY.061306.145817	WG215215-02	Calibration Point		1		06/13/06 14:58
3	HY.061306.145954	WG215215-03	Calibration Point		1		06/13/06 14:59
4	HY.061306.150143	WG215215-04	Calibration Point		1		06/13/06 15:01
5	HY.061306.150350	WG215215-05	Calibration Point		1		06/13/06 15:03
6	HY.061306.150534	WG215215-06	Calibration Point		1		06/13/06 15:05
7	HY.061306.150735	WG215215-07	Initial Calibration Verification		1		06/13/06 15:07
8	HY.061306.150936	WG215215-08	Initial Calib Blank		1		06/13/06 15:09
9	HY.061306.151118	WG215215-09	CCV		1		06/13/06 15:11
10	HY.061306.151315	WG215215-10	CCB		1		06/13/06 15:13
11	HY.061306.151501	WG215180-03	Method/Prep Blank	.6/40	1		06/13/06 15:15
12	HY.061306.151657	WG215180-04	Laboratory Control S	.6/40	1		06/13/06 15:16
13	HY.061306.151854	L0606267-01	A-SD-01	.632/40	1		06/13/06 15:18
14	HY.061306.152104	WG215204-01	Post Digestion Spike		1	L0606267-01	06/13/06 15:21
15	HY.061306.152242	L0606267-02	B-SD-02	.6/40	1		06/13/06 15:22
16	HY.061306.152420	L0606267-03	C-SD-03		1		06/13/06 15:24
17	HY.061306.152601	L0606267-04	D-SD-04	.632/40	1		06/13/06 15:26
18	HY.061306.152754	L0606267-05	E-SD-05	.624/40	1		06/13/06 15:27
19	HY.061306.152951	L0606267-06	F-SD-06	.616/40	1		06/13/06 15:29
20	HY.061306.153141	L0606267-07	G-SD-07	.614/40	1		06/13/06 15:31
21	HY.061306.153333	WG215215-11	CCV		1		06/13/06 15:33
22	HY.061306.153521	WG215215-12	CCB		1		06/13/06 15:35
23	HY.061306.153700	L0606267-08	H-SD-08	.639/40	1		06/13/06 15:37
24	HY.061306.153849	L0606267-09	I-SD-09	.623/40	1		06/13/06 15:38
25	HY.061306.154032	L0606267-10	FD-01	.631/40	1		06/13/06 15:40
26	HY.061306.154209	WG215180-05	Matrix Spike	.63/40	1	L0606267-11	06/13/06 15:42
27	HY.061306.154355	WG215180-06	Matrix Spike Duplica	.631/40	1	L0606267-12	06/13/06 15:43
28	HY.061306.154633	WG215215-13	CCV		1		06/13/06 15:46
29	HY.061306.154820	WG215215-14	CCB		1		06/13/06 15:48

Approved: June 16, 2006

Maren Berry

007706

KEMRON Environmental Services
HOLDING TIMES
EQUIVALENT TO AFCEE FORM 9

Analytical Method: 7471A **AAB#:** WG215204
Login Number: L0606267

Client ID	Date Collected	Date Received	Date Extracted	Max Hold Time Ext.	Time Held Ext.	Date Analyzed	Max Hold Time Anal	Time Held Anal.	Q
A-SD-01	06/08/06	06/10/06	06/13/06	28	4.92	06/13/06	28	0.263	
B-SD-02	06/08/06	06/10/06	06/13/06	28	4.87	06/13/06	28	0.266	
C-SD-03	06/08/06	06/10/06	06/13/06	28	4.73	06/13/06	28	0.267	
D-SD-04	06/08/06	06/10/06	06/13/06	28	4.68	06/13/06	28	0.268	
E-SD-05	06/08/06	06/10/06	06/13/06	28	4.78	06/13/06	28	0.269	
F-SD-06	06/08/06	06/10/06	06/13/06	28	4.65	06/13/06	28	0.271	
G-SD-07	06/09/06	06/10/06	06/13/06	28	3.92	06/13/06	28	0.272	
H-SD-08	06/09/06	06/10/06	06/13/06	28	3.95	06/13/06	28	0.276	
I-SD-09	06/09/06	06/10/06	06/13/06	28	3.89	06/13/06	28	0.277	
FD-01	06/09/06	06/10/06	06/13/06	28	3.95	06/13/06	28	0.278	
C-SD-03-MS	06/08/06	06/10/06	06/13/06	28	4.73	06/13/06	28	0.279	
C-SD-03-MSD	06/08/06	06/10/06	06/13/06	28	4.73	06/13/06	28	0.280	

* EXT = SEE PROJECT QAPP REQUIREMENTS
*ANAL = SEE PROJECT QAPP REQUIREMENTS

KEMRON FORMS - Modified 02/14/2006
Version 1.5 PDF File ID: 495556
Report generated 06/13/2006 16:37

KEMRON Environmental Services

METHOD BLANK SUMMARY

Login Number:	L0606267	Work Group:	WG215204
Blank File ID:	HY.061306.151501	Blank Sample ID:	WG215180-03
Date Analyzed:	06/13/06	Instrument ID:	HYDRA
Time Analyzed:	15:15	Method:	7471A
Analyst:	PAS		

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG215180-04	HY.061306.151657	06/13/06 15:16	01
A-SD-01	L0606267-01	HY.061306.151854	06/13/06 15:18	01
B-SD-02	L0606267-02	HY.061306.152242	06/13/06 15:22	01
C-SD-03	L0606267-03	HY.061306.152420	06/13/06 15:24	01
D-SD-04	L0606267-04	HY.061306.152601	06/13/06 15:26	01
E-SD-05	L0606267-05	HY.061306.152754	06/13/06 15:27	01
F-SD-06	L0606267-06	HY.061306.152951	06/13/06 15:29	01
G-SD-07	L0606267-07	HY.061306.153141	06/13/06 15:31	01
H-SD-08	L0606267-08	HY.061306.153700	06/13/06 15:37	01
I-SD-09	L0606267-09	HY.061306.153849	06/13/06 15:38	01
FD-01	L0606267-10	HY.061306.154032	06/13/06 15:40	01
C-SD-03-MS	L0606267-11	HY.061306.154209	06/13/06 15:42	01
C-SD-03-MSD	L0606267-12	HY.061306.154355	06/13/06 15:43	01

KEMRON Environmental Services

METHOD BLANK REPORT

Login Number:	L0606267	Run Date:	06/13/2006	Sample ID:	WG215180-03
Instrument ID:	HYDRA	Run Time:	15:15	Prep Method:	METHOD
File ID:	HY.061306.151501	Analyst:	PAS	Method:	7471A
Workgroup (AAB#):	WG215204	Matrix:	Solid	Units:	mg/kg
Contract #:		Cal ID:	HYDRA-13-JUN-06		

Analytes	SQL	PQL	Concentration	Dilution	Qualifier
Mercury, Total	0.0100	0.250	0.0100	1	U

MDL Method Detection Limit
RL Reporting/quantitation Limit

* Analyte concentration > RL

KEMRON FORMS - Modified 05/01/2006
Version 1.5 PDF File ID: 495558
Report generated 06/13/2006 16:38

KEMRON Environmental Services

LABORATORY CONTROL SAMPLE (LCS)

Login Number: L0606267	Run Date: 06/13/2006	Sample ID: WG215180-04
Instrument ID: HYDRA	Run Time: 15:16	Prep Method: METHOD
File ID: HY.061306.151657	Analyst: PAS	Method: 7471A
Workgroup (AAB#): WG215204	Matrix: Solid	Units: mg/kg
Contract #:	Cal ID: HYDRA-13-JUN-06	

Analytes	Expected	Found	% Rec	LCS Limits	Q
Mercury, Total	0.267	0.288	108	80 - 120	

KEMRON FORMS - Modified 05/01/2006
Version 1.5 PDF File ID: 495559
Report generated 06/13/2006 16:40

KEMRON Environmental Services

MS/MSD REPORT

Loginnum:L0606267 Cal ID:HYDRA-13-JUN-06 Worknum:WG215204
Instrument ID:HYDRA Contract #: Prep Method:METHOD
Parent ID:L0606267-03 File ID:HY.061306.152420 Dil:1 Method:7471A
Sample ID:L0606267-11 MS File ID:HY.061306.154209 Dil:1 Matrix:Soil
Sample ID:L0606267-12 MSD File ID:HY.061306.154355 Dil:1 Units:mg/kg
Percent Solid:100

Analyte	Parent	MS Spiked	MS Found	MS %Rec	MSD Spiked	MSD Found	MSD %Rec	%RPD	%Rec Limits	RPD Limit	Q
Mercury, Total	0.0197	0.254	0.298	109	0.254	0.300	110	0.691	75 - 125	25	

* FAILS %REC LIMIT

FAILS RPD LIMIT

KEMRON FORMS - Modified 06/02/2006
Version 1.5 PDF File ID:495560
Report generated 06/13/2006 16:38

KEMRON ENVIRONMENTAL SERVICES
POST SPIKE REPORT

Sample Login ID: L0606267 **Worknum:** WG215204
Instrument ID: HYDRA **Method:** 7471A
Post Spike ID: WG215204-01 **File ID:** HY.061306.152104 **Dil:** 1 **Units:** ug/kg
Sample ID: L0606267-01 **File ID:** HY.061306.151854 **Dil:** 1 **Matrix:** Soil

Analyte	Control Limit %R	Post Spike Result	C	Sample Result	C	Spike Added(SA)	% R	Q
MERCURY	85 - 115	1.35	F	0.312	F	1.00	107	

N = % Recoverv exceeds control limits of 85% - 115%
F = Result is between MDL and RL
U = Sample result is below MDL. A value of zero is used in the calculation.

KEMRON FORMS - Modified 02/14/2006
Version 2.0 PDF File ID: 495555
Report generated 06/13/2006 16:38

KEMRON Environmental Services

INITIAL CALIBRATION SUMMARY

Login Number: L0606267
Analytical Method: 7471A

Instrument ID: HYDRA
Initial Calibration Date: 06/13/2006 15:05
Initial Calibration Time: 15:05

Analyte	WG215215-01		WG215215-02		WG215215-03		WG215215-04		WG215215-05		WG215215-06	
	STD	INT	STD	INT	STD	INT	STD	INT	STD	INT	STD	INT
Mercury	0	6704	0.200	18350	1.00	68987	2.00	136919	5.00	328712	10.0	649577

INT = Instrument intensity
R = Coefficient of correlation
Q = Data Qualifier
*** = Out of Compliance; R < 0.995**

KEMRON FORMS - Modified 03/03/2006
Version 1.5 PDF File ID: 495563
Report generated 06/13/2006 16:37

KEMRON Environmental Services

INITIAL CALIBRATION SUMMARY

Analyte	R	Q
Mercury	1.000	

INT = Instrument intensity
R = Coefficient of correlation
Q = Data Qualifier
*** = Out of Compliance; R < 0.995**

KEMRON FORMS - Modified 03/03/2006
Version 1.5 PDF File ID: 495563
Report generated 06/13/2006 16:37

KEMRON Environmental Services

INITIAL CALIBRATION BLANK (ICB)

Login Number:L0606267 Run Date:06/13/2006 Sample ID:WG215215-08
Instrument ID:HYDRA Run Time:15:09 Method:7471A
File ID:HY.061306.150936 Analyst:PAS Units:ug/L
Workgroup (AAB#):WG215204 Cal ID: HYDRA - 13-JUN-06

Analytes	MDL	RDL	Concentration	Dilution	Qualifier
Mercury	0.150	3.75	-.061	1	U

U = Result is less than MDL
F = Result is between MDL and RL

KEMRON FORMS - Modified 03/06/2006
Version 1.5 PDF File ID: 495565
Report generated 06/13/2006 16:37

KEMRON Environmental Services

CONTINUING CALIBRATION BLANK (CCB)

Login Number:L0606267 Run Date:06/13/2006 Sample ID:WG215215-10
Instrument ID:HYDRA Run Time:15:13 Method:7471A
File ID:HY.061306.151315 Analyst:PAS Units:ug/L
Workgroup (AAB#):WG215204 Cal ID: HYDRA - 13-JUN-06

Analytes	MDL	RDL	Concentration	Dilution	Qualifier
Mercury	0.150	3.75	-0.0440	1	U

U = Result is less than MDL
F = Result is between MDL and RL

KEMRON FORMS - Modified 04/19/2006
Version 1.5 PDF File ID: 495567
Report generated 06/13/2006 16:37

KEMRON Environmental Services

CONTINUING CALIBRATION BLANK (CCB)

Login Number:L0606267 Run Date:06/13/2006 Sample ID:WG215215-12
Instrument ID:HYDRA Run Time:15:35 Method:7471A
File ID:HY.061306.153521 Analyst:PAS Units:ug/L
Workgroup (AAB#):WG215204 Cal ID: HYDRA - 13-JUN-06

Analytes	MDL	RDL	Concentration	Dilution	Qualifier
Mercury	0.150	3.75	-0.0670	1	U

U = Result is less than MDL
F = Result is between MDL and RL

KEMRON FORMS - Modified 04/19/2006
Version 1.5 PDF File ID: 495567
Report generated 06/13/2006 16:37

KEMRON Environmental Services

CONTINUING CALIBRATION BLANK (CCB)

Login Number:L0606267 Run Date:06/13/2006 Sample ID:WG215215-14
Instrument ID:HYDRA Run Time:15:48 Method:7471A
File ID:HY.061306.154820 Analyst:PAS Units:ug/L
Workgroup (AAB#):WG215204 Cal ID: HYDRA - 13-JUN-06

Analytes	MDL	RDL	Concentration	Dilution	Qualifier
Mercury	0.150	3.75	-0.0600	1	U

U = Result is less than MDL
F = Result is between MDL and RL

KEMRON FORMS - Modified 04/19/2006
Version 1.5 PDF File ID: 495567
Report generated 06/13/2006 16:37

KEMRON Environmental Services

INITIAL CALIBRATION VERIFICATION (ICV)

Login Number: L0606267 Run Date: 06/13/2006 Sample ID: WG215215-07
Instrument ID: HYDRA Run Time: 15:07 Method: 7471A
File ID: HY.061306.150735 Analyst: PAS Units: ug/L
Workgroup (AAB#): WG215204 Cal ID: HYDRA - 13-JUN-06

Analyte		Expected	Found	%REC	LIMITS	Q
Mercury		2	1.98	99.0	90 - 110	

* Exceeds LIMITS Limit

KEMRON FORMS - Modified 03/03/2006
Version 1.3 PDF File ID: 495564
Report generated 06/13/2006 16:37

KEMRON Environmental Services

CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L0606267 Run Date: 06/13/2006 Sample ID: WG215215-09
Instrument ID: HYDRA Run Time: 15:11 Method: 7471A
File ID: HY.061306.151118 Analyst: PAS
Workgroup (AAB#): WG215204 Cal ID: HYDRA - 13-JUN-06

Analyte		Expected	Found	%REC	LIMITS	UNITS	Q
Mercury		2	1.99	99.5	80 - 120	ug/L	

* Exceeds LIMITS Criteria

KEMRON FORMS - Modified 04/19/2006
Version 1.3 PDF File ID: 495566
Report generated 06/13/2006 16:37

KEMRON Environmental Services

CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L0606267 Run Date: 06/13/2006 Sample ID: WG215215-11
Instrument ID: HYDRA Run Time: 15:33 Method: 7471A
File ID: HY.061306.153333 Analyst: PAS
Workgroup (AAB#): WG215204 Cal ID: HYDRA - 13-JUN-06

Analyte		Expected	Found	%REC	LIMITS	UNITS	Q
Mercury		2	2.01	101	80 - 120	ug/L	

* Exceeds LIMITS Criteria

KEMRON FORMS - Modified 04/19/2006
Version 1.3 PDF File ID: 495566
Report generated 06/13/2006 16:37

KEMRON Environmental Services

CONTINUING CALIBRATION VERIFICATION (CCV)

Login Number: L0606267 Run Date: 06/13/2006 Sample ID: WG215215-13
Instrument ID: HYDRA Run Time: 15:46 Method: 7471A
File ID: HY.061306.154633 Analyst: PAS
Workgroup (AAB#): WG215204 Cal ID: HYDRA - 13-JUN-06

Analyte		Expected	Found	%REC	LIMITS	UNITS	Q
Mercury		2	2.01	101	80 - 120	ug/L	

* Exceeds LIMITS Criteria

KEMRON FORMS - Modified 04/19/2006
Version 1.3 PDF File ID: 495566
Report generated 06/13/2006 16:37

1.3 General Chemistry Data

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1.3.1 Percent Solids

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PERCENT SOLIDS DATA

Login Number: L0606267

✓ Analysis benchsheet

✓ Calculation spreadsheet

Example calculation:

[(WT3-WT1)/(WT2-WT1)] * 100 = % solids

100-(% solids) = moisture

where: WT1 = weight (grams) of empty container
WT2 - weight (grams) of container and wet sample
100 = factor to get units as percent weight

Checked By: MH Date: 6/16/06

007727

PERCENT SOLIDS

Workgroup: 215182 ADT (on): JWB 6/13/06 @1000 Balance: AND GR-202 / Other
SOP K0003 Rev: 9 ADT (off): JWB 6/14/06 @910 Approval: 6/15/06

Sample	Empty Pan WT 1	WET WT 2	DRY WT 3A	WET WT 3B	DRY WT 3C
06 - 207 - 01	1.27	16.24	11.80	✓	
06 - 259 - 01	1.27	22.66	16.79	✓	
- 02	1.28	16.41	13.91	✓	
06 - 267 - 01	1.26	26.01	13.61	✓	
02	1.27	20.53	12.76	✓	
03, 11, 12	1.28	17.07	8.98	✓	
04	1.25	19.28	12.44	✓	
05	1.26	18.23	13.96	✓	
06	1.26	17.79	13.23	✓	
07	1.27	25.26	13.70	✓	
08, 10	1.27	18.67	11.12	✓	
09	1.25	22.59	17.47	✓	
06 - 258 - 01, 02	1.28	24.29	19.32	✓	
- 03	1.27	20.47	16.38	✓	
06 - 286 - 01	1.27	17.13	13.01	✓	
06 - 287 - 01	1.29	21.20	19.07	✓	
06 - 219 - 01	1.29	20.67	16.40	✓	
- 02	1.26	26.60	20.92	✓	
- 03 04, 05	1.28	21.53	17.44	✓	
- 06, 07	1.26	18.63	15.03	✓	
uplicate 06 - 259 - 02	1.29	17.48	14.82		

Workgroup: 215197 ADT (on): JWB 6/13/06 @1310 Balance: AND GR-202 / Other
SOP K0003 Rev: 9 ADT (off): JWB 6/14/06 @0915 Approval: 6/15/06

Sample	Empty Pan WT 1	WET WT 2	DRY WT 3A	WET WT 3B	DRY WT 3C
06 - 219 - 08	1.26	22.32	15.08		
09	1.30	22.26	17.79		
10	1.28	21.01	16.38 JWB 6/14/06		
06 - 292 - 01	1.30	22.31	~~22.0~~ 21.23		
02	1.27	23.52	22.03		
03	1.30	16.50	16.13		
04	1.29	17.88	14.86		
05	1.31	23.84	21.22		
06	1.28	14.65	13.55		
07	1.31	24.74	21.38		
08	1.31	17.37	14.47		
09, 10, 11, 12	1.32	21.44	17.26		
Duplicate 06 - 219 - 10	1.27	21.09	16.31		

007728

KEMRON ENVIRONMENTAL SERVICES
PERCENT SOLID REPORT

Workgroup (AAB#):WG215182 Run Date:06/13/2006
Method:D2216-90 Run Time:10:00
Analyst:TMM

SAMPLE NUMBER	Pan WT.	Int WT.	Fnl WT.	% Solid	% Moist	UNITS
L0606207-01	1.270	16.24	11.80	70.34		%
L0606219-01	1.290	20.67	16.40	77.97		%
L0606219-02	1.260	26.60	20.92	77.58		%
L0606219-03	1.280	21.53	17.44	79.80		%
L0606219-04	1.280	21.53	17.44	79.80		%
L0606219-05	1.280	21.53	17.44	79.80		%
L0606219-06	1.260	18.83	15.03	78.37		%
L0606219-07	1.260	18.83	15.03	78.37		%
L0606258-01	1.280	24.29	19.32	78.40		%
L0606258-02	1.280	24.29	19.32	78.40		%
L0606258-03	1.270	20.47	16.38	78.70		%
L0606259-01	1.270	22.66	18.79	81.91		%
L0606259-02	1.280	16.41	13.91	83.48		%
L0606267-01	1.260	26.01	13.61	49.90		%
L0606267-02	1.270	20.53	12.76	59.66		%
L0606267-03	1.280	17.07	8.980	48.77		%
L0606267-04	1.250	19.28	12.44	62.06		%
L0606267-05	1.260	18.23	13.96	74.84		%
L0606267-06	1.260	17.79	13.23	72.41		%
L0606267-07	1.270	25.26	13.70	51.81		%
L0606267-08	1.270	18.67	11.12	56.61		%
L0606267-09	1.250	22.59	17.74	77.27		%
L0606267-10	1.270	18.67	11.12	56.61		%
L0606267-11	1.280	17.07	8.980	48.77		%
L0606267-12	1.280	17.07	8.980	48.77		%
L0606286-01	1.270	17.13	13.01	74.02		%
L0606287-01	1.290	21.20	19.07	89.30		%
WG215182-01	1.280	16.41	13.91	83.48	16.52	%
WG215182-02	1.290	17.48	14.82	83.57	16.43	%

KEMRON FORMS - Modified 08/27/2004
Version 1.2
Report generated 06/14/2006 09:59

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1.3.2 Method 400

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1.3.2.1 QC Summary

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LABORATORY REPORT

L0606267

06/19/06 11:25

Submitted By

KEMRON Environmental Services
156 Starlite Drive
Marietta , OH 45750
(740) 373 - 4071

For

Account Name: CH2MHILL, Inc
7600 Tidwell Road
Suite 400
San Antonio, TX 77040
Attention: John Ynfante

Account Number: 2736
Work ID: STATE MARINE SUPERFUND SITE

P.O. Number: 915193

Sample Analysis Summary

Client ID	Lab ID	Method	Dilution	Date Received
A-SD-01	L0606267-01	LYDKHN	1	10-JUN-06
B-SD-02	L0606267-02	LYDKHN	1	10-JUN-06
C-SD-03	L0606267-03	LYDKHN	1	10-JUN-06
D-SD-04	L0606267-04	LYDKHN	1	10-JUN-06
E-SD-05	L0606267-05	LYDKHN	1	10-JUN-06
F-SD-06	L0606267-06	LYDKHN	1	10-JUN-06
G-SD-07	L0606267-07	LYDKHN	1	10-JUN-06
H-SD-08	L0606267-08	LYDKHN	1	10-JUN-06
I-SD-09	L0606267-09	LYDKHN	1	10-JUN-06
FD-01	L0606267-10	LYDKHN	1	10-JUN-06
C-SD-03-MS	L0606267-11	LYDKHN	1	10-JUN-06
C-SD-03-MSD	L0606267-12	LYDKHN	1	10-JUN-06

Report Number: **L0606267**
Report Date : **June 19, 2006**

Sample Number: **L0606267-01**
Client ID: **A-SD-01**
Matrix: **Soil**
Workgroup Number: **WG215300**
Collect Date: **06/08/2006 11:00**

PrePrep Method: **NONE**
Prep Method: **LYDKHN**
Analytical Method: **LYDKHN**
Analyst: **DR**
Dilution: **1**
Units: **mg/kg**

Instrument: **TOC-VWP**
Prep Date: **06/14/2006 09:09**
Cal Date:
Run Date: **06/14/2006 09:09**
File ID: **TC06061508463309**
Percent Solid: **49.9**

Analyte	CAS. Number	Result	Qual	PQL	SQL
Total Organic Carbon		**10300**		**2000**	**1000**

Report Number: **L0606267**
Report Date : **June 19, 2006**

Sample Number: **L0606267-02**
Client ID: **B-SD-02**
Matrix: **Soil**
Workgroup Number: **WG215300**
Collect Date: **06/08/2006 12:05**

PrePrep Method: **NONE**
Prep Method: **LYDKHN**
Analytical Method: **LYDKHN**
Analyst: **DR**
Dilution: **1**
Units: **mg/kg**

Instrument: **TOC-VWP**
Prep Date: **06/14/2006 09:09**
Cal Date:
Run Date: **06/14/2006 09:09**
File ID: **TC06061508463310**
Percent Solid: **59.7**

Analyte	CAS. Number	Result	Qual	PQL	SQL
Total Organic Carbon		**6660**		**1680**	**838**

Report Number: **L0606267**
Report Date : **June 19, 2006**

Sample Number: **L0606267-03**
Client ID: **C-SD-03**
Matrix: **Soil**
Workgroup Number: **WG215300**
Collect Date: **06/08/2006 15:30**

PrePrep Method: **NONE**
Prep Method: **LYDKHN**
Analytical Method: **LYDKHN**
Analyst: **DR**
Dilution: **1**
Units: **mg/kg**

Instrument: **TOC-VWP**
Prep Date: **06/14/2006 09:09**
Cal Date:
Run Date: **06/14/2006 09:09**
File ID: **TC06061508463311**
Percent Solid: **48.8**

Analyte	CAS. Number	Result	Qual	PQL	SQL
Total Organic Carbon		**10800**		**2050**	**1030**

Report Number: **L0606267**
Report Date : **June 19, 2006**

Sample Number: **L0606267-04**
Client ID: **D-SD-04**
Matrix: **Soil**
Workgroup Number: **WG215300**
Collect Date: **06/08/2006 16:40**

PrePrep Method: **NONE**
Prep Method: **LYDKHN**
Analytical Method: **LYDKHN**
Analyst: **DR**
Dilution: **1**
Units: **mg/kg**

Instrument: **TOC-VWP**
Prep Date: **06/14/2006 09:09**
Cal Date:
Run Date: **06/14/2006 09:09**
File ID: **TC06061508463312**
Percent Solid: **62.1**

Analyte	CAS. Number	Result	Qual	PQL	SQL
Total Organic Carbon		**6200**		**1610**	**806**

Report Number: **L0606267**
Report Date : **June 19, 2006**

Sample Number: **L0606267-05**
Client ID: **E-SD-05**
Matrix: **Soil**
Workgroup Number: **WG215300**
Collect Date: **06/08/2006 14:20**

PrePrep Method: **NONE**
Prep Method: **LYDKHN**
Analytical Method: **LYDKHN**
Analyst: **DR**
Dilution: **1**
Units: **mg/kg**

Instrument: **TOC-VWP**
Prep Date: **06/14/2006 09:09**
Cal Date:
Run Date: **06/14/2006 09:09**
File ID: **TC06061508463313**
Percent Solid: **74.8**

Analyte	CAS. Number	Result	Qual	PQL	SQL
Total Organic Carbon		**4090**		**1340**	**668**

Report Number: **L0606267**
Report Date : **June 19, 2006**

Sample Number: **L0606267-06**
Client ID: **F-SD-06**
Matrix: **Soil**
Workgroup Number: **WG215300**
Collect Date: **06/08/2006 17:25**

PrePrep Method: **NONE**
Prep Method: **LYDKHN**
Analytical Method: **LYDKHN**
Analyst: **DR**
Dilution: **1**
Units: **mg/kg**

Instrument: **TOC-VWP**
Prep Date: **06/14/2006 09:09**
Cal Date:
Run Date: **06/14/2006 09:09**
File ID: **TC06061508463314**
Percent Solid: **72.4**

Analyte	CAS. Number	Result	Qual	PQL	SQL
Total Organic Carbon		**3470**		**1380**	**690**

Report Number: **L0606267**
Report Date : **June 19, 2006**

Sample Number: **L0606267-07**
Client ID: **G-SD-07**
Matrix: **Soil**
Workgroup Number: **WG215300**
Collect Date: **06/09/2006 10:50**

PrePrep Method: **NONE**
Prep Method: **LYDKHN**
Analytical Method: **LYDKHN**
Analyst: **DR**
Dilution: **1**
Units: **mg/kg**

Instrument: **TOC-VWP**
Prep Date: **06/14/2006 09:09**
Cal Date:
Run Date: **06/14/2006 09:09**
File ID: **TC06061508463315**
Percent Solid: **51.8**

Analyte	CAS. Number	Result	Qual	PQL	SQL
Total Organic Carbon		**38600**		**1930**	**965**

Report Number: **L0606267**
Report Date : **June 19, 2006**

Sample Number:	L0606267-08	PrePrep Method:	NONE	Instrument:	TOC-VWP
Client ID:	H-SD-08	Prep Method:	LYDKHN	Prep Date:	06/14/2006 09:09
Matrix:	Soil	Analytical Method:	LYDKHN	Cal Date:	
Workgroup Number:	WG215300	Analyst:	DR	Run Date:	06/14/2006 09:09
Collect Date:	06/09/2006 10:15	Dilution:	1	File ID:	TC06061508463316
		Units:	mg/kg	Percent Solid:	56.6

Analyte	CAS. Number	Result	Qual	PQL	SQL
Total Organic Carbon		7540		1770	883

Report Number: **L0606267**
Report Date : **June 19, 2006**

Sample Number: **L0606267-09**
Client ID: **I-SD-09**
Matrix: **Soil**
Workgroup Number: **WG215300**
Collect Date: **06/09/2006 11:45**

PrePrep Method: **NONE**
Prep Method: **LYDKHN**
Analytical Method: **LYDKHN**
Analyst: **DR**
Dilution: **1**
Units: **mg/kg**

Instrument: **TOC-VWP**
Prep Date: **06/14/2006 09:09**
Cal Date:
Run Date: **06/14/2006 09:09**
File ID: **TC06061508463317**
Percent Solid: **77.3**

Analyte	CAS. Number	Result	Qual	PQL	SQL
Total Organic Carbon			U	1290	647

U Not detected at or above the reporting limit

Report Number: **L0606267**
Report Date : **June 19, 2006**

Sample Number: **L0606267-10**
Client ID: **FD-01**
Matrix: **Soil**
Workgroup Number: **WG215300**
Collect Date: **06/09/2006 10:15**

PrePrep Method: **NONE**
Prep Method: **LYDKHN**
Analytical Method: **LYDKHN**
Analyst: **DR**
Dilution: **1**
Units: **mg/kg**

Instrument: **TOC-VWP**
Prep Date: **06/14/2006 09:09**
Cal Date:
Run Date: **06/14/2006 09:09**
File ID: **TC06061508463318**
Percent Solid: **56.6**

Analyte	CAS. Number	Result	Qual	PQL	SQL
Total Organic Carbon		**8730**		**1770**	**883**

Report Number: **L0606267**
Report Date : **June 19, 2006**

Sample Number: **L0606267-11**
Client ID: **C-SD-03-MS**
Matrix: **Soil**
Workgroup Number: **WG215300**
Collect Date: **06/08/2006 15:30**

PrePrep Method: **NONE**
Prep Method: **LYDKHN**
Analytical Method: **LYDKHN**
Analyst: **DR**
Dilution: **1**
Units: **mg/kg**

Instrument: **TOC-VWP**
Prep Date: **06/14/2006 09:09**
Cal Date:
Run Date: **06/14/2006 09:09**
File ID: **TC06061508463319**
Percent Solid: **48.8**

Analyte	CAS. Number	Result	Qual	PQL	SQL
Total Organic Carbon		**25100**		**2050**	**1030**

Report Number: **L0606267**
Report Date : **June 19, 2006**

Sample Number: **L0606267-12**
Client ID: **C-SD-03-MSD**
Matrix: **Soil**
Workgroup Number: **WG215300**
Collect Date: **06/08/2006 15:30**

PrePrep Method: **NONE**
Prep Method: **LYDKHN**
Analytical Method: **LYDKHN**
Analyst: **DR**
Dilution: **1**
Units: **mg/kg**

Instrument: **TOC-VWP**
Prep Date: **06/14/2006 09:09**
Cal Date:
Run Date: **06/14/2006 09:09**
File ID: **TC06061508463320**
Percent Solid: **48.8**

Analyte	CAS. Number	Result	Qual	PQL	SQL
Total Organic Carbon		**29100**		**2050**	**1030**

GENERAL CHEMISTRY DATA

Login Number: L0606267

Analyte: TOC

QC Summary

- ✓ Narrative
- ✓ Checklist
- ✓ Preparation Log (if applicable)
- ✓ Holding Time Summary
- ✓ Method Blank Summary
- ✓ Laboratory Control Sample (LCS)
- ___ Matrix Spike / Matrix Spike Duplicate (MS/MSD)
- ___ Duplicate Summary
- ✓ Initial Calibration Summary
- ✓ Initial Calibration Verification / Continuing Calibration Verification (ICV/CCV)

Raw QC Data

- ✓ Analysis benchsheet
- ✓ Calculation spreadsheet
- ✓ Example calculations

Checked By: dlh **Date:** 6/16/06

007748

QC SUMMARY

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HOLDING TIMES
EQUIVALENT TO AFCEE FORM 9

alytical Method: LYDKHN
Login Number: L0606267

AAB#: WG215300

Client ID	Date Collected	Date Received	Date Extracted	Max Hold Time Ext.	Time Held Ext.	Date Analyzed	Max Hold Time Anal	Time Held Anal.	Q
A-SD-01	06/08/06	06/10/06	06/14/06	28	5.92	06/14/06	28	5.92	
B-SD-02	06/08/06	06/10/06	06/14/06	28	5.88	06/14/06	28	5.88	
C-SD-03	06/08/06	06/10/06	06/14/06	28	5.74	06/14/06	28	5.74	
D-SD-04	06/08/06	06/10/06	06/14/06	28	5.69	06/14/06	28	5.69	
E-SD-05	06/08/06	06/10/06	06/14/06	28	5.78	06/14/06	28	5.78	
F-SD-06	06/08/06	06/10/06	06/14/06	28	5.66	06/14/06	28	5.66	
G-SD-07	06/09/06	06/10/06	06/14/06	28	4.93	06/14/06	28	4.93	
H-SD-08	06/09/06	06/10/06	06/14/06	28	4.95	06/14/06	28	4.95	
I-SD-09	06/09/06	06/10/06	06/14/06	28	4.89	06/14/06	28	4.89	
FD-01	06/09/06	06/10/06	06/14/06	28	4.95	06/14/06	28	4.95	
C-SD-03-MS	06/08/06	06/10/06	06/14/06	28	5.74	06/14/06	28	5.74	
C-SD-03-MSD	06/08/06	06/10/06	06/14/06	28	5.74	06/14/06	28	5.74	

EXT = SEE PROJECT QAPP REQUIREMENTS
ANAL = SEE PROJECT QAPP REQUIREMENTS

KEMRON Environmental Services

METHOD BLANK SUMMARY

Login Number:L0606267 Work Group:WG215300
Blank File ID:TC06061508463321 Blank Sample ID:WG215300-01
Date Analyzed:06/14/06 Instrument ID:TOC-VWP
Time Analyzed:09:09 Method:LYDKHN
Analyst:DR

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
A-SD-01	L0606267-01	TC06061508463309	06/14/06 09:09	
B-SD-02	L0606267-02	TC06061508463310	06/14/06 09:09	
C-SD-03	L0606267-03	TC06061508463311	06/14/06 09:09	
C-SD-03-MS	L0606267-11	TC06061508463319	06/14/06 09:09	
C-SD-03-MSD	L0606267-12	TC06061508463320	06/14/06 09:09	
D-SD-04	L0606267-04	TC06061508463312	06/14/06 09:09	
DUP	WG215300-05	TC06061508463325	06/14/06 09:09	
E-SD-05	L0606267-05	TC06061508463313	06/14/06 09:09	
F-SD-06	L0606267-06	TC06061508463314	06/14/06 09:09	
FD-01	L0606267-10	TC06061508463318	06/14/06 09:09	
G-SD-07	L0606267-07	TC06061508463315	06/14/06 09:09	
H-SD-08	L0606267-08	TC06061508463316	06/14/06 09:09	
I-SD-09	L0606267-09	TC06061508463317	06/14/06 09:09	
LCS	WG215300-02	TC06061508463322	06/14/06 09:09	
LCS2	WG215300-03	TC06061508463323	06/14/06 09:09	

METHOD BLANK REPORT

Login Number: L0606267 Run Date: 06/14/2006 Sample ID: WG215300-01
Instrument ID: TOC-VWP Run Time: 09:09 Prep Method: LYDKHN
File ID: TC06061508463321 Analyst: DR Method: LYDKHN
Workgroup (AAB#): WG215300 Matrix: Solid Units: mg/kg
Contract #: Cal ID: TOC-VW-

Analytes	SQL	PQL	Concentration	Dilution	Qualifier
Total Organic Carbon	500	1000	500	1	U

MDL Method Detection Limit
RL Reporting/quantitation Limit

* Analyte concentration > RL

KEMRON FORMS - Modified 05/01/2006
Version 1.5 PDF File ID: 497949
Report generated 06/16/2006 13:49

007753

LABORATORY CONTROL SAMPLE (LCS)

Login Number: L0606267 Analyst: DR Prep Method: LYDKHN
Instrument ID: TOC-VWP Matrix: Soil Method: LYDKHN
Workgroup (AAB#): WG215300 Units: mg/kg
Sample ID: WG215300-02 LCS File ID: TC06061508463322 Run Date: 06/14/2006 09:09
Sample ID: WG215300-03 LCS2 File ID: TC06061508463323 Run Date: 06/14/2006 09:09

Analytes	LCS			LCS2			%RPD	%Rec Limits	RPD Lmt	Q
	Known	Found	% REC	Known	Found	% REC				
Total Organic Carbon	8840	7110	80.4	8840	8620	97.5	19.2	70 - 140	50	

CHEMRON FORMS - Modified 06/02/2006
Version 1.5 PDF File ID: 497950
Report generated 06/16/2006 13:49

MS/MSD REPORT

Loginnum: L0606267 Cal ID: TOC-VWP- Worknum: WG215300
Instrument ID: TOC-VWP Contract #: Prep Method: LYDKHN
Parent ID: L0606267-03 File ID: TC06061508463311 Dil: 1 Method: LYDKHN
Sample ID: L0606267-11 MS File ID: TC06061508463319 Dil: 1 Matrix: Soil
Sample ID: L0606267-12 MSD File ID: TC06061508463320 Dil: 1 Units: mg/kg
Percent Solid: 48.8

Analyte	Parent	MS Spiked	MS Found	MS %Rec	MSD Spiked	MSD Found	MSD %Rec	%RPD	%Rec Limits	RPD Limit	Q
Total Organic Carbon	10800	18100	25100	79.1	18100	29100	101	14.7	70 - 140	50	

* FAILS %REC LIMIT
+ FAILS RPD LIMIT

CHEMRON FORMS - Modified 06/02/2006
Version 1.5 PDF File ID: 497951
Report generated 06/16/2006 13:49

Instr.Information

System	TOCVW SSM
Detector	Wet Chemical

Deanna Roberts
12/19/05
TOC-5011 CURVE

Cal. Curve

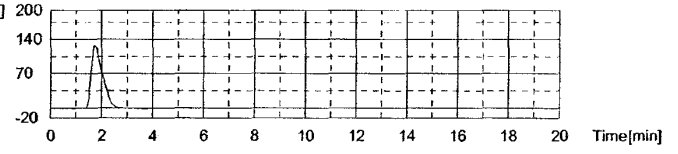
Sample Name:	Untitled
Sample ID:	Untitled
Cal. Curve:	SOILCURVE-12-19-2005.2005_12_19_08_47_09.cal
Status	Completed

Type	Anal.	Density
Standard	SSM-TC	

AbsC: 4000ug

No.	Area	CNV	Abs C	Weight	Rem.	Ex.	Date / Time
1	391.6	391.6	4000ug	100.0mg	*******		12/19/2005 08:55:30 AM

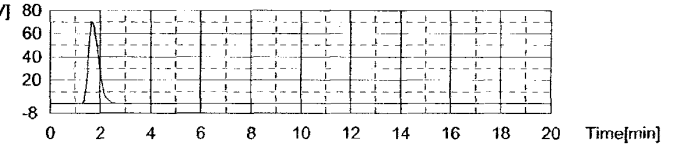
Mean Area 391.6
Mean CNV 391.6



AbsC: 2000ug

No.	Area	CNV	Abs C	Weight	Rem.	Ex.	Date / Time
1	201.4	201.4	2000ug	50.00mg	*******		12/19/2005 09:03:01 AM

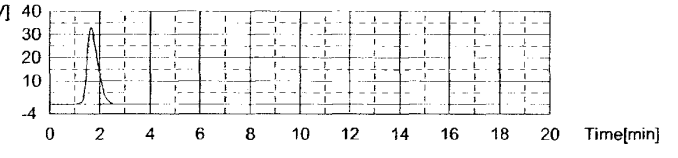
Mean Area 201.4
Mean CNV 201.4



AbsC: 1000ug

No.	Area	CNV	Abs C	Weight	Rem.	Ex.	Date / Time
1	101.1	101.1	1000ug	25.00mg	*******		12/19/2005 09:08:02 AM

Mean Area 101.1
Mean CNV 101.1

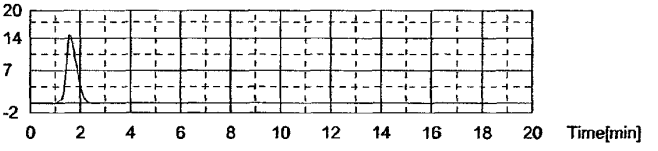


AbsC: 400.0ug

No.	Area	CNV	Abs C	Weight	Rem.	Ex.	Date / Time
1	42.69	42.69	400.0ug	10.00mg	*******		12/19/2005 09:13:17 AM

007756

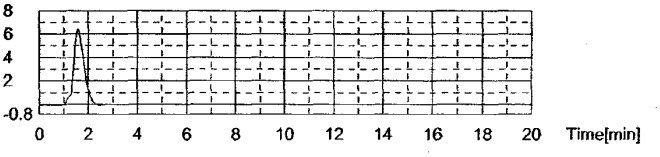
Mean Area 42.69
Mean CNV 42.69



AbsC: 120.0ug

No.	Area	CNV	Abs C	Weight	Rem.	Ex.	Date / Time
1	18.59	18.59	120.0ug	3.000mg	********		12/19/2005 09:24:16 AM

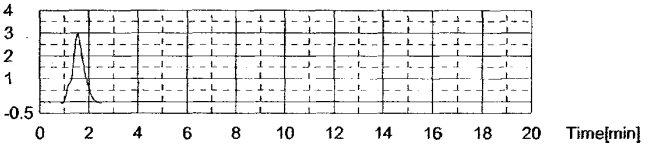
Mean Area 18.59
Mean CNV 18.59



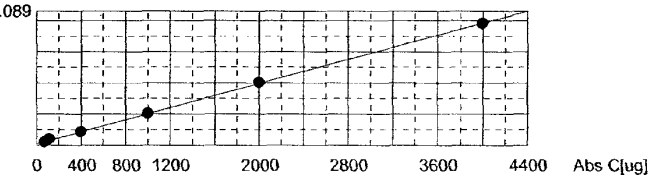
AbsC: 80.00ug

No.	Area	CNV	Abs C	Weight	Rem.	Ex.	Date / Time
1	9.384	9.384	80.00ug	2.000mg	********		12/19/2005 09:31:06 AM

Mean Area 9.384
Mean CNV 9.384



Slope: 0.09708
Intercept 4.495
r^2 0.999781
Zero Shift No



Sample

Sample Name: Untitled
Sample ID: Untitled
Origin: SOILCURVE-12-19-2005.cal
Status Completed
Chk. Result

Type	Anal.	Dil.	Density	Result
Unknown	SSM-TC	1.000	1.000mg/uL	SSM-TC:6557mg/L

87.7%

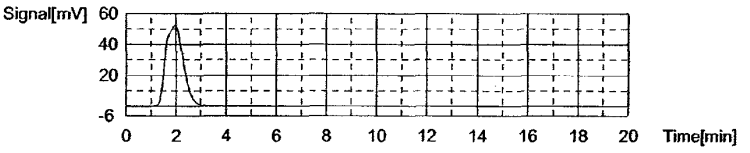
1. Det

Anal.: SSM-TC

No.	Area	CNV	Abs C	Conc.	Weight	Volume	Ex.	Cal. Curve	Date / Time
1	261.2	261.2	2644ug	6557mg/L	403.3mg	403uL		SOILCURVE-12-19-2005.2005_12_19_08_47	12/19/2005 09:43:08 AM

007757

Mean Area	261.2
Mean CNV	261.2
Mean Conc.	6557mg/L



WG#: _____

Total Organic Carbon (Soil)

Calibration curve: C 12/19/05 LCS (TOC): CS-04-37-13

CCV (TOC): CS-05-28-04 MS (TOC): _____

Daily dilution: 40,000

☑ Lloyd Kahn Method ☐ Other: _____ SOP: K 5310 Rev. 7

Instrument: Shimadza TOC-VWP/SSM-5000A

DAILY CHECK

☑ drain reservoir filled ☑ sufficient gas ☑ waste container ☑ tubing connections

Position	Sample ID	Weight (mg) of 40,000	Position	Sample ID	Weight (mg)
1	40,000	100	26		
2	20,000	50	27		
3	10,000	25	28		
4	4,000	10	29		
5	1,200	3	30		
6	800	2	31		
7	ICV 7480	403.3	32		
8			33		
9			34		
10			35		
11			36		
12			37		
13			38		
14			39		
15			40		
16			41		
17			42		
18			43		
19			44		
20			45		
21			46		
22			47		
23			48		
24			49		
25			50		

Analyst: Deanna Roberts Date: 12/19/05 Time: 0931

Approved by: _____ 12/20/05

007759

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RAW DATA

007761

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Wet Lab

Parameter: TOC-S
Analyst/Date/Time: DR 6/14/06 @0909
SOP: K-5310 Revision: 7
Work Group(s): 215300
Preservation Check: Yes ____ No ✓

	Analyst	
Calibration/Linearity	✓	Date: 12/19/05
Second Source Check		
ICV/CCV (std)	✓	
ICB/CCB	✓	
Blank	✓	
LCS/LCS Dup	✓	
MS/MSD	✓	
Duplicate	✓	
Record On ACS Benchsheet	✓	
Data Upload		
QC Form(s)	✓	
QC Violation Sheet		
Signed Raw Data	✓	
STD/LCS On Benchsheet	✓	

Primary Reviewer Initials & Date Checked DR 6/14/06

Secondary Reviewer Initials & Date Checked dch 6/14/06

✓ • Check for compliance with Method and project-specific requirements
✓ • Check the completeness of the reported information
✓ • Check the information for the report narrative
✓ • Check the reasonableness of results

Comments: _____

√- Checked & OK
NA - Not Applicable
DL - Diluted Out

Scanned 6/16

007763

WG#: 215300

Total Organic Carbon (Soil)

Calibration curve: 12/19/05
LCS (TOC): STD11482
CCV (TOC): CS-05-28-04
MS (TOC): STD11482
Daily dilution: 40,000

☑ Lloyd Kahn Method
☐ Other:

SOP: K 5310 Rev. 7
Instrument: Shimadza TOC-VWP/SSM-5000A

DAILY CHECK

☑ drain reservoir filled
☑ sufficient gas
☑ waste container
☑ tubing connections

Position	Sample ID	Weight (mg)
1	CCV 40,000	100
2	CCB	100
3	Blank	483.9
4	LCS 8840	498.8
5	LCSDUP	423.9
6	06-267-01	447.9
7	DUP 01	436.8
8	02	375.4
9	03	530.1
10	04	513.1
11	05	352.7
12	06	380.9
13	CCV 40000	100
14	CCB	100
15	06-267-07	311.9
16	06-267-08	367.8
17	09	473.9
18	10	361.5
19	ms 11	399.7
20	msd 12	368.8
21	06-243-01	367.9
22	02	371.8
23	03	339.7
24	04	336.1
25	CCV 40,000	100

Position	Sample ID	Weight (mg)
26	CCB	100
27	06-243-05	385.4
28	06	424.2
29	07	339.9
30	08	468.7
31	CCV 40,000	100
32	CCB	100
33		
34		
35		
36		
37		
38		
39		
40		
41		
42		
43		
44		
45		
46		
47		
48		
49		
50		

Analyst: Jeanna Robert Date: 6/14/06 Time: 0909
Approved by: dm 6/14/06

007764

TOTAL SOIL WET WEIGHTS

LCS (_____ mg/kg):

ADT	SAMPLE	WEIGHT (mg)	COMMENTS
OR 6/14/06	Blank	483.9	
	LCS	398.8	
	LCSDUP	423.9	
	06-267-01	447.9	
	DUP -01	436.8	
	02	375.4	
	03	530.1	
	04	513.1	
	05	352.7	
	06	380.9	
	07	311.9	
	08	367.8	
	09	473.9	
	10	361.5	
	MS 11	399.7/400.0	
	MSD 12	368.8/368.0	
	06-243-01	367.9	
	02	371.8	
	03	339.7	
	04	336.1	
	05	385.4	
	06	424.2	
	07	339.9	
	08	468.7	

Reviewed By: JMH 6/14/06

007765

	Analy	Sample Name	Diluti	Result	Status	Date / Time
1	SSM-	CCV 40000	1.00	SSM-TC:40318mg/L	Complet	06/14/2006 09:09:04
2	SSM-	CCB	1.00	!!Error!! SSM-TC:-463.0mg/L	Complet	06/14/2006 09:17:24
3	SSM-	BLANK	1.00	!!Error!! SSM-TC:-30.88mg/L	Complet	06/14/2006 09:22:36
4	SSM-	LCS 8840	1.00	SSM-TC:7106mg/L	Complet	06/14/2006 09:30:16
5	SSM-	LCSDUP 8840	1.00	SSM-TC:8617mg/L	Complet	06/14/2006 09:37:05
6	SSM-	06-267-01	1.00	SSM-TC:5115mg/L	Complet	06/14/2006 09:42:43
7	SSM-	DUP 267-01	1.00	SSM-TC:5077mg/L	Complet	06/14/2006 09:49:15
8	SSM-	06-267-02	1.00	SSM-TC:3973mg/L	Complet	06/14/2006 09:54:06
9	SSM-	06-267-03	1.00	SSM-TC:5249mg/L	Complet	06/14/2006 09:59:16
10	SSM-	06-267-04	1.00	SSM-TC:3849mg/L	Complet	06/14/2006 10:33:07
11	SSM-	06-267-05	1.00	SSM-TC:3061mg/L	Complet	06/14/2006 10:38:37
12	SSM-	06-267-06	1.00	SSM-TC:2513mg/L	Complet	06/14/2006 10:43:51
13	SSM-	CCV 40000	1.00	SSM-TC:40494mg/L	Complet	06/14/2006 10:48:44
14	SSM-	CCB	1.00	!!Error!! SSM-TC:-463.0mg/L	Complet	06/14/2006 10:54:36
15	SSM-	06-267-07	1.00	SSM-TC:19975mg/L	Complet	06/14/2006 11:01:07
16	SSM-	06-267-08	1.00	SSM-TC:4271mg/L	Complet	06/14/2006 11:10:34
17	SSM-	06-267-09	1.00	SSM-TC:453.8mg/L	Complet	06/14/2006 11:14:50
18	SSM-	06-267-10	1.00	SSM-TC:4941mg/L	Complet	06/14/2006 11:19:52
19	SSM-	06-267-11 MS	1.00	SSM-TC:12244mg/L	Complet	06/14/2006 12:30:34
20	SSM-	06-267-12 MSD	1.00	SSM-TC:14181mg/L	Complet	06/14/2006 12:39:32
21	SSM-	06-243-01	1.00	SSM-TC:4396mg/L	Complet	06/14/2006 12:46:32
22	SSM-	06-243-02	1.00	SSM-TC:366.1mg/L	Complet	06/14/2006 12:51:03
23	SSM-	06-243-03	1.00	SSM-TC:3042mg/L	Complet	06/14/2006 12:56:06
24	SSM-	06-243-04	1.00	SSM-TC:1077mg/L	Complet	06/14/2006 01:02:37
25	SSM-	CCV 40000	1.00	SSM-TC:40700mg/L	Complet	06/14/2006 01:08:30
26	SSM-	CCB	1.00	!!Error!! SSM-TC:-463.0mg/L	Complet	06/14/2006 01:17:49
27	SSM-	06-243-05	1.00	SSM-TC:3157mg/L	Complet	06/14/2006 01:26:30
28	SSM-	06-243-06	1.00	SSM-TC:692.2mg/L	Complet	06/14/2006 01:31:27
29	SSM-	06-243-07	1.00	SSM-TC:2697mg/L	Complet	06/14/2006 01:37:01
30	SSM-	06-243-08	1.00	SSM-TC:1333mg/L	Complet	06/14/2006 01:42:36
31	SSM-	CCV 40000	1.00	SSM-TC:40473mg/L	Complet	06/14/2006 01:48:26
32	SSM-	CCB	1.00	!!Error!! SSM-TC:-463.0mg/L	Complet	06/14/2006 02:02:34

Deanna Roberts
6/14/06

Instr.Information

System TOCVW SSM
Detector Wet Chemical

Deanna Roberts
6/14/06

Sample

Sample Name: CCV 40000
Sample ID:
Origin: SOIL-12-19-2005.met
Status Completed
Chk. Result

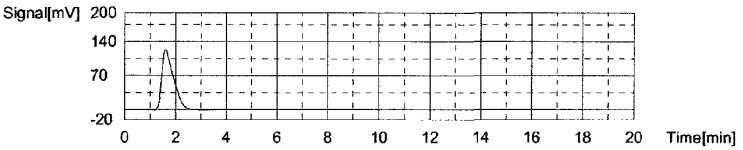
Type	Anal.	Dil.	Density	Result
Unknown	SSM-TC	1.000	1.000mg/uL	SSM-TC:40318mg/L

1. Det

Anal.: SSM-TC

No.	Area	CNV	Abs C	Conc.	Weight	Volume	Ex.	Cal. Curve	Date / Time
1	395.9	395.9	4032ug	40318mg/L	100.0mg	100uL		SOILCURVE-12-19-2005.2005_12_19_08_47	06/14/2006 09:09:04 AM

Mean Area 395.9
Mean CNV 395.9
Mean Conc. 40318mg/L



Sample

Sample Name: CCB
Sample ID:
Origin: SOIL-12-19-2005.met
Status Completed
Chk. Result

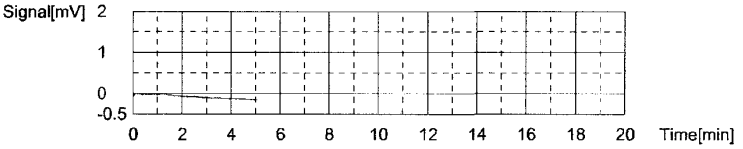
Type	Anal.	Dil.	Density	Result
Unknown	SSM-TC	1.000	1.000mg/uL	!!Error!! SSM-TC:-463.0mg/L

1. Det

Anal.: SSM-TC

No.	Area	CNV	Abs C	Conc.	Weight	Volume	Ex.	Cal. Curve	Date / Time
1	0.000	0.000	-46.30ug	-463.0mg/L	100.0mg	100uL		SOILCURVE-12-19-2005.2005_12_19_08_47	06/14/2006 09:17:24 AM

Mean Area 0.000
Mean CNV 0.000
Mean Conc. -463.0mg/L



007767

Sample

Sample Name: BLANK
Sample ID:
Origin: SOIL-12-19-2005.met
Status Completed
Chk. Result

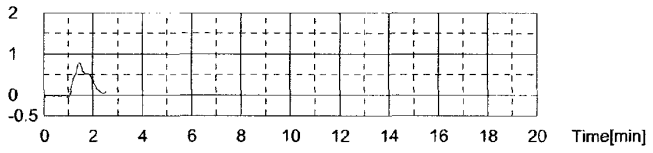
Type	Anal.	Dil.	Density	Result
Unknown	SSM-TC	1.000	1.000mg/uL	!!Error!! SSM-TC:-30.88mg/L

1. Det

Anal.: SSM-TC

No.	Area	CNV	Abs C	Conc.	Weight	Volume	Ex.	Cal. Curve	Date / Time
1	3.044	3.044	-14.94ug	-30.88mg/L	483.9mg	483uL		SOILCURVE-12-19-2005.2005_12_19_08_47	06/14/2006 09:22:36 AM

Mean Area 3.044
Mean CNV 3.044
Mean Conc. -30.88mg/L



Sample

Sample Name: LCS 8840
Sample ID:
Origin: SOIL-12-19-2005.met
Status Completed
Chk. Result

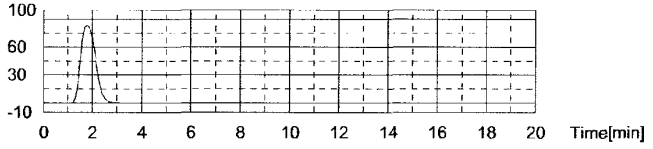
Type	Anal.	Dil.	Density	Result
Unknown	SSM-TC	1.000	1.000mg/uL	SSM-TC:7106mg/L

1. Det

Anal.: SSM-TC

No.	Area	CNV	Abs C	Conc.	Weight	Volume	Ex.	Cal. Curve	Date / Time
1	348.6	348.6	3545ug	7106mg/L	498.8mg	498uL		SOILCURVE-12-19-2005.2005_12_19_08_47	06/14/2006 09:30:16 AM

Mean Area 348.6
Mean CNV 348.6
Mean Conc. 7106mg/L



Sample

Sample Name: LCSDUP 8840
Sample ID:
Origin: SOIL-12-19-2005.met
Status Completed
Chk. Result

007768

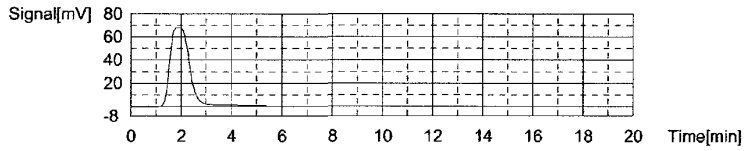
Type	Anal.	Dil.	Density	Result
Unknown	SSM-TC	1.000	1.000mg/uL	SSM-TC:8617mg/L

1. Det

Anal.: SSM-TC

No.	Area	CNV	Abs C	Conc.	Weight	Volume	Ex.	Cal. Curve	Date / Time
1	359.1	359.1	3653ug	8617mg/L	423.9mg	423uL		SOILCURVE-12-19-2005.2005_12_19_08_47	06/14/2006 09:37:05 AM

Mean Area 359.1
Mean CNV 359.1
Mean Conc. 8617mg/L



Sample

Sample Name: 06-267-01
Sample ID:
Origin: SOIL-12-19-2005.met
Status Completed
Chk. Result

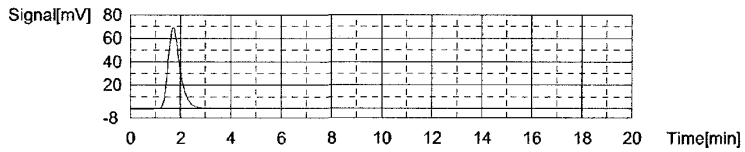
Type	Anal.	Dil.	Density	Result
Unknown	SSM-TC	1.000	1.000mg/uL	SSM-TC:5115mg/L

1. Det

Anal.: SSM-TC

No.	Area	CNV	Abs C	Conc.	Weight	Volume	Ex.	Cal. Curve	Date / Time
1	226.9	226.9	2291ug	5115mg/L	447.9mg	447uL		SOILCURVE-12-19-2005.2005_12_19_08_47	06/14/2006 09:42:43 AM

Mean Area 226.9
Mean CNV 226.9
Mean Conc. 5115mg/L



Sample

Sample Name: DUP 267-01
Sample ID:
Origin: SOIL-12-19-2005.met
Status Completed
Chk. Result

Type	Anal.	Dil.	Density	Result
Unknown	SSM-TC	1.000	1.000mg/uL	SSM-TC:5077mg/L

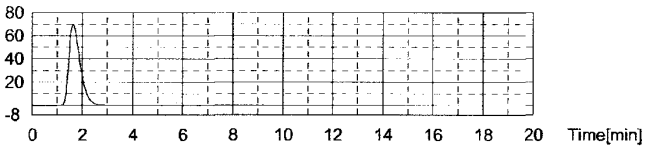
1. Det

Anal.: SSM-TC

007769

No.	Area	CNV	Abs C	Conc.	Weight	Volume	Ex.	Cal. Curve	Date / Time
1	219.8	219.8	2218ug	5077mg/L	436.8mg	436uL		SOILCURVE-12-19-2005.2005_12_19_08_47	06/14/2006 09:49:15 AM

Mean Area 219.8
Mean CNV 219.8
Mean Conc. 5077mg/L



Sample

Sample Name: 06-267-02
Sample ID:
Origin: SOIL-12-19-2005.met
Status Completed
Chk. Result

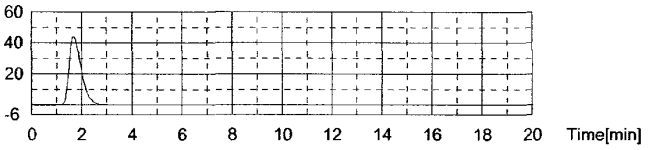
Type	Anal.	Dil.	Density	Result
Unknown	SSM-TC	1.000	1.000mg/uL	SSM-TC:3973mg/L

1. Det

Anal.: SSM-TC

No.	Area	CNV	Abs C	Conc.	Weight	Volume	Ex.	Cal. Curve	Date / Time
1	149.3	149.3	1492ug	3973mg/L	375.4mg	375uL		SOILCURVE-12-19-2005.2005_12_19_08_47	06/14/2006 09:54:06 AM

Mean Area 149.3
Mean CNV 149.3
Mean Conc. 3973mg/L



Sample

Sample Name: 06-267-03
Sample ID:
Origin: SOIL-12-19-2005.met
Status Completed
Chk. Result

Type	Anal.	Dil.	Density	Result
Unknown	SSM-TC	1.000	1.000mg/uL	SSM-TC:5249mg/L

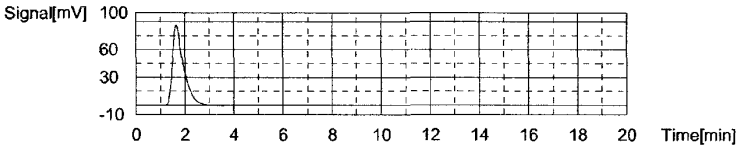
1. Det

Anal.: SSM-TC

No.	Area	CNV	Abs C	Conc.	Weight	Volume	Ex.	Cal. Curve	Date / Time
1	274.6	274.6	2782ug	5249mg/L	530.1mg	530uL		SOILCURVE-12-19-2005.2005_12_19_08_47	06/14/2006 09:59:16 AM

007770

Mean Area 274.6
Mean CNV 274.6
Mean Conc. 5249mg/L



Sample

Sample Name: 06-267-04
Sample ID:
Origin: SOIL-12-19-2005.met
Status Completed
Chk. Result

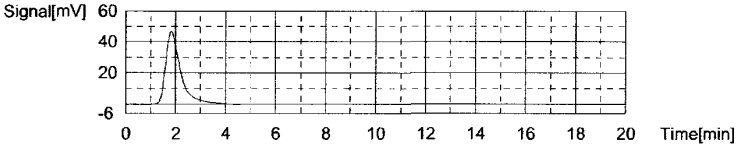
Type	Anal.	Dil.	Density	Result
Unknown	SSM-TC	1.000	1.000mg/uL	SSM-TC:3849mg/L

1. Det

Anal.: SSM-TC

No.	Area	CNV	Abs C	Conc.	Weight	Volume	Ex.	Cal. Curve	Date / Time
1	196.2	196.2	1975ug	3849mg/L	513.1mg	513uL		SOILCURVE-12-19-2005.2005_12_19_08_47	06/14/2006 10:33:07 AM

Mean Area 196.2
Mean CNV 196.2
Mean Conc. 3849mg/L



Sample

Sample Name: 06-267-05
Sample ID:
Origin: SOIL-12-19-2005.met
Status Completed
Chk. Result

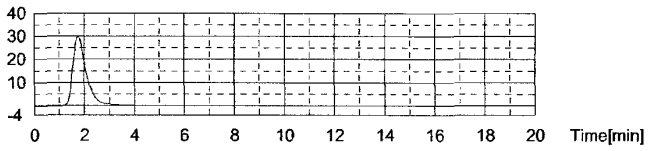
Type	Anal.	Dil.	Density	Result
Unknown	SSM-TC	1.000	1.000mg/uL	SSM-TC:3061mg/L

1. Det

Anal.: SSM-TC

No.	Area	CNV	Abs C	Conc.	Weight	Volume	Ex.	Cal. Curve	Date / Time
1	109.3	109.3	1080ug	3061mg/L	352.7mg	352uL		SOILCURVE-12-19-2005.2005_12_19_08_47	06/14/2006 10:38:37 AM

Mean Area 109.3
Mean CNV 109.3
Mean Conc. 3061mg/L



Sample

Sample Name: 06-267-06
Sample ID:
Origin: SOIL-12-19-2005.met
Status Completed
Chk. Result

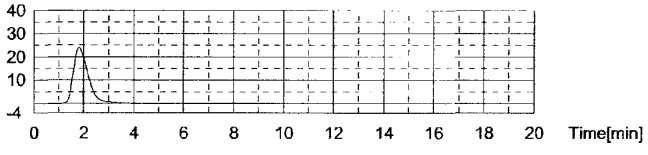
Type	Anal.	Dil.	Density	Result
Unknown	SSM-TC	1.000	1.000mg/uL	SSM-TC:2513mg/L

1. Det

Anal.: SSM-TC

No.	Area	CNV	Abs C	Conc.	Weight	Volume	Ex.	Cal. Curve	Date / Time
1	97.41	97.41	957.1ug	2513mg/L	380.9mg	380uL		SOILCURVE-12-19-2005.2005_12_19_08_47	06/14/2006 10:43:51 AM

Mean Area 97.41
Mean CNV 97.41
Mean Conc. 2513mg/L



Sample

Sample Name: CCV 40000
Sample ID:
Origin: SOIL-12-19-2005.met
Status Completed
Chk. Result

Type	Anal.	Dil.	Density	Result
Unknown	SSM-TC	1.000	1.000mg/uL	SSM-TC:40494mg/L

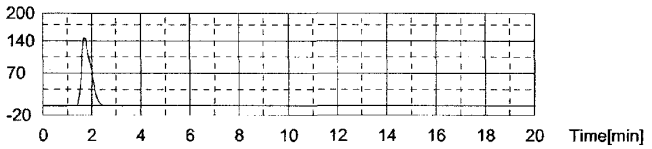
1. Det

Anal.: SSM-TC

No.	Area	CNV	Abs C	Conc.	Weight	Volume	Ex.	Cal. Curve	Date / Time
1	397.6	397.6	4049ug	40494mg/L	100.0mg	100uL		SOILCURVE-12-19-2005.2005_12_19_08_47	06/14/2006 10:48:44 AM

007772

Mean Area 397.6
Mean CNV 397.6
Mean Conc. 40494mg/L



Sample

Sample Name: CCB
Sample ID:
Origin: SOIL-12-19-2005.met
Status Completed
Chk. Result

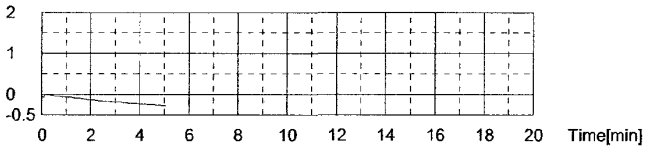
Type	Anal.	Dil.	Density	Result
Unknown	SSM-TC	1.000	1.000mg/uL	!!Error!! SSM-TC:-463.0mg/L

1. Det

Anal.: SSM-TC

No.	Area	CNV	Abs C	Conc.	Weight	Volume	Ex.	Cal. Curve	Date / Time
1	0.000	0.000	-46.30ug	-463.0mg/L	100.0mg	100uL		SOILCURVE-12-19-2005.2005_12_19_08_47	06/14/2006 10:54:36 AM

Mean Area 0.000
Mean CNV 0.000
Mean Conc. -463.0mg/L



Sample

Sample Name: 06-267-07
Sample ID:
Origin: SOIL-12-19-2005.met
Status Completed
Chk. Result

Type	Anal.	Dil.	Density	Result
Unknown	SSM-TC	1.000	1.000mg/uL	SSM-TC:19975mg/L

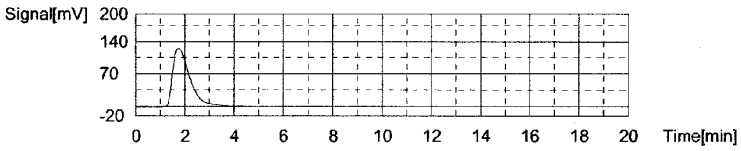
1. Det

Anal.: SSM-TC

No.	Area	CNV	Abs C	Conc.	Weight	Volume	Ex.	Cal. Curve	Date / Time
1	609.3	609.3	6230ug	19975mg/L	311.9mg	311uL		SOILCURVE-12-19-2005.2005_12_19_08_47	06/14/2006 11:01:07 AM

007773

Mean Area 609.3
Mean CNV 609.3
Mean Conc. 19975mg/L



Sample

Sample Name: 06-267-08
Sample ID:
Origin: SOIL-12-19-2005.met
Status Completed
Chk. Result

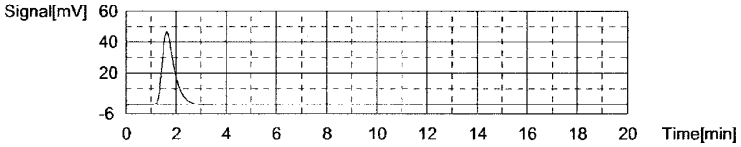
Type	Anal.	Dil.	Density	Result
Unknown	SSM-TC	1.000	1.000mg/uL	SSM-TC:4271mg/L

1. Det

Anal.: SSM-TC

No.	Area	CNV	Abs C	Conc.	Weight	Volume	Ex.	Cal. Curve	Date / Time
1	157.0	157.0	1571ug	4271mg/L	367.8mg	367uL		SOILCURVE-12-19-2005.2005_12_19_08_47	06/14/2006 11:10:34 AM

Mean Area 157.0
Mean CNV 157.0
Mean Conc. 4271mg/L



Sample

Sample Name: 06-267-09
Sample ID:
Origin: SOIL-12-19-2005.met
Status Completed
Chk. Result

Type	Anal.	Dil.	Density	Result
Unknown	SSM-TC	1.000	1.000mg/uL	SSM-TC:453.8mg/L

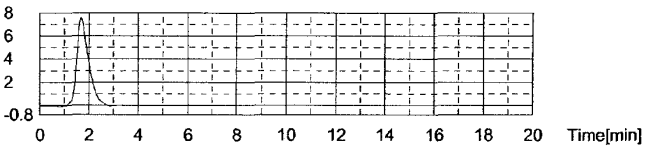
1. Det

Anal.: SSM-TC

No.	Area	CNV	Abs C	Conc.	Weight	Volume	Ex.	Cal. Curve	Date / Time
1	25.37	25.37	215.0ug	453.8mg/L	473.9mg	473uL		SOILCURVE-12-19-2005.2005_12_19_08_47	06/14/2006 11:14:50 AM

007774

Mean Area 25.37
Mean CNV 25.37
Mean Conc. 453.8mg/L



Sample

Sample Name: 06-267-10
Sample ID:
Origin: SOIL-12-19-2005.met
Status Completed
Chk. Result

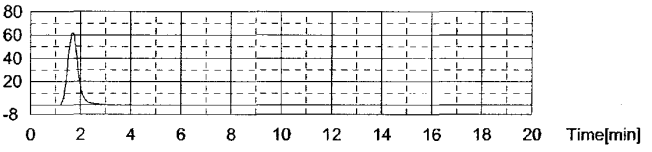
Type	Anal.	Dil.	Density	Result
Unknown	SSM-TC	1.000	1.000mg/uL	SSM-TC:4941mg/L

1. Det

Anal.: SSM-TC

No.	Area	CNV	Abs C	Conc.	Weight	Volume	Ex.	Cal. Curve	Date / Time
1	177.9	177.9	1786ug	4941mg/L	361.5mg	361uL		SOILCURVE-12-19-2005.2005_12_19_08_47	06/14/2006 11:19:52 AM

Mean Area 177.9
Mean CNV 177.9
Mean Conc. 4941mg/L



Sample

Sample Name: 06-267-11 MS
Sample ID:
Origin: SOIL-12-19-2005.met
Status Completed
Chk. Result

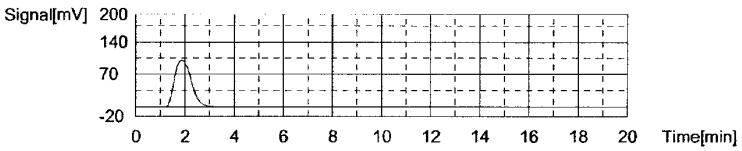
Type	Anal.	Dil.	Density	Result
Unknown	SSM-TC	1.000	1.000mg/uL	SSM-TC:12244mg/L

1. Det

Anal.: SSM-TC

No.	Area	CNV	Abs C	Conc.	Weight	Volume	Ex.	Cal. Curve	Date / Time
1	479.6	479.6	4894ug	12244mg/L	399.7mg	399uL		SOILCURVE-12-19-2005.2005_12_19_08_47	06/14/2006 12:30:34 PM

Mean Area 479.6
Mean CNV 479.6
Mean Conc. 12244mg/L



Sample

Sample Name: 06-267-12 MSD
Sample ID:
Origin: SOIL-12-19-2005.met
Status Completed
Chk. Result

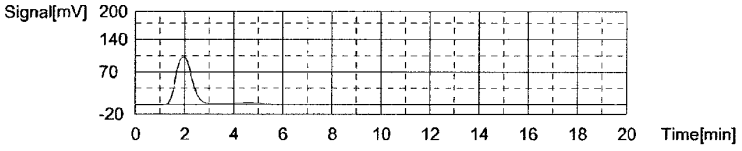
Type	Anal.	Dil.	Density	Result
Unknown	SSM-TC	1.000	1.000mg/uL	SSM-TC:14181mg/L

1. Det

Anal.: SSM-TC

No.	Area	CNV	Abs C	Conc.	Weight	Volume	Ex.	Cal. Curve	Date / Time
1	512.2	512.2	5230ug	14181mg/L	368.8mg	368uL		SOILCURVE-12-19-2005.2005_12_19_08_47	06/14/2006 12:39:32 PM

Mean Area 512.2
Mean CNV 512.2
Mean Conc. 14181mg/L



Sample

Sample Name: 06-243-01
Sample ID:
Origin: SOIL-12-19-2005.met
Status Completed
Chk. Result

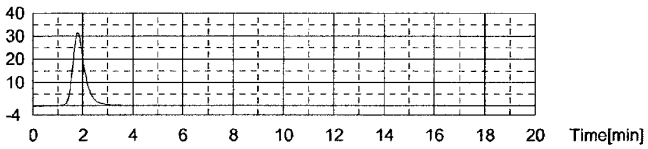
Type	Anal.	Dil.	Density	Result
Unknown	SSM-TC	1.000	1.000mg/uL	SSM-TC:4396mg/L

1. Det

Anal.: SSM-TC

No.	Area	CNV	Abs C	Conc.	Weight	Volume	Ex.	Cal. Curve	Date / Time
1	161.5	161.5	1617ug	4396mg/L	367.9mg	367uL		SOILCURVE-12-19-2005.2005_12_19_08_47	06/14/2006 12:46:32 PM

Mean Area 104.8
Mean CNV 104.8
Mean Conc. 3042mg/L



Sample

Sample Name: 06-243-04
Sample ID:
Origin: SOIL-12-19-2005.met
Status Completed
Chk. Result

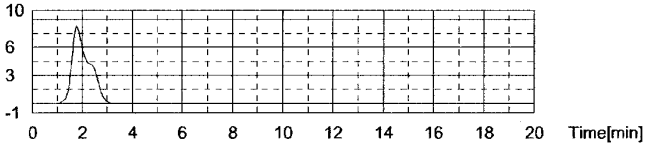
Type	Anal.	Dil.	Density	Result
Unknown	SSM-TC	1.000	1.000mg/uL	SSM-TC:1077mg/L

1. Det

Anal.: SSM-TC

No.	Area	CNV	Abs C	Conc.	Weight	Volume	Ex.	Cal. Curve	Date / Time
1	39.63	39.63	361.9ug	1077mg/L	336.1mg	336uL		SOILCURVE-12-19-2005.2005_12_19_08_47	06/14/2006 01:02:37 PM

Mean Area 39.63
Mean CNV 39.63
Mean Conc. 1077mg/L



Sample

Sample Name: CCV 40000
Sample ID:
Origin: SOIL-12-19-2005.met
Status Completed
Chk. Result

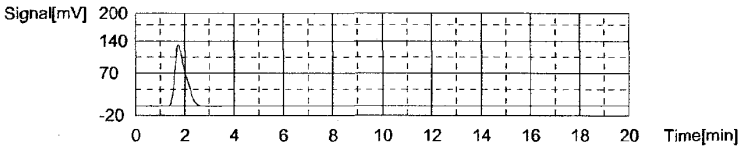
Type	Anal.	Dil.	Density	Result
Unknown	SSM-TC	1.000	1.000mg/uL	SSM-TC:40700mg/L

1. Det

Anal.: SSM-TC

No.	Area	CNV	Abs C	Conc.	Weight	Volume	Ex.	Cal. Curve	Date / Time
1	399.6	399.6	4070ug	40700mg/L	100.0mg	100uL		SOILCURVE-12-19-2005.2005_12_19_08_47	06/14/2006 01:08:30 PM

Mean Area 399.6
Mean CNV 399.6
Mean Conc. 40700mg/L



Sample

Sample Name: CCB
Sample ID:
Origin: SOIL-12-19-2005.met
Status Completed
Chk. Result

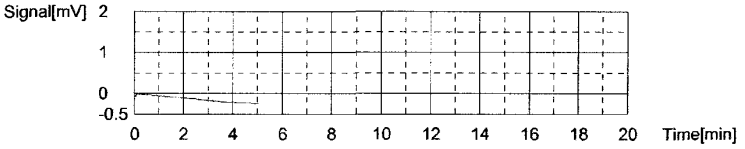
Type	Anal.	Dil.	Density	Result
Unknown	SSM-TC	1.000	1.000mg/uL	!!Error!! SSM-TC:-463.0mg/L

1. Det

Anal.: SSM-TC

No.	Area	CNV	Abs C	Conc.	Weight	Volume	Ex.	Cal. Curve	Date / Time
1	0.000	0.000	-46.30ug	-463.0mg/L	100.0mg	100uL		SOILCURVE-12-19-2005.2005_12_19_08_47	06/14/2006 01:17:49 PM

Mean Area 0.000
Mean CNV 0.000
Mean Conc. -463.0mg/L



Sample

Sample Name: 06-243-05
Sample ID:
Origin: SOIL-12-19-2005.met
Status Completed
Chk. Result

Type	Anal.	Dil.	Density	Result
Unknown	SSM-TC	1.000	1.000mg/uL	SSM-TC:3157mg/L

1. Det

Anal.: SSM-TC

No.	Area	CNV	Abs C	Conc.	Weight	Volume	Ex.	Cal. Curve	Date / Time
1	122.6	122.6	1217ug	3157mg/L	385.4mg	385uL		SOILCURVE-12-19-2005.2005_12_19_08_47	06/14/2006 01:26:30 PM

007778

KEMRON ENVIRONMENTAL SERVICES
CALCULATIONS REVISION 1

Cyanide (total and weak-dissociable)

[(absorbance - intercept)/(slope * dilution)/(volume)] * 50 = mg/L or mg/kg CN

where: absorbance = reading from the spectrophotometer
intercept = calculated from calibration standard absorbencies
slope = calculated from calibration standard absorbencies
dilution = dilution of the distillate in decimal form (ex. 1/5 dilution = 0.2)
volume = grams or mL of sample used in the distillation
50 = total volume (mL) in the distillation flask

Cyanide (amenable to chlorination)

The cyanide calculation is used to calculate the cyanide in the total and treated portion of the sample

(Y - X) = mg/L of mg/kg CN amenable to chlorination

where: Y = result for the total sample
X = result for the treated sample

Spectrophotometric (excluding all forms of cyanide)

(absorbance - intercept)/(slope * dilution) = mg/L

where: absorbance = reading from the spectrophotometer
intercept = calculated from calibration standard absorbencies (unique to each parameter)
slope = calculated from calibration standard absorbencies (unique to each parameter)
dilution = dilution factor in decimal form (ex. 1/5 dilution = 0.2)

Direct Readout Parameters (includes pH, fluoride, turbidity, color, residual chlorine, automated procedures)

(Readout)/(dilution) = mg/L

where: readout = direct readout from the instrument
dilution = dilution in decimal form (ex. 1/5 dilution = 0.2)

Nitrocellulose

(NO3NO2 * Fvol)/(Ivol * 0.126) = mg/L NC

where: Fvol = final volume (ml)
Ivol = initial volume (ml or grams)
0.126 = weight fraction of nitrogen in NC
NO3NO2 = concentration of nitrate-nitrite (mg/L)
NC = concentration of nitrocellulose (mg/L or mg/kg)

007779

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2.0 Attachments

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Kemron Environmental Services
Analyst Listing
June 19, 2006

AJF - AMANDA J. FICKIESEN	ALB - ANNIE L. BOCK	ALT - ANN L. THAYER
BRG - BRENDA R. GREGORY	CAF - CHERYL A. FLOWERS	CAK - CHERYL A. KOELSCH
CEB - CHAD E. BARNES	CLC - CHRYS L. CRAWFORD	CLK - CARL L. KING
CLS - CARA L. STRICKLER	CLW - CHARISSA L. WINTERS	CM - CHARLIE MARTIN
CMS - CRYSTAL M. STEPHENS	CPD - CHAD P. DAVIS	CRC - CARLA R. COCHRAN
CSA - LUCINDA S. ARNOLD	CSH - CHRIS S. HILL	DAS - DALLAS A. SULLIVAN
DD - DIANE M. DENNIS	DDE - DEBRA D. ELLIOTT	DEL - DON E. LIGHTFRITZ
DEV - DAVID E. VANDENBERG	DGB - DOUGLAS G. BUTCHER	DIH - DEANNA I. HESSON
DLB - DAVID L. BUMGARNER	DLP - DOROTHY L. PAYNE	DLR - DIANNA L. RAUCH
DR - DEANNA ROBERTS	DSM - DAVID S. MOSSOR	DST - DENNIS S. TEPE
ECL - ERIC C. LAWSON	ED - EMILY E. DECKER	HAV - HEMA VILASAGAR
JAL - JOHN A. LENT	JKT - JANE K. THOMPSON	JLS - JANICE L. SCHIMMEL
JNB - JOSHUA N. BOOTH	JWR - JOHN W. RICHARDS	JWS - JACK W. SHEAVES
JYH - JI Y. HU	KCZ - KEVIN C. ZUMBRO	KEB - KATHRYN E. BARNES
KHR - KIM H. RHODES	KRA - KATHY R. ALBERTSON	LKN - LINDA K. NEDEFF
LSB - LESLIE S. BUCINA	MDA - MIKE D. ALBERTSON	MDC - MICHAEL D. COCHRAN
MES - MARY E. SCHILLING	MKZ - MARILYN K. ZUMBRO	MLR - MARY L. ROCHOTTE
MLS - MICHAEL L. SCHIMMEL	MMB - MAREN M. BEERY	MSW - MATT S. WILSON
NJB - NATALIE J. BOOTH	OGT - OKEY G. TUCKER	PAS - PATRICK A. STREET
PJM - PAUL J. MILLER	RB - ROBERT BUCHANAN	RDC - REBECCA D. CUTLIP
REK - ROBERT E. KYER	RWC - RODNEY W. CAMPBELL	SCM - SUSAN C. MOELLENDICK
SLM - STEPHANIE L. MOSSBURG	SLP - SHERI L. PFALZGRAF	SMH - SHAUNA M. HYDE
TMB - TIFFANY M. BAILEY	TMM - TAMMY M. MORRIS	VC - VICKI COLLIER
WFM - WALTER F. MARTIN		

B2202

Kemron
CHAIN OF CUSTODY RECORD

156 Starlite Drive
Marietta, OH 45760
Phone: (800) 373-4071 x176; FAX: (740) 373-483

Project/Contact Information	
Project #	344479.SN.01
Project Name	State Marine Superfund Site
Report Copy to	John Ynfante
Company Name/Contact	CH2M HILL-Houston / John Ynfante

Sampling Date	Sampling Time	Type Comp	Type Grab	Matrix Water	Matrix Sediment	Matrix Air	Client Sample ID (9 Characters Max)	LAB QC	Total Number of Containers	TAL Metals	SVOCs (8270C)	PAHs (8270-SIM)	TOC	Grain Size	Preservative
06/08/06	1100	X			X		A-SD-01			X	X	X	X	X	
06/08/06	1205	X			X		B-SD-02			X	X	X	X	X	
06/08/06	1530	X			X		C-SD-03			X	X	X	X	X	
06/08/06	1640	X			X		D-SD-04			X	X	X	X	X	
06/08/06	1420	X			X		E-SD-05			X	X	X	X	X	
06/08/06	1725	X			X		F-SD-06			X	X	X	X	X	
06/09/06	1050	X			X		G-SD-07			X	X	X	X	X	
06/09/06	1015	X			X		H-SD-08			X	X	X	X	X	
06/09/06	1145	X			X		I-SD-09			X	X	X	X	X	
06/01/06	1015	X			X		FD-01			X	X	X	X	X	
06/08/06	1530	X			X		MS/MSD	X							

THIS AREA FOR LAB USE ONLY		
Lab #	Pg 1	of 1
Lab PM	Custody Review	
Log In	LIMS Verification	
pH	Cust Seals Y N Ice Y N	
QC Level 1 2 3		
Cooler Temperature		
Alternate Description	Lab ID	

Sampled By: Rob Price
Received By: [signature]
Received By: Cara Strickler

Relinquished By: Rob Price
Relinquished By: [signature]
Date/Time: 6/10/06 @ 0821

Special Instructions: SxS stored in a locked cooler over weekend
QC sealed, SxS intact; Cooler temp = 2° C

File: Lab_COC2.XLS

007784

SAMPLE RECEIPT FORM

156 STARLITE DRIVE
MARIETTA, OH
45750
(740) 373-4071

Date: 6-10-06 Client: Chem Mill - State Maine

Shipped By: ( ) Fed-Ex ( ) UPS ( )DHL ( ) KEMRON ( ) Client ( ) Other 0821

Opened By: CMD

Logged By: CMD Login # L06 6-267

IR Temp Gun: (✓) D ( ) F

COOLER INFORMATION

Number	Cooler ID	Temp °C	Airbill#	COC#	Other
1	1363	2	790952870008		
2					
3					
4					
5					
6					

Were all coolers sealed?	(Y)	N	N/A
Were custody seals used on all coolers?	Y	(N)	N/A
Were custody seals intact?	Y	N	(N/A)
Was visible ice present?	(Y)	N	N/A
Were all coolers in the temperature range of 2-6C? (>6C*)	(Y)	N	N/A
Were the samples frozen?*	Y	(N)	N/A
Were COC papers provided?	(Y)	N	N/A
Were all sample containers intact?*	(Y)	N	N/A
Were all sample labels intact?	(Y)	N	N/A
Were all sample labels legible?*	(Y)	N	N/A
Did all sample labels match the COC?*	(Y)	N	N/A
Was the label information complete?*	(Y)	N	N/A
Were the correct containers used?*	(Y)	N	N/A
Were the correct preservatives added to water samples?*	Y	N	(N/A)
Was the pH tested on preserved water samples?	Y	N	(N/A)
Were pH ranges acceptable?*	Y	N	(N/A)
Was sufficient amount of sample provided?*	(Y)	N	N/A
Were bubbles present in VOA samples?*	Y	N	(N/A)
Were COC's signed and dated?	(Y)	N	N/A
Did samples arrive before hold time expired?*	(Y)	N	N/A
Are discrepancy forms attached?	Y	N	(N/A)

**Requires a discrepancy form*

Comments:

CRF #1
Revised 8/22/03

007785

156 Starlite Drive, Marietta, OH 45750 * TEL 740-373-4071 * FAX 740-373-4835 * http://www.kemron.com

Laboratory Report Number: L0606269

Please find enclosed the analytical results for the samples you submitted to KEMRON Environmental Services.

These analyses were subcontracted to another laboratory. If you have questions, comments or require further assistance regarding this report, please contact our team member noted in the Reviewed box below at 800-373-4071. Team member e-mail addresses also appear here for your convenience.

Debra Elliott - Team Leader
delliott@kemron-lab.com

Amanda Fickiesen - Client Services Specialist
afickiesen@kemron-lab.com

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Stephanie Mossburg - Team Chemist/Data Specialist
smossburg@kemron-lab.com

Kathy Albertson - Team Chemist/Data Specialist
kalbertson@kemron-lab.com

This report was reviewed on 29-JUN-06.

CHERYL KOELSCH

I certify that all test results meet all of the requirments of the NELAP standards and other applicable contract terms and conditions. All results for soil samples are reported on a 'dry-weight' basis unless specified otherwise. Analytical results for water and wastes are reported on an 'as received' basis unless specified otherwise. A statement of uncertainty for each analysis is available upon request. This laboratory report shall not be reproduced, except in full, without the written approval of KEMRON Environmental Services.

This report was certified on 29-JUN-06.

DAVID VANDENBERG

FL DOH NELAP ID: E8755

This report contains a total of 24 pages.

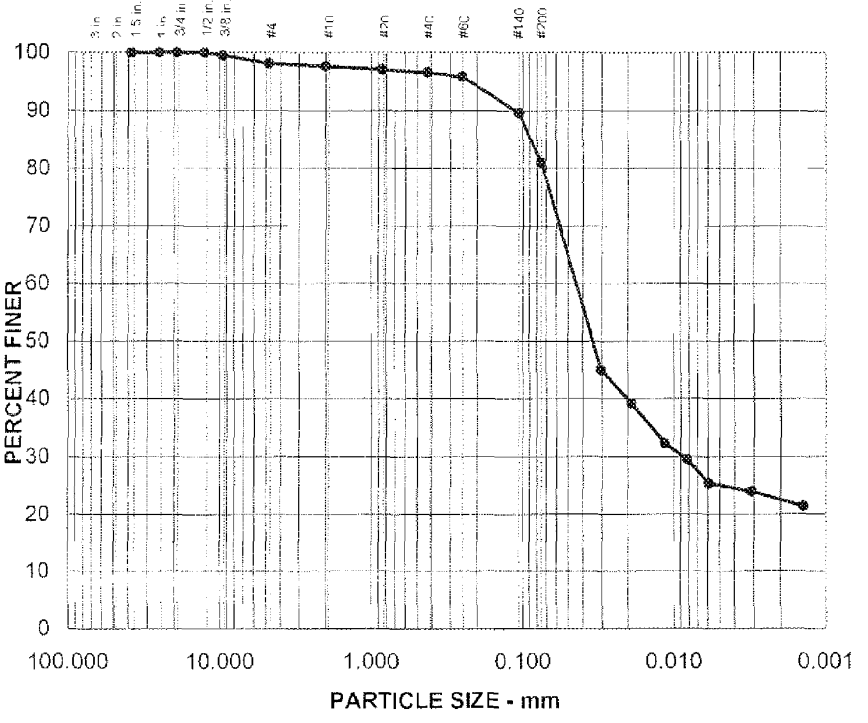
Protecting Our Environmental Future

KEMRON ENVIRONMENTAL SERVICES, INC.
STATE MARINE SUPERFUND SITE

TABLE 1
Particle Size Analyses
Summary of Results

SAMPLE ID	RESULTS			
	Particle Size Analyses			
	Gravel (%)	Sand (%)	Silt (%)	Clay (%)
FD-01	1.9	17.1	56.0	25.0
A-SD-01	0.0	29.3	38.5	32.2
B-SD-02	0.0	30.4	49.0	20.6
C-SD-03	0.0	30.6	35.7	33.7
D-SD-04	0.0	38.7	37.1	24.2
E-SD-05	0.8	71.6	21.0	6.6
F-SD-06	0.3	64.5	25.0	10.2
G-SD-07	1.3	35.7	28.4	34.6
H-SD-08	3.0	15.5	51.9	29.6
I-SD-09	0.0	90.2	6.1	1.7

PARTICLE SIZE DISTRIBUTION TEST REPORT



% GRAVEL	% SAND	% SILT	% CLAY
1.9	17.1	56.0	25.0

SAMPLE INFORMATION	
Project Name:	State Marine Superfund
Project Number:	SE-0178
Sample ID:	FD-01
Sample Description:	Dark gray
Testing Date:	06/16/06

SAMPLE CLASSIFICATION	
Liquid Limit:	
Plastic Limit:	
Plasticity Index:	
USCS Classification	
Classification	
AASHTO Classification	
Classification	
Group Index	
DESCRIPTION:	
Sandy Clayey Silt	

KEMRON
ENVIRONMENTAL SERVICES

PARTICLE SIZE DISTRIBUTION TEST REPORT PAGE 1 OF 2

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PARTICLE SIZE DISTRIBUTION DATA REPORT

REPORT FORM
ASTM D422

PROJECT:	State Marine Superfund Site
PROJECT No.:	SE-0178
SAMPLE No.	FD-01
SAMPLE DESCRIPT:	Dark gray
TESTING DATE:	06/16/06
TESTED BY:	CLG/KFS
TRACKING CODE:	3752

MOISTURE CONTENT (DRY AND WET BASIS)	
TARE WEIGHT	197.78 g
WT WET SOIL + TARE	318.84 g
WT DRY SOIL + TARE	269.24 g
WT WATER, Ww	49.60 g
WT DRY SOIL, Ws	71.46 g
ASTM MOISTURE	69.41 %
EPA MOISTURE	40.97 %

SIEVE NUMBER	PERCENT PASSING
1.5	100.0 %
1.0	100.0 %
0.75	100.0 %
0.5	100.0 %
0.375	99.5 %
#4	98.1 %
#10	97.6 %
#20	97.1 %
#40	96.6 %
#60	95.8 %
#140	89.6 %
#200	81.0 %

HYDROMETER ANALYSIS	
HYDROMETER No.	2
Wt OF DRY SOIL, Ws	57.86
DATE TESTING INITIATED	06/27/06
TIME TESTING INITIATED	1:39:00 PM

ELAPSED TIME (minutes)	ACTUAL READING	CORRECTED READING	DIAMETER (mm)	PERCENT FINER (%)
2	38.0	32.5	0.0302	45.0
5	33.0	28.3	0.0190	39.2
15	28.0	23.3	0.0114	32.3
30	26.0	21.3	0.0082	29.5
60	23.0	18.3	0.0059	25.4
222	22.0	17.3	0.0031	24.0
1130	20.5	15.4	0.0014	21.3

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ENVIRONMENTAL SERVICES

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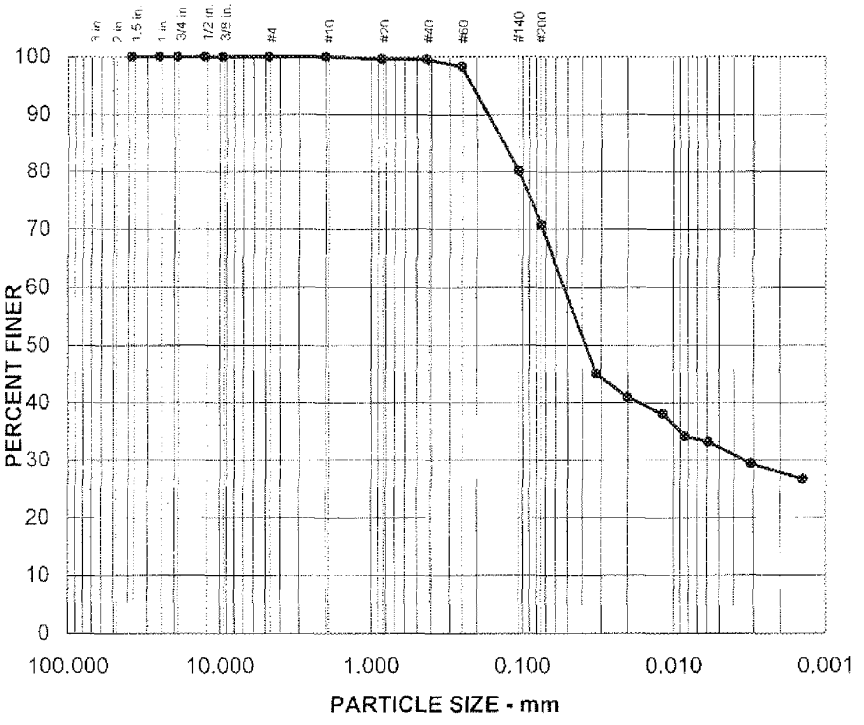
PARTICLE SIZE DISTRIBUTION TEST REPORT



% GRAVEL	% SAND	% SILT	% CLAY
0.0	29.3	38.5	32.2

SAMPLE INFORMATION	
Project Name:	State Marine Superfund Site
Project Number:	SE-0178
Sample ID:	A-SD-01
Sample Description:	Dark gray
Testing Date:	06/16/06

SAMPLE CLASSIFICATION	
Liquid Limit:	
Plastic Limit:	
Plasticity Index:	
USCS Classification	
Classification	
AASHTO Classification	
Classification	
Group Index	
DESCRIPTION:	
Sandy Clayey Silt	

KEMRON
ENVIRONMENTAL SERVICES

PARTICLE SIZE DISTRIBUTION TEST REPORT PAGE 1 OF 2

PARTICLE SIZE DISTRIBUTION DATA REPORT

REPORT FORM
ASTM D422

PROJECT:	State Marine Superfund Site
PROJECT No.:	SE-0178
SAMPLE No.:	A-SD-01
SAMPLE DESCRIPT:	Dark gray
TESTING DATE:	06/16/06
TESTED BY:	CLG/KFS
TRACKING CODE:	3753

MOISTURE CONTENT (DRY AND WET BASIS)	
TARE WEIGHT	180.22 g
WT WET SOIL + TARE	282.38 g
WT DRY SOIL + TARE	231.76 g
WT WATER, Ww	50.62 g
WT DRY SOIL, Ws	51.54 g
ASTM MOISTURE	98.21 %
EPA MOISTURE	49.55 %

SIEVE NUMBER	PERCENT PASSING
1.5	100.0 %
1.0	100.0 %
0.75	100.0 %
0.5	100.0 %
0.375	100.0 %
#4	100.0 %
#10	100.0 %
#20	99.7 %
#40	99.5 %
#60	98.3 %
#140	80.2 %
#200	70.7 %

HYDROMETER ANALYSIS	
HYDROMETER No.	2
Wt OF DRY SOIL, Ws	36.46
DATE TESTING INITIATED	06/27/06
TIME TESTING INITIATED	1:30:00 PM

ELAPSED TIME (minutes)	ACTUAL READING	CORRECTED READING	DIAMETER (mm)	PERCENT FINER (%)
2	29.0	23.5	0.0323	45.1
5	26.0	21.3	0.0200	40.9
15	24.5	19.8	0.0117	38.0
30	22.5	17.8	0.0084	34.2
60	22.0	17.3	0.0059	33.2
222	20.0	15.3	0.0031	29.4
1130	19.0	13.9	0.0014	26.7

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ENVIRONMENTAL SERVICES

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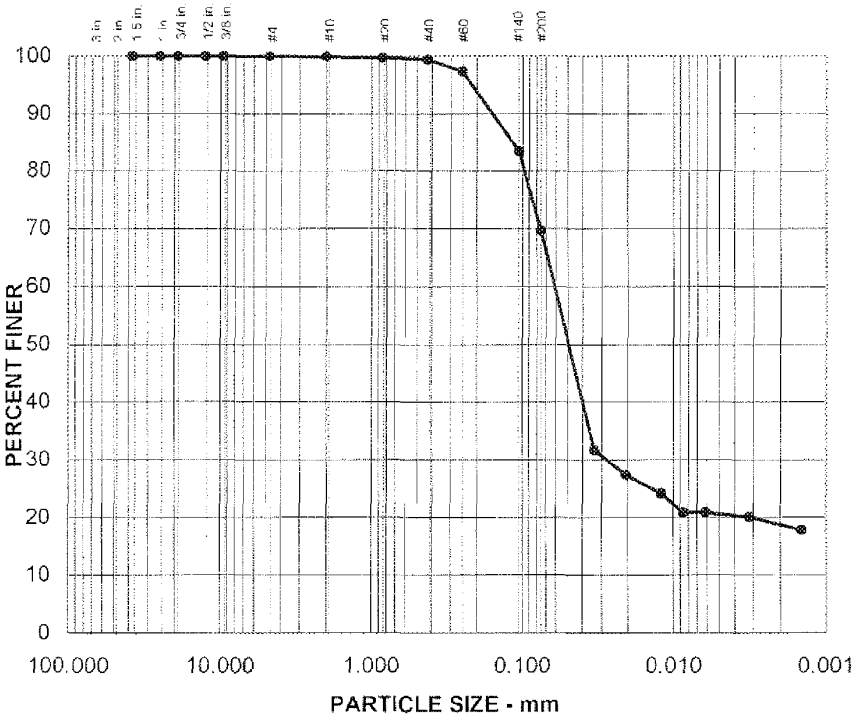
PARTICLE SIZE DISTRIBUTION TEST REPORT



% GRAVEL	% SAND	% SILT	% CLAY
0.0	30.4	49.0	20.6

SAMPLE INFORMATION	
Project Name:	State Marine Superfund Site
Project Number:	SE-0178
Sample ID:	B-SD-02
Sample Description:	Dark gray
Testing Date:	06/16/06

SAMPLE CLASSIFICATION	
Liquid Limit:	
Plastic Limit:	
Plasticity Index:	
USCS Classification	
Classification	
AASHTO Classification	
Classification	
Group Index	
DESCRIPTION: Sandy Clayey Silt	

KEMRON ENVIRONMENTAL SERVICES

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PARTICLE SIZE DISTRIBUTION DATA REPORT

REPORT FORM
ASTM D422

PROJECT:	State Marine Superfund Site
PROJECT No.:	SE-0178
SAMPLE No.:	B-SD-02
SAMPLE DESCRIPT:	Dark gray
TESTING DATE:	06/16/06
TESTED BY:	CLG/KFS
TRACKING CODE:	3754

MOISTURE CONTENT (DRY AND WET BASIS)	
TARE WEIGHT	236.79 g
WT WET SOIL + TARE	338.64 g
WT DRY SOIL + TARE	297.61 g
WT WATER, Ww	41.23 g
WT DRY SOIL, Ws	60.82 g
ASTM MOISTURE	67.79 %
EPA MOISTURE	40.40 %

SIEVE NUMBER	PERCENT PASSING
1.5	100.0 %
1.0	100.0 %
0.75	100.0 %
0.5	100.0 %
0.375	100.0 %
#4	100.0 %
#10	99.9 %
#20	99.7 %
#40	99.4 %
#60	97.3 %
#140	83.4 %
#200	69.6 %

HYDROMETER ANALYSIS	
HYDROMETER No.	2
Wt OF DRY SOIL, Ws	42.35
DATE TESTING INITIATED	06/27/06
TIME TESTING INITIATED	1:31:00 PM

ELAPSED TIME (minutes)	ACTUAL READING	CORRECTED READING	DIAMETER (mm)	PERCENT FINER (%)
2	25.0	19.5	0.0332	31.7
5	21.5	16.8	0.0206	27.4
15	19.5	14.8	0.0121	24.1
30	17.5	12.8	0.0086	20.8
60	17.5	12.8	0.0061	20.8
222	17.0	12.3	0.0032	20.0
1130	16.0	10.9	0.0014	17.8

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ENVIRONMENTAL SERVICES

PARTICLE SIZE DISTRIBUTION TEST REPORT PAGE 2 OF 2

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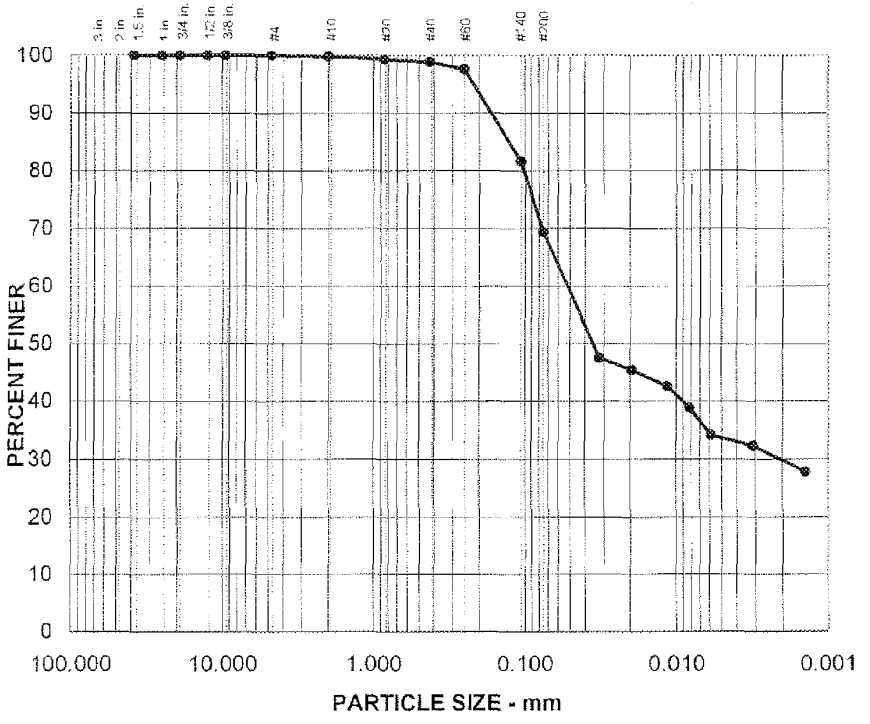
PARTICLE SIZE DISTRIBUTION TEST REPORT



% GRAVEL	% SAND	% SILT	% CLAY
0.0	30.6	35.7	33.7

SAMPLE INFORMATION	
Project Name:	State Marine Superfund Site
Project Number:	SE-0178
Sample ID:	C-SD-03
Sample Description:	Dark gray
Testing Date:	06/16/06

SAMPLE CLASSIFICATION	
Liquid Limit:	
Plastic Limit:	
Plasticity Index:	
USCS Classification	
Classification	
AASHTO Classification	
Classification	
Group Index	
DESCRIPTION:	
Sandy Clayey Silt	

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ENVIRONMENTAL SERVICES

PARTICLE SIZE DISTRIBUTION TEST REPORT PAGE 1 OF 2

PARTICLE SIZE DISTRIBUTION DATA REPORT

REPORT FORM
ASTM D422

PROJECT:	State Marine Superfund Site
PROJECT No.:	SE-0178
SAMPLE No.:	C-SD-03
SAMPLE DESCRIPT:	Dark gray
TESTING DATE:	06/16/06
TESTED BY:	CLG/KFS
TRACKING CODE:	3755

MOISTURE CONTENT (DRY AND WET BASIS)	
TARE WEIGHT	198.13 g
WT WET SOIL + TARE	302.83 g
WT DRY SOIL + TARE	251.16 g
WT WATER, Ww	51.67 g
WT DRY SOIL, Ws	53.03 g
ASTM MOISTURE	97.44 %
EPA MOISTURE	49.35 %

SIEVE NUMBER	PERCENT PASSING
1.5	100.0 %
1.0	100.0 %
0.75	100.0 %
0.5	100.0 %
0.375	100.0 %
#4	100.0 %
#10	99.8 %
#20	99.3 %
#40	98.8 %
#60	97.6 %
#140	81.7 %
#200	69.4 %

HYDROMETER ANALYSIS	
HYDROMETER No.	2
Wt OF DRY SOIL, Ws	36.81
DATE TESTING INITIATED	06/27/06
TIME TESTING INITIATED	1:32:00 PM

ELAPSED TIME (minutes)	ACTUAL READING	CORRECTED READING	DIAMETER (mm)	PERCENT FINER (%)
2	31.0	25.5	0.0318	47.5
5	29.0	24.3	0.0196	45.4
15	27.5	22.8	0.0114	42.6
30	25.5	20.8	0.0082	38.8
60	23.0	18.3	0.0059	34.2
222	22.0	17.3	0.0031	32.3
1130	20.0	14.9	0.0014	27.8

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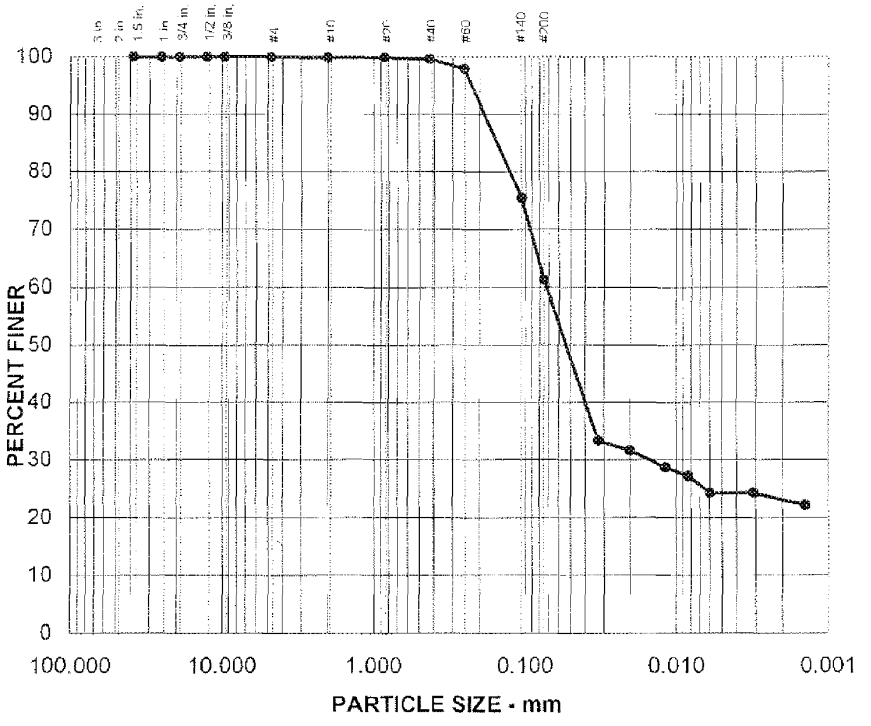
PARTICLE SIZE DISTRIBUTION TEST REPORT



% GRAVEL	% SAND	% SILT	% CLAY
0.0	38.7	37.1	24.2

SAMPLE INFORMATION	
Project Name:	State Marine Superfund Site
Project Number:	SE-0178
Sample ID:	D-SD-04
Sample Description:	Dark gray
Testing Date:	08/16/06

SAMPLE CLASSIFICATION	
Liquid Limit:	
Plastic Limit:	
Plasticity Index:	
USCS Classification	
Classification	
AASHTO Classification	
Classification	
Group Index	
DESCRIPTION:	
Sandy Clayey Silt	

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ENVIRONMENTAL SERVICES

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PARTICLE SIZE DISTRIBUTION DATA REPORT

REPORT FORM
ASTM D422

PROJECT:	State Marine Superfund Site
PROJECT No.:	SE-0178
SAMPLE No.:	D-SD-04
SAMPLE DESCRIPT:	Dark gray
TESTING DATE:	06/16/06
TESTED BY:	CLG/KFS
TRACKING CODE:	3756

MOISTURE CONTENT (DRY AND WET BASIS)	
TARE WEIGHT	211.53 g
WT WET SOIL + TARE	316.98 g
WT DRY SOIL + TARE	278.26 g
WT WATER, Ww	38.70 g
WT DRY SOIL, Ws	66.75 g
ASTM MOISTURE	57.98 %
EPA MOISTURE	36.70 %

SIEVE NUMBER	PERCENT PASSING
1.5	100.0 %
1.0	100.0 %
0.75	100.0 %
0.5	100.0 %
0.375	100.0 %
#4	100.0 %
#10	99.9 %
#20	99.9 %
#40	99.6 %
#60	97.9 %
#140	75.4 %
#200	61.3 %

HYDROMETER ANALYSIS	
HYDROMETER No.	2
Wt OF DRY SOIL, Ws	40.93
DATE TESTING INITIATED	06/27/06
TIME TESTING INITIATED	1:33:00 PM

ELAPSED TIME (minutes)	ACTUAL READING	CORRECTED READING	DIAMETER (mm)	PERCENT FINER (%)
2	28.0	22.5	0.0325	33.3
5	26.0	21.3	0.0200	31.6
15	24.0	19.3	0.0117	28.6
30	23.0	18.3	0.0083	27.1
60	21.0	16.3	0.0060	24.2
222	21.0	16.3	0.0031	24.2
1130	20.0	14.9	0.0014	22.1

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ENVIRONMENTAL SERVICES

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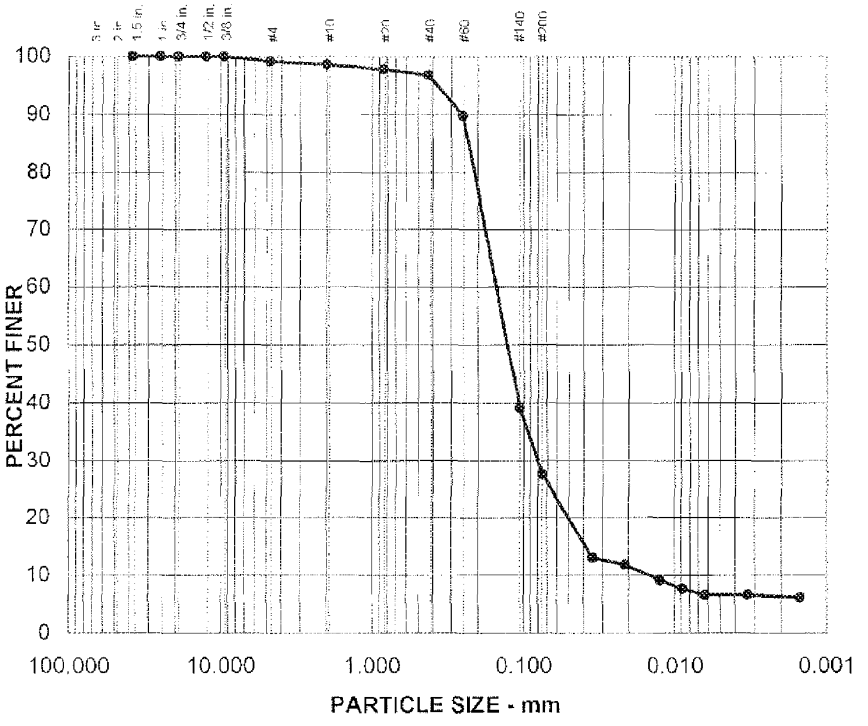
PARTICLE SIZE DISTRIBUTION TEST REPORT



% GRAVEL	% SAND	% SILT	% CLAY
0.8	71.6	21.0	6.6

SAMPLE INFORMATION	
Project Name:	State Marine Superfund Site
Project Number:	SE-0178
Sample ID:	E-SD-05
Sample Description:	Dark gray, shells
Testing Date:	06/16/06

SAMPLE CLASSIFICATION	
Liquid Limit:	
Plastic Limit:	
Plasticity Index:	
USCS Classification	
Classification	
AASHTO Classification	
Classification	
Group Index	
DESCRIPTION:	
Silty Sand	

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ENVIRONMENTAL SERVICES

PARTICLE SIZE DISTRIBUTION TEST REPORT PAGE 1 OF 2

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PARTICLE SIZE DISTRIBUTION DATA REPORT

REPORT FORM
ASTM D422

PROJECT:	State Marine Superfund Site
PROJECT No.:	SE-0178
SAMPLE No.:	E-SD-05
SAMPLE DESCRIPT:	Dark gray, shells
TESTING DATE:	06/16/06
TESTED BY:	CLG/KFS
TRACKING CODE:	3757

MOISTURE CONTENT (DRY AND WET BASIS)	
TARE WEIGHT	206.57 g
WT WET SOIL + TARE	334.12 g
WT DRY SOIL + TARE	301.41 g
WT WATER, Ww	32.71 g
WT DRY SOIL, Ws	94.84 g
ASTM MOISTURE	34.49 %
EPA MOISTURE	25.64 %

SIEVE NUMBER	PERCENT PASSING
1.5	100.0 %
1.0	100.0 %
0.75	100.0 %
0.5	100.0 %
0.375	100.0 %
#4	99.2 %
#10	98.5 %
#20	97.8 %
#40	96.8 %
#60	89.8 %
#140	39.1 %
#200	27.6 %

HYDROMETER ANALYSIS	
HYDROMETER No.	2
Wt OF DRY SOIL, Ws	26.16
DATE TESTING INITIATED	06/27/06
TIME TESTING INITIATED	1:34:00 PM

ELAPSED TIME (minutes)	ACTUAL READING	CORRECTED READING	DIAMETER (mm)	PERCENT FINER (%)
2	18.0	12.5	0.0347	13.0
5	16.0	11.3	0.0213	11.8
15	13.5	8.8	0.0125	9.2
30	12.0	7.3	0.0089	7.6
60	11.0	6.3	0.0063	6.6
222	11.0	6.3	0.0033	6.6
1130	11.0	5.9	0.0015	6.2

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ENVIRONMENTAL SERVICES

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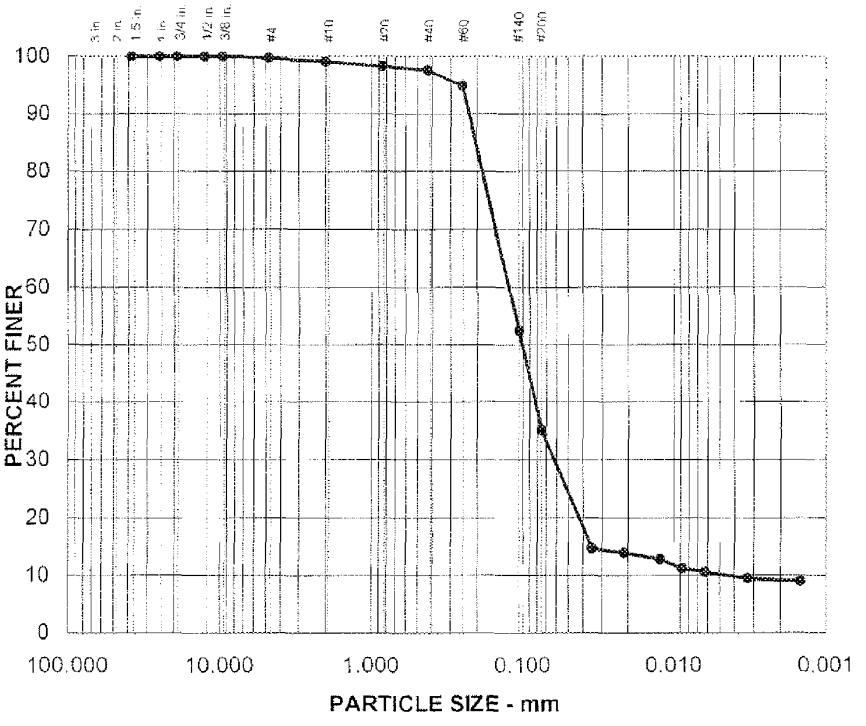
PARTICLE SIZE DISTRIBUTION TEST REPORT



% GRAVEL	% SAND	% SILT	% CLAY
0.3	64.5	25.0	10.2

SAMPLE INFORMATION	
Project Name:	State Marine Superfund Site
Project Number:	SE-0178
Sample ID:	F-SD-06
Sample Description:	Dark gray, shells
Testing Date:	06/16/06

SAMPLE CLASSIFICATION	
Liquid Limit:	
Plastic Limit:	
Plasticity Index:	
USCS Classification	
Classification	
AASHTO Classification	
Classification	
Group Index	
DESCRIPTION:	
Clayey Silty Sand	

KEMRON ENVIRONMENTAL SERVICES

PARTICLE SIZE DISTRIBUTION TEST REPORT PAGE 1 OF 2

PARTICLE SIZE DISTRIBUTION DATA REPORT

REPORT FORM
ASTM D422

PROJECT:	State Marine Superfund Site
PROJECT No.:	SE-0178
SAMPLE No.:	F-SD-06
SAMPLE DESCRIPT:	Dark gray, shells
TESTING DATE:	06/16/06
TESTED BY:	CLG/KFS
TRACKING CODE:	3758

MOISTURE CONTENT (DRY AND WET BASIS)	
TARE WEIGHT	240.45 g
WT WET SOIL + TARE	361.02 g
WT DRY SOIL + TARE	327.75 g
WT WATER, Ww	33.27 g
WT DRY SOIL, Ws	87.30 g
ASTM MOISTURE	38.11 %
EPA MOISTURE	27.59 %

SIEVE NUMBER	PERCENT PASSING
1.5	100.0 %
1.0	100.0 %
0.75	100.0 %
0.5	100.0 %
0.375	100.0 %
#4	99.7 %
#10	99.1 %
#20	98.3 %
#40	97.6 %
#60	94.9 %
#140	52.4 %
#200	35.1 %

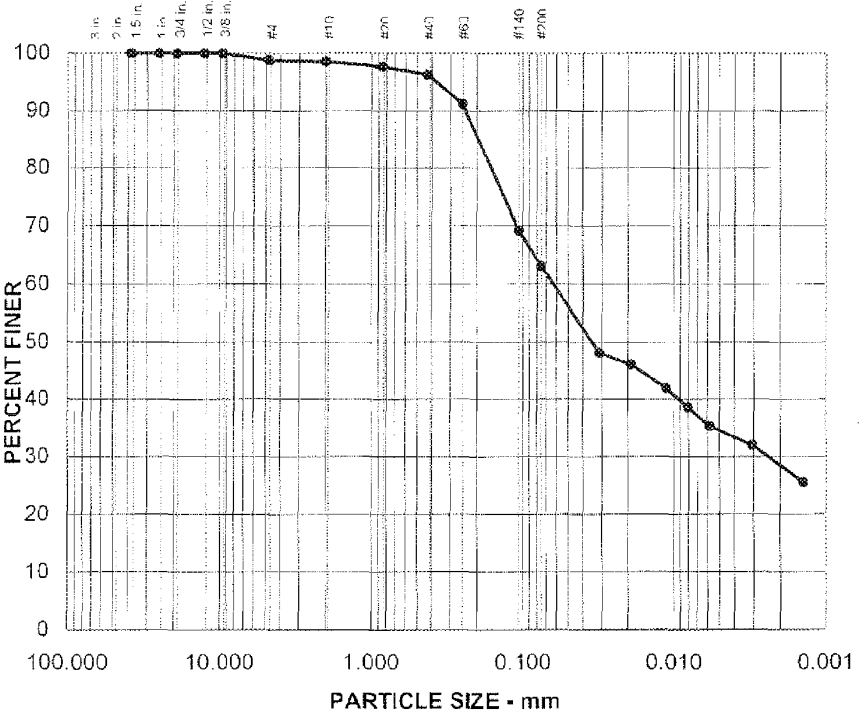
HYDROMETER ANALYSIS	
HYDROMETER No.	2
Wt OF DRY SOIL, Ws	30.68
DATE TESTING INITIATED	06/27/06
TIME TESTING INITIATED	1:35:00 PM

ELAPSED TIME (minutes)	ACTUAL READING	CORRECTED READING	DIAMETER (mm)	PERCENT FINER (%)
2	18.5	13.0	0.0346	14.7
5	17.0	12.3	0.0212	14.0
15	16.0	11.3	0.0123	12.8
30	14.5	9.8	0.0088	11.1
60	14.0	9.3	0.0062	10.5
222	13.0	8.3	0.0033	9.4
1130	13.0	7.9	0.0015	9.0

KEMRON
ENVIRONMENTAL SERVICES

PARTICLE SIZE DISTRIBUTION TEST REPORT PAGE 2 OF 2

PARTICLE SIZE DISTRIBUTION TEST REPORT



% GRAVEL	% SAND	% SILT	% CLAY
1.3	35.7	28.4	34.6

SAMPLE INFORMATION	
Project Name:	State Marine Superfund Site
Project Number:	SE-0178
Sample ID:	G-SD-07
Sample Description:	Dark blackish brown
Testing Date:	06/16/06

SAMPLE CLASSIFICATION	
Liquid Limit:	
Plastic Limit:	
Plasticity Index:	
USCS Classification	
Classification	
AASHTO Classification	
Classification	
Group Index	
DESCRIPTION: Sandy Silty Clay	

KEMRON ENVIRONMENTAL SERVICES

PARTICLE SIZE DISTRIBUTION TEST REPORT PAGE 1 OF 2

PARTICLE SIZE DISTRIBUTION DATA REPORT

REPORT FORM
ASTM D422

PROJECT:	State Marine Superfund Site
PROJECT No.:	SE-0178
SAMPLE No.:	G-SD-07
SAMPLE DESCRIPT:	Dark blackish brown
TESTING DATE:	06/16/06
TESTED BY:	CLG/KFS
TRACKING CODE:	3759

MOISTURE CONTENT (DRY AND WET BASIS)	
TARE WEIGHT	206.56 g
WT WET SOIL + TARE	326.52 g
WT DRY SOIL + TARE	266.37 g
WT WATER, Ww	60.15 g
WT DRY SOIL, Ws	59.71 g
ASTM MOISTURE	100.74 %
EPA MOISTURE	50.18 %

SIEVE NUMBER	PERCENT PASSING
1.5	100.0 %
1.0	100.0 %
0.75	100.0 %
0.5	100.0 %
0.375	100.0 %
#4	98.7 %
#10	98.5 %
#20	97.7 %
#40	96.3 %
#60	91.2 %
#140	69.2 %
#200	63.0 %

HYDROMETER ANALYSIS	
HYDROMETER No.	2
Wt OF DRY SOIL, Ws	37.64
DATE TESTING INITIATED	06/27/06
TIME TESTING INITIATED	1:36:00 PM

ELAPSED TIME (minutes)	ACTUAL READING	CORRECTED READING	DIAMETER (mm)	PERCENT FINER (%)
2	34.5	29.0	0.0310	48.0
5	32.5	27.8	0.0191	46.1
15	30.0	25.3	0.0112	42.0
30	28.0	23.3	0.0081	38.6
60	26.0	21.3	0.0058	35.3
222	24.0	19.3	0.0030	32.0
1130	20.5	15.4	0.0014	25.5

KEMRON
ENVIRONMENTAL SERVICES

PARTICLE SIZE DISTRIBUTION TEST REPORT PAGE 2 OF 2

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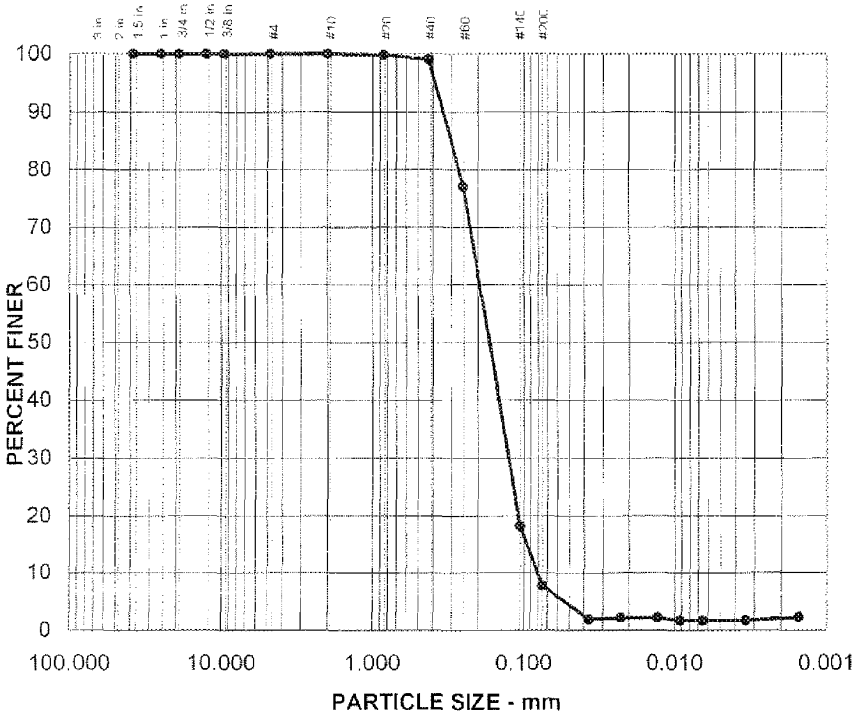
PARTICLE SIZE DISTRIBUTION TEST REPORT



% GRAVEL	% SAND	% SILT	% CLAY
0.0	92.2	6.1	1.7

SAMPLE INFORMATION	
Project Name:	State Marine Superfund Site
Project Number:	SE-0178
Sample ID:	I-SD-09
Sample Description:	Medium brown
Testing Date:	06/16/06

SAMPLE CLASSIFICATION	
Liquid Limit:	
Plastic Limit:	
Plasticity Index:	
USCS Classification	
Classification	
AASHTO Classification	
Classification	
Group Index	
DESCRIPTION: Sand	

KEMRON
ENVIRONMENTAL SERVICES

PARTICLE SIZE DISTRIBUTION TEST REPORT PAGE 1 OF 2

PARTICLE SIZE DISTRIBUTION DATA REPORT

REPORT FORM
ASTM D422

PROJECT:	State Marine Superfund Site
PROJECT No.:	SE-0178
SAMPLE No.:	I-SD-09
SAMPLE DESCRIPT:	Medium brown
TESTING DATE:	06/16/06
TESTED BY:	CLG/KFS
TRACKING CODE:	3761

MOISTURE CONTENT (DRY AND WET BASIS)	
TARE WEIGHT	185.34 g
WT WET SOIL + TARE	321.15 g
WT DRY SOIL + TARE	288.62 g
WT WATER, Ww	32.53 g
WT DRY SOIL, Ws	103.28 g
ASTM MOISTURE	31.50 %
EPA MOISTURE	23.95 %

SIEVE NUMBER	PERCENT PASSING
1.5	100.0 %
1.0	100.0 %
0.75	100.0 %
0.5	100.0 %
0.375	100.0 %
#4	100.0 %
#10	100.0 %
#20	99.8 %
#40	99.1 %
#60	77.1 %
#140	18.1 %
#200	7.8 %

HYDROMETER ANALYSIS	
HYDROMETER No.	2
Wt OF DRY SOIL, Ws	8.02
DATE TESTING INITIATED	06/27/06
TIME TESTING INITIATED	1:38:00 PM

ELAPSED TIME (minutes)	ACTUAL READING	CORRECTED READING	DIAMETER (mm)	PERCENT FINER (%)
2	7.5	2.0	0.0369	1.9
5	7.0	2.3	0.0224	2.2
15	7.0	2.3	0.0130	2.2
30	6.5	1.8	0.0092	1.7
60	6.5	1.8	0.0065	1.7
222	6.5	1.8	0.0034	1.7
1130	7.5	2.4	0.0015	2.3

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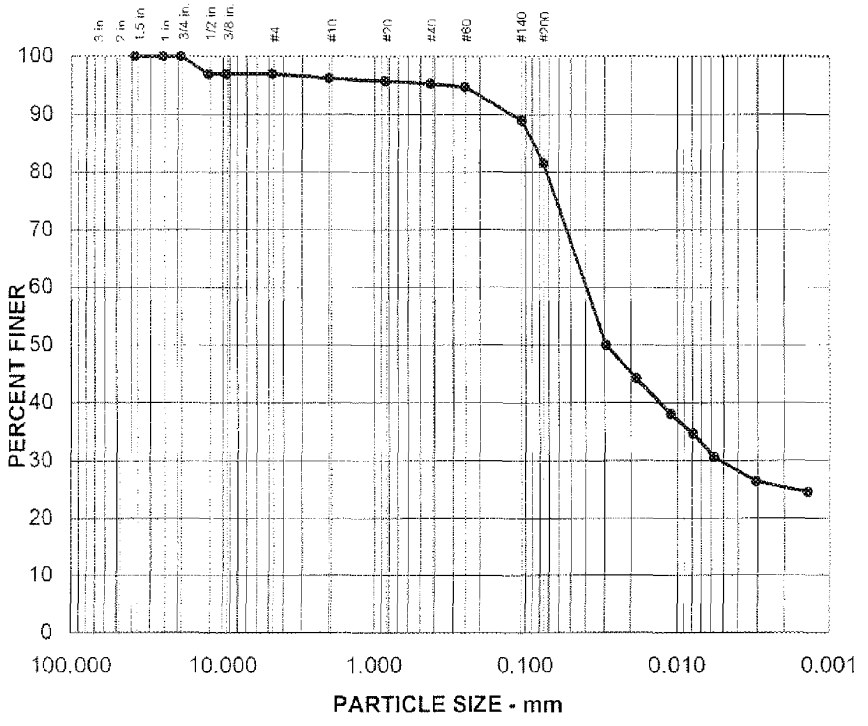
ENVIRONMENTAL SERVICES

PARTICLE SIZE DISTRIBUTION TEST REPORT PAGE 2 OF 2

PARTICLE SIZE DISTRIBUTION TEST REPORT



% GRAVEL	% SAND	% SILT	% CLAY
3.0	15.5	51.9	29.6

SAMPLE INFORMATION	
Project Name:	State Marine Superfund
Project Number:	SE-0178
Sample ID:	H-SD-08
Sample Description:	Dark med gray, shells
Testing Date:	06/16/06

SAMPLE CLASSIFICATION	
Liquid Limit:	
Plastic Limit:	
Plasticity Index:	
USCS Classification	
Classification	
AASHTO Classification	
Classification	
Group Index	
DESCRIPTION:	
Sandy Clayey Silt	

KEMRON
ENVIRONMENTAL SERVICES

PARTICLE SIZE DISTRIBUTION TEST REPORT PAGE 1 OF 2

PARTICLE SIZE DISTRIBUTION DATA REPORT

REPORT FORM
ASTM D422

PROJECT:	State Marine Superfund
PROJECT No.:	SE-0178
SAMPLE No.:	H-SD-08
SAMPLE DESCRIPT:	Dark med gray, shells
TESTING DATE:	06/16/06
TESTED BY:	CLG/KFS
TRACKING CODE:	3760

MOISTURE CONTENT (DRY AND WET BASIS)	
TARE WEIGHT	179.21 g
WT WET SOIL + TARE	304.58 g
WT DRY SOIL + TARE	251.52 g
WT WATER, Ww	53.06 g
WT DRY SOIL, Ws	72.31 g
ASTM MOISTURE	73.38 %
EPA MOISTURE	42.32 %

SIEVE NUMBER	PERCENT PASSING
1.5	100.0 %
1.0	100.0 %
0.75	100.0 %
0.5	97.0 %
0.375	97.0 %
#4	97.0 %
#10	96.2 %
#20	95.7 %
#40	95.2 %
#60	94.7 %
#140	89.0 %
#200	81.5 %

HYDROMETER ANALYSIS	
HYDROMETER No.	2
WT OF DRY SOIL, Ws	58.94
DATE TESTING INITIATED	06/27/06
TIME TESTING INITIATED	1:37:00 PM

ELAPSED TIME (minutes)	ACTUAL READING	CORRECTED READING	DIAMETER (mm)	PERCENT FINER (%)
2	42.0	36.5	0.0292	49.9
5	37.0	32.3	0.0184	44.2
15	32.5	27.8	0.0110	38.1
30	30.0	25.3	0.0079	34.6
60	27.0	22.3	0.0057	30.5
222	24.0	19.3	0.0030	26.4
1130	23.0	17.9	0.0014	24.5

KEMRON
ENVIRONMENTAL SERVICES

PARTICLE SIZE DISTRIBUTION TEST REPORT PAGE 2 OF 2

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B2202

Kemron
CHAIN OF CUSTODY RECORD

156 Starlite Drive
Marietta, OH 45750
Phone: (800) 373-4071 x176; FAX: (740) 373-483

Project/Contact Information	
Project #	344479.SN.01
Project Name	State Marine Superfund Site
Report Copy to	John Ynfante
Company Name/Contact	CH2M HILL-Houston / John Ynfante

Sampling Date	Sampling Time	Type: Comp	Type: Grab	Matrix: Water	Matrix: Sediment	Matrix: Air	Client Sample ID (9 Characters Max)	LAB QC	Total Number of Containers	TAL Metals	SVOCs (8270C)	PAHs (8270-SIM)	TOC	Grain Size
06/08/06	1100	X			X		A-SD-01			X	X	X	X	X
06/08/06	1205	X			X		B-SD-02			X	X	X	X	X
06/08/06	1530	X			X		C-SD-03			X	X	X	X	X
06/08/06	1640	X			X		D-SD-04			X	X	X	X	X
06/08/06	1420	X			X		E-SD-05			X	X	X	X	X
06/08/06	1725	X			X		F-SD-06			X	X	X	X	X
06/09/06	1050	X			X		G-SD-07			X	X	X	X	X
06/09/06	1015	X			X		H-SD-08			X	X	X	X	X
06/09/06	1145	X			X		I-SD-09			X	X	X	X	X
06/09/06	1015	X			X		FD-01			X	X	X	X	X
06/08/06	1530	X			X		MS/MSD	X						

Preservative

THIS AREA FOR LAB USE ONLY		
Lab #	Pg 1	of 1
Lab PM	Custody Review	
Log In	LIMS Verification	
pH	Cust Seals Y N Ice Y N	
QC Level 1 2 3		
Cooler Temperature		
Alternate Description		Lab ID

Sampled By: Rob Price	Relinquished By: Rob Price
Received By:	Relinquished By:
Received By: Cara Strickler	Date/Time: 6/10/06 @ 0821

Special Instructions: SxS stored in a locked cooler over weekend.
C/C sealed, SxS intact; Cooler temp = 2° C

File: Lab_COC2.XLS

SAMPLE RECEIPT FORM

156 STARLITE DRIVE
MARIETTA, OH
45750
(740) 373-4071

Date: 6-10-06 Client: Chem Hill - State Maine

Shipped By: ( ) Fed-Ex ( ) UPS ( )DHL ( ) KEMRON ( ) Client ( ) Other 0821

Opened By: CMD

Logged By: CMD Login # L06 6-269

IR Temp Gun: (✓) D ( ) F

COOLER INFORMATION

Number	Cooler ID	Temp °C	Airbill#	COC#	Other
1	1363	2	790952870008		
2					
3					
4					
5					
6					

Were all coolers sealed?	(Y)	N	N/A
Were custody seals used on all coolers?	Y	(N)	N/A
Were custody seals intact?	Y	N	(N/A)
Was visible ice present?	(Y)	N	N/A
Were all coolers in the temperature range of 2-6C? (>6C*)	(Y)	N	N/A
Were the samples frozen?*	Y	(N)	N/A
Were COC papers provided?	(Y)	N	N/A
Were all sample containers intact?*	(Y)	N	N/A
Were all sample labels intact?	(Y)	N	N/A
Were all sample labels legible?*	(Y)	N	N/A
Did all sample labels match the COC?*	(Y)	N	N/A
Was the label information complete?*	(Y)	N	N/A
Were the correct containers used?*	(Y)	N	N/A
Were the correct preservatives added to water samples?*	Y	N	(N/A)
Was the pH tested on preserved water samples?	Y	N	(N/A)
Were pH ranges acceptable?*	Y	N	(N/A)
Was sufficient amount of sample provided?*	(Y)	N	N/A
Were bubbles present in VOA samples?*	Y	N	(N/A)
Were COC's signed and dated?	(Y)	N	N/A
Did samples arrive before hold time expired?*	(Y)	N	N/A
Are discrepancy forms attached?	Y	N	(N/A)

**Requires a discrepancy form*

Comments:

CRF #1
Revised 8/22/03

007809

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Appendix D

Field Data Sheets

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CH2MHILL

Well Purge and Sampling Field Data Sheet

Project #: 344479.FI.03 **Date** 05/31/06

Well Number: MW116B **Site:** Griggs and Walnut Groundwater Plume Site

Field Crew: M. Harris, V. Martinez

Depth to Water (ft):	= 5.14	Casing Diameter		gal/ft of casing	
Well Depth (ft.):	- 27.30	(2 inch)		~~0.1632~~ 0.1632	
Water Column (ft):	= 22.16	4 inch		0.06528	
Gal/ft of Casing:	x 0.163	6 inch		1.4688	
Casing Volume (gal)	= 3.61	8 inch		2.611	
No. of Volumes (min.	x 1	10 inch		4.0797	
Purge Volume (gal):	= 3.61	12 inch		5.8748	

Method of Purging (circle one)

PUMP: SUB. CENT. (PERIST.) **OTHER:** **BAILER:** TEFLON, SS, OTHER

TIME ON:	1150	BAILER VOL. (gal):	
FLOW RATE (gpm):	125 mL/min	REQUIRED PULLS:	
PUMP TIME (min):	90 min	VOL. PURGED (gals):	
VOL. PURGED (gals):	3.70	OTHER:	

FIELD PARAMETERS	FIELD MEASUREMENTS						WITHIN 10% Y/N	
	1st	2nd	3rd	4th	5th	6th	7th	8th
TIME	1155	1215	1225	1235	1245	1300	1315	1325
Depth to Water (ft):	5.63	5.31	5.31	5.29	5.30	5.30	5.30	5.3
VOL. (gal):	0.5gal	0.75 gal	1.25 gal	2.0 gal	2.33 gal	2.85	3.35	3.6
FLOW RATE (gpm):	250 mL/min	150 mL/min	150 mL/m	100 mL/min	125 mL/min	125 mL/min	125	125
pH (s. units)	6.75	6.81	6.82	6.83	6.84	6.85	6.85	6.8
TEMP. (C)	21.83	22.65	22.51	22.49	22.46	22.46	22.39	22.4
D. O. (mg/L)	8.69	6.21	5.75	5.61	5.61	5.61	5.63	5.5
Turbidity (NTU)	8.1	8.6	8.0	9.4	13.0	25.2	33.0	23.5
REDOX	—	—	—	—	—	—	—	—
ORP	-152	-150	-147	-135	-117	-87	-82	-8
COND (umohs/cm)	7.98	7.97	7.89	7.73	7.50	7.24	6.41	5.6

SAMPLE PARAMETERS (**GRAB** or **COMPOSITE**):

FILTERED METALS COLLECTED (Y)/N 1.0um, 0.45um, OTHER:

Observations

Color: (Clear) Other (describe):

Odor: (None) Low Medium High Very Strong H2S Fuel-Like

Turbidity: None (Low) Medium High

COMMENTS: Portable battery went dead @ 1200. ~~Setting~~ up the vehicle to use the battery to continue sampling. Resume pumping @ 1210. Collected samples for

OTHER: PLEASE USE BACK OF SHEET FOR SKETCHING MAPS, NOTES, ETC. **SEE BACK OF SHEET** Y/(N)

QC SAMPLE TYPE: DUPLICATE EQUIPEMENT BLANK OTHER

QC PARAMETERS:

SAMPLE DATE/TIME: 05/31/06 — 1330

Signed/Sampler: Victor Martinez

CH2MHILL

Well Purge and Sampling Field Data Sheet

Project #: 344479.FT.03 **Date** 05/31/06

Well Number: MW136 **Site:** Griggs and Walnut Groundwater Plume Site

Field Crew: M. HARRIS, V. MARTINEZ

Depth to Water (ft):	= 6.06	Casing Diameter			gal/ft of casing
Well Depth (ft.):	- 22.93	(2 inch)			~~0.01632~~ 0.1632
Water Column (ft):	= 16.87	4 inch			0.06528
Gal/ft of Casing:	x 0.163	6 inch			1.4688
Casing Volume (gal)	= 2.75	8 inch			2.611
No. of Volumes (min.	x 3	10 inch			4.0797
Purge Volume (gal):	= 8.25	12 inch			5.8748

Method of Purging (circle one)

PUMP: SUB. CENT. PERIST.	**OTHER:**	**BAILER:** TEFLON, SS, OTHER
TIME ON: 1850		BAILER VOL. (gal):
FLOW RATE (gpm): 300-600mL/min		REQUIRED PULLS:
PUMP TIME (min): 50 min		VOL. PURGED (gals):
VOL. PURGED (gals): 8.30		OTHER:

FIELD PARAMETERS	FIELD MEASUREMENTS					WITHIN 10% Y/N
	1st	2nd	3rd	4th	5th	6th
TIME	1855	1905	1910	1918	1922	1928
Depth to Water (ft):	7.65	8.28	10.78	12.62	14.15	15.31
VOL. (gal):	0.5gal	1gal	1.5	2.00	3.00	4.00
FLOW RATE (gpm):	600mL/min	300mL/min	300mL/min	300mL/min	600mL/min	600
pH (s. units)	6.77	6.88	6.70	6.76	6.70	6.71
TEMP. (C)	21.61	21.87	21.48	21.33	21.32	21.37
D. O. (mg/L)	9.48	9.05	6.79	6.64	6.34	6.20
Turbidity (NTU)	>1000	43.6	38.6	58.2	53.5	437
REDOX						
ORP	-148	-126	-132	-124	-132	-137
COND (umohs/cm)	10.9	10.6	10.8	10.8	10.8	10.8

SAMPLE PARAMETERS (**GRAB** or **COMPOSITE**):

FILTERED METALS COLLECTED Y/N 1.0um, 0.45um, OTHER:

Observations

Color: Clear (Other (describe): brownish/yellowish

Odor: (None) Low Medium High Very Strong H2S Fuel-Like

Turbidity: None Low Medium (High)

COMMENTS: Purged 3 well volumes and then grabbed samples after well recovered @ least 80% of original depth to water

OTHER: PLEASE USE BACK OF SHEET FOR SKETCHING MAPS, NOTES, ETC. **SEE BACK OF SHEET** (Y) / N

QC SAMPLE TYPE: DUPLICATE EQUIPEMENT BLANK (OTHER) MS/MSD

QC PARAMETERS: MS/MSD

SAMPLE DATE/TIME: 05/31/06 - 2025

Signed/Sampler: Victor Martinez

Continue on next page

CH2MHILL

Well Purge and Sampling Field Data Sheet

Project #: 344479. FI.03 **Date** 05/31/06

Well Number: MW 136 **Site:** Griggs and Walnut Groundwater Plume Site

Field Crew: M. HARRIS, V. MARTINEZ

		Casing Diameter	gal/ft of casing
Depth to Water (ft):	=	2 inch	0.01632
Well Depth (ft.):	-	4 inch	0.06528
Water Column (ft):	=	6 inch	1.4688
Gal/ft of Casing:	x	8 inch	2.611
Casing Volume (gal)	=	10 inch	4.0797
No. of Volumes (min.	x	12 inch	5.8748
Purge Volume (gal):	=		

Method of Purging (circle one)

PUMP: SUB. CENT. PERIST.	**OTHER:**	**BAILER:** TEFLON, SS, OTHER
TIME ON:		BAILER VOL. (gal):
FLOW RATE (gpm):		REQUIRED PULLS:
PUMP TIME (min):		VOL. PURGED (gals):
VOL. PURGED (gals):		OTHER:

FIELD PARAMETERS	FIELD MEASUREMENTS					WITHIN 10% Y/N
	1st	2nd	3rd	4th	5th	6th
TIME	1935	1940	1946			
Depth to Water (ft):	18.05	20.00	21.36			
VOL. (gal):	6.00	7.00	8.25			
FLOW RATE (gpm):	600	600	600			
pH (s. units)	6.66	6.83	6.85			
TEMP. (C)	21.36	21.51	21.74			
D. O. (mg/L)	5.88	7.12	7.30			
Turbidity (NTU)	670	155	47.3			
REDOX						
ORP	-151	-150	-144			
COND (umohs/cm)	11.4	10.6	10.4			

SAMPLE PARAMETERS (**GRAB** or **COMPOSITE**):

FILTERED METALS COLLECTED: Y / N 1.0um, 0.45um, OTHER:

Observations

Color: Clear Other (describe):

Odor: None Low Medium High Very Strong H2S Fuel-Like

Turbidity: None Low Medium High

COMMENTS:

OTHER: PLEASE USE BACK OF SHEET FOR SKETCHING MAPS, NOTES, ETC. **SEE BACK OF SHEET Y / N**

QC SAMPLE TYPE: DUPLICATE EQUIPEMENT BLANK OTHER

QC PARAMETERS:

SAMPLE DATE/TIME: 05/31/06 – 2025

Signed/Sampler: Victor Martinez

CH2MHILL

Well Purge and Sampling Field Data Sheet

Project #: 344479.FI.03 **Date** 05/31/06

Well Number: MW 137 **Site:** Griggs and Walnut Groundwater Plume Site

Field Crew: M. Harris, V. Martinez

			Casing Diameter		gal/ft of casing
Depth to Water (ft):	=	7.28	(2 inch)		~~0.01632~~ 0.1632
Well Depth (ft.):	-	23.20	4 inch		0.06528
Water Column (ft):	=	15.92	6 inch		1.4688
Gal/ft of Casing:	x	0.163	8 inch		2.611
Casing Volume (gal)	=	2.6	10 inch		4.0797
No. of Volumes (min.	x	3	12 inch		5.8748
Purge Volume (gal):	=	7.8			

Method of Purging (circle one)

PUMP: SUB. CENT. PERIST.	**OTHER:**	**BAILER:** TEFLON, SS, OTHER	
TIME ON:	1458	BAILER VOL. (gal):	
FLOW RATE (gpm):	600 mL/min	REQUIRED PULLS:	
PUMP TIME (min):	49 min	VOL. PURGED (gals):	
VOL. PURGED (gals):	8 gal	OTHER:	

FIELD PARAMETERS	FIELD MEASUREMENTS						WITHIN 10% Y/N	
	1st	2nd	3rd	4th	5th	6th	7th	8th
TIME	1503	1510	1517	1524	1531	1538	1545	1552
Depth to Water (ft):	8.87	9.91	11.23	12.76	14.11	15.83	17.06	17.1
VOL. (gal):	1 gal	2 gal	3 gal	4 gal	5 gal	6 gal	7 gal	8 g
FLOW RATE (gpm):	600 mL/min	600	600	600	600	600	600	600
pH (s. units)	6.80	6.85	6.90	6.92	6.93	6.94	6.94	6.9
TEMP. (C)	23.05	23.15	23.17	23.16	23.38	23.44	23.47	23.
D. O. (mg/L)	5.97	6.71	6.41	6.38	6.37	6.47	6.52	6.4
Turbidity (NTU)	639	761.0	542.00	523.0	314.3	156.00	161.0	162
REDOX								
ORP	-101	-106	-100	-95	-95	-95	-94	-9
COND (umohs/cm)	8.78	9.3	9.1	9.1	9.1	9.1	9.2	9

SAMPLE PARAMETERS (**GRAB** or **COMPOSITE**):

FILTERED METALS COLLECTED (Y) / N 1.0um, 0.45um, OTHER:

Observations

Color: Clear (Other) (describe): brownish/

Odor: (None) Low Medium High Very Strong H2S Fuel-Like

Turbidity: None Low (Medium) High

COMMENTS: Purged 3 well volumes & waited until well recovered @ 80% of original depth to water to collect samples.

OTHER: PLEASE USE BACK OF SHEET FOR SKETCHING MAPS, NOTES, ETC. **SEE BACK OF SHEET** Y (N)

QC SAMPLE TYPE: (DUPLICATE) EQUIPEMENT BLANK OTHER

QC PARAMETERS:

SAMPLE DATE/TIME: 05/31/06 — 1950

Signed/Sampler: Victor Martinez

State Marine Superfund Site
Supplemental Remedial Investigation
Project No. 344479

DATE:___/___/2006

SEDIMENT INVESTIGATION SAMPLING FORM

Samplers/Inspectors: RP, BF, BC, RB
Rob Price, Barry Forsythe, Brian Cain, Ron Brinkly
Subcontractor/Crew:

Station ID: A
Time: 1010
Northing: 139330 Easting: 3596068 42
Weather: Clear Sunny

Surface Water ☐ Sediment ☑ Sediment Bioassay ☑ Taxonomic Identification ☑

☐ Intertidal Area
☒ Near Shore
☐ Far Shore

Depth of SW 8-9'
Depth of Sed

SW Sampling Equipment
☐ Bailer
☐ Subsurface bottle type
☐
☐

Sediment Sampling Equipment
☐ Vibra-Core
☐ Hand Auger
☐ Trowel / Spoon
☐ Dredge(type)
☐ Wildco
☒ Other Ponar

Comments/Description/Additional equipment

Type of Sediment Sample
☐ Grab ☒ Composite of 3 grabs - 1 location

Field Screening Data

TIME	Temp.	pH	Cond.	ORP	Turbidity	D.O.	PID	Comments
1020	29.04	5.74	20.3	187	5.4	7.16		Sal 1.21 tds = 12.5

SEDIMENT AND SURFACE WATER SAMPLE DATA

Sample Collection Date/Time 6/8/06 11:00 Samplers RP, BF

QA/QC Samples Collected: None, Duplicate _____, Equipment Blank _____, MS/MSD _____
Sample Parameters: VOCs, SVOCs, TAL Metals, PCBs, TOC, Dioxins, Bulk Density, Porosity, Others PCT Solids, PAH grain size

Sample and QA/QC ☒ Normal A-SD-01 ☐ Equipment Blank _____
☐ Duplicate _____ ☐ MS/MSD _____

SED SAMPLE DESCRIPTION

Color: gray **Moisture:** Dry Sl. Moist Moist V.Moist Wet
Major Description: Clay Silty Clay Silt Clayey Sand Sandy Clay Sand Gravelly Sand Gravel Grvly Clay
Minor Description: Organic Mottled Plastic M.Plastic ____Nodules vf f coarse-grained Ang / SA / SR / Rounded
Well / poorly / mod - sorted well / poorly / mod - cemented Loose
Other Descriptors: 3-5mm of sand on top / surface
good recovery of sediment

Organisms Observed:

Sampler Signature: [signature] FTL Review/Siganature: _____ Date: _____

007818

State Marine Superfund Site
Supplemental Remedial Investigation
Project No. 344479

DATE:____/____/2006

SEDIMENT INVESTIGATION SAMPLING FORM

Samplers/Inspectors: RP, BF, BC, RB

Subcontractor/Crew:

Station ID: Station B
Time: 12:00 pm
Northing: 13932680. Easting: 3595978.0 IE
Weather: Clear Sunny

Surface Water ☐ Sediment ☒ Sediment Bioassay ☒ Taxonomic Identification ☒

☐ Intertidal Area
☒ Near Shore
☐ Far Shore

Depth of SW 8-9
Depth of Sed

SW Sampling Equipment
☐ Bailer
☐ Subsurface bottle type
☐
☐

Sediment Sampling Equipment
☐ Vibra-Core
☐ Hand Auger
☐ Trowel / Spoon
☐ Dredge(type)
☐ Wildco
☒ Other Ponar

Comments/Description/Additional equipment
~~Oily Sheen on Sample~~
- see field book for sample details
- poor recovery at many sites

Type of Sediment Sample
☐ Grab ☒ Composite of ~~2~~ ~~3~~ grabs 5 locations 30+ grabs

Field Screening Data

TIME	Temp.	pH	Cond.	ORP	Turbidity	D.O.	PID	Comments
1200	29.16	6.95	19.7	90	37.9	7.55		Sal 1.18, 12.2 TDS

SEDIMENT AND SURFACE WATER SAMPLE DATA

Sample Collection Date/Time 6/8/06 1205 Samplers BF

QA/QC Samples Collected: None, Duplicate _____, Equipment Blank _____, MS/MSD _____

Sample Parameters: VOCs, SVOCs, TAL Metals, PCBs, TOC, Dioxins, Bulk Density, Porosity, Others PAH, % Solids Grain Size

Sample and QA/QC ☒ Normal B-SD-02 ☐ Equipment Blank _____

☐ Duplicate _____ ☐ MS/MSD _____

SED SAMPLE DESCRIPTION

Color: Gray Moisture: Dry Sl. Moist Moist V.Moist Wet

Major Description: Clay Silty Clay Silt Clayey Sand Sandy Clay Sand Gravelly Sand Gravel Grvly Clay

Minor Description: Sandy silt Organic Mottled Plastic M.Plastic ____Nodules vf f coarse-grained Ang / SA / SR / Rounded
Well / poorly / mod - sorted well / poorly / mod - cemented Loose

Other Descriptors: 3-5mm of sand
oily sheen on surface of water

Organisms Observed:

Sampler Signature: [signature] FTL Review/Siganature: _____ Date: _____

State Marine Superfund Site
Supplemental Remedial Investigation
Project No. 344479

DATE:___/___/2006

SEDIMENT INVESTIGATION SAMPLING FORM

Samplers/Inspectors: RP, BF, BC, RB

Subcontractor/Crew:

Station ID: Station C
Time: 1527
Northing: ____ Easting: -see field book
Weather: Clear / Sunny

Surface Water ☐ Sediment ☒ Sediment Bioassay ☒ Taxonomic Identification ☒

☐ Intertidal Area
☒ Near Shore
☐ Far Shore

Depth of SW 15
Depth of Sed ____

SW Sampling Equipment
☐ Bailer
☐ Subsurface bottle type
☐ ____
☐ ____

Sediment Sampling Equipment
☐ Vibra-Core
☐ Hand Auger
☐ Trowel / Spoon
☐ Dredge(type)
☐ Wildco
☒ Other ponar

Comments/Description/Additional equipment
Sample C-SD-03

Type of Sediment Sample
☐ Grab ☐ Composite of 2 location grabs
30+ grabs

Field Screening Data

TIME	Temp.	pH	Cond.	ORP	Turbidity	D.O.	PID	Comments
1527	29.34	7.27	22.1	8.4	43.5	8.44		Sal = 1.29 TDS = 13.3

SEDIMENT AND SURFACE WATER SAMPLE DATA

Sample Collection Date/Time 1530 Samplers RP, BF

QA/QC Samples Collected: None, Duplicate ____, Equipment Blank ____ MS/MSD

Sample Parameters: VOCs, SVOCs, TAL Metals, PCBs, TOC, Dioxins, Bulk Density, Porosity, Others PAH, w solids grain size

Sample and QA/QC ☒ Normal C-SD-03 ☐ Equipment Blank ____

☐ Duplicate ____ ☒ MS/MSD MS/MSD

SED SAMPLE DESCRIPTION

Color: Gray Moisture: Dry Sl. Moist Moist V.Moist Wet

Major Description: Clay Silty Clay Silt Clayey Sand Sandy Clay Sand Gravelly Sand Gravel Grvly Clay

Minor Description: Organic Mottled Plastic M.Plastic ____Nodules vf f coarse-grained Ang / SA / SR / Rounded
Well / poorly / mod - sorted well / poorly / mod - cemented Loose

Other Descriptors: hard bottom, low amounts of sediment present

Organisms Observed:

Sampler Signature: Robert R FTL Review/Siganature: ____ Date: ____

State Marine Superfund Site
Supplemental Remedial Investigation
Project No. 344479

DATE:___/___/2006

SEDIMENT INVESTIGATION SAMPLING FORM

Samplers/Inspectors: RP, BF, BC, RB

Subcontractor/Crew:

Station ID: Station D
Time: 16:15
Northing: Easting: - see field back
Weather: Clear Sunny

Surface Water ☐ Sediment ☒ Sediment Bioassay ☒ Taxonomic Identification ☒

☐ Intertidal Area ☒ Near Shore ☐ Far Shore

Depth of SW ~~7~~ 10 ft
Depth of Sed

SW Sampling Equipment
☐ Bailer
☐ Subsurface bottle type
☐
☐

Sediment Sampling Equipment
☐ Vibra-Core
☐ Hand Auger
☐ Trowel / Spoon
☐ Dredge(type)
☐ Wildco
☒ Other Ponar

Comments/Description/Additional equipment

Type of Sediment Sample
☐ Grab ☒ Composite of 5 ~~4~~ location grabs
30+ grabs

Field Screening Data

TIME	Temp.	pH	Cond.	ORP	Turbidity	D.O.	PID	Comments
1530	29.5	7.36	24.0	90	58.3	7.46		Sal = 1.34 TDS = 13.5

SEDIMENT AND SURFACE WATER SAMPLE DATA

Sample Collection Date/Time 6/8/06 16:15 Samplers RP, BF

QA/QC Samples Collected: None, Duplicate _____, Equipment Blank _____, MS/MSD _____

Sample Parameters: VOCs, SVOCs, TAL Metals, PCBs, TOC, Dioxins, Bulk Density, Porosity, Others PAH, % solids Grain size

Sample and QA/QC ☒ Normal D-SD-04 ☐ Equipment Blank _____

☐ Duplicate _____ ☐ MS/MSD _____

SED SAMPLE DESCRIPTION

Color: Gray Moisture: Dry Sl. Moist Moist V.Moist Wet

Major Description: Clay Silty Clay Silt Clayey Sand Sandy Clay Sand Gravelly Sand Gravel Grvly Clay

Minor Description: Organic Mottled Plastic M.Plastic ____Nodules vf f coarse-grained Ang / SA / SR / Rounded
Well / poorly / mod - sorted well / poorly / mod - cemented Loose

Other Descriptors: best recovered from ~~5th~~ 5th location - most sample from that

Organisms Observed:

Sampler Signature: _____ FTL Review/Siganature: _____ Date: _____

007821

State Marine Superfund Site
Supplemental Remedial Investigation
Project No. 344479

DATE:___/___/2006

SEDIMENT INVESTIGATION SAMPLING FORM

Samplers/Inspectors: RP, BF, BC, RB
Subcontractor/Crew:
Station ID: Station E
Time: 1420
Northing: _____ Easting: _____
Weather: Clear Sunny

Surface Water ☐ Sediment ☒ Sediment Bioassay ☒ Taxonomic Identification ☒

☐ Intertidal Area ☐ Near Shore ☐ Far Shore

Depth of SW ~~3-4~~ 3-4
Depth of Sed _____

SW Sampling Equipment
☐ Bailer
☐ Subsurface bottle type
☐ _____
☐ _____

Sediment Sampling Equipment
☐ Vibra-Core
☐ Hand Auger
☐ Trowel / Spoon
☐ Dredge(type)
☐ Wildco
☒ Other Ponar

Comments/Description/Additional equipment
Sample E-SD-05

Type of Sediment Sample
☐ Grab ☒ Composite of 4/5 locations grabs
3-4 ponar grabs

Field Screening Data

TIME	Temp.	pH	Cond.	ORP	Turbidity	D.O.	PID	Comments
1420	29.12	7.2	20.5	80	21.5	9.11		Sal = 1.25 TDS = 10.8

SEDIMENT AND SURFACE WATER SAMPLE DATA

Sample Collection Date/Time 6/8/06, 1420 Samplers RP, BF

QA/QC Samples Collected: None, Duplicate _____, Equipment Blank _____, MS/MSD _____
Sample Parameters: VOCs, SVOCs, TAL Metals, PCBs, TOC, Dioxins, Bulk Density, Porosity, Others PAH, Grain Size % solids

Sample and QA/QC ☒ Normal E-SD-05 ☐ Equipment Blank _____
☐ Duplicate _____ ☐ MS/MSD _____

SED SAMPLE DESCRIPTION

Color: grey Moisture: Dry Sl. Moist Moist V.Moist Wet
Major Description: Clay Silty Clay Silt Clayey Sand Sandy Clay Sand Gravelly Sand Gravel Grvly Clay
Minor Description: Organic Mottled Plastic M.Plastic ____Nodules vf f coarse-grained Ang / SA / SR / Rounded
Well / poorly / mod - sorted well / poorly / mod - cemented Loose
Other Descriptors: little sediment - mostly hard clay + sand
poor recovery of sediment = pond
Organisms Observed:

Sampler Signature: Robert R. FTL Review/Siganature: _____ Date: _____

007822

State Marine Superfund Site
Supplemental Remedial Investigation
Project No. 344479

DATE:___/___/2006

SEDIMENT INVESTIGATION SAMPLING FORM

Samplers/Inspectors: ~~RB~~ RP, BF, BC, RB

Station ID: Station F

Time: 17:05

Subcontractor/Crew:

Northing: ____ Easting: ~See field book

Weather: Clear / Sunny

Surface Water ☐ Sediment ☒ Sediment Bioassay ☒ Taxonomic Identification ☒

☐ Intertidal Area ☐ Far Shore Depth of SW 8

☐ Near Shore Depth of Sed ____

SW Sampling Equipment
- ☐ Bailer
- ☐ Subsurface bottle type
- ☐ ____
- ☐ ____

Sediment Sampling Equipment
- ☐ Vibra-Core
- ☐ Hand Auger
- ☐ Trowel / Spoon
- ☐ Dredge(type)
- ☐ Wildco
- ☒ Other ponar

Comments/Description/Additional equipment

Type of Sediment Sample
☐ Grab ☒ Composite of 2 location grabs
3 of grabs

Field Screening Data

TIME	Temp.	pH	Cond.	ORP	Turbidity	D.O.	PID	Comments
1705	30.48	7.58	20.4	79	1.4	7.54		Sal 1.19, TDS 12.3

SEDIMENT AND SURFACE WATER SAMPLE DATA

Sample Collection Date/Time 17:05 6/8/06 Samplers ____

QA/QC Samples Collected: None, Duplicate ____, Equipment Blank ____, MS/MSD ____

Sample Parameters: VOCs, SVOCs, TAL Metals, PCBs, TOC, Dioxins, Bulk Density, Porosity, Others PAH, % Solids, Grain Size

Sample and QA/QC ☒ Normal F-SP-06 ☐ Equipment Blank ____

☐ Duplicate ____ ☐ MS/MSD ____

SED SAMPLE DESCRIPTION

Color: Gray **Moisture:** Dry Sl. Moist Moist V.Moist Wet

Major Description: Clay Silty Clay Silt Clayey Sand Sandy Clay Sand Gravelly Sand Gravel Grvly Clay

Minor Description: Organic Mottled Plastic M.Plastic ____Nodules vf f coarse-grained Ang / SA / SR / Rounded
Well / poorly / mod - sorted well / poorly / mod - cemented Loose

Other Descriptors: Silty / Sand + clayey Sand
Poor recovery from ponar

Organisms Observed:

Sampler Signature: [signature] FTL Review/Siganature: ____ Date: ____

007823

State Marine Superfund Site
Supplemental Remedial Investigation
Project No. 344479

DATE:___/___/2006

SEDIMENT INVESTIGATION SAMPLING FORM

Samplers/Inspectors: RP, BF, RB, BC
Subcontractor/Crew:

Station ID: Station G
Time: 1030 6/9/06
Northing: _____ Easting: _____
Weather: clear Sunny

Surface Water ☐ Sediment ☒ Sediment Bioassay ☒ Taxonomic Identification ☒

☐ Intertidal Area
☒ Near Shore
☐ Far Shore

Depth of SW ~~8-12~~ 8-10
Depth of Sed _____

SW Sampling Equipment
☐ Bailer
☐ Subsurface bottle type
☐ _____
☐ _____

Sediment Sampling Equipment
☐ Vibra-Core
☐ Hand Auger
☐ Trowel / Spoon
☐ Dredge(type)
☐ Wildco
☒ Other Ponar

Comments/Description/Additional equipment

Type of Sediment Sample
☐ Grab ☒ Composite of 2 locations ____ grabs
12 grabs

Field Screening Data

TIME	Temp.	pH	Cond.	ORP	Turbidity	D.O.	PID	Comments
1035	29.36	6.72	23.7	100	16.2	7.33		Sal 1.43, TDS 14.66

SEDIMENT AND SURFACE WATER SAMPLE DATA

Sample Collection Date/Time 1050 Samplers RP BF

QA/QC Samples Collected: None, Duplicate _____, Equipment Blank _____, MS/MSD _____
Sample Parameters: VOCs, SVOCs, TAL Metals, PCBs, TOC, Dioxins, Bulk Density, Porosity, Others WS, PAH

Sample and QA/QC ☒ Normal G-SD-07 ☐ Equipment Blank _____
☐ Duplicate _____ ☐ MS/MSD _____

SED SAMPLE DESCRIPTION

Color: grey / black Moisture: Dry Sl. Moist Moist V.Moist (Wet)
Major Description: Clay (Silty Clay) Silt Clayey Sand Sandy Clay Sand Gravelly Sand Gravel Grvly Clay
Minor Description: Organic Mottled Plastic M.Plastic ____Nodules vf f coarse-grained Ang / SA / SR / Rounded
Well / poorly / mod - sorted well / poorly / mod - cemented Loose
Other Descriptors: dark color
good recovery
Organisms Observed:

Sampler Signature: [signature] FTL Review/Siganature: _____ Date: _____

007824

State Marine Superfund Site
Supplemental Remedial Investigation
Project No. 344479

DATE:___/___/2006

SEDIMENT INVESTIGATION SAMPLING FORM

Samplers/Inspectors: RP, BF, RB, BL
Subcontractor/Crew:

Station ID: Station H
Time: 945
Northing: _____ Easting: _____
Weather: Sunny Hazy

Surface Water ☐ Sediment ☑ Sediment Bioassay ☑ Taxonomic Identification ☑

☐ Intertidal Area ☐ Far Shore
☑ Near Shore

Depth of SW 41
Depth of Sed _____

SW Sampling Equipment
- ☐ Bailer
- ☐ Subsurface bottle type
- ☐ _____
- ☐ _____

Sediment Sampling Equipment
- ☐ Vibra-Core
- ☐ Hand Auger
- ☐ Trowel / Spoon
- ☐ Dredge(type)
- ☐ Wildco
- ☒ Other Ponar

Comments/Description/Additional equipment

Type of Sediment Sample
☐ Grab ☒ Composite of 41 aliquots 12 grabs

Field Screening Data

TIME	Temp.	pH	Cond.	ORP	Turbidity	D.O.	PID	Comments
945	29.03	6.07	21.5	171	11.0	6.50		Sal 1.3) TDS 13.3

SEDIMENT AND SURFACE WATER SAMPLE DATA

Sample Collection Date/Time 1015 (01910 Samplers RP, BF H-SD-08

QA/QC Samples Collected: None (Duplicate) _____, Equipment Blank _____, MS/MSD _____
Sample Parameters: VOCs, SVOCs, TAL Metals, PCBs, TOC, Dioxins, Bulk Density, Porosity, Others_____, _____

Sample and QA/QC
- ☒ Normal H-SD-08
- ☒ Duplicate FD-01
- ☐ Equipment Blank _____
- ☐ MS/MSD _____

SED SAMPLE DESCRIPTION

Color: Grey
Moisture: Dry Sl. Moist Moist V.Moist (Wet)
Major Description: (Clay) Silty Clay Silt Clayey Sand Sandy Clay Sand Gravelly Sand Gravel Grvly Clay
Minor Description: Organic Mottled Plastic M.Plastic ____Nodules vf f coarse-grained Ang / SA / SR / Rounded
Well / poorly / mod - sorted well / poorly / mod - cemented Loose
Other Descriptors: good recovery
mostly clay substrate
Organisms Observed:

Sampler Signature: [signature] FTL Review/Siganature: _____ Date: _____

007825

State Marine Superfund Site
Supplemental Remedial Investigation
Project No. 344479

DATE: ___/___/2006

SEDIMENT INVESTIGATION SAMPLING FORM

Samplers/Inspectors: RP, BF, Bc, RB
Subcontractor/Crew:
Station ID: State Marine Reference
Time: 1125
Northing: Easting:
Weather: Sunny Clear

Surface Water ☐ Sediment ☒ Sediment Bioassay ☒ Taxonomic Identification ☒

☐ Intertidal Area ☒ Near Shore ☐ Far Shore

Depth of SW 2'
Depth of Sed

SW Sampling Equipment
☐ Bailer
☐ Subsurface bottle type
☐ ____
☐ ____

Sediment Sampling Equipment
☐ Vibra-Core
☐ Hand Auger
☐ Trowel / Spoon
☐ Dredge(type)
☐ Wildco
☒ Other poor

Comments/Description/Additional equipment

Type of Sediment Sample
☐ Grab ☒ Composite of 1 location - 0.5 sq ft - 12 scrapes from 1 location

Field Screening Data

TIME	Temp.	pH	Cond.	ORP	Turbidity	D.O.	PID	Comments
1125	30.46	6.98	14.3	71	24.9	8.50		Sal 0.84 9 0 TDS

SEDIMENT AND SURFACE WATER SAMPLE DATA

Sample Collection Date/Time 6/9/06 1145 Samplers ~~RB~~ RP, BF

QA/QC Samples Collected: (None,) Duplicate ____, Equipment Blank ____, MS/MSD ____

Sample Parameters: VOCs, (SVOCs), TAL Metals, PCBs (TOC) Dioxins, Bulk Density, Porosity, Others PAH, %Silt

Sample and QA/QC
☒ Normal Reference I-SD-09 ☐ Equipment Blank ____
☐ Duplicate ____ ☐ MS/MSD ____

SED SAMPLE DESCRIPTION

Color: brown Moisture: Dry Sl. Moist Moist V.Moist Wet

Major Description: Clay Silty Clay Silt Clayey Sand Sandy Clay (Sand) Gravelly Sand Gravel Grvly Clay

Minor Description: Organic Mottled Plastic M.Plastic ____Nodules vf f coarse-grained Ang / SA / SR / Rounded
Well / poorly / mod - sorted well / poorly / mod - cemented Loose

Other Descriptors: Very Sandy Site

Organisms Observed:

Sampler Signature: RP FTL Review/Siganature: ____ Date: ____

007826

CH2MHILL

PROJECT NUMBER	WELL NUMBER	SHEET
344479.FI.03	MW 136	1 of 1

WELL DEVELOPMENT LOG

PROJECT: STATE MARINE

LOCATION: Port Arthur, TX

START: 05-23 END: 05-24

DEVELOPMENT CONTRACTOR: QRI

FIELD ~~HYDROGEOLOGIST~~ ENGINEER: Victor Martinez

SCREEN INTERVAL: 10 ft

PUMP PLACEMENT: Bottom of well/screen

WELL DIAMETER AND MATERIAL: 2 in PVC

	TIME	WATER VOLUME DISCHARGED	WATER LEVEL (BTOC)	Ph	TURB. (NTU)	COND. (umhos/cm)	TEMP. (CELSIUS)	DO (mg/L)	ORP	REMARKS (COLOR, ODOR, SHEEN, SEDIMENT, ETC)
05-23	1346	2 gal	6.29	7.04	>999	7.36	27.54	10.7	-178	dark grey color w/sediment
"	1358	5 gal	12.38	6.85	>999	9.30	24.86	10.8	-143	"
"	1408	7 gal	15.29	7.38	>999	9.58	25.10	9.87	-133	"
"	1415	9 gal	14.99	7.21	>999	9.23	25.37	9.95	-135	"
"	1420	11 gal	17.25	7.15	>999	10.34	25.49	8.91	-124	"
"	1425	14 gal	19.38	7.18	>999	9.87	25.84	8.38	-122	"
"	1430	17 gal	22.15	7.20	>999	8.91	25.90	8.76	-128	"
05-24	0750	1000mL	6.48	6.20	79	10.3	22.66	9.51	-48	ligth brown
"	0755	2000mL	7.01	6.81	90.0	9.87	22.45	7.92	-81	" "
"	0758	2500mL	7.89	6.88	186.	9.79	23.22	7.96	-97	" "
"	0804	3000mL	8.23	6.87	392	9.86	23.72	8.08	-101	brownish
"	0809	3700mL	8.80	7.01	806	10.05	23.74	8.80	-106	dark-brow w/sediments
"	0815	4200mL	9.80	7.01	900	9.83	23.28	8.63	-98	" " "
"	0820	5700mL	9.99	7.00	674	10.5	25.40	10.49	-111	" " "
"	0835	6200mL	9.80	7.01	532	11.2	26.24	10.58	-110	brownish
"	0840	6700mL	9.85	7.01	516	~~11.68~~ 11.4	26.39	9.28	-112	brownish
"	0848	7500mL	10.28	7.01	500	11.1	28.01	8.70	-115	"

EQUIPMENT USED (MAKE, MODEL, SER. No.):

Submersible Well pump

METHOD USED FOR DEVELOPMENT (i.e. air-lift, overpumping/surging, bailer, etc...):

OVERPUMPING / SURGING

TOTAL VOLUME H_2O PURGED FROM WELL (GALLONS):

≅ 19 gallons

COMMENTS: The well dried out, water Quality parameters did not stabilized. Well development will continue on 05-24-2006. Most parameters appear to have stabilized except turbidity & DO. Talked to Darren Davis and he mentioned that the well can be considered ~~b~~ developed as indicated by the project manager.

CH2MHILL

PROJECT NUMBER: 344479.FI.03

WELL NUMBER: MW137

SHEET 1 of 1

WELL DEVELOPMENT LOG

PROJECT: STATE MARINE

LOCATION: PORT ARTHUR, TX

START: 05-23 END: 05-24

DEVELOPMENT CONTRACTOR: QRI

FIELD ~~HYDROGEOLOGIST~~: ENGINEER Victor Martinez

SCREEN INTERVAL: 10 ft

PUMP PLACEMENT: TOP OF SCREEN

WELL DIAMETER AND MATERIAL: 2 IN PVC

	TIME	WATER VOLUME DISCHARGED	WATER LEVEL (BTOC)	Ph	TURB. (NTU)	COND. (umhos/cm)	TEMP. (CELSIUS)	DO (mg/L)	ORP	REMARKS (COLOR, ODOR, SHEEN, SEDIMENT, ETC)
05-23	1450	1 gal	9.85	7.49	>999	6.09	27.3	14.27	-121	dark grey w/sediments
"	1455	2 "	12.76	7.72	"	5.87	25.24	13.81	-66	" " "
"	1505	3 "	12.58	7.47	"	6.17	26.77	12.66	-33	" " "
"	1515	4 "	12.31	7.46	"	6.15	25.55	13.94	-32	" " "
"	1525	5 "	12.48	7.40	"	6.49	26.00	13.80	-6	" " "
"	1540	6 "	12.51	7.63	"	6.73	25.72	14.10	6	" " "
"	1605	7 "	12.41	7.51	"	6.93	26.02	12.61	12	" " "
"	1625	8 "	12.58	7.15	"	7.41	25.05	12.93	-78	" " "
"	1650	9 "	12.98	7.23	"	7.40	24.95	12.51	-78	" " "
05-24	1000	500 mL	9.23	7.42	116	8.45	26.54	12.9	35	Light brown / Light sediments
"	1005	1000mL	9.89	7.25	118	8.05	27.98	9.15	48	" " "
"	1010	1500mL	9.85	7.02	123	8.04	28.98	10.11	52	" "
"	1015	2000mL	9.71	6.95	113	8.02	29.39	8.70	61	" "
"	1020	2500mL	9.75	7.01	105	7.99	30.5	8.04	61	" "
"	1030	3500mL	9.83	7.02	93.2	8.10	30.1	8.44	63	" "
"	1040	4500mL	9.84	7.00	100	8.27	30.3	8.47	65	" "
"	1050	5500mL	9.84	7.01	95.8	8.15	30.8	8.45	62	" "

EQUIPMENT USED (MAKE, MODEL, SER. No.):

Submersible well pump

METHOD USED FOR DEVELOPMENT (i.e. air-lift, overpumping/surging, bailer, etc...):

Overpumping / surging

TOTAL VOLUME H_2O PURGED FROM WELL (GALLONS):

≈ 10.5gal

COMMENTS:

Well did not stabilized, Turbidity is too high. The well was installed this mornining. Will continue developing well tomorrow (Wed 05-24-06). All water quality parameters stabilized. Well considered developed

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Appendix E-1

Baseline Human Health Risk Assessment

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REMEDIAL ACTION CONTRACT

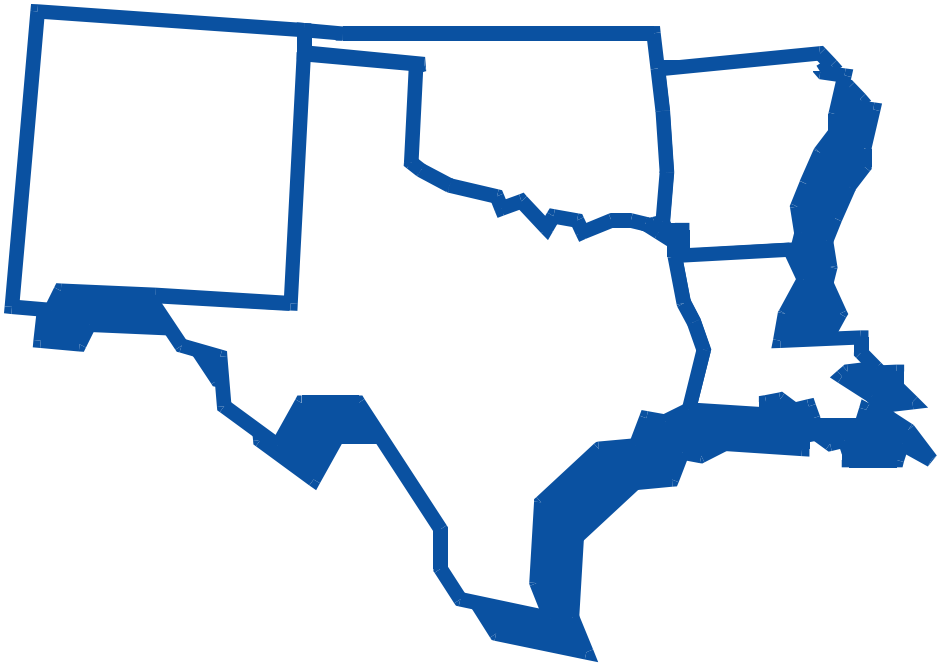
United States Environmental Protection Agency Region 6

Contract No. EP-W-06-021

Final
Baseline Human Health Risk Assessment
State Marine Superfund Site

EPA Task Order No. 0002-RICO-06BX
DCN 0002-02010

October 2006



CH2MHILL

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Acronyms

95% UCL	95 Percent Upper Confidence Level
AST	Aboveground Storage Tank
BHHRA	Baseline Human Health Risk Assessment
BSAF	Biota-Sediment Accumulation Factor
COC	Chemical of Concern
COPC	Chemical of Potential Concern
CSM	Conceptual Site Model
CT	Central Tendency
ELCR	Excess Lifetime Cancer Risk
EPC	Exposure Point Concentration
ESI	Expanded Site Inspection
FS	Feasibility Study
HEAST	Health Effects Assessment Summary Tables
HI	Hazard Index
IRIS	Integrated Risk Information System
MSSL	Medium-Specific Screening Level
NCEA	National Center for Environmental Assessment
ND	Non-Detect
ppm	parts per million
PPRTV	Provisional Peer-Reviewed Toxicity Value
RAGS	*Risk Assessment Guidance for Superfund*
RBEL	Risk-Based Exposure Level
RI	Remedial Investigation
RI/FS	Remedial Investigation/Feasibility Study
RME	Reasonable Maximum Exposure
SQL	Sample Quantitation Limit
SVOC	Semivolatile Organic Compound
TDH	Texas Department of Health

TNRCC	Texas Natural Resource Conservation Commission
TRRP	Texas Risk Reduction Program
USEPA	United States Environmental Protection Agency
UTL	Upper Tolerance Limit
VOC	Volatile Organic Compound
WTF	Wastewater Treatment Facility

1. Introduction

The following sections present the approach, assumptions, and conclusions of the baseline human health risk assessment (BHHRA) for the State Marine Superfund Site. The approach and assumptions presented below are consistent with the EPA-approved Human Health Risk Assessment Work Plan for the Site (**CH2MHILL, 2005**). In accordance with the Work Plan, a statistical comparison of onsite concentrations to measured background levels was performed for inorganic analytes using a central tendency comparison. Results are incorporated into the BHHRA.

In summary, no chemicals of concern (COCs) were identified in soil or sediment requiring risk management. Copper, zinc, and Aroclor 1242 were estimated to potentially pose unacceptable risks in sediment based on modeled fish tissue concentrations. However, the modeled fish tissue concentrations used in this BHHRA are much higher than the measured fish tissue concentrations from Lake Sabine as reported by the Texas Department of Health (TDH). Therefore, modeled fish concentrations are overly conservative. Consequently, sediments do not warrant risk management on the basis of potential human health risk from fish ingestion exposures.

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2. Data Evaluation

2.1 Soil Data

All historical soil data that were available to CH2M HILL electronically as of June 17, 2005, were used in the BHHRA. The available data consisted of soil samples collected in 1995 and 2001 from various areas, including six "hot spot" areas that were identified during the Expanded Site Inspection (ESI) (**TNRCC, 1996**) and Remedial Investigation (RI) (Weston, 2003) based on historical activities performed in six distinct areas. Supplemental soil data collected from the former Wastewater Impoundment Area in May 2006 were also used in the BHHRA.

The data were evaluated based on the groupings presented in the ESI and the groupings provided in the RI Report (**Weston, 2003**). It should be noted that during the 1995 ESI, soil samples were grouped by areas potentially impacted by the potential sources and included areas outside the immediate source boundaries. The following data groupings were used in the BHHRA:

- Wastewater Impoundment Area
- Wastewater Treatment Facility
- Tar Burn Area
- Current Aboveground Storage Tank Area Maintenance Shed Area
- Lauren Tank Farm
- Non-Source Area

2.2 Ground water Data

Ground water data were not used in the BHHRA due to the lack of ground water receptors (ground water is not used as a potable source, chemicals of potential concern are inorganics and semivolatile organic compounds, and no ground water seeps were observed during the Site reconnaissance visit on June 17, 2005).

2.3 Surface Water Data

Surface water data were not used in the BHHRA. Although one surface water sample was available, the methodology used for its collection reflected ground water quality rather than surface water.

2.4 Sediment Data

All historical sediment data collected from the 0-6 inch interval and available to CH2M HILL electronically as of June 17, 2005 were used in the BHHRA. The available data consisted of sediment samples collected in 1995 and 2001. All sediment groupings

previously identified in the ESI and RI data sets were combined into one sediment grouping. The sediment data were used to model edible fish tissue concentrations.

The 2006 sediment data were not included in the BHHRA. However, sediment concentrations detected in 2006 were lower than the sediment concentrations previously detected that were used to model fish tissue ocncentrations. Therefore, if the 2006 data had been used in the BHHRA, the modeled fish tissue concentrations and estimated risks would be lower than those presented in the BHHRA.

2.5 Fish Data

Historical edible fish tissue data available for Sabine Lake are discussed in the Uncertainty Section (Section 9). The data were collected by TDH in 1995.

2.6 Potential Receptors

The following realistic receptors were identified onsite and near the Site and were evaluated for significant exposure pathways in the BHHRA:

Current onsite – industrial/commercial worker (Site owner), adult trespasser (although very infrequent since the Site is remote in relation to residential areas)

Current offsite – adult or child eating fish caught in Lake Sabine

Future onsite – industrial/commercial worker, construction worker, and adult trespasser (although very infrequent since the Site is remote in relation to residential areas)

Future offsite – adult or child eating fish caught in Lake Sabine

Direct contact exposures to sediment were not quantified since there are currently no complete exposure pathways for sediment, and the Jefferson County Navigation District has no plans to dredge sediments immediately adjacent to the Site. The nearest dredging will occur approximately 500 feet from the Site shoreline.

The conservative draft human health Conceptual Site Model (CSM) presented in the 2003 RI Report was revised to reflect more realistic current and future exposure scenarios. The CSM presents potential chemical sources, release mechanisms, receptors (current and future), and exposure routes, and is provided in **Table 1** of **Attachment 1**.

2.7 Chemical of Potential Concern Selection Process

Chemicals of potential concern (COPCs) are the chemicals with the greatest potential to pose unacceptable cancer and non-cancer health risks at a site and which exceed initial human health screening levels. The COPCs were identified for soil and sediment by a three-step screening process that evaluated: 1) frequency of detection, 2) background concentrations, and 3) risk-based screening levels. In addition, chemicals that were considered essential nutrients (calcium, magnesium, potassium, and sodium) were not selected as COPCs. The screening methodology applied in the BHHRA was approved by TCEQ during the planning stage of the BHHRA.

2.7.1 Step 1: Frequency of Detection Evaluation

The frequency at which each chemical was detected was evaluated. Those constituents detected at a frequency of 5 percent or less in soil or sediment were eliminated from the BHHRA. Those constituents detected at a frequency greater than 5 percent were carried to Step 2 of the COPC screening process.

2.7.2 Step 2: Comparison to Background

A statistical comparison was made of Site concentrations to background levels of inorganics. The following sources of background data were used in the comparison:

Soil – site-specific background data collected in 1995 during the ESI and in 2001 during the RI.

Sediment – background data collected in Sabine Lake (in an area unimpacted by the Site) in 2001 during the RI.

The background comparison included the following components:

Graphical Comparison – Box and whisker plots were prepared for visual comparison of Site and background data.

Central Tendency Comparison – Nonparametric Wilcoxon Rank-Sum test performed to determine whether an average shift of the Site data population appeared to exist relative to the background data population.

Comparison to Background Threshold Value - Upper tolerance limits (UTLs) and Prediction Limits were calculated to estimate the upper tail of the background population. These are presented as auxiliary statistics in this study while the conclusions from the Wilcoxon Rank Sum are used for risk decisions.

Final Data Evaluation – After the preliminary conclusions were developed, the background dataset underwent a final review for inappropriate conclusions.

Those constituents concluded to exceed background concentrations were carried to Step 3 of the COPC screening process. The detailed statistical evaluation is provided as **Attachment 2.**

2.7.3 Step 3: Comparison to Screening Levels

For each analyte carried to Step 3, the maximum detected concentration was compared to its human health risk-based screening levels identified below. Subsequently, for those chemicals (except lead) with maximum concentrations exceeding risk-based screening levels, the 95 percent upper confidence limit (95% UCL) on the mean concentration was compared to the human health risk-based screening levels identified below. In accordance with EPA guidance (**EPA, 2005**), the mean concentration of lead is used to represent an exposure area and was used in the comparison to screening levels:

Soil – EPA Region 6 Medium-Specific Screening Levels (MSSLs) issued December 2005, based on a target excess lifetime cancer risk (ELCR) of $1x10^{-6}$ and a non-cancer hazard index (HI) of 1.

Sediment – Sediment concentrations protective of fish consumption for those constituents with bioaccumulation potential, as identified in **Table 3-1** ("Bioaccumulative COCs") of the Ecological Risk Assessment Guidance document (**TNRCC, 2001**). The two-step process presented in the Texas Risk Reduction Program (TRRP) was used.

First, a risk-based exposure level (RBEL) for consumption of fish tissue was derived using equations presented in Table 5-3 of TCEQ's regulatory guidance entitled *Determining PCLs for Surface Water and Sediment* (**TCEQ, 2002**). Fish tissue RBELs were based on a target ELCR of $1x10^{-5}$ and a hazard index (HI) of 1. With the exception of the fish ingestion rate, all exposure factors used in deriving the fish tissue RBEL were default factors presented in Table 5-3 of the aforementioned guidance. A fish ingestion rate of 0.026 kg/day was used based on the 95th percentile of the average daily intake of marine finfish in the Gulf of Mexico, derived from fish surveys conducted by the National Marine Fisheries in 1993 (**EPA, 1997**).

Second, biota-sediment accumulation factors (BSAFs) were obtained from the RI Report, supplemented with values from the open literature, and used to calculate the corresponding sediment screening level. The detailed calculations used to develop the sediment screening levels are presented in **Attachment 3**.

Those chemicals evaluated in Step 3 that exceeded risk-based screening levels were identified as COPCs for the specific exposure area. In addition, sample quantitation limits (SQLs) were compared to screening levels for analytes that were always non-detected. Results of the COPC selection process, including the SQL comparison, are provided in **Tables 2-1** through **2-8** of **Attachment 1**.

2.7.4 Summary of COPCs

In summary, the following COPCs were identified:

Soil - Former Wastewater Impoundment Area – benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, dibenz(a,h)anthracene, and indeno(1,2,3-c,d)pyrene

Soil - Wastewater Treatment Facility – benzo(a)pyrene and iron

Soil - Tar Burn Area – benzo(a)pyrene

Soil - Current Aboveground Storage Tank Area – benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, and dibenz(a,h)anthracene

Soil - Maintenance Shed Area – benzo(a)pyrene and Aroclor-1254

Soil - Former Lauren Tank Farm Area – benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, dibenz(a,h)anthracene, and alpha-chlordane

Soil - Non-Source Area - benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, and dibenz(a,h)anthracene

Sediment – Aroclor-1242, copper, and zinc

As indicated above, lead was not identified as a COPC in soil or sediment. Therefore, further evaluation of lead was not warranted and EPA's Adult Lead Model was not used.

3. Exposure Assessment

Various potential exposure pathways were quantified in the BHHRA. Each soil hot spot area and the non-source area were evaluated separately.

3.1 Exposure Pathways Quantified in the BHHRA

The following data groupings were used to estimate potential risks for the indicated receptors:

Current/Future Onsite Industrial/Commercial Worker #1 – Ingestion, dermal contact, and inhalation of COPCs at the former Wastewater Impoundment Area.

Current/Future Onsite Industrial/Commercial Worker #2 – Ingestion, dermal contact, and inhalation of COPCs at the former Wastewater Treatment Facility.

Current/Future Onsite Industrial/Commercial Worker #3 – Ingestion, dermal contact, and inhalation of COPCs at the former Tar Burn Area.

Current/Future Onsite Industrial/Commercial Worker #4 – Ingestion, dermal contact, and inhalation of COPCs at the Current Aboveground Storage Tank Area.

Current/Future Onsite Industrial/Commercial Worker #5 – Ingestion, dermal contact, and inhalation of COPCs at the former Maintenance Shed Area.

Current/Future Onsite Industrial/Commercial Worker #6 – Ingestion, dermal contact, and inhalation of COPCs at the former Lauren Tank Farm.

Current/Future Onsite Industrial/Commercial Worker #7 – Ingestion, dermal contact, and inhalation of COPCs in soil from the Non-source area.

Current/Future Onsite Trespasser – Not quantified since their exposure would be less than that of the industrial/commercial worker.

Current/Future Offsite Fisher – Ingestion of COPCs in fish from Lake Sabine by an adult; an exposure by a child was not quantified since a child would eat much smaller portions of fish, and at a lower frequency, than an adult. Therefore, the risk calculated for an adult can conservatively represent the risk to a child from eating fish.

Future Construction Worker – Not quantified since only six subsurface soil samples are available (which are combined with the surface soil data for the industrial/commercial worker) and their exposure would be less than that of the industrial/commercial worker.

The 95% UCL on the mean concentration of each soil COPC was used as the exposure point concentration (EPC) unless it exceeded the maximum detected concentration for that data grouping. In sediment, the 95% UCL on the mean concentrations (or the maximum concentration, whichever was lower) was used to model the EPCs of sediment COPCs in fish. The 95% UCLs were calculated using the most recent version of ProUCL (Version

3.00.02). The ProUCL output is provided in **Attachment 4**. The EPCs for each exposure area are provided in **Tables 3.1** through **3.8** of **Attachment 1.**

3.2 Exposure Factors

A reasonable maximum exposure (RME) scenario was quantified for each of the indicated receptors. If the potential risks associated with an RME scenario exceeded acceptable risk levels, a central tendency (CT) scenario was also quantified. The exposure factors used in the risk calculations are presented in **Tables 4.1** through **4.3** of **Attachment 1** and are summarized below:

Industrial/Commercial Worker – For each exposure parameter, the more conservative value between the standard default exposure factors presented in EPA guidance and the exposure factors used in TRRP.

Fisher - Standard default exposure factors presented in EPA guidance.

For the CT exposure scenario, exposure factors were based on various EPA guidance documents, as indicated on **Tables 4.1** through **4.3** of **Attachment 1**.

4. Toxicity Assessment

The following hierarchy of sources was used to obtain toxicity data for chemicals detected at the Site:

- Integrated Risk Information System (IRIS)
- Provisional Peer-Reviewed Toxicity Values (PPRTVs)
- National Center for Environmental Assessment (NCEA)
- Health Effects Assessment Summary Tables (HEAST)

For those constituents without toxicity values, toxicity values for surrogate chemicals were used when available. Constituents with no appropriate toxicity values were evaluated qualitatively in the BHHRA. Non-cancer toxicity values used in the BHHRA are presented in **Tables 5.1** and **5.2** of **Attachment 1**, while cancer toxicity values are provided in **Tables 6.1** and **6.2** of **Attachment 1.**

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5. Risk Characterization

Potential ELCRs and HIs were calculated using RME assumptions for the receptors and exposure pathways identified above (**Tables 7.1** through **7.8** of **Attachment 1**, and summarized in **Tables 9.1** through **9.8** of **Attachment 1**). The following potential risks were identified:

Current/Future Onsite Industrial/Commercial Worker #1 – Ingestion, dermal contact, and inhalation exposures to soil COPCs in the former Wastewater Impoundment Area were quantified. An ELCR of $2x10^{-5}$ was calculated; an HI was not calculated due to the lack of non-cancer toxicity data for the COPCs. No COPCs exceeded an individual ELCR of $1x10^{-5}$. Therefore, risks are within acceptable levels and no COCs were identified for this receptor and exposure area.

Current/Future Onsite Industrial/Commercial Worker #2 – Ingestion, dermal contact, and inhalation exposures to soil COPCs in the former Wastewater Treatment Facility were quantified. An ELCR of $2x10^{-6}$ and HI of 0.6 were calculated. No COPCs exceeded an individual ELCR of $1x10^{-5}$ or HI of 1. Therefore, risks are within acceptable levels and no COCs were identified for this receptor and exposure area.

Current/Future Onsite Industrial/Commercial Worker #3 – Ingestion, dermal contact, and inhalation exposures to soil COPCs in the former Tar Burn Area were quantified. An ELCR of $5x10^{-6}$ was calculated; an HI was not calculated due to the lack of non-cancer toxicity data for the COPCs. No COPCs exceeded an individual ELCR of $1x10^{-5}$. Therefore, risks are within acceptable levels and no COCs were identified for this receptor and exposure area.

Current/Future Onsite Industrial/Commercial Worker #4 – Ingestion, dermal contact, and inhalation exposures to soil COPCs in the Current Aboveground Storage Tank Area were quantified. An ELCR of $2x10^{-5}$ was calculated; an HI was not calculated due to the lack of non-cancer toxicity data for the COPCs. No COPCs exceeded an individual ELCR of $1x10^{-5}$. Therefore, risks are within acceptable levels and no COCs were identified for this receptor and exposure area.

Current/Future Onsite Industrial/Commercial Worker #5 – Ingestion, dermal contact, and inhalation exposures to soil COPCs in the former Maintenance Shed Area were quantified. An ELCR of $6x10^{-6}$ and HI of 0.1 were calculated. No COPCs exceeded an individual ELCR of $1x10^{-5}$ or HI of 1. Therefore, risks are within acceptable levels and no COCs were identified for this receptor and exposure area.

Current/Future Onsite Industrial/Commercial Worker #6 – Ingestion, dermal contact, and inhalation exposures to soil COPCs in the former Lauren Tank Farm Area were quantified. An ELCR of $2x10^{-5}$ and HI of 0.00005 were calculated. No COPCs exceeded an individual ELCR of $1x10^{-5}$ or HI of 1. Therefore, risks are within acceptable levels and no COCs were identified for this receptor and exposure area.

Current/Future Onsite Industrial/Commercial Worker #7 – Ingestion, dermal contact, and inhalation exposures to soil COPCs from all non-source areas were quantified. An ELCR of

$1x10^{-5}$ was calculated; an HI was not calculated due to the lack of non-cancer toxicity data for the COPCs. No COPCs exceeded an individual ELCR of $1x10^{-5}$ or HI of 1. Therefore, risks are within acceptable levels and no COCs were identified for this receptor and exposure area.

Current/Future Offsite Fisher – Ingestion exposures to COPCs in sediment (bioaccumulated by fish in Lake Sabine) were quantified for an adult. An ELCR of $2x10^{-4}$ and HI of 7 were calculated. One COPC (Aroclor 1242) exceeded an individual ELCR of $1x10^{-5}$ and copper and zinc exceeded an HI of 1. Therefore, risks exceed acceptable levels due to three COPCs (Aroclor 1242, copper, and zinc) (**Table 10-3** of **Attachment 1**).

Since estimated risks using RME assumptions exceeded acceptable risk levels, potential exposure were also evaluated using CT exposure assumptions. An ELCR of $8x10^{-5}$ and HI of 7 were calculated (**Table 7.3** of **Attachment 1**). One COPC (Aroclor 1242) exceeds an individual ELCR of $1x10^{-5}$ and two COPCs (copper and zinc) exceed an HI of 1. Therefore, risks exceed acceptable levels using CTE assumptions (**Table 10-2** CTE of **Attachment 1**).

6. Uncertainty Assessment

The following discussion presents the major uncertainties associated with this BHHRA.

6.1 Data Issues

SQLs for some analytes in soil and sediment samples exceeded screening levels (**Attachment 5**). However, these chemicals are not expected to be site-related and therefore exert no significant impact on the BHHRA or its conclusions.

There is some uncertainty associated with the historical data collected in 1995 in terms of the exact locations where these samples were collected. However, the data were used since it represents soil/sediment quality onsite and adjacent to the Site. Use of this data is not expected to affect the conclusions of the BHHRA, but adds uncertainty to the locations that may warrant risk management.

6.2 Aroclor 1242 in Sediment

Aroclor 1242 is a risk driver for sediment in the BHHRA. However, there is much uncertainty in the risk calculations, primarily due to the available dataset.

No source has been identified onsite for Aroclor 1242, although two other PCB Aroclors were detected at a few locations on-site. Available data from all areas of the Site indicate no detections of Aroclor 1242, as expected based on knowledge of site activities. The number of soil samples analyzed for Aroclor 1242 in each area is indicated below:

Wastewater Impoundment - No detects for all Aroclors in four soil samples.

Wastewater Treatment Facility - No detects for all Aroclors in two soil samples.

Tar Burn Area – PCBs were not evaluated.

Current AST Area – PCBs were not evaluated.

Maintenance Shed Area – One detect of Aroclor 1254 in six samples; all other Aroclors were non-detect.

Lauren Tank Farm – Two detects of Aroclor 1248 in six samples; all other Aroclors were non-detect.

Non-source Area – No detects for all Aroclors in two soil samples.

Aroclor 1242 was detected in one of seven sediment samples; it was the only Aroclor detected. PCBs were not analyzed in the background sediment dataset. The fish ingestion risk calculations are based on a single detected PCB concentration in sediments. This concentration is not expected to represent the PCB concentrations that a fish contacts during its lifetime before it is caught and eaten since a fish's home range is much larger than the

single location. Therefore, using one location to model fish uptake is extremely conservative.

The TDH prepared a risk assessment of Sabine Lake under EPA's Near Coastal Water Grant (**TDH, 1995**). Although these data were gathered for a broader study, the data were reportedly collected in accordance with EPA's *Guidance for Assessing Chemical Contaminant Data for Use in Fish Advisories, Fish Sampling and Analysis* (**EPA, 1993**) and analyses were performed in the TDH laboratory using EPA-approved methods for detection of metals, pesticides, PCBs, semivolatile, and volatile organic constituents. Aquatic species were collected to represent commonly consumed edible tissue taken by the public from sample locations in Sabine Lake (South), Sabine Lake (North), and Sabine Pass. The TDH Study is provided in Attachment 6, and the analytical data from this investigation are presented in the table below. As shown, Aroclor 1242 was not detected in fish samples.

PCB'S IN FISH TISSUE TAKEN FROM SABINE LAKE

PCB	Detection Limit (PPB)	LOCATION AND SAMPLE NO.									
		SABINE LAKE (SOUTH)				SABINE PASS	SABINE LAKE (NORTH)				
		4	5	6	7	8	9	10	11	12	13
		PCB CONCENTRATION, (PPB)									
AROCLOR 1016	40	nd	nd*	nd	nd	nd	nd	nd	nd	nd	nd
AROCLOR 1221	40	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
AROCLOR 1232	40	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
AROCLOR 1242	40	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
AROCLOR 1248	40	nd	nd	nd	nd	38*	nd	nd	nd	nd	nd
AROCLOR 1254	40	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
AROCLOR 1260	40	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
AROCLOR 1262	40	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd

*non-detectable
*reported below quantitation limits

6.3 Copper in Sediment

Copper is a risk driver for sediment in the BHHRA. However, there is much uncertainty in the risk calculations, primarily due to the available dataset.

No significant source of copper has been identified onsite. Results of the statistical comparison to background indicate the following:

Former Wastewater Impoundments – exceeds background; maximum detection of 373 ppm.

Former Wastewater Treatment Facility – exceeds background; maximum detection of 299 ppm.

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Tar Burn Area – exceeds background; maximum detection of 155 ppm.

Current AST Area – within background.

Maintenance Shed Area – within background.

Lauren Tank Farm – exceeds background; maximum detection of 7,390 ppm (remaining results <100 ppm).

Non-source Area – exceeds background; maximum detection of 5,480 ppm (only six results above 200 ppm).

As expected (since copper is a naturally occurring element), copper was detected in 61 of 62 sediment samples. Copper was not analyzed in the background sediment dataset. The fish ingestion risk calculations are based on a 95% UCL concentration of the 62 samples. Only five locations exceeded risk-based concentrations.

The calculated HI is 2 using both reasonable maximum exposure and central tendency exposure scenarios. This level is only slightly higher than the acceptable HI of 1.

The TDH prepared a risk assessment of Sabine Lake under EPA's Near Coastal Water Grant (**TDH, 1995**). Although these data were gathered for a broader study, the data were reportedly collected in accordance with EPA's *Guidance for Assessing Chemical Contaminant Data for Use in Fish Advisories, Fish Sampling and Analysis* (**EPA, 1993**) and analyses were performed in the TDH laboratory using EPA-approved methods for detection of metals, pesticides, PCBs, semivolatile, and volatile organic constituents. Aquatic species were collected to represent commonly consumed edible tissue taken by the public from sample locations in Sabine Lake (South), Sabine Lake (North), and Sabine Pass. A summary of the inorganic data from this investigation is presented in the table below. As shown, copper was detected in 3 of the 10 fish samples. The maximum detected concentration of copper in fish tissue (19 ppm) is much lower than the modeled fish tissue concentration (150 ppm) used in the risk calculations for the State Marine Site.

METALS IN FISH TISSUE TAKEN FROM SABINE LAKE

METAL	LOCATION AND SAMPLE NO.									
	[illegible]				[illegible]	[illegible]				
	4	5	6	7	8	9	10	11	12	13
	CONCENTRATION (PPM)									
ARSENIC	0.11	0.088	0.017	0.048	0.041	0.023	0.038	<0.014	0.031	0.038
CADMIUM	0.41	0.497	0.43	0.335	<0.037	0.513	<0.034	0.177	<0.039	0.162
COPPER	19.6	8.6	<0.4	8.8	<0.4	<0.4	<0.4	<0.5	<0.4	<0.4
LEAD	<0.074	0.163	0.055	<0.075	<0.037	0.047	<0.034	0.063	<0.039	0.049
MERCURY	<0.062	<0.049	<0.074	<0.072	0.161	<0.07	0.074	0.188	0.196	0.136
ZINC	344	35.3	2.9	31.6	3.1	3.1	3.5	2.9	2.9	3.6

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6.4 Zinc in Sediment

Zinc is a risk driver for sediment in the BHHRA. However, there is much uncertainty in the risk calculations for the following reasons.

No significant source of zinc has been identified onsite. Results of the statistical comparison to background indicate the following:

Former Wastewater Impoundments – exceeds background; maximum detection of 4,140 ppm.

Former Wastewater Treatment Facility – exceeds background; maximum detection of 908 ppm; other concentrations <400 ppm.

Tar Burn Area – exceeds background; maximum detection of 424 ppm.

Current AST Area – within background.

Maintenance Shed Area – exceeds background; maximum detection of 2,220 ppm. (other concentrations <400 ppm).

Lauren Tank Farm – exceeds background; maximum detection of 1,480 ppm (other concentrations <300 ppm).

Non-source Area – exceeds background; maximum detection of 38,700 ppm (five results above 1,000 ppm).

As expected (since zinc is a naturally occurring element), zinc was detected in all 66 sediment samples. Zinc was analyzed in the background sediment dataset and was concluded to exceed background. The fish ingestion risk calculations are based on a 95% UCL concentration based on the 66 samples. Only two sediment locations exceeded risk-based concentrations for zinc.

The calculated HI is 5 using both reasonable maximum exposure and central tendency exposure scenarios. This level is slightly higher than the acceptable HI of 1.

The TDH prepared a risk assessment of Sabine Lake under EPA's Near Coastal Water Grant (**TDH, 1995**). Although these data were gathered for a broader study, the data were reportedly collected in accordance with EPA's *Guidance for Assessing Chemical Contaminant Data for Use in Fish Advisories, Fish Sampling and Analysis* (**EPA, 1993**) and analyses were performed in the TDH laboratory using EPA-approved methods for detection of metals, pesticides, PCBs, semivolatile, and volatile organic constituents. Aquatic species were collected to represent commonly consumed edible tissue taken by the public from sample locations in Sabine Lake (South), Sabine Lake (North), and Sabine Pass. A summary of the inorganic data from this investigation is presented in the table above. As expected, zinc was detected in all 10 fish tissue samples. The maximum detected concentration of zinc in fish tissue (344 ppm) is much lower than the modeled fish tissue concentration (4,300 ppm) used in the conservative risk calculations for the State Marine Site.

7. References

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Attachment 1

RAGS D TABLES

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TABLE 1

SELECTION OF EXPOSURE PATHWAYS

State Marine Superfund Site, Port Arthur, Texas

Scenario Timeframe	Medium	Exposure Medium	Exposure Point	Receptor Population	Receptor Age	Exposure Route	On-Site/ Off-Site	Type of Analysis	Rationale for Selection or Exclusion of Exposure Pathway
Current/Future	Soil	Soil (0-1 ft at source areas; 0-5 ft at non-source areas)[1]	Soil at Former Wastewater Impoundments[1]; at Wastewater Treatment Facility; at Tar Burn Area; at Current ASTs; at Maintenance Shed Area; at Lauren Tank Farm; and at Nonsource Areas	Industrial/Commercial Worker	Adult	Dermal Absorption	On-site	Quant	Industrial/Commercial workers could come in direct contact with surface soil at the site.
						Ingestion	On-site	Quant	Industrial/Commercial workers could come in direct contact with surface soil at the site.
				Trespasser	Adult	Dermal Absorption	On-site	Qual	The site is remote, and adult trespassers may infrequently access the site and contact soil. Exposures by industrial/commercial workers can be used to conservatively represent exposures by adult trespassers.
						Ingestion	On-site	Qual	
		Air	Emissions from Surface Soil at Former Wastewater Impoundments; at Wastewater Treatment Facility; at Tar Burn Area; at Current ASTs; at Maintenance Shed Area; at Lauren Tank Farm; and at Nonsource Areas	Industrial/Commercial Worker	Adult	Inhalation	On-site	Quant	Industrial/Commercial workers could inhale airborne particulates and volatiles from surface soil at the site.
				Trespasser	Adult	Inhalation	On-site	Qual	The site is remote, and adult trespassers may infrequently access the site and contact soil. Exposures by industrial/commercial workers can be used to conservatively represent exposures by adult trespassers.
	Surface/ Subsurface Soil	Soil (0-5 ft)	Soil at Former Wastewater Impoundments; at Wastewater Treatment Facility; at Tar Burn Area; at Current ASTs; at Maintenance Shed Area; at Lauren Tank Farm; and at Nonsource Areas	Construction Worker	Adult	Dermal Absorption	On-site	Qual	Construction workers could come in direct contact with soil at the site.
						Ingestion	On-site	Qual	Construction workers could come in direct contact with soil at the site.
		Air	Emissions from Surface/Subsurface Soil at Former Wastewater Impoundments; at Wastewater Treatment Facility; at Tar Burn Area; at Current ASTs; at Maintenance Shed Area; at Lauren Tank Farm; and at Nonsource Areas	Construction Worker	Adult	Inhalation	On-site	Qual	Construction workers could inhale airborne particulates and volatiles from soil at the site.
	Surface Water	Surface Water	Surface Water in Lake Sabine	Fisher	Adult	Dermal Contact	Off-site	None	There is no complete exposure pathway; fishing occurs via boat (as opposed to wading).
	Sediment	Sediment	Sediments from Lake Sabine	Fisher	Adult	Dermal Contact	Off-site	None	There is no complete exposure pathway; fishing occurs via boat (as opposed to wading).
		Fish Tissue	Fish Tissue	Fisher	Adult/Child	Ingestion	Off-site	Quant	Lake Sabine is considered a fishery and recreational fishers could come into contact with bioaccumulative chemicals in the sediment that have been taken up by the fish in the lake. Exposures by adults are quantified.

Note:

[1] Soil samples collected from 0-5 ft interval were used for Former Wastewater Impoundments

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Table 2.1
OCCURRENCE, DISTRIBUTION AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN
State Marine Superfund Site, Port Arthur, Texas

Scenario Timeframe: Current/Future
Medium: Soil
Exposure Medium: Soil (0-5 ft)

Exposure Point	CAS Number	Chemical	Minimum Concentration Qualifier	Maximum Concentration Qualifier	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration Used for Screening (1)	Background Value (2)	Screening Toxicity Value (N/C) (3)	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag	Rationale for Selection or Deletion (4)
Soil at the Former Wastewater Impoundment Area	007429-90-5	ALUMINUM	9.67E+02 =	2.06E+04 =	mg/kg	SM122	19/19	8.12 to 87.8	2.06E+04	24600	1.00E+05 max	NA	NA	No	BSL
	007440-36-0	ANTIMONY	5.04E-01 J	4.47E+01 =	mg/kg	SM95-SO-22	14/19	0.406 to 17.2	4.47E+01	NA	4.50E+02 N	NA	NA	No	BSL
	007440-38-2	ARSENIC	2.10E+00 LJQK	1.33E+01 =	mg/kg	SM136	19/19	0.406 to 4.39	1.33E+01	32.6	1.80E+00 C	NA	NA	No	Bkgd
	007440-39-3	BARIUM	7.21E+01 =	5.40E+02 =	mg/kg	SM136	19/19	0.0812 to 57.2	5.40E+02	966	1.00E+05 max	NA	NA	No	BSL
	007440-41-7	BERYLLIUM	1.10E-01 LQ	9.90E-01 =	mg/kg	SM95-SO-26	19/19	0.00974 to 1.4	9.90E-01	2.5	2.20E+03 N	NA	NA	No	BSL
	007440-43-9	CADMIUM	1.18E-01 =	7.24E+00 =	mg/kg	SM136	14/19	0.0406 to 1.4	7.24E+00	NA	5.60E+02 N	NA	NA	No	BSL
	007440-70-2	CALCIUM	4.97E+03 =	7.90E+04 =	mg/kg	SM136	19/19	4.18 to 1430	7.90E+04	88800	NA	NA	NA	No	Bkgd
	007440-47-3	CHROMIUM, TOTAL	5.00E+00 JK	5.50E+01 =	mg/kg	SM136	19/19	0.0974 to 2.9	5.50E+01	78.1	5.00E+02 C	NA	NA	No	BSL
	007440-48-4	COBALT	1.30E+00 LQ	1.69E+01 =	mg/kg	SM136	19/19	0.0974 to 14.3	1.69E+01	33.2	2.10E+03 C	NA	NA	No	BSL
	007440-50-8	COPPER	7.20E+00 =	3.73E+02 =	mg/kg	SM136	19/19	0.406 to 7.2	3.73E+02	123	4.20E+04 N	NA	NA	No	BSL
	000057-12-5	CYANIDE	4.80E-01 LQ	4.80E-01 LQ	mg/kg	SM122	1/12	0.11 to 0.72	4.80E-01	NA	1.40E+04 N	NA	NA	No	BSL
	007439-89-6	IRON	6.05E+03 =	1.03E+05 =	mg/kg	SM136	19/19	0.836 to 28.6	1.03E+05	247000	1.00E+05 max	NA	NA	No	Bkgd
	007439-92-1	LEAD	1.26E+01 =	5.74E+02 =	mg/kg	SM136	19/19	0.406 to 4.39	5.74E+02	103	8.00E+02	NA	NA	No	BSL
	007439-95-4	MAGNESIUM	4.58E+02 LQ	8.15E+03 =	mg/kg	SM136	19/19	9.74 to 1430	8.15E+03	6120	NA	NA	NA	No	Nut
	007439-96-5	MANGANESE	1.05E+02 =	5.34E+02 =	mg/kg	SM136	19/19	0.0812 to 4.3	5.34E+02	2090	3.50E+04 N	NA	NA	No	BSL
	007439-97-6	MERCURY	5.72E-02 J	2.20E-01 =	mg/kg	SM95-SO-26	13/19	0.0109 to 0.14	2.20E-01	NA	3.40E+02	NA	NA	No	BSL
	007440-02-0	NICKEL	2.50E+00 LQ	5.92E+01 =	mg/kg	SM95-SO-22	19/19	0.406 to 11.4	5.92E+01	90.5	2.30E+04 N	NA	NA	No	BSL
	007440-09-7	POTASSIUM	3.19E+02 LQ	1.88E+03 =	mg/kg	SM136	19/19	20.3 to 1430	1.88E+03	3750	NA	NA	NA	No	Bkgd
	007782-49-2	SELENIUM	1.30E+00 =	4.68E+00 J	mg/kg	SM136	3/19	0.418 to 21.9	4.68E+00	NA	5.70E+03 N	NA	NA	No	BSL
	007440-22-4	SILVER	2.90E-01 LQ	5.23E+00 =	mg/kg	SM136	16/19	0.203 to 2.9	5.23E+00	0.737	5.70E+03 N	NA	NA	No	BSL
	007440-23-5	SODIUM	1.32E+02 =	1.49E+03 =	mg/kg	SM142	15/19	4.06 to 1430	1.49E+03	1170	NA	NA	NA	No	Nut
	007440-28-0	THALLIUM	1.30E+00 =	3.80E+00 =	mg/kg	SM95-SO-22	4/19	0.812 to 8.78	3.80E+00	NA	9.10E+01 N	NA	NA	No	BSL
	007440-62-2	VANADIUM	5.50E+00 LQ	3.05E+01 =	mg/kg	SM139	19/19	0.203 to 14.3	3.05E+01	81.4	1.10E+03 N	NA	NA	No	BSL
	007440-66-6	ZINC	4.04E+01 =	4.14E+03 =	mg/kg	SM136	19/19	0.418 to 5.7	4.14E+03	203	1.00E+05 max	NA	NA	No	BSL
	309-00- 2	ALDRIN	NA	NA	mg/kg	NA	0/4	0.0017 to 0.0017	NA	NA	1.10E-01 C	NA	NA	No	ND
	319-84-6	ALPHA BHC (ALPHA HEXACHLOROCYCLOHEXANE)	NA	NA	mg/kg	NA	0/4	0.0017 to 0.0017	NA	NA	4.00E-01 C	NA	NA	No	ND
	959-98-8	ALPHA ENDOSULFAN	NA	NA	mg/kg	NA	0/4	0.0017 to 0.0017	NA	NA	4.10E+03 N	NA	NA	No	ND
	510-37- 1	ALPHA-CHLORDANE	2.60E-03 =	3.00E-03 =	mg/kg	SM95-SO-21	2/4	0.0017 to 0.0017	3.00E-03	NA	7.20E+00 C	NA	NA	No	BSL
	319-85-7	BETA BHC (BETA HEXACHLOROCYCLOHEXANE)	NA	NA	mg/kg	NA	0/4	0.0017 to 0.0017	NA	NA	1.40E+00 C	NA	NA	No	ND
	33213-65-9	BETA ENDOSULFAN	8.10E-03 Jv	8.10E-03 Jv	mg/kg	SM95-SO-22	1/4	0.0033 to 0.0033	8.10E-03	NA	4100 N	NA	NA	No	BSL
	319-86-8	DELTA BHC (DELTA HEXACHLOROCYCLOHEXANE)	NA	NA	mg/kg	NA	0/4	0.0017 to 0.0017	NA	NA	1.40E+00 C	NA	NA	No	ND
	60-57-1	DIELDRIN	NA	NA	mg/kg	NA	0/4	0.0033 to 0.0033	NA	NA	1.20E-01 C	NA	NA	No	ND
	103-10- 7	ENDOSULFAN SULFATE	9.20E-03 Jv	9.20E-03 Jv	mg/kg	SM95-SO-22	1/4	0.0033 to 0.0033	9.20E-03	NA	4.10E+03 N	NA	NA	No	BSL
	72-20-8	ENDRIN	7.60E-03 =	1.40E-02 Jv	mg/kg	SM95-SO-22	2/4	0.0033 to 0.0033	1.40E-02	NA	2.10E+02 N	NA	NA	No	BSL
	742-19- 3	ENDRIN ALDEHYDE	1.00E-02 Jv	1.00E-02 Jv	mg/kg	SM95-SO-22	1/4	0.0033 to 0.0033	1.00E-02	NA	2.10E+02 N	NA	NA	No	BSL
	53494-70-5	ENDRIN KETONE	9.90E-03 Jv	9.90E-03 Jv	mg/kg	SM95-SO-22	1/4	0.0033 to 0.0033	9.90E-03	NA	2.10E+02 N	NA	NA	No	BSL
	58-89-9	GAMMA BHC (LINDANE)	NA	NA	mg/kg	NA	0/4	0.0017 to 0.0017	NA	NA	1.90E+00 C	NA	NA	No	ND
	510-37- 4	GAMMA-CHLORDANE	2.80E-03 =	5.60E-03 =	mg/kg	SM95-SO-21	2/4	0.0017 to 0.0017	5.60E-03	NA	7.20E+00 C	NA	NA	No	BSL
	76-44-8	HEPTACHLOR	NA	NA	mg/kg	NA	0/4	0.0017 to 0.0017	NA	NA	4.30E-01 C	NA	NA	No	ND
	102-45- 7	HEPTACHLOR EPOXIDE	5.10E-03 J	5.10E-03 J	mg/kg	SM95-SO-22	1/4	0.0017 to 0.0017	5.10E-03	NA	2.10E-01 C	NA	NA	No	BSL
	72-43-5	METHOXYCHLOR	NA	NA	mg/kg	NA	0/4	0.017 to 0.017	NA	NA	3.40E+03 N	NA	NA	No	ND
	72-54-8	P,P'-DDD	NA	NA	mg/kg	NA	0/4	0.0033 to 0.0033	NA	NA	1.10E+01 C	NA	NA	No	ND
	72-55-9	P,P'-DDE	NA	NA	mg/kg	NA	0/4	0.0033 to 0.0033	NA	NA	7.80E+00 C	NA	NA	No	ND
	50-29-3	P,P'-DDT	9.10E-03 Jv	9.10E-03 Jv	mg/kg	SM95-SO-22	1/4	0.0033 to 0.0033	9.10E-03	NA	7.80E+00 C	NA	NA	No	BSL
	12674-11-2	PCB-1016 (AROCHLOR 1016)	NA	NA	mg/kg	NA	0/4	0.033 to 0.033	NA	NA	2.40E+01 C	NA	NA	No	ND
	11104-28-2	PCB-1221 (AROCHLOR 1221)	NA	NA	mg/kg	NA	0/4	0.033 to 0.033	NA	NA	8.30E-01 C	NA	NA	No	ND
	11141-16-5	PCB-1232 (AROCHLOR 1232)	NA	NA	mg/kg	NA	0/4	0.033 to 0.033	NA	NA	8.30E-01 C	NA	NA	No	ND
	53469-21-9	PCB-1242 (AROCHLOR 1242)	NA	NA	mg/kg	NA	0/4	0.033 to 0.033	NA	NA	8.30E-01 C	NA	NA	No	ND
	12672-29-6	PCB-1248 (AROCHLOR 1248)	NA	NA	mg/kg	NA	0/4	0.033 to 0.033	NA	NA	8.30E-01 C	NA	NA	No	ND
	11097-69-1	PCB-1254 (AROCHLOR 1254)	NA	NA	mg/kg	NA	0/4	0.033 to 0.033	NA	NA	8.30E-01 C	NA	NA	No	ND
	11096-82-5	PCB-1260 (AROCHLOR 1260)	NA	NA	mg/kg	NA	0/4	0.033 to 0.033	NA	NA	8.30E-01 C	NA	NA	No	ND
	800-13- 5	TOXAPHENE	NA	NA	mg/kg	NA	0/4	0.17 to 0.17	NA	NA	1.70E+00 C	NA	NA	No	ND
	95-94-3	1,2,4,5-TETRACHLOROBENZENE	NA	NA	mg/kg	NA	0/11	0.103 to 2.08	NA	NA	2.10E+02 N	NA	NA	No	ND
	000108-60-1	2,2'-OXYBIS(1-CHLORO)PROPANE	NA	NA	mg/kg	NA	0/12	0.17 to 2.3	NA	NA	NA	NA	NA	No	ND
	58-90-2	2,3,4,6-TETRACHLOROPHENOL	NA	NA	mg/kg	NA	0/4	0.17 to 0.17	NA	NA	2.10E+04 N	NA	NA	No	ND
	000095-95-4	2,4,5-TRICHLOROPHENOL	NA	NA	mg/kg	NA	0/19	0.103 to 5.7	NA	NA	6.80E+04 N	NA	NA	No	ND
	000088-06-2	2,4,6-TRICHLOROPHENOL	NA	NA	mg/kg	NA	0/19	0.103 to 2.3	NA	NA	1.70E+02 C	NA	NA	No	ND
	000120-83-2	2,4-DICHLOROPHENOL	NA	NA	mg/kg	NA	0/19	0.103 to 2.3	NA	NA	2.10E+03 N	NA	NA	No	ND
	000105-67-9	2,4-DIMETHYLPHENOL	NA	NA	mg/kg	NA	0/19	0.103 to 2.3	NA	NA	1.40E+04 N	NA	NA	No	ND
	000051-28-5	2,4-DINITROPHENOL	NA	NA	mg/kg	NA	0/19	0.33 to 8.31	NA	NA	1.40E+03 N	NA	NA	No	ND
	000121-14-2	2,4-DINITROTOLUENE	NA	NA	mg/kg	NA	0/19	0.103 to 2.3	NA	NA	1.40E+03 N	NA	NA	No	ND
	000606-20-2	2,6-DINITROTOLUENE	NA	NA	mg/kg	NA	0/19	0.103 to 2.3	NA	NA	6.80E+02 N	NA	NA	No	ND
	000091-58-7	2-CHLORONAPHTHALENE	NA	NA	mg/kg	NA	0/19	0.103 to 2.3	NA	NA	2.60E+04 N	NA	NA	No	ND
	000095-57-8	2-CHLOROPHENOL	NA	NA	mg/kg	NA	0/19	0.103 to 2.3	NA	NA	2.60E+02 N	NA	NA	No	ND
	000091-57-6	2-METHYLNAPHTHALENE	2.80E-02 LJQK	7.00E-01 =	mg/kg	SM95-SO-22	5/19	0.103 to 2.3	7.00E-01	NA	2.10E+02 N	NA	NA	No	BSL

Table 2.1
OCCURRENCE, DISTRIBUTION AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN
State Marine Superfund Site, Port Arthur, Texas

Scenario Timeframe: Current/Future
Medium: Soil
Exposure Medium: Soil (0-5 ft)

Exposure Point	CAS Number	Chemical	Minimum Concentration Qualifier	Maximum Concentration Qualifier	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration Used for Screening (1)	Background Value (2)	Screening Toxicity Value (N/C) (3)	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag	Rationale for Selection or Deletion (4)
	000095-48-7	2-METHYLPHENOL (O-CRESOL)	NA	NA	mg/kg	NA	0/19	0.103 to 2.3	NA	NA	3.40E+04 N	NA	NA	No	ND
	000088-74-4	2-NITROANILINE	NA	NA	mg/kg	NA	0/19	0.33 to 8.31	NA	NA	2.00E+03 N	NA	NA	No	ND
	000088-75-5	2-NITROPHENOL	NA	NA	mg/kg	NA	0/19	0.103 to 2.3	NA	NA	5.50E+03 N	NA	NA	No	ND
	000091-94-1	3,3'-DICHLOROBENZIDINE	NA	NA	mg/kg	NA	0/19	0.17 to 4.15	NA	NA	4.30E+00 C	NA	NA	No	ND
	000099-09-2	3-NITROANILINE	NA	NA	mg/kg	NA	0/19	0.33 to 8.31	NA	NA	2.00E+03 N	NA	NA	No	ND
	000534-52-1	4,6-DINITRO-2-METHYLPHENOL	NA	NA	mg/kg	NA	0/19	0.33 to 8.31	NA	NA	NA	NA	NA	No	ND
	000101-55-3	4-BROMOPHENYL PHENYL ETHER	NA	NA	mg/kg	NA	0/19	0.103 to 2.3	NA	NA	NA	NA	NA	No	ND
	000059-50-7	4-CHLORO-3-METHYLPHENOL	NA	NA	mg/kg	NA	0/19	0.103 to 2.3	NA	NA	NA	NA	NA	No	ND
	000106-47-8	4-CHLOROANILINE	NA	NA	mg/kg	NA	0/19	0.103 to 2.3	NA	NA	2.70E+03 N	NA	NA	No	ND
	007005-72-3	4-CHLOROPHENYL PHENYL ETHER	NA	NA	mg/kg	NA	0/19	0.103 to 2.3	NA	NA	NA	NA	NA	No	ND
	000106-44-5	4-METHYLPHENOL (P-CRESOL)	NA	NA	mg/kg	NA	0/12	0.17 to 2.3	NA	NA	3.40E+03 N	NA	NA	No	ND
	000100-01-6	4-NITROANILINE	NA	NA	mg/kg	NA	0/19	0.33 to 8.31	NA	NA	2.00E+03 N	NA	NA	No	ND
	000100-02-7	4-NITROPHENOL	NA	NA	mg/kg	NA	0/19	0.33 to 8.31	NA	NA	5.50E+03 N	NA	NA	No	ND
	000083-32-9	ACENAPHTHENE	1.60E-02 LJQK	3.90E-01 J	mg/kg	SM95-SO-22	8/19	0.103 to 2.3	3.90E-01	NA	3.30E+04 N	NA	NA	No	BSL
	000208-96-8	ACENAPHTHYLENE	2.70E-02 LJQK	5.83E+00 =	mg/kg	SM142	12/19	0.103 to 2.3	5.83E+00	NA	3.30E+04 N	NA	NA	No	BSL
	000098-86-2	ACETOPHENONE	NA	NA	mg/kg	NA	0/19	0.103 to 2.3	NA	NA	1.70E+03 sat	NA	NA	No	ND
	000120-12-7	ANTHRACENE	2.50E-02 LJQK	1.90E+01 =	mg/kg	SM142	12/19	0.103 to 2.3	1.90E+01	NA	1.00E+05 max	NA	NA	No	BSL
	001912-24-9	ATRAZINE	NA	NA	mg/kg	NA	0/19	0.103 to 2.3	NA	NA	8.60E+00 C	NA	NA	No	ND
	000100-52-7	BENZALDEHYDE	NA	NA	mg/kg	NA	0/7	0.103 to 1.96	NA	NA	6.80E+04 N	NA	NA	No	ND
	000100-52-7	BENZALDEHYDE	NA	NA	mg/kg	NA	0/12	0.17 to 2.3	NA	NA	6.80E+04 N	NA	NA	No	ND
	000056-55-3	BENZO(A)ANTHRACENE	2.20E-02 *	1.08E+01 =	mg/kg	SM142	12/19	0.103 to 2.3	1.08E+01	NA	2.30E+00 C	NA	NA	Yes	ASL
	000050-32-8	BENZO(A)PYRENE	4.10E-02 LJQK	1.08E+01 =	mg/kg	SM142	11/19	0.103 to 2.3	1.08E+01	NA	2.30E-01 C	NA	NA	Yes	ASL
	000205-99-2	BENZO(B)FLUORANTHENE	5.00E-02 =	1.51E+01 =	mg/kg	SM142	12/19	0.103 to 2.3	1.51E+01	NA	2.30E+00 C	NA	NA	Yes	ASL
	000191-24-2	BENZO(G,H,I)PERYLENE	6.00E-02 LJQK	8.80E+00 *	mg/kg	SM95-SO-22	9/19	0.103 to 2.3	8.80E+00	NA	3.20E+04 N	NA	NA	No	BSL
	000207-08-9	BENZO(K)FLUORANTHENE	2.20E-02 LJQK	4.33E+00 =	mg/kg	SM142	9/19	0.103 to 2.3	4.33E+00	NA	2.30E+01 C	NA	NA	No	BSL
	000085-68-7	BENZYL BUTYL PHTHALATE	1.60E-01 *	1.60E-01 *	mg/kg	SM95-SO-19	1/19	0.103 to 2.3	1.60E-01	NA	2.40E+02 sat	NA	NA	No	BSL
	000092-52-4	BIPHENYL (DIPHENYL)	NA	NA	mg/kg	NA	0/19	0.103 to 2.3	NA	NA	2.60E+04 N	NA	NA	No	ND
	000111-91-1	BIS(2-CHLOROETHOXY) METHANE	NA	NA	mg/kg	NA	0/19	0.103 to 2.3	NA	NA	NA	NA	NA	No	ND
	000111-44-4	BIS(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHER)	NA	NA	mg/kg	NA	0/19	0.103 to 2.3	NA	NA	6.20E-01 C	NA	NA	No	ND
	39638-32-9	BIS(2-CHLOROISOPROPYL) ETHER	NA	NA	mg/kg	NA	0/7	0.103 to 2.08	NA	NA	8.18E+00 C	NA	NA	No	ND
	000117-81-7	BIS(2-ETHYLHEXYL) PHTHALATE	8.60E-02 *	4.90E+00 =	mg/kg	SM125	4/19	0.103 to 2.3	4.90E+00	NA	1.40E+02 C	NA	NA	No	BSL
	000105-60-2	CAPROLACTAM	NA	NA	mg/kg	NA	0/19	0.103 to 2.3	NA	NA	1.00E+05 max	NA	NA	No	ND
	000086-74-8	CARBAZOLE	2.10E-02 LJQK	9.72E+00 =	mg/kg	SM142	11/19	0.103 to 2.3	9.72E+00	NA	9.60E+01 C	NA	NA	No	BSL
	000086-74-8	CARBAZOLE	2.10E-02 LJQK	9.72E+00 =	mg/kg	SM142	11/19	0.103 to 2.3	9.72E+00	NA	9.60E+01 C	NA	NA	No	BSL
	000218-01-9	CHRYSENE	4.40E-02 *	1.55E+01 =	mg/kg	SM142	12/19	0.103 to 2.3	1.55E+01	NA	2.30E+02 C	NA	NA	No	BSL
	108-39-4/106-44-5	CRESOLS, M & P	NA	NA	mg/kg	NA	0/7	0.103 to 2.08	NA	NA	3.42E+03 N	NA	NA	No	ND
	000084-74-2	DI-N-BUTYL PHTHALATE	6.90E-02 J	6.90E-02 J	mg/kg	SM95-SO-22	1/19	0.103 to 2.3	6.90E-02	NA	6.80E+04 N	NA	NA	No	BSL
	000117-84-0	DI-N-OCTYLPHTHALATE	1.80E-01 LJQK	1.80E-01 LJQK	mg/kg	SM125	1/19	0.103 to 2.3	1.80E-01	NA	2.70E+04 N	NA	NA	No	BSL
	000053-70-3	DIBENZ(A,H)ANTHRACENE	2.00E-02 LJQK	4.60E-01 =	mg/kg	SM95-SO-22	8/19	0.103 to 2.3	4.60E-01	NA	2.30E-01 C	NA	NA	Yes	ASL
	000132-64-9	DIBENZOFURAN	3.20E-02 LJQK	2.10E-01 J	mg/kg	SM95-SO-22	6/19	0.103 to 2.3	2.10E-01	NA	1.70E+03 N	NA	NA	No	BSL
	000084-66-2	DIETHYL PHTHALATE	NA	NA	mg/kg	NA	0/19	0.103 to 2.3	NA	NA	1.00E+05 max	NA	NA	No	ND
	000131-11-3	DIMETHYL PHTHALATE	NA	NA	mg/kg	NA	0/19	0.103 to 2.3	NA	NA	1.00E+05 max	NA	NA	No	ND
	000206-44-0	FLUORANTHENE	3.00E-02 *	1.83E+01 =	mg/kg	SM142	12/19	0.103 to 2.3	1.83E+01	NA	2.40E+04 N	NA	NA	No	BSL
	000086-73-7	FLUORENE	1.40E-02 LJQK	3.44E+00 J	mg/kg	SM142	8/19	0.103 to 2.3	3.44E+00	NA	2.60E+04 N	NA	NA	No	BSL
	000118-74-1	HEXACHLOROBENZENE	NA	NA	mg/kg	NA	0/19	0.103 to 2.3	NA	NA	1.20E+00 C	NA	NA	No	ND
	000087-68-3	HEXACHLOROBUTADIENE	NA	NA	mg/kg	NA	0/19	0.103 to 2.3	NA	NA	2.50E+01 C	NA	NA	No	ND
	000077-47-4	HEXACHLOROCYCLOPENTADIENE	NA	NA	mg/kg	NA	0/19	0.103 to 2.3	NA	NA	4.10E+03 N	NA	NA	No	ND
	000067-72-1	HEXACHLOROETHANE	NA	NA	mg/kg	NA	0/19	0.103 to 2.3	NA	NA	1.40E+02 C	NA	NA	No	ND
	000193-39-5	INDENO(1,2,3-C,D)PYRENE	3.90E-02 LJQK	4.81E+00 =	mg/kg	SM142	10/19	0.103 to 2.3	4.81E+00	NA	2.30E+00 C	NA	NA	Yes	ASL
	000078-59-1	ISOPHORONE	NA	NA	mg/kg	NA	0/19	0.103 to 2.3	NA	NA	2.00E+03 C	NA	NA	No	ND
	000621-64-7	N-NITROSODI-N-PROPYLAMINE	NA	NA	mg/kg	NA	0/19	0.103 to 2.3	NA	NA	2.70E-01 C	NA	NA	No	ND
	000086-30-6	N-NITROSODIPHENYLAMINE	1.30E-01 J	1.30E-01 J	mg/kg	SM95-SO-22	1/19	0.103 to 2.3	1.30E-01	NA	3.90E+02 C	NA	NA	No	BSL
	000091-20-3	NAPHTHALENE	7.00E-02 LJQK	2.36E+00 J	mg/kg	SM142	6/19	0.103 to 2.3	2.36	NA	2.10E+02 N	NA	NA	No	BSL
	000098-95-3	NITROBENZENE	NA	NA	mg/kg	NA	0/19	0.103 to 2.3	NA	NA	1.10E+02 N	NA	NA	No	ND
	000087-86-5	PENTACHLOROPHENOL	NA	NA	mg/kg	NA	0/19	0.33 to 8.31	NA	NA	1.00E+01 C	NA	NA	No	ND
	000085-01-8	PHENANTHRENE	1.90E-02 LJQK	1.61E+01 =	mg/kg	SM142	13/19	0.103 to 2.3	1.61E+01	NA	3.20E+04 N	NA	NA	No	BSL
	000108-95-2	PHENOL	NA	NA	mg/kg	NA	0/19	0.103 to 2.3	NA	NA	1.00E+05 max	NA	NA	No	ND
	000129-00-0	PYRENE	4.20E-02 J	1.37E+01 =	mg/kg	SM142	12/19	0.103 to 2.3	1.37E+01	NA	3.20E+04 N	NA	NA	No	BSL
	000071-55-6	1,1,1-TRICHLOROETHANE	3.00E-03 J	6.00E-03 *	mg/kg	SM95-SO-19	2/4	0.005 to 0.005	6.00E-03	NA	1.40E+03 sat	NA	NA	No	BSL
	000079-34-5	1,1,2,2-TETRACHLOROETHANE	NA	NA	mg/kg	NA	0/4	0.005 to 0.005	NA	NA	9.70E-01 C	NA	NA	No	ND
	000076-13-1	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	NA	NA	mg/kg	NA	0/4	0.005 to 0.005	NA	NA	5.60E+03 sat	NA	NA	No	ND
	000079-00-5	1,1,2-TRICHLOROETHANE	NA	NA	mg/kg	NA	0/4	0.005 to 0.005	NA	NA	2.10E+00 C	NA	NA	No	ND
	000075-34-3	1,1-DICHLOROETHANE	NA	NA	mg/kg	NA	0/4	0.005 to 0.005	NA	NA	2.30E+03 N	NA	NA	No	ND
	000075-35-4	1,1-DICHLOROETHENE	NA	NA	mg/kg	NA	0/4	0.005 to 0.005	NA	NA	4.70E+02 N	NA	NA	No	ND
	87-61-6	1,2,3-TRICHLOROBENZENE	NA	NA	mg/kg	NA	0/4	0.005 to 0.005	NA	NA	2.60E+02 N	NA	NA	No	ND
	000120-82-1	1,2,4-TRICHLOROBENZENE	NA	NA	mg/kg	NA	0/4	0.005 to 0.005	NA	NA	2.60E+02 N	NA	NA	No	ND

Table 2.1
OCCURRENCE, DISTRIBUTION AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN
State Marine Superfund Site, Port Arthur, Texas

Scenario Timeframe: Current/Future
Medium: Soil
Exposure Medium: Soil (0-5 ft)

Exposure Point	CAS Number	Chemical	Minimum Concentration Qualifier	Maximum Concentration Qualifier	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration Used for Screening (1)	Background Value (2)	Screening Toxicity Value (N/C) (3)	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag	Rationale for Selection or Deletion (4)
	000096-12-8	1,2-DIBROMO-3-CHLOROPROPANE	NA	NA	mg/kg	NA	0/4	0.005 to 0.005	NA	NA	2.20E+00 C	NA	NA	No	ND
	106-93-4	1,2-DIBROMOETHANE (ETHYLENE DIBROMIDE)	NA	NA	mg/kg	NA	0/4	0.005 to 0.005	NA	NA	7.00E-02 C	NA	NA	No	ND
	000095-50-1	1,2-DICHLOROBENZENE	NA	NA	mg/kg	NA	0/4	0.005 to 0.005	NA	NA	3.70E+02 sat	NA	NA	No	ND
	000107-06-2	1,2-DICHLOROETHANE	NA	NA	mg/kg	NA	0/4	0.005 to 0.005	NA	NA	8.40E-01 C	NA	NA	No	ND
	000078-87-5	1,2-DICHLOROPROPANE	NA	NA	mg/kg	NA	0/4	0.005 to 0.005	NA	NA	8.50E-01 C	NA	NA	No	ND
	000541-73-1	1,3-DICHLOROBENZENE	NA	NA	mg/kg	NA	0/4	0.005 to 0.005	NA	NA	1.40E+02 N	NA	NA	No	ND
	000106-46-7	1,4-DICHLOROBENZENE	NA	NA	mg/kg	NA	0/4	0.005 to 0.005	NA	NA	8.10E+00 C	NA	NA	No	ND
	123-91-1	1,4-DIOXANE (P-DIOXANE)	NA	NA	mg/kg	NA	0/4	0.1 to 0.1	NA	NA	1.70E+02 C	NA	NA	No	ND
	000591-78-6	2-HEXANONE	NA	NA	mg/kg	NA	0/4	0.01 to 0.01	NA	NA	NA	NA	NA	No	ND
	000067-64-1	ACETONE	NA	NA	mg/kg	NA	0/4	0.01 to 0.01	NA	NA	6.00E+04 N	NA	NA	No	ND
	000071-43-2	BENZENE	NA	NA	mg/kg	NA	0/4	0.005 to 0.005	NA	NA	1.60E+00 C	NA	NA	No	ND
	74-97-5	BROMOCHLOROMETHANE	NA	NA	mg/kg	NA	0/4	0.005 to 0.005	NA	NA	1.50E+01 N	NA	NA	No	ND
	000075-27-4	BROMODICHLOROMETHANE	NA	NA	mg/kg	NA	0/4	0.005 to 0.005	NA	NA	2.60E+00 C	NA	NA	No	ND
	000075-25-2	BROMOFORM	NA	NA	mg/kg	NA	0/4	0.005 to 0.005	NA	NA	2.40E+02 C	NA	NA	No	ND
	000074-83-9	BROMOMETHANE	NA	NA	mg/kg	NA	0/4	0.005 to 0.005	NA	NA	1.50E+01 N	NA	NA	No	ND
	000075-15-0	CARBON DISULFIDE	NA	NA	mg/kg	NA	0/4	0.005 to 0.005	NA	NA	7.20E+02 sat	NA	NA	No	ND
	000056-23-5	CARBON TETRACHLORIDE	NA	NA	mg/kg	NA	0/4	0.005 to 0.005	NA	NA	5.80E-01 C	NA	NA	No	ND
	000108-90-7	CHLOROBENZENE	NA	NA	mg/kg	NA	0/4	0.005 to 0.005	NA	NA	6.00E+02 N	NA	NA	No	ND
	000075-00-3	CHLOROETHANE	NA	NA	mg/kg	NA	0/4	0.005 to 0.005	NA	NA	NA	NA	NA	No	ND
	000067-66-3	CHLOROFORM	NA	NA	mg/kg	NA	0/4	0.005 to 0.005	NA	NA	5.80E-01 C	NA	NA	No	ND
	000074-87-3	CHLOROMETHANE	NA	NA	mg/kg	NA	0/4	0.005 to 0.005	NA	NA	3.00E+00 C	NA	NA	No	ND
	000156-59-2	CIS-1,2-DICHLOROETHYLENE	NA	NA	mg/kg	NA	0/4	0.005 to 0.005	NA	NA	1.60E+02 N	NA	NA	No	ND
	010061-01-5	CIS-1,3-DICHLOROPROPENE	NA	NA	mg/kg	NA	0/4	0.005 to 0.005	NA	NA	1.70E+00 C	NA	NA	No	ND
	110-82-7	CYCLOHEXANE	NA	NA	mg/kg	NA	0/4	0.005 to 0.005	NA	NA	NA	NA	NA	No	ND
	000124-48-1	DIBROMOCHLOROMETHANE	NA	NA	mg/kg	NA	0/4	0.005 to 0.005	NA	NA	2.60E+00 C	NA	NA	No	ND
	000075-71-8	DICHLORODIFLUOROMETHANE	NA	NA	mg/kg	NA	0/4	0.005 to 0.005	NA	NA	3.40E+02 sat	NA	NA	No	ND
	000100-41-4	ETHYLBENZENE	NA	NA	mg/kg	NA	0/4	0.005 to 0.005	NA	NA	2.30E+02 sat	NA	NA	No	ND
	000098-82-8	ISOPROPYLBENZENE (CUMENE)	NA	NA	mg/kg	NA	0/4	0.005 to 0.005	NA	NA	5.80E+02 N	NA	NA	No	ND
	108-38-3/106-42-3	M,P-XYLENE (SUM OF ISOMERS)	NA	NA	mg/kg	NA	0/4	0.005 to 0.005	NA	NA	2.10E+02 N	NA	NA	No	ND
	79-20-9	METHYL ACETATE	NA	NA	mg/kg	NA	0/4	0.005 to 0.005	NA	NA	1.00E+05 max	NA	NA	No	ND
	000078-93-3	METHYL ETHYL KETONE (2-BUTANONE)	NA	NA	mg/kg	NA	0/4	0.01 to 0.01	NA	NA	3.40E+04 sat	NA	NA	No	ND
	000108-10-1	METHYL ISOBUTYL KETONE (4-METHYL-2-PENTANONE)	NA	NA	mg/kg	NA	0/4	0.01 to 0.01	NA	NA	1.70E+04 sat	NA	NA	No	ND
	108-87-2	METHYLCYCLOHEXANE	NA	NA	mg/kg	NA	0/4	0.005 to 0.005	NA	NA	1.40E+02 sat	NA	NA	No	ND
	000075-09-2	METHYLENE CHLORIDE	3.00E-03 =	6.00E-03 *	mg/kg	SM95-SO-19	3/4	0.005 to 0.005	6.00E-03	NA	2.20E+01 C	NA	NA	No	BSL
	95-47-6	O-XYLENE (1,2-DIMETHYLBENZENE)	NA	NA	mg/kg	NA	0/4	0.005 to 0.005	NA	NA	2.80E+02 sat	NA	NA	No	ND
	000100-42-5	STYRENE	NA	NA	mg/kg	NA	0/4	0.005 to 0.005	NA	NA	1.70E+03 sat	NA	NA	No	ND
	1634-04-4	TERT-BUTYL METHYL ETHER	NA	NA	mg/kg	NA	0/4	0.005 to 0.005	NA	NA	4.10E+01 C	NA	NA	No	ND
	000127-18-4	TETRACHLOROETHYLENE(PCE)	NA	NA	mg/kg	NA	0/4	0.005 to 0.005	NA	NA	1.70E+00 C	NA	NA	No	ND
	000108-88-3	TOLUENE	2.00E-03 J	4.00E-03 *	mg/kg	SM95-SO-19	2/4	0.005 to 0.005	4.00E-03	NA	5.20E+02 sat	NA	NA	No	BSL
	1634-04-4	TRANS-1,2-DICHLOROETHENE	NA	NA	mg/kg	NA	0/4	0.005 to 0.005	NA	NA	2.40E+02 N	NA	NA	No	ND
	010061-02-6	TRANS-1,3-DICHLOROPROPENE	NA	NA	mg/kg	NA	0/4	0.005 to 0.005	NA	NA	1.70E+00 C	NA	NA	No	ND
	000079-01-6	TRICHLOROETHYLENE (TCE)	NA	NA	mg/kg	NA	0/4	0.005 to 0.005	NA	NA	1.00E-01 C	NA	NA	No	ND
	000075-69-4	TRICHLOROFLUOROMETHANE	NA	NA	mg/kg	NA	0/4	0.005 to 0.005	NA	NA	1.40E+03 N	NA	NA	No	ND
	000075-01-4	VINYL CHLORIDE	NA	NA	mg/kg	NA	0/4	0.005 to 0.005	NA	NA	8.60E-01 C	NA	NA	No	ND

(1) Maximum detected concentration initially used; if screening level exceeded, mean (lead only) or 95% UCL were used for screening.
(2) These background values were calculated from a small data set and are not recommended for definitive comparisons.
(3) Medium Specific Standard Levels, December, 2006, U.S. EPA Region VI. Industrial Outdoor Worker.
Screening level for thallium sulfate used as a surrogate for thallium.
Screening level for pyrene used as a surrogate for benzo(g,h,i)perylene and phenanthrene.
Screening level for acenaphthene used as a surrogate for acenaphthylene.
Screening level for naphthalene used as a surrogate for 2-methylnaphthalene.
Screening level for 4-nitrophenol used as a surrogate for 2-nitrophenol.
Screening level for 2-nitroaniline used as a surrogate for 3-nitroaniline and 4-nitroaniline.
Screening level for endosulfan used as a surrogate for endosulfan sulfate, alpha-endosulfan and beta-endosulfan.
Screening level for chlordane used as a surrogate for alpha-chlordane and gamma-chlordane.
Screening level for HCH-technical (BHC-technical) used as a surrogate for delta-HCH (delta-BHC).
Screening level for endrin used as a surrogate for endrin aldehyde and endrin ketone.
Screening level for 1,2,4-trichlorobenzene used as a surrogate for 1,3,5-trichlorobenzene.
Screening level for bromomethane used as a surrogate for bromochloromethane.
Screening level for 1,3-dichloropropene used as a surrogate for cis-1,3-dichloropropene and trans-1,3-dichloropropene.

(4) Rationale Codes
Selection Reason: Above Screening Levels (ASL)
Deletion Reason: No Toxicity Information (NTX)
Essential Nutrient (Nut)
Below Screening Level (BSL)

ARAR/TBC = Applicable or Relevant and Appropriate Requirement/To Be Considered
COPC = Chemical of Potential Concern
C = Screening level is based on a carcinogenic endpoint.
max = Screening level is based on a ceiling limit.
mg/kg = Milligrams per kilogram
NA = Not available
N = Screening level is based on a noncarcinogenic endpoint.
sat = Screening level is based on soil saturation.

Qualifiers:
J = Estimated value.
v = Low biased. Actual concentration may be higher than the concentraiton reported.
L = Reported concentration is < CRQL (contract-required quantitation limit)
Q = Severe QC or quantitation problem - no result reported but analyte is confirmed as qualitatively pres
K = Result is estimated but bias is unknown
^ = High biased. Actual concentration may be lower than the concentration reported.
* = Result not recommended for use due to associated QA/QC performance inferior to that from other ar
H = Result is likely biased high

Table 2.1
OCCURRENCE, DISTRIBUTION AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN
State Marine Superfund Site, Port Arthur, Texas

Scenario Timeframe: Current/Future
Medium: Soil
Exposure Medium: Soil (0-5 ft)

Exposure Point	CAS Number	Chemical	Minimum Concentration Qualifier	Maximum Concentration Qualifier	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration Used for Screening (1)	Background Value (2)	Screening Toxicity Value (N/C) (3)	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag	Rationale for Selection or Deletion (4)

Not Detected (ND)
Site Concentrations Consistent with Background (Bkgd)

Table 2.2
OCCURRENCE, DISTRIBUTION AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN
State Marine Superfund Site, Port Arthur, Texas

Scenario Timeframe: Current/Future
Medium: Soil
Exposure Medium: Soil (0-1 ft)

Exposure Point	CAS Number	Chemical	Minimum Concentration	Minimum Concentration Qualifier	Maximum Concentration	Maximum Concentration Qualifier	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration Used for Screening (1)	Background Value (2)	Screening Toxicity Value (N/C) (3)		Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag	Rationale for Selection or Deletion (4)
Soil at the Wastewater Treatment Facility	007429-90-5	ALUMINUM	2380	J	11100	=	mg/Kg	SM119	7/7	49 to 58.9	11100	24600	100000	max	NA	NA	No	BSL
	007440-36-0	ANTIMONY	1.1	LJvQ	5.7	LJvQ	mg/Kg	SM117A	6/7	1.1 to 17.7	5.7	NA	450	N	NA	NA	No	BSL
	007440-38-2	ARSENIC	4.7	JK	14	=	mg/Kg	SM95-SO-16	7/7	2.4 to 2.9	14	32.6	1.8	C	NA	NA	No	Bkgd
	007440-39-3	BARIUM	66.1	=	292	=	mg/Kg	SM118	7/7	49 to 58.9	292	966	79000	N	NA	NA	No	BSL
	007440-41-7	BERYLLIUM	0.33	=	1.2	=	mg/Kg	SM95-SO-14	7/7	1.2 to 1.5	1.2	2.5	2200	N	NA	NA	No	BSL
	007440-43-9	CADMIUM	0.49	LQ	1.1	LQ	mg/Kg	SM116	4/7	0.15 to 1.3	1.1	NA	560	N	NA	NA	No	BSL
	007440-70-2	CALCIUM	1330	=	10400	JvL	mg/Kg	SM119	7/7	1220 to 1470	10400	88800	NA		NA	NA	No	Nut
	007440-47-3	CHROMIUM, TOTAL	11.3	JL	63.6	=	mg/Kg	SM95-SO-16	7/7	2.4 to 2.9	63.6	78.1	500	C	NA	NA	No	BSL
	007440-48-4	COBALT	4.4	LQ	14.2	=	mg/Kg	SM95-SO-16	7/7	12.2 to 14.7	14.2	33.2	2100	C	NA	NA	No	BSL
	007440-50-8	COPPER	14	=	299	=	mg/Kg	SM117	7/7	6.1 to 7.4	299	123	42000	N	NA	NA	No	BSL
	000057-12-5	CYANIDE	0.21	LQ	0.21	LQ	mg/Kg	SM117A	1/7	0.12 to 0.74	0.21	NA	14000	N	NA	NA	No	BSL
	007439-89-6	IRON	12700	=	200000	=	mg/Kg	SM95-SO-16	7/7	24.5 to 29.5	160032	247000	100000	max	NA	NA	Yes	ASL
	007439-92-1	LEAD	27.2	=	161	=	mg/Kg	SM95-SO-16	7/7	0.73 to 0.88	161	103	800		NA	NA	No	BSL
	007439-95-4	MAGNESIUM	761	LQ	3460	=	mg/Kg	SM95-SO-14	7/7	1220 to 1470	3460	6120	NA		NA	NA	No	Nut
	007439-96-5	MANGANESE	85.8	=	11320	Jv	mg/Kg	SM95-SO-16	7/7	3.7 to 4.4	11320	2090	35000	N	NA	NA	No	BSL
	007439-97-6	MERCURY	0.06	LQ	0.98	=	mg/Kg	SM117	5/7	0.07 to 0.14	0.98	NA	340		NA	NA	No	BSL
	007440-02-0	NICKEL	11.4	=	77.2	=	mg/Kg	SM95-SO-16	7/7	9.8 to 11.8	77.2	90.5	23000	N	NA	NA	No	BSL
	007440-09-7	POTASSIUM	398	=	2970	=	mg/Kg	SM95-SO-14	7/7	1220 to 1470	2970	3750	NA		NA	NA	No	Nut
	007782-49-2	SELENIUM	0.77	LQ	4.5	=	mg/Kg	SM95-SO-16	2/7	0.54 to 1.4	4.5	NA	5700	N	NA	NA	No	BSL
	007440-22-4	SILVER	0.64	LQ	1.4	LQ	mg/Kg	SM116, SM119	5/7	0.53 to 2.9	1.4	0.737	5700	N	NA	NA	No	BSL
	007440-23-5	SODIUM	220	J^	3700	J	mg/Kg	SM95-SO-14	7/7	1220 to 1470	3700	1170	NA		NA	NA	No	Nut
	007440-28-0	THALLIUM	2.2	LQ	9.9	=	mg/Kg	SM95-SO-16	2/7	0.86 to 2.7	9.9	NA	91	N	NA	NA	No	Bkgd
	007440-62-2	VANADIUM	8.8	LQ	26.2	=	mg/Kg	SM119	7/7	12.2 to 14.7	26.2	81.4	1100	N	NA	NA	No	BSL
	007440-66-6	ZINC	131	=	908	=	mg/Kg	SM117A	7/7	4.9 to 5.9	908	203	100000	max	NA	NA	No	BSL
	309-00- 2	ALDRIN	NA		NA		mg/kg	NA	0/2	0.0017 to 0.0017	NA	NA	0.11	C	NA	NA	No	ND
	319-84-6	ALPHA BHC (ALPHA HEXACHLOROCYCLOHEXANE)	NA		NA		mg/kg	NA	0/2	0.0017 to 0.0017	NA	NA	0.4	C	NA	NA	No	ND
	959-98-8	ALPHA ENDOSULFAN	NA		NA		mg/kg	NA	0/2	0.0017 to 0.0017	NA	NA	4100	N	NA	NA	No	ND
	510-37- 1	ALPHA-CHLORDANE	NA		NA		mg/kg	NA	0/2	0.0017 to 0.0017	NA	NA	7.2	C	NA	NA	No	ND
	319-85-7	BETA BHC (BETA HEXACHLOROCYCLOHEXANE)	NA		NA		mg/kg	NA	0/2	0.0017 to 0.0017	NA	NA	1.4	C	NA	NA	No	ND
	33213-65-9	BETA ENDOSULFAN	NA		NA		mg/kg	NA	0/2	0.0033 to 0.0033	NA	NA	4100	N	NA	NA	No	ND
	319-86-8	DELTA BHC (DELTA HEXACHLOROCYCLOHEXANE)	NA		NA		mg/kg	NA	0/2	0.0017 to 0.0017	NA	NA	1.4	C	NA	NA	No	ND
	60-57-1	DIELDRIN	NA		NA		mg/kg	NA	0/2	0.0033 to 0.0033	NA	NA	0.12	C	NA	NA	No	ND
	103-10- 7	ENDOSULFAN SULFATE	NA		NA		mg/kg	NA	0/2	0.0033 to 0.0033	NA	NA	4100	N	NA	NA	No	ND
	72-20-8	ENDRIN	NA		NA		mg/kg	NA	0/2	0.0033 to 0.0033	NA	NA	210	N	NA	NA	No	ND
	742-19- 3	ENDRIN ALDEHYDE	NA		NA		mg/kg	NA	0/2	0.0033 to 0.0033	NA	NA	210	N	NA	NA	No	ND
	53494-70-5	ENDRIN KETONE	NA		NA		mg/kg	NA	0/2	0.0033 to 0.0033	NA	NA	210	N	NA	NA	No	ND
	58-89-9	GAMMA BHC (LINDANE)	NA		NA		mg/kg	NA	0/2	0.0017 to 0.0017	NA	NA	1.9	C	NA	NA	No	ND
	510-37- 4	GAMMA-CHLORDANE	NA		NA		mg/kg	NA	0/2	0.0017 to 0.0017	NA	NA	7.2	C	NA	NA	No	ND
	76-44-8	HEPTACHLOR	NA		NA		mg/kg	NA	0/2	0.0017 to 0.0017	NA	NA	0.43	C	NA	NA	No	ND
	102-45- 7	HEPTACHLOR EPOXIDE	NA		NA		mg/kg	NA	0/2	0.0017 to 0.0017	NA	NA	0.21	C	NA	NA	No	ND
	72-43-5	METHOXYCHLOR	NA		NA		mg/kg	NA	0/2	0.017 to 0.017	NA	NA	3400	N	NA	NA	No	ND
	72-54-8	P,P'-DDD	NA		NA		mg/kg	NA	0/2	0.0033 to 0.0033	NA	NA	11	C	NA	NA	No	ND
	72-55-9	P,P'-DDE	NA		NA		mg/kg	NA	0/2	0.0033 to 0.0033	NA	NA	7.8	C	NA	NA	No	ND
	50-29-3	P,P'-DDT	NA		NA		mg/kg	NA	0/2	0.0033 to 0.0033	NA	NA	7.8	C	NA	NA	No	ND
	12674-11-2	PCB-1016 (AROCHLOR 1016)	NA		NA		mg/kg	NA	0/2	0.033 to 0.033	NA	NA	24	C	NA	NA	No	ND
	11104-28-2	PCB-1221 (AROCHLOR 1221)	NA		NA		mg/kg	NA	0/2	0.033 to 0.033	NA	NA	0.83	C	NA	NA	No	ND
	11141-16-5	PCB-1232 (AROCHLOR 1232)	NA		NA		mg/kg	NA	0/2	0.033 to 0.033	NA	NA	0.83	C	NA	NA	No	ND
	53469-21-9	PCB-1242 (AROCHLOR 1242)	NA		NA		mg/kg	NA	0/2	0.033 to 0.033	NA	NA	0.83	C	NA	NA	No	ND
	12672-29-6	PCB-1248 (AROCHLOR 1248)	NA		NA		mg/kg	NA	0/2	0.033 to 0.033	NA	NA	0.83	C	NA	NA	No	ND
	11097-69-1	PCB-1254 (AROCHLOR 1254)	NA		NA		mg/kg	NA	0/2	0.033 to 0.033	NA	NA	0.83	C	NA	NA	No	ND
	11096-82-5	PCB-1260 (AROCHLOR 1260)	NA		NA		mg/kg	NA	0/2	0.033 to 0.033	NA	NA	0.83	C	NA	NA	No	ND
	800-13- 5	TOXAPHENE	NA		NA		mg/kg	NA	0/2	0.17 to 0.17	NA	NA	1.7	C	NA	NA	No	ND
	95-94-3	1,2,4,5-TETRACHLOROBENZENE	NA		NA		mg/kg	NA	0/2	0.17 to 0.17	NA	NA	210	N	NA	NA	No	ND
	000108-60-1	2,2'-OXYBIS(1-CHLORO)PROPANE	NA		NA		mg/kg	NA	0/7	0.17 to 0.48	NA	NA	NA		NA	NA	No	ND
	58-90-2	2,3,4,6-TETRACHLOROPHENOL	NA		NA		mg/kg	NA	0/2	0.17 to 0.17	NA	NA	21000	N	NA	NA	No	ND
	000095-95-4	2,4,5-TRICHLOROPHENOL	NA		NA		mg/kg	NA	0/7	0.17 to 1.2	NA	NA	68000	N	NA	NA	No	ND
	000088-06-2	2,4,6-TRICHLOROPHENOL	NA		NA		mg/kg	NA	0/7	0.17 to 0.48	NA	NA	170	C	NA	NA	No	ND
	000120-83-2	2,4-DICHLOROPHENOL	NA		NA		mg/kg	NA	0/7	0.17 to 0.48	NA	NA	2100	N	NA	NA	No	ND
	000105-67-9	2,4-DIMETHYLPHENOL	NA		NA		mg/kg	NA	0/7	0.17 to 0.48	NA	NA	14000	N	NA	NA	No	ND

Table 2.2
OCCURRENCE, DISTRIBUTION AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN
State Marine Superfund Site, Port Arthur, Texas

Scenario Timeframe: Current/Future
Medium: Soil
Exposure Medium: Soil (0-1 ft)

Exposure Point	CAS Number	Chemical	Minimum Concentration Qualifier	Maximum Concentration Qualifier	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration Used for Screening (1)	Background Value (2)	Screening Toxicity Value (N/C) (3)	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag	Rationale for Selection or Deletion (4)
	000051-28-5	2,4-DINITROPHENOL	NA	NA	mg/kg	NA	0/7	0.33 to 1.2	NA	NA	1400 N	NA	NA	No	ND
	000121-14-2	2,4-DINITROTOLUENE	NA	NA	mg/kg	NA	0/7	0.17 to 0.48	NA	NA	1400 N	NA	NA	No	ND
	000606-20-2	2,6-DINITROTOLUENE	NA	NA	mg/kg	NA	0/7	0.17 to 0.48	NA	NA	680 N	NA	NA	No	ND
	000091-58-7	2-CHLORONAPHTHALENE	NA	NA	mg/kg	NA	0/7	0.17 to 0.48	NA	NA	26000 N	NA	NA	No	ND
	000095-57-8	2-CHLOROPHENOL	NA	NA	mg/kg	NA	0/7	0.17 to 0.48	NA	NA	260 N	NA	NA	No	ND
	000091-57-6	2-METHYLNAPHTHALENE	0.033 LJQK	0.22 LJQK	mg/kg	SM117	2/7	0.17 to 0.48	0.22	NA	210 N	NA	NA	No	BSL
	000095-48-7	2-METHYLPHENOL (O-CRESOL)	NA	NA	mg/kg	NA	0/7	0.17 to 0.48	NA	NA	34000 N	NA	NA	No	ND
	000088-74-4	2-NITROANILINE	NA	NA	mg/kg	NA	0/7	0.33 to 1.2	NA	NA	2000 N	NA	NA	No	ND
	000088-75-5	2-NITROPHENOL	NA	NA	mg/kg	NA	0/7	0.17 to 0.48	NA	NA	5500 N	NA	NA	No	ND
	000091-94-1	3,3'-DICHLOROBENZIDINE	NA	NA	mg/kg	NA	0/7	0.17 to 0.48	NA	NA	4.3 C	NA	NA	No	ND
	000099-09-2	3-NITROANILINE	NA	NA	mg/kg	NA	0/7	0.33 to 1.2	NA	NA	2000 N	NA	NA	No	ND
	000534-52-1	4,6-DINITRO-2-METHYLPHENOL	NA	NA	mg/kg	NA	0/7	0.33 to 1.2	NA	NA	NA	NA	NA	No	ND
	000101-55-3	4-BROMOPHENYL PHENYL ETHER	NA	NA	mg/kg	NA	0/7	0.17 to 0.48	NA	NA	NA	NA	NA	No	ND
	000059-50-7	4-CHLORO-3-METHYLPHENOL	NA	NA	mg/kg	NA	0/7	0.17 to 0.48	NA	NA	NA	NA	NA	No	ND
	000106-47-8	4-CHLOROANILINE	NA	NA	mg/kg	NA	0/7	0.17 to 0.48	NA	NA	2700 N	NA	NA	No	ND
	007005-72-3	4-CHLOROPHENYL PHENYL ETHER	NA	NA	mg/kg	NA	0/7	0.17 to 0.48	NA	NA	NA	NA	NA	No	ND
	000106-44-5	4-METHYLPHENOL (P-CRESOL)	0.023 LJQK	0.023 LJQK	mg/kg	SM117	1/7	0.17 to 0.48	0.023	NA	3400 N	NA	NA	No	BSL
	000100-01-6	4-NITROANILINE	NA	NA	mg/kg	NA	0/7	0.33 to 1.2	NA	NA	2000 N	NA	NA	No	ND
	000100-02-7	4-NITROPHENOL	2.3 F+	2.3 F+	mg/kg	SM95-SO-16	1/7	0.33 to 1.2	2.3	NA	5500 N	NA	NA	No	BSL
	000083-32-9	ACENAPHTHENE	0.014 LJQK	0.085 LJQK	mg/kg	SM119	3/7	0.17 to 0.48	0.085	NA	33000 N	NA	NA	No	BSL
	000208-96-8	ACENAPHTHYLENE	0.042 LJQK	0.35 LJQK	mg/kg	SM117	4/7	0.17 to 0.48	0.35	NA	33000 N	NA	NA	No	BSL
	000098-86-2	ACETOPHENONE	0.023 LJQK	0.12 LJQK	mg/kg	SM117	2/7	0.17 to 0.48	0.12	NA	1700 sat	NA	NA	No	BSL
	000120-12-7	ANTHRACENE	0.019 LJQK	0.45 LJQK	mg/kg	SM119	6/7	0.17 to 0.48	0.45	NA	100000 max	NA	NA	No	BSL
	001912-24-9	ATRAZINE	NA	NA	mg/kg	NA	0/7	0.17 to 0.48	NA	NA	8.6 C	NA	NA	No	ND
	000100-52-7	BENZALDEHYDE	0.025 LJQK	0.051 LJQK	mg/kg	SM117	2/7	0.17 to 0.48	0.051	NA	68000 N	NA	NA	No	BSL
	000056-55-3	BENZO(A)ANTHRACENE	0.1 LJQK	0.83 =	mg/kg	SM119	5/7	0.17 to 0.48	0.83	NA	2.3 C	NA	NA	No	BSL
	000050-32-8	BENZO(A)PYRENE	0.1 LJQK	0.65 =	mg/kg	SM119	5/7	0.17 to 0.48	0.44	NA	0.23 C	NA	NA	Yes	ASL
	000205-99-2	BENZO(B)FLUORANTHENE	0.13 LJQK	1.1 =	mg/kg	SM119	5/7	0.17 to 0.48	1.1	NA	2.3 C	NA	NA	No	BSL
	000191-24-2	BENZO(G,H,I)PERYLENE	0.056 LJQK	0.24 LJQK	mg/kg	SM117	4/7	0.17 to 0.48	0.24	NA	32000 N	NA	NA	No	BSL
	000207-08-9	BENZO(K)FLUORANTHENE	0.061 LJQK	0.34 LJQK	mg/kg	SM119	5/7	0.17 to 0.48	0.34	NA	23 C	NA	NA	No	BSL
	000085-68-7	BENZYL BUTYL PHTHALATE	NA	NA	mg/kg	NA	0/7	0.17 to 0.48	NA	NA	240 sat	NA	NA	No	ND
	000092-52-4	BIPHENYL (DIPHENYL)	0.013 LJQK	0.025 LJQK	mg/kg	SM117	2/7	0.17 to 0.48	0.025	NA	26000 N	NA	NA	No	BSL
	000111-91-1	BIS(2-CHLOROETHOXY) METHANE	NA	NA	mg/kg	NA	0/7	0.17 to 0.48	NA	NA	NA	NA	NA	No	ND
	000111-44-4	BIS(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHER)	NA	NA	mg/kg	NA	0/7	0.17 to 0.48	NA	NA	0.62 C	NA	NA	No	ND
	000117-81-7	BIS(2-ETHYLHEXYL) PHTHALATE	NA	NA	mg/kg	NA	0/7	0.17 to 0.48	NA	NA	140 C	NA	NA	No	ND
	000105-60-2	CAPROLACTAM	NA	NA	mg/kg	NA	0/7	0.17 to 0.48	NA	NA	100000 max	NA	NA	No	ND
	000086-74-8	CARBAZOLE	0.031 LJQK	0.13 LJ	mg/kg	SM119	3/7	0.17 to 0.48	0.13	NA	96 C	NA	NA	No	BSL
	000218-01-9	CHRYSENE	0.098 LJQK	1.3 =	mg/kg	SM119	5/7	0.17 to 0.48	1.3	NA	230 C	NA	NA	No	BSL
	000053-70-3	DIBENZ(A,H)ANTHRACENE	0.025 LJQK	0.1 LJQK	mg/kg	SM117, SM119	5/7	0.17 to 0.48	0.1	NA	0.23 C	NA	NA	No	BSL
	000132-64-9	DIBENZOFURAN	0.026 J	0.033 LJQK	mg/kg	SM117	3/7	0.17 to 0.48	0.033	NA	1700 N	NA	NA	No	BSL
	000084-66-2	DIETHYL PHTHALATE	NA	NA	mg/kg	NA	0/7	0.17 to 0.48	NA	NA	100000 max	NA	NA	No	ND
	000131-11-3	DIMETHYL PHTHALATE	NA	NA	mg/kg	NA	0/7	0.17 to 0.48	NA	NA	100000 max	NA	NA	No	ND
	000084-74-2	DI-N-BUTYL PHTHALATE	NA	NA	mg/kg	NA	0/7	0.17 to 0.48	NA	NA	68000 N	NA	NA	No	ND
	000117-84-0	DI-N-OCTYLPHTHALATE	0.033 LJQK	0.033 LJQK	mg/kg	SM119	1/7	0.17 to 0.48	0.033	NA	27000 N	NA	NA	No	BSL
	000206-44-0	FLUORANTHENE	0.065 LJQK	2.2 =	mg/kg	SM119	5/7	0.17 to 0.48	2.2	NA	24000 N	NA	NA	No	BSL
	000086-73-7	FLUORENE	0.044 J	0.097 LJQK	mg/kg	SM119	3/7	0.17 to 0.48	0.097	NA	26000 N	NA	NA	No	BSL
	000118-74-1	HEXACHLOROBENZENE	NA	NA	mg/kg	NA	0/7	0.17 to 0.48	NA	NA	1.2 C	NA	NA	No	ND
	000087-68-3	HEXACHLOROBUTADIENE	NA	NA	mg/kg	NA	0/7	0.17 to 0.48	NA	NA	25 C	NA	NA	No	ND
	000077-47-4	HEXACHLOROCYCLOPENTADIENE	NA	NA	mg/kg	NA	0/7	0.17 to 0.48	NA	NA	4100 N	NA	NA	No	ND
	000067-72-1	HEXACHLOROETHANE	NA	NA	mg/kg	NA	0/7	0.17 to 0.48	NA	NA	140 C	NA	NA	No	ND
	000193-39-5	INDENO(1,2,3-C,D)PYRENE	0.085 LJQK	0.42 LJQK	mg/kg	SM119	5/7	0.17 to 0.48	0.42	NA	2.3 C	NA	NA	No	BSL
	000078-59-1	ISOPHORONE	NA	NA	mg/kg	NA	0/7	0.17 to 0.48	NA	NA	2000 C	NA	NA	No	ND
	000091-20-3	NAPHTHALENE	0.036 LJQK	0.12 LJQK	mg/kg	SM117	2/7	0.17 to 0.48	0.12	NA	210 N	NA	NA	No	BSL
	000098-95-3	NITROBENZENE	NA	NA	mg/kg	NA	0/7	0.17 to 0.48	NA	NA	110 N	NA	NA	No	ND
	000621-64-7	N-NITROSODI-N-PROPYLAMINE	NA	NA	mg/kg	NA	0/7	0.17 to 0.48	NA	NA	0.27 C	NA	NA	No	ND
	000086-30-6	N-NITROSODIPHENYLAMINE	NA	NA	mg/kg	NA	0/7	0.17 to 0.48	NA	NA	390 C	NA	NA	No	ND
	000087-86-5	PENTACHLOROPHENOL	NA	NA	mg/kg	NA	0/7	0.33 to 1.2	NA	NA	10 C	NA	NA	No	ND
	000085-01-8	PHENANTHRENE	0.031 LJQK	1.1 =	mg/kg	SM119	6/7	0.17 to 0.48	1.1	NA	32000 N	NA	NA	No	BSL
	000108-95-2	PHENOL	NA	NA	mg/kg	NA	0/7	0.17 to 0.48	NA	NA	100000 max	NA	NA	No	ND
	000129-00-0	PYRENE	0.13 LJQK	1.6 =	mg/kg	SM119	5/7	0.17 to 0.48	1.6	NA	32000 N	NA	NA	No	BSL

Table 2.2
OCCURRENCE, DISTRIBUTION AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN
State Marine Superfund Site, Port Arthur, Texas

Scenario Timeframe: Current/Future
Medium: Soil
Exposure Medium: Soil (0-1 ft)

Exposure Point	CAS Number	Chemical	Minimum Concentration Qualifier	Maximum Concentration Qualifier	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration Used for Screening (1)	Background Value (2)	Screening Toxicity Value (N/C) (3)	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag	Rationale for Selection or Deletion (4)
	000071-55-6	1,1,1-TRICHLOROETHANE	0.009 J	0.009 J	mg/kg	SM95-SO-16	1/2	0.005 to 0.005	0.009	NA	1400 sat	NA	NA	No	BSL
	000079-34-5	1,1,2,2-TETRACHLOROETHANE	NA	NA	mg/kg	NA	0/2	0.005 to 0.005	NA	NA	0.97 C	NA	NA	No	ND
	000076-13-1	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	NA	NA	mg/kg	NA	0/2	0.005 to 0.005	NA	NA	5600 sat	NA	NA	No	ND
	000079-00-5	1,1,2-TRICHLOROETHANE	NA	NA	mg/kg	NA	0/2	0.005 to 0.005	NA	NA	2.1 C	NA	NA	No	ND
	000075-34-3	1,1-DICHLOROETHANE	NA	NA	mg/kg	NA	0/2	0.005 to 0.005	NA	NA	2300 N	NA	NA	No	ND
	000075-35-4	1,1-DICHLOROETHENE	NA	NA	mg/kg	NA	0/2	0.005 to 0.005	NA	NA	470 N	NA	NA	No	ND
	87616	1,2,3-TRICHLOROBENZENE	NA	NA	mg/kg	NA	0/2	0.005 to 0.005	NA	NA	260 N	NA	NA	No	ND
	000120-82-1	1,2,4-TRICHLOROBENZENE	NA	NA	mg/kg	NA	0/2	0.005 to 0.005	NA	NA	260 N	NA	NA	No	ND
	000096-12-8	1,2-DIBROMO-3-CHLOROPROPANE	NA	NA	mg/kg	NA	0/2	0.005 to 0.005	NA	NA	2.2 C	NA	NA	No	ND
	106-93-4	1,2-DIBROMOETHANE (ETHYLENE DIBROMIDE)	NA	NA	mg/kg	NA	0/2	0.005 to 0.005	NA	NA	0.07 C	NA	NA	No	ND
	000095-50-1	1,2-DICHLOROBENZENE	NA	NA	mg/kg	NA	0/2	0.005 to 0.005	NA	NA	370 sat	NA	NA	No	ND
	000107-06-2	1,2-DICHLOROETHANE	NA	NA	mg/kg	NA	0/2	0.005 to 0.005	NA	NA	0.84 C	NA	NA	No	ND
	000078-87-5	1,2-DICHLOROPROPANE	NA	NA	mg/kg	NA	0/2	0.005 to 0.005	NA	NA	0.85 C	NA	NA	No	ND
	000541-73-1	1,3-DICHLOROBENZENE	NA	NA	mg/kg	NA	0/2	0.005 to 0.005	NA	NA	150 N	NA	NA	No	ND
	000106-46-7	1,4-DICHLOROBENZENE	NA	NA	mg/kg	NA	0/2	0.005 to 0.005	NA	NA	8.1 C	NA	NA	No	ND
	123-91-1	1,4-DIOXANE (P-DIOXANE)	NA	NA	mg/kg	NA	0/2	0.1 to 0.1	NA	NA	170 C	NA	NA	No	ND
	000591-78-6	2-HEXANONE	NA	NA	mg/kg	NA	0/2	0.01 to 0.01	NA	NA	NA	NA	NA	No	ND
	000067-64-1	ACETONE	NA	NA	mg/kg	NA	0/2	0.01 to 0.01	NA	NA	100000 max	NA	NA	No	ND
	000071-43-2	BENZENE	NA	NA	mg/kg	NA	0/2	0.005 to 0.005	NA	NA	1.6 C	NA	NA	No	ND
	74975	BROMOCHLOROMETHANE	NA	NA	mg/kg	NA	0/2	0.005 to 0.005	NA	NA	15 N	NA	NA	No	ND
	000075-27-4	BROMODICHLOROMETHANE	NA	NA	mg/kg	NA	0/2	0.005 to 0.005	NA	NA	2.6 C	NA	NA	No	ND
	000075-25-2	BROMOFORM	NA	NA	mg/kg	NA	0/2	0.005 to 0.005	NA	NA	240 C	NA	NA	No	ND
	000074-83-9	BROMOMETHANE	NA	NA	mg/kg	NA	0/2	0.005 to 0.005	NA	NA	15 N	NA	NA	No	ND
	000075-15-0	CARBON DISULFIDE	NA	NA	mg/kg	NA	0/2	0.005 to 0.005	NA	NA	720 sat	NA	NA	No	ND
	000056-23-5	CARBON TETRACHLORIDE	NA	NA	mg/kg	NA	0/2	0.005 to 0.005	NA	NA	0.58 C	NA	NA	No	ND
	000108-90-7	CHLOROBENZENE	NA	NA	mg/kg	NA	0/2	0.005 to 0.005	NA	NA	600 N	NA	NA	No	ND
	000075-00-3	CHLOROETHANE	NA	NA	mg/kg	NA	0/2	0.005 to 0.005	NA	NA	NA	NA	NA	No	ND
	000067-66-3	CHLOROFORM	NA	NA	mg/kg	NA	0/2	0.005 to 0.005	NA	NA	0.58 C	NA	NA	No	ND
	000074-87-3	CHLOROMETHANE	NA	NA	mg/kg	NA	0/2	0.005 to 0.005	NA	NA	3 C	NA	NA	No	ND
	000156-59-2	CIS-1,2-DICHLOROETHYLENE	NA	NA	mg/kg	NA	0/2	0.005 to 0.005	NA	NA	160 N	NA	NA	No	ND
	010061-01-5	CIS-1,3-DICHLOROPROPENE	NA	NA	mg/kg	NA	0/2	0.005 to 0.005	NA	NA	1.7 C	NA	NA	No	ND
	110827	CYCLOHEXANE	NA	NA	mg/kg	NA	0/2	0.005 to 0.005	NA	NA	NA	NA	NA	No	ND
	000124-48-1	DIBROMOCHLOROMETHANE	NA	NA	mg/kg	NA	0/2	0.005 to 0.005	NA	NA	2.6 C	NA	NA	No	ND
	000075-71-8	DICHLORODIFLUOROMETHANE	NA	NA	mg/kg	NA	0/2	0.005 to 0.005	NA	NA	340 sat	NA	NA	No	ND
	000100-41-4	ETHYLBENZENE	NA	NA	mg/kg	NA	0/2	0.005 to 0.005	NA	NA	230 sat	NA	NA	No	ND
	000098-82-8	ISOPROPYLBENZENE (CUMENE)	NA	NA	mg/kg	NA	0/2	0.005 to 0.005	NA	NA	580 N	NA	NA	No	ND
	108-38-3/106-42-3	M,P-XYLENE (SUM OF ISOMERS)	NA	NA	mg/kg	NA	0/2	0.005 to 0.005	NA	NA	210 N	NA	NA	No	ND
	79-20-9	METHYL ACETATE	NA	NA	mg/kg	NA	0/2	0.005 to 0.005	NA	NA	100000 max	NA	NA	No	ND
	000078-93-3	METHYL ETHYL KETONE (2-BUTANONE)	NA	NA	mg/kg	NA	0/2	0.01 to 0.01	NA	NA	34000 sat	NA	NA	No	ND
	000108-10-1	METHYL ISOBUTYL KETONE (4-METHYL-2-PENTANONE)	NA	NA	mg/kg	NA	0/2	0.01 to 0.01	NA	NA	17000 sat	NA	NA	No	ND
	108872	METHYLCYCLOHEXANE	NA	NA	mg/kg	NA	0/2	0.005 to 0.005	NA	NA	140 sat	NA	NA	No	ND
	000075-09-2	METHYLENE CHLORIDE	0.009 J	0.009 J	mg/kg	SM95-SO-16	1/2	0.005 to 0.005	0.009	NA	22 C	NA	NA	No	BSL
	95-47-6	O-XYLENE (1,2-DIMETHYLBENZENE)	NA	NA	mg/kg	NA	0/2	0.005 to 0.005	NA	NA	280 sat	NA	NA	No	ND
	000100-42-5	STYRENE	NA	NA	mg/kg	NA	0/2	0.005 to 0.005	NA	NA	1700 sat	NA	NA	No	ND
	1634044	TERT-BUTYL METHYL ETHER	NA	NA	mg/kg	NA	0/2	0.005 to 0.005	NA	NA	1800 C	NA	NA	No	ND
	000127-18-4	TETRACHLOROETHYLENE(PCE)	NA	NA	mg/kg	NA	0/2	0.005 to 0.005	NA	NA	1.7 C	NA	NA	No	ND
	000108-88-3	TOLUENE	NA	NA	mg/kg	NA	0/2	0.005 to 0.005	NA	NA	520 sat	NA	NA	No	ND
	1634-04-4	TRANS-1,2-DICHLOROETHENE	NA	NA	mg/kg	NA	0/2	0.005 to 0.005	NA	NA	240 N	NA	NA	No	ND
	010061-02-6	TRANS-1,3-DICHLOROPROPENE	NA	NA	mg/kg	NA	0/2	0.005 to 0.005	NA	NA	1.7 C	NA	NA	No	ND
	000079-01-6	TRICHLOROETHYLENE (TCE)	NA	NA	mg/kg	NA	0/2	0.005 to 0.005	NA	NA	0.1 C	NA	NA	No	ND
	000075-69-4	TRICHLOROFLUOROMETHANE	NA	NA	mg/kg	NA	0/2	0.005 to 0.005	NA	NA	1400 N	NA	NA	No	ND
	000075-01-4	VINYL CHLORIDE	NA	NA	mg/kg	NA	0/2	0.005 to 0.005	NA	NA	0.43 C	NA	NA	No	ND

(1) Maximum detected concentration initially used; if screening level exceeded, mean (lead only) or 95% UCL were used for screening.
(2) These background values were calculated from a small data set and are not recommended for definitive comparisons.
(3) Medium Specific Standard Levels, December, 2004, U.S. EPA Region VI. Industrial Outdoor Worker.
Screening level for thallium sulfate used as a surrogate for thallium.
Screening level for pyrene used as a surrogate for benzo(g,h,i)perylene and phenanthrene.
Screening level for acenaphthene used as a surrogate for acenaphthylene.
Screening level for naphthalene used as a surrogate for 2-methylnaphthalene.

ARAR/TBC = Applicable or Relevant and Appropriate Requirement/To Be Considered
COPC = Chemical of Potential Concern
C = Screening level is based on a carcinogenic endpoint.
max = Screening level is based on a ceiling limit.
mg/kg = Milligrams per kilogram
NA = Not available
N = Screening level is based on a noncarcinogenic endpoint.

Table 2.2
OCCURRENCE, DISTRIBUTION AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN
State Marine Superfund Site, Port Arthur, Texas

Scenario Timeframe: Current/Future
Medium: Soil
Exposure Medium: Soil (0-1 ft)

Exposure Point	CAS Number	Chemical	Minimum Concentration Qualifier	Maximum Concentration Qualifier	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration Used for Screening (1)	Background Value (2)	Screening Toxicity Value (N/C) (3)	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag	Rationale for Selection or Deletion (4)

Screening level for 4-nitrophenol used as a surrogate for 2-nitrophenol.
Screening level for 2-nitroaniline used as a surrogate for 3-nitroaniline and 4-nitroaniline.
Screening level for endosulfan used as a surrogate for endosulfan sulfate, alpha-endosulfan and beta-endosulfan.
Screening level for chlordane used as a surrogate for alpha-chlordane and gamma-chlordane.
Screening level for HCH-technical (BHC-technical) used as a surrogate for delta-HCH (delta-BHC).
Screening level for endrin used as a surrogate for endrin aldehyde and endrin ketone.
Screening level for 1,2,4-trichlorobenzene used as a surrogate for 1,3,5-trichlorobenzene.
Screening level for bromomethane used as a surrogate for bromochloromethane.
Screening level for 1,3-dichloropropene used as a surrogate for cis-1,3-dichloropropene and trans-1,3-dichloropropene.

(4) Rationale Codes

Selection Reason: Above Screening Levels (ASL)

Deletion Reason:
No Toxicity Information (NTX)
Essential Nutrient (Nut)
Below Screening Level (BSL)
Not Detected (ND)
Site Concentrations Consistent with Background (Bkgd)

sat = Screening level is based on soil saturation.

Qualifiers:
F+ = False positive
J = Estimated value.
v = Low biased. Actual concentration may be higher than the concentraiton reported.
L = Reported concentration is < CRQL (contract-required quantitation limit)
Q = Severe QC or quantitation problem - no result reported but analyte is confirmed as qualitatively pres
K = Result is estimated but bias is unknown
^ = High biased. Actual concentration may be lower than the concentration reported.

Table 2.3
OCCURRENCE, DISTRIBUTION AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN
State Marine Superfund Site, Port Arthur, Texas

Scenario Timeframe: Current/Future
Medium: Soil
Exposure Medium: Soil (0-1 ft)

Exposure Point	CAS Number	Chemical	Minimum Concentration	Qualifier	Maximum Concentration	Qualifier	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration Used for Screening (1)	Background Value (2)	Screening Toxicity Value (N/C) (3)		Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag	Rationale for Selection or Deletion (4)
Soil at the Tar Burn Area	007429-90-5	ALUMINUM	3510	=	17900	=	mg/kg	SM113	4/4	50.3 to 60.3	17900	24600	100000	max	NA	NA	No	BSL
	007440-36-0	ANTIMONY	1.3	LJvQ	6	LJvQ	mg/kg	SM114	4/4	15.1 to 18.1	6	NA	450	N	NA	NA	No	BSL
	007440-38-2	ARSENIC	4.3	JvL	7.9	JvL	mg/kg	SM112	4/4	2.5 to 3	7.9	32.6	1.8	C	NA	NA	No	Bkgd
	007440-39-3	BARIUM	89.6	=	146	=	mg/kg	SM114	4/4	50.3 to 60.3	146	966	79000	N	NA	NA	No	BSL
	007440-41-7	BERYLLIUM	0.32	LQ	0.7	LQ	mg/kg	SM113	4/4	1.3 to 1.5	0.7	2.5	2200	N	NA	NA	No	BSL
	007440-43-9	CADMIUM	0.37	LQ	1.1	LQ	mg/kg	SM113, SM114	3/4	0.16 to 1.5	1.1	NA	560	N	NA	NA	No	BSL
	007440-70-2	CALCIUM	3430	=	66600	=	mg/kg	SM114	4/4	1260 to 1510	66600	88800	NA		NA	NA	No	Nut
	007440-47-3	CHROMIUM, TOTAL	10.1	=	22.5	=	mg/kg	SM114	4/4	2.5 to 3	22.5	78.1	500	C	NA	NA	No	BSL
	007440-48-4	COBALT	3.3	LQ	6.7	LQ	mg/kg	SM112	4/4	12.6 to 15.1	6.7	33.2	2100	C	NA	NA	No	BSL
	007440-50-8	COPPER	17.4	=	155	=	mg/kg	SM114	4/4	6.3 to 7.5	155	123	42000	N	NA	NA	No	BSL
	000057-12-5	CYANIDE	0.24	LQ	0.24	LQ	mg/kg	SM115	1/4	0.13 to 0.63	0.24	NA	14000	N	NA	NA	No	BSL
	007439-89-6	IRON	12000	=	18200	=	mg/kg	SM113	4/4	25.1 to 30.2	18200	247000	100000	max	NA	NA	No	BSL
	007439-92-1	LEAD	38.7	JK	967	JK	mg/kg	SM114	4/4	0.75 to 0.9	320	103	800		NA	NA	No	BSL
	007439-95-4	MAGNESIUM	873	LQ	2020	=	mg/kg	SM114	4/4	1260 to 1510	2020	6120	NA		NA	NA	No	Nut
	007439-96-5	MANGANESE	182	JvL	413	JvL	mg/kg	SM113	4/4	3.8 to 4.5	413	2090	35000	N	NA	NA	No	BSL
	007439-97-6	MERCURY	0.06	LQ	0.31	=	mg/kg	SM114	4/4	0.13 to 0.15	0.31	NA	340		NA	NA	No	BSL
	007440-02-0	NICKEL	8	LQ	26.2	=	mg/kg	SM114	4/4	10.1 to 12.1	26.2	90.5	23000	N	NA	NA	No	BSL
	007440-09-7	POTASSIUM	629	LQ	1880	=	mg/kg	SM113	4/4	1260 to 1510	1880	3750	NA		NA	NA	No	Nut
	007782-49-2	SELENIUM	NA		NA		mg/kg	NA	0/4	1.2 to 1.4	NA	NA	5700	N	NA	NA	No	ND
	007440-22-4	SILVER	0.8	LQ	1	LQ	mg/kg	SM113	4/4	2.5 to 3	1	0.737	5700	N	NA	NA	No	BSL
	007440-23-5	SODIUM	330	LQ	639	LQ	mg/kg	SM114	4/4	1260 to 1510	639	1170	NA		NA	NA	No	Nut
	007440-28-0	THALLIUM	1.3	LQ	1.3	LQ	mg/kg	SM115	1/4	1.2 to 2.5	1.3	NA	91	N	NA	NA	No	Bkgd
	007440-62-2	VANADIUM	11.6	LQ	17	=	mg/kg	SM115	4/4	12.6 to 15.1	17	81.4	1100	N	NA	NA	No	BSL
	007440-66-6	ZINC	96.3	=	424	=	mg/kg	SM114	4/4	5 to 6	424	203	100000	max	NA	NA	No	BSL
	000108-60-1	2,2'-OXYBIS(1-CHLORO)PROPANE	NA		NA		mg/kg	NA	0/4	0.44 to 0.81	NA	NA	NA		NA	NA	No	ND
	000095-95-4	2,4,5-TRICHLOROPHENOL	NA		NA		mg/kg	NA	0/4	1.1 to 2	NA	NA	68000	N	NA	NA	No	ND
	000088-06-2	2,4,6-TRICHLOROPHENOL	NA		NA		mg/kg	NA	0/4	0.44 to 0.81	NA	NA	170	C	NA	NA	No	ND
	000120-83-2	2,4-DICHLOROPHENOL	NA		NA		mg/kg	NA	0/4	0.44 to 0.81	NA	NA	2100	N	NA	NA	No	ND
	000105-67-9	2,4-DIMETHYLPHENOL	NA		NA		mg/kg	NA	0/4	0.44 to 0.81	NA	NA	14000	N	NA	NA	No	ND
	000051-28-5	2,4-DINITROPHENOL	NA		NA		mg/kg	NA	0/4	1.1 to 2	NA	NA	1400	N	NA	NA	No	ND
	000121-14-2	2,4-DINITROTOLUENE	NA		NA		mg/kg	NA	0/4	0.44 to 0.81	NA	NA	1400	N	NA	NA	No	ND
	000606-20-2	2,6-DINITROTOLUENE	NA		NA		mg/kg	NA	0/4	0.44 to 0.81	NA	NA	680	N	NA	NA	No	ND
	000091-58-7	2-CHLORONAPHTHALENE	NA		NA		mg/kg	NA	0/4	0.44 to 0.81	NA	NA	26000	N	NA	NA	No	ND
	000095-57-8	2-CHLOROPHENOL	NA		NA		mg/kg	NA	0/4	0.44 to 0.81	NA	NA	260	N	NA	NA	No	ND
	000091-57-6	2-METHYLNAPHTHALENE	0.025	LJQK	0.042	LJQK	mg/kg	SM115	2/4	0.44 to 0.81	0.042	NA	210	N	NA	NA	No	BSL
	000095-48-7	2-METHYLPHENOL (O-CRESOL)	NA		NA		mg/kg	NA	0/4	0.44 to 0.81	NA	NA	34000	N	NA	NA	No	ND
	000088-74-4	2-NITROANILINE	NA		NA		mg/kg	NA	0/4	1.1 to 2	NA	NA	2000	N	NA	NA	No	ND
	000088-75-5	2-NITROPHENOL	NA		NA		mg/kg	NA	0/4	0.44 to 0.81	NA	NA	5500	N	NA	NA	No	ND
	000091-94-1	3,3'-DICHLOROBENZIDINE	NA		NA		mg/kg	NA	0/4	0.44 to 0.81	NA	NA	4.3	C	NA	NA	No	ND
	000099-09-2	3-NITROANILINE	NA		NA		mg/kg	NA	0/4	1.1 to 2	NA	NA	2000	N	NA	NA	No	ND
	000534-52-1	4,6-DINITRO-2-METHYLPHENOL	NA		NA		mg/kg	NA	0/4	1.1 to 2	NA	NA	NA		NA	NA	No	ND
	000101-55-3	4-BROMOPHENYL PHENYL ETHER	NA		NA		mg/kg	NA	0/4	0.44 to 0.81	NA	NA	NA		NA	NA	No	ND
	000059-50-7	4-CHLORO-3-METHYLPHENOL	NA		NA		mg/kg	NA	0/4	0.44 to 0.81	NA	NA	NA		NA	NA	No	ND
	000106-47-8	4-CHLOROANILINE	NA		NA		mg/kg	NA	0/4	0.44 to 0.81	NA	NA	2700	N	NA	NA	No	ND
	007005-72-3	4-CHLOROPHENYL PHENYL ETHER	NA		NA		mg/kg	NA	0/4	0.44 to 0.81	NA	NA	NA		NA	NA	No	ND
	000106-44-5	4-METHYLPHENOL (P-CRESOL)	NA		NA		mg/kg	NA	0/4	0.44 to 0.81	NA	NA	3400	N	NA	NA	No	ND
	000100-01-6	4-NITROANILINE	NA		NA		mg/kg	NA	0/4	1.1 to 2	NA	NA	2000	N	NA	NA	No	ND
	000100-02-7	4-NITROPHENOL	NA		NA		mg/kg	NA	0/4	1.1 to 2	NA	NA	5500	N	NA	NA	No	ND
	000083-32-9	ACENAPHTHENE	0.035	LJQK	0.035	LJQK	mg/kg	SM115	1/4	0.44 to 0.81	0.035	NA	33000	N	NA	NA	No	BSL
	000208-96-8	ACENAPHTHYLENE	0.053	LJQK	0.45	LJQK	mg/kg	SM115	3/4	0.44 to 0.81	0.45	NA	33000	N	NA	NA	No	BSL
	000098-86-2	ACETOPHENONE	0.027	LJQK	2	=	mg/kg	SM115	2/4	0.44 to 0.81	2	NA	1700	sat	NA	NA	No	BSL
	000120-12-7	ANTHRACENE	0.014	Q	0.39	LJQK	mg/kg	SM115	4/4	0.44 to 0.81	0.39	NA	100000	max	NA	NA	No	BSL
	001912-24-9	ATRAZINE	NA		NA		mg/kg	NA	0/4	0.44 to 0.81	NA	NA	8.6	C	NA	NA	No	ND
	000100-52-7	BENZALDEHYDE	0.025	LJQK	6.3	=	mg/kg	SM115	3/4	0.44 to 0.81	6.3	NA	68000	N	NA	NA	No	BSL
	000056-55-3	BENZO(A)ANTHRACENE	0.066	Q	0.92	=	mg/kg	SM115	4/4	0.44 to 0.81	0.92	NA	2.3	C	NA	NA	No	BSL

Table 2.3
OCCURRENCE, DISTRIBUTION AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN
State Marine Superfund Site, Port Arthur, Texas

Scenario Timeframe: Current/Future
Medium: Soil
Exposure Medium: Soil (0-1 ft)

Exposure Point	CAS Number	Chemical	Minimum Concentration	Minimum Concentration Qualifier	Maximum Concentration	Maximum Concentration Qualifier	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration Used for Screening (1)	Background Value (2)	Screening Toxicity Value (N/C) (3)		Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag	Rationale for Selection or Deletion (4)
	000050-32-8	BENZO(A)PYRENE	0.075	Q	1.2	=	mg/kg	SM115	4/4	0.44 to 0.81	1.1	NA	0.23	C	NA	NA	Yes	ASL
	000205-99-2	BENZO(B)FLUORANTHENE	0.15	Q	1.2	=	mg/kg	SM115	4/4	0.44 to 0.81	1.2	NA	2.3	C	NA	NA	No	BSL
	000191-24-2	BENZO(G,H,I)PERYLENE	0.061	Q	0.46	LJQK	mg/kg	SM115	4/4	0.44 to 0.81	0.46	NA	32000	N	NA	NA	No	BSL
	000207-08-9	BENZO(K)FLUORANTHENE	0.056	Q	1.4	=	mg/kg	SM115	4/4	0.44 to 0.81	1.4	NA	23	C	NA	NA	No	BSL
	000085-68-7	BENZYL BUTYL PHTHALATE	0.051	LJQK	0.52	=	mg/kg	SM114	2/4	0.44 to 0.81	0.52	NA	240	sat	NA	NA	No	BSL
	000092-52-4	BIPHENYL (DIPHENYL)	NA		NA		mg/kg	NA	0/4	0.44 to 0.81	NA	NA	26000	N	NA	NA	No	ND
	000111-91-1	BIS(2-CHLOROETHOXY) METHANE	NA		NA		mg/kg	NA	0/4	0.44 to 0.81	NA	NA	NA		NA	NA	No	ND
	000111-44-4	BIS(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHER)	NA		NA		mg/kg	NA	0/4	0.44 to 0.81	NA	NA	0.62	C	NA	NA	No	ND
	000117-81-7	BIS(2-ETHYLHEXYL) PHTHALATE	0.3	LJQK	4.7	D	mg/kg	SM114	2/4	0.47 to 0.99	4.7	NA	140	C	NA	NA	No	BSL
	000105-60-2	CAPROLACTAM	NA		NA		mg/kg	NA	0/4	0.44 to 0.81	NA	NA	100000	max	NA	NA	No	ND
	000086-74-8	CARBAZOLE	0.081	LJQK	0.29	LJQK	mg/kg	SM115	3/4	0.44 to 0.81	0.29	NA	96	C	NA	NA	No	BSL
	000218-01-9	CHRYSENE	0.098	Q	1.1	=	mg/kg	SM115	4/4	0.44 to 0.81	1.1	NA	230	C	NA	NA	No	BSL
	000053-70-3	DIBENZ(A,H)ANTHRACENE	0.017	Q	0.23	LJQK	mg/kg	SM115	4/4	0.44 to 0.81	0.23	NA	0.23	C	NA	NA	No	BSL
	000132-64-9	DIBENZOFURAN	0.044	LJQK	0.044	LJQK	mg/kg	SM115	1/4	0.44 to 0.81	0.044	NA	1700	N	NA	NA	No	BSL
	000084-66-2	DIETHYL PHTHALATE	NA		NA		mg/kg	NA	0/4	0.44 to 0.81	NA	NA	100000	max	NA	NA	No	ND
	000131-11-3	DIMETHYL PHTHALATE	NA		NA		mg/kg	NA	0/4	0.44 to 0.81	NA	NA	100000	max	NA	NA	No	ND
	000084-74-2	DI-N-BUTYL PHTHALATE	0.034	LJQK	0.034	LJQK	mg/kg	SM114	1/4	0.44 to 0.81	0.034	NA	68000	N	NA	NA	No	BSL
	000117-84-0	DI-N-OCTYLPHTHALATE	NA		NA		mg/kg	NA	0/4	0.44 to 0.81	NA	NA	27000	N	NA	NA	No	ND
	000206-44-0	FLUORANTHENE	0.097	Q	1.9	=	mg/kg	SM115	4/4	0.44 to 0.81	1.9	NA	24000	N	NA	NA	No	BSL
	000086-73-7	FLUORENE	0.019	LJQK	0.12	LJQK	mg/kg	SM115	2/4	0.44 to 0.81	0.12	NA	26000	N	NA	NA	No	BSL
	000118-74-1	HEXACHLOROBENZENE	NA		NA		mg/kg	NA	0/4	0.44 to 0.81	NA	NA	1.2	C	NA	NA	No	ND
	000087-68-3	HEXACHLOROBUTADIENE	NA		NA		mg/kg	NA	0/4	0.44 to 0.81	NA	NA	25	C	NA	NA	No	ND
	000077-47-4	HEXACHLOROCYCLOPENTADIENE	NA		NA		mg/kg	NA	0/4	0.44 to 0.81	NA	NA	4100	N	NA	NA	No	ND
	000067-72-1	HEXACHLOROETHANE	NA		NA		mg/kg	NA	0/4	0.44 to 0.81	NA	NA	140	C	NA	NA	No	ND
	000193-39-5	INDENO(1,2,3-C,D)PYRENE	0.07	Q	0.74	LJQK	mg/kg	SM115	4/4	0.44 to 0.81	0.74	NA	2.3	C	NA	NA	No	BSL
	000078-59-1	ISOPHORONE	NA		NA		mg/kg	NA	0/4	0.44 to 0.81	NA	NA	2000	C	NA	NA	No	ND
	000091-20-3	NAPHTHALENE	0.028	LJQK	0.052	LJQK	mg/kg	SM115	2/4	0.44 to 0.81	0.052	NA	210	N	NA	NA	No	BSL
	000098-95-3	NITROBENZENE	NA		NA		mg/kg	NA	0/4	0.44 to 0.81	NA	NA	110	N	NA	NA	No	ND
	000621-64-7	N-NITROSODI-N-PROPYLAMINE	NA		NA		mg/kg	NA	0/4	0.44 to 0.81	NA	NA	0.27	C	NA	NA	No	ND
	000086-30-6	N-NITROSODIPHENYLAMINE	NA		NA		mg/kg	NA	0/4	0.44 to 0.81	NA	NA	390	C	NA	NA	No	ND
	000087-86-5	PENTACHLOROPHENOL	NA		NA		mg/kg	NA	0/4	1.1 to 2	NA	NA	10	C	NA	NA	No	ND
	000085-01-8	PHENANTHRENE	0.051	Q	0.93	=	mg/kg	SM115	4/4	0.44 to 0.81	0.93	NA	32000	N	NA	NA	No	BSL
	000108-95-2	PHENOL	NA		NA		mg/kg	NA	0/4	0.44 to 0.81	NA	NA	100000	max	NA	NA	No	ND
	000129-00-0	PYRENE	0.12	Q	1.5	=	mg/kg	SM115	4/4	0.44 to 0.81	1.5	NA	32000	N	NA	NA	No	BSL

(1) Maximum detected concentration initially used; if screening level exceeded, mean (lead only) or 95% UCL were used for screening.
(2) These background values were calculated from a small data set and are not recommended for definitive comparisons.
(3) Medium Specific Standard Levels, December, 2004, U.S. EPA Region VI. Industrial Outdoor Worker.
Screening level for thallium sulfate used as a surrogate for thallium.
Screening level for pyrene used as a surrogate for benzo(g,h,i)perylene and phenanthrene.
Screening level for acenaphthene used as a surrogate for acenaphthylene.
Screening level for naphthalene used as a surrogate for 2-methylnaphthalene.
Screening level for 4-nitrophenol used as a surrogate for 2-nitrophenol.
Screening level for 2-nitroaniline used as a surrogate for 3-nitroaniline and 4-nitroaniline.
(4) Rationale Codes
Selection Reason: Above Screening Levels (ASL)
Deletion Reason: No Toxicity Information (NTX)
Essential Nutrient (Nut)
Below Screening Level (BSL)
Not Detected (ND)
Site Concentrations Consistent with Background (Bkgd)

ARAR/TBC = Applicable or Relevant and Appropriate Requirement/To Be Considered
COPC = Chemical of Potential Concern
C = Screening level is based on a carcinogenic endpoint.
max = Screening level is based on a ceiling limit.
mg/kg = Milligrams per kilogram
NA = Not available
N = Screening level is based on a noncarcinogenic endpoint.
sat = Screening level is based on soil saturation.

Qualifiers:
D = Result was derived from analysis of a dilution
J = Estimated value.
v = Low biased. Actual concentration may be higher than the concentraiton reported.
L = Reported concentration is < CRQL (contract-required quantitation limit)
Q = Severe QC or quantitation problem - no result reported but analyte is confirmed as qualitatively prese
K = Result is estimated but bias is unknown
^ = High biased. Actual concentration may be lower than the concentration reported.

Table 2.4
OCCURRENCE, DISTRIBUTION AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN
State Marine Superfund Site, Port Arthur, Texas

Scenario Timeframe: Current/Future
Medium: Soil
Exposure Medium: Soil (0-1 ft)

Exposure Point	CAS Number	Chemical	Minimum Concentration	Min Qual	Maximum Concentration	Max Qual	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration Used for Screening (1)	Background Value (2)	Screening Toxicity Value (N/C) (3)		Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag	Rationale for Selection or Deletion (4)
Soil at the Current AST Area	007429-90-5	ALUMINUM	593	=	3490	=	mg/kg	SM128	5/5	47.7 to 67.6	3490	24600	100000	max	NA	NA	No	BSL
	007440-36-0	ANTIMONY	2.1	LJvQ	2.5	LJvQ	mg/kg	SM131	2/3	0.77 to 20.3	2.5	NA	450	N	NA	NA	No	BSL
	007440-38-2	ARSENIC	1.5	LQ	7.9	JvL	mg/kg	SM128	5/5	2.4 to 3.4	7.9	32.6	1.8	C	NA	NA	No	Bkgd
	007440-39-3	BARIUM	49.6	=	276	=	mg/kg	SM130	5/5	47.7 to 67.6	276	966	79000	N	NA	NA	No	BSL
	007440-41-7	BERYLLIUM	0.09	LQ	0.31	LQ	mg/kg	SM131	3/5	0.07 to 1.7	0.31	2.5	2200	N	NA	NA	No	BSL
	007440-43-9	CADMIUM	0.48	LQ	0.48	LQ	mg/kg	SM131	1/5	0.14 to 1.7	0.48	NA	560	N	NA	NA	No	BSL
	007440-70-2	CALCIUM	1280	=	8860	=	mg/kg	SM131	4/5	409 to 1690	8860	88800	NA		NA	NA	No	Nut
	007440-47-3	CHROMIUM, TOTAL	1.6	LQ	126	=	mg/kg	SM131	5/5	2.4 to 3.4	126	78.1	500	C	NA	NA	No	BSL
	007440-48-4	COBALT	0.67	LQ	3.1	LQ	mg/kg	SM131	5/5	11.9 to 16.9	3.1	33.2	2100	C	NA	NA	No	BSL
	007440-50-8	COPPER	4.4	LQ	36.7	=	mg/kg	SM131	5/5	6 to 8.4	36.7	123	42000	N	NA	NA	No	BSL
	000057-12-5	CYANIDE	0.12	LQ	0.31	L	mg/kg	SM131	2/5	0.12 to 0.84	0.31	NA	14000	N	NA	NA	No	BSL
	007439-89-6	IRON	3460	=	14500	=	mg/kg	SM131	5/5	23.9 to 33.8	14500	247000	100000	max	NA	NA	No	BSL
	007439-92-1	LEAD	7.5	=	558	=	mg/kg	SM131	5/5	0.72 to 1	558	103	800		NA	NA	No	BSL
	007439-95-4	MAGNESIUM	136	LQ	865	LQ	mg/kg	SM131	5/5	1190 to 1690	865	6120	NA		NA	NA	No	Nut
	007439-96-5	MANGANESE	17.7	=	379	JvL	mg/kg	SM128	5/5	3.6 to 5.1	379	2090	35000	N	NA	NA	No	BSL
	007439-97-6	MERCURY	0.1	LQ	0.13	LQ	mg/kg	SM131	2/5	0.06 to 0.17	0.13	NA	340		NA	NA	No	BSL
	007440-02-0	NICKEL	0.81	LQ	15.9	=	mg/kg	SM131	5/5	9.5 to 13.5	15.9	90.5	23000	N	NA	NA	No	BSL
	007440-09-7	POTASSIUM	202	LQ	816	LQ	mg/kg	SM131	5/5	1190 to 1690	816	3750	NA		NA	NA	No	Nut
	007782-49-2	SELENIUM	NA		NA		mg/kg	NA	0/5	1.1 to 1.6	NA	NA	5700	N	NA	NA	No	ND
	007440-22-4	SILVER	0.26	LQ	0.96	LQ	mg/kg	SM131	4/5	0.24 to 3.4	0.96	0.737	5700	N	NA	NA	No	BSL
	007440-23-5	SODIUM	152	LJvQ	512	LJvQ	mg/kg	SM131	5/5	1190 to 1690	512	1170	NA		NA	NA	No	Nut
	007440-28-0	THALLIUM	NA		NA		mg/kg	NA	0/5	1.1 to 1.6	NA	NA	91	N	NA	NA	No	ND
	007440-62-2	VANADIUM	3.4	L	31	=	mg/kg	SM131	5/5	11.9 to 16.9	31	81.4	1100	N	NA	NA	No	BSL
	007440-66-6	ZINC	13.2	=	484	=	mg/kg	SM131	5/5	4.8 to 6.8	484	203	100000	max	NA	NA	No	BSL
	000108-60-1	2,2'-OXYBIS(1-CHLORO)PROPANE	NA		NA		mg/kg	NA	0/5	0.39 to 0.55	NA	NA			NA	NA	No	ND
	000095-95-4	2,4,5-TRICHLOROPHENOL	NA		NA		mg/kg	NA	0/5	0.98 to 1.4	NA	NA	68000	N	NA	NA	No	ND
	000088-06-2	2,4,6-TRICHLOROPHENOL	NA		NA		mg/kg	NA	0/5	0.39 to 0.55	NA	NA	170	C	NA	NA	No	ND
	000120-83-2	2,4-DICHLOROPHENOL	NA		NA		mg/kg	NA	0/5	0.39 to 0.55	NA	NA	2100	N	NA	NA	No	ND
	000105-67-9	2,4-DIMETHYLPHENOL	NA		NA		mg/kg	NA	0/5	0.39 to 0.55	NA	NA	14000	N	NA	NA	No	ND
	000051-28-5	2,4-DINITROPHENOL	NA		NA		mg/kg	NA	0/5	0.98 to 1.4	NA	NA	1400	N	NA	NA	No	ND
	000121-14-2	2,4-DINITROTOLUENE	NA		NA		mg/kg	NA	0/5	0.39 to 0.55	NA	NA	1400	N	NA	NA	No	ND
	000606-20-2	2,6-DINITROTOLUENE	NA		NA		mg/kg	NA	0/5	0.39 to 0.55	NA	NA	680	N	NA	NA	No	ND
	000091-58-7	2-CHLORONAPHTHALENE	NA		NA		mg/kg	NA	0/5	0.39 to 0.55	NA	NA	26000	N	NA	NA	No	ND
	000095-57-8	2-CHLOROPHENOL	NA		NA		mg/kg	NA	0/5	0.39 to 0.55	NA	NA	260	N	NA	NA	No	ND
	000091-57-6	2-METHYLNAPHTHALENE	0.02	Q	0.11	Q	mg/kg	SM131	2/5	0.39 to 0.55	0.11	NA	210	N	NA	NA	No	BSL
	000095-48-7	2-METHYLPHENOL (O-CRESOL)	NA		NA		mg/kg	NA	0/5	0.39 to 0.55	NA	NA	34000	N	NA	NA	No	ND
	000088-74-4	2-NITROANILINE	NA		NA		mg/kg	NA	0/5	0.98 to 1.4	NA	NA	2000	N	NA	NA	No	ND
	000088-75-5	2-NITROPHENOL	NA		NA		mg/kg	NA	0/5	0.39 to 0.55	NA	NA	5500	N	NA	NA	No	ND
	000091-94-1	3,3'-DICHLOROBENZIDINE	NA		NA		mg/kg	NA	0/5	0.39 to 0.55	NA	NA	4.3	C	NA	NA	No	ND
	000099-09-2	3-NITROANILINE	NA		NA		mg/kg	NA	0/5	0.98 to 1.4	NA	NA	2000	N	NA	NA	No	ND
	000534-52-1	4,6-DINITRO-2-METHYLPHENOL	NA		NA		mg/kg	NA	0/5	0.98 to 1.4	NA	NA	NA		NA	NA	No	ND
	000101-55-3	4-BROMOPHENYL PHENYL ETHER	NA		NA		mg/kg	NA	0/5	0.39 to 0.55	NA	NA	NA		NA	NA	No	ND
	000059-50-7	4-CHLORO-3-METHYLPHENOL	NA		NA		mg/kg	NA	0/5	0.39 to 0.55	NA	NA	NA		NA	NA	No	ND
	000106-47-8	4-CHLOROANILINE	NA		NA		mg/kg	NA	0/5	0.39 to 0.55	NA	NA	2700	N	NA	NA	No	ND
	007005-72-3	4-CHLOROPHENYL PHENYL ETHER	NA		NA		mg/kg	NA	0/5	0.39 to 0.55	NA	NA	NA		NA	NA	No	ND
	000106-44-5	4-METHYLPHENOL (P-CRESOL)	0.046	Q	0.046	Q	mg/kg	SM131	1/5	0.39 to 0.55	0.046	NA	3400	N	NA	NA	No	BSL
	000100-01-6	4-NITROANILINE	NA		NA		mg/kg	NA	0/5	0.98 to 1.4	NA	NA	2000	N	NA	NA	No	ND
	000100-02-7	4-NITROPHENOL	NA		NA		mg/kg	NA	0/5	0.98 to 1.4	NA	NA	5500	N	NA	NA	No	ND
	000083-32-9	ACENAPHTHENE	0.017	Q	0.46	Q	mg/kg	SM131	2/5	0.39 to 0.55	0.46	NA	33000	N	NA	NA	No	BSL
	000208-96-8	ACENAPHTHYLENE	0.022	Q	0.18	Q	mg/kg	SM131	4/5	0.39 to 0.55	0.18	NA	33000	N	NA	NA	No	BSL
	000098-86-2	ACETOPHENONE	0.016	Q	0.049	Q	mg/kg	SM131	4/5	0.39 to 0.55	0.049	NA	1700	sat	NA	NA	No	BSL
	000120-12-7	ANTHRACENE	0.014	Q	1.5	=	mg/kg	SM131	3/5	0.39 to 0.55	1.5	NA	100000	max	NA	NA	No	BSL
	001912-24-9	ATRAZINE	NA		NA		mg/kg	NA	0/5	0.39 to 0.55	NA	NA	8.6	C	NA	NA	No	ND
	000100-52-7	BENZALDEHYDE	0.008	Q	0.032	Q	mg/kg	SM131	3/5	0.39 to 0.55	0.032	NA	68000	N	NA	NA	No	BSL
	000056-55-3	BENZO(A)ANTHRACENE	0.034	Q	3	=	mg/kg	SM131	5/5	0.39 to 0.55	3	NA	2.3	C	NA	NA	Yes	ASL

Table 2.4
OCCURRENCE, DISTRIBUTION AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN
State Marine Superfund Site, Port Arthur, Texas

Scenario Timeframe: Current/Future
Medium: Soil
Exposure Medium: Soil (0-1 ft)

Exposure Point	CAS Number	Chemical	Minimum Concentration Qualifier	Maximum Concentration Qualifier	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration Used for Screening (1)	Background Value (2)	Screening Toxicity Value (N/C) (3)	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag	Rationale for Selection or Deletion (4)
	000050-32-8	BENZO(A)PYRENE	0.043 Q	2.7 =	mg/kg	SM131	5/5	0.39 to 0.55	2.7	NA	0.23 C	NA	NA	Yes	ASL
	000205-99-2	BENZO(B)FLUORANTHENE	0.055 Q	4.4 =	mg/kg	SM131	5/5	0.39 to 0.55	4.4	NA	2.3 C	NA	NA	Yes	ASL
	000191-24-2	BENZO(G,H,I)PERYLENE	0.059 Q	0.97 =	mg/kg	SM131	3/5	0.39 to 0.55	0.97	NA	32000 N	NA	NA	No	BSL
	000207-08-9	BENZO(K)FLUORANTHENE	0.019 Q	1.8 =	mg/kg	SM131	5/5	0.39 to 0.55	1.8	NA	23 C	NA	NA	No	BSL
	000085-68-7	BENZYL BUTYL PHTHALATE	0.03 Q	0.03 Q	mg/kg	SM132	1/5	0.39 to 0.55	0.03	NA	240 sat	NA	NA	No	BSL
	000092-52-4	BIPHENYL (DIPHENYL)	0.04 Q	0.04 Q	mg/kg	SM131	1/5	0.39 to 0.55	0.04	NA	26000 N	NA	NA	No	BSL
	000111-91-1	BIS(2-CHLOROETHOXY) METHANE	NA	NA	mg/kg	NA	0/5	0.39 to 0.55	NA	NA	NA	NA	NA	No	ND
	000111-44-4	BIS(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHER)	NA	NA	mg/kg	NA	0/5	0.39 to 0.55	NA	NA	0.62 C	NA	NA	No	ND
	000117-81-7	BIS(2-ETHYLHEXYL) PHTHALATE	NA	NA	mg/kg	NA	0/5	0.39 to 0.69	NA	NA	140 C	NA	NA	No	ND
	000105-60-2	CAPROLACTAM	NA	NA	mg/kg	NA	0/5	0.39 to 0.55	NA	NA	100000 max	NA	NA	No	ND
	000086-74-8	CARBAZOLE	0.024 Q	0.23 Q	mg/kg	SM131	2/5	0.39 to 0.55	0.23	NA	96 C	NA	NA	No	BSL
	000218-01-9	CHRYSENE	0.036 Q	2.8 =	mg/kg	SM131	5/5	0.39 to 0.55	2.8	NA	230 C	NA	NA	No	BSL
	000053-70-3	DIBENZ(A,H)ANTHRACENE	0.031 Q	0.33 Q	mg/kg	SM131	2/5	0.39 to 0.55	0.24	NA	0.23 C	NA	NA	Yes	ASL
	000132-64-9	DIBENZOFURAN	0.009 Q	0.18 Q	mg/kg	SM131	2/5	0.39 to 0.55	0.18	NA	1700 N	NA	NA	No	BSL
	000084-66-2	DIETHYL PHTHALATE	NA	NA	mg/kg	NA	0/5	0.39 to 0.55	NA	NA	100000 max	NA	NA	No	ND
	000131-11-3	DIMETHYL PHTHALATE	NA	NA	mg/kg	NA	0/5	0.39 to 0.55	NA	NA	100000 max	NA	NA	No	ND
	000084-74-2	DI-N-BUTYL PHTHALATE	NA	NA	mg/kg	NA	0/5	0.39 to 0.55	NA	NA	68000 N	NA	NA	No	ND
	000117-84-0	DI-N-OCTYLPHTHALATE	NA	NA	mg/kg	NA	0/5	0.39 to 0.55	NA	NA	27000 N	NA	NA	No	ND
	000206-44-0	FLUORANTHENE	0.021 Q	10 D	mg/kg	SM131	5/5	0.39 to 1.7	10	NA	24000 N	NA	NA	No	BSL
	000086-73-7	FLUORENE	0.47 Q	0.47 Q	mg/kg	SM131	1/5	0.39 to 0.55	0.47	NA	26000 N	NA	NA	No	BSL
	000118-74-1	HEXACHLOROBENZENE	NA	NA	mg/kg	NA	0/5	0.39 to 0.55	NA	NA	1.2 C	NA	NA	No	ND
	000087-68-3	HEXACHLOROBUTADIENE	NA	NA	mg/kg	NA	0/5	0.39 to 0.55	NA	NA	25 C	NA	NA	No	ND
	000077-47-4	HEXACHLOROCYCLOPENTADIENE	NA	NA	mg/kg	NA	0/5	0.39 to 0.55	NA	NA	4100 N	NA	NA	No	ND
	000067-72-1	HEXACHLOROETHANE	NA	NA	mg/kg	NA	0/5	0.39 to 0.55	NA	NA	140 C	NA	NA	No	ND
	000193-39-5	INDENO(1,2,3-C,D)PYRENE	0.029 Q	1.1 =	mg/kg	SM131	5/5	0.39 to 0.55	1.1	NA	2.3 C	NA	NA	No	BSL
	000078-59-1	ISOPHORONE	NA	NA	mg/kg	NA	0/5	0.39 to 0.55	NA	NA	2000 C	NA	NA	No	ND
	000091-20-3	NAPHTHALENE	0.02 Q	0.078 Q	mg/kg	SM131	2/5	0.39 to 0.55	0.078	NA	210 N	NA	NA	No	BSL
	000098-95-3	NITROBENZENE	NA	NA	mg/kg	NA	0/5	0.39 to 0.55	NA	NA	110 N	NA	NA	No	ND
	000621-64-7	N-NITROSODI-N-PROPYLAMINE	NA	NA	mg/kg	NA	0/5	0.39 to 0.55	NA	NA	0.27 C	NA	NA	No	ND
	000086-30-6	N-NITROSODIPHENYLAMINE	NA	NA	mg/kg	NA	0/5	0.39 to 0.55	NA	NA	390 C	NA	NA	No	ND
	000087-86-5	PENTACHLOROPHENOL	0.28 Q	0.28 Q	mg/kg	SM131	1/5	0.98 to 1.4	0.28	NA	10 C	NA	NA	No	BSL
	000085-01-8	PHENANTHRENE	0.035 Q	3.8 =	mg/kg	SM131	4/5	0.39 to 0.55	3.8	NA	32000 N	NA	NA	No	BSL
	000108-95-2	PHENOL	NA	NA	mg/kg	NA	0/5	0.39 to 0.55	NA	NA	100000 max	NA	NA	No	ND
	000129-00-0	PYRENE	0.024 Q	8.4 D	mg/kg	SM131	5/5	0.39 to 1.7	8.4	NA	32000 N	NA	NA	No	BSL

(1) Maximum detected concentration initially used; if screening level exceeded, mean (lead only) or 95% UCL were used for screening.
(2) These background values were calculated from a small data set and are not recommended for definitive comparisons.
(3) Medium Specific Standard Levels, December, 2004, U.S. EPA Region VI. Industrial Outdoor Worker.
Screening level for thallium sulfate used as a surrogate for thallium.
Screening level for pyrene used as a surrogate for benzo(g,h,i)perylene and phenanthrene.
Screening level for acenaphthene used as a surrogate for acenaphthylene.
Screening level for napthalene used as a surrogate for 2-methylnapthalene.
Screening level for naphthalene used as a surrogate for 2-methylnaphthalene.
Screening level for 4-nitrophenol used as a surrogate for 2-nitrophenol .
Screening level for 2-nitroaniline used as a surrogate for 3-nitroaniline and 4-nitroaniline.
(4) Rationale Codes
Selection Reason: Above Screening Levels (ASL)
Deletion Reason: No Toxicity Information (NTX)
Essential Nutrient (Nut)
Below Screening Level (BSL)
Not Detected (ND)
Site Concentrations Consistent with Background (Bkgd)

ARAR/TBC = Applicable or Relevant and Appropriate Requirement/To Be Considered
COPC = Chemical of Potential Concern
C = Screening level is based on a carcinogenic endpoint.
max = Screening level is based on a ceiling limit.
mg/kg = Milligrams per kilogram
NA = Not available
N = Screening level is based on a noncarcinogenic endpoint.
sat = Screening level is based on soil saturation.

Qualifiers:
D = Result was derived from analysis of a dilution
J = Estimated value.
v = Low biased. Actual concentration may be higher than the concentraiton reported.
L = Reported concentration is < CRQL (contract-required quantitation limit)
Q = Severe QC or quantitation problem - no result reported but analyte is confirmed as qualitatively present

Table 2.5

OCCURRENCE, DISTRIBUTION AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN

State Marine Superfund Site, Port Arthur, Texas

Scenario Timeframe: Current/Future
Medium: Soil
Exposure Medium: Soil (0-1 ft)

Exposure Point	CAS Number	Chemical	Minimum Concentration Qualifier	Maximum Concentration Qualifier	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration Used for Screening (1)	Background Value (2)	Screening Toxicity Value (N/C) (3)	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag	Rationale for Selection or Deletion (4)
Soil at the Maintenance Shed Area	007429-90-5	ALUMINUM	269 =	6610 =	mg/Kg	SM95-SO-9	9/9	44.1 to 53.9	6610	24600	100000 max	NA	NA	No	BSL
	007440-36-0	ANTIMONY	5.8 LJvQ	12 =	mg/Kg	SM95-SO-4	4/8	0.72 to 13.2	12	NA	450 N	NA	NA	No	BSL
	007440-38-2	ARSENIC	1.9 LQ	19 =	mg/Kg	SM110	9/9	2.2 to 2.7	19	32.6	1.8 C	NA	NA	No	Bkgd
	007440-39-3	BARIUM	13.7 =	306 =	mg/Kg	SM95-SO-5	9/9	44.1 to 53.9	306	966	79000 N	NA	NA	No	BSL
	007440-41-7	BERYLLIUM	0.09 LQ	1.9 =	mg/Kg	SM95-SO-12	7/8	0.25 to 1.3	1.9	2.5	2200 N	NA	NA	No	BSL
	007440-43-9	CADMIUM	0.2 LQ	2.6 =	mg/Kg	SM95-SO-5	4/8	0.14 to 1.1	2.6	NA	560 N	NA	NA	No	BSL
	007440-70-2	CALCIUM	331 =	167000 =	mg/Kg	SM95-SO-5	9/9	1100 to 1350	167000	88800	NA	NA	NA	No	Nut
	007440-47-3	CHROMIUM, TOTAL	1.5 =	32.5 =	mg/Kg	SM110	9/9	2.2 to 2.7	32.5	78.1	500 C	NA	NA	No	BSL
	007440-48-4	COBALT	1.4 =	6.6 =	mg/Kg	SM95-SO-12	9/9	11 to 13.5	6.6	33.2	2100 C	NA	NA	No	BSL
	007440-50-8	COPPER	1.7 Jv	180 =	mg/Kg	SM110	9/9	5.5 to 6.7	180	123	42000 N	NA	NA	No	BSL
	000057-12-5	CYANIDE	0.15 LQ	0.15 LQ	mg/Kg	SM110	1/8	0.11 to 0.77	0.15	NA	14000 N	NA	NA	No	BSL
	007439-89-6	IRON	3160 =	54800 =	mg/Kg	SM110	9/9	22 to 27	54800	247000	100000 max	NA	NA	No	BSL
	007439-92-1	LEAD	4.6 =	290 =	mg/Kg	SM110	9/9	0.66 to 0.81	290	103	800	NA	NA	No	BSL
	007439-95-4	MAGNESIUM	88.6 =	3720 =	mg/Kg	SM95-SO-5	9/9	1100 to 1350	3720	6120	NA	NA	NA	No	Nut
	007439-96-5	MANGANESE	0.14 Jv	588 =	mg/Kg	SM110	9/9	3.3 to 4	588	2090	35000 N	NA	NA	No	BSL
	007439-97-6	MERCURY	0.06 LQ	0.16 =	mg/Kg	SM95-SO-5	4/8	0.06 to 0.13	0.16	NA	340	NA	NA	No	BSL
	007440-02-0	NICKEL	1.1 =	36.3 =	mg/Kg	SM110	9/9	8.8 to 10.8	36.3	90.5	23000 N	NA	NA	No	BSL
	007440-09-7	POTASSIUM	111 =	1310 =	mg/Kg	SM95-SO-9	9/9	1100 to 1350	1310	3750	NA	NA	NA	No	Nut
	007782-49-2	SELENIUM	NA	NA	mg/Kg	NA	0/8	0.75 to 1.3	NA	NA	5700 N	NA	NA	No	ND
	007440-22-4	SILVER	0.96 LQ	3.3 =	mg/Kg	SM110	2/8	0.23 to 2.7	3.3	0.737	5700 N	NA	NA	No	BSL
	007440-23-5	SODIUM	72.6 =	530 LQ	mg/Kg	SM110	9/9	1100 to 1350	530	1170	NA	NA	NA	No	Nut
	007440-28-0	THALLIUM	1.6 LJQK, =	237 J^	mg/Kg	SM95-SO-10	3/9	1 to 2.2	237	NA	91 N	NA	NA	No	Bkgd
	007440-62-2	VANADIUM	2.7 =	18.3 =	mg/Kg	SM95-SO-5	9/9	11 to 13.5	18.3	81.4	1100 N	NA	NA	No	BSL
	007440-66-6	ZINC	11.9 =	2220 =	mg/Kg	SM95-SO-12	9/9	4.4 to 5.4	2220	203	100000 max	NA	NA	No	BSL
	309-00- 2	ALDRIN	0.011 =	0.011 =	mg/kg	SM95-SO-12	1/6	0.0017 to 0.0017	0.011	NA	0.11 C	NA	NA	No	BSL
	319-84-6	ALPHA BHC (ALPHA HEXACHLOROCYCLOHEXANE)	NA	NA	mg/kg	NA	0/6	0.0017 to 0.0017	NA	NA	0.4 C	NA	NA	No	ND
	959-98-8	ALPHA ENDOSULFAN	NA	NA	mg/kg	NA	0/6	0.0017 to 0.0017	NA	NA	4100 N	NA	NA	No	ND
	510-37- 1	ALPHA-CHLORDANE	NA	NA	mg/kg	NA	0/6	0.0017 to 0.0017	NA	NA	7.2 C	NA	NA	No	ND
	319-85-7	BETA BHC (BETA HEXACHLOROCYCLOHEXANE)	NA	NA	mg/kg	NA	0/6	0.0017 to 0.0017	NA	NA	1.4 C	NA	NA	No	ND
	33213-65-9	BETA ENDOSULFAN	0.0057 J	0.1 =	mg/kg	SM95-SO-12	3/6	0.0033 to 0.0033	0.1	NA	4100 N	NA	NA	No	BSL
	319-86-8	DELTA BHC (DELTA HEXACHLOROCYCLOHEXANE)	0.023 J	0.023 J	mg/kg	SM95-SO-12	1/6	0.0017 to 0.0017	0.023	NA	1.4 C	NA	NA	No	BSL
	60-57-1	DIELDRIN	0.01 J	0.054 =	mg/Kg	SM95-SO-12	3/6	0.0033 to 0.0033	0.054	NA	0.12 C	NA	NA	No	BSL
	103-10- 7	ENDOSULFAN SULFATE	0.039 Jv	0.039 Jv	mg/kg	SM95-SO-12	1/6	0.0033 to 0.0033	0.039	NA	4100 N	NA	NA	No	BSL
	72-20-8	ENDRIN	0.018 J	0.018 J	mg/Kg	SM95-SO-4	1/6	0.0033 to 0.0033	0.018	NA	210 N	NA	NA	No	BSL
	742-19- 3	ENDRIN ALDEHYDE	0.0085 JT	21 J	mg/Kg	SM95-SO-4	3/6	0.0033 to 0.0033	21	NA	210 N	NA	NA	No	BSL
	53494-70-5	ENDRIN KETONE	NA	NA	mg/kg	NA	0/6	0.0033 to 0.0033	NA	NA	210 N	NA	NA	No	ND
	58-89-9	GAMMA BHC (LINDANE)	0.0059 J	0.0059 J	mg/kg	SM95-SO-12	1/6	0.0017 to 0.0017	0.0059	NA	1.9 C	NA	NA	No	BSL
	510-37- 4	GAMMA-CHLORDANE	0.036 =	0.036 =	mg/kg	SM95-SO-12	1/6	0.0017 to 0.0017	0.036	NA	7.2 C	NA	NA	No	BSL
	76-44-8	HEPTACHLOR	0.0079 J	0.0079 J	mg/kg	SM95-SO-12	1/6	0.0017 to 0.0017	0.0079	NA	0.43 C	NA	NA	No	BSL
	102-45- 7	HEPTACHLOR EPOXIDE	0.041 =	0.041 =	mg/kg	SM95-SO-12	1/6	0.0017 to 0.0017	0.041	NA	0.21 C	NA	NA	No	BSL
	72-43-5	METHOXYCHLOR	NA	NA	mg/kg	NA	0/6	0.017 to 0.017	NA	NA	3400 N	NA	NA	No	ND
	72-54-8	P,P'-DDD	0.015 J	0.015 J	mg/Kg	SM95-SO-4, SM95-SO-5	2/6	0.0033 to 0.0033	0.015	NA	11 C	NA	NA	No	BSL
	72-55-9	P,P'-DDE	0.01 J	0.05 =	mg/kg	SM95-SO-12	2/6	0.0033 to 0.0033	0.05	NA	7.8 C	NA	NA	No	BSL
	50-29-3	P,P'-DDT	0.014 J	0.057 =	mg/Kg	SM95-SO-12	3/6	0.0033 to 0.0033	0.057	NA	7.8 C	NA	NA	No	BSL
	12674-11-2	PCB-1016 (AROCHLOR 1016)	NA	NA	mg/kg	NA	0/6	0.033 to 0.033	NA	NA	24 C	NA	NA	No	ND
	11104-28-2	PCB-1221 (AROCHLOR 1221)	NA	NA	mg/kg	NA	0/6	0.033 to 0.033	NA	NA	0.83 C	NA	NA	No	ND
	11141-16-5	PCB-1232 (AROCHLOR 1232)	NA	NA	mg/kg	NA	0/6	0.033 to 0.033	NA	NA	0.83 C	NA	NA	No	ND
	53469-21-9	PCB-1242 (AROCHLOR 1242)	NA	NA	mg/kg	NA	0/6	0.033 to 0.033	NA	NA	0.83 C	NA	NA	No	ND
	12672-29-6	PCB-1248 (AROCHLOR 1248)	NA	NA	mg/kg	NA	0/6	0.033 to 0.033	NA	NA	0.83 C	NA	NA	No	ND
	11097-69-1	PCB-1254 (AROCHLOR 1254)	1.1 J	1.1 J	mg/kg	SM95-SO-12	1/6	0.033 to 0.033	1.1	NA	0.83 C	NA	NA	Yes	ASL
	11096-82-5	PCB-1260 (AROCHLOR 1260)	NA	NA	mg/kg	NA	0/6	0.033 to 0.033	NA	NA	0.83 C	NA	NA	No	ND
	800-13- 5	TOXAPHENE	NA	NA	mg/kg	NA	0/6	0.17 to 0.17	NA	NA	1.7 C	NA	NA	No	ND
	95-94-3	1,2,4,5-TETRACHLOROBENZENE	NA	NA	mg/kg	NA	0/6	0.17 to 0.17	NA	NA	210 N	NA	NA	No	ND
	000108-60-1	2,2'-OXYBIS(1-CHLORO)PROPANE	NA	NA	mg/kg	NA	0/9	0.17 to 0.79	NA	NA	NA	NA	NA	No	ND
	58-90-2	2,3,4,6-TETRACHLOROPHENOL	NA	NA	mg/kg	NA	0/6	0.17 to 0.17	NA	NA	21000 N	NA	NA	No	ND
	000095-95-4	2,4,5-TRICHLOROPHENOL	NA	NA	mg/kg	NA	0/9	0.17 to 2	NA	NA	68000 N	NA	NA	No	ND
	000088-06-2	2,4,6-TRICHLOROPHENOL	NA	NA	mg/kg	NA	0/9	0.17 to 0.79	NA	NA	170 C	NA	NA	No	ND

Table 2.5
OCCURRENCE, DISTRIBUTION AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN
State Marine Superfund Site, Port Arthur, Texas

Scenario Timeframe: Current/Future
Medium: Soil
Exposure Medium: Soil (0-1 ft)

Exposure Point	CAS Number	Chemical	Minimum Concentration Qualifier	Maximum Concentration Qualifier	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration Used for Screening (1)	Background Value (2)	Screening Toxicity Value (N/C) (3)	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag	Rationale for Selection or Deletion (4)
	000120-83-2	2,4-DICHLOROPHENOL	NA	NA	mg/kg	NA	0/9	0.17 to 0.79	NA	NA	2100 N	NA	NA	No	ND
	000105-67-9	2,4-DIMETHYLPHENOL	NA	NA	mg/kg	NA	0/9	0.17 to 0.79	NA	NA	14000 N	NA	NA	No	ND
	000051-28-5	2,4-DINITROPHENOL	NA	NA	mg/kg	NA	0/9	0.33 to 2	NA	NA	1400 N	NA	NA	No	ND
	000121-14-2	2,4-DINITROTOLUENE	NA	NA	mg/kg	NA	0/9	0.17 to 0.79	NA	NA	1400 N	NA	NA	No	ND
	000606-20-2	2,6-DINITROTOLUENE	NA	NA	mg/kg	NA	0/9	0.17 to 0.79	NA	NA	680 N	NA	NA	No	ND
	000091-58-7	2-CHLORONAPHTHALENE	NA	NA	mg/kg	NA	0/9	0.17 to 0.79	NA	NA	26000 N	NA	NA	No	ND
	000095-57-8	2-CHLOROPHENOL	NA	NA	mg/kg	NA	0/9	0.17 to 0.79	NA	NA	260 N	NA	NA	No	ND
	000091-57-6	2-METHYLNAPHTHALENE	0.028 J	0.18 J	mg/Kg	SM95-SO-4	4/9	0.17 to 0.79	0.18	NA	210 N	NA	NA	No	BSL
	000095-48-7	2-METHYLPHENOL (O-CRESOL)	NA	NA	mg/kg	NA	0/9	0.17 to 0.79	NA	NA	34000 N	NA	NA	No	ND
	000088-74-4	2-NITROANILINE	NA	NA	mg/kg	NA	0/9	0.33 to 2	NA	NA	2000 N	NA	NA	No	ND
	000088-75-5	2-NITROPHENOL	NA	NA	mg/kg	NA	0/9	0.17 to 0.79	NA	NA	5500 N	NA	NA	No	ND
	000091-94-1	3,3'-DICHLOROBENZIDINE	NA	NA	mg/kg	NA	0/9	0.17 to 0.79	NA	NA	4.3 C	NA	NA	No	ND
	000099-09-2	3-NITROANILINE	NA	NA	mg/kg	NA	0/9	0.33 to 2	NA	NA	2000 N	NA	NA	No	ND
	000534-52-1	4,6-DINITRO-2-METHYLPHENOL	NA	NA	mg/kg	NA	0/9	0.33 to 2	NA	NA	NA	NA	NA	No	ND
	000101-55-3	4-BROMOPHENYL PHENYL ETHER	NA	NA	mg/kg	NA	0/9	0.17 to 0.79	NA	NA	NA	NA	NA	No	ND
	000059-50-7	4-CHLORO-3-METHYLPHENOL	NA	NA	mg/kg	NA	0/9	0.17 to 0.79	NA	NA	NA	NA	NA	No	ND
	000106-47-8	4-CHLOROANILINE	NA	NA	mg/kg	NA	0/9	0.17 to 0.79	NA	NA	2700 N	NA	NA	No	ND
	007005-72-3	4-CHLOROPHENYL PHENYL ETHER	NA	NA	mg/kg	NA	0/9	0.17 to 0.79	NA	NA	NA	NA	NA	No	ND
	000106-44-5	4-METHYLPHENOL (P-CRESOL)	NA	NA	mg/kg	NA	0/9	0.17 to 0.79	NA	NA	3400 N	NA	NA	No	ND
	000100-01-6	4-NITROANILINE	NA	NA	mg/kg	NA	0/9	0.33 to 2	NA	NA	2000 N	NA	NA	No	ND
	000100-02-7	4-NITROPHENOL	NA	NA	mg/kg	NA	0/9	0.33 to 2	NA	NA	5500 N	NA	NA	No	ND
	000083-32-9	ACENAPHTHENE	0.033 J	0.033 J	mg/Kg	SM95-SO-4	1/9	0.17 to 0.79	0.033	NA	33000 N	NA	NA	No	BSL
	000208-96-8	ACENAPHTHYLENE	0.012 LJQK	0.29 J	mg/Kg	SM95-SO-4	4/9	0.17 to 0.79	0.29	NA	33000 N	NA	NA	No	BSL
	000098-86-2	ACETOPHENONE	0.015 LJQK	0.015 LJQK	mg/kg	SM110	1/9	0.17 to 0.79	0.015	NA	1700 sat	NA	NA	No	BSL
	000120-12-7	ANTHRACENE	0.015 LJQK	0.29 J	mg/Kg	SM95-SO-4	6/9	0.17 to 0.79	0.29	NA	100000 max	NA	NA	No	BSL
	001912-24-9	ATRAZINE	NA	NA	mg/kg	NA	0/9	0.17 to 0.79	NA	NA	8.6 C	NA	NA	No	ND
	000100-52-7	BENZALDEHYDE	0.011 Q	0.011 Q	mg/kg	SM111	1/9	0.17 to 0.79	0.011	NA	68000 N	NA	NA	No	BSL
	000056-55-3	BENZO(A)ANTHRACENE	0.029 LJQK	0.97 =	mg/kg	SM95-SO-12	4/9	0.17 to 0.79	0.97	NA	2.3 C	NA	NA	No	BSL
	000050-32-8	BENZO(A)PYRENE	0.018 LJQK	1.3 =	mg/Kg	SM95-SO-4	7/9	0.17 to 0.79	0.92	NA	0.23 C	NA	NA	Yes	ASL
	000205-99-2	BENZO(B)FLUORANTHENE	0.051 LJQK	3.4 =	mg/Kg	SM95-SO-12	5/9	0.17 to 0.79	1.6	NA	2.3 C	NA	NA	No	BSL
	000191-24-2	BENZO(G,H,I)PERYLENE	0.049 LJQK	1.2 =	mg/Kg	SM95-SO-4	7/9	0.17 to 0.79	1.2	NA	32000 N	NA	NA	No	BSL
	000207-08-9	BENZO(K)FLUORANTHENE	0.027 LJQK	2.4 =	mg/Kg	SM95-SO-4	4/9	0.17 to 0.79	2.4	NA	23 C	NA	NA	No	BSL
	000085-68-7	BENZYL BUTYL PHTHALATE	0.047 J	0.13 =	mg/Kg	SM95-SO-12	2/9	0.17 to 0.79	0.13	NA	240 sat	NA	NA	No	BSL
	000092-52-4	BIPHENYL (DIPHENYL)	NA	NA	mg/kg	NA	0/9	0.17 to 0.79	NA	NA	26000 N	NA	NA	No	ND
	000111-91-1	BIS(2-CHLOROETHOXY) METHANE	NA	NA	mg/kg	NA	0/9	0.17 to 0.79	NA	NA	NA	NA	NA	No	ND
	000111-44-4	BIS(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHER)	NA	NA	mg/kg	NA	0/9	0.17 to 0.79	NA	NA	0.62 C	NA	NA	No	ND
	000117-81-7	BIS(2-ETHYLHEXYL) PHTHALATE	0.032 J	0.4 =	mg/kg	SM95-SO-12	2/9	0.17 to 0.92	0.4	NA	140 C	NA	NA	No	BSL
	000105-60-2	CAPROLACTAM	NA	NA	mg/kg	NA	0/9	0.17 to 0.79	NA	NA	100000 max	NA	NA	No	ND
	000086-74-8	CARBAZOLE	0.02 Q	0.3 J	mg/Kg	SM95-SO-4	5/9	0.17 to 0.79	0.3	NA	96 C	NA	NA	No	BSL
	000218-01-9	CHRYSENE	0.05 LJQK	1.7 =	mg/Kg	SM95-SO-12	5/9	0.17 to 0.79	1.7	NA	230 C	NA	NA	No	BSL
	000053-70-3	DIBENZ(A,H)ANTHRACENE	0.035 Q	0.49 =	mg/Kg	SM95-SO-4	4/9	0.17 to 0.79	0.23	NA	0.23 C	NA	NA	No	BSL
	000132-64-9	DIBENZOFURAN	0.04 J	0.082 J	mg/Kg	SM95-SO-4	2/9	0.17 to 0.79	0.082	NA	1700 N	NA	NA	No	BSL
	000084-66-2	DIETHYL PHTHALATE	NA	NA	mg/kg	NA	0/9	0.17 to 0.79	NA	NA	100000 max	NA	NA	No	ND
	000131-11-3	DIMETHYL PHTHALATE	NA	NA	mg/kg	NA	0/9	0.17 to 0.79	NA	NA	100000 max	NA	NA	No	ND
	000084-74-2	DI-N-BUTYL PHTHALATE	0.014 J	0.057 J	mg/Kg	SM95-SO-4	2/9	0.17 to 0.79	0.057	NA	68000 N	NA	NA	No	BSL
	000117-84-0	DI-N-OCTYLPHTHALATE	0.074 =	0.14 Q	mg/kg	SM111	2/9	0.17 to 0.79	0.14	NA	27000 N	NA	NA	No	BSL
	000206-44-0	FLUORANTHENE	0.034 LJQK	3.5 =	mg/Kg	SM95-SO-12	6/9	0.17 to 0.79	3.5	NA	24000 N	NA	NA	No	BSL
	000086-73-7	FLUORENE	0.098 J	0.098 J	mg/Kg	SM95-SO-4	1/9	0.17 to 0.79	0.098	NA	26000 N	NA	NA	No	BSL
	000118-74-1	HEXACHLOROBENZENE	NA	NA	mg/kg	NA	0/9	0.17 to 0.79	NA	NA	1.2 C	NA	NA	No	ND
	000087-68-3	HEXACHLOROBUTADIENE	NA	NA	mg/kg	NA	0/9	0.17 to 0.79	NA	NA	25 C	NA	NA	No	ND
	000077-47-4	HEXACHLOROCYCLOPENTADIENE	NA	NA	mg/kg	NA	0/9	0.17 to 0.79	NA	NA	4100 N	NA	NA	No	ND
	000067-72-1	HEXACHLOROETHANE	NA	NA	mg/kg	NA	0/9	0.17 to 0.79	NA	NA	140 C	NA	NA	No	ND
	000193-39-5	INDENO(1,2,3-C,D)PYRENE	0.027 LJQK	1 =	mg/Kg	SM95-SO-4	7/9	0.17 to 0.79	1	NA	2.3 C	NA	NA	No	BSL
	000078-59-1	ISOPHORONE	NA	NA	mg/kg	NA	0/9	0.17 to 0.79	NA	NA	2000 C	NA	NA	No	ND
	000091-20-3	NAPHTHALENE	0.026 J	0.18 J	mg/Kg	SM95-SO-4	4/9	0.17 to 0.79	0.18	NA	210 N	NA	NA	No	BSL
	000098-95-3	NITROBENZENE	NA	NA	mg/kg	NA	0/9	0.17 to 0.79	NA	NA	110 N	NA	NA	No	ND
	000621-64-7	N-NITROSODI-N-PROPYLAMINE	NA	NA	mg/kg	NA	0/9	0.17 to 0.79	NA	NA	0.27 C	NA	NA	No	ND
	000086-30-6	N-NITROSODIPHENYLAMINE	NA	NA	mg/kg	NA	0/9	0.17 to 0.79	NA	NA	390 C	NA	NA	No	ND

Table 2.5
OCCURRENCE, DISTRIBUTION AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN
State Marine Superfund Site, Port Arthur, Texas

Scenario Timeframe: Current/Future
Medium: Soil
Exposure Medium: Soil (0-1 ft)

Exposure Point	CAS Number	Chemical	Minimum Concentration Qualifier	Maximum Concentration Qualifier	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration Used for Screening (1)	Background Value (2)	Screening Toxicity Value (N/C) (3)	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag	Rationale for Selection or Deletion (4)
	000087-86-5	PENTACHLOROPHENOL	NA	NA	mg/kg	NA	0/9	0.33 to 2	NA	NA	10 C	NA	NA	No	ND
	000085-01-8	PHENANTHRENE	0.028 LJQK	1.2 =	mg/Kg	SM95-SO-12	6/9	0.17 to 0.79	1.2	NA	32000 N	NA	NA	No	BSL
	000108-95-2	PHENOL	NA	NA	mg/kg	NA	0/9	0.17 to 0.79	NA	NA	100000 max	NA	NA	No	ND
	000129-00-0	PYRENE	0.034 LJQK	4 =	mg/Kg	SM95-SO-12	7/9	0.17 to 0.79	4	NA	32000 N	NA	NA	No	BSL
	000071-55-6	1,1,1-TRICHLOROETHANE	0.002 J	0.002 J	mg/kg	SM95-SO-12	1/6	0.005 to 0.005	0.002	NA	1400 sat	NA	NA	No	BSL
	000079-34-5	1,1,2,2-TETRACHLOROETHANE	NA	NA	mg/kg	NA	0/6	0.005 to 0.005	NA	NA	0.97 C	NA	NA	No	ND
	000076-13-1	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	NA	NA	mg/kg	NA	0/6	0.005 to 0.005	NA	NA	5600 sat	NA	NA	No	ND
	000079-00-5	1,1,2-TRICHLOROETHANE	NA	NA	mg/kg	NA	0/6	0.005 to 0.005	NA	NA	2.1 C	NA	NA	No	ND
	000075-34-3	1,1-DICHLOROETHANE	NA	NA	mg/kg	NA	0/6	0.005 to 0.005	NA	NA	2300 N	NA	NA	No	ND
	000075-35-4	1,1-DICHLOROETHENE	NA	NA	mg/kg	NA	0/6	0.005 to 0.005	NA	NA	470 N	NA	NA	No	ND
	87-61-6	1,2,3-TRICHLOROBENZENE	NA	NA	mg/kg	NA	0/6	0.005 to 0.005	NA	NA	260 N	NA	NA	No	ND
	000120-82-1	1,2,4-TRICHLOROBENZENE	NA	NA	mg/kg	NA	0/6	0.005 to 0.005	NA	NA	260 N	NA	NA	No	ND
	000096-12-8	1,2-DIBROMO-3-CHLOROPROPANE	NA	NA	mg/kg	NA	0/6	0.005 to 0.005	NA	NA	2.2 C	NA	NA	No	ND
	106-93-4	1,2-DIBROMOETHANE (ETHYLENE DIBROMIDE)	NA	NA	mg/kg	NA	0/6	0.005 to 0.005	NA	NA	0.07 C	NA	NA	No	ND
	000095-50-1	1,2-DICHLOROBENZENE	NA	NA	mg/kg	NA	0/6	0.005 to 0.005	NA	NA	370 sat	NA	NA	No	ND
	000107-06-2	1,2-DICHLOROETHANE	NA	NA	mg/kg	NA	0/6	0.005 to 0.005	NA	NA	0.84 C	NA	NA	No	ND
	000078-87-5	1,2-DICHLOROPROPANE	NA	NA	mg/kg	NA	0/6	0.005 to 0.005	NA	NA	0.85 C	NA	NA	No	ND
	000541-73-1	1,3-DICHLOROBENZENE	NA	NA	mg/kg	NA	0/6	0.005 to 0.005	NA	NA	150 N	NA	NA	No	ND
	000106-46-7	1,4-DICHLOROBENZENE	NA	NA	mg/kg	NA	0/6	0.005 to 0.005	NA	NA	8.1 C	NA	NA	No	ND
	123-91-1	1,4-DIOXANE (P-DIOXANE)	NA	NA	mg/kg	NA	0/6	0.1 to 0.1	NA	NA	170 C	NA	NA	No	ND
	000591-78-6	2-HEXANONE	NA	NA	mg/kg	NA	0/6	0.01 to 0.01	NA	NA	NA	NA	NA	No	ND
	000067-64-1	ACETONE	NA	NA	mg/kg	NA	0/6	0.01 to 0.01	NA	NA	100000 max	NA	NA	No	ND
	000071-43-2	BENZENE	NA	NA	mg/kg	NA	0/6	0.005 to 0.005	NA	NA	1.6 C	NA	NA	No	ND
	74-97-5	BROMOCHLOROMETHANE	NA	NA	mg/kg	NA	0/6	0.005 to 0.005	NA	NA	15 N	NA	NA	No	ND
	000075-27-4	BROMODICHLOROMETHANE	NA	NA	mg/kg	NA	0/6	0.005 to 0.005	NA	NA	2.6 C	NA	NA	No	ND
	000075-25-2	BROMOFORM	NA	NA	mg/kg	NA	0/6	0.005 to 0.005	NA	NA	240 C	NA	NA	No	ND
	000074-83-9	BROMOMETHANE	NA	NA	mg/kg	NA	0/6	0.005 to 0.005	NA	NA	15 N	NA	NA	No	ND
	000075-15-0	CARBON DISULFIDE	NA	NA	mg/kg	NA	0/6	0.005 to 0.005	NA	NA	720 sat	NA	NA	No	ND
	000056-23-5	CARBON TETRACHLORIDE	NA	NA	mg/kg	NA	0/6	0.005 to 0.005	NA	NA	0.58 C	NA	NA	No	ND
	000108-90-7	CHLOROBENZENE	NA	NA	mg/kg	NA	0/6	0.005 to 0.005	NA	NA	600 N	NA	NA	No	ND
	000075-00-3	CHLOROETHANE	NA	NA	mg/kg	NA	0/6	0.005 to 0.005	NA	NA	NA	NA	NA	No	ND
	000067-66-3	CHLOROFORM	NA	NA	mg/kg	NA	0/6	0.005 to 0.005	NA	NA	0.58 C	NA	NA	No	ND
	000074-87-3	CHLOROMETHANE	NA	NA	mg/kg	NA	0/6	0.005 to 0.005	NA	NA	3 C	NA	NA	No	ND
	000156-59-2	CIS-1,2-DICHLOROETHYLENE	NA	NA	mg/kg	NA	0/6	0.005 to 0.005	NA	NA	160 N	NA	NA	No	ND
	010061-01-5	CIS-1,3-DICHLOROPROPENE	NA	NA	mg/kg	NA	0/6	0.005 to 0.005	NA	NA	1.7 C	NA	NA	No	ND
	110-82-7	CYCLOHEXANE	NA	NA	mg/kg	NA	0/6	0.005 to 0.005	NA	NA	NA	NA	NA	No	ND
	000124-48-1	DIBROMOCHLOROMETHANE	NA	NA	mg/kg	NA	0/6	0.005 to 0.005	NA	NA	2.6 C	NA	NA	No	ND
	000075-71-8	DICHLORODIFLUOROMETHANE	NA	NA	mg/kg	NA	0/6	0.005 to 0.005	NA	NA	340 sat	NA	NA	No	ND
	000100-41-4	ETHYLBENZENE	NA	NA	mg/kg	NA	0/6	0.005 to 0.005	NA	NA	230 sat	NA	NA	No	ND
	000098-82-8	ISOPROPYLBENZENE (CUMENE)	NA	NA	mg/kg	NA	0/6	0.005 to 0.005	NA	NA	580 N	NA	NA	No	ND
	108-38-3/106-42-3	M,P-XYLENE (SUM OF ISOMERS)	NA	NA	mg/kg	NA	0/6	0.005 to 0.005	NA	NA	210 N	NA	NA	No	ND
	79-20-9	METHYL ACETATE	NA	NA	mg/kg	NA	0/6	0.005 to 0.005	NA	NA	100000 max	NA	NA	No	ND
	000078-93-3	METHYL ETHYL KETONE (2-BUTANONE)	NA	NA	mg/kg	NA	0/6	0.01 to 0.01	NA	NA	34000 sat	NA	NA	No	ND
	000108-10-1	METHYL ISOBUTYL KETONE (4-METHYL-2-PENTANONE)	NA	NA	mg/kg	NA	0/6	0.01 to 0.01	NA	NA	17000 sat	NA	NA	No	ND
	108-87-2	METHYLCYCLOHEXANE	NA	NA	mg/kg	NA	0/6	0.005 to 0.005	NA	NA	140 sat	NA	NA	No	ND
	000075-09-2	METHYLENE CHLORIDE	0.001 J	0.001 J	mg/kg	SM95-SO-6	1/6	0.005 to 0.005	0.001	NA	22 C	NA	NA	No	BSL
	95-47-6	O-XYLENE (1,2-DIMETHYLBENZENE)	NA	NA	mg/kg	NA	0/6	0.005 to 0.005	NA	NA	280 sat	NA	NA	No	ND
	000100-42-5	STYRENE	NA	NA	mg/kg	NA	0/6	0.005 to 0.005	NA	NA	1700 sat	NA	NA	No	ND
	1634-04-4	TERT-BUTYL METHYL ETHER	NA	NA	mg/kg	NA	0/6	0.005 to 0.005	NA	NA	1800 C	NA	NA	No	ND
	000127-18-4	TETRACHLOROETHYLENE(PCE)	NA	NA	mg/kg	NA	0/6	0.005 to 0.005	NA	NA	1.7 C	NA	NA	No	ND
	000108-88-3	TOLUENE	NA	NA	mg/kg	NA	0/6	0.005 to 0.005	NA	NA	520 sat	NA	NA	No	ND
	1634-04-4	TRANS-1,2-DICHLOROETHENE	NA	NA	mg/kg	NA	0/6	0.005 to 0.005	NA	NA	240 N	NA	NA	No	ND
	010061-02-6	TRANS-1,3-DICHLOROPROPENE	NA	NA	mg/kg	NA	0/6	0.005 to 0.005	NA	NA	1.7 C	NA	NA	No	ND
	000079-01-6	TRICHLOROETHYLENE (TCE)	NA	NA	mg/kg	NA	0/6	0.005 to 0.005	NA	NA	0.1 C	NA	NA	No	ND

Table 2.5
OCCURRENCE, DISTRIBUTION AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN
State Marine Superfund Site, Port Arthur, Texas

Scenario Timeframe: Current/Future
Medium: Soil
Exposure Medium: Soil (0-1 ft)

Exposure Point	CAS Number	Chemical	Minimum Concentration Qualifier	Maximum Concentration Qualifier	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration Used for Screening (1)	Background Value (2)	Screening Toxicity Value (N/C) (3)	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag	Rationale for Selection or Deletion (4)
	000075-69-4	TRICHLOROFLUOROMETHANE	NA	NA	mg/kg	NA	0/6	0.005 to 0.005	NA	NA	1400 N	NA	NA	No	ND
	000075-01-4	VINYL CHLORIDE	NA	NA	mg/kg	NA	0/6	0.005 to 0.005	NA	NA	0.43 C	NA	NA	No	ND

(1) Maximum detected concentration initially used; if screening level exceeded, mean (lead only) or 95% UCL were used for screening.
(2) These background values were calculated from a small data set and are not recommended for definitive comparisons.
(3) Medium Specific Standard Levels, December, 2004, U.S. EPA Region VI. Industrial Outdoor Worker.
Screening level for thallium sulfate used as a surrogate for thallium.
Screening level for pyrene used as a surrogate for benzo(g,h,i)perylene and phenanthrene.
Screening level for acenaphthene used as a surrogate for acenaphthylene.
Screening level for naphthalene used as a surrogate for 2-methylnaphthalene.
Screening level for 4-nitrophenol used as a surrogate for 2-nitrophenol.
Screening level for 2-nitroaniline used as a surrogate for 3-nitroaniline and 4-nitroaniline.
Screening level for endosulfan used as a surrogate for endosulfan sulfate, alpha-endosulfan and beta-endosulfan.
Screening level for chlordane used as a surrogate for alpha-chlordane and gamma-chlordane.
Screening level for HCH-technical (BHC-technical) used as a surrogate for delta-HCH (delta-BHC).
Screening level for endrin used as a surrogate for endrin aldehyde and endrin ketone.
Screening level for 1,2,4-trichlorobenzene used as a surrogate for 1,3,5-trichlorobenzene.
Screening level for bromomethane used as a surrogate for bromochloromethane.
Screening level for 1,3-dichloropropene used as a surrogate for cis-1,3-dichloropropene and trans-1,3-dichloropropene.
(4) Rationale Codes
Selection Reason: Above Screening Levels (ASL)
Deletion Reason: No Toxicity Information (NTX)
Essential Nutrient (Nut)
Below Screening Level (BSL)
Not Detected (ND)
Site Concentrations Consistent with Background (Bkgd)

ARAR/TBC = Applicable or Relevant and Appropriate Requirement/To Be Considered
COPC = Chemical of Potential Concern
C = Screening level is based on a carcinogenic endpoint.
max = Screening level is based on a ceiling limit.
mg/kg = Milligrams per kilogram
NA = Not available
N = Screening level is based on a noncarcinogenic endpoint.
sat = Screening level is based on soil saturation.

Qualifiers:
J = Estimated value.
v = Low biased. Actual concentration may be higher than the concentraiton reported.
L = Reported concentration is < CRQL (contract-required quantitation limit)
Q = Severe QC or quantitation problem - no result reported but analyte is confirmed as qualitatively pre
K = Result is estimated but bias is unknown
^ = High biased. Actual concentration may be lower than the concentration reported.
T = Identification is questionable due to absence of other commonly coexisting pesticides.
* = Result not recommended for use due to associated QA/QC performance inferior to that from other a

Table 2.6

OCCURRENCE, DISTRIBUTION AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN

State Marine Superfund Site, Port Arthur, Texas

Scenario Timeframe: Current/Future
Medium: Soil
Exposure Medium: Soil (0-1 ft)

Exposure Point	CAS Number	Chemical	Minimum Concentration Qualifier		Maximum Concentration Qualifier		Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration Used for Screening (1)	Background Value (2)	Screening Toxicity Value (N/C) (3)		Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag	Rationale for Selection or Deletion (4)
Soil at Lauren Tank Farm	007429-90-5	ALUMINUM	3420	=	10200	=	mg/Kg	SM95-SO-28	13/13	51.3 to 54.8	10200	24600	100000	max	NA	NA	No	BSL
	007440-36-0	ANTIMONY	1.4	LJvQ	4.6	LJvQ	mg/Kg	SM107	2/13	0.65 to 15.6	4.6	NA	450	N	NA	NA	No	BSL
	007440-38-2	ARSENIC	4.1	=	26.4	=	mg/Kg	SM107	13/13	2.6 to 2.7	26.4	32.6	1.8	C	NA	NA	No	Bkgd
	007440-39-3	BARIUM	63.8	=	289	=	mg/Kg	SM107	13/13	51.3 to 54.8	289	966	79000	N	NA	NA	No	BSL
	007440-41-7	BERYLLIUM	0.12	LQ	0.88	=	mg/Kg	SM95-SO-29	10/13	0.26 to 1.4	0.88	2.5	2200	N	NA	NA	No	BSL
	007440-43-9	CADMIUM	0.48	=	1.7	=	mg/Kg	SM104	5/13	0.16 to 1.4	1.7	NA	560	N	NA	NA	No	BSL
	007440-70-2	CALCIUM	1030	=	17500	=	mg/Kg	SM102	13/13	1280 to 1370	17500	88800	NA		NA	NA	No	Nut
	007440-47-3	CHROMIUM, TOTAL	6.3	=	503	JK	mg/Kg	SM107	13/13	2.6 to 2.7	503	78.1	500	C	NA	NA	No	Bkgd
	007440-48-4	COBALT	3	LQ	19.1	=	mg/Kg	SM107	13/13	12.8 to 13.7	19.1	33.2	2100	C	NA	NA	No	BSL
	007440-50-8	COPPER	8.5	=	7390	=	mg/Kg	SM107	13/13	6.4 to 6.8	7390	123	42000	N	NA	NA	No	BSL
	000057-12-5	CYANIDE	0.98	=	0.98	=	mg/Kg	SM95-SO-7	1/13	0.12 to 0.71	0.98	NA	14000	N	NA	NA	No	BSL
	007439-89-6	IRON	8470	=	134000	=	mg/Kg	SM107	13/13	25.6 to 27.4	134000	247000	100000	max	NA	NA	No	Bkgd
	007439-92-1	LEAD	15.7	=	1030	=	mg/Kg	SM107	13/13	0.77 to 0.82	137	103	800		NA	NA	No	BSL
	007439-95-4	MAGNESIUM	584	=	1890	=	mg/Kg	SM95-SO-8	13/13	1280 to 1370	1890	6120	NA		NA	NA	No	Nut
	007439-96-5	MANGANESE	41.8	J	1020	=	mg/Kg	SM107	13/13	3.8 to 4.1	1020	2090	35000	N	NA	NA	No	BSL
	007439-97-6	MERCURY	0.1	LQ	5.6	J^H	mg/Kg	SM107	5/12	0.07 to 0.14	5.6	NA	340		NA	NA	No	BSL
	007440-02-0	NICKEL	3.4	=	411	=	mg/Kg	SM107	13/13	10.3 to 11	411	90.5	23000	N	NA	NA	No	BSL
	007440-09-7	POTASSIUM	523	LQ	3090	JvL	mg/Kg	SM101	13/13	1280 to 1370	3090	3750	NA		NA	NA	No	Nut
	007782-49-2	SELENIUM	0.75	LQ	4.4	=	mg/Kg	SM107	3/13	0.56 to 1.4	4.4	NA	5700	N	NA	NA	No	BSL
	007440-22-4	SILVER	0.28	LQ	6.9	=	mg/Kg	SM107	7/13	0.52 to 2.7	6.9	0.737	5700	N	NA	NA	No	BSL
	007440-23-5	SODIUM	80	=	1880	=	mg/Kg	SM95-SO-8	12/13	255 to 1370	1880	1170	NA		NA	NA	No	Nut
	007440-28-0	THALLIUM	1	LQ	1.4	=	mg/Kg	SM95-SO-28	2/13	0.9 to 2.7	1.4	NA	91	N	NA	NA	No	Bkgd
	007440-62-2	VANADIUM	11.8	LQ	19.3	=	mg/Kg	SM95-SO-28, SM95-SO-29	13/13	12.8 to 13.7	19.3	81.4	1100	N	NA	NA	No	BSL
	007440-66-6	ZINC	27.1	=	1480	=	mg/Kg	SM107	13/13	5.1 to 5.5	1480	203	100000	max	NA	NA	No	BSL
	309-00- 2	ALDRIN	NA		NA		mg/kg	NA	0/6	0.0017 to 0.0017	NA	NA	0.11	C	NA	NA	No	ND
	319-84-6	ALPHA BHC (ALPHA HEXACHLOROCYCLOHEXANE)	NA		NA		mg/kg	NA	0/6	0.0017 to 0.0017	NA	NA	0.4	C	NA	NA	No	ND
	959-98-8	ALPHA ENDOSULFAN	NA		NA		mg/kg	NA	0/6	0.0017 to 0.0017	NA	NA	4100	N	NA	NA	No	ND
	510-37- 1	ALPHA-CHLORDANE	13	=	13	=	mg/Kg	SM95-SO-7	1/6	0.0017 to 0.0017	13	NA	7.2	C	NA	NA	Yes	ASL
	319-85-7	BETA BHC (BETA HEXACHLOROCYCLOHEXANE)	NA		NA		mg/kg	NA	0/6	0.0017 to 0.0017	NA	NA	1.4	C	NA	NA	No	ND
	33213-65-9	BETA ENDOSULFAN	NA		NA		mg/kg	NA	0/6	0.0033 to 0.0033	NA	NA	4100	N	NA	NA	No	ND
	319-86-8	DELTA BHC (DELTA HEXACHLOROCYCLOHEXANE)	NA		NA		mg/kg	NA	0/6	0.0017 to 0.0017	NA	NA	1.4	C	NA	NA	No	ND
	60-57-1	DIELDRIN	0.0053	J	0.0053	J	mg/kg	SM95-SO-7	1/6	0.0033 to 0.0033	0.0053	NA	0.12	C	NA	NA	No	BSL
	103-10- 7	ENDOSULFAN SULFATE	NA		NA		mg/kg	NA	0/6	0.0033 to 0.0033	NA	NA	4100	N	NA	NA	No	ND
	72-20-8	ENDRIN	NA		NA		mg/kg	NA	0/6	0.0033 to 0.0033	NA	NA	210	N	NA	NA	No	ND
	742-19- 3	ENDRIN ALDEHYDE	0.011	T	0.011	T	mg/kg	SM95-SO-30	1/6	0.0033 to 0.0033	0.011	NA	210	N	NA	NA	No	BSL
	53494-70-5	ENDRIN KETONE	NA		NA		mg/kg	NA	0/6	0.0033 to 0.0033	NA	NA	210	N	NA	NA	No	ND
	58-89-9	GAMMA BHC (LINDANE)	NA		NA		mg/kg	NA	0/6	0.0017 to 0.0017	NA	NA	1.9	C	NA	NA	No	ND
	510-37- 4	GAMMA-CHLORDANE	0.0078	J	0.0078	J	mg/Kg	SM95-SO-7	1/6	0.0017 to 0.0017	0.0078	NA	7.2	C	NA	NA	No	BSL
	76-44-8	HEPTACHLOR	0.0031	J	0.0031	J	mg/kg	SM95-SO-7	1/6	0.0017 to 0.0017	0.0031	NA	0.43	C	NA	NA	No	BSL
	102-45- 7	HEPTACHLOR EPOXIDE	NA		NA		mg/kg	NA	0/6	0.0017 to 0.0017	NA	NA	0.21	C	NA	NA	No	ND
	72-43-5	METHOXYCHLOR	NA		NA		mg/kg	NA	0/6	0.017 to 0.017	NA	NA	3400	N	NA	NA	No	ND
	72-54-8	P,P'-DDD	0.0091	J	0.0091	J	mg/kg	SM95-SO-7	1/6	0.0033 to 0.0033	0.0091	NA	11	C	NA	NA	No	BSL
	72-55-9	P,P'-DDE	NA		NA		mg/kg	NA	0/6	0.0033 to 0.0033	NA	NA	7.8	C	NA	NA	No	ND
	50-29-3	P,P'-DDT	0.0076	J	0.0076	J	mg/kg	SM95-SO-7	1/6	0.0033 to 0.0033	0.0076	NA	7.8	C	NA	NA	No	BSL
	12674-11-2	PCB-1016 (AROCHLOR 1016)	NA		NA		mg/kg	NA	0/6	0.033 to 0.033	NA	NA	24	C	NA	NA	No	ND
	11104-28-2	PCB-1221 (AROCHLOR 1221)	NA		NA		mg/kg	NA	0/6	0.033 to 0.033	NA	NA	0.83	C	NA	NA	No	ND
	11141-16-5	PCB-1232 (AROCHLOR 1232)	NA		NA		mg/kg	NA	0/6	0.033 to 0.033	NA	NA	0.83	C	NA	NA	No	ND
	53469-21-9	PCB-1242 (AROCHLOR 1242)	NA		NA		mg/kg	NA	0/6	0.033 to 0.033	NA	NA	0.83	C	NA	NA	No	ND
	12672-29-6	PCB-1248 (AROCHLOR 1248)	0.46	J	0.58	J	mg/Kg	SM95-SO-29	2/6	0.033 to 0.033	0.58	NA	0.83	C	NA	NA	No	BSL
	11097-69-1	PCB-1254 (AROCHLOR 1254)	NA		NA		mg/kg	NA	0/6	0.033 to 0.033	NA	NA	0.83	C	NA	NA	No	ND
	11096-82-5	PCB-1260 (AROCHLOR 1260)	NA		NA		mg/kg	NA	0/6	0.033 to 0.033	NA	NA	0.83	C	NA	NA	No	ND
	800-13- 5	TOXAPHENE	NA		NA		mg/kg	NA	0/6	0.17 to 0.17	NA	NA	1.7	C	NA	NA	No	ND
	95-94-3	1,2,4,5-TETRACHLOROBENZENE	NA		NA		mg/kg	NA	0/6	0.17 to 0.17	NA	NA	210	N	NA	NA	No	ND
	000108-60-1	2,2'-OXYBIS(1-CHLORO)PROPANE	NA		NA		mg/kg	NA	0/13	0.17 to 4.4	NA	NA	NA		NA	NA	No	ND
	58-90-2	2,3,4,6-TETRACHLOROPHENOL	NA		NA		mg/kg	NA	0/6	0.17 to 0.17	NA	NA	21000	N	NA	NA	No	ND
	000095-95-4	2,4,5-TRICHLOROPHENOL	NA		NA		mg/kg	NA	0/13	0.17 to 11	NA	NA	68000	N	NA	NA	No	ND
	000088-06-2	2,4,6-TRICHLOROPHENOL	NA		NA		mg/kg	NA	0/13	0.17 to 4.4	NA	NA	170	C	NA	NA	No	ND

Table 2.6

OCCURRENCE, DISTRIBUTION AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN

State Marine Superfund Site, Port Arthur, Texas

Scenario Timeframe: Current/Future
Medium: Soil
Exposure Medium: Soil (0-1 ft)

Exposure Point	CAS Number	Chemical	Minimum Concentration Qualifier	Maximum Concentration Qualifier	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration Used for Screening (1)	Background Value (2)	Screening Toxicity Value (N/C) (3)	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag	Rationale for Selection or Deletion (4)
	000120-83-2	2,4-DICHLOROPHENOL	NA	NA	mg/kg	NA	0/13	0.17 to 4.4	NA	NA	2100 N	NA	NA	No	ND
	000105-67-9	2,4-DIMETHYLPHENOL	NA	NA	mg/kg	NA	0/13	0.17 to 4.4	NA	NA	14000 N	NA	NA	No	ND
	000051-28-5	2,4-DINITROPHENOL	NA	NA	mg/kg	NA	0/13	0.33 to 11	NA	NA	1400 N	NA	NA	No	ND
	000121-14-2	2,4-DINITROTOLUENE	NA	NA	mg/kg	NA	0/13	0.17 to 4.4	NA	NA	1400 N	NA	NA	No	ND
	000606-20-2	2,6-DINITROTOLUENE	NA	NA	mg/kg	NA	0/13	0.17 to 4.4	NA	NA	680 N	NA	NA	No	ND
	000091-58-7	2-CHLORONAPHTHALENE	NA	NA	mg/kg	NA	0/13	0.17 to 4.4	NA	NA	26000 N	NA	NA	No	ND
	000095-57-8	2-CHLOROPHENOL	NA	NA	mg/kg	NA	0/13	0.17 to 4.4	NA	NA	260 N	NA	NA	No	ND
	000091-57-6	2-METHYLNAPHTHALENE	0.022 J	1.6 LJQK	mg/kg	SM107	8/13	0.17 to 4.4	1.6	NA	210 N	NA	NA	No	BSL
	000095-48-7	2-METHYLPHENOL (O-CRESOL)	NA	NA	mg/kg	NA	0/13	0.17 to 4.4	NA	NA	34000 N	NA	NA	No	ND
	000088-74-4	2-NITROANILINE	NA	NA	mg/kg	NA	0/13	0.33 to 11	NA	NA	2000 N	NA	NA	No	ND
	000088-75-5	2-NITROPHENOL	NA	NA	mg/kg	NA	0/13	0.17 to 4.4	NA	NA	5500 N	NA	NA	No	ND
	000091-94-1	3,3'-DICHLOROBENZIDINE	NA	NA	mg/kg	NA	0/13	0.17 to 4.4	NA	NA	4.3 C	NA	NA	No	ND
	000099-09-2	3-NITROANILINE	NA	NA	mg/kg	NA	0/13	0.33 to 11	NA	NA	2000 N	NA	NA	No	ND
	000534-52-1	4,6-DINITRO-2-METHYLPHENOL	NA	NA	mg/kg	NA	0/13	0.33 to 11	NA	NA	NA	NA	NA	No	ND
	000101-55-3	4-BROMOPHENYL PHENYL ETHER	NA	NA	mg/kg	NA	0/13	0.17 to 4.4	NA	NA	NA	NA	NA	No	ND
	000059-50-7	4-CHLORO-3-METHYLPHENOL	NA	NA	mg/kg	NA	0/13	0.17 to 4.4	NA	NA	NA	NA	NA	No	ND
	000106-47-8	4-CHLOROANILINE	NA	NA	mg/kg	NA	0/13	0.17 to 4.4	NA	NA	2700 N	NA	NA	No	ND
	007005-72-3	4-CHLOROPHENYL PHENYL ETHER	NA	NA	mg/kg	NA	0/13	0.17 to 4.4	NA	NA	NA	NA	NA	No	ND
	000106-44-5	4-METHYLPHENOL (P-CRESOL)	0.11 LJQ	0.11 LJQ	mg/kg	SM106	1/13	0.17 to 4.4	0.11	NA	3400 N	NA	NA	No	BSL
	000100-01-6	4-NITROANILINE	NA	NA	mg/kg	NA	0/13	0.33 to 11	NA	NA	2000 N	NA	NA	No	ND
	000100-02-7	4-NITROPHENOL	NA	NA	mg/kg	NA	0/13	0.33 to 11	NA	NA	5500 N	NA	NA	No	ND
	000083-32-9	ACENAPHTHENE	0.031 J	0.064 LJQ	mg/kg	SM106	2/13	0.17 to 4.4	0.064	NA	33000 N	NA	NA	No	BSL
	000208-96-8	ACENAPHTHYLENE	0.036 LJQ	0.91 LJQ	mg/kg	SM106	9/13	0.17 to 4.4	0.91	NA	33000 N	NA	NA	No	BSL
	000098-86-2	ACETOPHENONE	0.023 LJQ	0.25 LJQK	mg/kg	SM101	6/13	0.17 to 4.4	0.25	NA	1700 sat	NA	NA	No	BSL
	000120-12-7	ANTHRACENE	0.031 LJQK	1.1 LJQK	mg/kg	SM107	9/13	0.17 to 4.4	1.1	NA	100000 max	NA	NA	No	BSL
	001912-24-9	ATRAZINE	NA	NA	mg/kg	NA	0/13	0.17 to 4.4	NA	NA	8.6 C	NA	NA	No	ND
	000100-52-7	BENZALDEHYDE	0.021 LJQ	0.097 LJQ	mg/kg	SM106	5/13	0.17 to 4.4	0.097	NA	68000 N	NA	NA	No	BSL
	000056-55-3	BENZO(A)ANTHRACENE	0.03 LJQ	4.2 =	mg/Kg	SM106	8/13	0.17 to 4.4	3.7	NA	2.3 C	NA	NA	Yes	ASL
	000050-32-8	BENZO(A)PYRENE	0.046 LJQK	5.1 =	mg/Kg	SM106	10/13	0.17 to 4.4	1.2	NA	0.23 C	NA	NA	Yes	ASL
	000205-99-2	BENZO(B)FLUORANTHENE	0.063 LJQ	7.1 =	mg/Kg	SM106	11/13	0.17 to 4.4	6.0	NA	2.3 C	NA	NA	Yes	ASL
	000191-24-2	BENZO(G,H,I)PERYLENE	0.059 LJQ	2.1 JK	mg/Kg	SM106	10/13	0.17 to 4.4	2.1	NA	32000 N	NA	NA	No	BSL
	000207-08-9	BENZO(K)FLUORANTHENE	0.023 LJQK	2.5 =	mg/Kg	SM106	8/13	0.17 to 4.4	2.5	NA	23 C	NA	NA	No	BSL
	000085-68-7	BENZYL BUTYL PHTHALATE	0.024 LJQK	0.024 LJQK	mg/kg	SM103	1/13	0.17 to 4.4	0.024	NA	240 sat	NA	NA	No	BSL
	000092-52-4	BIPHENYL (DIPHENYL)	0.018 LJQK	0.21 LJQ	mg/kg	SM106	2/13	0.17 to 4.4	0.21	NA	26000 N	NA	NA	No	BSL
	000111-91-1	BIS(2-CHLOROETHOXY) METHANE	NA	NA	mg/kg	NA	0/13	0.17 to 4.4	NA	NA	NA	NA	NA	No	ND
	000111-44-4	BIS(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHER)	NA	NA	mg/kg	NA	0/13	0.17 to 4.4	NA	NA	0.62 C	NA	NA	No	ND
	000117-81-7	BIS(2-ETHYLHEXYL) PHTHALATE	0.094 LJQK	1.9 BJH	mg/Kg	SM104	7/13	0.17 to 4.4	1.9	NA	140 C	NA	NA	No	BSL
	000105-60-2	CAPROLACTAM	NA	NA	mg/kg	NA	0/13	0.17 to 4.4	NA	NA	100000 max	NA	NA	No	ND
	000086-74-8	CARBAZOLE	0.03 J	0.52 LJQ	mg/kg	SM106	3/13	0.17 to 4.4	0.52	NA	96 C	NA	NA	No	BSL
	000218-01-9	CHRYSENE	0.039 LJQK	5.4 =	mg/Kg	SM106	10/13	0.17 to 4.4	5.4	NA	230 C	NA	NA	No	BSL
	000053-70-3	DIBENZ(A,H)ANTHRACENE	0.022 LJQK	0.94 LJQ	mg/Kg	SM106	8/13	0.17 to 4.4	0.94	NA	0.23 C	NA	NA	Yes	ASL
	000132-64-9	DIBENZOFURAN	0.017 LJQK	0.13 LJQ	mg/kg	SM106	2/13	0.17 to 4.4	0.13	NA	1700 N	NA	NA	No	BSL
	000084-66-2	DIETHYL PHTHALATE	NA	NA	mg/kg	NA	0/13	0.17 to 4.4	NA	NA	100000 max	NA	NA	No	ND
	000131-11-3	DIMETHYL PHTHALATE	0.025 J	0.031 J	mg/kg	SM95-SO-30	2/13	0.17 to 4.4	0.031	NA	100000 max	NA	NA	No	BSL
	000084-74-2	DI-N-BUTYL PHTHALATE	0.056 LJQ	0.056 LJQ	mg/kg	SM104	1/13	0.17 to 4.4	0.056	NA	68000 N	NA	NA	No	BSL
	000117-84-0	DI-N-OCTYLPHTHALATE	0.013 LJQK	0.034 J	mg/Kg	SM95-SO-28	3/13	0.17 to 4.4	0.034	NA	27000 N	NA	NA	No	BSL
	000206-44-0	FLUORANTHENE	0.029 LJQK	7.6 =	mg/Kg	SM106	11/13	0.17 to 4.4	7.6	NA	24000 N	NA	NA	No	BSL
	000086-73-7	FLUORENE	0.029 LJQK	0.18 LJQ	mg/kg	SM106	3/13	0.17 to 4.4	0.18	NA	26000 N	NA	NA	No	BSL
	000118-74-1	HEXACHLOROBENZENE	NA	NA	mg/kg	NA	0/13	0.17 to 4.4	NA	NA	1.2 C	NA	NA	No	ND
	000087-68-3	HEXACHLOROBUTADIENE	NA	NA	mg/kg	NA	0/13	0.17 to 4.4	NA	NA	25 C	NA	NA	No	ND
	000077-47-4	HEXACHLOROCYCLOPENTADIENE	NA	NA	mg/kg	NA	0/13	0.17 to 4.4	NA	NA	4100 N	NA	NA	No	ND
	000067-72-1	HEXACHLOROETHANE	NA	NA	mg/kg	NA	0/13	0.17 to 4.4	NA	NA	140 C	NA	NA	No	ND
	000193-39-5	INDENO(1,2,3-C,D)PYRENE	0.038 LJQ	2.2 JK	mg/Kg	SM106	11/13	0.17 to 4.4	2.2	NA	2.3 C	NA	NA	No	BSL
	000078-59-1	ISOPHORONE	NA	NA	mg/kg	NA	0/13	0.17 to 4.4	NA	NA	2000 C	NA	NA	No	ND
	000091-20-3	NAPHTHALENE	0.023 LJQ, LJQK	1.4 LJQ	mg/kg	SM106	8/13	0.17 to 4.4	1.4	NA	210 N	NA	NA	No	BSL
	000098-95-3	NITROBENZENE	NA	NA	mg/kg	NA	0/13	0.17 to 4.4	NA	NA	110 N	NA	NA	No	ND
	000621-64-7	N-NITROSODI-N-PROPYLAMINE	NA	NA	mg/kg	NA	0/13	0.17 to 4.4	NA	NA	0.27 C	NA	NA	No	ND

Table 2.6
OCCURRENCE, DISTRIBUTION AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN
State Marine Superfund Site, Port Arthur, Texas

Scenario Timeframe: Current/Future
Medium: Soil
Exposure Medium: Soil (0-1 ft)

Exposure Point	CAS Number	Chemical	Minimum Concentration Qualifier	Maximum Concentration Qualifier	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration Used for Screening (1)	Background Value (2)	Screening Toxicity Value (N/C) (3)	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag	Rationale for Selection or Deletion (4)
	000086-30-6	N-NITROSODIPHENYLAMINE	NA	NA	mg/kg	NA	0/13	0.17 to 4.4	NA	NA	390 C	NA	NA	No	ND
	000087-86-5	PENTACHLOROPHENOL	NA	NA	mg/kg	NA	0/13	0.33 to 11	NA	NA	10 C	NA	NA	No	ND
	000085-01-8	PHENANTHRENE	0.017 LJQK	2 LJQ	mg/kg	SM106	9/13	0.17 to 4.4	2	NA	32000 N	NA	NA	No	BSL
	000108-95-2	PHENOL	NA	NA	mg/kg	NA	0/13	0.17 to 4.4	NA	NA	100000 max	NA	NA	No	ND
	000129-00-0	PYRENE	0.042 LJQ	7.4 =	mg/Kg	SM106	11/13	0.17 to 4.4	7.4	NA	32000 N	NA	NA	No	BSL
	000071-55-6	1,1,1-TRICHLOROETHANE	NA	NA	mg/kg	NA	0/6	0.005 to 0.005	NA	NA	1400 sat	NA	NA	No	ND
	000079-34-5	1,1,2,2-TETRACHLOROETHANE	NA	NA	mg/kg	NA	0/6	0.005 to 0.005	NA	NA	0.97 C	NA	NA	No	ND
	000076-13-1	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	NA	NA	mg/kg	NA	0/6	0.005 to 0.005	NA	NA	5600 sat	NA	NA	No	ND
	000079-00-5	1,1,2-TRICHLOROETHANE	NA	NA	mg/kg	NA	0/6	0.005 to 0.005	NA	NA	2.1 C	NA	NA	No	ND
	000075-34-3	1,1-DICHLOROETHANE	NA	NA	mg/kg	NA	0/6	0.005 to 0.005	NA	NA	2300 N	NA	NA	No	ND
	000075-35-4	1,1-DICHLOROETHENE	NA	NA	mg/kg	NA	0/6	0.005 to 0.005	NA	NA	470 N	NA	NA	No	ND
	87-61-6	1,2,3-TRICHLOROBENZENE	NA	NA	mg/kg	NA	0/6	0.005 to 0.005	NA	NA	260 N	NA	NA	No	ND
	000120-82-1	1,2,4-TRICHLOROBENZENE	NA	NA	mg/kg	NA	0/6	0.005 to 0.005	NA	NA	260 N	NA	NA	No	ND
	000096-12-8	1,2-DIBROMO-3-CHLOROPROPANE	NA	NA	mg/kg	NA	0/6	0.005 to 0.005	NA	NA	2.2 C	NA	NA	No	ND
	106-93-4	1,2-DIBROMOETHANE (ETHYLENE DIBROMIDE)	NA	NA	mg/kg	NA	0/6	0.005 to 0.005	NA	NA	0.07 C	NA	NA	No	ND
	000095-50-1	1,2-DICHLOROBENZENE	NA	NA	mg/kg	NA	0/6	0.005 to 0.005	NA	NA	370 sat	NA	NA	No	ND
	000107-06-2	1,2-DICHLOROETHANE	NA	NA	mg/kg	NA	0/6	0.005 to 0.005	NA	NA	0.84 C	NA	NA	No	ND
	000078-87-5	1,2-DICHLOROPROPANE	NA	NA	mg/kg	NA	0/6	0.005 to 0.005	NA	NA	0.85 C	NA	NA	No	ND
	000541-73-1	1,3-DICHLOROBENZENE	NA	NA	mg/kg	NA	0/6	0.005 to 0.005	NA	NA	150 N	NA	NA	No	ND
	000106-46-7	1,4-DICHLOROBENZENE	NA	NA	mg/kg	NA	0/6	0.005 to 0.005	NA	NA	8.1 C	NA	NA	No	ND
	123-91-1	1,4-DIOXANE (P-DIOXANE)	NA	NA	mg/kg	NA	0/6	0.1 to 0.1	NA	NA	170 C	NA	NA	No	ND
	000591-78-6	2-HEXANONE	NA	NA	mg/kg	NA	0/6	0.01 to 0.01	NA	NA	NA	NA	NA	No	ND
	000067-64-1	ACETONE	0.003 *	0.055 J	mg/Kg	SM95-SO-30	3/6	0.01 to 0.01	0.055	NA	100000 max	NA	NA	No	BSL
	000071-43-2	BENZENE	NA	NA	mg/kg	NA	0/6	0.005 to 0.005	NA	NA	1.6 C	NA	NA	No	ND
	74-97-5	BROMOCHLOROMETHANE	NA	NA	mg/kg	NA	0/6	0.005 to 0.005	NA	NA	15 N	NA	NA	No	ND
	000075-27-4	BROMODICHLOROMETHANE	NA	NA	mg/kg	NA	0/6	0.005 to 0.005	NA	NA	2.6 C	NA	NA	No	ND
	000075-25-2	BROMOFORM	NA	NA	mg/kg	NA	0/6	0.005 to 0.005	NA	NA	240 C	NA	NA	No	ND
	000074-83-9	BROMOMETHANE	NA	NA	mg/kg	NA	0/6	0.005 to 0.005	NA	NA	15 N	NA	NA	No	ND
	000075-15-0	CARBON DISULFIDE	NA	NA	mg/kg	NA	0/6	0.005 to 0.005	NA	NA	720 sat	NA	NA	No	ND
	000056-23-5	CARBON TETRACHLORIDE	NA	NA	mg/kg	NA	0/6	0.005 to 0.005	NA	NA	0.58 C	NA	NA	No	ND
	000108-90-7	CHLOROBENZENE	NA	NA	mg/kg	NA	0/6	0.005 to 0.005	NA	NA	600 N	NA	NA	No	ND
	000075-00-3	CHLOROETHANE	NA	NA	mg/kg	NA	0/6	0.005 to 0.005	NA	NA	NA	NA	NA	No	ND
	000067-66-3	CHLOROFORM	NA	NA	mg/kg	NA	0/6	0.005 to 0.005	NA	NA	0.58 C	NA	NA	No	ND
	000074-87-3	CHLOROMETHANE	NA	NA	mg/kg	NA	0/6	0.005 to 0.005	NA	NA	3 C	NA	NA	No	ND
	000156-59-2	CIS-1,2-DICHLOROETHYLENE	NA	NA	mg/kg	NA	0/6	0.005 to 0.005	NA	NA	160 N	NA	NA	No	ND
	010061-01-5	CIS-1,3-DICHLOROPROPENE	NA	NA	mg/kg	NA	0/6	0.005 to 0.005	NA	NA	1.7 C	NA	NA	No	ND
	110-82-7	CYCLOHEXANE	NA	NA	mg/kg	NA	0/6	0.005 to 0.005	NA	NA	NA	NA	NA	No	ND
	000124-48-1	DIBROMOCHLOROMETHANE	NA	NA	mg/kg	NA	0/6	0.005 to 0.005	NA	NA	2.6 C	NA	NA	No	ND
	000075-71-8	DICHLORODIFLUOROMETHANE	NA	NA	mg/kg	NA	0/6	0.005 to 0.005	NA	NA	340 sat	NA	NA	No	ND
	000100-41-4	ETHYLBENZENE	NA	NA	mg/kg	NA	0/6	0.005 to 0.005	NA	NA	230 sat	NA	NA	No	ND
	000098-82-8	ISOPROPYLBENZENE (CUMENE)	NA	NA	mg/kg	NA	0/6	0.005 to 0.005	NA	NA	580 N	NA	NA	No	ND
	108-38-3/106-42-3	M,P-XYLENE (SUM OF ISOMERS)	NA	NA	mg/kg	NA	0/6	0.005 to 0.005	NA	NA	210 N	NA	NA	No	ND
	79-20-9	METHYL ACETATE	NA	NA	mg/kg	NA	0/6	0.005 to 0.005	NA	NA	100000 max	NA	NA	No	ND
	000078-93-3	METHYL ETHYL KETONE (2-BUTANONE)	0.002 *, J	0.002 *, J	mg/kg	SM95-SO-29, SM95-SO-8	2/6	0.01 to 0.01	0.002	NA	34000 sat	NA	NA	No	BSL
	000108-10-1	METHYL ISOBUTYL KETONE (4-METHYL-2-PENTANONE)	NA	NA	mg/kg	NA	0/6	0.01 to 0.01	NA	NA	17000 sat	NA	NA	No	ND
	108-87-2	METHYLCYCLOHEXANE	NA	NA	mg/kg	NA	0/6	0.005 to 0.005	NA	NA	140 sat	NA	NA	No	ND
	000075-09-2	METHYLENE CHLORIDE	NA	NA	mg/kg	NA	0/6	0.005 to 0.005	NA	NA	22 C	NA	NA	No	ND
	95-47-6	O-XYLENE (1,2-DIMETHYLBENZENE)	NA	NA	mg/kg	NA	0/6	0.005 to 0.005	NA	NA	280 sat	NA	NA	No	ND
	000100-42-5	STYRENE	NA	NA	mg/kg	NA	0/6	0.005 to 0.005	NA	NA	1700 sat	NA	NA	No	ND
	1634-04-4	TERT-BUTYL METHYL ETHER	NA	NA	mg/kg	NA	0/6	0.005 to 0.005	NA	NA	1800 C	NA	NA	No	ND
	000127-18-4	TETRACHLOROETHYLENE (PCE)	NA	NA	mg/kg	NA	0/6	0.005 to 0.005	NA	NA	1.7 C	NA	NA	No	ND
	000108-88-3	TOLUENE	NA	NA	mg/kg	NA	0/6	0.005 to 0.005	NA	NA	520 sat	NA	NA	No	ND
	000156-60-5	TRANS-1,2-DICHLOROETHENE	NA	NA	mg/kg	NA	0/6	0.005 to 0.005	NA	NA	240 N	NA	NA	No	ND
	010061-02-6	TRANS-1,3-DICHLOROPROPENE	NA	NA	mg/kg	NA	0/6	0.005 to 0.005	NA	NA	1.7 C	NA	NA	No	ND

Table 2.6

OCCURRENCE, DISTRIBUTION AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN

State Marine Superfund Site, Port Arthur, Texas

Scenario Timeframe: Current/Future
Medium: Soil
Exposure Medium: Soil (0-1 ft)

Exposure Point	CAS Number	Chemical	Minimum Concentration Qualifier	Maximum Concentration Qualifier	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration Used for Screening (1)	Background Value (2)	Screening Toxicity Value (N/C) (3)	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag	Rationale for Selection or Deletion (4)
	000079-01-6	TRICHLOROETHYLENE (TCE)	NA	NA	mg/kg	NA	0/6	0.005 to 0.005	NA	NA	0.1 C	NA	NA	No	ND
	000075-69-4	TRICHLOROFLUOROMETHANE	NA	NA	mg/kg	NA	0/6	0.005 to 0.005	NA	NA	1400 N	NA	NA	No	ND
	000075-01-4	VINYL CHLORIDE	NA	NA	mg/kg	NA	0/6	0.005 to 0.005	NA	NA	0.43 C	NA	NA	No	ND

(1) Maximum detected concentration initially used; if screening level exceeded, mean (lead only) or 95% UCL were used for screening.

(2) These background values were calculated from a small data set and are not recommended for definitive comparisons.

(3) Medium Specific Standard Levels, December, 2004, U.S. EPA Region VI. Industrial Outdoor Worker.
Screening level for thallium sulfate used as a surrogate for thallium.
Screening level for pyrene used as a surrogate for benzo(g,h,i)perylene and phenanthrene.
Screening level for acenaphthene used as a surrogate for acenaphthylene.
Screening level for napthalene used as a surrogate for 2-methylnapthalene.
Screening level for naphthalene used as a surrogate for 2-methylnaphthalene.
Screening level for 4-nitrophenol used as a surrogate for 2-nitrophenol .
Screening level for 2-nitroaniline used as a surrogate for 3-nitroaniline and 4-nitroaniline.
Screening level for endosulfan used as a surrogate for endosulfan sulfate, alpha-endosulfan and beta-endosulfan.
Screening level for chlordane used as a surrogate for alpha-chlordane and gamma-chlordane.
Screening level for HCH-technical (BHC-technical) used as a surrogate for delta-HCH (delta-BHC).
Screening level for endrin used as a surrogate for endrin aldehyde and endrin ketone.
Screening level for 1,2,4-trichlorobenzene used as a surrogate for 1,3,5-trichlorobenzene.
Screening level for bromomethane used as a surrogate for bromochloromethane.
Screening level for 1,3-dichloropropene used as a surrogate for cis-1,3-dichloropropene and trans-1,3-dichloropropene.

(4) Rationale Codes

Selection Reason:
- Above Screening Levels (ASL)

Deletion Reason:
- No Toxicity Information (NTX)
- Essential Nutrient (Nut)
- Below Screening Level (BSL)
- Not Detected (ND)
- Site Concentrations Consistent with Background (Bkgd)

ARAR/TBC = Applicable or Relevant and Appropriate Requirement/To Be Considered
COPC = Chemical of Potential Concern
C = Screening level is based on a carcinogenic endpoint.
max = Screening level is based on a ceiling limit.
mg/kg = Milligrams per kilogram
NA = Not available
N = Screening level is based on a noncarcinogenic endpoint.
sat = Screening level is based on soil saturation.

Qualifiers:
D = Result was derived from analysis of a dilution
J = Estimated value.
v = Low biased. Actual concentration may be higher than the concentraiton reported.
L = Reported concentration is < CRQL (contract-required quantitation limit)
Q = Severe QC or quantitation problem - no result reported but analyte is confirmed as qualitatively pre
K = Result is estimated but bias is unknown
^ = High biased. Actual concentration may be lower than the concentration reported.
H = Result is likely biased high
T = Identification is questionable due to absence of other commonly coexisting pesticides.
* = Result not recommended for use due to associated QA/QC performance inferior to that from other a

Table 2.7

OCCURRENCE, DISTRIBUTION AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN

State Marine Superfund Site, Port Arthur, Texas

Scenario Timeframe: Current/Future
Medium: Soil
Exposure Medium: Soil (0-5 ft)

Exposure Point	CAS Number	Chemical	Minimum Concentration Qualifier		Maximum Concentration Qualifier		Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration Used for Screening (1)	Background Value (2)	Screening Toxicity Value (N/C) (3)		Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag	Rationale for Selection or Deletion (4)
Soil at Nonsource Areas	007429-90-5	ALUMINUM	841	=	19600	=	mg/Kg	SM082	56/56	44.3 to 60	19600	24600	100000	max	NA	NA	No	BSL
	007440-36-0	ANTIMONY	0.8	LJvQ	26.3	JvL	mg/Kg	SM085	28/49	0.62 to 18	26.3	NA	450	N	NA	NA	No	BSL
	007440-38-2	ARSENIC	1.7	LQ	48.7	=	mg/Kg	SM098	53/56	0.84 to 7.8	48.7	32.6	1.8	C	NA	NA	No	Bkgd
	007440-39-3	BARIUM	40.7	LQ	682	=	mg/Kg	SM077	56/56	44.3 to 60	682	966	79000	N	NA	NA	No	BSL
	007440-41-7	BERYLLIUM	0.12	LQ	27	=	mg/Kg	SM95-SO-13	53/56	0.07 to 1.5	27	2.5	2200	N	NA	NA	No	BSL
	007440-43-9	CADMIUM	0.18	LQ	11.5	=	mg/Kg	SM098	27/56	0.1 to 1.5	11.5	NA	560	N	NA	NA	No	BSL
	007440-70-2	CALCIUM	577	LQ	130000	=	mg/Kg	SM046	56/56	1110 to 1500	130000	88800	NA		NA	NA	No	Nut
	007440-47-3	CHROMIUM, TOTAL	2.6	JK	81.7	=	mg/Kg	SM098	56/56	2.2 to 3	81.7	78.1	500	C	NA	NA	No	BSL
	007440-48-4	COBALT	0.81	LQ	65.6	=	mg/Kg	SM95-SO-13	56/56	11.1 to 15	65.6	33.2	2100	C	NA	NA	No	BSL
	007440-50-8	COPPER	5.6	LQ	5480	JvL	mg/Kg	SM078	56/56	5.5 to 7.5	5480	123	42000	N	NA	NA	No	BSL
	000057-12-5	CYANIDE	0.12	LQ	0.37	LQ	mg/Kg	SM058	8/56	0.11 to 0.68	0.37	NA	14000	N	NA	NA	No	BSL
	007439-89-6	IRON	4420	=	157000	=	mg/Kg	SM098	56/56	22.2 to 30	157000	247000	100000	max	NA	NA	No	Bkgd
	007439-92-1	LEAD	8.6	=	4090	=	mg/Kg	SM95-SO-13	56/56	0.67 to 0.9	226	103	800		NA	NA	No	BSL
	007439-95-4	MAGNESIUM	197	LQ	4220	=	mg/Kg	SM077	56/56	1110 to 1500	4220	6120	NA		NA	NA	No	Nut
	007439-96-5	MANGANESE	24.9	JK	1360	J	mg/Kg	SM95-SO-13	56/56	3.3 to 4.5	1360	2090	35000	N	NA	NA	No	BSL
	007439-97-6	MERCURY	0.08	LQ	0.54	=	mg/Kg	SM079	17/56	0.06 to 0.14	0.54	NA	340		NA	NA	No	BSL
	007440-02-0	NICKEL	1.4	LQ	243	=	mg/Kg	SM95-SO-13	56/56	8.9 to 12	243	90.5	23000	N	NA	NA	No	BSL
	007440-09-7	POTASSIUM	278	LQ	2330	=	mg/Kg	SM065	56/56	1110 to 1500	2330	3750	NA		NA	NA	No	Nut
	007782-49-2	SELENIUM	0.65	LQ	4.3	=	mg/Kg	SM95-SO-13	4/56	0.51 to 1.4	4.3	NA	5700	N	NA	NA	No	BSL
	007440-22-4	SILVER	0.24	LQ	8.3	=	mg/Kg	SM098	55/56	0.42 to 3	8.3	0.737	5700	N	NA	NA	No	BSL
	007440-23-5	SODIUM	137	LJvQ	2830	=	mg/Kg	SM95-SO-13	56/56	1110 to 1500	2830	1170	NA		NA	NA	No	Nut
	007440-28-0	THALLIUM	0.96	LQ	5.3	Jv	mg/Kg	SM95-SO-13	11/56	0.81 to 5.9	5.3	NA	91	N	NA	NA	No	Bkgd
	007440-62-2	VANADIUM	4.2	LQ	26.8	=	mg/Kg	SM090	56/56	11.1 to 15	26.8	81.4	1100	N	NA	NA	No	BSL
	007440-66-6	ZINC	12.6	=	38700	=	mg/Kg	SM95-SO-13	56/56	4.4 to 6	38700	203	100000	max	NA	NA	No	BSL
	309-00- 2	ALDRIN	NA		NA		mg/kg	NA	0/2	0.0017 to 0.0017		NA	0.11	C	NA	NA	No	ND
	319-84-6	ALPHA BHC (ALPHA HEXACHLOROCYCLOHEXANE)	NA		NA		mg/kg	NA	0/2	0.0017 to 0.0017		NA	0.4	C	NA	NA	No	ND
	959-98-8	ALPHA ENDOSULFAN	NA		NA		mg/kg	NA	0/2	0.0017 to 0.0017		NA	4100	N	NA	NA	No	ND
	510-37- 1	ALPHA-CHLORDANE	NA		NA		mg/kg	NA	0/2	0.0017 to 0.0017		NA	7.2	C	NA	NA	No	ND
	319-85-7	BETA BHC (BETA HEXACHLOROCYCLOHEXANE)	NA		NA		mg/kg	NA	0/2	0.0017 to 0.0017		NA	1.4	C	NA	NA	No	ND
	33213-65-9	BETA ENDOSULFAN	NA		NA		mg/kg	NA	0/2	0.0033 to 0.0033		NA	4100	N	NA	NA	No	ND
	319-86-8	DELTA BHC (DELTA HEXACHLOROCYCLOHEXANE)	NA		NA		mg/kg	NA	0/2	0.0017 to 0.0017		NA	1.4	C	NA	NA	No	ND
	60-57-1	DIELDRIN	0.0099	J	0.0099	J	mg/kg	SM95-SO-18	1/2	0.0033 to 0.0033	0.0099	NA	0.12	C	NA	NA	No	BSL
	103-10- 7	ENDOSULFAN SULFATE	NA		NA		mg/kg	NA	0/2	0.0033 to 0.0033		NA	4100	N	NA	NA	No	ND
	72-20-8	ENDRIN	NA		NA		mg/kg	NA	0/2	0.0033 to 0.0033		NA	210	N	NA	NA	No	ND
	742-19- 3	ENDRIN ALDEHYDE	0.031	JT	0.031	JT	mg/kg	SM95-SO-18	1/2	0.0033 to 0.0033	0.031	NA	210	N	NA	NA	No	BSL
	53494-70-5	ENDRIN KETONE	NA		NA		mg/kg	NA	0/2	0.0033 to 0.0033		NA	210	N	NA	NA	No	ND
	58-89-9	GAMMA BHC (LINDANE)	NA		NA		mg/kg	NA	0/2	0.0017 to 0.0017		NA	1.9	C	NA	NA	No	ND
	510-37- 4	GAMMA-CHLORDANE	NA		NA		mg/kg	NA	0/2	0.0017 to 0.0017		NA	7.2	C	NA	NA	No	ND
	76-44-8	HEPTACHLOR	NA		NA		mg/kg	NA	0/2	0.0017 to 0.0017		NA	0.43	C	NA	NA	No	ND
	102-45- 7	HEPTACHLOR EPOXIDE	0.024	J	0.024	J	mg/kg	SM95-SO-18	1/2	0.0017 to 0.0017	0.024	NA	0.21	C	NA	NA	No	BSL
	72-43-5	METHOXYCHLOR	NA		NA		mg/kg	NA	0/2	0.017 to 0.017		NA	3400	N	NA	NA	No	ND
	72-54-8	P,P'-DDD	0.011	JT	0.011	JT	mg/kg	SM95-SO-18	1/2	0.0033 to 0.0033	0.011	NA	11	C	NA	NA	No	BSL
	72-55-9	P,P'-DDE	NA		NA		mg/kg	NA	0/2	0.0033 to 0.0033		NA	7.8	C	NA	NA	No	ND
	50-29-3	P,P'-DDT	NA		NA		mg/kg	NA	0/2	0.0033 to 0.0033		NA	7.8	C	NA	NA	No	ND
	12674-11-2	PCB-1016 (AROCHLOR 1016)	NA		NA		mg/kg	NA	0/2	0.033 to 0.033		NA	24	C	NA	NA	No	ND
	11104-28-2	PCB-1221 (AROCHLOR 1221)	NA		NA		mg/kg	NA	0/2	0.033 to 0.033		NA	0.83	C	NA	NA	No	ND
	11141-16-5	PCB-1232 (AROCHLOR 1232)	NA		NA		mg/kg	NA	0/2	0.033 to 0.033		NA	0.83	C	NA	NA	No	ND
	53469-21-9	PCB-1242 (AROCHLOR 1242)	NA		NA		mg/kg	NA	0/2	0.033 to 0.033		NA	0.83	C	NA	NA	No	ND
	12672-29-6	PCB-1248 (AROCHLOR 1248)	NA		NA		mg/kg	NA	0/2	0.033 to 0.033		NA	0.83	C	NA	NA	No	ND
	11097-69-1	PCB-1254 (AROCHLOR 1254)	NA		NA		mg/kg	NA	0/2	0.033 to 0.033		NA	0.83	C	NA	NA	No	ND
	11096-82-5	PCB-1260 (AROCHLOR 1260)	NA		NA		mg/kg	NA	0/2	0.033 to 0.033		NA	0.83	C	NA	NA	No	ND
	800-13- 5	TOXAPHENE	NA		NA		mg/kg	NA	0/2	0.17 to 0.17		NA	1.7	C	NA	NA	No	ND
	95-94-3	1,2,4,5-TETRACHLOROBENZENE	NA		NA		mg/kg	NA	0/2	0.17 to 0.17		NA	210	N	NA	NA	No	ND
	000108-60-1	2,2'-OXYBIS(1-CHLORO)PROPANE	NA		NA		mg/kg	NA	0/57	0.17 to 6.6		NA	NA		NA	NA	No	ND
	58-90-2	2,3,4,6-TETRACHLOROPHENOL	NA		NA		mg/kg	NA	0/2	0.17 to 0.17		NA	21000	N	NA	NA	No	ND
	000095-95-4	2,4,5-TRICHLOROPHENOL	NA		NA		mg/kg	NA	0/57	0.17 to 17		NA	68000	N	NA	NA	No	ND
	000088-06-2	2,4,6-TRICHLOROPHENOL	NA		NA		mg/kg	NA	0/57	0.17 to 6.6		NA	170	C	NA	NA	No	ND

Table 2.7

OCCURRENCE, DISTRIBUTION AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN

State Marine Superfund Site, Port Arthur, Texas

Scenario Timeframe: Current/Future
Medium: Soil
Exposure Medium: Soil (0-5 ft)

Exposure Point	CAS Number	Chemical	Minimum Concentration Qualifier	Maximum Concentration Qualifier	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration Used for Screening (1)	Background Value (2)	Screening Toxicity Value (N/C) (3)	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag	Rationale for Selection or Deletion (4)
	000120-83-2	2,4-DICHLOROPHENOL	NA	NA	mg/kg	NA	0/57	0.17 to 6.6		NA	2100 N	NA	NA	No	ND
	000105-67-9	2,4-DIMETHYLPHENOL	NA	NA	mg/kg	NA	0/57	0.17 to 6.6		NA	14000 N	NA	NA	No	ND
	000051-28-5	2,4-DINITROPHENOL	NA	NA	mg/kg	NA	0/57	0.33 to 17		NA	1400 N	NA	NA	No	ND
	000121-14-2	2,4-DINITROTOLUENE	NA	NA	mg/kg	NA	0/57	0.17 to 6.6		NA	1400 N	NA	NA	No	ND
	000606-20-2	2,6-DINITROTOLUENE	NA	NA	mg/kg	NA	0/57	0.17 to 6.6		NA	680 N	NA	NA	No	ND
	000091-58-7	2-CHLORONAPHTHALENE	NA	NA	mg/kg	NA	0/57	0.17 to 6.6		NA	26000 N	NA	NA	No	ND
	000095-57-8	2-CHLOROPHENOL	NA	NA	mg/kg	NA	0/57	0.17 to 6.6		NA	260 N	NA	NA	No	ND
	000091-57-6	2-METHYLNAPHTHALENE	0.013 LJQK	1.9 LJQK	mg/Kg	SM087	15/57	0.17 to 6.6	1.9	NA	210 N	NA	NA	No	BSL
	000095-48-7	2-METHYLPHENOL (O-CRESOL)	NA	NA	mg/kg	NA	0/57	0.17 to 6.6		NA	34000 N	NA	NA	No	ND
	000088-74-4	2-NITROANILINE	NA	NA	mg/kg	NA	0/57	0.33 to 17		NA	2000 N	NA	NA	No	ND
	000088-75-5	2-NITROPHENOL	NA	NA	mg/kg	NA	0/57	0.17 to 6.6		NA	5500 N	NA	NA	No	ND
	000091-94-1	3,3'-DICHLOROBENZIDINE	NA	NA	mg/kg	NA	0/57	0.17 to 6.6		NA	4.3 C	NA	NA	No	ND
	000099-09-2	3-NITROANILINE	NA	NA	mg/kg	NA	0/57	0.33 to 17		NA	2000 N	NA	NA	No	ND
	000534-52-1	4,6-DINITRO-2-METHYLPHENOL	NA	NA	mg/kg	NA	0/57	0.33 to 17		NA	NA	NA	NA	No	ND
	000101-55-3	4-BROMOPHENYL PHENYL ETHER	NA	NA	mg/kg	NA	0/57	0.17 to 6.6		NA	NA	NA	NA	No	ND
	000059-50-7	4-CHLORO-3-METHYLPHENOL	NA	NA	mg/kg	NA	0/57	0.17 to 6.6		NA	NA	NA	NA	No	ND
	000106-47-8	4-CHLOROANILINE	NA	NA	mg/kg	NA	0/57	0.17 to 6.6		NA	2700 N	NA	NA	No	ND
	007005-72-3	4-CHLOROPHENYL PHENYL ETHER	NA	NA	mg/kg	NA	0/57	0.17 to 6.6		NA	NA	NA	NA	No	ND
	000106-44-5	4-METHYLPHENOL (P-CRESOL)	0.021 LJQK	0.22 LJQK	mg/kg	SM087	2/57	0.17 to 6.6	0.22	NA	3400 N	NA	NA	No	BSL
	000100-01-6	4-NITROANILINE	NA	NA	mg/kg	NA	0/57	0.33 to 17		NA	2000 N	NA	NA	No	ND
	000100-02-7	4-NITROPHENOL	NA	NA	mg/kg	NA	0/57	0.33 to 17		NA	5500 N	NA	NA	No	ND
	000083-32-9	ACENAPHTHENE	0.012 LJQ	9.6 =	mg/kg	SM087	6/57	0.17 to 6.6	9.6	NA	33000 N	NA	NA	No	BSL
	000208-96-8	ACENAPHTHYLENE	0.011 LJQ	5 =	mg/kg	SM058	28/57	0.17 to 6.6	5	NA	33000 N	NA	NA	No	BSL
	000098-86-2	ACETOPHENONE	0.013 LJQ, LJQK	0.82 LJQK	mg/kg	SM052	12/57	0.17 to 6.6	0.82	NA	1700 sat	NA	NA	No	BSL
	000120-12-7	ANTHRACENE	0.01 LJQ	13 =	mg/Kg	SM087	35/57	0.35 to 6.6	13	NA	100000 max	NA	NA	No	BSL
	001912-24-9	ATRAZINE	NA	NA	mg/kg	NA	0/57	0.17 to 6.6		NA	8.6 C	NA	NA	No	ND
	000100-52-7	BENZALDEHYDE	0.007 LJQ, LJQK, Q	0.15 LJQK	mg/kg	SM052	33/57	0.17 to 6.6	0.15	NA	68000 N	NA	NA	No	BSL
	000056-55-3	BENZO(A)ANTHRACENE	0.012 LJQK	24 D	mg/Kg	SM087	41/57	0.35 to 12	3.3	NA	2.3 C	NA	NA	Yes	ASL
	203-33-8	BENZO(A)-FLUORANTHENE	NA	NA	mg/kg	NA	0/1	0.35 to 0.35		NA	2.3 C	NA	NA	No	ND
	000050-32-8	BENZO(A)PYRENE	0.012 LJQ	19 D	mg/Kg	SM087	50/57	0.35 to 12	2.7	NA	0.23 C	NA	NA	Yes	ASL
	000205-99-2	BENZO(B)FLUORANTHENE	0.019 LJQ, LJQK	25 D	mg/kg	SM087	47/57	0.17 to 12	3.5	NA	2.3 C	NA	NA	Yes	ASL
	000191-24-2	BENZO(G,H,I)PERYLENE	0.051 LJQ	4.3 =	mg/kg	SM087	24/57	0.17 to 6.6	4.3	NA	32000 N	NA	NA	No	BSL
	000207-08-9	BENZO(K)FLUORANTHENE	0.02 LJ	12 =	mg/kg	SM087	34/57	0.17 to 6.6	12	NA	23 C	NA	NA	No	BSL
	000085-68-7	BENZYL BUTYL PHTHALATE	0.016 LJQK	0.26 LJQK	mg/kg	SM058	9/57	0.17 to 6.6	0.26	NA	240 sat	NA	NA	No	BSL
	000092-52-4	BIPHENYL (DIPHENYL)	0.026 Q	0.5 LJQK	mg/kg	SM087	4/57	0.17 to 6.6	0.5	NA	26000 N	NA	NA	No	BSL
	000111-91-1	BIS(2-CHLOROETHOXY) METHANE	NA	NA	mg/kg	NA	0/57	0.17 to 6.6		NA	NA	NA	NA	No	ND
	000111-44-4	BIS(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHER)	NA	NA	mg/kg	NA	0/57	0.17 to 6.6		NA	0.62 C	NA	NA	No	ND
	000117-81-7	BIS(2-ETHYLHEXYL) PHTHALATE	0.031 LJQK	3.2 =	mg/kg	SM095	20/57	0.17 to 6.6	3.2	NA	140 C	NA	NA	No	BSL
	000105-60-2	CAPROLACTAM	NA	NA	mg/kg	NA	0/57	0.17 to 6.6		NA	100000 max	NA	NA	No	ND
	000086-74-8	CARBAZOLE	0.012 Q	7.5 =	mg/kg	SM087	18/57	0.17 to 6.6	7.5	NA	96 C	NA	NA	No	BSL
	000218-01-9	CHRYSENE	0.021 Q	21 D	mg/Kg	SM087	44/57	0.35 to 12	21	NA	230 C	NA	NA	No	BSL
	000053-70-3	DIBENZ(A,H)ANTHRACENE	0.014 LJQ	2.2 LJQK	mg/kg	SM087	30/57	0.17 to 6.6	0.48	NA	0.23 C	NA	NA	Yes	ASL
	000132-64-9	DIBENZOFURAN	0.011 LJQ	3.8 =	mg/kg	SM087	7/57	0.17 to 6.6	3.8	NA	1700 N	NA	NA	No	BSL
	000084-66-2	DIETHYL PHTHALATE	NA	NA	mg/kg	NA	0/57	0.17 to 6.6		NA	100000 max	NA	NA	No	ND
	000131-11-3	DIMETHYL PHTHALATE	NA	NA	mg/kg	NA	0/57	0.17 to 6.6		NA	100000 max	NA	NA	No	ND
	000084-74-2	DI-N-BUTYL PHTHALATE	0.014 J	0.44 =	mg/Kg	SM070	6/57	0.37 to 6.6	0.44	NA	68000 N	NA	NA	No	BSL
	000117-84-0	DI-N-OCTYLPHTHALATE	0.027 LJQK	0.091 LJQK	mg/kg	SM080	4/57	0.17 to 6.6	0.091	NA	27000 N	NA	NA	No	BSL
	000206-44-0	FLUORANTHENE	0.01 LJQK	62 D	mg/Kg	SM087	48/57	0.37 to 12	62	NA	24000 N	NA	NA	No	BSL
	000086-73-7	FLUORENE	0.013 LJQK	8.1 =	mg/Kg	SM087	9/57	0.35 to 6.6	8.1	NA	26000 N	NA	NA	No	BSL
	000118-74-1	HEXACHLOROBENZENE	NA	NA	mg/kg	NA	0/57	0.17 to 6.6		NA	1.2 C	NA	NA	No	ND
	000087-68-3	HEXACHLOROBUTADIENE	NA	NA	mg/kg	NA	0/57	0.17 to 6.6		NA	25 C	NA	NA	No	ND
	000077-47-4	HEXACHLOROCYCLOPENTADIENE	NA	NA	mg/kg	NA	0/57	0.17 to 6.6		NA	4100 N	NA	NA	No	ND
	000067-72-1	HEXACHLOROETHANE	NA	NA	mg/kg	NA	0/57	0.17 to 6.6		NA	140 C	NA	NA	No	ND
	000193-39-5	INDENO(1,2,3-C,D)PYRENE	0.016 Q	6.9 =	mg/kg	SM087	43/57	0.17 to 6.6	1.1	NA	2.3 C	NA	NA	No	BSL
	000078-59-1	ISOPHORONE	NA	NA	mg/kg	NA	0/57	0.17 to 6.6		NA	2000 C	NA	NA	No	ND
	000091-20-3	NAPHTHALENE	0.014 LJQ	6.8 =	mg/Kg	SM087	14/57	0.17 to 6.6	6.8	NA	210 N	NA	NA	No	BSL
	000098-95-3	NITROBENZENE	NA	NA	mg/kg	NA	0/57	0.17 to 6.6		NA	110 N	NA	NA	No	ND

Table 2.7

OCCURRENCE, DISTRIBUTION AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN

State Marine Superfund Site, Port Arthur, Texas

Scenario Timeframe: Current/Future
Medium: Soil
Exposure Medium: Soil (0-5 ft)

Exposure Point	CAS Number	Chemical	Minimum Concentration Qualifier	Maximum Concentration Qualifier	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration Used for Screening (1)	Background Value (2)	Screening Toxicity Value (N/C) (3)	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag	Rationale for Selection or Deletion (4)
	000621-64-7	N-NITROSODI-N-PROPYLAMINE	NA	NA	mg/kg	NA	0/57	0.17 to 6.6		NA	0.27 C	NA	NA	No	ND
	000086-30-6	N-NITROSODIPHENYLAMINE	NA	NA	mg/kg	NA	0/57	0.17 to 6.6		NA	390 C	NA	NA	No	ND
	000087-86-5	PENTACHLOROPHENOL	NA	NA	mg/kg	NA	0/57	0.33 to 17		NA	10 C	NA	NA	No	ND
	000085-01-8	PHENANTHRENE	0.011 LJQK	53 D	mg/Kg	SM087	39/57	0.37 to 12	53	NA	32000 N	NA	NA	No	BSL
	000108-95-2	PHENOL	NA	NA	mg/kg	NA	0/57	0.17 to 6.6		NA	100000 max	NA	NA	No	ND
	000129-00-0	PYRENE	0.017 LJQK	40 D	mg/Kg	SM087	45/57	0.37 to 12	40	NA	32000 N	NA	NA	No	BSL
	000071-55-6	1,1,1-TRICHLOROETHANE	NA	NA	mg/kg	NA	0/2	0.005 to 0.005		NA	1400 sat	NA	NA	No	ND
	000079-34-5	1,1,2,2-TETRACHLOROETHANE	NA	NA	mg/kg	NA	0/2	0.005 to 0.005		NA	0.97 C	NA	NA	No	ND
	000076-13-1	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	NA	NA	mg/kg	NA	0/2	0.005 to 0.005		NA	5600 sat	NA	NA	No	ND
	000079-00-5	1,1,2-TRICHLOROETHANE	NA	NA	mg/kg	NA	0/2	0.005 to 0.005		NA	2.1 C	NA	NA	No	ND
	000075-34-3	1,1-DICHLOROETHANE	NA	NA	mg/kg	NA	0/2	0.005 to 0.005		NA	2300 N	NA	NA	No	ND
	000075-35-4	1,1-DICHLOROETHENE	NA	NA	mg/kg	NA	0/2	0.005 to 0.005		NA	470 N	NA	NA	No	ND
	87616	1,2,3-TRICHLOROBENZENE	NA	NA	mg/kg	NA	0/2	0.005 to 0.005		NA	260 N	NA	NA	No	ND
	000120-82-1	1,2,4-TRICHLOROBENZENE	NA	NA	mg/kg	NA	0/2	0.005 to 0.005		NA	260 N	NA	NA	No	ND
	87-61-6	1,2-DIBROMO-3-CHLOROPROPANE	NA	NA	mg/kg	NA	0/2	0.005 to 0.005		NA	2.2 C	NA	NA	No	ND
	000106-93-4	1,2-DIBROMOETHANE (ETHYLENE DIBROMIDE)	NA	NA	mg/kg	NA	0/2	0.005 to 0.005		NA	0.07 C	NA	NA	No	ND
	000095-50-1	1,2-DICHLOROBENZENE	NA	NA	mg/kg	NA	0/2	0.005 to 0.005		NA	370 sat	NA	NA	No	ND
	000107-06-2	1,2-DICHLOROETHANE	NA	NA	mg/kg	NA	0/2	0.005 to 0.005		NA	0.84 C	NA	NA	No	ND
	000078-87-5	1,2-DICHLOROPROPANE	NA	NA	mg/kg	NA	0/2	0.005 to 0.005		NA	0.85 C	NA	NA	No	ND
	000541-73-1	1,3-DICHLOROBENZENE	NA	NA	mg/kg	NA	0/2	0.005 to 0.005		NA	150 N	NA	NA	No	ND
	000106-46-7	1,4-DICHLOROBENZENE	NA	NA	mg/kg	NA	0/2	0.005 to 0.005		NA	8.1 C	NA	NA	No	ND
	123-91-1	1,4-DIOXANE (P-DIOXANE)	NA	NA	mg/kg	NA	0/2	0.1 to 0.1		NA	170 C	NA	NA	No	ND
	000591-78-6	2-HEXANONE	NA	NA	mg/kg	NA	0/2	0.01 to 0.01		NA	NA	NA	NA	No	ND
	000067-64-1	ACETONE	NA	NA	mg/kg	NA	0/2	0.01 to 0.01		NA	100000 max	NA	NA	No	ND
	000071-43-2	BENZENE	NA	NA	mg/kg	NA	0/2	0.005 to 0.005		NA	1.6 C	NA	NA	No	ND
	74975	BROMOCHLOROMETHANE	NA	NA	mg/kg	NA	0/2	0.005 to 0.005		NA	15 N	NA	NA	No	ND
	000075-27-4	BROMODICHLOROMETHANE	NA	NA	mg/kg	NA	0/2	0.005 to 0.005		NA	2.6 C	NA	NA	No	ND
	000075-25-2	BROMOFORM	NA	NA	mg/kg	NA	0/2	0.005 to 0.005		NA	240 C	NA	NA	No	ND
	000074-83-9	BROMOMETHANE	NA	NA	mg/kg	NA	0/2	0.005 to 0.005		NA	15 N	NA	NA	No	ND
	000075-15-0	CARBON DISULFIDE	NA	NA	mg/kg	NA	0/2	0.005 to 0.005		NA	720 sat	NA	NA	No	ND
	000056-23-5	CARBON TETRACHLORIDE	NA	NA	mg/kg	NA	0/2	0.005 to 0.005		NA	0.58 C	NA	NA	No	ND
	000108-90-7	CHLOROBENZENE	NA	NA	mg/kg	NA	0/2	0.005 to 0.005		NA	600 N	NA	NA	No	ND
	000075-00-3	CHLOROETHANE	NA	NA	mg/kg	NA	0/2	0.005 to 0.005		NA	NA	NA	NA	No	ND
	000067-66-3	CHLOROFORM	NA	NA	mg/kg	NA	0/2	0.005 to 0.005		NA	0.58 C	NA	NA	No	ND
	000074-87-3	CHLOROMETHANE	NA	NA	mg/kg	NA	0/2	0.005 to 0.005		NA	3 C	NA	NA	No	ND
	000156-59-2	CIS-1,2-DICHLOROETHYLENE	NA	NA	mg/kg	NA	0/2	0.005 to 0.005		NA	160 N	NA	NA	No	ND
	010061-01-5	CIS-1,3-DICHLOROPROPENE	NA	NA	mg/kg	NA	0/2	0.005 to 0.005		NA	1.7 C	NA	NA	No	ND
	110-82-7	CYCLOHEXANE	NA	NA	mg/kg	NA	0/2	0.005 to 0.005		NA	NA	NA	NA	No	ND
	000124-48-1	DIBROMOCHLOROMETHANE	NA	NA	mg/kg	NA	0/2	0.005 to 0.005		NA	2.6 C	NA	NA	No	ND
	000075-71-8	DICHLORODIFLUOROMETHANE	NA	NA	mg/kg	NA	0/2	0.005 to 0.005		NA	340 sat	NA	NA	No	ND
	000100-41-4	ETHYLBENZENE	NA	NA	mg/kg	NA	0/2	0.005 to 0.005		NA	230 sat	NA	NA	No	ND
	000098-82-8	ISOPROPYLBENZENE (CUMENE)	NA	NA	mg/kg	NA	0/2	0.005 to 0.005		NA	580 N	NA	NA	No	ND
	108-38-3/106-42-3	M,P-XYLENE (SUM OF ISOMERS)	NA	NA	mg/kg	NA	0/2	0.005 to 0.005		NA	210 N	NA	NA	No	ND
	79-20-9	METHYL ACETATE	NA	NA	mg/kg	NA	0/2	0.005 to 0.005		NA	100000 max	NA	NA	No	ND
	000078-93-3	METHYL ETHYL KETONE (2-BUTANONE)	NA	NA	mg/kg	NA	0/2	0.01 to 0.01		NA	34000 sat	NA	NA	No	ND
	000108-10-1	METHYL ISOBUTYL KETONE (4-METHYL-2-PENTANONE)	NA	NA	mg/kg	NA	0/2	0.01 to 0.01		NA	17000 sat	NA	NA	No	ND
	108-87-2	METHYLCYCLOHEXANE	NA	NA	mg/kg	NA	0/2	0.005 to 0.005		NA	140 sat	NA	NA	No	ND
	000075-09-2	METHYLENE CHLORIDE	NA	NA	mg/kg	NA	0/2	0.005 to 0.005		NA	22 C	NA	NA	No	ND
	95-47-6	O-XYLENE (1,2-DIMETHYLBENZENE)	NA	NA	mg/kg	NA	0/2	0.005 to 0.005		NA	280 sat	NA	NA	No	ND
	000100-42-5	STYRENE	NA	NA	mg/kg	NA	0/2	0.005 to 0.005		NA	1700 sat	NA	NA	No	ND
	1634-04-4	TERT-BUTYL METHYL ETHER	NA	NA	mg/kg	NA	0/2	0.005 to 0.005		NA	1800 C	NA	NA	No	ND
	000127-18-4	TETRACHLOROETHYLENE(PCE)	0.001 J	0.001 J	mg/kg	SM95-SO-18	1/2	0.005 to 0.005	0.001	NA	1.7 C	NA	NA	No	BSL
	1634-04-4	TOLUENE	NA	NA	mg/kg	NA	0/2	0.005 to 0.005		NA	520 sat	NA	NA	No	ND
	000156-60-5	TRANS-1,2-DICHLOROETHENE	NA	NA	mg/kg	NA	0/2	0.005 to 0.005		NA	240 N	NA	NA	No	ND
	010061-02-6	TRANS-1,3-DICHLOROPROPENE	NA	NA	mg/kg	NA	0/2	0.005 to 0.005		NA	1.7 C	NA	NA	No	ND
	25323-89-1	TRICHLOROETHANE	0.003 J	0.003 J	mg/Kg	SM95-SO-18	1/1	to	0.003	NA	2.1 C	NA	NA	No	BSL
	000079-01-6	TRICHLOROETHYLENE (TCE)	NA	NA	mg/kg	NA	0/2	0.005 to 0.005		NA	0.1 C	NA	NA	No	ND

Table 2.7
OCCURRENCE, DISTRIBUTION AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN
State Marine Superfund Site, Port Arthur, Texas

Scenario Timeframe: Current/Future
Medium: Soil
Exposure Medium: Soil (0-5 ft)

Exposure Point	CAS Number	Chemical	Minimum Concentration Qualifier	Maximum Concentration Qualifier	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration Used for Screening (1)	Background Value (2)	Screening Toxicity Value (N/C) (3)	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag	Rationale for Selection or Deletion (4)
	000075-69-4	TRICHLOROFLUOROMETHANE	NA	NA	mg/kg	NA	0/2	0.005 to 0.005		NA	1400 N	NA	NA	No	ND
	000075-01-4	VINYL CHLORIDE	NA	NA	mg/kg	NA	0/2	0.005 to 0.005		NA	0.43 C	NA	NA	No	ND

(1) Maximum detected concentration initially used; if screening level exceeded, mean (lead only) or 95% UCL were used for screening.
(2) These background values were calculated from a small data set and are not recommended for definitive comparisons.
(3) Medium Specific Standard Levels, December, 2004, U.S. EPA Region VI. Industrial Outdoor Worker.
Screening level for thallium sulfate used as a surrogate for thallium.
Screening level for pyrene used as a surrogate for benzo(g,h,i)perylene and phenanthrene.
Screening level for acenaphthene used as a surrogate for acenaphthylene.
Screening level for naphthalene used as a surrogate for 2-methylnaphthalene.
Screening level for 4-nitrophenol used as a surrogate for 2-nitrophenol.
Screening level for 2-nitroaniline used as a surrogate for 3-nitroaniline and 4-nitroaniline.
Screening level for endosulfan used as a surrogate for endosulfan sulfate, alpha-endosulfan and beta-endosulfan.
Screening level for chlordane used as a surrogate for alpha-chlordane and gamma-chlordane.
Screening level for HCH-technical (BHC-technical) used as a surrogate for delta-HCH (delta-BHC).
Screening level for endrin used as a surrogate for endrin aldehyde and endrin ketone.
Screening level for 1,2,4-trichlorobenzene used as a surrogate for 1,3,5-trichlorobenzene.
Screening level for bromomethane used as a surrogate for bromochloromethane.
Screening level for 1,3-dichloropropene used as a surrogate for cis-1,3-dichloropropene and trans-1,3-dichloropropene.
Screening level for benzo(b)fluoranthene used as a surrogate for benzo(a)-fluoranthene.
Screening level for 1,1,2-trichloroethane used as a surrogate for trichloroethane.
(4) Rationale Codes
Selection Reason: Above Screening Levels (ASL)
Deletion Reason: No Toxicity Information (NTX)
Essential Nutrient (Nut)
Below Screening Level (BSL)
Not Detected (ND)
Site Concentrations Consistent with Background (Bkgd)

ARAR/TBC = Applicable or Relevant and Appropriate Requirement/To Be Considered
COPC = Chemical of Potential Concern
C = Screening level is based on a carcinogenic endpoint.
max = Screening level is based on a ceiling limit.
mg/kg = Milligrams per kilogram
NA = Not available
N = Screening level is based on a noncarcinogenic endpoint.
sat = Screening level is based on soil saturation.

Qualifiers:
D = Result was derived from analysis of a dilution
J = Estimated value.
v = Low biased. Actual concentration may be higher than the concentraiton reported.
L = Reported concentration is < CRQL (contract-required quantitation limit)
Q = Severe QC or quantitation problem - no result reported but analyte is confirmed as qualitatively pre
K = Result is estimated but bias is unknown
^ = High biased. Actual concentration may be lower than the concentration reported.
T = Identification is questionable due to absence of other commonly coexisting pesticides.
* = Result not recommended for use due to associated QA/QC performance inferior to that from other a

Table 2.8
OCCURRENCE, DISTRIBUTION AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN
State Marine Superfund Site, Port Arthur, Texas

Scenario Timeframe: Current/Future
Medium: Sediment
Exposure Medium: Fish Tissue

Exposure Point	CAS Number	Chemical	Minimum Concentration Qualifier	Maximum Concentration Qualifier	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration Used for Screening (1)	Background Value (2)	Screening Toxicity Value (N/C) (3)	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag	Rationale for Selection or Deletion (4)
	RFW999-15-0	ACID VOLITILE SULFIDE	0.001 =	933 =	mg/kg	SM008	52/55	0.0006 to 48	933	NA	NA	NA	NA	No	Not Bio
	RFW999-14-1	TOTAL ORGANIC CARBON	1300 =	36000 =	mg/kg	SM003	23/23	300 to 500	36000	NA	NA	NA	NA	No	Not Bio
Fish Tissue	007429-90-5	ALUMINUM	273 JH	8820 JK	mg/kg	PB008	66/66	29.8 to 81.4	8820	NA	NA	NA	NA	No	Not Bio
	007440-36-0	ANTIMONY	0.2 BJK	16.1 JK	mg/kg	SM007	21/66	0.19 to 8.1	16.1	0.5	NA	NA	NA	No	Not Bio
	007440-38-2	ARSENIC	1.6 =	13.7 =	mg/kg	SM007	66/66	1.2 to 3.3	13.7	1.57	NA	NA	NA	No	Not Bio
	007440-39-3	BARIUM	10.8 JH	220 JK	mg/kg	PB003	66/66	1.2 to 3.3	220	8.98	NA	NA	NA	No	Not Bio
	007440-41-7	BERYLLIUM	0.1 B	2.7 =	mg/kg	SM95-SE-9	48/66	0.055 to 0.81	2.7	NA	NA	NA	NA	No	Not Bio
	007440-43-9	CADMIUM	0.04 B, BQ	1.49 =	mg/kg	SM003	56/66	0.05 to 0.65	1.49	0.106	2.5	NA	NA	No	BSL
	007440-70-2	CALCIUM	227 =	172000 JK	mg/kg	SM001	66/66	119 to 6630	172000	290	NA	NA	NA	No	Not Bio
	007440-47-3	CHROMIUM, TOTAL	1.6 =	87.2 JK	mg/kg	SM002	66/66	0.6 to 1.6	87.2	1.8	NA	NA	NA	No	Not Bio
	007440-48-4	COBALT	1.4 =	21.2 JK	mg/kg	SM012	66/66	0.6 to 1.6	21.2	2.01	NA	NA	NA	No	Not Bio
	007440-50-8	COPPER	1.4 =	313 =	mg/kg	SM008	61/62	0.02 to 2.7	137	NA	91	NA	NA	Yes	ASL
	000057-12-5	CYANIDE	0.27 B	0.55 B	mg/kg	SM003	4/66	0.15 to 1	0.55	NA	NA	NA	NA	No	Not Bio
	007439-89-6	IRON	3850 =	201000 JK	mg/kg	SM003	66/66	23.8 to 1330	201000	3360	NA	NA	NA	No	Not Bio
	007439-92-1	LEAD	4.3 =	942 =	mg/kg	SM003	66/66	1.1 to 14.6	942	3.26	NA	NA	NA	No	Not Bio
	007439-95-4	MAGNESIUM	189 =	4300 JK	mg/kg	SM042, SM044	66/66	119 to 326	4300	444	NA	NA	NA	No	Not Bio
	007439-96-5	MANGANESE	35.2 =	1500 =	mg/kg	SM002	66/66	1.8 to 4.9	1500	73.9	NA	NA	NA	No	Not Bio
	007439-97-6	MERCURY	0.011 B	0.18 =	mg/kg	SM008	21/66	0.047 to 0.21	0.18	NA	0.25	NA	NA	No	BSL
	007440-02-0	NICKEL	1.5 =	85 =	mg/kg	SM003	66/66	0.24 to 5.53	85	1.7	997	NA	NA	No	BSL
	007440-09-7	POTASSIUM	76.4 BJK	2460 JK	mg/kg	SM042	66/66	119 to 326	2460	258	NA	NA	NA	No	Not Bio
	007782-49-2	SELENIUM	0.13 B	5.9 JK	mg/kg	SM003	32/66	0.11 to 6.5	5.9	NA	11	NA	NA	No	BSL
	007440-22-4	SILVER	NA	NA	mg/kg	NA	0/66	0.083 to 0.83	NA	NA	NA	NA	NA	No	ND
	007440-23-5	SODIUM	432 =	5450 JK	mg/kg	PB008	66/66	119 to 326	5450	585	NA	NA	NA	No	Not Bio
	007440-28-0	THALLIUM	1 =	2.1 =	mg/kg	SM95-SE-8	3/66	0.23 to 1.7	2.1	NA	NA	NA	NA	No	Not Bio
	007440-62-2	VANADIUM	2.5 =	22.6 JK	mg/kg	PB008	66/66	0.6 to 1.6	22.6	4.33	NA	NA	NA	No	Not Bio
	007440-66-6	ZINC	14.2 =	3910 =	mg/kg	SM95-SE-9	66/66	0.11 to 1.46	3910	10.2	734	NA	NA	Yes	ASL
	001461-22-9	TRIBUTYLTIN	0.00047 J	0.0063 =	mg/kg	SM037	18/55	0.00038 to 0.014	0.0063	NA	0.040	NA	NA	No	BSL
	309-00- 2	ALDRIN	NA	NA	mg/kg	NA	0/7	0.0017 to 0.0017	NA	NA	0.00023	NA	NA	No	ND
	319-84-6	ALPHA BHC (ALPHA HEXACHLOROCYCLOHEXANE)	NA	NA	mg/kg	NA	0/7	0.0017 to 0.0017	NA	NA	NA	NA	NA	No	ND
	959-98-8	ALPHA ENDOSULFAN	NA	NA	mg/kg	NA	0/7	0.0017 to 0.0017	NA	NA	NA	NA	NA	No	ND
	510-37- 1	ALPHA-CHLORDANE	NA	NA	mg/kg	NA	0/7	0.0017 to 0.0017	NA	NA	NA	NA	NA	No	ND
	319-85-7	BETA BHC (BETA HEXACHLOROCYCLOHEXANE)	NA	NA	mg/kg	NA	0/7	0.0017 to 0.0017	NA	NA	NA	NA	NA	No	ND
	33213-65-9	BETA ENDOSULFAN	NA	NA	mg/kg	NA	0/7	0.0033 to 0.0033	NA	NA	NA	NA	NA	No	ND
	319-86-8	DELTA BHC (DELTA HEXACHLOROCYCLOHEXANE)	NA	NA	mg/kg	NA	0/7	0.0017 to 0.0017	NA	NA	NA	NA	NA	No	ND
	60-57-1	DIELDRIN	NA	NA	mg/kg	NA	0/7	0.0033 to 0.0033	NA	NA	0.00025	NA	NA	No	ND
	103-10- 7	ENDOSULFAN SULFATE	NA	NA	mg/kg	NA	0/7	0.0033 to 0.0033	NA	NA	NA	NA	NA	No	ND
	72-20-8	ENDRIN	NA	NA	mg/kg	NA	0/7	0.0033 to 0.0033	NA	NA	0.12	NA	NA	No	ND
	742-19- 3	ENDRIN ALDEHYDE	NA	NA	mg/kg	NA	0/7	0.0033 to 0.0033	NA	NA	NA	NA	NA	No	ND
	53494-70-5	ENDRIN KETONE	NA	NA	mg/kg	NA	0/7	0.0033 to 0.0033	NA	NA	NA	NA	NA	No	ND
	58-89-9	GAMMA BHC (LINDANE)	0.0034 J	0.0034 J	mg/kg	SM95-SE-8	1/7	0.0017 to 0.0017	0.0034	NA	NA	NA	NA	No	Not Bio
	510-37- 4	GAMMA-CHLORDANE	NA	NA	mg/kg	NA	0/7	0.0017 to 0.0017	NA	NA	NA	NA	NA	No	ND
	76-44-8	HEPTACHLOR	NA	NA	mg/kg	NA	0/7	0.0017 to 0.0017	NA	NA	0.00088	NA	NA	No	ND
	102-45- 7	HEPTACHLOR EPOXIDE	NA	NA	mg/kg	NA	0/7	0.0017 to 0.0017	NA	NA	0.00024	NA	NA	No	ND
	72-43-5	METHOXYCHLOR	NA	NA	mg/kg	NA	0/7	0.017 to 0.017	NA	NA	NA	NA	NA	No	ND
	72-54-8	P,P'-DDD	NA	NA	mg/kg	NA	0/7	0.0033 to 0.0033	NA	NA	0.0073	NA	NA	No	ND
	72-55-9	P,P'-DDE	NA	NA	mg/kg	NA	0/7	0.0033 to 0.0033	NA	NA	0.00044	NA	NA	No	ND
	50-29-3	P,P'-DDT	NA	NA	mg/kg	NA	0/7	0.0033 to 0.0033	NA	NA	0.0013	NA	NA	No	ND
	12674-11-2	PCB-1016 (AROCHLOR 1016)	NA	NA	mg/kg	NA	0/7	0.033 to 0.033	NA	NA	0.00015	NA	NA	No	ND
	11104-28-2	PCB-1221 (AROCHLOR 1221)	NA	NA	mg/kg	NA	0/7	0.033 to 0.033	NA	NA	0.00015	NA	NA	No	ND
	11141-16-5	PCB-1232 (AROCHLOR 1232)	NA	NA	mg/kg	NA	0/7	0.033 to 0.033	NA	NA	0.00015	NA	NA	No	ND
	53469-21-9	PCB-1242 (AROCHLOR 1242)	0.084 J	0.084 J	mg/kg	SM95-SE-9	1/7	0.033 to 0.033	0.07	NA	0.00015	NA	NA	Yes	ASL
	12672-29-6	PCB-1248 (AROCHLOR 1248)	NA	NA	mg/kg	NA	0/7	0.033 to 0.033	NA	NA	0.00015	NA	NA	No	ND
	11097-69-1	PCB-1254 (AROCHLOR 1254)	NA	NA	mg/kg	NA	0/7	0.033 to 0.033	NA	NA	0.00015	NA	NA	No	ND
	11096-82-5	PCB-1260 (AROCHLOR 1260)	NA	NA	mg/kg	NA	0/7	0.033 to 0.033	NA	NA	0.00015	NA	NA	No	ND
	800-13- 5	TOXAPHENE	NA	NA	mg/kg	NA	0/7	0.17 to 0.17	NA	NA	0.0036	NA	NA	No	ND
	95-94-3	1,2,4,5-TETRACHLOROBENZENE	NA	NA	mg/kg	NA	0/7	0.17 to 0.17	NA	NA	NA	NA	NA	No	ND
	000108-60-1	2,2'-OXYBIS(1-CHLORO)PROPANE	NA	NA	mg/kg	NA	0/62	0.003 to 0.17	NA	NA	NA	NA	NA	No	ND
	58-90-2	2,3,4,6-TETRACHLOROPHENOL	NA	NA	mg/kg	NA	0/7	0.17 to 0.17	NA	NA	NA	NA	NA	No	ND
	000095-95-4	2,4,5-TRICHLOROPHENOL	NA	NA	mg/kg	NA	0/62	0.006 to 0.17	NA	NA	NA	NA	NA	No	ND

Table 2.8

OCCURRENCE, DISTRIBUTION AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN

State Marine Superfund Site, Port Arthur, Texas

Scenario Timeframe: Current/Future
Medium: Sediment
Exposure Medium: Fish Tissue

Exposure Point	CAS Number	Chemical	Minimum Concentration	Minimum Concentration Qualifier	Maximum Concentration	Maximum Concentration Qualifier	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration Used for Screening (1)	Background Value (2)	Screening Toxicity Value (N/C) (3)	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag	Rationale for Selection or Deletion (4)
	000088-06-2	2,4,6-TRICHLOROPHENOL	NA		NA		mg/kg	NA	0/62	0.006 to 0.17	NA	NA	NA	NA	NA	No	ND
	000120-83-2	2,4-DICHLOROPHENOL	NA		NA		mg/kg	NA	0/62	0.004 to 0.17	NA	NA	NA	NA	NA	No	ND
	000105-67-9	2,4-DIMETHYLPHENOL	NA		NA		mg/kg	NA	0/62	0.006 to 0.17	NA	NA	NA	NA	NA	No	ND
	000051-28-5	2,4-DINITROPHENOL	NA		NA		mg/kg	NA	0/62	0.13 to 0.71	NA	NA	NA	NA	NA	No	ND
	000121-14-2	2,4-DINITROTOLUENE	NA		NA		mg/kg	NA	0/62	0.007 to 0.17	NA	NA	NA	NA	NA	No	ND
	000606-20-2	2,6-DINITROTOLUENE	NA		NA		mg/kg	NA	0/62	0.006 to 0.17	NA	NA	NA	NA	NA	No	ND
	000091-58-7	2-CHLORONAPHTHALENE	NA		NA		mg/kg	NA	0/62	0.003 to 0.17	NA	NA	NA	NA	NA	No	ND
	000095-57-8	2-CHLOROPHENOL	NA		NA		mg/kg	NA	0/62	0.007 to 0.17	NA	NA	NA	NA	NA	No	ND
	000091-57-6	2-METHYLNAPHTHALENE	0.0027	JQ	0.091	J	mg/kg	SM003	12/62	0.004 to 0.17	0.091	NA	NA	NA	NA	No	Not Bio
	000095-48-7	2-METHYLPHENOL (O-CRESOL)	NA		NA		mg/kg	NA	0/62	0.002 to 0.17	NA	NA	NA	NA	NA	No	ND
	000088-74-4	2-NITROANILINE	NA		NA		mg/kg	NA	0/62	0.009 to 0.33	NA	NA	NA	NA	NA	No	ND
	000088-75-5	2-NITROPHENOL	NA		NA		mg/kg	NA	0/62	0.005 to 0.17	NA	NA	NA	NA	NA	No	ND
	000091-94-1	3,3'-DICHLOROBENZIDINE	0.031	J	0.075	J	mg/kg	PB010	6/62	0.031 to 0.17	0.075	NA	NA	NA	NA	No	Not Bio
	000099-09-2	3-NITROANILINE	NA		NA		mg/kg	NA	0/62	0.02 to 0.33	NA	NA	NA	NA	NA	No	ND
	000534-52-1	4,6-DINITRO-2-METHYLPHENOL	NA		NA		mg/kg	NA	0/62	0.033 to 0.33	NA	NA	NA	NA	NA	No	ND
	000101-55-3	4-BROMOPHENYL PHENYL ETHER	NA		NA		mg/kg	NA	0/62	0.002 to 0.17	NA	NA	NA	NA	NA	No	ND
	000059-50-7	4-CHLORO-3-METHYLPHENOL	NA		NA		mg/kg	NA	0/62	0.006 to 0.17	NA	NA	NA	NA	NA	No	ND
	000106-47-8	4-CHLOROANILINE	NA		NA		mg/kg	NA	0/62	0.006 to 0.17	NA	NA	NA	NA	NA	No	ND
	007005-72-3	4-CHLOROPHENYL PHENYL ETHER	NA		NA		mg/kg	NA	0/62	0.004 to 0.17	NA	NA	NA	NA	NA	No	ND
	000106-44-5	4-METHYLPHENOL (P-CRESOL)	0.044	=	0.044	=	mg/kg	SM001	1/62	0.007 to 0.17	0.044	NA	NA	NA	NA	No	Not Bio
	000100-01-6	4-NITROANILINE	NA		NA		mg/kg	NA	0/62	0.012 to 0.33	NA	NA	NA	NA	NA	No	ND
	000100-02-7	4-NITROPHENOL	NA		NA		mg/kg	NA	0/62	0.048 to 0.33	NA	NA	NA	NA	NA	No	ND
	000083-32-9	ACENAPHTHENE	0.0014	JQ	0.58	=	mg/kg	SM95-SE-9	15/62	0.004 to 0.17	0.58	NA	NA	NA	NA	No	Not Bio
	000208-96-8	ACENAPHTHYLENE	0.0037	JQ	0.12	JL	mg/kg	SM028	13/62	0.003 to 0.17	0.12	NA	NA	NA	NA	No	Not Bio
	000098-86-2	ACETOPHENONE	0.0033	JQ	0.043	JQ	mg/kg	SM003	3/62	0.0006 to 0.17	0.043	NA	NA	NA	NA	No	Not Bio
	000120-12-7	ANTHRACENE	0.00009	JQ	2	=	mg/kg	SM95-SE-9	22/62	0.002 to 0.17	2	NA	NA	NA	NA	No	Not Bio
	001912-24-9	ATRAZINE	NA		NA		mg/kg	NA	0/62	0.0003 to 0.17	NA	NA	NA	NA	NA	No	ND
	000100-52-7	BENZALDEHYDE	0.0085	JQ	0.11	J	mg/kg	SM003	5/62	0.025 to 0.17	0.11	NA	NA	NA	NA	No	Not Bio
	000056-55-3	BENZO(A)ANTHRACENE	0.0026	JQ	4.1	*	mg/kg	SM95-SE-9	29/62	0.002 to 0.17	4.1	NA	NA	NA	NA	No	Not Bio
	000050-32-8	BENZO(A)PYRENE	0.022	=	2.3	*	mg/kg	SM95-SE-9	34/62	0.002 to 0.17	2.3	NA	NA	NA	NA	No	Not Bio
	000205-99-2	BENZO(B)FLUORANTHENE	0.015	JQ	3.6	*	mg/kg	SM95-SE-9	37/62	0.007 to 0.17	3.6	NA	NA	NA	NA	No	Not Bio
	000191-24-2	BENZO(G,H,I)PERYLENE	0.016	JQ	0.24	*	mg/kg	SM95-SE-9	23/62	0.004 to 0.17	0.24	NA	NA	NA	NA	No	Not Bio
	000207-08-9	BENZO(K)FLUORANTHENE	0.017	JQ	1.9	J	mg/kg	SM95-SE-9	30/62	0.009 to 0.21	1.9	NA	NA	NA	NA	No	Not Bio
	000085-68-7	BENZYL BUTYL PHTHALATE	0.024	JQ	0.064	J	mg/kg	SM95-SE-9	15/62	0.005 to 0.17	0.064	NA	NA	NA	NA	No	Not Bio
	000092-52-4	BIPHENYL (DIPHENYL)	0.0012	JQ	0.039	B	mg/kg	SM042	4/62	0.005 to 0.17	0.039	NA	NA	NA	NA	No	Not Bio
	000111-91-1	BIS(2-CHLOROETHOXY) METHANE	NA		NA		mg/kg	NA	0/62	0.006 to 0.17	NA	NA	NA	NA	NA	No	ND
	000111-44-4	BIS(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHER)	NA		NA		mg/kg	NA	0/62	0.004 to 0.17	NA	NA	NA	NA	NA	No	ND
	000117-81-7	BIS(2-ETHYLHEXYL) PHTHALATE	0.047	J	0.26	J	mg/kg	SM95-SE-9	6/62	0.032 to 3	0.26	NA	NA	NA	NA	No	Not Bio
	000105-60-2	CAPROLACTAM	0.037	J	0.11	J	mg/kg	SM003	4/62	0.019 to 0.17	0.11	NA	NA	NA	NA	No	Not Bio
	000086-74-8	CARBAZOLE	0.0068	JQ	0.31	J	mg/kg	SM95-SE-9	15/62	0.003 to 0.17	0.31	NA	NA	NA	NA	No	Not Bio
	000218-01-9	CHRYSENE	0.0022	JQ	3.9	*	mg/kg	SM95-SE-9	27/62	0.002 to 0.17	3.9	NA	NA	NA	NA	No	Not Bio
	000053-70-3	DIBENZ(A,H)ANTHRACENE	0.019	JQ	0.23	*	mg/kg	SM95-SE-9	11/62	0.004 to 0.17	0.23	NA	NA	NA	NA	No	Not Bio
	000132-64-9	DIBENZOFURAN	0.0028	JQL	0.36	J	mg/kg	SM95-SE-9	10/62	0.003 to 0.17	0.36	NA	NA	NA	NA	No	Not Bio
	000084-66-2	DIETHYL PHTHALATE	0.0019	JQ	0.014	JQ	mg/kg	SM029	5/62	0.0033 to 0.17	0.014	NA	NA	NA	NA	No	Not Bio
	000131-11-3	DIMETHYL PHTHALATE	NA		NA		mg/kg	NA	0/62	0.001 to 0.17	NA	NA	NA	NA	NA	No	ND
	000084-74-2	DI-N-BUTYL PHTHALATE	0.0045	JQ	0.096	J	mg/kg	SM95-SE-15	15/62	0.004 to 0.17	0.096	NA	NA	NA	NA	No	Not Bio
	000117-84-0	DI-N-OCTYLPHTHALATE	0.0048	JQ	0.22	*	mg/kg	SM95-SE-8	3/62	0.003 to 0.17	0.22	NA	NA	NA	NA	No	Not Bio
	000206-44-0	FLUORANTHENE	0.003	JQ	9.1	J	mg/kg	SM95-SE-9	37/62	0.004 to 0.17	9.1	NA	NA	NA	NA	No	Not Bio
	000086-73-7	FLUORENE	0.0065	JQ	0.79	=	mg/kg	SM95-SE-9	10/62	0.003 to 0.17	0.79	NA	NA	NA	NA	No	Not Bio
	000118-74-1	HEXACHLOROBENZENE	NA		NA		mg/kg	NA	0/62	0.004 to 0.17	NA	NA	0.010	NA	NA	No	ND
	000087-68-3	HEXACHLOROBUTADIENE	NA		NA		mg/kg	NA	0/62	0.003 to 0.17	NA	NA	NA	NA	NA	No	ND
	000077-47-4	HEXACHLOROCYCLOPENTADIENE	NA		NA		mg/kg	NA	0/62	0.0009 to 0.17	NA	NA	NA	NA	NA	No	ND
	000067-72-1	HEXACHLOROETHANE	NA		NA		mg/kg	NA	0/62	0.004 to 0.17	NA	NA	NA	NA	NA	No	ND
	000193-39-5	INDENO(1,2,3-C,D)PYRENE	0.027	JQ	0.34	*	mg/kg	SM95-SE-9	21/62	0.006 to 0.17	0.34	NA	NA	NA	NA	No	Not Bio
	000078-59-1	ISOPHORONE	NA		NA		mg/kg	NA	0/62	0.004 to 0.17	NA	NA	NA	NA	NA	No	ND
	000091-20-3	NAPHTHALENE	0.0046	JQ	0.4	=	mg/kg	SM003	14/62	0.003 to 0.17	0.4	NA	NA	NA	NA	No	Not Bio
	000098-95-3	NITROBENZENE	NA		NA		mg/kg	NA	0/62	0.004 to 0.17	NA	NA	NA	NA	NA	No	ND
	000621-64-7	N-NITROSODI-N-PROPYLAMINE	NA		NA		mg/kg	NA	0/62	0.007 to 0.17	NA	NA	NA	NA	NA	No	ND
	000086-30-6	N-NITROSODIPHENYLAMINE	NA		NA		mg/kg	NA	0/62	0.002 to 0.17	NA	NA	NA	NA	NA	No	ND

Table 2.8
OCCURRENCE, DISTRIBUTION AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN
State Marine Superfund Site, Port Arthur, Texas

Scenario Timeframe: Current/Future
Medium: Sediment
Exposure Medium: Fish Tissue

Exposure Point	CAS Number	Chemical	Minimum Concentration Qualifier	Maximum Concentration Qualifier	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration Used for Screening (1)	Background Value (2)	Screening Toxicity Value (N/C) (3)	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag	Rationale for Selection or Deletion (4)
	000087-86-5	PENTACHLOROPHENOL	0.082 JQ	0.16 JQ	mg/kg	SM003	2/62	0.039 to 0.8	0.16	NA	NA	NA	NA	No	Not Bio
	000085-01-8	PHENANTHRENE	0.000089 JQ	7.1 *	mg/kg	SM95-SE-9	30/62	0.002 to 0.17	7.1	NA	NA	NA	NA	No	Not Bio
	000108-95-2	PHENOL	0.008 J	0.0092 JQ	mg/kg	SM008	2/62	0.005 to 0.17	0.0092	NA	NA	NA	NA	No	Not Bio
	000129-00-0	PYRENE	0.0023 JQ	8.8 *	mg/kg	SM95-SE-9	38/62	0.004 to 0.17	8.8	NA	NA	NA	NA	No	Not Bio
	000071-55-6	1,1,1-TRICHLOROETHANE	NA	NA	mg/kg	NA	0/11	0.005 to 0.005	NA	NA	NA	NA	NA	No	ND
	000079-34-5	1,1,2,2-TETRACHLOROETHANE	NA	NA	mg/kg	NA	0/11	0.005 to 0.005	NA	NA	NA	NA	NA	No	ND
	000076-13-1	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	NA	NA	mg/kg	NA	0/11	0.005 to 0.005	NA	NA	NA	NA	NA	No	ND
	000079-00-5	1,1,2-TRICHLOROETHANE	NA	NA	mg/kg	NA	0/11	0.005 to 0.005	NA	NA	NA	NA	NA	No	ND
	000075-34-3	1,1-DICHLOROETHANE	NA	NA	mg/kg	NA	0/11	0.005 to 0.005	NA	NA	NA	NA	NA	No	ND
	000075-35-4	1,1-DICHLOROETHENE	NA	NA	mg/kg	NA	0/11	0.005 to 0.005	NA	NA	NA	NA	NA	No	ND
	87-61-6	1,2,3-TRICHLOROBENZENE	NA	NA	mg/kg	NA	0/11	0.005 to 0.005	NA	NA	NA	NA	NA	No	ND
	000120-82-1	1,2,4-TRICHLOROBENZENE	NA	NA	mg/kg	NA	0/11	0.005 to 0.005	NA	NA	NA	NA	NA	No	ND
	000096-12-8	1,2-DIBROMO-3-CHLOROPROPANE	NA	NA	mg/kg	NA	0/11	0.005 to 0.005	NA	NA	NA	NA	NA	No	ND
	000106-93-4	1,2-DIBROMOETHANE (ETHYLENE DIBROMIDE)	NA	NA	mg/kg	NA	0/11	0.005 to 0.005	NA	NA	NA	NA	NA	No	ND
	000095-50-1	1,2-DICHLOROBENZENE	NA	NA	mg/kg	NA	0/11	0.005 to 0.005	NA	NA	NA	NA	NA	No	ND
	000107-06-2	1,2-DICHLOROETHANE	NA	NA	mg/kg	NA	0/11	0.005 to 0.005	NA	NA	NA	NA	NA	No	ND
	000078-87-5	1,2-DICHLOROPROPANE	NA	NA	mg/kg	NA	0/11	0.005 to 0.005	NA	NA	NA	NA	NA	No	ND
	000541-73-1	1,3-DICHLOROBENZENE	NA	NA	mg/kg	NA	0/11	0.005 to 0.005	NA	NA	NA	NA	NA	No	ND
	000106-46-7	1,4-DICHLOROBENZENE	NA	NA	mg/kg	NA	0/11	0.005 to 0.005	NA	NA	NA	NA	NA	No	ND
	123-91-1	1,4-DIOXANE (P-DIOXANE)	NA	NA	mg/kg	NA	0/11	0.1 to 0.1	NA	NA	NA	NA	NA	No	ND
	000591-78-6	2-HEXANONE	NA	NA	mg/kg	NA	0/11	0.01 to 0.01	NA	NA	NA	NA	NA	No	ND
	000067-64-1	ACETONE	0.065 JB	0.095 *	mg/kg	SM95-SE-8	2/11	0.01 to 0.01	0.095	NA	NA	NA	NA	No	Not Bio
	000071-43-2	BENZENE	NA	NA	mg/kg	NA	0/11	0.005 to 0.005	NA	NA	NA	NA	NA	No	ND
	74-97-5	BROMOCHLOROMETHANE	NA	NA	mg/kg	NA	0/11	0.005 to 0.005	NA	NA	NA	NA	NA	No	ND
	000075-27-4	BROMODICHLOROMETHANE	NA	NA	mg/kg	NA	0/11	0.005 to 0.005	NA	NA	NA	NA	NA	No	ND
	000075-25-2	BROMOFORM	NA	NA	mg/kg	NA	0/11	0.005 to 0.005	NA	NA	NA	NA	NA	No	ND
	000074-83-9	BROMOMETHANE	NA	NA	mg/kg	NA	0/11	0.005 to 0.005	NA	NA	NA	NA	NA	No	ND
	000075-15-0	CARBON DISULFIDE	0.002 *	0.002 *	mg/kg	SM95-SE-8	1/11	0.005 to 0.005	0.002	NA	NA	NA	NA	No	Not Bio
	000056-23-5	CARBON TETRACHLORIDE	NA	NA	mg/kg	NA	0/11	0.005 to 0.005	NA	NA	NA	NA	NA	No	ND
	000108-90-7	CHLOROBENZENE	NA	NA	mg/kg	NA	0/11	0.005 to 0.005	NA	NA	NA	NA	NA	No	ND
	000075-00-3	CHLOROETHANE	NA	NA	mg/kg	NA	0/11	0.005 to 0.005	NA	NA	NA	NA	NA	No	ND
	000067-66-3	CHLOROFORM	NA	NA	mg/kg	NA	0/11	0.005 to 0.005	NA	NA	NA	NA	NA	No	ND
	000074-87-3	CHLOROMETHANE	NA	NA	mg/kg	NA	0/11	0.005 to 0.005	NA	NA	NA	NA	NA	No	ND
	000156-59-2	CIS-1,2-DICHLOROETHYLENE	NA	NA	mg/kg	NA	0/11	0.005 to 0.005	NA	NA	NA	NA	NA	No	ND
	010061-01-5	CIS-1,3-DICHLOROPROPENE	NA	NA	mg/kg	NA	0/11	0.005 to 0.005	NA	NA	NA	NA	NA	No	ND
	110-82-7	CYCLOHEXANE	NA	NA	mg/kg	NA	0/11	0.005 to 0.005	NA	NA	NA	NA	NA	No	ND
	000124-48-1	DIBROMOCHLOROMETHANE	NA	NA	mg/kg	NA	0/11	0.005 to 0.005	NA	NA	NA	NA	NA	No	ND
	000075-71-8	DICHLORODIFLUOROMETHANE	NA	NA	mg/kg	NA	0/11	0.005 to 0.005	NA	NA	NA	NA	NA	No	ND
	000100-41-4	ETHYLBENZENE	NA	NA	mg/kg	NA	0/11	0.005 to 0.005	NA	NA	NA	NA	NA	No	ND
	000098-82-8	ISOPROPYLBENZENE (CUMENE)	NA	NA	mg/kg	NA	0/11	0.005 to 0.005	NA	NA	NA	NA	NA	No	ND
	108-38-3/106-42-3	M,P-XYLENE (SUM OF ISOMERS)	NA	NA	mg/kg	NA	0/11	0.005 to 0.005	NA	NA	NA	NA	NA	No	ND
	79-20-9	METHYL ACETATE	NA	NA	mg/kg	NA	0/11	0.005 to 0.005	NA	NA	NA	NA	NA	No	ND
	000078-93-3	METHYL ETHYL KETONE (2-BUTANONE)	NA	NA	mg/kg	NA	0/11	0.01 to 0.01	NA	NA	NA	NA	NA	No	ND
	000108-10-1	METHYL ISOBUTYL KETONE (4-METHYL-2-PENTANONE)	NA	NA	mg/kg	NA	0/11	0.01 to 0.01	NA	NA	NA	NA	NA	No	ND
	108-87-2	METHYLCYCLOHEXANE	NA	NA	mg/kg	NA	0/11	0.005 to 0.005	NA	NA	NA	NA	NA	No	ND
	000075-09-2	METHYLENE CHLORIDE	0.005 *	0.005 *	mg/kg	SM95-SE-8	1/11	0.005 to 0.005	0.005	NA	NA	NA	NA	No	Not Bio
	95-47-6	O-XYLENE (1,2-DIMETHYLBENZENE)	NA	NA	mg/kg	NA	0/11	0.005 to 0.005	NA	NA	NA	NA	NA	No	ND
	000100-42-5	STYRENE	NA	NA	mg/kg	NA	0/11	0.005 to 0.005	NA	NA	NA	NA	NA	No	ND
	1634-04-4	TERT-BUTYL METHYL ETHER	NA	NA	mg/kg	NA	0/11	0.005 to 0.005	NA	NA	NA	NA	NA	No	ND
	000127-18-4	TETRACHLOROETHYLENE(PCE)	NA	NA	mg/kg	NA	0/11	0.005 to 0.005	NA	NA	NA	NA	NA	No	ND
	000108-88-3	TOLUENE	0.002 *	0.002 *	mg/kg	SM95-SE-8	1/11	0.005 to 0.005	0.002	NA	NA	NA	NA	No	Not Bio
	000156-60-5	TRANS-1,2-DICHLOROETHENE	NA	NA	mg/kg	NA	0/11	0.005 to 0.005	NA	NA	NA	NA	NA	No	ND
	010061-02-6	TRANS-1,3-DICHLOROPROPENE	NA	NA	mg/kg	NA	0/11	0.005 to 0.005	NA	NA	NA	NA	NA	No	ND
	000079-01-6	TRICHLOROETHYLENE (TCE)	NA	NA	mg/kg	NA	0/11	0.005 to 0.005	NA	NA	NA	NA	NA	No	ND
	000075-69-4	TRICHLOROFLUOROMETHANE	NA	NA	mg/kg	NA	0/11	0.005 to 0.005	NA	NA	NA	NA	NA	No	ND
	000075-01-4	VINYL CHLORIDE	NA	NA	mg/kg	NA	0/11	0.005 to 0.005	NA	NA	NA	NA	NA	No	ND

(1) Maximum detected concentration is used for screening. Those chemicals whose maximum detected concentrations exceeding Screening Levels, UCL 95% was used for screening.
(2) These background values were calculated from a small data set and are not recommended for definitive comparisons.

ARAR/TBC = Applicable or Relevant and Appropriate Requirement/To Be Considered
COPC = Chemical of Potential Concern

Table 2.8
OCCURRENCE, DISTRIBUTION AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN
State Marine Superfund Site, Port Arthur, Texas

Scenario Timeframe: Current/Future
Medium: Sediment
Exposure Medium: Fish Tissue

Exposure Point	CAS Number	Chemical	Minimum Concentration Qualifier	Maximum Concentration Qualifier	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration Used for Screening (1)	Background Value (2)	Screening Toxicity Value (N/C) (3)	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag	Rationale for Selection or Deletion (4)

(3) Calculated for bioaccumulative chemicals in sediment according to methodology presented in the text.

(4) Rationale Codes

Selection Reason: Above Screening Levels (ASL)
Deletion Reason: Below Screening Level (BSL)
Not Detected (ND)
Not bioaccumulative according to TRRP (Not Bio)

C = Screening level is based on a carcinogenic endpoint.
max = Screening level is based on a ceiling limit.
mg/kg = Milligrams per kilogram
NA = Not available
N = Screening level is based on a noncarcinogenic endpoint.
sat = Screening level is based on soil saturation.

Qualifiers:
B = Metals - Result is estimated, reported concentration is between MDL and CRQL (contract-required
Organics - Analyte was detected in the associated method blank, result is likely biased high.
J = Estimated value.
Q = Severe QC or quantitation problem - no result reported but analyte is confirmed as qualitatively pres
H = Result is likely biased high
K = Result is estimated but bias is unknown
L = Reported concentration is < CRQL (contract-required quantitation limit)
* = Result not recommended for use due to associated QA/QC performance inferior to that from other ar

Table 3.1.RME

MEDIUM-SPECIFIC EXPOSURE POINT CONCENTRATION SUMMARY

State Marine Superfund Site, Port Arthur, Texas

Scenario Timeframe: Current/Future
Medium: Soil
Exposure Medium: Soil (0-5 ft)

Exposure Point	Chemical of Potential Concern	Units	Arithmetic Mean	95% UCL (N/T/NP/G)		Maximum Concentration (Qualifier)		Exposure Point Concentration			
								Value	Units	Statistic	Rationale
Soil at the Former Wastewater Impoundment Area											
	Benzo(a)anthracene	mg/kg	1.09E+00	5.50E+00	(T)	1.08E+01	=	5.50E+00	mg/kg	99% Cheb	(1)
	Benzo(a)pyrene	mg/kg	1.19E+00	2.21E+00	(G)	1.08E+01	=	2.21E+00	mg/kg	App. Gamma	(1, 4)
	Benzo(b)fluoranthene	mg/kg	1.59E+00	3.02E+00	(G)	1.51E+01	=	3.02E+00	mg/kg	App. Gamma	(1, 3, 4)
	Dibenzo(a,h)anthracene	mg/kg	3.58E-01	1.24E+00	(NP)	4.60E-01	=	4.60E-01	mg/kg	Max	(6)
	Indeno(1,2,3-cd)pyrene	mg/kg	7.84E-01	2.14E+00	(T)	4.81E+00	=	2.14E+00	mg/kg	99% Cheb-m	(1)

For non-detects, 1/2 sample quantitation limit was used as a proxy concentration;
ProUCL, Version 3.00.02 used to determine distribution of data using the Shapiro-Wilk W Test. ProUCL used to calculate RME EPC, following recommendations based on distribution and standard deviation in users guide (USEPA. April 2004. ProUCL, Version 3.0. Prepared by Lockheed Martin Environmental Services).
Statistics: Maximum Detected Value (Max); 95% UCL of Log-transformed Data, H-Statistic (95% UCL-T); 95% Chebyshev (MVUE) UCL (95% Cheb);
99% Chebyshev (MVUE) UCL (99% Cheb); 95% Chebyshev (mean,std) UCL (95% Cheb-m); 97.5% Chebyshev (mean,std) UCL (97.5% Cheb-m);
99% Chebyshev (mean,std) UCL (99% Cheb-m); 95% modified-t UCL adjusted for skewness (95% Mod-t); 95% Student's-T test UCL (95% Stud-t);
95% Hall's Bootdtrap UCL (95% Hall); 95% Approximate Gamma (App. Gamma); 95% Adjusted Gamma (Adj. Gamma);
Mean of Log-transformed Data using the Minimum Variance Unbiased Estimate (MVUE) method (Mean-T)

(1) Shapiro-Wilk W Test indicates data are log-normally distributed.
(2) Shapiro-Wilk W Test indicates data are normally distributed.
(3) Anderson-Darling Test indicates data are gamma distributed.
(4) Kolmogorov-Smirnov Test indicates data are gamma distributed.
(5) Distribution tests are inconclusive (data are not normal, log-normal, or gamma-distributed).
(6) The maximum detected concentration was used as the UCL because the value recommended by ProUCL 3.0 was higher than the Max.
(7) Mean value to be used for lead modeling.
mg/kg = milligrams per kilogram
G = Gamma distribution.
N = Normal distribution.
T = Log-normal distribution.
NP = Non-Parametric distribution.

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Table 3.2.RME
MEDIUM-SPECIFIC EXPOSURE POINT CONCENTRATION SUMMARY
State Marine Superfund Site, Port Arthur, Texas

Scenario Timeframe: Current/Future
Medium: Soil
Exposure Medium: Soil (0-1 ft)

Exposure Point	Chemical of Potential Concern	Units	Arithmetic Mean	95% UCL (N/T/NP/G)	Maximum Concentration (Qualifier)	Exposure Point Concentration			
						Value	Units	Statistic	Rationale
Soil at the Wastewater Treatment Facility	Iron	mg/kg	4.73E+04	1.60E+05 (NP)	2.00E+05	1.60E+05	mg/kg	95% Cheb-m	(5)
	Benzo(a)pyrene	mg/kg	1.89E-01	4.38E-01 (G)	6.50E-01	4.38E-01	mg/kg	App. Gamma	(1, 3, 4)

For non-detects, 1/2 sample quantitation limit was used as a proxy concentration; for duplicate sample results, the maximum value was used in the calculation.
ProUCL, Version 3.00.02 used to determine distribution of data using the Shapiro-Wilk W Test. ProUCL used to calculate RME EPC, following recommendations based on distribution and standard deviation in users guide (USEPA. April 2004. ProUCL, Version 3.0. Prepared by Lockheed Martin Environmental Services).
Statistics: Maximum Detected Value (Max); 95% UCL of Log-transformed Data, H-Statistic (95% UCL-T); 95% Chebyshev (MVUE) UCL (95% Cheb); 99% Chebyshev (MVUE) UCL (99% Cheb); 95% Chebyshev (mean,std) UCL (95% Cheb-m); 97.5% Chebyshev (mean,std) UCL (97.5% Cheb-m); 99% Chebyshev (mean,std) UCL (99% Cheb-m); 95% modified-t UCL adjusted for skewness (95% Mod-t); 95% Student's-T test UCL (95% Stud-t); 95% Hall's Bootdtrap UCL (95% Hall); 95% Approximate Gamma (App. Gamma); 95% Adjusted Gamma (Adj. Gamma); Mean of Log-transformed Data using the Minimum Variance Unbiased Estimate (MVUE) method (Mean-T)

(1) Shapiro-Wilk W Test indicates data are log-normally distributed.
(2) Shapiro-Wilk W Test indicates data are normally distributed.
(3) Anderson-Darling Test indicates data are gamma distributed.
(4) Kolmogorov-Smirnov Test indicates data are gamma distributed.
(5) Distribution tests are inconclusive (data are not normal, log-normal, or gamma-distributed).
(6) The maximum detected concentration was used as the UCL because the value recommended by ProUCL 3.0 was higher than the Max.
(7) Mean value to be used for lead modeling.
mg/kg = milligrams per kilogram
G = Gamma distribution.
N = Normal distribution.
T = Log-normal distribution.
NP = Non-Parametric distribution.

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Table 3.3.RME
MEDIUM-SPECIFIC EXPOSURE POINT CONCENTRATION SUMMARY
State Marine Superfund Site, Port Arthur, Texas

Scenario Timeframe: Current/Future
Medium: Soil
Exposure Medium: Soil (0-1 ft)

Exposure Point	Chemical of Potential Concern	Units	Arithmetic Mean	95% UCL (N/T/NP/G)	Maximum Concentration (Qualifier)	Exposure Point Concentration			
						Value	Units	Statistic	Rationale
Soil at the Tar Burn Area	Benzo(a)pyrene	mg/kg	5.46E-01	1.11E+00 (N)	1.20E+00	1.11E+00	mg/kg	95% Stud-t	(2)

For non-detects, 1/2 sample quantitation limit was used as a proxy concentration; for duplicate sample results, the maximum value was used in the calculation.
ProUCL, Version 3.00.02 used to determine distribution of data using the Shapiro-Wilk W Test. ProUCL used to calculate RME EPC, following recommendations based on distribution and standard deviation in users guide (USEPA. April 2004. ProUCL, Version 3.0. Prepared by Lockheed Martin Environmental Services).
Statistics: Maximum Detected Value (Max); 95% UCL of Log-transformed Data, H-Statistic (95% UCL-T); 95% Chebyshev (MVUE) UCL (95% Cheb);
99% Chebyshev (MVUE) UCL (99% Cheb); 95% Chebyshev (mean,std) UCL (95% Cheb-m); 97.5% Chebyshev (mean,std) UCL (97.5% Cheb-m);
99% Chebyshev (mean,std) UCL (99% Cheb-m); 95% modified-t UCL adjusted for skewness (95% Mod-t); 95% Student's-T test UCL (95% Stud-t);
95% Hall's Bootdtrap UCL (95% Hall); 95% Approximate Gamma (App. Gamma); 95% Adjusted Gamma (Adj. Gamma);
Mean of Log-transformed Data using the Minimum Variance Unbiased Estimate (MVUE) method (Mean-T)

(1) Shapiro-Wilk W Test indicates data are log-normally distributed.
(2) Shapiro-Wilk W Test indicates data are normally distributed.
(3) Anderson-Darling Test indicates data are gamma distributed.
(4) Kolmogorov-Smirnov Test indicates data are gamma distributed.
(5) Distribution tests are inconclusive (data are not normal, log-normal, or gamma-distributed).
(6) The maximum detected concentration was used as the UCL because the value recommended by ProUCL 3.0 was higher than the Max.
(7) Mean value to be used for lead modeling.
mg/kg = milligrams per kilogram
G = Gamma distribution.
N = Normal distribution.
T = Log-normal distribution.
NP = Non-Parametric distribution.

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Table 3.4.RME
MEDIUM-SPECIFIC EXPOSURE POINT CONCENTRATION SUMMARY
State Marine Superfund Site, Port Arthur, Texas

Scenario Timeframe: Current/Future
Medium: Soil
Exposure Medium: Soil (0-1 ft)

Exposure Point	Chemical of Potential Concern	Units	Arithmetic Mean	95% UCL (N/T/NP/G)	Maximum Concentration (Qualifier)	Exposure Point Concentration			
						Value	Units	Statistic	Rationale
Soil at the Current AST Area	Benzo(a)anthracene	mg/kg	6.49E-01	6.50E+00 (NP)	3.00E+00	3.00E+00	mg/kg	Max	(6)
	Benzo(a)pyrene	mg/kg	5.98E-01	5.83E+00 (NP)	2.70E+00	2.70E+00	mg/kg	Max	(6)
	Benzo(b)fluoranthene	mg/kg	9.69E-01	4.73E+00 (T)	4.40E+00	4.40E+00	mg/kg	Max	(6)
	Dibenzo(a,h)anthracene	mg/kg	1.33E-01	2.42E-01 (N)	3.30E-01 Q	2.42E-01	mg/kg	95% Stud-t	(2)

For non-detects, 1/2 sample quantitation limit was used as a proxy concentration; for duplicate sample results, the maximum value was used in the calculation.
ProUCL, Version 3.00.02 used to determine distribution of data using the Shapiro-Wilk W Test. ProUCL used to calculate RME EPC, following recommendations based on distribution and standard deviation in users guide (USEPA. April 2004. ProUCL, Version 3.0. Prepared by Lockheed Martin Environmental Services).
Statistics: Maximum Detected Value (Max); 95% UCL of Log-transformed Data, H-Statistic (95% UCL-T); 95% Chebyshev (MVUE) UCL (95% Cheb); 99% Chebyshev (MVUE) UCL (99% Cheb); 95% Chebyshev (mean,std) UCL (95% Cheb-m); 97.5% Chebyshev (mean,std) UCL (97.5% Cheb-m); 99% Chebyshev (mean,std) UCL (99% Cheb-m); 95% modified-t UCL adjusted for skewness (95% Mod-t); 95% Student's-T test UCL (95% Stud-t); 95% Hall's Bootdtrap UCL (95% Hall); 95% Approximate Gamma (App. Gamma); 95% Adjusted Gamma (Adj. Gamma); Mean of Log-transformed Data using the Minimum Variance Unbiased Estimate (MVUE) method (Mean-T)

(1) Shapiro-Wilk W Test indicates data are log-normally distributed.
(2) Shapiro-Wilk W Test indicates data are normally distributed.
(3) Anderson-Darling Test indicates data are gamma distributed.
(4) Kolmogorov-Smirnov Test indicates data are gamma distributed.
(5) Distribution tests are inconclusive (data are not normal, log-normal, or gamma-distributed).
(6) The maximum detected concentration was used as the UCL because the value recommended by ProUCL 3.0 was higher than the Max.
(7) Mean value to be used for lead modeling.
mg/kg = milligrams per kilogram
G = Gamma distribution.

Table 3.4.RME
MEDIUM-SPECIFIC EXPOSURE POINT CONCENTRATION SUMMARY
State Marine Superfund Site, Port Arthur, Texas

Scenario Timeframe: Current/Future
Medium: Soil
Exposure Medium: Soil (0-1 ft)

Exposure Point	Chemical of Potential Concern	Units	Arithmetic Mean	95% UCL (N/T/NP/G)	Maximum Concentration (Qualifier)	Exposure Point Concentration			
						Value	Units	Statistic	Rationale

N = Normal distribution.

T = Log-normal distribution.

NP = Non-Parametric distribution.

Table 3.5.RME
MEDIUM-SPECIFIC EXPOSURE POINT CONCENTRATION SUMMARY
State Marine Superfund Site, Port Arthur, Texas

Scenario Timeframe: Current/Future
Medium: Soil
Exposure Medium: Soil (0-1 ft)

Exposure Point	Chemical of Potential Concern	Units	Arithmetic Mean	95% UCL (N/T/NP/G)	Maximum Concentration (Qualifier)	Exposure Point Concentration			
						Value	Units	Statistic	Rationale
Soil at the Maintenance Shed Area	Aroclor-1254	mg/kg	1.90E-01	2.00E+00 (NP)	1.10E+00 J	1.10E+00	mg/kg	99% Cheb-m	(5)
	Benzo(a)pyrene	mg/kg	3.35E-01	9.18E-01 (G)	1.30E+00	9.18E-01	mg/kg	App. Gamma	(1, 3, 4)

For non-detects, 1/2 sample quantitation limit was used as a proxy concentration; for duplicate sample results, the maximum value was used in the calculation.
ProUCL, Version 3.00.02 used to determine distribution of data using the Shapiro-Wilk W Test. ProUCL used to calculate RME EPC, following recommendations based on distribution and standard deviation in users guide (USEPA. April 2004. ProUCL, Version 3.0. Prepared by Lockheed Martin Environmental Services).
Statistics: Maximum Detected Value (Max); 95% UCL of Log-transformed Data, H-Statistic (95% UCL-T); 95% Chebyshev (MVUE) UCL (95% Cheb); 99% Chebyshev (MVUE) UCL (99% Cheb); 95% Chebyshev (mean,std) UCL (95% Cheb-m); 97.5% Chebyshev (mean,std) UCL (97.5% Cheb-m); 99% Chebyshev (mean,std) UCL (99% Cheb-m); 95% modified-t UCL adjusted for skewness (95% Mod-t); 95% Student's-T test UCL (95% Stud-t); 95% Hall's Bootdtrap UCL (95% Hall); 95% Approximate Gamma (App. Gamma); 95% Adjusted Gamma (Adj. Gamma); Mean of Log-transformed Data using the Minimum Variance Unbiased Estimate (MVUE) method (Mean-T)

(1) Shapiro-Wilk W Test indicates data are log-normally distributed.
(2) Shapiro-Wilk W Test indicates data are normally distributed.
(3) Anderson-Darling Test indicates data are gamma distributed.
(4) Kolmogorov-Smirnov Test indicates data are gamma distributed.
(5) Distribution tests are inconclusive (data are not normal, log-normal, or gamma-distributed).
(6) The maximum detected concentration was used as the UCL because the value recommended by ProUCL 3.0 was higher than the Max.
(7) Mean value to be used for lead modeling.
mg/kg = milligrams per kilogram
G = Gamma distribution.
N = Normal distribution.

Table 3.5.RME
MEDIUM-SPECIFIC EXPOSURE POINT CONCENTRATION SUMMARY
State Marine Superfund Site, Port Arthur, Texas

Scenario Timeframe: Current/Future
Medium: Soil
Exposure Medium: Soil (0-1 ft)

Exposure Point	Chemical of Potential Concern	Units	Arithmetic Mean	95% UCL (N/T/NP/G)	Maximum Concentration (Qualifier)	Exposure Point Concentration			
						Value	Units	Statistic	Rationale

T = Log-normal distribution.

NP = Non-Parametric distribution.

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Table 3.6.RME
MEDIUM-SPECIFIC EXPOSURE POINT CONCENTRATION SUMMARY
State Marine Superfund Site, Port Arthur, Texas

Scenario Timeframe: Current/Future
Medium: Soil
Exposure Medium: Soil (0-1 ft)

Exposure Point	Chemical of Potential Concern	Units	Arithmetic Mean	95% UCL (N/T/NP/G)	Maximum Concentration (Qualifier)	Exposure Point Concentration			
						Value	Units	Statistic	Rationale
Soil at Lauren Tank Farm	Alpha-Chlordane	mg/kg	2.17E+00	2.37E+01 (NP)	1.30E+01	1.30E+01	mg/kg	Max	(6)
	Benzo(a)anthracene	mg/kg	5.03E-01	3.67E+00 (NP)	4.20E+00	3.67E+00	mg/kg	99% Cheb-m	(5)
	Benzo(a)pyrene	mg/kg	6.00E-01	1.19E+00 (T)	5.10E+00	1.19E+00	mg/kg	95% Cheb	(1)
	Benzo(b)fluoranthene	mg/kg	7.02E-01	6.02E+00 (NP)	7.10E+00	6.02E+00	mg/kg	99% Cheb-m	(5)
	Dibenzo(a,h)anthracene	mg/kg	2.07E-01	1.21E+00 (NP)	1.10E+00	1.10E+00	mg/kg	Max	(6)

For non-detects, 1/2 sample quantitation limit was used as a proxy concentration; for duplicate sample results, the maximum value was used in the calculation.
ProUCL, Version 3.00.02 used to determine distribution of data using the Shapiro-Wilk W Test. ProUCL used to calculate RME EPC, following recommendations based on distribution and standard deviation in users guide (USEPA. April 2004. ProUCL, Version 3.0. Prepared by Lockheed Martin Environmental Services).
Statistics: Maximum Detected Value (Max); 95% UCL of Log-transformed Data, H-Statistic (95% UCL-T); 95% Chebyshev (MVUE) UCL (95% Cheb); 99% Chebyshev (MVUE) UCL (99% Cheb); 95% Chebyshev (mean,std) UCL (95% Cheb-m); 97.5% Chebyshev (mean,std) UCL (97.5% Cheb-m); 99% Chebyshev (mean,std) UCL (99% Cheb-m); 95% modified-t UCL adjusted for skewness (95% Mod-t); 95% Student's-T test UCL (95% Stud-t); 95% Hall's Bootdtrap UCL (95% Hall); 95% Approximate Gamma (App. Gamma); 95% Adjusted Gamma (Adj. Gamma); Mean of Log-transformed Data using the Minimum Variance Unbiased Estimate (MVUE) method (Mean-T)

(1) Shapiro-Wilk W Test indicates data are log-normally distributed.
(2) Shapiro-Wilk W Test indicates data are normally distributed.
(3) Anderson-Darling Test indicates data are gamma distributed.
(4) Kolmogorov-Smirnov Test indicates data are gamma distributed.
(5) Distribution tests are inconclusive (data are not normal, log-normal, or gamma-distributed).
(6) The maximum detected concentration was used as the UCL because the value recommended by ProUCL 3.0 was higher than the Max.
(7) Mean value to be used for lead modeling.

Table 3.6.RME
MEDIUM-SPECIFIC EXPOSURE POINT CONCENTRATION SUMMARY
State Marine Superfund Site, Port Arthur, Texas

Scenario Timeframe: Current/Future
Medium: Soil
Exposure Medium: Soil (0-1 ft)

Exposure Point	Chemical of Potential Concern	Units	Arithmetic Mean	95% UCL (N/T/NP/G)	Maximum Concentration (Qualifier)	Exposure Point Concentration			
						Value	Units	Statistic	Rationale

mg/kg = milligrams per kilogram

G = Gamma distribution.

N = Normal distribution.

T = Log-normal distribution.

NP = Non-Parametric distribution.

Table 3.7.RME
MEDIUM-SPECIFIC EXPOSURE POINT CONCENTRATION SUMMARY
State Marine Superfund Site, Port Arthur, Texas

Scenario Timeframe: Current/Future
Medium: Soil
Exposure Medium: Soil (0-5 ft)

Exposure Point	Chemical of Potential Concern	Units	Arithmetic Mean	95% UCL (N/T/NP/G)	Maximum Concentration (Qualifier)	Exposure Point Concentration			
						Value	Units	Statistic	Rationale
Soil at Nonsource Areas	Benzo(a)anthracene	mg/kg	6.40E-01	3.26E+00 (NP)	2.40E+01 D	3.26E+00	mg/kg	97.5%Cheb-m	(5)
	Benzo(a)pyrene	mg/kg	5.87E-01	2.67E+00 (NP)	1.90E+01 D	2.67E+00	mg/kg	97.5%Cheb-m	(5)
	Benzo(b)fluoranthene	mg/kg	7.94E-01	3.54E+00 (NP)	2.50E+01 D	3.54E+00	mg/kg	97.5%Cheb-m	(5)
	Dibenzo(a,h)anthracene	mg/kg	1.80E-01	4.78E-01 (NP)	2.20E+00 LJQK	4.78E-01	mg/kg	97.5%Cheb-m	(5)

For non-detects, 1/2 sample quantitation limit was used as a proxy concentration; for duplicate sample results, the maximum value was used in the calculation.
ProUCL, Version 3.00.02 used to determine distribution of data using the Shapiro-Wilk W Test. ProUCL used to calculate RME EPC, following recommendations based on distribution and standard deviation in users guide (USEPA. April 2004. ProUCL, Version 3.0. Prepared by Lockheed Martin Environmental Services).
Statistics: Maximum Detected Value (Max); 95% UCL of Log-transformed Data, H-Statistic (95% UCL-T); 95% Chebyshev (MVUE) UCL (95% Cheb);
99% Chebyshev (MVUE) UCL (99% Cheb); 95% Chebyshev (mean,std) UCL (95% Cheb-m); 97.5% Chebyshev (mean,std) UCL (97.5% Cheb-m);
99% Chebyshev (mean,std) UCL (99% Cheb-m); 95% modified-t UCL adjusted for skewness (95% Mod-t); 95% Student's-T test UCL (95% Stud-t);
95% Hall's Bootdtrap UCL (95% Hall); 95% Approximate Gamma (App. Gamma); 95% Adjusted Gamma (Adj. Gamma);
Mean of Log-transformed Data using the Minimum Variance Unbiased Estimate (MVUE) method (Mean-T)

(1) Shapiro-Wilk W Test indicates data are log-normally distributed.
(2) Shapiro-Wilk W Test indicates data are normally distributed.
(3) Anderson-Darling Test indicates data are gamma distributed.
(4) Kolmogorov-Smirnov Test indicates data are gamma distributed.
(5) Distribution tests are inconclusive (data are not normal, log-normal, or gamma-distributed).
(6) The maximum detected concentration was used as the UCL because the value recommended by ProUCL 3.0 was higher than the Max.
(7) Mean value to be used for lead modeling.
mg/kg = milligrams per kilogram

Table 3.7.RME
MEDIUM-SPECIFIC EXPOSURE POINT CONCENTRATION SUMMARY
State Marine Superfund Site, Port Arthur, Texas

Scenario Timeframe: Current/Future
Medium: Soil
Exposure Medium: Soil (0-5 ft)

Exposure Point	Chemical of Potential Concern	Units	Arithmetic Mean	95% UCL (N/T/NP/G)	Maximum Concentration (Qualifier)	Exposure Point Concentration			
						Value	Units	Statistic	Rationale

G = Gamma distribution.

N = Normal distribution.

T = Log-normal distribution.

NP = Non-Parametric distribution.

Table 3.8.RME
MEDIUM-SPECIFIC EXPOSURE POINT CONCENTRATION SUMMARY
State Marine Superfund Site, Port Arthur, Texas

Scenario Timeframe: Current/Future
Medium: Sediment
Exposure Medium: Fish Tissue

Exposure Point	Chemical of Potential Concern	Units	Arithmetic Mean	95% UCL (N/T/NP/G)	Maximum Concentration (Qualifier)	Exposure Point Concentration			
						Value	Units	Statistic	Rationale
Fish Tissue	Copper	mg/kg	5.28E+01	1.37E+02 (G)	3.13E+02	1.37E+02	mg/kg	App. Gamma	(3)
	Zinc	mg/kg	6.30E+02	4.24E+03 (NP)	3.91E+03	3.91E+03	mg/kg	Max	(6)
	PCB-1242	mg/kg	1.91E-02	6.62E-02 (NP)	8.40E-02 J	6.62E-02	mg/kg	95% Cheb-m	(5)

For non-detects, 1/2 sample quantitation limit was used as a proxy concentration; for duplicate sample results, the maximum value was used in the calculation.
ProUCL, Version 3.00.02 used to determine distribution of data using the Shapiro-Wilk W Test. ProUCL used to calculate RME EPC, following recommendations based on distribution and standard deviation in users guide (USEPA. April 2004. ProUCL, Version 3.0. Prepared by Lockheed Martin Environmental Services).
Statistics: Maximum Detected Value (Max); 95% UCL of Log-transformed Data, H-Statistic (95% UCL-T); 95% Chebyshev (MVUE) UCL (95% Cheb);
99% Chebyshev (MVUE) UCL (99% Cheb); 95% Chebyshev (mean,std) UCL (95% Cheb-m); 97.5% Chebyshev (mean,std) UCL (97.5% Cheb-m);
99% Chebyshev (mean,std) UCL (99% Cheb-m); 95% modified-t UCL adjusted for skewness (95% Mod-t); 95% Student's-T test UCL (95% Stud-t);
95% Hall's Bootdtrap UCL (95% Hall); 95% Approximate Gamma (App. Gamma); 95% Adjusted Gamma (Adj. Gamma);
Mean of Log-transformed Data using the Minimum Variance Unbiased Estimate (MVUE) method (Mean-T)

(1) Shapiro-Wilk W Test indicates data are log-normally distributed.
(2) Shapiro-Wilk W Test indicates data are normally distributed.
(3) Anderson-Darling Test indicates data are gamma distributed.
(4) Kolmogorov-Smirnov Test indicates data are gamma distributed.
(5) Distribution tests are inconclusive (data are not normal, log-normal, or gamma-distributed).
(6) The maximum detected concentration was used as the UCL because the value recommended by ProUCL 3.0 was higher than the Max.
(7) Mean value to be used for lead modeling.
mg/kg = milligrams per kilogram
G = Gamma distribution.

Table 3.8.RME
MEDIUM-SPECIFIC EXPOSURE POINT CONCENTRATION SUMMARY
State Marine Superfund Site, Port Arthur, Texas

Scenario Timeframe: Current/Future
Medium: Sediment
Exposure Medium: Fish Tissue

Exposure Point	Chemical of Potential Concern	Units	Arithmetic Mean	95% UCL (N/T/NP/G)	Maximum Concentration (Qualifier)	Exposure Point Concentration			
						Value	Units	Statistic	Rationale

N = Normal distribution.

T = Log-normal distribution.

NP = Non-Parametric distribution.

TABLE 4.1.RME
VALUES USED FOR DAILY INTAKE CALCULATIONS
REASONABLE MAXIMUM EXPOSURE
State Marine Superfund Site, Port Arthur, Texas

Scenario Timeframe: Current/Future
Medium: Soil
Exposure Medium: Soil (0-1 ft at source areas; 0-5 ft at non-source areas)

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Value	Units	Rationale/ Reference	Intake Equation/ Model Name
Ingestion	Industrial/Commercial Worker	Adult	Soil at Former Wastewater Impoundments; at Wastewater Treatment Facility; at Tar Burn Area; at Current ASTs; at Maintenance Shed Area; at Lauren Tank Farm; and at Nonsource Areas	CS	Chemical Concentration in Soil	see Table 3.1.RME	mg/kg		Chronic Daily Intake (CDI) (mg/kg-day) =
				IR-S	Ingestion Rate of Soil	100	mg/day	EPA, 1991	CS x IR-S x EF x ED x CF3 x 1/BW x 1/AT
				EF	Exposure Frequency	250	days/year	EPA, 1991	
				ED	Exposure Duration	25	years	EPA, 1991	
				CF3	Conversion Factor 3	0.000001	kg/mg	- -	
				BW	Body Weight	70	kg	EPA, 1991	
				AT-C	Averaging Time (Cancer)	25,550	days	EPA, 1989	
				AT-N	Averaging Time (Non-Cancer)	9,125	days	EPA, 1989	
Dermal	Industrial/Commercial Worker	Adult	Soil at Former Wastewater Impoundments; at Wastewater Treatment Facility; at Tar Burn Area; at Current ASTs; at Maintenance Shed Area; at Lauren Tank Farm; and at Nonsource Areas	CS	Chemical Concentration in Soil	see Table 3.1.RME	mg/kg		CDI (mg/kg-day) =
				SA	Skin Surface Area Available for Contact	3,300	cm^2	EPA, 2004, (1)	CS x SA x SSAF x DABS x CF3 x EF x
				SSAF	Soil to Skin Adherence Factor	0.2	mg/cm^2-day	EPA, 2004, (2)	ED x 1/BW x 1/AT
				DABS	Dermal Absorption Factor Solids	chem specific	--	EPA, 2004	
				CF3	Conversion Factor 3	0.000001	kg/mg	- -	
				EF	Exposure Frequency	250	days/year	EPA, 1991	
				ED	Exposure Duration	25	years	EPA, 1991	
				BW	Body Weight	70	kg	EPA, 1991	
				AT-C	Averaging Time (Cancer)	25,550	days	EPA, 1989	
				AT-N	Averaging Time (Non-Cancer)	9,125	days	EPA, 1989	

Notes:

(1) Surface area based on adult worker wearing long pants, short-sleeved shirt, and shoes.

(2) Soil to skin adherence factor is based on 50th percentile weighted adherence factor for utility workers.

Sources:

EPA, 1989: Risk Assessment Guidance for Superfund. Vol.1: Human Health Evaluation Manual, Part A. OERR. EPA/540/1-89/002.

EPA, 1991: Risk Assessment Guidance for Superfund. Vol.1: Human Health Evaluation Manual - Supplemental Guidance, Standard Default Exposure Factors. Interim Final. OSWER Directive 9285.6-03.

EPA, 2004: Risk Assessment Guidance for Superfund. Vol.1: Human Health Evaluation Manual (Part E, Supplemental Guidance for Dermal Risk Assessment) Final. EPA/540/R/99/005.

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TABLE 4.2.RME
VALUES USED FOR DAILY INTAKE CALCULATIONS
REASONABLE MAXIMUM EXPOSURE
State Marine Superfund Site, Port Arthur, Texas

Scenario Timeframe: Current/Future
Medium: Soil
Exposure Medium: Air

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Value	Units	Rationale/ Reference	Intake Equation/ Model Name
Inhalation	Industrial/Commercial Worker	Adult	Emissions from surface soil at Former Wastewater Impoundments; at Wastewater Treatment Facility; at Tar Burn Area; at Current ASTs; at Maintenance Shed Area; at Lauren Tank Farm; and at Nonsource Areas	CS	Chemical Concentration in Soil	see Table 3.2.RME	mg/kg		Chronic Daily Intake (CDI) (mg/kg-day) =
				CA	Chemical Concentration in Air	calc	mg/m^3	EPA, 2001	CA x IN x ET x EF x ED x 1/BW x 1/AT
				PEF	Particulate Emission Factor	1.32E+09	m^3/kg	EPA, 2001	
				VF	Volatilization Factor for volatile constituents	calc	m^3/kg	EPA, 2001	
				IN	Inhalation Rate	0.83	m^3/hour	EPA, 1991	
				ET	Exposure Time	8	hr/day	EPA, 1991	CA (mg/m^3) = CS (1/PEF + 1/VF)
				EF	Exposure Frequency	250	days/year	EPA, 1991	
				ED	Exposure Duration	25	years	EPA, 1991	
				BW	Body Weight	70	kg	EPA, 1991	
				AT-C	Averaging Time (Cancer)	25,550	days	EPA, 1989	
				AT-N	Averaging Time (Non-Cancer)	9,125	days	EPA, 1989	

Sources:

EPA, 1989: Risk Assessment Guidance for Superfund. Vol.1: Human Health Evaluation Manual, Part A. OERR. EPA/540/1-89/002.

EPA, 1991: Risk Assessment Guidance for Superfund. Vol.1: Human Health Evaluation Manual - Supplemental Guidance, Standard Default Exposure Factors. Interim Final. OSWER Directive 9285.6-03.

EPA, 2001: Supplemental Guidance for Developing Soil Screening Levels for Superfund Sites. OSWER 9355.4-24.

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TABLE 4.3.RME
VALUES USED FOR DAILY INTAKE CALCULATIONS
REASONABLE MAXIMUM EXPOSURE
State Marine Superfund Site, Port Arthur, Texas

Scenario Timeframe: Current/Future
Medium: Sediment
Exposure Medium: Fish Tissue

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Value	Units	Rationale/ Reference	Intake Equation/ Model Name
Ingestion	Fisher	Adult	Fish Tissue	Cs	Chemical Concentration in Sediment	See Table 3.3.RME	mg/kg-sed	See Table 3.3.RME	Fish Tissue Concentration (C_{fish}) (mg/kg) =
				BSAF	Biota-Sediment Accumulation Factor	chemical specific	kg-sed/kg-fish	(2)	Cs x BSAF
				IR-F	Fish Ingestion Rate	0.026	kg-fish/day	EPA, 1997 (1)	
				ED	Exposure Duration	24	years	EPA, 2000	
				BW	Body Weight	70	kg	EPA, 1991	Chronic Daily Intake (CDI) (mg/kg-day) =
				AT-C	Averaging Time (Cancer)	25,550	days	EPA, 1989	C_{fish} x IR-F x ED x 365 x 1/BW x 1/AT
				AT-N	Averaging Time (Non-Cancer)	8,760	days	EPA, 1989	

(1) Fish intake values taken from page 10-26 of USEPA's EFH (1997) for Recreational Freshwater Anglers.

(2) Metal BSAFs for fish were based on maximum values derived for a variety of fish species that were available for co-located sediment stations from the Calcasieu Estuary Investigation (Weston Solutions, Inc., 2003).
Aroclor-1242 BSAF was obtained from Oliver and Niimi, 1988.

Sources:

EPA, 1989: Risk Assessment Guidance for Superfund. Vol.1: Human Health Evaluation Manual, Part A. OERR. EPA/540/1-89/002.

EPA, 1991: Risk Assessment Guidance for Superfund. Vol.1: Human Health Evaluation Manual - Supplemental Guidance, Standard Default Exposure Factors. Interim Final. OSWER Directive 9285.6-03.

EPA, 1997: Exposure Factors Handbook. EPA/600/P-95/002Fa.

EPA, 2000: Supplemental Guidance to RAGS: Region 4 Bulletins, Human Health Risk Assessment Bulletins.

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TABLE 4.1.CTE
VALUES USED FOR DAILY INTAKE CALCULATIONS
CENTRAL TENDENCY EXPOSURE
State Marine Superfund Site, Port Arthur, Texas

Scenario Timeframe: Current/Future
Medium: Soil
Exposure Medium: Soil (0-1 ft at source areas; 0-5 ft at non-source areas)

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Value	Units	Rationale/ Reference	Intake Equation/ Model Name
Ingestion	Industrial/Commercial Worker	Adult	Soil at Former Wastewater Impoundments; at Wastewater Treatment Facility; at Tar Burn Area; at Current ASTs; at Maintenance Shed Area; at Lauren Tank Farm; and at Nonsource Areas	CS	Chemical Concentration in Soil	see Table 3.1.CTE	mg/kg	see Table 3.1.CTE	Chronic Daily Intake (CDI) (mg/kg-day) =
				IR-S	Ingestion Rate of Soil	50	mg/day	EPA, 1993	CS x IR-S x EF x ED x CF3 x 1/BW x 1/AT
				EF	Exposure Frequency	219	days/year	EPA, 1993	
				ED	Exposure Duration	5	years	EPA, 1993	
				CF3	Conversion Factor 3	0.000001	kg/mg	- -	
				BW	Body Weight	70	kg	EPA, 1991	
				AT-C	Averaging Time (Cancer)	25,550	days	EPA, 1989	
				AT-N	Averaging Time (Non-Cancer)	1,825	days	- -	
Dermal	Industrial/Commercial Worker	Adult	Soil at Former Wastewater Impoundments; at Wastewater Treatment Facility; at Tar Burn Area; at Current ASTs; at Maintenance Shed Area; at Lauren Tank Farm; and at Nonsource Areas	CS	Chemical Concentration in Soil	see Table 3.1.CTE	mg/kg	see Table 3.1.CTE	CDI (mg/kg-day) =
				SA	Skin Surface Area Available for Contact	3,300	cm^2	EPA, 2004 (1)	CS x SA x SSAF x DABS x CF3 x EF x
				SSAF	Soil to Skin Adherence Factor	0.2	mg/cm^2-day	EPA, 2004 (2)	ED x 1/BW x 1/AT
				DABS	Dermal Absorption Factor Solids	chem specific	--	EPA, 2004	
				CF3	Conversion Factor 3	0.000001	kg/mg	- -	
				EF	Exposure Frequency	219	days/year	EPA, 1993	
				ED	Exposure Duration	5	years	EPA, 1993	
				BW	Body Weight	70	kg	EPA, 1991	
				AT-C	Averaging Time (Cancer)	25,550	days	EPA, 1989	
				AT-N	Averaging Time (Non-Cancer)	1,825	days	- -	

Notes:

(1) Surface area includes head, hands, and forearms.

(2) Soil to skin adherence factor is based on 50th percentile weighted adherence factor for utility workers.

Sources:

EPA, 1989: Risk Assessment Guidance for Superfund. Vol.1: Human Health Evaluation Manual, Part A. OERR. EPA/540/1-89/002.

EPA, 1991: Risk Assessment Guidance for Superfund. Vol.1: Human Health Evaluation Manual - Supplemental Guidance, Standard Default Exposure Factors. Interim Final. OSWER Directive 9285.6-03.

EPA, 1993: Superfund's Standard Default Exposure Factors for the Central Tendency and Reasonable Maximum Exposure.

EPA, 2004: Risk Assessment Guidance for Superfund. Vol.1: Human Health Evaluation Manual (Part E, Supplemental Guidance for Dermal Risk Assessment) Final. EPA/540/R/99/005.

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TABLE 4.2.CTE
VALUES USED FOR DAILY INTAKE CALCULATIONS
CENTRAL TENDENCY EXPOSURE
State Marine Superfund Site, Port Arthur, Texas

Scenario Timeframe: Current/Future
Medium: Soil
Exposure Medium: Air

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Value	Units	Rationale/ Reference	Intake Equation/ Model Name
Inhalation	Industrial/Commercial Worker	Adult	Emissions from Soil at Former Wastewater Impoundments; at Wastewater Treatment Facility; at Tar Burn Area; at Current ASTs; at Maintenance Shed Area; at Lauren Tank Farm; and at Nonsource Areas	CS	Chemical Concentration in Soil	see Table 3.2.CTE	mg/kg	see Table 3.2.CTE	Chronic Daily Intake (CDI) (mg/kg-day) =
				CA	Chemical Concentration in Air	calc	mg/m^3	EPA, 2001	CA x IN x ET x EF x ED x 1/BW x 1/AT
				PEF	Particulate Emission Factor	1.32E+09	m^3/kg	EPA, 2001	
				VF	Volatilization Factor for volatile constituents	calc	m^3/kg	EPA, 2001	
				IN	Inhalation Rate	0.83	m^3/hour	EPA, 1991	
				ET	Exposure Time	8	hr/day	EPA, 1991	CA (mg/m^3) = CS (1/PEF + 1/VF)
				EF	Exposure Frequency	219	days/year	EPA, 1993	
				ED	Exposure Duration	5	years	EPA., 1993	
				BW	Body Weight	70	kg	EPA, 1991	
				AT-C	Averaging Time (Cancer)	25,550	days	EPA, 1989	
				AT-N	Averaging Time (Non-Cancer)	1,825	days	- -	

Sources:

EPA, 1989: Risk Assessment Guidance for Superfund. Vol.1: Human Health Evaluation Manual, Part A. OERR. EPA/540/1-89/002.

EPA, 1991: Risk Assessment Guidance for Superfund. Vol.1: Human Health Evaluation Manual - Supplemental Guidance, Standard Default Exposure Factors. Interim Final. OSWER Directive 9285.6-03.

EPA, 2001: Supplemental Guidance for Developing Soil Screening Levels for Superfund Sites. OSWER 9355.4-24.

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TABLE 4.3.CTE
VALUES USED FOR DAILY INTAKE CALCULATIONS
CENTRAL TENDENCY EXPOSURE
State Marine Superfund Site, Port Arthur, Texas

Scenario Timeframe: Current/Future
Medium: Sediment
Exposure Medium: Fish Tissue

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Value	Units	Rationale/ Reference	Intake Equation/ Model Name
Ingestion	Fisher	Adult	Fish Tissue	Cs	Chemical Concentration in Sediment	See Table 3.3.RME	mg/kg-sed	See Table 3.3.RME	Fish Tissue Concentration (C_{fish}) (mg/kg) =
				BSAF	Biota-Sediment Accumulation Factor	chemical specific	kg-sed/kg-fish	(1)	Cs x BSAF
				IR-F	Fish Ingestion Rate	0.026	kg-fish/day	EPA, 1997 (2)	
				ED	Exposure Duration	9	years	EPA, 1993 (3)	
				BW	Body Weight	70	kg	EPA, 1991	Chronic Daily Intake (CDI) (mg/kg-day) =
				AT-C	Averaging Time (Cancer)	25,550	days	EPA, 1989	C_{fish} x IR-F x ED x 365 x 1/BW x 1/AT
				AT-N	Averaging Time (Non-Cancer)	3,285	days	EPA, 1989	

(1) Metal BSAFs for fish were based on maximum values derived for a variety of fish species that were available for co-located sediment stations from the Calcasieu Estuary Investigation (Weston Solutions, Inc., 2003).
Aroclor-1242 BSAF was obtained from Oliver and Niimi, 1988.
(2) Fish intake values taken from page 10-26 of USEPA's EFH (1997) for Recreational Freshwater Anglers.
(3) Professional judgement assuming this is a nearby resident.

Sources:

EPA, 1989: Risk Assessment Guidance for Superfund. Vol.1: Human Health Evaluation Manual, Part A. OERR. EPA/540/1-89/002.
EPA, 1991: Risk Assessment Guidance for Superfund. Vol.1: Human Health Evaluation Manual - Supplemental Guidance, Standard Default Exposure Factors. Interim Final. OSWER Directive 9285.6-03.
EPA, 1993: Superfund's Standard Default Exposure Factors for the Central Tendency and Reasonable Maximum Exposure.
EPA, 1997: Exposure Factors Handbook. EPA/600/P-95/002Fa.

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TABLE 5.1

NON-CANCER TOXICITY DATA -- ORAL/DERMAL

State Marine Superfund Site, Port Arthur, Texas

Chemical of Potential Concern	Chronic/ Subchronic	Oral RfD Value	Oral RfD Units	Oral to Dermal Adjustment Factor (1)	Adjusted Dermal RfD (2)	Units	Primary Target Organ	Combined Uncertainty/Modifying Factors	Sources of RfD: Target Organ	Dates of RfD: Target Organ (3) (MM/DD/YY)
Aroclor-1242	Chronic	N/A	N/A	80% - 96%	N/A	N/A	N/A	N/A	N/A	N/A
	Subchronic	N/A	N/A	80% - 96%	N/A	N/A	N/A	N/A	N/A	N/A
Aroclor-1254	Chronic	2.0E-05	mg/kg-day	80% - 96%	2.0E-05	mg/kg-day	Immune System	300/1	IRIS	07/04/05
	Subchronic	5.0E-05	mg/kg-day	80% - 96%	5.0E-05	mg/kg-day	Immune System	300	HEAST	07/01/97
Benzo(a)anthracene	Chronic	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Subchronic	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Benzo(a)pyrene	Chronic	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Subchronic	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Benzo(b)fluoranthene	Chronic	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Subchronic	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
alpha-Chlordane	Chronic	5.0E-04	mg/kg-day	NA	5.0E-04	mg/kg-day	Liver	300/1	IRIS	07/04/05
	Subchronic	6.0E-05	mg/kg-day	NA	6.0E-05	mg/kg-day	Liver	1000	HEAST	07/01/97
Copper	Chronic	3.7E-02	mg/kg-day	NA	3.7E-02	mg/kg-day	Gastrointestinal	N/A	HEAST	07/01/97
	Subchronic	3.7E-02	mg/kg-day	N/A	3.7E-02	mg/kg-day	Gastrointestinal	N/A	HEAST	07/01/97
Dibenzo(a,h)anthracene	Chronic	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Subchronic	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Indeno(1,2,3-cd)pyrene	Chronic	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Subchronic	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Iron	Chronic	3.0E-01	mg/kg/day	NA	3.0E-01	mg/kg/day	Gastrointestinal, Blood, Liver	1	NCEA	01/05/99
	Subchronic	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	Chronic	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Subchronic	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Zinc	Chronic	3.0E-01	mg/kg-day	N/A	3.0E-01	mg/kg-day	Blood	3/1	IRIS	07/04/05
	Subchronic	3.0E-01	mg/kg-day	N/A	3.0E-01	mg/kg-day	Blood	3	HEAST	07/01/97

N/A = Not Applicable or Not Available.

(1) Source: Risk Assessment Guidance for Superfund. Volume 1: Human Health Evalution Manual (Part E, Supplemetnal Guidance for Dermal Risk Assessment. Final. Section 4.2 and Exhibit 4-1. USEPA recommends that the oral RfD should not be adjusted to estimate the absorbed dose for compounds when the absorption efficiency is greater than 50%. Constituents that do not have oral absorption efficiencies reported on this table were assumed to have an oral absorption efficiency of 100%.

ATSDR = Agency for Toxic Substances and Disease Registry

IRIS = Integrated Risk Information System

HEAST= Health Effects Assessment Summary Tables

NCEA = National Center for Environmental Assessment

PPRTV = Provisional Peer-Reviewed Toxicity Value

RESP = Respiratory System

CNS = Central Nervous System

NOAEL = No adverse effect level

(2) Provide equation for derivation in text.

PPRTV = Provisional Peer-Reviewed Toxicity Value

(3) For IRIS values, provide the date IRIS was searched.

For HEAST values, provide the date of HEAST.

For NCEA values, provide the date of the article provided by NCEA.

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TABLE 5.2

NON-CANCER TOXICITY DATA -- INHALATION

State Marine Superfund Site, Port Arthur, Texas

Chemical of Potential Concern	Chronic/ Subchronic	Value Inhalation RfC	Units	Adjusted Inhalation RfD (1)	Units	Primary Target Organ	Combined Uncertainty/Modifying Factors	Sources of RfC:RfD: Target Organ	Dates (2) (MM/DD/YY)
Aroclor-1242	Chronic	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Subchronic	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Aroclor-1254	Chronic	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Subchronic	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Benzo(a)anthracene	Chronic	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Subchronic	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Benzo(a)pyrene	Chronic	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Subchronic	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Benzo(b)fluoranthene	Chronic	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Subchronic	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
alpha-Chlordane	Chronic	7.4E-04	mg/m3	2.0E-04	mg/kg/d	Liver	1000/1	IRIS	07/04/05
	Subchronic	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Copper	Chronic	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Subchronic	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dibenzo(a,h)anthracene	Chronic	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Subchronic	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Indeno(1,2,3-cd)pyrene	Chronic	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Subchronic	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Iron	Chronic	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Subchronic	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Lead	Chronic	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Subchronic	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Zinc	Chronic	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Subchronic	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

N/A = Not Applicable

(1) Equation used for derivation presented in text.

(2) For IRIS values, provide the date IRIS was searched.

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TABLE 6.1

CANCER TOXICITY DATA -- ORAL/DERMAL

State Marine Superfund Site, Port Arthur, Texas

Chemical of Potential Concern	Oral Cancer Slope Factor	Oral to Dermal Adjustment Factor	Adjusted Dermal Cancer Slope Factor (1)	Units	EPA Carcinogen Group	Source	Date (2) (MM/DD/YY)
Aroclor-1242	2.0E+00	80% - 96%	2.0E+00	$(mg/kg\text{-}day)^{-1}$	B2	IRIS	07/04/05
Aroclor-1254	2.0E+00	80% - 96%	2.0E+00	$(mg/kg\text{-}day)^{-1}$	B2	IRIS	07/04/05
Benzo(a)anthracene	7.3E-01	58%-89%	7.3E-01	$(mg/kg\text{-}day)^{-1}$	B2	NCEA	07/01/93
Benzo(a)pyrene	7.3E+00	58%-89%	7.3E+00	$(mg/kg\text{-}day)^{-1}$	B2	IRIS	07/04/05
Benzo(b)fluoranthene	7.3E-01	58%-89%	7.3E-01	$(mg/kg\text{-}day)^{-1}$	B2	NCEA	07/01/93
alpha-Chlordane	3.5E-01	80%	3.5E-01	$(mg/kg\text{-}day)^{-1}$	B2	IRIS	07/04/05
Copper	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dibenz(a,h)anthracene	7.3E+00	58%-89%	7.3E+00	$(mg/kg\text{-}day)^{-1}$	B2	NCEA	07/01/93
Indeno(1,2,3-cd)pyrene	7.3E-01	58%-89%	7.3E-01	$(mg/kg\text{-}day)^{-1}$	B2	NCEA	07/01/93
Iron	N/A	N/A	N/A	N/A	N/A	NCEA	07/23/96
Lead	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Zinc	N/A	N/A	N/A	N/A	D	IRIS	07/04/05

N/A-Not available

IRIS = Integrated Risk Information System

HEAST= Health Effects Assessment Summary Tables

NCEA = National Center for Environmental Assessment

PPRTV = Provisional Peer-Reviewed Toxicity Value

EPA Carcinogen Group:

A - Human carcinogen

B1 - Probable human carcinogen - indicates that limited human data are available

B2 - Probable human carcinogen - indicates sufficient evidence in animals and inadequate or no evidence in humans

C - Possible human carcinogen

D - Not classifiable as a human carcinogen

E - Evidence of noncarcinogenicity

(1) Refer to RAGS, Part E. July 2004.

(2) For IRIS values, provide the date IRIS was searched.
For HEAST values, provide the date of HEAST.
For NCEA values, provide article date provided by NCEA.
For RBC values, provide the date of last change in the Tables.

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TABLE 6.2

CANCER TOXICITY DATA -- INHALATION

State Marine Superfund Site, Port Arthur, Texas

Chemical of Potential Concern	Unit Risk	Units	Adjustment (1)	Inhalation Cancer Slope Factor	Units	Weight of Evidence/ Cancer Guidance Description	Source	Date (2) (MM/DD/YY)
Aroclor-1242	5.7E-04	$(ug/m3)^{-1}$	3500	2.0E+00	$(mg/kg\text{-}day)^{-1}$	B2	IRIS	07/04/05
Aroclor-1254	5.7E-04	$(ug/m3)^{-1}$	3500	2.0E+00	$(mg/kg\text{-}day)^{-1}$	B2	IRIS	07/04/05
Benzo(a)anthracene	8.9E-05	$(ug/m3)^{-1}$	3500	3.1E-01	$(mg/kg\text{-}day)^{-1}$	B2	NCEA	11/18/94
Benzo(a)pyrene	8.9E-04	$(ug/m3)^{-1}$	3500	3.1E+00	$(mg/kg\text{-}day)^{-1}$	B2	NCEA	11/18/94
Benzo(b)fluoranthene	8.9E-05	$(ug/m3)^{-1}$	3500	3.1E-01	$(mg/kg\text{-}day)^{-1}$	B2	NCEA	11/18/94
alpha-Chlordane	1.0E-04	$(ug/m3)^{-1}$	3500	3.5E-01	$(mg/kg\text{-}day)^{-1}$	B2	IRIS	07/04/05
Copper	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dibenz(a,h)anthracene	8.9E-04	$(ug/m3)^{-1}$	3500	3.1E+00	$(mg/kg\text{-}day)^{-1}$	B2	NCEA	11/18/94
Indeno(1,2,3-cd)pyrene	8.9E-05	$(ug/m3)^{-1}$	3500	3.1E-01	$(mg/kg\text{-}day)^{-1}$	B2	NCEA	11/18/94
Iron	N/A	N/A	N/A	N/A	N/A	N/A	NCEA	07/23/96
Lead	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Zinc	N/A	N/A	N/A	N/A	N/A	D	IRIS	07/04/05

IRIS = Integrated Risk Information System

HEAST= Health Effects Assessment Summary Tables

NCEA = National Center for Environmental Assessment

PPRTV = Provisional Peer-Reviewed Toxicity Value

N/A = Not Available

(1) Adjustment Factor applied to Unit Risk to calculate Inhalation Slope Factor = 70kg x 1/20m3/day x 1000ug/mg

(2) For IRIS values, provide the date IRIS was searched.
For HEAST values, provide the date of HEAST.
For NCEA values, provide the date of the article provided by NCEA.
For RBC values, provide the date of last change in the Tables.

EPA Group:

A - Human carcinogen

B1 - Probable human carcinogen - indicates that limited human data are available

B2 - Probable human carcinogen - indicates sufficient evidence in animals and inadequate or no evidence in humans

C - Possible human carcinogen

D - Not classifiable as a human carcinogen

E - Evidence of noncarcinogenicity

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TABLE 7.1.RME
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
State Marine Superfund Site, Port Arthur, Texas

Scenario Timeframe: Current/Future
Receptor Population: Industrial/Commercial Worker
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units		Value	Units	Value	Units	
Soil	Soil (0-5 ft)	Soil at the Former Wastewater Impoundment Area	Ingestion													
				Benzo(a)anthracene	5.5E+00	mg/kg	1.9E-06	mg/kg-day	7.3E-01	1/(mg/kg-day)	1.4E-06	5.4E-06	mg/kg-day	NA	NA	NA
				Benzo(a)pyrene	2.2E+00	mg/kg	7.7E-07	mg/kg-day	7.3E+00	1/(mg/kg-day)	5.6E-06	2.2E-06	mg/kg-day	NA	NA	NA
				Benzo(b)fluoranthene	3.0E+00	mg/kg	1.1E-06	mg/kg-day	7.3E-01	1/(mg/kg-day)	7.7E-07	3.0E-06	mg/kg-day	NA	NA	NA
				Dibenzo(a,h)anthracene	4.6E-01	mg/kg	1.6E-07	mg/kg-day	7.3E+00	1/(mg/kg-day)	1.2E-06	4.5E-07	mg/kg-day	NA	NA	NA
				Indeno(1,2,3-cd)pyrene	2.1E+00	mg/kg	7.5E-07	mg/kg-day	7.3E-01	1/(mg/kg-day)	5.5E-07	2.1E-06	mg/kg-day	NA	NA	NA
			Exp. Route Total								9.5E-06					0.0E+00
			Dermal													
				Benzo(a)anthracene	5.5E+00	mg/kg	1.6E-06	mg/kg-day	7.3E-01	1/(mg/kg-day)	1.2E-06	4.6E-06	mg/kg-day	NA	NA	NA
				Benzo(a)pyrene	2.2E+00	mg/kg	6.6E-07	mg/kg-day	7.3E+00	1/(mg/kg-day)	4.8E-06	1.9E-06	mg/kg-day	NA	NA	NA
				Benzo(b)fluoranthene	3.0E+00	mg/kg	9.1E-07	mg/kg-day	7.3E-01	1/(mg/kg-day)	6.6E-07	2.5E-06	mg/kg-day	NA	NA	NA
				Dibenzo(a,h)anthracene	4.6E-01	mg/kg	1.4E-07	mg/kg-day	7.3E+00	1/(mg/kg-day)	1.0E-06	3.9E-07	mg/kg-day	NA	NA	NA
				Indeno(1,2,3-cd)pyrene	2.1E+00	mg/kg	6.4E-07	mg/kg-day	7.3E-01	1/(mg/kg-day)	4.7E-07	1.8E-06	mg/kg-day	NA	NA	NA
			Exp. Route Total								8.2E-06					0.0E+00
		Exposure Point Total									1.8E-05					0.0E+00
	Exposure Medium Total										1.8E-05					0.0E+00
	Air	Emissions from Surface Soil at the Former Wastewater Impoundment Area	Inhalation													
				Benzo(a)anthracene	4.2E-09	mg/m3	9.7E-11	mg/kg-day	3.1E-01	1/(mg/kg-day)	3.0E-11	2.7E-10	mg/kg-day	NA	NA	NA
				Benzo(a)pyrene	1.7E-09	mg/m3	3.9E-11	mg/kg-day	3.1E+00	1/(mg/kg-day)	1.2E-10	1.1E-10	mg/kg-day	NA	NA	NA
				Benzo(b)fluoranthene	2.3E-09	mg/m3	5.3E-11	mg/kg-day	3.1E-01	1/(mg/kg-day)	1.6E-11	1.5E-10	mg/kg-day	NA	NA	NA
				Dibenzo(a,h)anthracene	3.5E-10	mg/m3	8.1E-12	mg/kg-day	3.1E+00	1/(mg/kg-day)	2.5E-11	2.3E-11	mg/kg-day	NA	NA	NA
				Indeno(1,2,3-cd)pyrene	1.6E-09	mg/m3	3.8E-11	mg/kg-day	3.1E-01	1/(mg/kg-day)	1.2E-11	1.1E-10	mg/kg-day	NA	NA	NA
			Exp. Route Total								2.0E-10					0.0E+00
		Exposure Point Total									2.0E-10					0.0E+00
	Exposure Medium Total										2.0E-10					0.0E+00
Surface Soil Total											1.8E-05					0.0E+00
										Total of Receptor Risks Across All Media	1.8E-05			Total of Receptor Hazards Across All Media		0.0E+00

Notes-
NA = Not applicable.

007924

TABLE 7.2.RME

CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS

REASONABLE MAXIMUM EXPOSURE

State Marine Superfund Site, Port Arthur, Texas

Scenario Timeframe: Current/Future
Receptor Population: Industrial/Commercial Worker
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units		Value	Units	Value	Units	
Soil	Soil (0-1 ft)	Soil at the Wastewater Treatment Facility	Ingestion	Benzo(a)pyrene	4.4E-01	mg/kg	1.5E-07	mg/kg-day	7.3E+00	1/(mg/kg-day)	1.1E-06	4.3E-07	mg/kg-day	NA	NA	NA
				Iron	1.6E+05	mg/kg	5.6E-02	mg/kg-day	NA	NA	NA	1.6E-01	mg/kg-day	3.0E-01	mg/kg-day	5.2E-01
			Exp. Route Total								1.1E-06					5.2E-01
			Dermal	Benzo(a)pyrene	4.4E-01	mg/kg	1.3E-07	mg/kg-day	7.3E+00	1/(mg/kg-day)	9.6E-07	3.7E-07	mg/kg-day	NA	NA	NA
				Iron	1.6E+05	mg/kg	3.7E-03	mg/kg-day	NA	NA	NA	1.0E-02	mg/kg-day	3.0E-01	mg/kg-day	3.4E-02
			Exp. Route Total								9.6E-07					3.4E-02
		Exposure Point Total									2.1E-06					5.6E-01
		Emissions from Surface Soil at the Wastewater Treatment Facility	Inhalation	Benzo(a)pyrene	#REF!	mg/m3	#REF!	mg/kg-day	3.1E+00	1/(mg/kg-day)	#REF!	#REF!	mg/kg-day	NA	NA	NA
				Iron	#REF!	mg/m3	#REF!	mg/kg-day	NA	NA	NA	#REF!	mg/kg-day	NA	NA	NA
			Exp. Route Total								#REF!					0.0E+00
		Exposure Point Total									#REF!					0.0E+00
	Exposure Medium Total										#REF!					5.6E-01
Surface Soil Total											2.1E-06					5.6E-01
											Total of Receptor Risks Across All Media	2.1E-06		Total of Receptor Hazards Across All Media		5.6E-01

Notes-
NA = Not applicable.

007925

TABLE 7.4.RME
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
State Marine Superfund Site, Port Arthur, Texas

Scenario Timeframe: Current/Future
Receptor Population: Industrial/Commercial Worker
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units		Value	Units	Value	Units	
Soil	Soil (0-1 ft)	Soil at the Current AST Area	Ingestion													
				Benzo(a)anthracene	3.0E+00	mg/kg	1.0E-06	mg/kg-day	7.3E-01	1/(mg/kg-day)	7.7E-07	2.9E-06	mg/kg-day	NA	NA	NA
				Benzo(a)pyrene	2.7E+00	mg/kg	9.4E-07	mg/kg-day	7.3E+00	1/(mg/kg-day)	6.9E-06	2.6E-06	mg/kg-day	NA	NA	NA
				Benzo(b)fluoranthene	4.4E+00	mg/kg	1.5E-06	mg/kg-day	7.3E-01	1/(mg/kg-day)	1.1E-06	4.3E-06	mg/kg-day	NA	NA	NA
				Dibenzo(a,h)anthracene	2.4E-01	mg/kg	8.4E-08	mg/kg-day	7.3E+00	1/(mg/kg-day)	6.2E-07	2.4E-07	mg/kg-day	NA	NA	NA
			Exp. Route Total								9.4E-06					0.0E+00
			Dermal													
				Benzo(a)anthracene	3.0E+00	mg/kg	9.0E-07	mg/kg-day	7.3E-01	1/(mg/kg-day)	6.6E-07	2.5E-06	mg/kg-day	NA	NA	NA
				Benzo(a)pyrene	2.7E+00	mg/kg	8.1E-07	mg/kg-day	7.3E+00	1/(mg/kg-day)	5.9E-06	2.3E-06	mg/kg-day	NA	NA	NA
				Benzo(b)fluoranthene	4.4E+00	mg/kg	1.3E-06	mg/kg-day	7.3E-01	1/(mg/kg-day)	9.6E-07	3.7E-06	mg/kg-day	NA	NA	NA
				Dibenzo(a,h)anthracene	2.4E-01	mg/kg	7.2E-08	mg/kg-day	7.3E+00	1/(mg/kg-day)	5.3E-07	2.0E-07	mg/kg-day	NA	NA	NA
			Exp. Route Total								8.1E-06					0.0E+00
		Exposure Point Total									1.7E-05					0.0E+00
	Exposure Medium Total										1.7E-05					0.0E+00
	Air	Emissions from Surface Soil at the Current AST Area	Inhalation													
				Benzo(a)anthracene	#REF!	mg/m3	#REF!	mg/kg-day	3.1E-01	1/(mg/kg-day)	#REF!	#REF!	mg/kg-day	NA	NA	NA
				Benzo(a)pyrene	#REF!	mg/m3	#REF!	mg/kg-day	3.1E+00	1/(mg/kg-day)	#REF!	#REF!	mg/kg-day	NA	NA	NA
				Benzo(b)fluoranthene	#REF!	mg/m3	#REF!	mg/kg-day	3.1E-01	1/(mg/kg-day)	#REF!	#REF!	mg/kg-day	NA	NA	NA
				Dibenzo(a,h)anthracene	#REF!	mg/m3	#REF!	mg/kg-day	3.1E+00	1/(mg/kg-day)	#REF!	#REF!	mg/kg-day	NA	NA	NA
			Exp. Route Total								#REF!					0.0E+00
		Exposure Point Total									#REF!					0.0E+00
	Exposure Medium Total										#REF!					0.0E+00
Surface Soil Total											#REF!					0.0E+00
											Total of Receptor Risks Across All Media					Total of Receptor Hazards Across All Media

Notes-
NA = Not applicable.

007926

TABLE 7.5.RME

CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS

REASONABLE MAXIMUM EXPOSURE

State Marine Superfund Site, Port Arthur, Texas

Scenario Timeframe: Current/Future
Receptor Population: Industrial/Commercial Worker
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units		Value	Units	Value	Units	
Soil	Soil (0-1 ft)	Soil at the Maintenance Shed Area	Ingestion	Benzo(a)pyrene	9.2E-01	mg/kg	3.2E-07	mg/kg-day	7.3E+00	1/(mg/kg-day)	2.3E-06	9.0E-07	mg/kg-day	NA	NA	NA
				Aroclor-1254	1.1E+00	mg/kg	3.8E-07	mg/kg-day	2.0E+00	1/(mg/kg-day)	7.7E-07	1.1E-06	mg/kg-day	2.0E-05	mg/kg-day	5.4E-02
			Exp. Route Total								3.1E-06					5.4E-02
			Dermal	Benzo(a)pyrene	9.2E-01	mg/kg	2.8E-07	mg/kg-day	7.3E+00	1/(mg/kg-day)	2.0E-06	7.7E-07	mg/kg-day	NA	NA	NA
				Aroclor-1254	1.1E+00	mg/kg	3.6E-07	mg/kg-day	2.0E+00	1/(mg/kg-day)	7.1E-07	9.9E-07	mg/kg-day	2.0E-05	mg/kg-day	5.0E-02
			Exp. Route Total								2.7E-06					5.0E-02
		Exposure Point Total									5.8E-06					1.0E-01
	Exposure Medium Total										5.8E-06					1.0E-01
	Air	Emissions from Surface Soil at the Maintenance Shed Area	Inhalation	Benzo(a)pyrene	#REF!	mg/m3	#REF!	mg/kg-day	3.1E+00	1/(mg/kg-day)	#REF!	#REF!	mg/kg-day	NA	NA	NA
				Aroclor-1254	#REF!	mg/m3	#REF!	mg/kg-day	2.0E+00	1/(mg/kg-day)	#REF!	#REF!	mg/kg-day	NA	NA	NA
			Exp. Route Total								#REF!					0.0E+00
		Exposure Point Total									#REF!					0.0E+00
	Exposure Medium Total										#REF!					0.0E+00
Surface Soil Total											#REF!					1.0E-01
										Total of Receptor Risks Across All Media	#REF!			Total of Receptor Hazards Across All Media		1.0E-01

Notes-
NA = Not applicable.

TABLE 7.3.RME

CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS

REASONABLE MAXIMUM EXPOSURE

State Marine Superfund Site, Port Arthur, Texas

Scenario Timeframe: Current/Future
Receptor Population: Industrial/Commercial Worker
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units		Value	Units	Value	Units	
Soil	Soil (0-1 ft)	Soil at the Tar Burn Area	Ingestion	Benzo(a)pyrene	1.1E+00	mg/kg	3.9E-07	mg/kg-day	7.3E+00	1/(mg/kg-day)	2.8E-06	1.1E-06	mg/kg-day	NA	NA	NA
			Exp. Route Total								2.8E-06					0.0E+00
			Dermal	Benzo(a)pyrene	1.1E+00	mg/kg	3.3E-07	mg/kg-day	7.3E+00	1/(mg/kg-day)	2.4E-06	9.3E-07	mg/kg-day	NA	NA	NA
			Exp. Route Total								2.4E-06					0.0E+00
		Exposure Point Total									5.3E-06					0.0E+00
	Exposure Medium Total										5.3E-06					0.0E+00
	Air	Emissions from Surface Soil at the Tar Burn Area	Inhalation	Benzo(a)pyrene	#REF!	mg/m3	#REF!	mg/kg-day	3.1E+00	1/(mg/kg-day)	#REF!	#REF!	mg/kg-day	NA	NA	NA
			Exp. Route Total								#REF!					0.0E+00
		Exposure Point Total									#REF!					0.0E+00
	Exposure Medium Total										#REF!					0.0E+00
Surface Soil Total											#REF!					0.0E+00
											Total of Receptor Risks Across All Media					#REF!
																Total of Receptor Hazards Across All Media
																0.0E+00

Notes-
NA = Not applicable.

TABLE 7.6.RME
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
State Marine Superfund Site, Port Arthur, Texas

Scenario Timeframe: Current/Future
Receptor Population: Industrial/Commercial Worker
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units		Value	Units	Value	Units	
Soil	Soil (0-1 ft)	Soil at Lauren Tank Farm	Ingestion													
				Benzo(a)anthracene	3.7E+00	mg/kg	1.3E-06	mg/kg-day	7.3E-01	1/(mg/kg-day)	9.4E-07	3.6E-06	mg/kg-day	NA	NA	NA
				Benzo(a)pyrene	1.2E+00	mg/kg	4.2E-07	mg/kg-day	7.3E+00	1/(mg/kg-day)	3.0E-06	1.2E-06	mg/kg-day	NA	NA	NA
				Benzo(b)fluoranthene	6.0E+00	mg/kg	2.1E-06	mg/kg-day	7.3E-01	1/(mg/kg-day)	1.5E-06	5.9E-06	mg/kg-day	NA	NA	NA
				Dibenzo(a,h)anthracene	1.1E+00	mg/kg	3.8E-07	mg/kg-day	7.3E+00	1/(mg/kg-day)	2.8E-06	1.1E-06	mg/kg-day	NA	NA	NA
				Alpha-Chlordane	1.3E+01	mg/kg	4.5E-06	mg/kg-day	NA	NA	NA	1.3E-05	mg/kg-day	3.0E-01	mg/kg-day	4.2E-05
			Exp. Route Total								8.3E-06					4.2E-05
			Dermal													
				Benzo(a)anthracene	3.7E+00	mg/kg	1.1E-06	mg/kg-day	7.3E-01	1/(mg/kg-day)	8.0E-07	3.1E-06	mg/kg-day	NA	NA	NA
				Benzo(a)pyrene	1.2E+00	mg/kg	3.6E-07	mg/kg-day	7.3E+00	1/(mg/kg-day)	2.6E-06	1.0E-06	mg/kg-day	NA	NA	NA
				Benzo(b)fluoranthene	6.0E+00	mg/kg	1.8E-06	mg/kg-day	7.3E-01	1/(mg/kg-day)	1.3E-06	5.1E-06	mg/kg-day	NA	NA	NA
				Dibenzo(a,h)anthracene	1.1E+00	mg/kg	3.3E-07	mg/kg-day	7.3E+00	1/(mg/kg-day)	2.4E-06	9.2E-07	mg/kg-day	NA	NA	NA
				Alpha-Chlordane	1.3E+01	mg/kg	3.0E-07	mg/kg-day	NA	NA	NA	8.4E-07	mg/kg-day	3.0E-01	mg/kg-day	2.8E-06
			Exp. Route Total								7.1E-06					2.8E-06
		Exposure Point Total									1.5E-05					4.5E-05
	Exposure Medium Total										1.5E-05					4.5E-05
	Air	Emissions from Surface Soil at the Lauren Tank Farm	Inhalation													
				Benzo(a)anthracene	#REF!	mg/m3	#REF!	mg/kg-day	3.1E-01	1/(mg/kg-day)	#REF!	#REF!	mg/kg-day	NA	NA	NA
				Benzo(a)pyrene	#REF!	mg/m3	#REF!	mg/kg-day	3.1E+00	1/(mg/kg-day)	#REF!	#REF!	mg/kg-day	NA	NA	NA
				Benzo(b)fluoranthene	#REF!	mg/m3	#REF!	mg/kg-day	3.1E-01	1/(mg/kg-day)	#REF!	#REF!	mg/kg-day	NA	NA	NA
				Dibenzo(a,h)anthracene	#REF!	mg/m3	#REF!	mg/kg-day	3.1E+00	1/(mg/kg-day)	#REF!	#REF!	mg/kg-day	NA	NA	NA
				Alpha-Chlordane	#REF!	mg/m3	#REF!	mg/kg-day	3.5E-01	1/(mg/kg-day)	#REF!	#REF!	mg/kg-day	2.0E-04	mg/kg-day	#REF!
			Exp. Route Total								#REF!					#REF!
		Exposure Point Total									#REF!					#REF!
	Exposure Medium Total										#REF!					#REF!
Subsurface Soil Total											#REF!					#REF!
											Total of Receptor Risks Across All Media					#REF!
																Total of Receptor Hazards Across All Media

Notes-
NA = Not applicable.

007929

TABLE 7.7.RME
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
State Marine Superfund Site, Port Arthur, Texas

Scenario Timeframe: Current/Future
Receptor Population: Industrial/Commercial Worker
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units		Value	Units	Value	Units	
Soil	Soil (0-5 ft)	Soil at the Nonsource Areas	Ingestion													
				Benzo(a)anthracene	3.3E+00	mg/kg	1.1E-06	mg/kg-day	7.3E-01	1/(mg/kg-day)	8.3E-07	3.2E-06	mg/kg-day	NA	NA	NA
				Benzo(a)pyrene	2.7E+00	mg/kg	9.3E-07	mg/kg-day	7.3E+00	1/(mg/kg-day)	6.8E-06	2.6E-06	mg/kg-day	NA	NA	NA
				Benzo(b)fluoranthene	3.5E+00	mg/kg	1.2E-06	mg/kg-day	7.3E-01	1/(mg/kg-day)	9.0E-07	3.5E-06	mg/kg-day	NA	NA	NA
				Dibenzo(a,h)anthracene	4.8E-01	mg/kg	1.7E-07	mg/kg-day	7.3E+00	1/(mg/kg-day)	1.2E-06	4.7E-07	mg/kg-day	NA	NA	NA
			Exp. Route Total								9.8E-06					0.0E+00
			Dermal	Benzo(a)anthracene	3.3E+00	mg/kg	9.8E-08	mg/kg-day	7.3E-01	1/(mg/kg-day)	7.1E-08	2.7E-06	mg/kg-day	NA	NA	NA
				Benzo(a)pyrene	2.7E+00	mg/kg	8.0E-08	mg/kg-day	7.3E+00	1/(mg/kg-day)	5.8E-07	2.2E-06	mg/kg-day	NA	NA	NA
				Benzo(b)fluoranthene	3.5E+00	mg/kg	1.1E-07	mg/kg-day	7.3E-01	1/(mg/kg-day)	7.7E-08	3.0E-06	mg/kg-day	NA	NA	NA
				Dibenzo(a,h)anthracene	4.8E-01	mg/kg	1.4E-08	mg/kg-day	7.3E+00	1/(mg/kg-day)	1.0E-07	4.0E-07	mg/kg-day	NA	NA	NA
			Exp. Route Total								8.4E-07					0.0E+00
		Exposure Point Total									1.1E-05					0.0E+00
	Exposure Medium Total										1.1E-05					0.0E+00
	Air	Emissions from Surface Soil at the Nonsource Area	Inhalation													
				Benzo(a)anthracene	#REF!	mg/m3	#REF!	mg/kg-day	3.1E-01	1/(mg/kg-day)	#REF!	#REF!	mg/kg-day	NA	NA	NA
				Benzo(a)pyrene	#REF!	mg/m3	#REF!	mg/kg-day	3.1E+00	1/(mg/kg-day)	#REF!	#REF!	mg/kg-day	NA	NA	NA
				Benzo(b)fluoranthene	#REF!	mg/m3	#REF!	mg/kg-day	3.1E-01	1/(mg/kg-day)	#REF!	#REF!	mg/kg-day	NA	NA	NA
				Dibenzo(a,h)anthracene	#REF!	mg/m3	#REF!	mg/kg-day	3.1E+00	1/(mg/kg-day)	#REF!	#REF!	mg/kg-day	NA	NA	NA
			Exp. Route Total								#REF!					0.0E+00
		Exposure Point Total									#REF!					0.0E+00
	Exposure Medium Total										#REF!					0.0E+00
Subsurface Soil Total											#REF!					0.0E+00
											Total of Receptor Risks Across All Media					
											#REF!					0.0E+00
																Total of Receptor Hazards Across All Media

Notes-
NA = Not applicable.

TABLE 7.8.RME

CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS

REASONABLE MAXIMUM EXPOSURE

State Marine Superfund Site, Port Arthur, Texas

Scenario Timeframe: Current/Future
Receptor Population: Fisher
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units		Value	Units	Value	Units	
Sediment	Fish Tissue	Fish Tissue	Ingestion													
				Aroclor-1242	8.5E-01	mg/kg	1.1E-04	mg/kg-day	2.0E+00	1/(mg/kg-day)	2.2E-04	3.2E-04	mg/kg-day	NA	NA	NA
				Copper	1.5E+02	mg/kg	1.9E-02	mg/kg-day	NA	NA	NA	5.6E-02	mg/kg-day	3.7E-02	mg/kg-day	1.5E+00
				Zinc	4.3E+03	mg/kg	5.5E-01	mg/kg-day	NA	NA	NA	1.6E+00	mg/kg-day	3.0E-01	mg/kg-day	5.3E+00
			Exp. Route Total								2.2E-04					6.8E+00
		Exposure Point Total									2.2E-04					6.8E+00
	Exposure Medium Total										2.2E-04					6.8E+00
Sediment Total											2.2E-04					6.8E+00
										Total of Receptor Risks Across All Media	2.2E-04				Total of Receptor Hazards Across All Media	6.8E+00

Notes-
NA = Not applicable.

TABLE 7.1.CTE
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS
CENTRAL TENDENCY EXPOSURE
State Marine Superfund Site, Port Arthur, Texas

Scenario Timeframe: Current/Future
Receptor Population: Industrial Worker
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units		Value	Units	Value	Units	
Sediment	Fish Tissue	Fish Tissue	Ingestion													
				Aroclor-1254	8.5E-01	mg/kg	4.1E-05	mg/kg-day	2.0E+00	1/(mg/kg-day)	8.2E-05	3.2E-04	mg/kg-day	NA	NA	NA
				Copper	1.5E+02	mg/kg	7.2E-03	mg/kg-day	NA	NA	NA	5.6E-02	mg/kg-day	3.7E-02	mg/kg-day	1.5E+00
				Zinc	4.3E+03	mg/kg	2.1E-01	mg/kg-day	NA	NA	NA	1.6E+00	mg/kg-day	3.0E-01	mg/kg-day	5.3E+00
			Exp. Route Total								8.2E-05					6.8E+00
Subsurface Soil Total											8.2E-05					6.8E+00
											Total of Receptor Risks Across All Media 8.2E-05					Total of Receptor Hazards Across All Media 6.8E+00

Notes-
NA = Not applicable.

007932

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TABLE 9.1.RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
REASONABLE MAXIMUM EXPOSURE
State Marine Superfund Site, Port Arthur, Texas

Scenario Timeframe: Current/Future
Receptor Population: Industrial/Commercial Worker
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk				Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil	Soil (0-5 ft)	Soil at the Former Wastewater Impoundment Area										
			Benzo(a)anthracene	1.4E-06	NA	1.2E-06	2.6E-06	NA	NA	NA	NA	0.0E+00
			Benzo(a)pyrene	5.6E-06	NA	4.8E-06	1.0E-05	NA	NA	NA	NA	0.0E+00
			Benzo(b)fluoranthene	7.7E-07	NA	6.6E-07	1.4E-06	NA	NA	NA	NA	0.0E+00
			Dibenzo(a,h)anthracene	1.2E-06	NA	1.0E-06	2.2E-06	NA	NA	NA	NA	0.0E+00
			Indeno(1,2,3-cd)pyrene	5.5E-07	NA	4.7E-07	1.0E-06	NA	NA	NA	NA	0.0E+00
Chemical Total				9.5E-06	NA	8.2E-06	1.8E-05		0.0E+00	NA	0.0E+00	0.0E+00
	Air	Emissions from Surface Soil at the Former Wastewater Impoundment Area										
			Benzo(a)anthracene	NA	3.0E-11	NA	3.0E-11	NA	NA	NA	NA	0.0E+00
			Benzo(a)pyrene	NA	1.2E-10	NA	1.2E-10	NA	NA	NA	NA	0.0E+00
			Benzo(b)fluoranthene	NA	1.6E-11	NA	1.6E-11	NA	NA	NA	NA	0.0E+00
			Dibenzo(a,h)anthracene	NA	2.5E-11	NA	2.5E-11	NA	NA	NA	NA	0.0E+00
			Indeno(1,2,3-cd)pyrene	NA	1.2E-11	NA	1.2E-11	NA	NA	NA	NA	0.0E+00
Chemical Total				0.0E+00	2.0E-10	0.0E+00	2.0E-10		NA	0.0E+00	NA	0.0E+00
Medium Total							1.8E-05					0.0E+00
Receptor Total							1.8E-05				Receptor HI Total	0.0E+00

007934

TABLE 9.2.RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
REASONABLE MAXIMUM EXPOSURE
State Marine Superfund Site, Port Arthur, Texas

Scenario Timeframe: Current/Future
Receptor Population: Industrial/Commercial Worker
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk				Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil	Soil (0-1 ft)	Soil at the Wastewater Treatment Facility	Benzo(a)pyrene	1.1E-06	NA	9.6E-07	2.1E-06	NA	NA	NA	NA	0.0E+00
			Iron	NA	NA	NA	0.0E+00	Gastrointestinal, Blood, Liver	5.2E-01	NA	3.4E-02	5.6E-01
Chemical Total				1.1E-06	NA	9.6E-07	2.1E-06		5.2E-01	NA	3.4E-02	5.6E-01
	Air	Emissions from Surface Soil at the Wastewater Treatment Facility	Benzo(a)pyrene	NA	2.4E-11	NA	2.4E-11	NA	NA	NA	NA	0.0E+00
			Iron	NA	NA	NA	0.0E+00	NA	NA	NA	NA	0.0E+00
Chemical Total				0.0E+00	2.4E-11	0.0E+00	2.4E-11		NA	NA	NA	0.0E+00
Medium Total							2.1E-06					5.6E-01
Receptor Total							2.1E-06				Receptor HI Total	5.6E-01

Total Gastrointestinal HI Across All Media =	5.6E-01
Total Blood HI Across All Media =	5.6E-01
Total Liver HI Across All Media =	5.6E-01

007935

TABLE 9.3.RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
REASONABLE MAXIMUM EXPOSURE
State Marine Superfund Site, Port Arthur, Texas

Scenario Timeframe: Current/Future
Receptor Population: Industrial/Commercial Worker
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk				Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil	Soil (0-1 ft)	Soil at the Tar Burn Area	Benzo(a)pyrene	2.8E-06	NA	2.4E-06	5.3E-06	NA	NA	NA	NA	0.0E+00
Chemical Total				2.8E-06	NA	2.4E-06	5.3E-06		NA	NA	NA	NA
	Air	Emissions from Surface Soil at the Tar Burn Area	Benzo(a)pyrene	NA	6.0E-11	NA	6.0E-11	NA	NA	NA	NA	0.0E+00
Chemical Total				0.0E+00	6.0E-11	0.0E+00	6.0E-11		NA	NA	NA	0.0E+00
Medium Total							5.3E-06					NA
Receptor Total							5.3E-06				Receptor HI Total	NA

007936

TABLE 9.4.RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
REASONABLE MAXIMUM EXPOSURE
State Marine Superfund Site, Port Arthur, Texas

Scenario Timeframe: Current/Future
Receptor Population: Industrial/Commercial Worker
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk				Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil	Soil (0-1 ft)	Soil at the Current AST Area										
			Benzo(a)anthracene	7.7E-07	NA	6.6E-07	1.4E-06	NA	NA	NA	NA	0.0E+00
			Benzo(a)pyrene	6.9E-06	NA	5.9E-06	1.3E-05	NA	NA	NA	NA	0.0E+00
			Benzo(b)fluoranthene	1.1E-06	NA	9.6E-07	2.1E-06	NA	NA	NA	NA	0.0E+00
			Dibenzo(a,h)anthracene	6.2E-07	NA	5.3E-07	1.1E-06	NA	NA	NA	NA	0.0E+00
Chemical Total				9.4E-06	NA	8.1E-06	1.7E-05		0.0E+00	NA	0.0E+00	0.0E+00
	Air	Emissions from Surface Soil at the Current AST Area										
			Benzo(a)anthracene	NA	1.6E-11	NA	1.6E-11	NA	NA	NA	NA	0.0E+00
			Benzo(a)pyrene	NA	1.5E-10	NA	1.5E-10	NA	NA	NA	NA	0.0E+00
			Benzo(b)fluoranthene	NA	2.4E-11	NA	2.4E-11	NA	NA	NA	NA	0.0E+00
			Dibenzo(a,h)anthracene	NA	1.3E-11	NA	1.3E-11	NA	NA	NA	NA	0.0E+00
Chemical Total				0.0E+00	2.0E-10	0.0E+00	2.0E-10		NA	NA	NA	0.0E+00
Medium Total							1.7E-05					0.0E+00
Receptor Total							1.7E-05				Receptor HI Total	0.0E+00

007937

TABLE 9.5.RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
REASONABLE MAXIMUM EXPOSURE
State Marine Superfund Site, Port Arthur, Texas

Scenario Timeframe: Current/Future
Receptor Population: Industrial/Commercial Worker
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk				Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil	Soil (0-1 ft)	Soil at the Maintenance Shed Area	Benzo(a)pyrene	2.3E-06	NA	2.0E-06	4.4E-06	NA	NA	NA	NA	0.0E+00
			Aroclor-1254	7.7E-07	NA	7.1E-07	1.5E-06	Immune system	5.4E-02	NA	5.0E-02	1.0E-01
Chemical Total				3.1E-06	NA	2.7E-06	5.8E-06		5.4E-02	NA	5.0E-02	1.0E-01
	Air	Emissions from Surface Soil at the Maintenance Shed Area	Benzo(a)pyrene	NA	5.0E-11	NA	5.0E-11	NA	NA	NA	NA	0.0E+00
			Aroclor-1254	NA	3.9E-11	NA	3.9E-11	NA	NA	NA	NA	0.0E+00
Chemical Total				0.0E+00	8.9E-11	0.0E+00	8.9E-11		NA	NA	NA	0.0E+00
Medium Total							5.8E-06					1.0E-01
Receptor Total							5.8E-06				Receptor HI Total	1.0E-01

Total Immune System HI Across All Media = 1.0E-01

007938

TABLE 9.6.RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
REASONABLE MAXIMUM EXPOSURE
State Marine Superfund Site, Port Arthur, Texas

Scenario Timeframe: Current/Future
Receptor Population: Industrial/Commercial Worker
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk				Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil	Soil (0-1 ft)	Soil at Lauren Tank Farm										
			Benzo(a)anthracene	9.4E-07	NA	8.0E-07	1.7E-06	NA	NA	NA	NA	0.0E+00
			Benzo(a)pyrene	3.0E-06	NA	2.6E-06	5.6E-06	NA	NA	NA	NA	0.0E+00
			Benzo(b)fluoranthene	1.5E-06	NA	1.3E-06	2.9E-06	NA	NA	NA	NA	0.0E+00
			Dibenzo(a,h)anthracene	2.8E-06	NA	2.4E-06	5.2E-06	NA	NA	NA	NA	0.0E+00
			Alpha-Chlordane	NA	NA	NA	0.0E+00	Liver	4.2E-05	NA	2.8E-06	4.5E-05
Chemical Total				8.3E-06	NA	7.1E-06	1.5E-05		4.2E-05	NA	2.8E-06	4.5E-05
	Air	Emissions from Surface Soil at the Lauren Tank Farm										
			Benzo(a)anthracene	NA	2.0E-11	NA	2.0E-11	NA	NA	NA	NA	0.0E+00
			Benzo(a)pyrene	NA	6.5E-11	NA	6.5E-11	NA	NA	NA	NA	0.0E+00
			Benzo(b)fluoranthene	NA	3.3E-11	NA	3.3E-11	NA	NA	NA	NA	0.0E+00
			Dibenzo(a,h)anthracene	NA	6.0E-11	NA	6.0E-11	NA	NA	NA	NA	0.0E+00
			Alpha-Chlordane	NA	8.0E-11	NA	8.0E-11	Liver	NA	3.2E-06	NA	3.2E-06
Chemical Total				0.0E+00	2.6E-10	0.0E+00	2.6E-10		NA	3.2E-06	NA	3.2E-06
Medium Total							1.5E-05					4.8E-05
Receptor Total							1.5E-05				Receptor HI Total	4.8E-05

Total Liver HI Across All Media = 4.8E-05

007939

TABLE 9.7.RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
REASONABLE MAXIMUM EXPOSURE
State Marine Superfund Site, Port Arthur, Texas

Scenario Timeframe: Current/Future
Receptor Population: Industrial/Commercial Worker
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk				Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil	Soil (0-5 ft)	Soil at the Nonsource Areas										
			Benzo(a)anthracene	8.3E-07	NA	7.1E-08	9.0E-07	NA	NA	NA	NA	0.0E+00
			Benzo(a)pyrene	6.8E-06	NA	5.8E-07	7.4E-06	NA	NA	NA	NA	0.0E+00
			Benzo(b)fluoranthene	9.0E-07	NA	7.7E-08	9.8E-07	NA	NA	NA	NA	0.0E+00
			Dibenzo(a,h)anthracene	1.2E-06	NA	1.0E-07	1.3E-06	NA	NA	NA	NA	0.0E+00
Chemical Total				9.8E-06	NA	8.4E-07	1.1E-05		0.0E+00	NA	0.0E+00	0.0E+00
	Air	Emissions from Surface Soil at the Nonsource Areas										
			Benzo(a)anthracene	NA	1.8E-11	NA	1.8E-11	NA	NA	NA	NA	0.0E+00
			Benzo(a)pyrene	NA	1.5E-10	NA	1.5E-10	NA	NA	NA	NA	0.0E+00
			Benzo(b)fluoranthene	NA	1.9E-11	NA	1.9E-11	NA	NA	NA	NA	0.0E+00
			Dibenzo(a,h)anthracene	NA	2.6E-11	NA	2.6E-11	NA	NA	NA	NA	0.0E+00
Chemical Total				0.0E+00	2.1E-10	0.0E+00	2.1E-10		NA	0.0E+00	NA	0.0E+00
Medium Total							1.1E-05					0.0E+00
Receptor Total							1.1E-05				Receptor HI Total	0.0E+00

Total Liver HI Across All Media = 0.0E+00

007940

TABLE 9.8.RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
REASONABLE MAXIMUM EXPOSURE
State Marine Superfund Site, Port Arthur, Texas

Scenario Timeframe: Current/Future
Receptor Population: Fisher
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk				Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
Sediment	Fish Tissue	Fish Tissue										
			Aroclor-1242	2.2E-04	NA	NA	2.2E-04	NA	NA	NA	NA	0.0E+00
			Copper	NA	NA	NA	0.0E+00	Gastrointestinal	1.5E+00	NA	NA	1.5E+00
			Zinc	NA	NA	NA	0.0E+00	Blood	5.3E+00	NA	NA	5.3E+00
Chemical Total				2.2E-04	NA	NA	2.2E-04		6.8E+00	NA	NA	6.8E+00
Medium Total							2.2E-04					6.8E+00
Receptor Total							2.2E-04				Receptor HI Total	6.8E+00

Total Gastrointestinal HI Across All Media =	1.5E+00
Total Blood HI Across All Media =	5.3E+00

007941

TABLE 9.1 CTE

SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs

CENTRAL TENDENCY EXPOSURE

State Marine Superfund Site, Port Arthur, Texas

Scenario Timeframe: Current/Future
Receptor Population: Fisher
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk				Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
Sediment	Fish Tissue	Fish Tissue										
			Aroclor-1242	8.2E-05	NA	NA	8.2E-05	NA	NA	NA	NA	0.0E+00
			Copper	NA	NA	NA	0.0E+00	Gastrointestinal	1.5E+00	NA	NA	1.5E+00
			Zinc	NA	NA	NA	0.0E+00	Blood	5.3E+00	NA	NA	5.3E+00
Chemical Total				8.2E-05	NA	NA	8.2E-05		6.8E+00	NA	NA	6.8E+00
Medium Total							8.2E-05					6.8E+00
Receptor Total							8.2E-05				Receptor HI Total	6.8E+00

Total Gastrointestinal HI Across All Media = 1.5E+00

Total Blood HI Across All Media = 5.3E+00

007942

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TABLE 10.1.RME
RISK SUMMARY
REASONABLE MAXIMUM EXPOSURE
State Marine Superfund Site, Port Arthur, Texas

Scenario Timeframe: Current/Future
Receptor Population: Fisher
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk				Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
Sediment	Fish Tissue	Fish Tissue										
			Aroclor-1242	2.2E-04	NA	NA	2.2E-04	NA	NA	NA	NA	0.0E+00
			Copper	NA	NA	NA	0.0E+00	Gastrointestinal	1.5E+00	NA	NA	1.5E+00
			Zinc	NA	NA	NA	0.0E+00	Blood	5.3E+00	NA	NA	5.3E+00
Chemical Total				2.2E-04	NA	NA	2.2E-04		6.8E+00	NA	NA	6.8E+00
Medium Total							2.2E-04					6.8E+00
Receptor Total							2.2E-04				Receptor HI Total	6.8E+00

Total Gastrointestinal HI Across All Media =	1.5E+00
Total Blood HI Across All Media =	5.3E+00

007944

TABLE 10.1.CTE
RISK SUMMARY
CENTRAL TENDENCY EXPOSURE
State Marine Superfund Site, Port Arthur, Texas

Scenario Timeframe: Current/Future
Receptor Population: Fisher
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk				Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
Sediment	Fish Tissue	Fish Tissue										
			Aroclor-1242	8.2E-05	NA	NA	8.2E-05	NA	NA	NA	NA	0.0E+00
			Copper	NA	NA	NA	0.0E+00	Gastrointestinal	1.5E+00	NA	NA	1.5E+00
			Zinc	NA	NA	NA	0.0E+00	Blood	5.3E+00	NA	NA	5.3E+00
Chemical Total				8.2E-05	NA	NA	8.2E-05		6.8E+00	NA	NA	6.8E+00
Medium Total							8.2E-05					6.8E+00
Receptor Total							8.2E-05				Receptor HI Total	6.8E+00

Total Gastrointestinal HI Across All Media = 1.5E+00
Total Blood HI Across All Media = 5.3E+00

007945

Attachment 2

STATISTICAL COMPARISON TO BACKGROUND CONSENTRATIONS

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A statistical comparison of site data to historic background data was performed to identify potentially site-related constituents that were detected at the State Marine Superfund Site. Results of the comparison were used to identify chemicals of potential concern in the human health risk assessment and ecological risk assessment. Results of the evaluation are described below.

Introduction

Background data were available for both soil and sediment for the State Marine Site. These included five soil and five sediment samples. The background data are summarized in **Table 1.** Both inorganic and organic parameter concentrations were available, with the organic data having a higher percentage of nondetects, as is typical. With this few samples, and the typically higher frequency of nondetects, decisions with background comparisons with the organic data are not recommended. However, statistics were carried out and reported for all parameters that were detected in both Site and background populations.

This statistical analysis primarily focused on comparisons of central tendency using the nonparametric Wilcoxon Rank Sum test. These comparisons were reinforced with graphical comparisons of the background and Site data via box and whisker plots. The comparison results with inorganics were used in consideration of which parameters would be included in risk calculations. Background threshold values were also calculated, as discussed later, but their use is not recommended for definitive decisions (with inorganic or organic data) since estimates of the upper tail of the background population carry considerable uncertainty with only five background samples.

Wilcoxon Rank Sum Comparisons

The Wilcoxon Rank Sum (WRS) test is a nonparametric test used for determining whether a difference exists between two populations. It can be used to test whether measurements from one population (such as the Site population) tend to be shifted higher than those from another population (such as the background population). Acknowledged as a nonparametric test, it is suggested by EPA background guidance for cases when the sample size is less than 20 (EPA, 2002). As a nonparametric test based on ranks of the data, it is less influenced by spurious results in either data set than parametric tests, such as a t-test performed on the concentrations, which makes a distributional assumption about the data.

This test calculates the probability that the observed differences between the two populations are due merely to random variability in the data, as opposed to being due to an actual elevated shift in one. If this probability is less than a chosen significance level, in this case 0.20, then the decision is made that a significant difference does exist between the two populations. A significance level of 0.20 implies that one has 80% confidence ([1 – 0. 20]*100%) that the two groups will be determined to be statistically equivalent when they actually are.

With a background data set of only five samples (five for soil and five for sediment) there is still considerable uncertainty in these background comparisons, but complemented with the box and whisker plots presented in **Figures 1, 2, and 3**, a useful understanding of how the background and Site populations compare can be obtained. **Figure 1** presents plots for inorganics in soil, while **Figure 2** presents plots for organics in soil. Plots of sediment data appear in **Figure 3.** Box and whisker plots are explained in the following section.

The results of these comparisons are presented in **Tables 2 through 14** for each matrix-Site combination. While each table needs to be reviewed individually, four soil metals are seen to be most likely to exceed background. These are copper, lead, silver, and zinc. Occasionally, these were not seen to exceed background and occasionally other soil metals were. For sediment, all metals except for antimony were found to significantly exceed background.

Box and Whisker Plots

Box and whisker plots are often very good at demonstrating how much overlap exists between two or more populations. These plots simultaneously present information on the central tendency, variability, and skewness for a sample data set by sketching the center 50 percent of the concentrations with a box, and then illustrating the typical tail regions of the distribution with whiskers (see EPA, 2000 for methodology and examples). For atypical concentrations that extend further from the center than the whiskers, individual data symbols are plotted. These plots often provide a better visual perspective on the comparison between populations than scatter plots, particularly when a large number of data points cause individual scatter plot symbols to overlap.

Specifically, these box and whisker plots are constructed as follows:

- The height of the box represents the interquartile range (IQR). The IQR is the distance between the 25th and the 75th percentiles.
- The horizontal line in the box interior represents the median.
- The vertical lines issuing from the box extend to the minimum and maximum measured values (as long as these minimum and maximum values do not extend further from the box than a distance of 1.5 times the IQR).
- Individual data symbols are used for concentrations that exceed the whiskers.

These principles are seen in the example box and whisker plots shown in **Figure 4**. The upper and lower edges of the box and the ends of the whiskers all represent actual measured concentrations in the sample data set. Specifically, for Data Group C, the 25th percentile, 75th percentile, and median are all labeled as part of the box. In this plot the overall minimum value serves as the end of the whisker since it is within a distance of 1.5 x IQR from the box. The maximum values (and the next to the largest value), however, are further from the box than a distance of 1.5 × IQR. Thus, they are labeled as outliers. The third largest overall value, that represents the largest value within a distance of 1.5 risk based concentration IQR, serves as the end of the upper whisker.

Various interpretations are possible by examining these box and whisker plots. For example, if extensive overlap exists between the box plots from different data groups, such as between data groups B and C, then the measurements from each group, on average, are very similar. Conversely, little overlap, as seen between data group A and the other two, suggests that the measurements from the groups are, on average, quite different. The box and whisker plots presented in **Figures 1 through 3** offer a similar opportunity to visualize the comparisons between Site and background concentrations for inorganic soil, organic soil, and inorganic sediment, respectively.

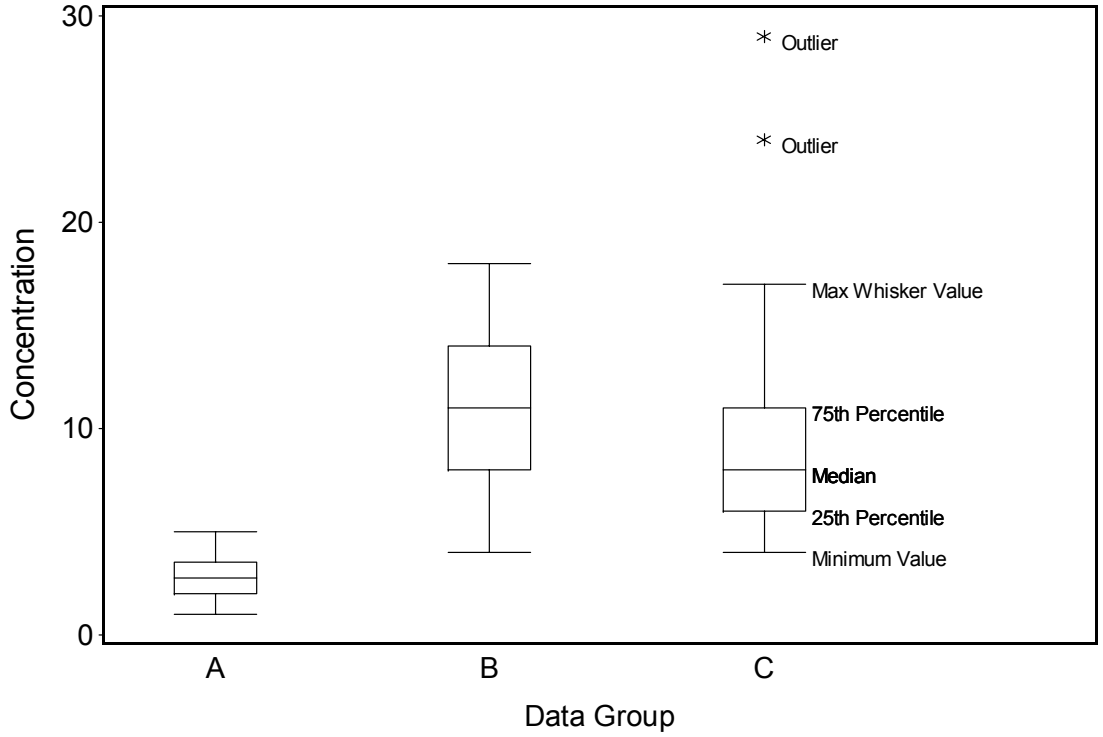

Figure 4: Example Box and Whisker Plots

Comparisons to a Background Threshold Value

A common feature in comparisons to background involves the calculation of a background threshold value to which individual Site concentrations are compared. There are various threshold values that can be calculated and three are included here. These are the upper tolerance limit (UTL), the upper prediction limit (UPL), and the maximum of background sample concentrations. Although these are presented in **Table 1**, none of them were used definitively in determining whether a site should be considered to exceed background (the WRS test was used for this). The size of the background data set (5 samples) makes it difficult to estimate an appropriate elevated background value. Instead, they are presented as auxiliary information, particularly for those accustomed to considering these thresholds.

The UTL was calculated as a 95 percent/95 percent background UTL, that is, an upper bound (with 95 percent confidence) of the background 95th percentile. The calculation of UTLs depends on a distributional assumption. Given that the sample size (5 samples) did not lend itself to a good understanding of the distribution, all UTLs were calculated assuming normality. Some environmental data sets, including background, demonstrate more skewness than a normal distribution (positive skewness), but assuming normality tends to offer a lower calculated upper bound than if an attempt is made to adjust for skewness, such as with a log transformation. Thus, the assumption of normality tended to offer values conservative for the environment.

Furthermore, the Shapiro-Wilk test for normality was performed on each parameter (see **Table 1)** with the results suggesting that normality was a typically good assumption (only a few p-values less than 0.05, the recommended threshold for this test of normality) although with only five samples one would typically not expect there to be sufficient evidence to reject normality (unless strong deviations from a normal distribution were indicated). The normal UTLs were calculated using the following equation:

$$UTL = \bar{x} + (K \times s),$$

where $\bar{x}$ is the sample mean;
K is the tolerance factor; and
s is the sample standard deviation.

Since UTLs are an estimate of the 95th percentile of the background population, one understands that (with 95% confidence) as many as 5% of results equivalent to background may exceed this threshold.

Included in **Tables 2 through 14** are the number of exceedances of the UTL as well as the percentage of exceedances. Assuming the background populations for which the UTLs were calculated were normally distributed, one would expect this percentage to exceed 5% only about 5% of the time (1 in 20) if the upper tails of the Site and background populations are equivalent. Of course, considerable uncertainty exists given the background sample size, so this comparison was not relied upon, even though it is reported.

Some consideration to using UPLs as a background threshold value has been voiced in the environmental community. It is an upper confidence limit on the next encountered Site result. The UPLs were also calculated with a confidence level of 95% and an assumption of normality as follows:

$$UPL = \bar{x} + t_{0.95,n-1} \times s \times \sqrt{1 + \frac{1}{n}},$$

where $\bar{x}$ is the sample mean;
t is the *Student's t* statistic;
n is the number of background samples; and
s is the sample standard deviation.

Adjustments to the equation are possible to expand the limit to include some future number of multiple results, but this is not typical of those proposing UPLs as a background threshold value. Because the UPL focuses on the next encountered result, it sometimes results in a large number of exceedances (of the UPL) when the number of Site results to be compared is large (even more so than the UTL). Being closer to the mean, it is often considered a more stable value than the UTL, but it also results in more exceedances by results equivalent to those in the background population (false indications of individual exceedances over background).

The number of exceedances are provided in **Tables 2 through 14**. Also include are the number of exceedances of the background sample maximum. The number of UPL exceedances are more than the number of exceedances of the UTL which is to be expected since it tends to estimate a lower percentile than the UTL. Even more exceedances are noted with the background sample maximum. The background sample maximum also estimates a value less than the 95th percentile with small data sets. (It would not estimate the 95th percentile, with 95% confidence, unless about 60 background samples were available.)

As would be expected, the number of exceedances of these background threshold values increases when the Site population appears to exceed the background population (as indicated by the WRS test). With a small number of background samples, however, estimating an upper percentile of the background population carries a lot of uncertainty, and reliance on these values is not recommended.

References

U.S. Environmental Protection Agency (EPA). 2000. *Guidance for Data Quality Assessment. Practical Methods for Data Analysis*. Office of Research and Development, Washington, D.C. 2000.

U.S. Environmental Protection Agency (EPA). 2002. *Guidance for Comparing Background and Chemical Concentrations in Soil for CERCLA Sites*, Office of Emergency and Remedial Response, 2002.

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Figures

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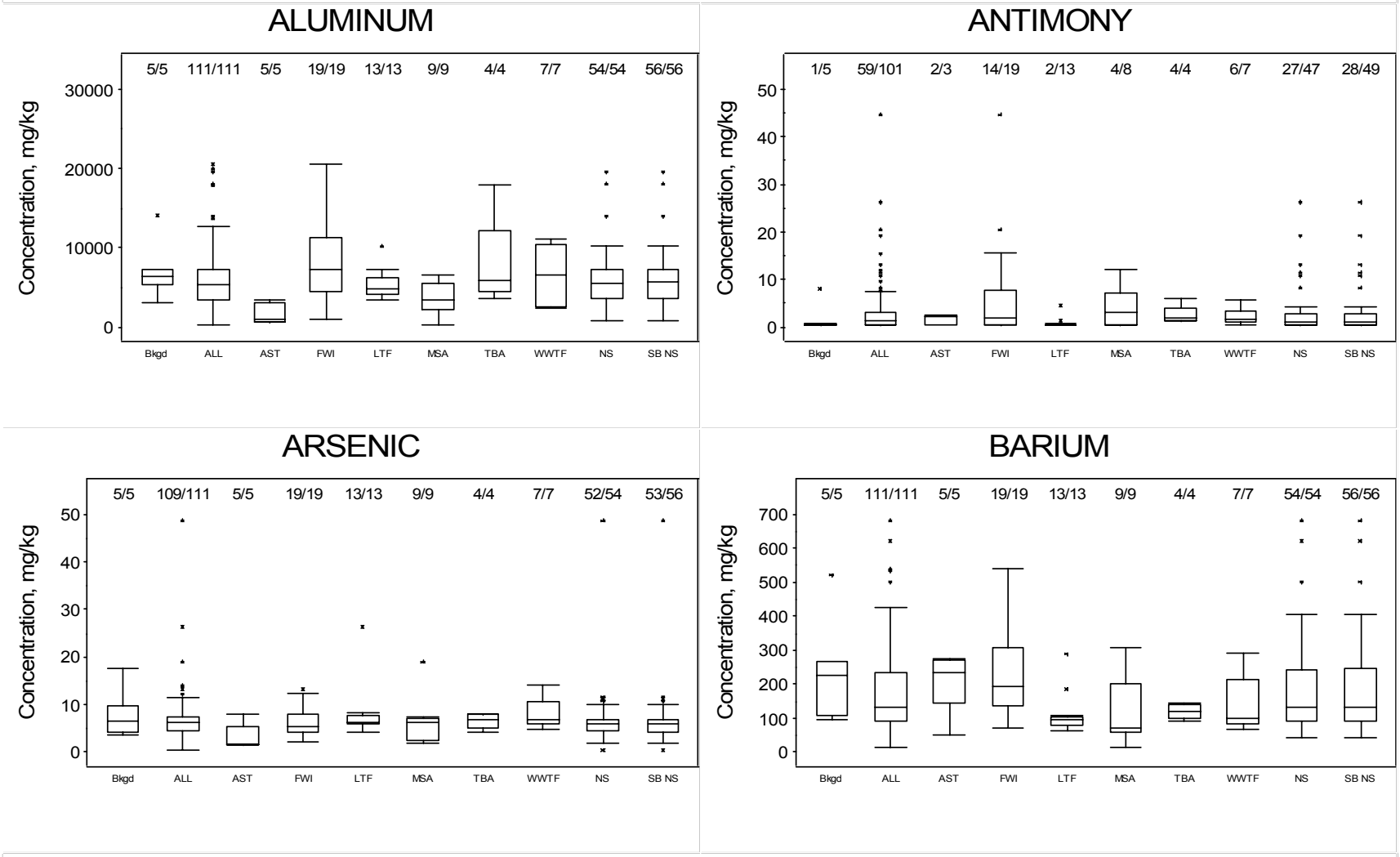
Figure 1: Soil Box and Whisker Plots for Detected Inorganics



Bkgd=Background; ALL=All locations 0-0.5 feet; AST=Current Aboveground Storage Tank Area; FWI=Former Wastewater Impoundments; LTF=Former Lauren Tank Farm Area; MSA=Maintenance Shed Area; NS=Non-Source Area 0-5 feet; TBA=TAR Burn Area; WWTF=Wastewater Treatment Facility, SB NS=Subsurface Soil Non-Source Area 0-5 feet

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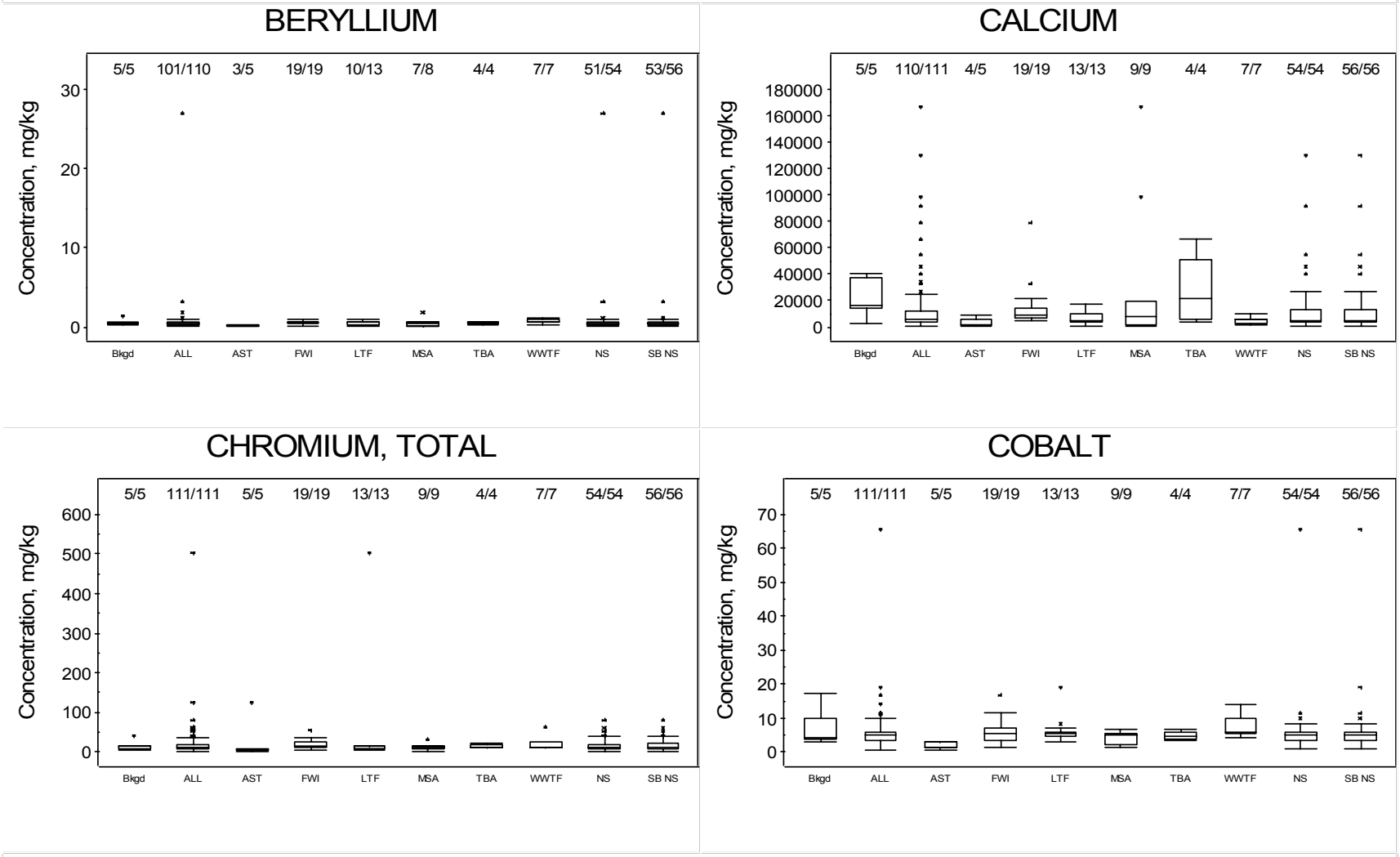

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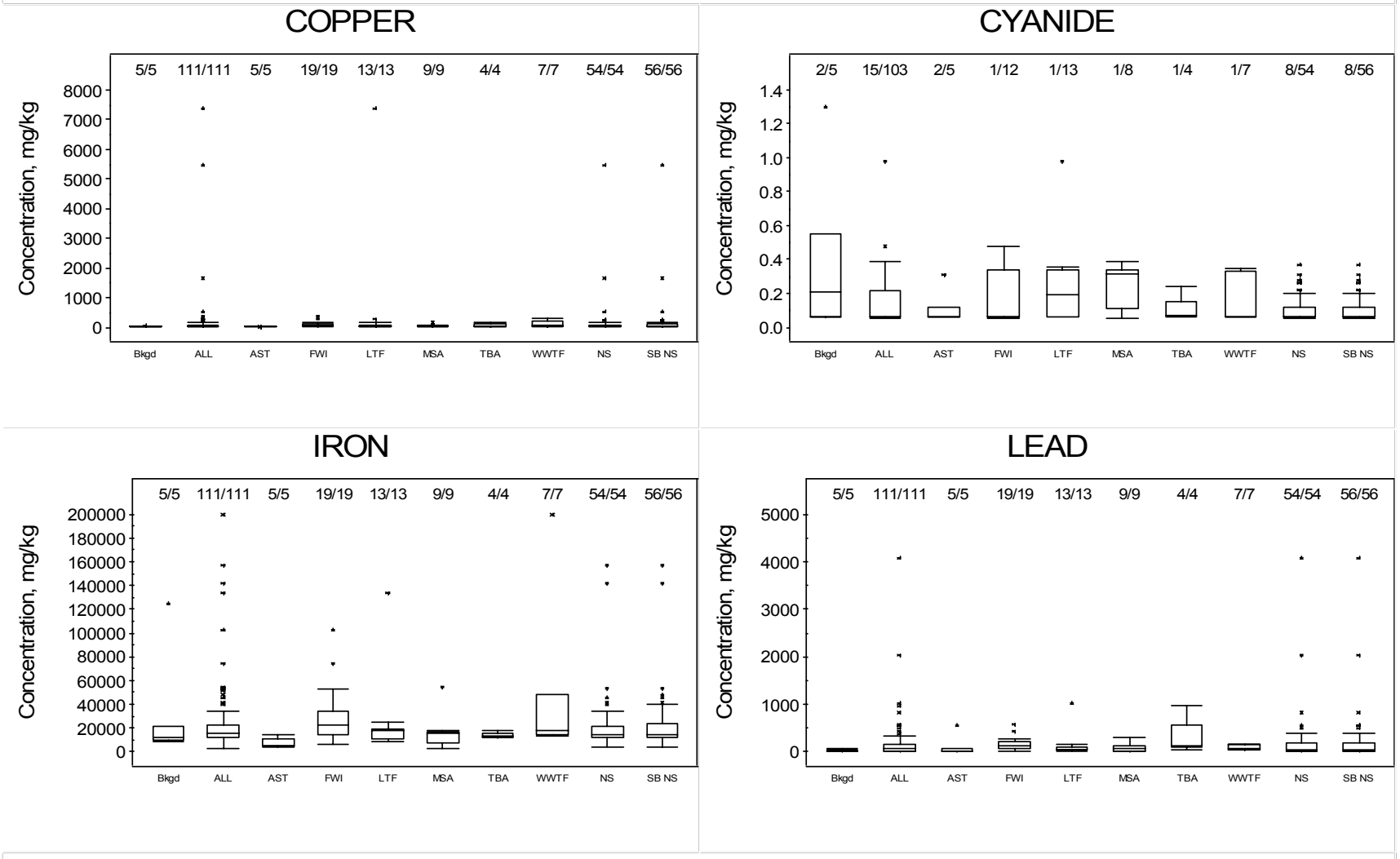

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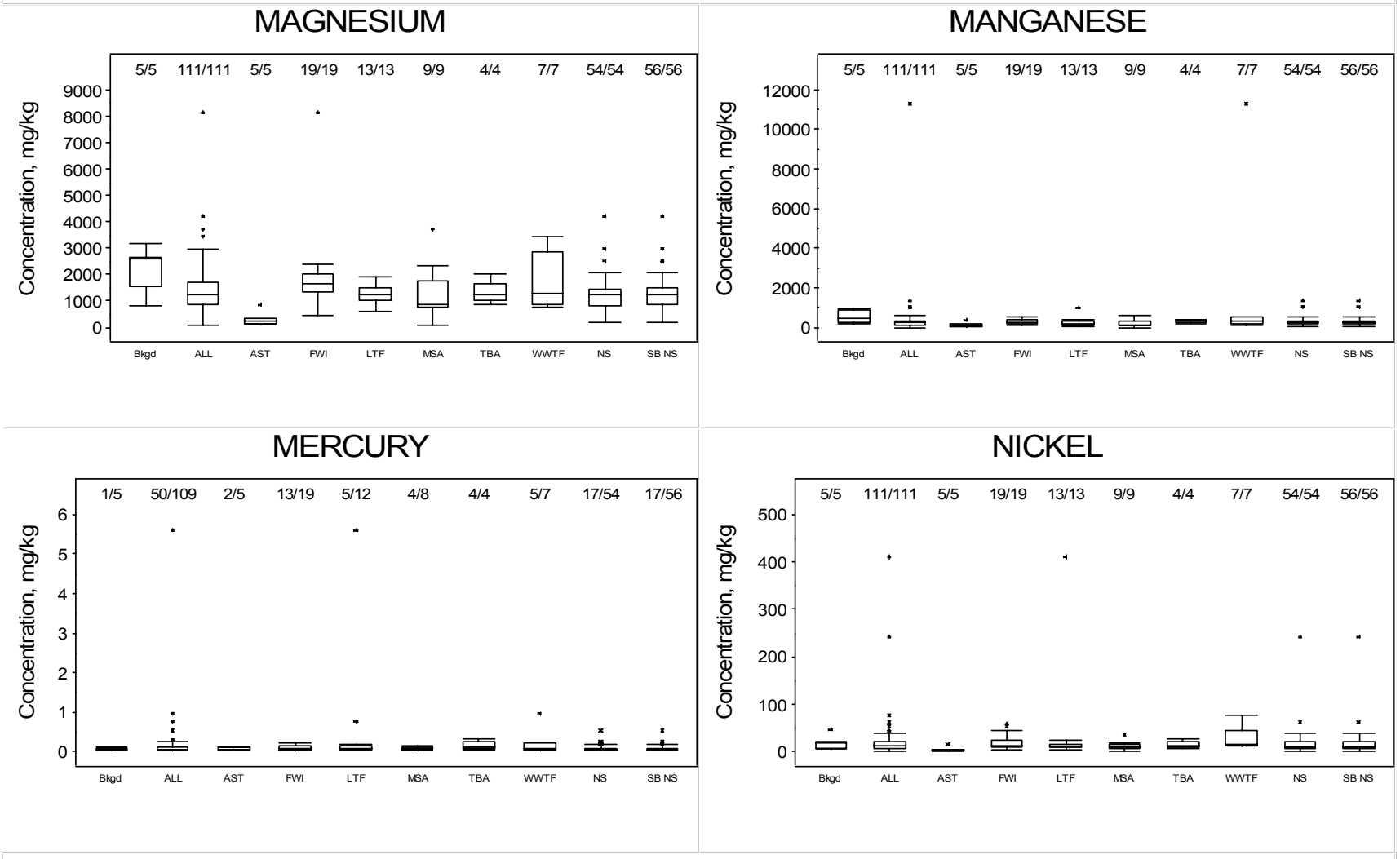

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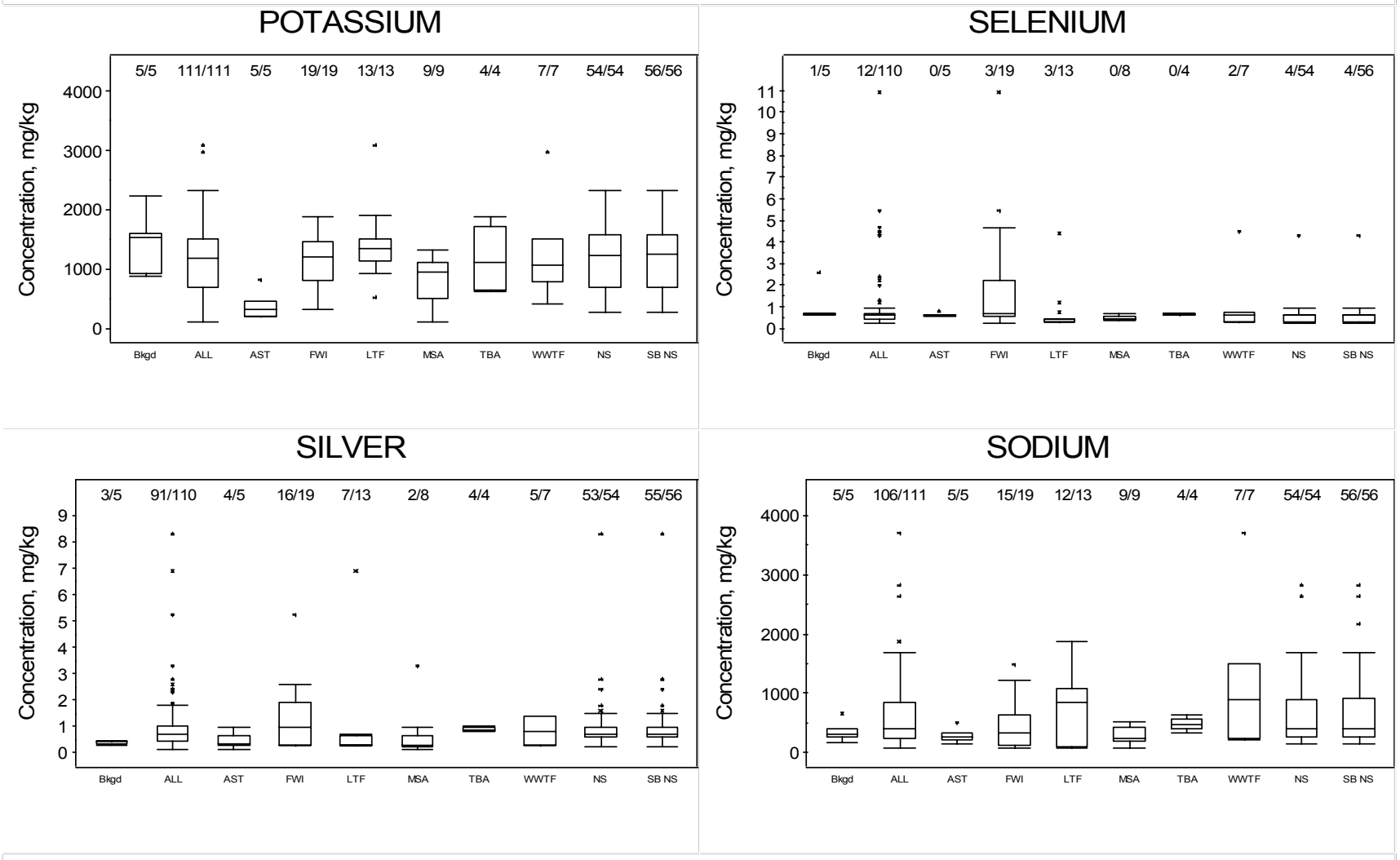

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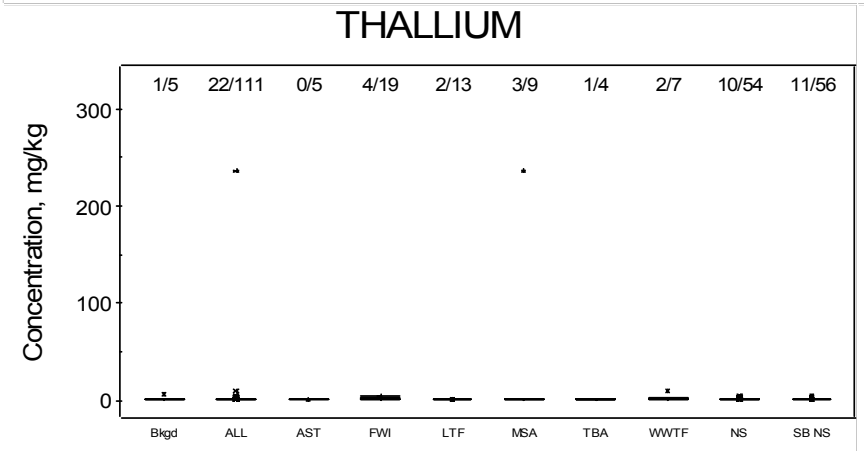

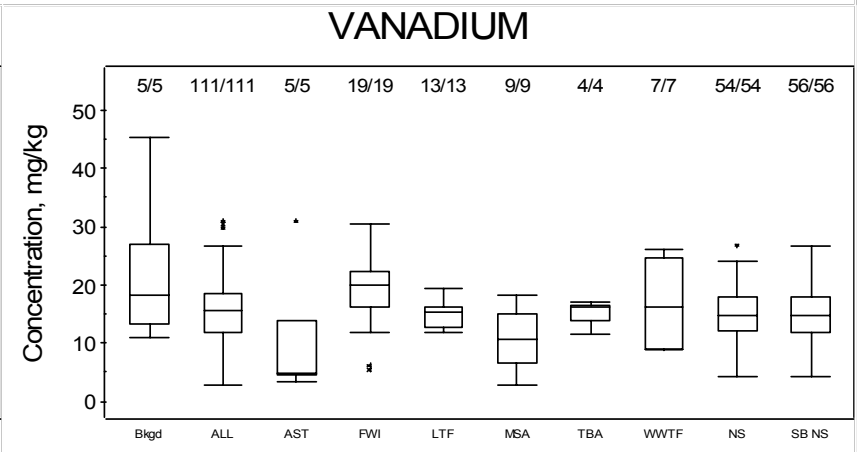

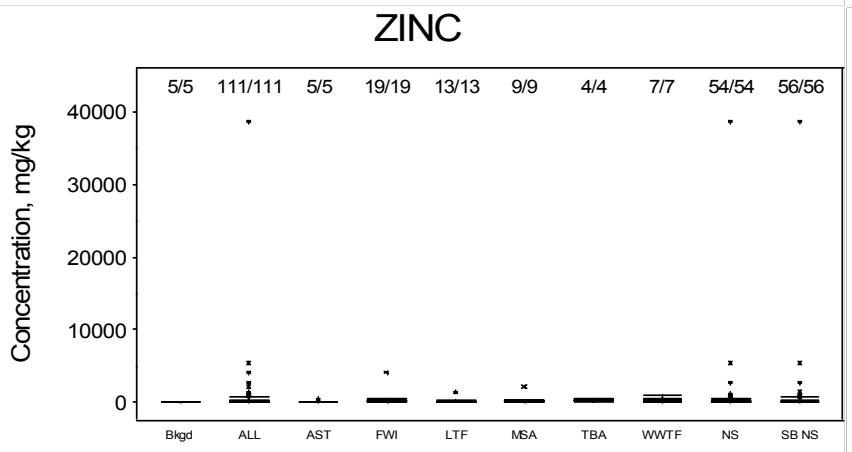

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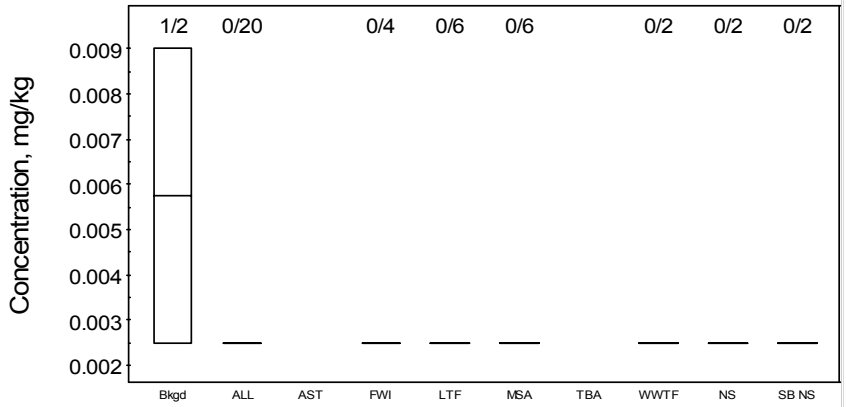
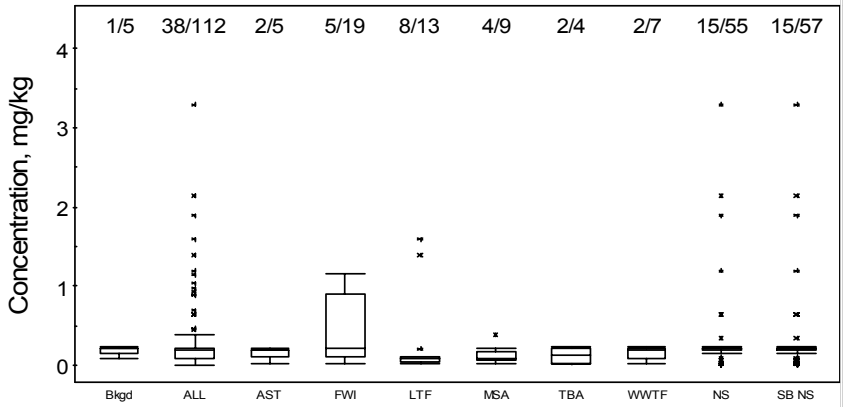
Figure 2: Soil Box and Whisker Plots for Detected Organics

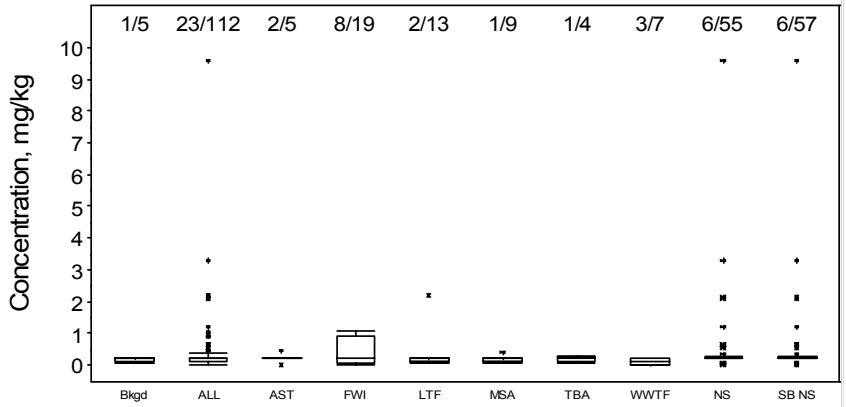
1,2-DICHLOROETHANE



2-METHYLNAPHTHALENE



ACENAPHTHENE



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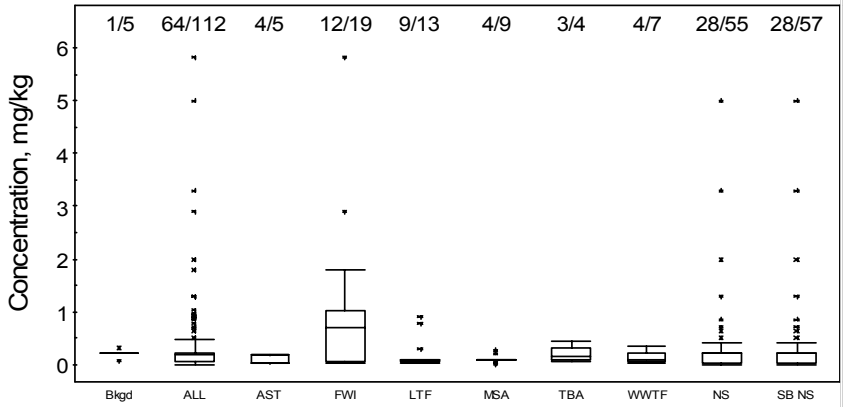

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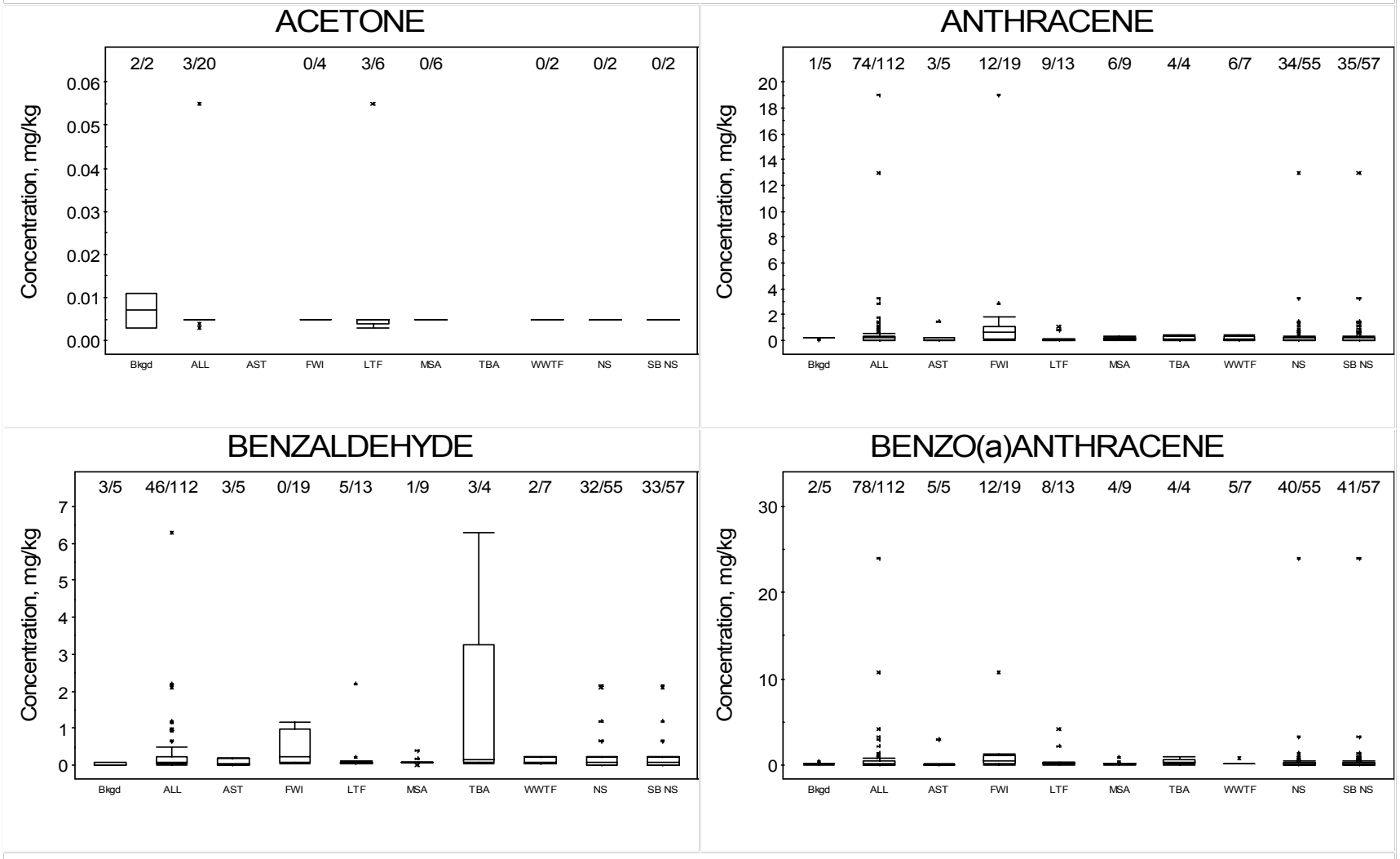

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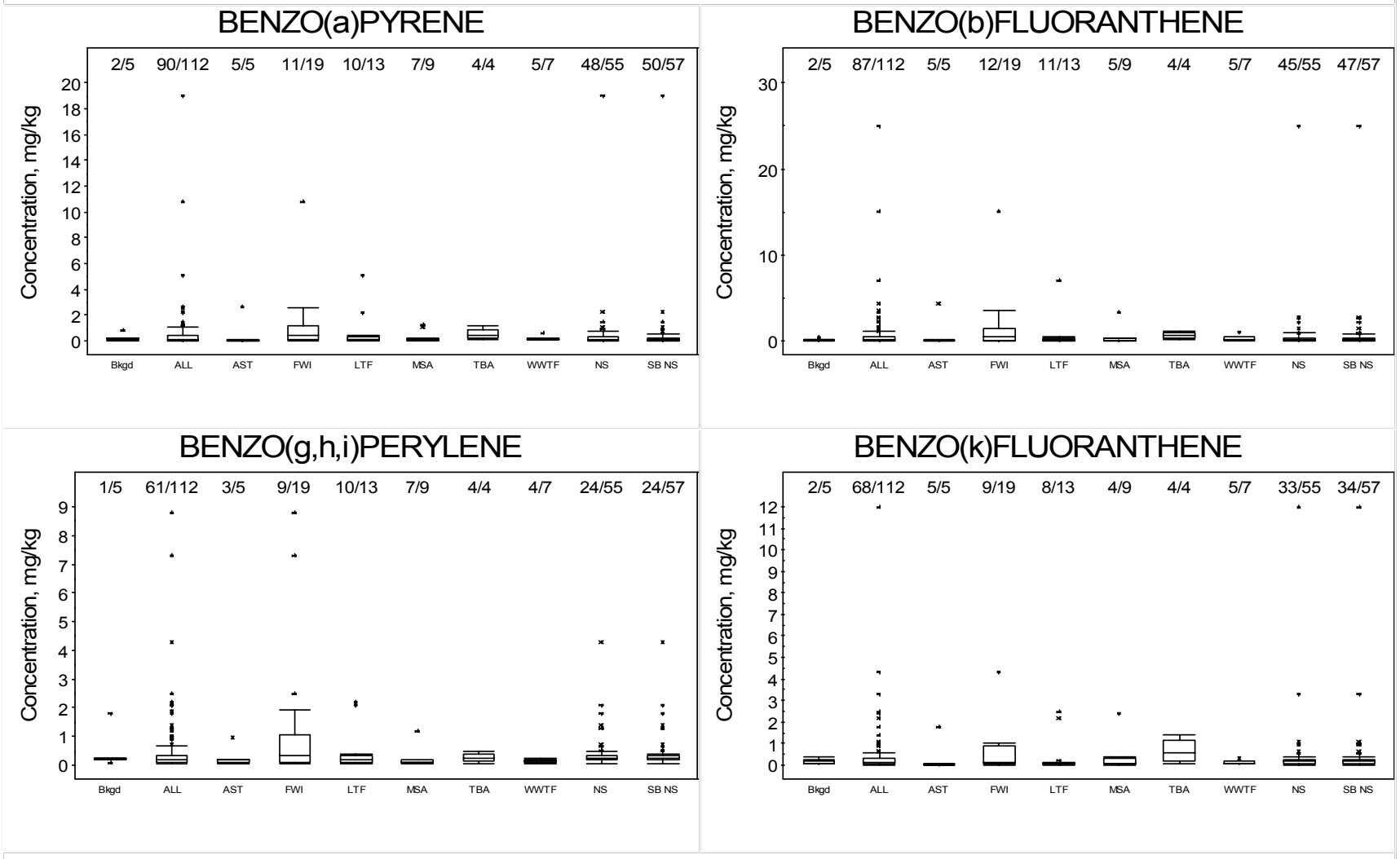

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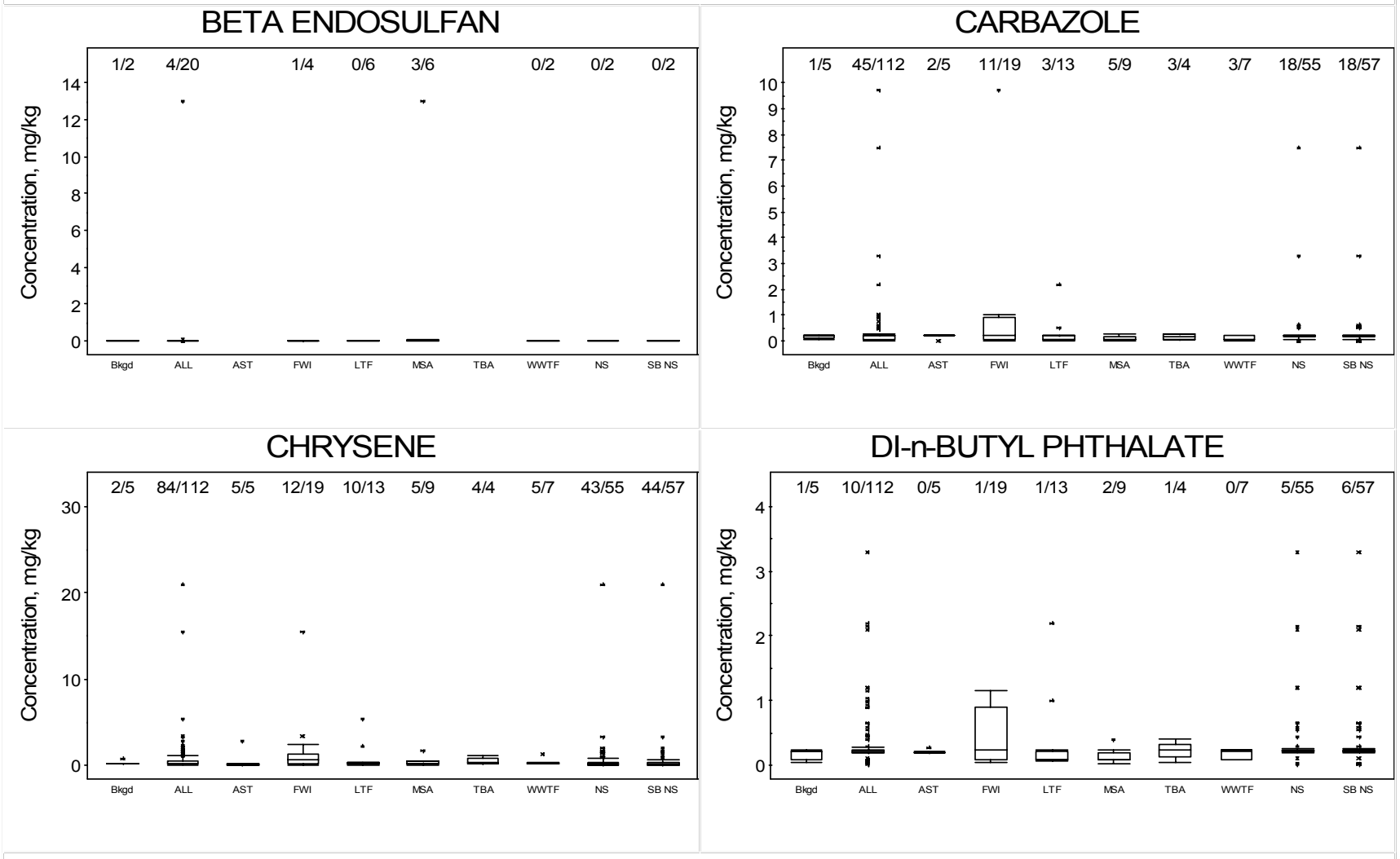

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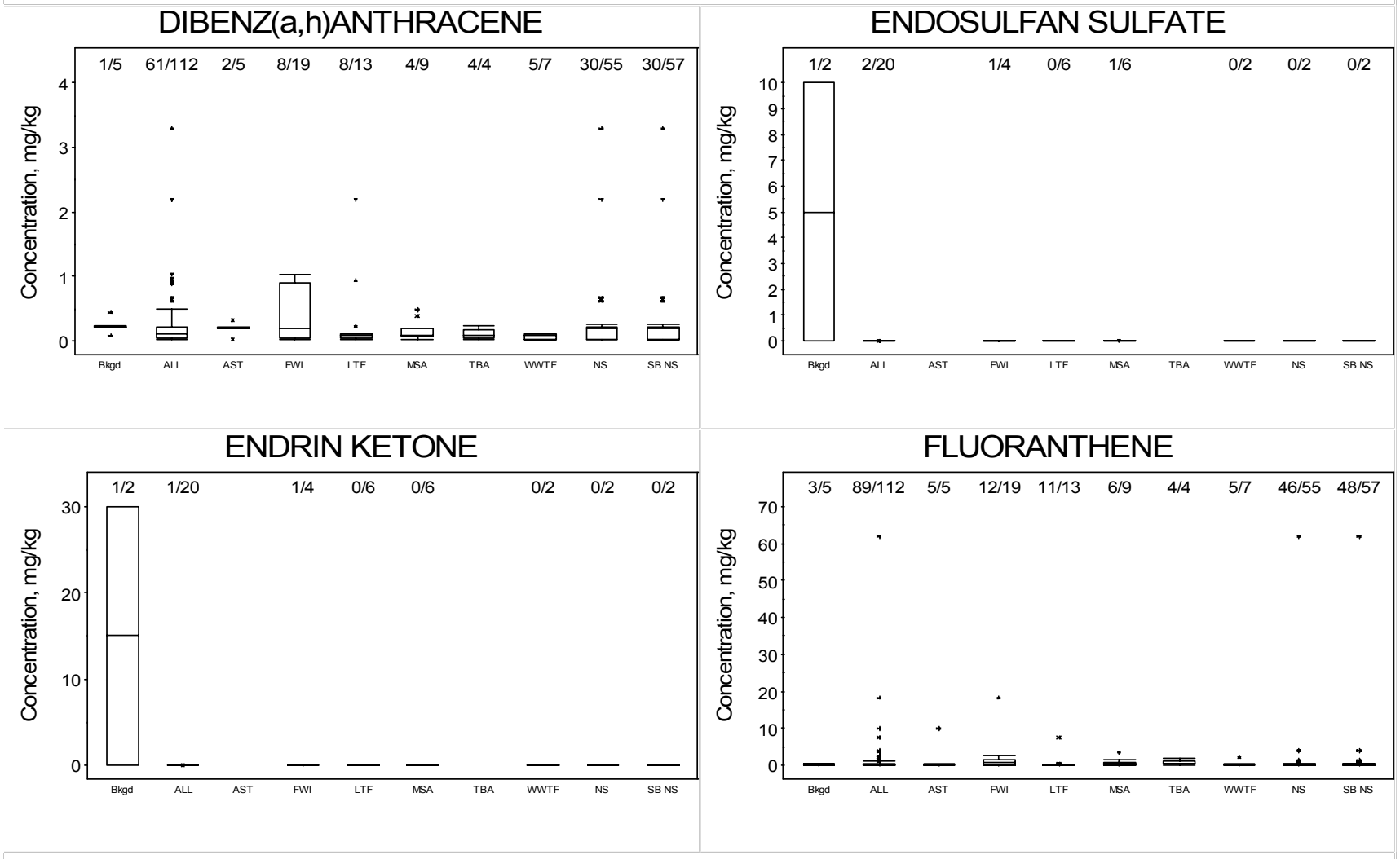

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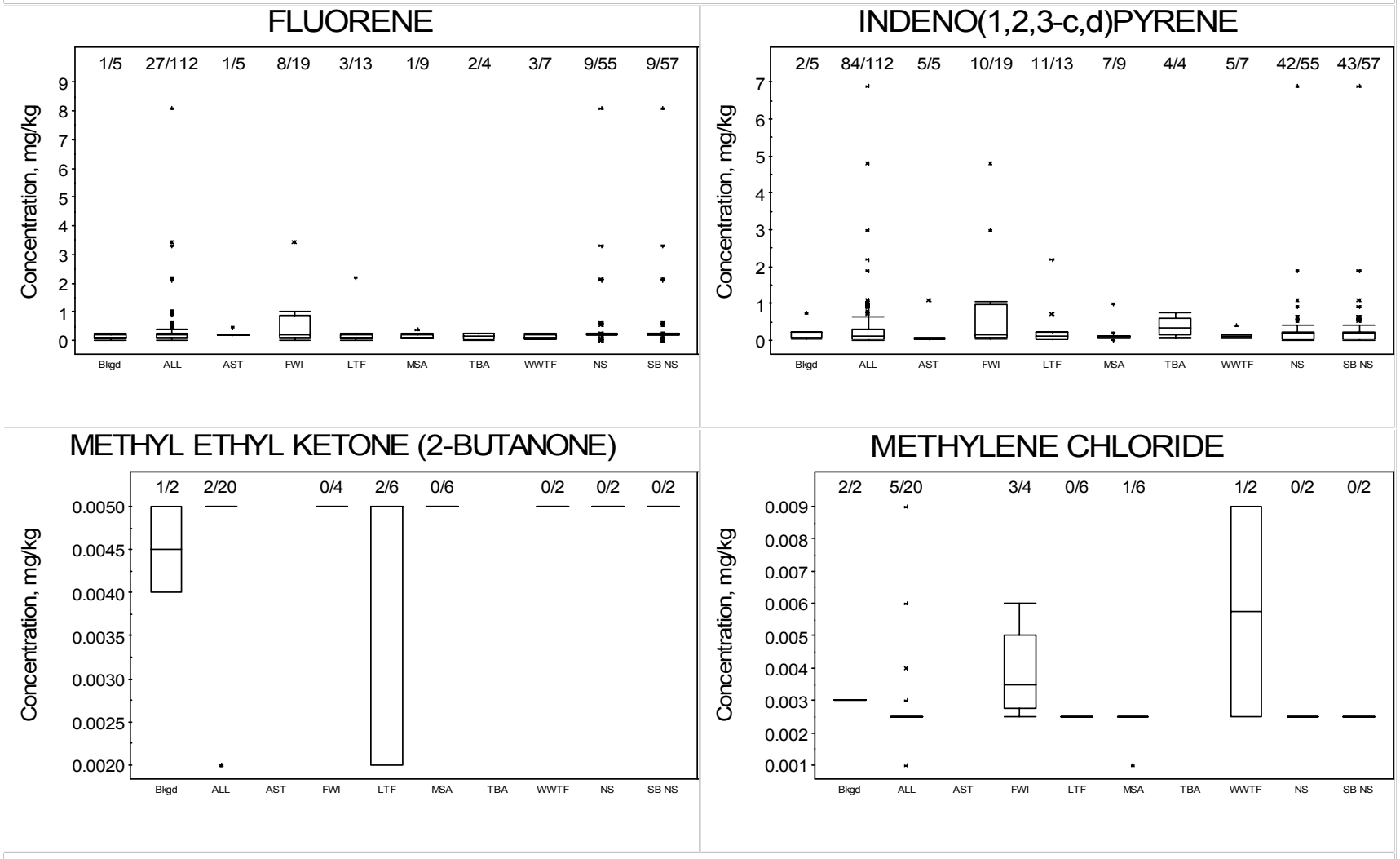

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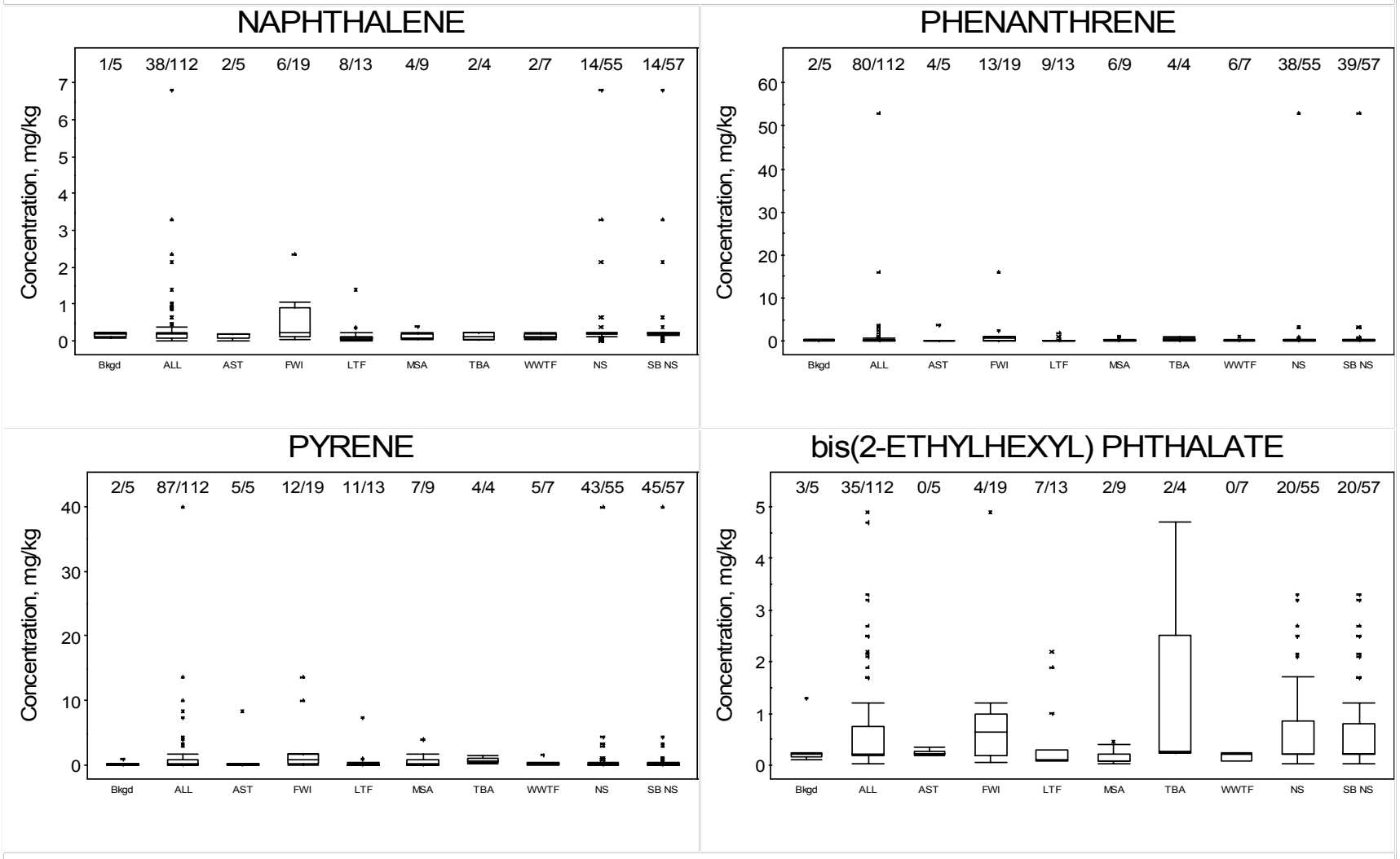

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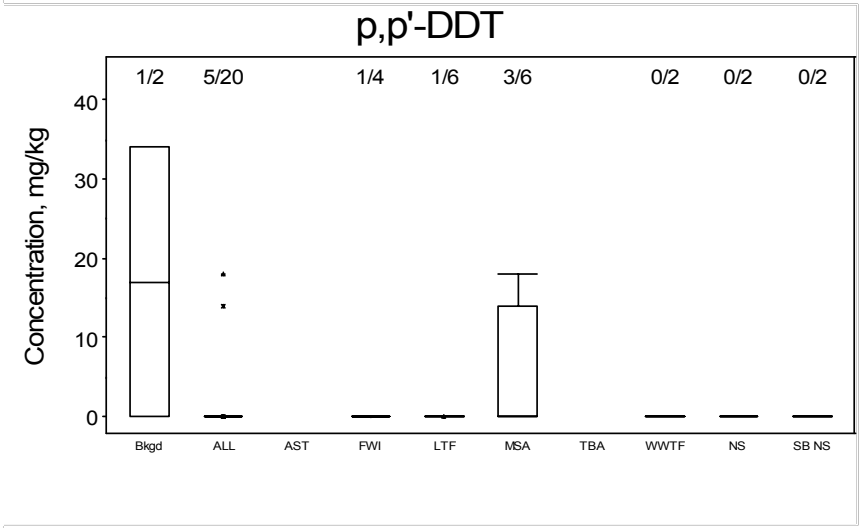

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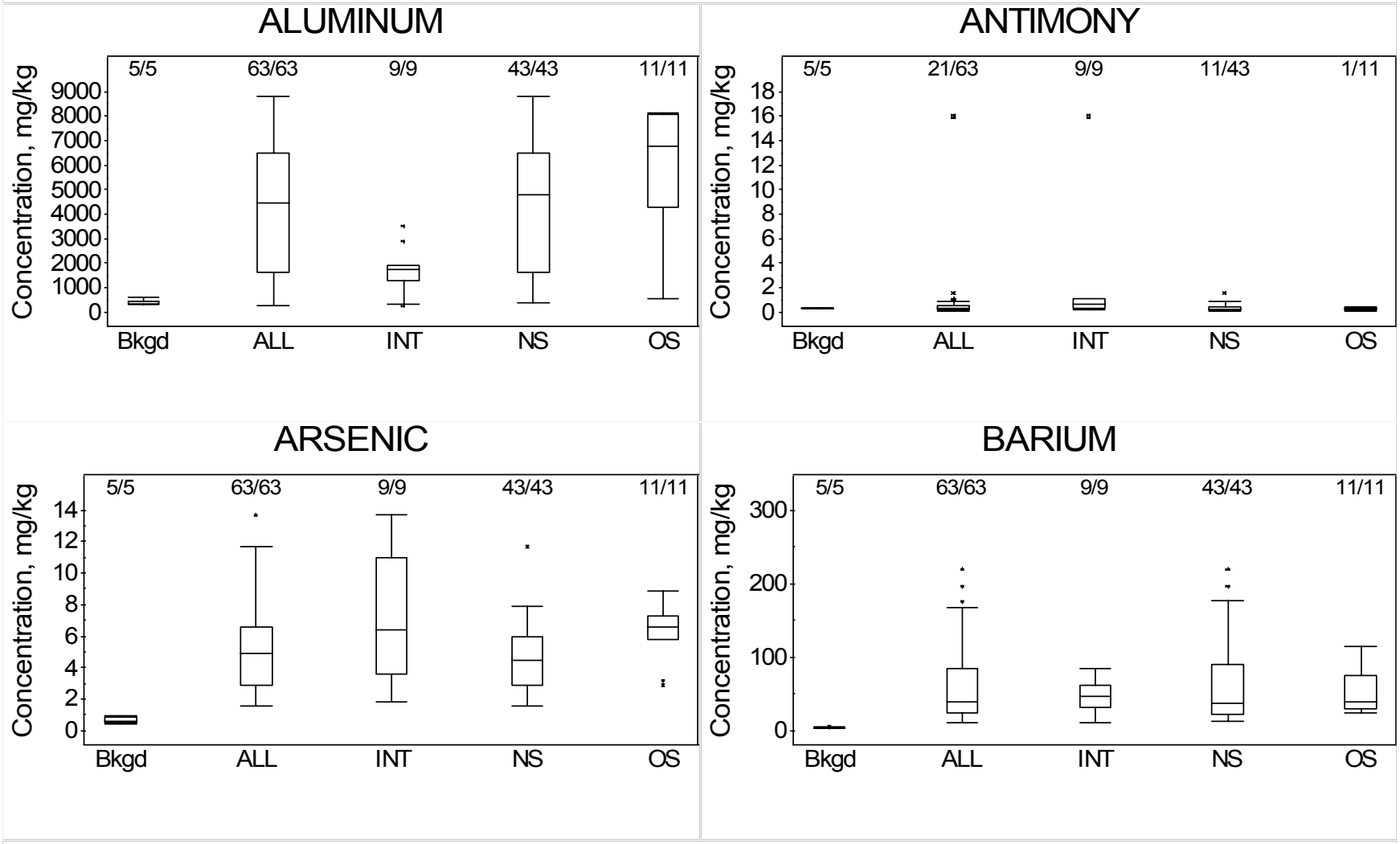
Figure 3: Sediment Box and Whisker Plots for Detected Inorganics



Bkgd=Background; ALL=All Sediment Data; INT=Intertidal Sediment (top of bank to mean lower water mark;
NS=Near shore Sediment (shallow sed to potential upland; OS=Off shore Sediment (parallel to navigation channel, ship traffic

Figure 3: Sediment Box and Whisker Plots for Detected Inorganics

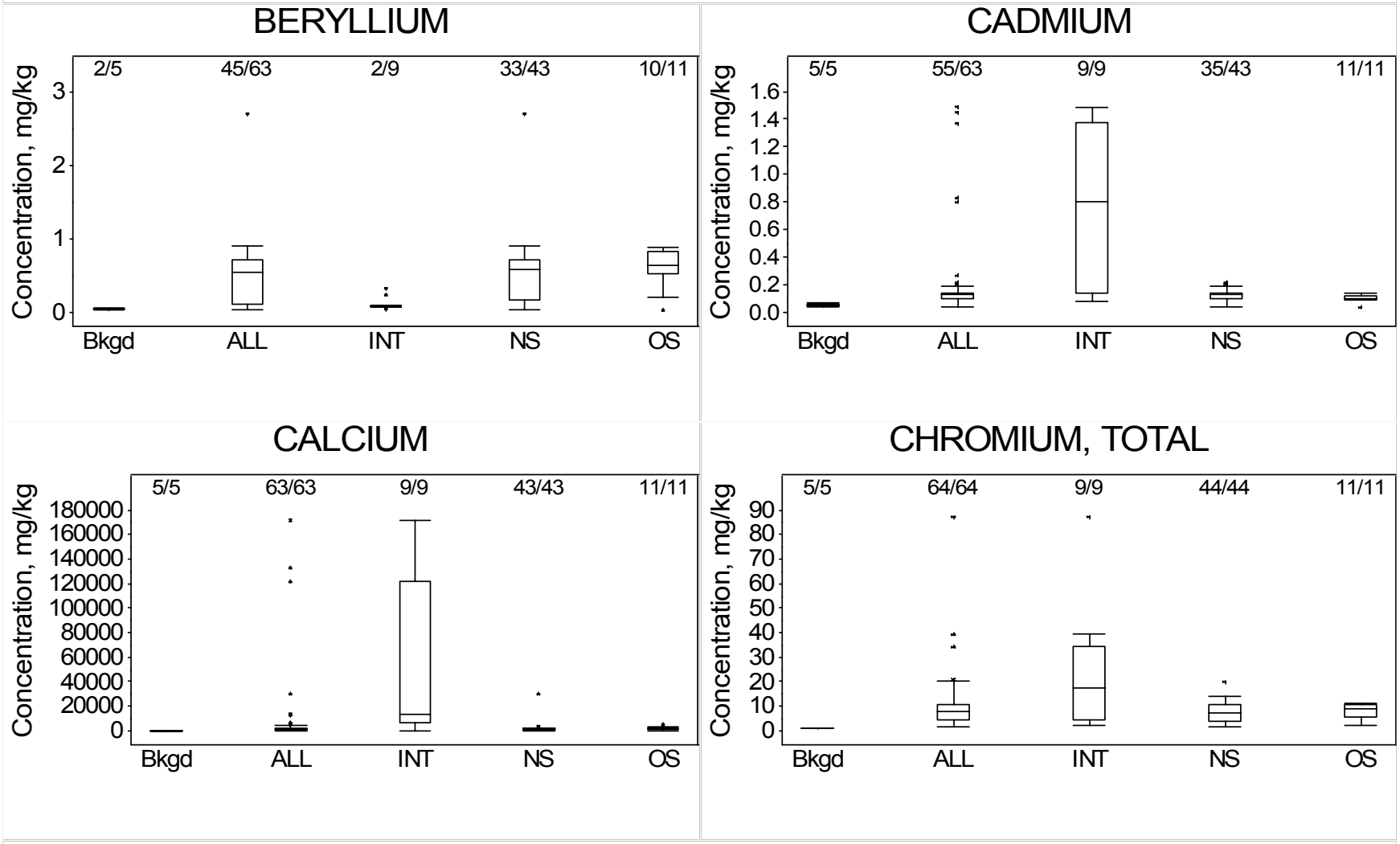


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Figure 3: Sediment Box and Whisker Plots for Detected Inorganics

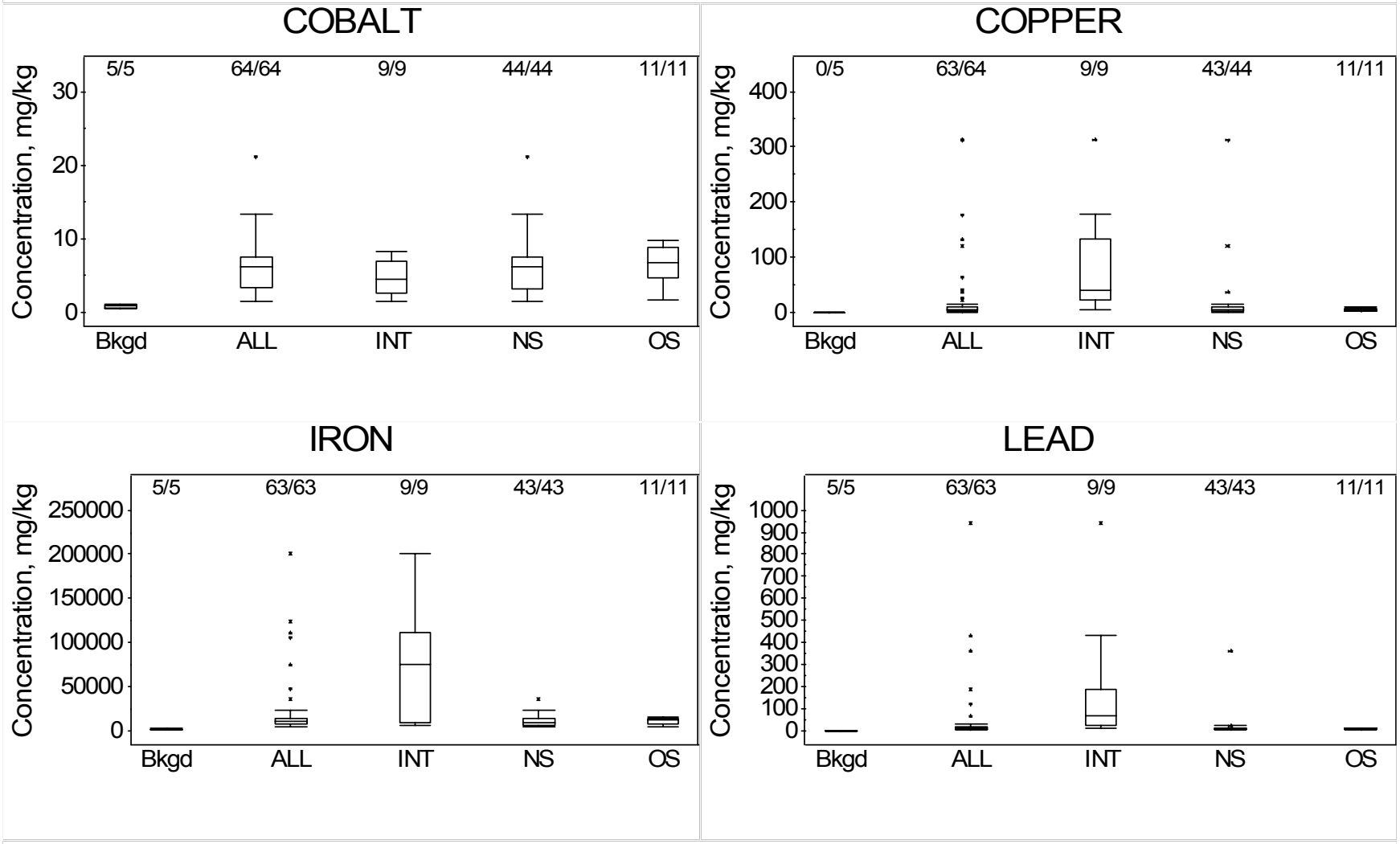

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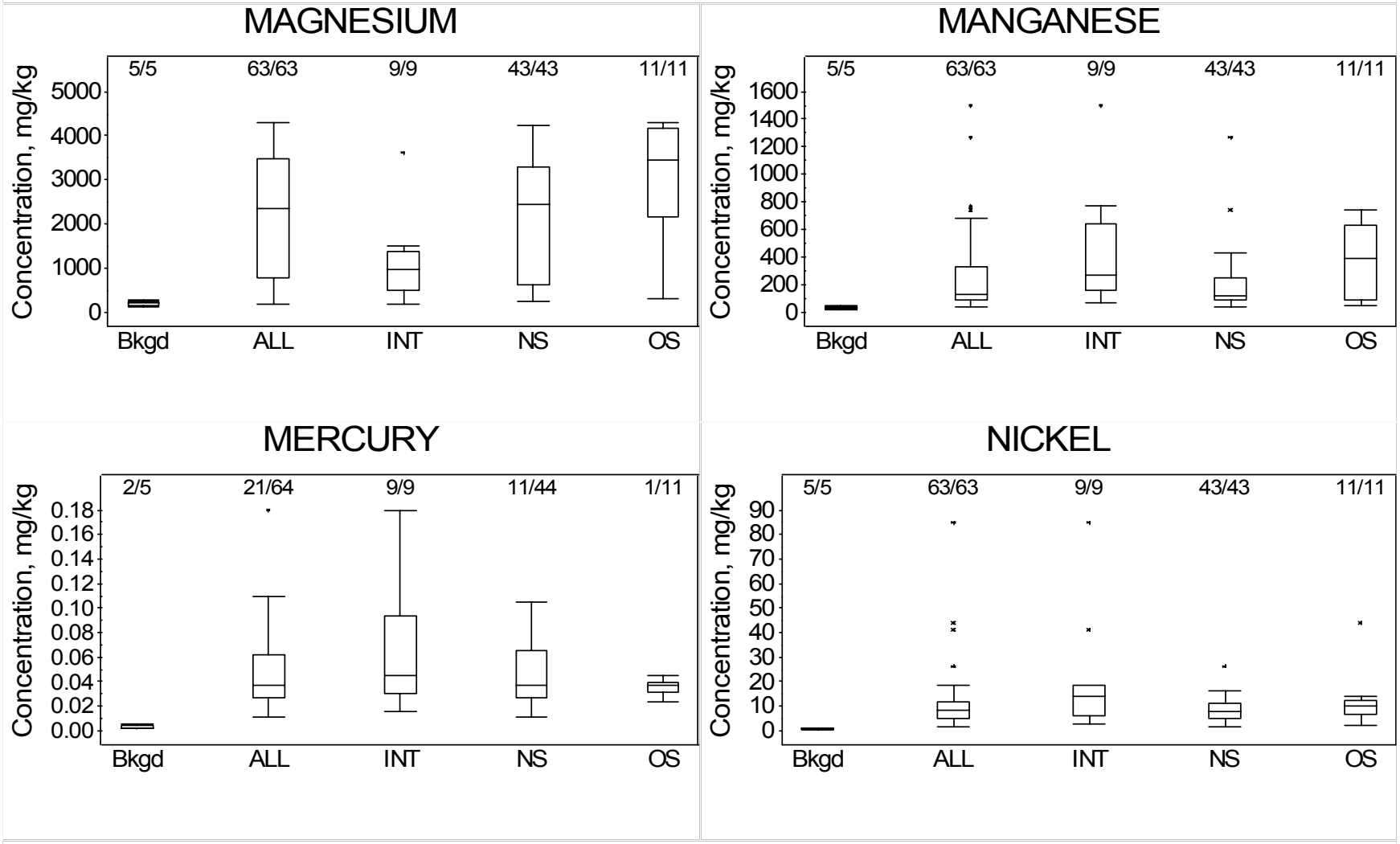
Figure 3: Sediment Box and Whisker Plots for Detected Inorganics



Bkgd=Background; ALL=All Sediment Data; INT=Intertidal Sediment (top of bank to mean lower water mark;
NS=Near shore Sediment (shallow sed to potential upland; OS=Off shore Sediment (parallel to navigation channel, ship traffic

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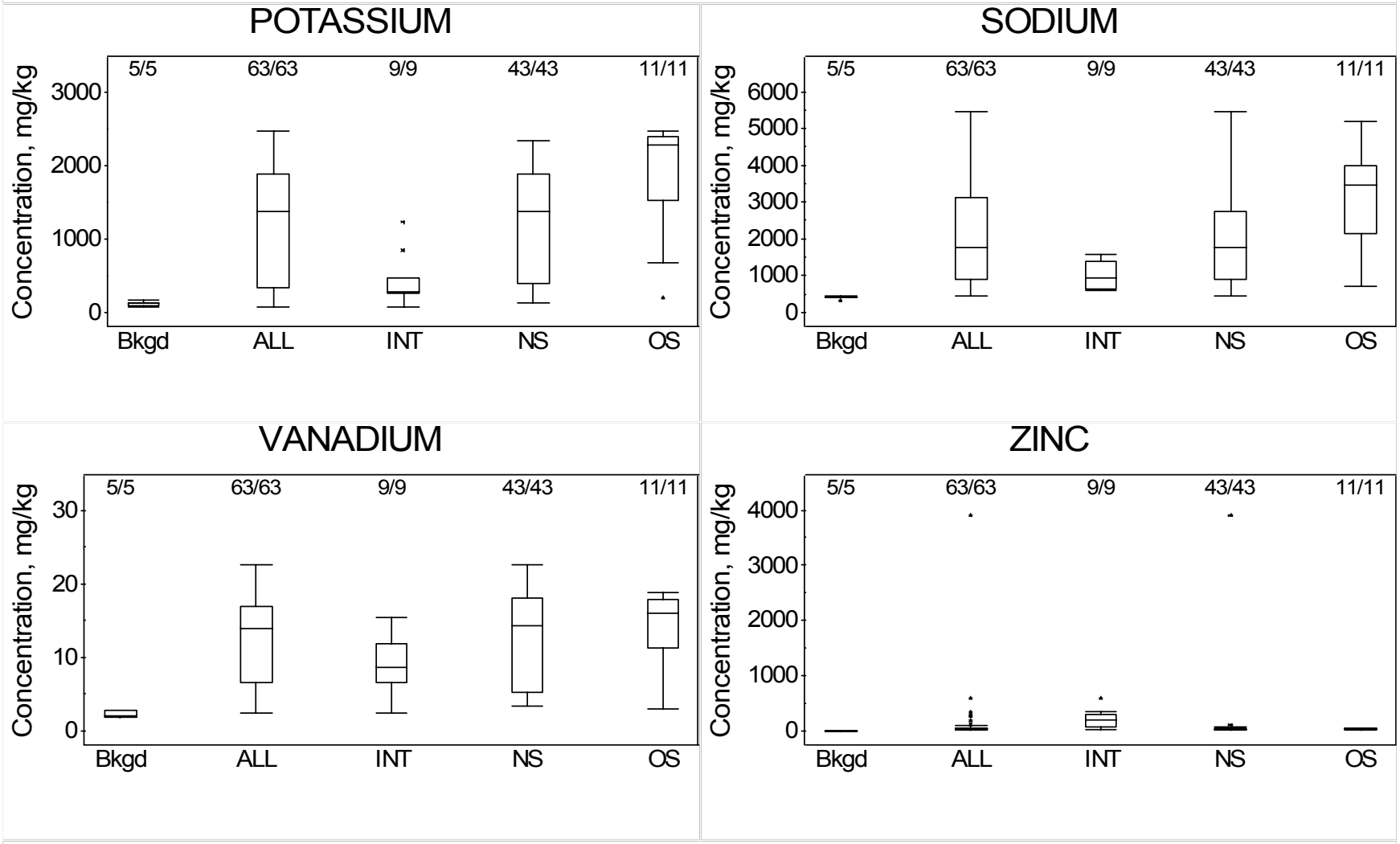

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Tables

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Table 1: Background Summary Statistics (all concentration units in mg/kg)

Chemical Group	Parameter	Units	Background UTL	Background UPL	Mean	Median	Std Dev	Number of Detects	Number of Samples	Minimum Detect	Maximum Detect	Normality p-value
Sediment												
METAL	ANTIMONY	mg/kg	0.5	0.414	0.306	0.29	0.0462	5	5	0.27	0.38	0.200
METAL	ARSENIC	mg/kg	1.57	1.18	0.686	0.59	0.209	5	5	0.47	0.93	0.217
METAL	BARIUM	mg/kg	8.98	7	4.52	4.4	1.06	5	5	3.2	6.1	0.906
METAL	BERYLLIUM	mg/kg	*	*	0.0484	0.048	0.00997	2	5	0.054	0.062	0.810
METAL	CADMIUM	mg/kg	0.106	0.0822	0.053	0.049	0.0125	5	5	0.037	0.07	0.847
METAL	CALCIUM	mg/kg	290	211	111	108	42.7	5	5	66.3	176	0.719
METAL	CHROMIUM, TOTAL	mg/kg	1.8	1.48	1.09	1.1	0.169	5	5	0.91	1.3	0.535
METAL	COBALT	mg/kg	2.01	1.5	0.86	0.96	0.272	5	5	0.57	1.2	0.335
METAL	IRON	mg/kg	3360	2620	1690	1680	397	5	5	1210	2250	0.987
METAL	LEAD	mg/kg	3.26	2.67	1.92	2	0.319	5	5	1.5	2.3	0.858
METAL	MAGNESIUM	mg/kg	444	336	202	208	57.7	5	5	133	275	0.857
METAL	MANGANESE	mg/kg	73.9	55.3	32	29.9	9.99	5	5	21.9	45.6	0.601
METAL	MERCURY	mg/kg	*	*	0.00287	0.0019	0.00153	2	5	0.004	0.005	0.097
METAL	NICKEL	mg/kg	1.7	1.29	0.778	0.81	0.219	5	5	0.54	1.1	0.671
METAL	POTASSIUM	mg/kg	258	197	120	128	32.8	5	5	81.6	165	0.734
METAL	SODIUM	mg/kg	585	504	403	414	43.5	5	5	329	442	0.180
METAL	VANADIUM	mg/kg	4.33	3.42	2.28	2.1	0.487	5	5	1.8	2.8	0.117
METAL	ZINC	mg/kg	10.2	7.84	4.86	5.1	1.28	5	5	3.3	6.5	0.874
Soil												
METAL	ALUMINUM	mg/kg	24600	16900	7240	6370	4140	5	5	3080	14100	0.313
METAL	ANTIMONY	mg/kg	*	*	2.03	0.43	3.4	1	5	8.1	8.1	0.001
METAL	ARSENIC	mg/kg	32.6	21.8	8.3	6.4	5.78	5	5	3.5	17.7	0.252
METAL	BARIUM	mg/kg	966	645	243	225	172	5	5	96.4	521	0.271
METAL	BERYLLIUM	mg/kg	2.5	1.66	0.622	0.5	0.447	5	5	0.3	1.4	0.034
METAL	CALCIUM	mg/kg	88800	59200	22200	16100	15900	5	5	2970	40000	0.399
METAL	CHROMIUM, TOTAL	mg/kg	78.1	50.9	16.9	13.8	14.5	5	5	4.4	41.5	0.177
METAL	COBALT	mg/kg	33.2	21.9	7.7	4.3	6.07	5	5	2.8	17.3	0.161
METAL	COPPER	mg/kg	123	78.9	23.1	10.7	23.9	5	5	7.6	64.6	0.019
METAL	CYANIDE	mg/kg	*	*	0.437	0.21	0.522	2	5	0.21	1.3	0.103
METAL	IRON	mg/kg	247000	153000	35400	12000	50300	5	5	9110	125000	0.001
METAL	LEAD	mg/kg	103	71.3	32	22.2	16.8	5	5	17	55.8	0.212
METAL	MAGNESIUM	mg/kg	6120	4360	2150	2600	945	5	5	825	3160	0.534
METAL	MANGANESE	mg/kg	2090	1400	544	427	367	5	5	179	959	0.203
METAL	MERCURY	mg/kg	*	*	0.061	0.065	0.0303	1	5	0.07	0.07	0.569
METAL	NICKEL	mg/kg	90.5	59.1	19.9	18.2	16.8	5	5	5.3	47.7	0.217
METAL	POTASSIUM	mg/kg	3750	2720	1430	1530	554	5	5	875	2220	0.458
METAL	SELENIUM	mg/kg	*	*	1.02	0.65	0.884	1	5	2.6	2.6	0.000
METAL	SILVER	mg/kg	0.737	0.58	0.385	0.42	0.0837	3	5	0.35	0.46	0.364
METAL	SODIUM	mg/kg	1170	810	362	312	192	5	5	166	667	0.581
METAL	THALLIUM	mg/kg	*	*	1.85	0.65	2.66	1	5	6.6	6.6	0.000
METAL	VANADIUM	mg/kg	81.4	55.5	23	18.3	13.9	5	5	11	45.3	0.314
METAL	ZINC	mg/kg	203	142	66	56.5	32.7	5	5	37.7	116	0.368
PEST	BETA ENDOSULFAN	mg/kg	*	*	0.00478	0.00478	0.00442	1	2	0.0079	0.0079	*
PEST	ENDOSULFAN SULFATE	mg/kg	*	*	5	5	7.07	1	2	10	10	*
PEST	ENDRIN KETONE	mg/kg	*	*	15	15	21.2	1	2	30	30	*
PEST	p,p'-DDT	mg/kg	*	*	17	17	24	1	2	34	34	*
SVOC	2-METHYLNAPHTHALENE	mg/kg	*	*	0.181	0.21	0.06	1	5	0.16	0.16	0.202
SVOC	ACENAPHTHENE	mg/kg	*	*	0.156	0.21	0.0893	1	5	0.036	0.036	0.111
SVOC	ACENAPHTHYLENE	mg/kg	*	*	0.215	0.22	0.0872	1	5	0.33	0.33	0.561
SVOC	ANTHRACENE	mg/kg	*	*	0.195	0.22	0.062	1	5	0.23	0.23	0.004
SVOC	BENZALDEHYDE	mg/kg	0.218	0.138	0.0382	0.009	0.0427	3	5	0.006	0.009	0.010
SVOC	BENZO(a)ANTHRACENE	mg/kg	*	*	0.208	0.22	0.175	2	5	0.027	0.48	0.543
SVOC	BENZO(a)PYRENE	mg/kg	*	*	0.282	0.22	0.33	2	5	0.024	0.85	0.061
SVOC	BENZO(b)FLUORANTHENE	mg/kg	*	*	0.22	0.22	0.174	2	5	0.063	0.5	0.277
SVOC	BENZO(g,h,i)PERYLENE	mg/kg	*	*	0.509	0.22	0.724	1	5	1.8	1.8	0.001
SVOC	BENZO(k)FLUORANTHENE	mg/kg	*	*	0.191	0.22	0.141	2	5	0.03	0.39	0.742
SVOC	CARBAZOLE	mg/kg	*	*	0.171	0.21	0.068	1	5	0.11	0.11	0.108
SVOC	CHRYSENE	mg/kg	*	*	0.275	0.22	0.281	2	5	0.078	0.76	0.034
SVOC	DI-n-BUTYL PHTHALATE	mg/kg	*	*	0.158	0.21	0.0857	1	5	0.047	0.047	0.096
SVOC	DIBENZ(a,h)ANTHRACENE	mg/kg	*	*	0.239	0.22	0.132	1	5	0.45	0.45	0.312
SVOC	FLUORANTHENE	mg/kg	0.777	0.502	0.157	0.085	0.148	3	5	0.015	0.38	0.409
SVOC	FLUORENE	mg/kg	*	*	0.128	0.085	0.0931	1	5	0.018	0.018	0.259
SVOC	INDENO(1,2,3-c,d)PYRENE	mg/kg	*	*	0.262	0.22	0.287	2	5	0.024	0.75	0.105
SVOC	NAPHTHALENE	mg/kg	*	*	0.175	0.21	0.064	1	5	0.13	0.13	0.196
SVOC	PHENANTHRENE	mg/kg	*	*	0.166	0.22	0.105	2	5	0.026	0.27	0.327
SVOC	PYRENE	mg/kg	*	*	0.311	0.22	0.383	2	5	0.04	0.98	0.025
SVOC	bis(2-ETHYLHEXYL) PHTHALATE	mg/kg	2.52	1.58	0.401	0.21	0.505	3	5	0.095	1.3	0.003
VOC	1,2-DICHLOROETHANE	mg/kg	*	*	0.00575	0.00575	0.0046	1	2	0.009	0.009	*
VOC	ACETONE	mg/kg	*	*	0.007	0.007	0.00566	2	2	0.003	0.011	*
VOC	METHYL ETHYL KETONE (2-BUTANONE)	mg/kg	*	*	0.0045	0.0045	0.000707	1	2	0.004	0.004	*
VOC	METHYLENE CHLORIDE	mg/kg	*	*	0.003	0.003	0	2	2	0.003	0.003	*

* too few samples or too few detects. UTLs and UPLs were only calculated when five samples with > 50% detects were available.

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Table 2: Comparison of Surface Soil (All locations 0-0.5 feet) to Background

Chemical Group	Parameter	p-value from Wilcoxon Rank Sum (WRS) Test	Is Background Exceeded via WRS Test?	Site Detection Frequency	Bkgd Detection Frequency	Site Mean	Bkgd Mean	Site Median	Bkgd Median	Number of Exceedances of Normal UTL	Percent of Exceedances of Normal UTL	Number of Exceedances of Normal UPL	Number of Exceedances of Background Max
METAL	ALUMINUM	0.833	no	104/104	5/5	5650	7240	5030	6370	0	0	4	4
METAL	ANTIMONY	0.202	no	53/94	1/5	3.41	2.03	1.05	0.43				11
METAL	ARSENIC	0.691	no	102/104	5/5	6.63	8.3	6.1	6.4	1	1	2	3
METAL	BARIUM	0.863	no	104/104	5/5	173	243	127	225	0	0	1	3
METAL	BERYLLIUM	0.650	no	94/103	5/5	0.757	0.622	0.47	0.5	2	2	3	3
METAL	CALCIUM	0.962	no	103/104	5/5	13200	22200	5640	16100	4	4	5	8
METAL	CHROMIUM, TOTAL	0.611	no	104/104	5/5	20.9	16.9	10.7	13.8	3	3	6	7
METAL	COBALT	0.678	no	104/104	5/5	5.57	7.7	5	4.3	1	1	1	2
METAL	COPPER	0.103	Yes	104/104	5/5	200	23.1	24.6	10.7	19	18	26	31
METAL	CYANIDE	0.905	no	15/103	2/5	0.148	0.437	0.065	0.21				0
METAL	IRON	0.414	no	104/104	5/5	22700	35400	14900	12000	0	0	2	4
METAL	LEAD	0.109	Yes	104/104	5/5	181	32	53.5	22.2	37	36	45	51
METAL	MAGNESIUM	0.980	no	104/104	5/5	1260	2150	1230	2600	0	0	0	3
METAL	MANGANESE	0.968	no	104/104	5/5	364	544	223	427	1	1	1	4
METAL	MERCURY	0.406	no	43/102	1/5	0.152	0.061	0.0575	0.065				38
METAL	NICKEL	0.740	no	104/104	5/5	20.9	19.9	11.2	18.2	2	2	5	6
METAL	POTASSIUM	0.877	no	104/104	5/5	1110	1430	1140	1530	0	0	2	3
METAL	SELENIUM	0.967	no	10/103	1/5	0.64	1.02	0.6	0.65				3
METAL	SILVER	0.020	Yes	84/103	3/5	0.893	0.385	0.66	0.42	41	40	63	74
METAL	SODIUM	0.244	no	99/104	5/5	595	362	391	312	10	10	26	31
METAL	THALLIUM	0.875	no	22/104	1/5	3.21	1.85	0.6	0.65				2
METAL	VANADIUM	0.907	no	104/104	5/5	14.6	23	15.2	18.3	0	0	0	0
METAL	ZINC	0.052	Yes	104/104	5/5	681	66	115	56.5	40	38	49	52
SVOC	2-METHYLNAPHTHALENE	0.661	no	38/105	1/5	0.278	0.181	0.205	0.21				8
SVOC	ACENAPHTHENE	0.373	no	23/105	1/5	0.374	0.156	0.21	0.21				13
SVOC	ACENAPHTHYLENE	0.892	no	63/105	1/5	0.335	0.215	0.18	0.22				16
SVOC	ANTHRACENE	0.793	no	73/105	1/5	0.438	0.195	0.175	0.22				25
SVOC	BENZALDEHYDE	0.016	Yes	46/105	3/5	0.256	0.0382	0.085	0.009	1	1	2	36
SVOC	BENZO(a)ANTHRACENE	0.568	no	77/105	2/5	0.585	0.208	0.14	0.22				17
SVOC	BENZO(a)PYRENE	0.599	no	89/105	2/5	0.573	0.282	0.12	0.22				16
SVOC	BENZO(b)FLUORANTHENE	0.457	no	86/105	2/5	0.77	0.22	0.19	0.22				23
SVOC	BENZO(g,h,i)PERYLENE	0.712	no	60/105	1/5	0.479	0.509	0.21	0.22				6
SVOC	BENZO(k)FLUORANTHENE	0.653	no	67/105	2/5	0.416	0.191	0.11	0.22				13
SVOC	CARBAZOLE	0.687	no	44/105	1/5	0.294	0.171	0.205	0.21				16
SVOC	CHRYSENE	0.568	no	83/105	2/5	0.68	0.275	0.16	0.22				17
SVOC	DI-n-BUTYL PHTHALATE	0.230	no	10/105	1/5	0.329	0.158	0.215	0.21				6
SVOC	DIBENZ(a,h)ANTHRACENE	0.954	no	61/105	1/5	0.222	0.239	0.09	0.22				6
SVOC	FLUORANTHENE	0.336	no	88/105	3/5	1.16	0.157	0.12	0.085	17	16	22	23
SVOC	FLUORENE	0.180	Yes	26/105	1/5	0.353	0.128	0.21	0.085				22
SVOC	INDENO(1,2,3-c,d)PYRENE	0.697	no	83/105	2/5	0.334	0.262	0.11	0.22				10
SVOC	NAPHTHALENE	0.672	no	37/105	1/5	0.299	0.175	0.205	0.21				10
SVOC	PHENANTHRENE	0.585	no	79/105	2/5	0.852	0.166	0.12	0.22				23
SVOC	PYRENE	0.517	no	86/105	2/5	1.06	0.311	0.185	0.22				17
SVOC	bis(2-ETHYLHEXYL) PHTHALATE	0.357	no	35/105	3/5	0.605	0.401	0.225	0.21	4	4	9	9

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Table 3: Comparison of Surface Soil (Current Aboveground Storage Tank Area) to Background

Chemical Group	Parameter	p-value from Wilcoxon Rank Sum (WRS) Test	Is Background Exceeded via WRS Test?	Site Detection Frequency	Bkgd Detection Frequency	Site Mean	Bkgd Mean	Site Median	Bkgd Median	Number of Exceedances of Normal UTL	Percent of Exceedances of Normal UTL	Number of Exceedances of Normal UPL	Number of Exceedances of Background Max
METAL	ALUMINUM	0.967	no	5/5	5/5	1780	7240	1040	6370	0	0	0	0
METAL	ANTIMONY	0.387	no	2/3	1/5	1.66	2.03	2.1	0.43				0
METAL	ARSENIC	0.912	no	5/5	5/5	3.6	8.3	1.6	6.4	0	0	0	0
METAL	BARIUM	0.500	no	5/5	5/5	194	243	233	225	0	0	0	0
METAL	BERYLLIUM	0.977	no	3/5	5/5	0.134	0.622	0.09	0.5	0	0	0	0
METAL	CALCIUM	0.967	no	4/5	5/5	3630	22200	1870	16100	0	0	0	0
METAL	CHROMIUM, TOTAL	0.880	no	5/5	5/5	28.2	16.9	3.2	13.8	1	20	1	1
METAL	COBALT	0.967	no	5/5	5/5	1.81	7.7	1.2	4.3	0	0	0	0
METAL	COPPER	0.620	no	5/5	5/5	14.8	23.1	10.3	10.7	0	0	0	0
METAL	CYANIDE	0.867	no	2/5	2/5	0.122	0.437	0.06	0.21				0
METAL	IRON	0.911	no	5/5	5/5	7830	35400	5020	12000	0	0	0	0
METAL	LEAD	0.580	no	5/5	5/5	134	32	20.4	22.2	1	20	1	2
METAL	MAGNESIUM	0.976	no	5/5	5/5	348	2150	219	2600	0	0	0	0
METAL	MANGANESE	0.967	no	5/5	5/5	140	544	75	427	0	0	0	0
METAL	MERCURY	0.623	no	2/5	1/5	0.064	0.061	0.03	0.065				2
METAL	NICKEL	0.967	no	5/5	5/5	5.88	19.9	4.7	18.2	0	0	0	0
METAL	POTASSIUM	0.983	no	5/5	5/5	396	1430	304	1530	0	0	0	0
METAL	SILVER	0.500	no	4/5	3/5	0.458	0.385	0.33	0.42	1	20	2	2
METAL	SODIUM	0.657	no	5/5	5/5	291	362	261	312	0	0	0	0
METAL	VANADIUM	0.879	no	5/5	5/5	11.5	23	4.9	18.3	0	0	0	0
METAL	ZINC	0.420	no	5/5	5/5	142	66	76.3	56.5	1	20	1	1
SVOC	2-METHYLNAPHTHALENE	0.815	no	2/5	1/5	0.147	0.181	0.195	0.21				0
SVOC	ACENAPHTHENE	0.541	no	2/5	1/5	0.215	0.156	0.2	0.21				1
SVOC	ACENAPHTHYLENE	0.968	no	4/5	1/5	0.087	0.215	0.02	0.22				0
SVOC	ANTHRACENE	0.816	no	3/5	1/5	0.392	0.195	0.2	0.22				1
SVOC	BENZALDEHYDE	0.160	Yes	3/5	3/5	0.0886	0.0382	0.03	0.009	0	0	0	2
SVOC	BENZO(a)ANTHRACENE	0.657	no	5/5	2/5	0.648	0.208	0.05	0.22				1
SVOC	BENZO(a)PYRENE	0.657	no	5/5	2/5	0.596	0.282	0.06	0.22				1
SVOC	BENZO(b)FLUORANTHENE	0.657	no	5/5	2/5	0.966	0.22	0.09	0.22				1
SVOC	BENZO(g,h,i)PERYLENE	0.815	no	3/5	1/5	0.308	0.509	0.2	0.22				0
SVOC	BENZO(k)FLUORANTHENE	0.838	no	5/5	2/5	0.388	0.191	0.04	0.22				1
SVOC	CARBAZOLE	0.581	no	2/5	1/5	0.171	0.171	0.2	0.21				1
SVOC	CHRYSENE	0.787	no	5/5	2/5	0.622	0.275	0.08	0.22				1
SVOC	DIBENZ(a,h)ANTHRACENE	0.815	no	2/5	1/5	0.193	0.239	0.2	0.22				0
SVOC	FLUORANTHENE	0.580	no	5/5	3/5	2.07	0.157	0.07	0.085	1	20	1	1
SVOC	FLUORENE	0.211	no	1/5	1/5	0.255	0.128	0.2	0.085				1
SVOC	INDENO(1,2,3-c,d)PYRENE	0.787	no	5/5	2/5	0.254	0.262	0.04	0.22				1
SVOC	NAPHTHALENE	0.861	no	2/5	1/5	0.139	0.175	0.195	0.21				0
SVOC	PHENANTHRENE	0.580	no	4/5	2/5	0.844	0.166	0.13	0.22				1
SVOC	PYRENE	0.657	no	5/5	2/5	1.76	0.311	0.13	0.22				1

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Table 4: Comparison of Surface Soil (Former Wastewater Impoundments) to Background

Chemical Group	Parameter	p-value from Wilcoxon Rank Sum (WRS) Test	Is Background Exceeded via WRS Test?	Site Detection Frequency	Bkgd Detection Frequency
METAL	ALUMINUM	0.363	no	19/19	5/5
METAL	ANTIMONY	0.075	Yes	14/19	1/5
METAL	ARSENIC	0.584	no	19/19	5/5
METAL	BARIUM	0.417	no	19/19	5/5
METAL	BERYLLIUM	0.337	no	19/19	5/5
METAL	CALCIUM	0.905	no	19/19	5/5
METAL	CHROMIUM, TOTAL	0.264	no	19/19	5/5
METAL	COBALT	0.500	no	19/19	5/5
METAL	COPPER	0.016	Yes	19/19	5/5
METAL	CYANIDE	0.770	no	1/12	2/5
METAL	IRON	0.201	no	19/19	5/5
METAL	LEAD	0.014	Yes	19/19	5/5
METAL	MAGNESIUM	0.866	no	19/19	5/5
METAL	MANGANESE	0.905	no	19/19	5/5
METAL	MERCURY	0.099	Yes	13/19	1/5
METAL	NICKEL	0.458	no	19/19	5/5
METAL	POTASSIUM	0.859	no	19/19	5/5
METAL	SELENIUM	0.500	no	3/19	1/5
METAL	SILVER	0.034	Yes	16/19	3/5
METAL	SODIUM	0.472	no	15/19	5/5
METAL	THALLIUM	0.748	no	4/19	1/5
METAL	VANADIUM	0.528	no	19/19	5/5
METAL	ZINC	0.007	Yes	19/19	5/5
SVOC	2-METHYLNAPHTHALENE	0.231	no	5/19	1/5
SVOC	ACENAPHTHENE	0.276	no	8/19	1/5
SVOC	ACENAPHTHYLENE	0.253	no	12/19	1/5
SVOC	ANTHRACENE	0.141	Yes	12/19	1/5
SVOC	BENZO(a)ANTHRACENE	0.107	Yes	12/19	2/5
SVOC	BENZO(a)PYRENE	0.095	Yes	11/19	2/5
SVOC	BENZO(b)FLUORANTHENE	0.101	Yes	12/19	2/5
SVOC	BENZO(g,h,i)PERYLENE	0.376	no	9/19	1/5
SVOC	BENZO(k)FLUORANTHENE	0.311	no	9/19	2/5
SVOC	CARBAZOLE	0.299	no	11/19	1/5
SVOC	CHRYSENE	0.101	Yes	12/19	2/5
SVOC	DI-n-BUTYL PHTHALATE	0.112	Yes	1/19	1/5
SVOC	DIBENZ(a,h)ANTHRACENE	0.651	no	8/19	1/5
SVOC	FLUORANTHENE	0.029	Yes	12/19	3/5
SVOC	FLUORENE	0.107	Yes	8/19	1/5
SVOC	INDENO(1,2,3-c,d)PYRENE	0.210	no	10/19	2/5
SVOC	NAPHTHALENE	0.221	no	6/19	1/5
SVOC	PHENANTHRENE	0.084	Yes	13/19	2/5
SVOC	PYRENE	0.066	Yes	12/19	2/5
SVOC	bis(2-ETHYLHEXYL) PHTHALATE	0.288	no	4/19	3/5

Site Mean	Bkgd Mean	Site Median	Bkgd Median	Number of Exceedances of Normal UTL	Percent of Exceedances of Normal UTL	Number of Exceedances of Normal UPL	Number of Exceedances of Background Max
8630	7240	7270	6370	0	0	2	2
6.42	2.03	1.97	0.43	.	.	.	4
6.45	8.3	5.4	6.4	0	0	0	0
241	243	195	225	0	0	0	2
0.517	0.622	0.559	0.5	0	0	0	0
14600	22200	9040	16100	0	0	1	1
19.1	16.9	16.5	13.8	0	0	1	1
6.23	7.7	5.4	4.3	0	0	0	0
94.1	23.1	65.8	10.7	4	21	6	11
0.19	0.437	0.065	0.21	.	.	.	0
29100	35400	22500	12000	0	0	0	0
155	32	132	22.2	11	58	13	15
1920	2150	1660	2600	1	5	1	1
278	544	261	427	0	0	0	0
0.103	0.061	0.08	0.065	.	.	.	10
20.1	19.9	13.9	18.2	0	0	1	2
1140	1430	1190	1530	0	0	0	0
1.86	1.02	0.65	0.65	.	.	.	1
1.29	0.385	0.95	0.42	12	63	13	14
467	362	329	312	2	11	2	4
1.21	1.85	0.6	0.65	.	.	.	0
19.1	23	19.9	18.3	0	0	0	0
471	66	285	56.5	12	63	14	14
0.464	0.181	0.225	0.21	.	.	.	1
0.372	0.156	0.215	0.21	.	.	.	5
0.973	0.215	0.7	0.22	.	.	.	6
1.68	0.195	0.69	0.22	.	.	.	7
1.09	0.208	0.475	0.22	.	.	.	5
1.19	0.282	0.475	0.22	.	.	.	5
1.59	0.22	0.475	0.22	.	.	.	5
1.38	0.509	0.32	0.22	.	.	.	4
0.565	0.191	0.11	0.22	.	.	.	3
0.866	0.171	0.24	0.21	.	.	.	5
1.62	0.275	0.69	0.22	.	.	.	5
0.459	0.158	0.225	0.21	.	.	.	1
0.358	0.239	0.19	0.22	.	.	.	1
1.66	0.157	0.76	0.085	5	26	6	6
0.523	0.128	0.215	0.085	.	.	.	7
0.784	0.262	0.16	0.22	.	.	.	4
0.509	0.175	0.215	0.21	.	.	.	3
1.41	0.166	0.62	0.22	.	.	.	6
1.86	0.311	0.895	0.22	.	.	.	6
0.798	0.401	0.65	0.21	1	5	1	1

Table 5: Comparison of Surface Soil (Former Lauren Tank Farm Area) to Background

Chemical Group	Parameter	p-value from Wilcoxon Rank Sum (WRS) Test	Is Background Exceeded via WRS Test?	Site Detection Frequency	Bkgd Detection Frequency	Site Mean	Bkgd Mean	Site Median	Bkgd Median	Number of Exceedances of Normal UTL	Percent of Exceedances of Normal UTL	Number of Exceedances of Normal UPL	Number of Exceedances of Background Max
METAL	ALUMINUM	0.806	no	13/13	5/5	5350	7240	4730	6370	0	0	0	0
METAL	ANTIMONY	0.721	no	2/13	1/5	0.842	2.03	0.55	0.43				0
METAL	ARSENIC	0.500	no	13/13	5/5	8.12	8.3	6.3	6.4	0	0	1	1
METAL	BARIUM	0.976	no	13/13	5/5	110	243	96.4	225	0	0	0	0
METAL	BERYLLIUM	0.500	no	10/13	5/5	0.507	0.622	0.55	0.5	0	0	0	0
METAL	CALCIUM	0.961	no	13/13	5/5	6440	22200	4500	16100	0	0	0	0
METAL	CHROMIUM, TOTAL	0.703	no	13/13	5/5	48.3	16.9	9.5	13.8	1	8	1	1
METAL	COBALT	0.423	no	13/13	5/5	6.22	7.7	5.4	4.3	0	0	0	1
METAL	COPPER	0.109	Yes	13/13	5/5	622	23.1	24.5	10.7	3	23	3	4
METAL	CYANIDE	0.705	no	1/13	2/5	0.252	0.437	0.19	0.21				0
METAL	IRON	0.423	no	13/13	5/5	24600	35400	17400	12000	0	0	0	1
METAL	LEAD	0.109	Yes	13/13	5/5	137	32	51.4	22.2	3	23	6	6
METAL	MAGNESIUM	0.961	no	13/13	5/5	1210	2150	1230	2600	0	0	0	0
METAL	MANGANESE	0.944	no	13/13	5/5	254	544	208	427	0	0	0	1
METAL	MERCURY	0.202	no	5/12	1/5	0.593	0.061	0.0675	0.065				5
METAL	NICKEL	0.651	no	13/13	5/5	42.5	19.9	10.6	18.2	1	8	1	1
METAL	POTASSIUM	0.539	no	13/13	5/5	1420	1430	1330	1530	0	0	1	1
METAL	SELENIUM	0.961	no	3/13	1/5	0.754	1.02	0.4	0.65				1
METAL	SILVER	0.349	no	7/13	3/5	0.925	0.385	0.29	0.42	1	8	4	6
METAL	SODIUM	0.314	no	12/13	5/5	694	362	858	312	3	23	7	7
METAL	THALLIUM	0.945	no	2/13	1/5	0.676	1.85	0.55	0.65				0
METAL	VANADIUM	0.780	no	13/13	5/5	15.1	23	15.2	18.3	0	0	0	0
METAL	ZINC	0.126	Yes	13/13	5/5	222	66	111	56.5	3	23	6	6
SVOC	2-METHYLNAPHTHALENE	0.936	no	8/13	1/5	0.294	0.181	0.085	0.21				2
SVOC	ACENAPHTHENE	0.520	no	2/13	1/5	0.294	0.156	0.085	0.21				1
SVOC	ACENAPHTHYLENE	0.923	no	9/13	1/5	0.204	0.215	0.085	0.22				2
SVOC	ANTHRACENE	0.955	no	9/13	1/5	0.208	0.195	0.085	0.22				2
SVOC	BENZALDEHYDE	0.040	Yes	5/13	3/5	0.241	0.0382	0.085	0.009	0	0	0	5
SVOC	BENZO(a)ANTHRACENE	0.558	no	8/13	2/5	0.609	0.208	0.085	0.22				1
SVOC	BENZO(a)PYRENE	0.500	no	10/13	2/5	0.69	0.282	0.13	0.22				1
SVOC	BENZO(b)FLUORANTHENE	0.615	no	11/13	2/5	0.708	0.22	0.11	0.22				1
SVOC	BENZO(g,h,i)PERYLENE	0.686	no	10/13	1/5	0.475	0.509	0.17	0.22				1
SVOC	BENZO(k)FLUORANTHENE	0.669	no	8/13	2/5	0.438	0.191	0.085	0.22				1
SVOC	CARBAZOLE	0.654	no	3/13	1/5	0.315	0.171	0.085	0.21				1
SVOC	CHRYSENE	0.615	no	10/13	2/5	0.692	0.275	0.11	0.22				1
SVOC	DI-n-BUTYL PHTHALATE	0.500	no	1/13	1/5	0.356	0.158	0.085	0.21				1
SVOC	DIBENZ(a,h)ANTHRACENE	0.929	no	8/13	1/5	0.308	0.239	0.085	0.22				1
SVOC	FLUORANTHENE	0.615	no	11/13	3/5	0.695	0.157	0.08	0.085	1	8	2	2
SVOC	FLUORENE	0.401	no	3/13	1/5	0.289	0.128	0.085	0.085				3
SVOC	INDENO(1,2,3-c,d)PYRENE	0.633	no	11/13	2/5	0.316	0.262	0.12	0.22				1
SVOC	NAPHTHALENE	0.936	no	8/13	1/5	0.2	0.175	0.085	0.21				2
SVOC	PHENANTHRENE	0.721	no	9/13	2/5	0.308	0.166	0.085	0.22				3
SVOC	PYRENE	0.596	no	11/13	2/5	0.758	0.311	0.085	0.22				2
SVOC	bis(2-ETHYLHEXYL) PHTHALATE	0.832	no	7/13	3/5	0.488	0.401	0.11	0.21	0	0	1	1

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Table 6: Comparison of Surface Soil (Maintenance Shed Area) to Background

Chemical Group	Parameter	p-value from Wilcoxon Rank Sum (WRS) Test	Is Background Exceeded via WRS Test?	Site Detection Frequency	Bkgd Detection Frequency	Site Mean	Bkgd Mean	Site Median	Bkgd Median	Number of Exceedances of Normal UTL	Percent of Exceedances of Normal UTL	Number of Exceedances of Normal UPL	Number of Exceedances of Background Max
METAL	ALUMINUM	0.947	no	9/9	5/5	3470	7240	3370	6370	0	0	0	0
METAL	ANTIMONY	0.261	no	4/8	1/5	4.26	2.03	3.15	0.43				1
METAL	ARSENIC	0.762	no	9/9	5/5	6.23	8.3	6.1	6.4	0	0	0	1
METAL	BARIUM	0.917	no	9/9	5/5	129	243	70.9	225	0	0	0	0
METAL	BERYLLIUM	0.557	no	7/8	5/5	0.559	0.622	0.51	0.5	0	0	1	1
METAL	CALCIUM	0.781	no	9/9	5/5	34600	22200	7590	16100	2	22	2	2
METAL	CHROMIUM, TOTAL	0.699	no	9/9	5/5	12	16.9	10.4	13.8	0	0	0	0
METAL	COBALT	0.742	no	9/9	5/5	4.2	7.7	5	4.3	0	0	0	0
METAL	COPPER	0.500	no	9/9	5/5	49.1	23.1	18.9	10.7	1	11	2	2
METAL	CYANIDE	0.557	no	1/8	2/5	0.246	0.437	0.315	0.21				0
METAL	IRON	0.652	no	9/9	5/5	16700	35400	15500	12000	0	0	0	0
METAL	LEAD	0.348	no	9/9	5/5	101	32	63.5	22.2	4	44	4	5
METAL	MAGNESIUM	0.897	no	9/9	5/5	1360	2150	845	2600	0	0	0	1
METAL	MANGANESE	0.967	no	9/9	5/5	207	544	113	427	0	0	0	0
METAL	MERCURY	0.306	no	4/8	1/5	0.0856	0.061	0.065	0.065				3
METAL	NICKEL	0.781	no	9/9	5/5	13.1	19.9	10.5	18.2	0	0	0	0
METAL	POTASSIUM	0.933	no	9/9	5/5	767	1430	948	1530	0	0	0	0
METAL	SILVER	0.820	no	2/8	3/5	0.716	0.385	0.273	0.42	2	25	2	2
METAL	SODIUM	0.699	no	9/9	5/5	293	362	243	312	0	0	0	0
METAL	THALLIUM	0.744	no	3/9	1/5	27.1	1.85	0.6	0.65				1
METAL	VANADIUM	0.967	no	9/9	5/5	10.5	23	10.7	18.3	0	0	0	0
METAL	ZINC	0.103	Yes	9/9	5/5	386	66	143	56.5	3	33	5	5
SVOC	2-METHYLNAPHTHALENE	0.889	no	4/9	1/5	0.131	0.181	0.085	0.21				1
SVOC	ACENAPHTHENE	0.682	no	1/9	1/5	0.14	0.156	0.085	0.21				0
SVOC	ACENAPHTHYLENE	0.937	no	4/9	1/5	0.113	0.215	0.085	0.22				0
SVOC	ANTHRACENE	0.604	no	6/9	1/5	0.156	0.195	0.1	0.22				3
SVOC	BENZALDEHYDE	0.029	Yes	1/9	3/5	0.122	0.0382	0.085	0.009	0	0	0	1
SVOC	BENZO(a)ANTHRACENE	0.703	no	4/9	2/5	0.216	0.208	0.085	0.22				1
SVOC	BENZO(a)PYRENE	0.603	no	7/9	2/5	0.343	0.282	0.12	0.22				2
SVOC	BENZO(b)FLUORANTHENE	0.371	no	5/9	2/5	0.558	0.22	0.27	0.22				1
SVOC	BENZO(g,h,i)PERYLENE	0.934	no	7/9	1/5	0.242	0.509	0.11	0.22				0
SVOC	BENZO(k)FLUORANTHENE	0.500	no	4/9	2/5	0.393	0.191	0.085	0.22				1
SVOC	CARBAZOLE	0.928	no	5/9	1/5	0.112	0.171	0.085	0.21				2
SVOC	CHRYSENE	0.526	no	5/9	2/5	0.351	0.275	0.16	0.22				1
SVOC	DI-n-BUTYL PHTHALATE	0.703	no	2/9	1/5	0.134	0.158	0.085	0.21				1
SVOC	DIBENZ(a,h)ANTHRACENE	0.910	no	4/9	1/5	0.164	0.239	0.085	0.22				1
SVOC	FLUORANTHENE	0.102	Yes	6/9	3/5	0.763	0.157	0.24	0.085	2	22	3	3
SVOC	FLUORENE	0.390	no	1/9	1/5	0.147	0.128	0.085	0.085				1
SVOC	INDENO(1,2,3-c,d)PYRENE	0.743	no	7/9	2/5	0.194	0.262	0.09	0.22				1
SVOC	NAPHTHALENE	0.835	no	4/9	1/5	0.137	0.175	0.085	0.21				2
SVOC	PHENANTHRENE	0.500	no	6/9	2/5	0.322	0.166	0.085	0.22				2
SVOC	PYRENE	0.526	no	7/9	2/5	0.792	0.311	0.2	0.22				2
SVOC	bis(2-ETHYLHEXYL) PHTHALATE	0.877	no	2/9	3/5	0.182	0.401	0.085	0.21	0	0	0	0

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Table 7: Comparison of Surface Soil (Non-Source Area 0-0.5 feet) to Background

Chemical Group	Parameter	p-value from Wilcoxon Rank Sum (WRS) Test	Is Background Exceeded via WRS Test?	Site Detection Frequency	Bkgd Detection Frequency	Site Mean	Bkgd Mean	Site Median	Bkgd Median	Number of Exceedances of Normal UTL	Percent of Exceedances of Normal UTL	Number of Exceedances of Normal UPL	Number of Exceedances of Background Max
METAL	ALUMINUM	0.759	no	54/54	5/5	5970	7240	5440	6370	0	0	2	2
METAL	ANTIMONY	0.221	no	27/47	1/5	2.99	2.03	0.96	0.43				6
METAL	ARSENIC	0.715	no	52/54	5/5	6.61	8.3	5.95	6.4	1	2	1	1
METAL	BARIUM	0.817	no	54/54	5/5	182	243	130	225	0	0	1	2
METAL	BERYLLIUM	0.715	no	51/54	5/5	0.985	0.622	0.465	0.5	2	4	2	2
METAL	CALCIUM	0.935	no	54/54	5/5	13300	22200	4860	16100	2	4	2	5
METAL	CHROMIUM, TOTAL	0.554	no	54/54	5/5	16.7	16.9	10.2	13.8	1	2	3	4
METAL	COBALT	0.687	no	54/54	5/5	5.87	7.7	5	4.3	1	2	1	1
METAL	COPPER	0.126	Yes	54/54	5/5	192	23.1	21.8	10.7	10	19	15	16
METAL	CYANIDE	0.950	no	8/54	2/5	0.103	0.437	0.065	0.21				0
METAL	IRON	0.378	no	54/54	5/5	22600	35400	14500	12000	0	0	1	2
METAL	LEAD	0.197	Yes	54/54	5/5	224	32	38.3	22.2	18	33	21	22
METAL	MAGNESIUM	0.980	no	54/54	5/5	1260	2150	1230	2600	0	0	0	1
METAL	MANGANESE	0.963	no	54/54	5/5	265	544	228	427	0	0	0	2
METAL	MERCURY	0.647	no	17/54	1/5	0.0748	0.061	0.035	0.065				17
METAL	NICKEL	0.755	no	54/54	5/5	18	19.9	10.7	18.2	1	2	2	2
METAL	POTASSIUM	0.791	no	54/54	5/5	1170	1430	1240	1530	0	0	0	1
METAL	SELENIUM	0.974	no	4/54	1/5	0.587	1.02	0.6	0.65				1
METAL	SILVER	0.001	Yes	53/54	3/5	0.982	0.385	0.7	0.42	24	44	40	48
METAL	SODIUM	0.153	Yes	54/54	5/5	639	362	405	312	5	9	15	18
METAL	THALLIUM	0.898	no	10/54	1/5	0.856	1.85	0.6	0.65				0
METAL	VANADIUM	0.897	no	54/54	5/5	14.7	23	14.8	18.3	0	0	0	0
METAL	ZINC	0.126	Yes	54/54	5/5	1060	66	101	56.5	20	37	21	23
SVOC	2-METHYLNAPHTHALENE	0.410	no	15/55	1/5	0.333	0.181	0.21	0.21				3
SVOC	ACENAPHTHENE	0.144	Yes	6/55	1/5	0.545	0.156	0.215	0.21				5
SVOC	ACENAPHTHYLENE	0.831	no	28/55	1/5	0.38	0.215	0.21	0.22				7
SVOC	ANTHRACENE	0.788	no	34/55	1/5	0.534	0.195	0.2	0.22				10
SVOC	BENZALDEHYDE	0.039	Yes	32/55	3/5	0.204	0.0382	0.07	0.009	0	0	1	23
SVOC	BENZO(a)ANTHRACENE	0.620	no	40/55	2/5	0.72	0.208	0.18	0.22				8
SVOC	BENZO(a)PYRENE	0.721	no	48/55	2/5	0.619	0.282	0.1	0.22				7
SVOC	BENZO(b)FLUORANTHENE	0.558	no	45/55	2/5	0.839	0.22	0.21	0.22				12
SVOC	BENZO(g,h,i)PERYLENE	0.532	no	24/55	1/5	0.433	0.509	0.22	0.22				2
SVOC	BENZO(k)FLUORANTHENE	0.610	no	33/55	2/5	0.49	0.191	0.205	0.22				6
SVOC	CARBAZOLE	0.500	no	18/55	1/5	0.385	0.171	0.21	0.21				6
SVOC	CHRYSENE	0.684	no	43/55	2/5	0.747	0.275	0.175	0.22				8
SVOC	DI-n-BUTYL PHTHALATE	0.113	Yes	5/55	1/5	0.402	0.158	0.22	0.21				3
SVOC	DIBENZ(a,h)ANTHRACENE	0.898	no	30/55	1/5	0.264	0.239	0.19	0.22				3
SVOC	FLUORANTHENE	0.516	no	46/55	3/5	1.46	0.157	0.12	0.085	7	13	8	8
SVOC	FLUORENE	0.106	Yes	9/55	1/5	0.494	0.128	0.215	0.085				7
SVOC	INDENO(1,2,3-c,d)PYRENE	0.708	no	42/55	2/5	0.358	0.262	0.18	0.22				4
SVOC	NAPHTHALENE	0.421	no	14/55	1/5	0.408	0.175	0.21	0.21				4
SVOC	PHENANTHRENE	0.660	no	38/55	2/5	1.25	0.166	0.16	0.22				9
SVOC	PYRENE	0.645	no	43/55	2/5	1.14	0.311	0.185	0.22				5
SVOC	bis(2-ETHYLHEXYL) PHTHALATE	0.153	Yes	20/55	3/5	0.685	0.401	0.225	0.21	2	4	6	6

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Table 8: Comparison of Surface Soil (TAR Burn Area) to Background

Chemical Group	Parameter	p-value from Wilcoxon Rank Sum (WRS) Test	Is Background Exceeded via WRS Test?	Site Detection Frequency	Bkgd Detection Frequency	Site Mean	Bkgd Mean	Site Median	Bkgd Median	Number of Exceedances of Normal UTL	Percent of Exceedances of Normal UTL	Number of Exceedances of Normal UPL	Number of Exceedances of Background Max
METAL	ALUMINUM	0.547	no	4/4	5/5	8250	7240	5790	6370	0	0	1	1
METAL	ANTIMONY	0.107	Yes	4/4	1/5	2.75	2.03	1.85	0.43				0
METAL	ARSENIC	0.500	no	4/4	5/5	6.45	8.3	6.8	6.4	0	0	0	0
METAL	BARIUM	0.849	no	4/4	5/5	119	243	120	225	0	0	0	0
METAL	BERYLLIUM	0.453	no	4/4	5/5	0.508	0.622	0.505	0.5	0	0	0	0
METAL	CALCIUM	0.500	no	4/4	5/5	28400	22200	21700	16100	0	0	1	1
METAL	CHROMIUM, TOTAL	0.500	no	4/4	5/5	13.9	16.9	11.5	13.8	0	0	0	0
METAL	COBALT	0.500	no	4/4	5/5	4.9	7.7	4.8	4.3	0	0	0	0
METAL	COPPER	0.107	Yes	4/4	5/5	64.7	23.1	43.2	10.7	1	25	1	1
METAL	CYANIDE	0.641	no	1/4	2/5	0.11	0.437	0.0675	0.21				0
METAL	IRON	0.406	no	4/4	5/5	13900	35400	12700	12000	0	0	0	0
METAL	LEAD	0.052	Yes	4/4	5/5	320	32	138	22.2	3	75	3	3
METAL	MAGNESIUM	0.849	no	4/4	5/5	1350	2150	1250	2600	0	0	0	0
METAL	MANGANESE	0.721	no	4/4	5/5	321	544	344	427	0	0	0	0
METAL	MERCURY	0.107	Yes	4/4	1/5	0.158	0.061	0.13	0.065				3
METAL	NICKEL	0.500	no	4/4	5/5	14.6	19.9	12.1	18.2	0	0	0	0
METAL	POTASSIUM	0.721	no	4/4	5/5	1180	1430	1100	1530	0	0	0	0
METAL	SILVER	0.024	Yes	4/4	3/5	0.873	0.385	0.845	0.42	4	100	4	4
METAL	SODIUM	0.151	Yes	4/4	5/5	476	362	468	312	0	0	0	0
METAL	THALLIUM	0.452	no	1/4	1/5	0.813	1.85	0.675	0.65				0
METAL	VANADIUM	0.721	no	4/4	5/5	15.2	23	16.2	18.3	0	0	0	0
METAL	ZINC	0.035	Yes	4/4	5/5	327	66	393	56.5	3	75	3	3
SVOC	2-METHYLNAPHTHALENE	0.594	no	2/4	1/5	0.129	0.181	0.13	0.21				0
SVOC	ACENAPHTHENE	0.241	no	1/4	1/5	0.183	0.156	0.228	0.21				0
SVOC	ACENAPHTHYLENE	0.594	no	3/4	1/5	0.21	0.215	0.17	0.22				1
SVOC	ANTHRACENE	0.500	no	4/4	1/5	0.188	0.195	0.175	0.22				1
SVOC	BENZALDEHYDE	0.051	Yes	3/4	3/5	1.66	0.0382	0.165	0.009	1	25	1	3
SVOC	BENZO(a)ANTHRACENE	0.208	no	4/4	2/5	0.43	0.208	0.37	0.22				1
SVOC	BENZO(a)PYRENE	0.208	no	4/4	2/5	0.545	0.282	0.455	0.22				1
SVOC	BENZO(b)FLUORANTHENE	0.075	Yes	4/4	2/5	0.685	0.22	0.695	0.22				3
SVOC	BENZO(g,h,i)PERYLENE	0.547	no	4/4	1/5	0.255	0.509	0.25	0.22				0
SVOC	BENZO(k)FLUORANTHENE	0.151	Yes	4/4	2/5	0.66	0.191	0.595	0.22				2
SVOC	CARBAZOLE	0.594	no	3/4	1/5	0.168	0.171	0.15	0.21				1
SVOC	CHRYSENE	0.151	Yes	4/4	2/5	0.468	0.275	0.34	0.22				1
SVOC	DI-n-BUTYL PHTHALATE	0.241	no	1/4	1/5	0.223	0.158	0.228	0.21				0
SVOC	DIBENZ(a,h)ANTHRACENE	0.873	no	4/4	1/5	0.105	0.239	0.09	0.22				0
SVOC	FLUORANTHENE	0.052	Yes	4/4	3/5	0.753	0.157	0.51	0.085	1	25	2	3
SVOC	FLUORENE	0.406	no	2/4	1/5	0.146	0.128	0.17	0.085				1
SVOC	INDENO(1,2,3-c,d)PYRENE	0.318	no	4/4	2/5	0.375	0.262	0.345	0.22				0
SVOC	NAPHTHALENE	0.594	no	2/4	1/5	0.131	0.175	0.135	0.21				0
SVOC	PHENANTHRENE	0.279	no	4/4	2/5	0.37	0.166	0.25	0.22				2
SVOC	PYRENE	0.151	Yes	4/4	2/5	0.725	0.311	0.64	0.22				1
SVOC	bis(2-ETHYLHEXYL) PHTHALATE	0.075	Yes	2/4	3/5	1.37	0.401	0.275	0.21	1	25	1	1

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Table 9: Comparison of Surface Soil (Wastewater Treatment Facility) to Background

Chemical Group	Parameter	p-value from Wilcoxon Rank Sum (WRS) Test	Is Background Exceeded via WRS Test?	Site Detection Frequency	Bkgd Detection Frequency	Site Mean	Bkgd Mean	Site Median	Bkgd Median	Number of Exceedances of Normal UTL	Percent of Exceedances of Normal UTL	Number of Exceedances of Normal UPL	Number of Exceedances of Background Max
METAL	ALUMINUM	0.500	no	7/7	5/5	6720	7240	6630	6370	0	0	0	0
METAL	ANTIMONY	0.086	Yes	6/7	1/5	2.24	2.03	1.7	0.43				0
METAL	ARSENIC	0.318	no	7/7	5/5	8.33	8.3	6.8	6.4	0	0	0	0
METAL	BARIUM	0.890	no	7/7	5/5	139	243	98.9	225	0	0	0	0
METAL	BERYLLIUM	0.140	Yes	7/7	5/5	0.749	0.622	0.65	0.5	0	0	0	0
METAL	CALCIUM	0.961	no	7/7	5/5	5220	22200	5630	16100	0	0	0	0
METAL	CHROMIUM, TOTAL	0.318	no	7/7	5/5	22.9	16.9	12.8	13.8	0	0	1	1
METAL	COBALT	0.264	no	7/7	5/5	7.7	7.7	5.8	4.3	0	0	0	0
METAL	COPPER	0.051	Yes	7/7	5/5	101	23.1	50.6	10.7	2	29	2	2
METAL	CYANIDE	0.809	no	1/7	2/5	0.162	0.437	0.065	0.21				0
METAL	IRON	0.175	Yes	7/7	5/5	47300	35400	17700	12000	0	0	1	1
METAL	LEAD	0.022	Yes	7/7	5/5	90.3	32	61.4	22.2	3	43	3	5
METAL	MAGNESIUM	0.682	no	7/7	5/5	1760	2150	1270	2600	0	0	0	1
METAL	MANGANESE	0.682	no	7/7	5/5	1870	544	335	427	1	14	1	1
METAL	MERCURY	0.174	Yes	5/7	1/5	0.231	0.061	0.07	0.065				3
METAL	NICKEL	0.318	no	7/7	5/5	29.7	19.9	16.2	18.2	0	0	1	1
METAL	POTASSIUM	0.735	no	7/7	5/5	1280	1430	1070	1530	0	0	1	1
METAL	SELENIUM	0.684	no	2/7	1/5	1.08	1.02	0.6	0.65				1
METAL	SILVER	0.086	Yes	5/7	3/5	0.858	0.385	0.82	0.42	4	57	5	5
METAL	SODIUM	0.110	Yes	7/7	5/5	1160	362	890	312	2	29	4	4
METAL	THALLIUM	0.683	no	2/7	1/5	2.12	1.85	0.6	0.65				1
METAL	VANADIUM	0.735	no	7/7	5/5	17.6	23	16.2	18.3	0	0	0	0
METAL	ZINC	0.009	Yes	7/7	5/5	389	66	331	56.5	4	57	6	7
SVOC	2-METHYLNAPHTHALENE	0.711	no	2/7	1/5	0.153	0.181	0.205	0.21				1
SVOC	ACENAPHTHENE	0.916	no	3/7	1/5	0.0971	0.156	0.085	0.21				1
SVOC	ACENAPHTHYLENE	0.878	no	4/7	1/5	0.148	0.215	0.085	0.22				1
SVOC	ANTHRACENE	0.736	no	6/7	1/5	0.178	0.195	0.085	0.22				2
SVOC	BENZALDEHYDE	0.048	Yes	2/7	3/5	0.125	0.0382	0.085	0.009	0	0	0	2
SVOC	BENZO(a)ANTHRACENE	0.563	no	5/7	2/5	0.219	0.208	0.11	0.22				1
SVOC	BENZO(a)PYRENE	0.595	no	5/7	2/5	0.201	0.282	0.1	0.22				0
SVOC	BENZO(b)FLUORANTHENE	0.375	no	5/7	2/5	0.324	0.22	0.15	0.22				1
SVOC	BENZO(g,h,i)PERYLENE	0.915	no	4/7	1/5	0.142	0.509	0.13	0.22				0
SVOC	BENZO(k)FLUORANTHENE	0.737	no	5/7	2/5	0.129	0.191	0.085	0.22				0
SVOC	CARBAZOLE	0.936	no	3/7	1/5	0.11	0.171	0.085	0.21				1
SVOC	CHRYSENE	0.375	no	5/7	2/5	0.333	0.275	0.17	0.22				1
SVOC	DIBENZ(a,h)ANTHRACENE	0.979	no	5/7	1/5	0.0643	0.239	0.085	0.22				0
SVOC	FLUORANTHENE	0.317	no	5/7	3/5	0.434	0.157	0.13	0.085	1	14	1	1
SVOC	FLUORENE	0.500	no	3/7	1/5	0.131	0.128	0.09	0.085				3
SVOC	INDENO(1,2,3-c,d)PYRENE	0.684	no	5/7	2/5	0.15	0.262	0.11	0.22				0
SVOC	NAPHTHALENE	0.827	no	2/7	1/5	0.139	0.175	0.12	0.21				0
SVOC	PHENANTHRENE	0.532	no	6/7	2/5	0.256	0.166	0.09	0.22				1
SVOC	PYRENE	0.468	no	5/7	2/5	0.374	0.311	0.14	0.22				1

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Table 10: Comparison of Subsurface Soil (Non-Source Area 0-5 feet) to Background

Chemical Group	Parameter	p-value from Wilcoxon Rank Sum (WRS) Test	Is Background Exceeded via WRS Test?	Site Detection Frequency	Bkgd Detection Frequency	Site Mean	Bkgd Mean	Site Median	Bkgd Median	Number of Exceedances of Normal UTL	Percent of Exceedances of Normal UTL	Number of Exceedances of Normal UPL	Number of Exceedances of Background Max
METAL	ALUMINUM	0.752	no	56/56	5/5	5980	7240	5610	6370	0	0	2	2
METAL	ANTIMONY	0.238	no	28/49	1/5	2.9	2.03	0.96	0.43				6
METAL	ARSENIC	0.717	no	53/56	5/5	6.56	8.3	5.95	6.4	1	2	1	1
METAL	BARIUM	0.816	no	56/56	5/5	182	243	130	225	0	0	1	2
METAL	BERYLLIUM	0.700	no	53/56	5/5	0.976	0.622	0.465	0.5	2	4	2	2
METAL	CALCIUM	0.932	no	56/56	5/5	13200	22200	4860	16100	2	4	2	5
METAL	CHROMIUM, TOTAL	0.542	no	56/56	5/5	16.7	16.9	10.2	13.8	1	2	3	4
METAL	COBALT	0.653	no	56/56	5/5	6.08	7.7	5	4.3	1	2	1	2
METAL	COPPER	0.113	Yes	56/56	5/5	188	23.1	24.2	10.7	11	20	16	17
METAL	CYANIDE	0.951	no	8/56	2/5	0.102	0.437	0.065	0.21				0
METAL	IRON	0.362	no	56/56	5/5	22900	35400	14900	12000	0	0	1	2
METAL	LEAD	0.171	Yes	56/56	5/5	227	32	39.2	22.2	19	34	22	24
METAL	MAGNESIUM	0.980	no	56/56	5/5	1280	2150	1230	2600	0	0	0	1
METAL	MANGANESE	0.963	no	56/56	5/5	265	544	228	427	0	0	0	2
METAL	MERCURY	0.662	no	17/56	1/5	0.0734	0.061	0.035	0.065				17
METAL	NICKEL	0.722	no	56/56	5/5	18.4	19.9	11.1	18.2	1	2	2	2
METAL	POTASSIUM	0.776	no	56/56	5/5	1190	1430	1260	1530	0	0	0	1
METAL	SELENIUM	0.976	no	4/56	1/5	0.582	1.02	0.6	0.65				1
METAL	SILVER	0.001	Yes	55/56	3/5	1.01	0.385	0.71	0.42	26	46	42	50
METAL	SODIUM	0.137	Yes	56/56	5/5	666	362	406	312	6	11	16	19
METAL	THALLIUM	0.888	no	11/56	1/5	0.856	1.85	0.6	0.65				0
METAL	VANADIUM	0.903	no	56/56	5/5	14.6	23	14.6	18.3	0	0	0	0
METAL	ZINC	0.108	Yes	56/56	5/5	1050	66	106	56.5	21	38	23	25
SVOC	2-METHYLNAPHTHALENE	0.398	no	15/57	1/5	0.329	0.181	0.215	0.21				3
SVOC	ACENAPHTHENE	0.143	Yes	6/57	1/5	0.533	0.156	0.215	0.21				5
SVOC	ACENAPHTHYLENE	0.826	no	28/57	1/5	0.374	0.215	0.21	0.22				7
SVOC	ANTHRACENE	0.799	no	35/57	1/5	0.519	0.195	0.2	0.22				10
SVOC	BENZALDEHYDE	0.038	Yes	33/57	3/5	0.2	0.0382	0.07	0.009	0	0	1	24
SVOC	BENZO(a)ANTHRACENE	0.631	no	41/57	2/5	0.699	0.208	0.18	0.22				8
SVOC	BENZO(a)PYRENE	0.748	no	50/57	2/5	0.598	0.282	0.09	0.22				7
SVOC	BENZO(b)FLUORANTHENE	0.607	no	47/57	2/5	0.81	0.22	0.17	0.22				12
SVOC	BENZO(g,h,i)PERYLENE	0.536	no	24/57	1/5	0.426	0.509	0.22	0.22				2
SVOC	BENZO(k)FLUORANTHENE	0.631	no	34/57	2/5	0.477	0.191	0.205	0.22				6
SVOC	CARBAZOLE	0.490	no	18/57	1/5	0.379	0.171	0.21	0.21				6
SVOC	CHRYSENE	0.701	no	44/57	2/5	0.725	0.275	0.175	0.22				8
SVOC	DI-n-BUTYL PHTHALATE	0.132	Yes	6/57	1/5	0.391	0.158	0.215	0.21				3
SVOC	DIBENZ(a,h)ANTHRACENE	0.893	no	30/57	1/5	0.262	0.239	0.19	0.22				3
SVOC	FLUORANTHENE	0.557	no	48/57	3/5	1.41	0.157	0.12	0.085	7	12	8	8
SVOC	FLUORENE	0.107	Yes	9/57	1/5	0.484	0.128	0.215	0.085				7
SVOC	INDENO(1,2,3-c,d)PYRENE	0.715	no	43/57	2/5	0.35	0.262	0.18	0.22				4
SVOC	NAPHTHALENE	0.408	no	14/57	1/5	0.402	0.175	0.21	0.21				4
SVOC	PHENANTHRENE	0.669	no	39/57	2/5	1.21	0.166	0.16	0.22				9
SVOC	PYRENE	0.679	no	45/57	2/5	1.1	0.311	0.17	0.22				5
SVOC	bis(2-ETHYLHEXYL) PHTHALATE	0.155	Yes	20/57	3/5	0.668	0.401	0.225	0.21	2	4	6	6

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Table 11: Comparison of All Sediment Data to Background

Chemical Group	Parameter	p-value from Wilcoxon Rank Sum (WRS) Test	Is Background Exceeded via WRS Test?	Site Detection Frequency	Bkgd Detection Frequency	Site Mean	Bkgd Mean	Site Median	Bkgd Median	Number of Exceedances of Normal UTL	Percent of Exceedances of Normal UTL	Number of Exceedances of Normal UPL	Number of Exceedances of Background Max
METAL	ALUMINUM	0.001	Yes	64/64	5/5	4080	431	4390	448	55	86	56	57
METAL	ANTIMONY	0.618	no	21/64	5/5	0.844	0.306	0.28	0.29	7	11	10	10
METAL	ARSENIC	0.000	Yes	64/64	5/5	5.27	0.686	5	0.59	64	100	64	64
METAL	BARIUM	0.000	Yes	64/64	5/5	59.4	4.52	39.3	4.4	64	100	64	64
METAL	BERYLLIUM	0.001	Yes	46/64	2/5	0.492	0.0484	0.54	0.048				46
METAL	CADMIUM	0.001	Yes	55/64	5/5	0.205	0.053	0.125	0.049	35	55	45	49
METAL	CALCIUM	0.000	Yes	64/64	5/5	9090	111	1450	108	59	92	64	64
METAL	CHROMIUM, TOTAL	0.000	Yes	64/64	5/5	10	1.09	7.6	1.1	62	97	64	64
METAL	COBALT	0.000	Yes	64/64	5/5	5.84	0.86	6.2	0.96	53	83	63	64
METAL	IRON	0.000	Yes	64/64	5/5	20300	1690	11600	1680	64	100	64	64
METAL	LEAD	0.000	Yes	64/64	5/5	45.2	1.92	10	2	64	100	64	64
METAL	MAGNESIUM	0.000	Yes	64/64	5/5	2170	202	2280	208	55	86	55	59
METAL	MANGANESE	0.000	Yes	64/64	5/5	264	32	138	29.9	53	83	59	61
METAL	MERCURY	0.000	Yes	21/64	2/5	0.0446	0.00287	0.035	0.0019				21
METAL	NICKEL	0.000	Yes	64/64	5/5	11.2	0.778	8.36	0.81	62	97	64	0
METAL	POTASSIUM	0.001	Yes	64/64	5/5	1210	120	1340	128	55	86	56	58
METAL	SODIUM	0.000	Yes	64/64	5/5	2050	403	1740	414	60	94	63	63
METAL	VANADIUM	0.000	Yes	64/64	5/5	12.3	2.28	13.6	2.1	54	84	60	63
METAL	ZINC	0.000	Yes	64/64	5/5	143	4.86	36.1	5.1	64	100	64	64

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Table 12: Comparison of Intertidal Sediment (top of bank to mean lower water mark) to Background

Chemical Group	Parameter	p-value from Wilcoxon Rank Sum (WRS) Test	Is Background Exceeded via WRS Test?	Site Detection Frequency	Bkgd Detection Frequency	Site Mean	Bkgd Mean	Site Median	Bkgd Median	Number of Exceedances of Normal UTL	Percent of Exceedances of Normal UTL	Number of Exceedances of Normal UPL	Number of Exceedances of Background Max
METAL	ALUMINUM	0.018	Yes	13/13	5/5	1860	431	1730	448	10	77	10	10
METAL	ANTIMONY	0.012	Yes	9/13	5/5	2.96	0.306	0.56	0.29	6	46	6	6
METAL	ARSENIC	0.003	Yes	13/13	5/5	6.55	0.686	6.4	0.59	13	100	13	13
METAL	BARIUM	0.003	Yes	13/13	5/5	45.7	4.52	47.1	4.4	13	100	13	13
METAL	BERYLLIUM	0.007	Yes	5/13	2/5	0.425	0.0484	0.095	0.048	.	.	.	5
METAL	CADMIUM	0.003	Yes	9/13	5/5	0.547	0.053	0.18	0.049	8	62	8	9
METAL	CALCIUM	0.003	Yes	13/13	5/5	39000	111	6760	108	11	85	13	13
METAL	CHROMIUM, TOTAL	0.003	Yes	13/13	5/5	20.4	1.09	14.8	1.1	12	92	13	13
METAL	COBALT	0.003	Yes	13/13	5/5	5.32	0.86	5.6	0.96	10	77	12	13
METAL	IRON	0.003	Yes	13/13	5/5	58100	1690	29300	1680	13	100	13	13
METAL	LEAD	0.003	Yes	13/13	5/5	181	1.92	67.3	2	13	100	13	13
METAL	MAGNESIUM	0.010	Yes	13/13	5/5	1160	202	954	208	10	77	10	11
METAL	MANGANESE	0.003	Yes	13/13	5/5	374	32	243	29.9	11	85	13	13
METAL	MERCURY	0.003	Yes	9/13	2/5	0.065	0.00287	0.065	0.0019	.	.	.	9
METAL	NICKEL	0.003	Yes	13/13	5/5	20.1	0.778	14.3	0.81	12	92	13	13
METAL	POTASSIUM	0.015	Yes	13/13	5/5	488	120	276	128	10	77	10	11
METAL	SODIUM	0.003	Yes	13/13	5/5	1040	403	942	414	12	92	13	13
METAL	VANADIUM	0.004	Yes	13/13	5/5	8.61	2.28	8.7	2.1	10	77	12	12
METAL	ZINC	0.003	Yes	13/13	5/5	557	4.86	198	5.1	13	100	13	13

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Table 13: Comparison of Near shore Sediment (shallow sed to potential upland) to Background

Chemical Group	Parameter	p-value from Wilcoxon Rank Sum (WRS) Test	Is Background Exceeded via WRS Test?	Site Detection Frequency	Bkgd Detection Frequency	Site Mean	Bkgd Mean	Site Median	Bkgd Median	Number of Exceedances of Normal UTL	Percent of Exceedances of Normal UTL	Number of Exceedances of Normal UPL	Number of Exceedances of Background Max
METAL	ALUMINUM	0.001	Yes	53/53	5/5	3710	431	3740	448	45	85	46	47
METAL	ANTIMONY	0.566	no	20/53	5/5	0.965	0.306	0.28	0.29	7	13	10	10
METAL	ARSENIC	0.000	Yes	53/53	5/5	5.06	0.686	4.5	0.59	53	100	53	53
METAL	BARIUM	0.000	Yes	53/53	5/5	60.9	4.52	39.3	4.4	53	100	53	53
METAL	BERYLLIUM	0.002	Yes	36/53	2/5	0.468	0.0484	0.49	0.048				36
METAL	CADMIUM	0.001	Yes	44/53	5/5	0.226	0.053	0.13	0.049	31	58	35	39
METAL	CALCIUM	0.000	Yes	53/53	5/5	10600	111	1380	108	49	92	53	53
METAL	CHROMIUM, TOTAL	0.000	Yes	53/53	5/5	10.4	1.09	7.4	1.1	51	96	53	53
METAL	COBALT	0.000	Yes	53/53	5/5	5.68	0.86	6	0.96	43	81	52	53
METAL	IRON	0.000	Yes	53/53	5/5	22200	1690	11500	1680	53	100	53	53
METAL	LEAD	0.000	Yes	53/53	5/5	52.6	1.92	10.2	2	53	100	53	53
METAL	MAGNESIUM	0.001	Yes	53/53	5/5	1980	202	2060	208	45	85	45	48
METAL	MANGANESE	0.000	Yes	53/53	5/5	239	32	128	29.9	44	83	49	50
METAL	MERCURY	0.000	Yes	20/53	2/5	0.0471	0.00287	0.035	0.0019				20
METAL	NICKEL	0.000	Yes	53/53	5/5	11	0.778	7.9	0.81	51	96	53	0
METAL	POTASSIUM	0.001	Yes	53/53	5/5	1080	120	1160	128	45	85	45	47
METAL	SODIUM	0.000	Yes	53/53	5/5	1820	403	1560	414	49	92	52	52
METAL	VANADIUM	0.000	Yes	53/53	5/5	11.9	2.28	11.8	2.1	44	83	50	52
METAL	ZINC	0.000	Yes	53/53	5/5	165	4.86	37.1	5.1	53	100	53	53

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Table 14: Comparison of Off shore Sediment (parallel to navigation channel, ship traffic) to Background

Chemical Group	Parameter	p-value from Wilcoxon Rank Sum (WRS) Test	Is Background Exceeded via WRS Test?	Site Detection Frequency	Bkgd Detection Frequency	Site Mean	Bkgd Mean	Site Median	Bkgd Median	Number of Exceedances of Normal UTL	Percent of Exceedances of Normal UTL	Number of Exceedances of Normal UPL	Number of Exceedances of Background Max
METAL	ALUMINUM	0.005	Yes	11/11	5/5	5840	431	6800	448	10	91	10	10
METAL	ANTIMONY	0.764	no	1/11	5/5	0.258	0.306	0.28	0.29	0	0	0	0
METAL	ARSENIC	0.004	Yes	11/11	5/5	6.26	0.686	6.6	0.59	11	100	11	11
METAL	BARIUM	0.004	Yes	11/11	5/5	52.4	4.52	39	4.4	11	100	11	11
METAL	BERYLLIUM	0.012	Yes	10/11	2/5	0.61	0.0484	0.63	0.048				10
METAL	CADMIUM	0.010	Yes	11/11	5/5	0.102	0.053	0.1	0.049	4	36	10	10
METAL	CALCIUM	0.004	Yes	11/11	5/5	1970	111	1640	108	10	91	11	11
METAL	CHROMIUM, TOTAL	0.004	Yes	11/11	5/5	8.05	1.09	8.8	1.1	11	100	11	11
METAL	COBALT	0.004	Yes	11/11	5/5	6.59	0.86	6.8	0.96	10	91	11	11
METAL	IRON	0.004	Yes	11/11	5/5	11200	1690	12100	1680	11	100	11	11
METAL	LEAD	0.004	Yes	11/11	5/5	9.75	1.92	9.8	2	11	100	11	11
METAL	MAGNESIUM	0.004	Yes	11/11	5/5	3040	202	3460	208	10	91	10	11
METAL	MANGANESE	0.004	Yes	11/11	5/5	385	32	388	29.9	9	82	10	11
METAL	MERCURY	0.003	Yes	1/11	2/5	0.0327	0.00287	0.035	0.0019				1
METAL	NICKEL	0.004	Yes	11/11	5/5	12.5	0.778	10.3	0.81	11	100	11	0
METAL	POTASSIUM	0.004	Yes	11/11	5/5	1830	120	2270	128	10	91	11	11
METAL	SODIUM	0.004	Yes	11/11	5/5	3160	403	3470	414	11	100	11	11
METAL	VANADIUM	0.004	Yes	11/11	5/5	14.1	2.28	15.9	2.1	10	91	10	11
METAL	ZINC	0.004	Yes	11/11	5/5	32.1	4.86	35.1	5.1	11	100	11	11

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Attachment 3

SEDIMENTS SCREENING LEVEL CALCULATIONS

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Calculation of Sediment Screening Levels for Protection of Fish Ingestion Exposures

Bioaccumulative COC	CAS No.	SF-oral	Class	Ref	RfD-oral	Ref	RBEL_fish _NC (mg/kg)	RBEL_fish _C (mg/kg)	RBEL_fish (mg/kg)	BSAF Average (unitless)	BSAF Max (unitless)	BSAF ref	Sediment PCL Average (mg/kg)	Sediment PCL Max (mg/kg)
Cadmium	7440-43-9	NA	NA		5.00E-04	i	1.35E+00	NA	1.3E+00	3.0E-02	5.3E-01	RI report	4.5E+01	2.5E+00
Copper	7440-50-8	NA	NA		3.71E-02	h	1.00E+02	NA	1.0E+02	9.7E-02	1.1E+00	RI report	1.0E+03	9.1E+01
Mercury (HgCl)		NA	NA		3.00E-04	i	8.08E-01	NA	8.1E-01	5.7E-01	3.2E+00	RI report	1.4E+00	2.5E-01
Mercury (methyl)	22967-92-6	NA	NA		1.00E-04	i	2.69E-01	NA	2.7E-01	5.7E-01	3.2E+00	RI report	4.7E-01	8.4E-02
Nickel	7440-02-0	NA	NA		2.00E-02	i	5.38E+01	NA	5.4E+01	8.7E-03	5.4E-02	RI report	6.2E+03	1.0E+03
Selenium	7782-49-2	NA	NA		5.00E-03	i	1.35E+01	NA	1.3E+01	7.0E-01	1.2E+00	RI report	1.9E+01	1.1E+01
Zinc	7440-66-6	NA	NA		3.00E-01	i	8.08E+02	NA	8.1E+02	2.8E-01	1.1E+00	RI report	2.9E+03	7.3E+02
Tributyltin	56-35-9	NA	NA		3.00E-04	i	8.08E-01	NA	8.1E-01	1.4E+01	2.0E+01	RI report	5.8E-02	4.0E-02
Aldrin	309-00-2	1.70E+01	B2	IRIS	3.00E-05	i	8.08E-02	1.58E-03	1.6E-03	1.0E+00	1.0E+00	assumed	2.3E-04	2.3E-04
Chlordane	57-74-9	3.50E-01		i	5.00E-04	i	1.35E+00	7.69E-02	7.7E-02	1.0E+00	1.0E+00	assumed	1.1E-02	1.1E-02
DDD	75-99-0	2.40E-01	B2	i	NA		NA	1.12E-01	1.1E-01	2.3E+00	2.3E+00	Oliver and Niimi 1988	7.3E-03	7.3E-03
DDE	72-54-8	3.40E-01	B2	i	NA		NA	7.92E-02	7.9E-02	2.6E+01	2.6E+01	Oliver and Niimi 1988	4.4E-04	4.4E-04
DDT	72-55-9	3.40E-01	B2	i	5.00E-04	i	1.35E+00	7.92E-02	7.9E-02	8.8E+00	8.8E+00	Oliver and Niimi 1988	1.3E-03	1.3E-03
Dieldrin	60-57-1	1.60E+01	B2	i	5.00E-05	i	1.35E-01	1.68E-03	1.7E-03	1.0E+00	1.0E+00	assumed	2.5E-04	2.5E-04
Endrin	72-20-8	NA			3.00E-04	i	8.08E-01	NA	8.1E-01	1.0E+00	1.0E+00	assumed	1.2E-01	1.2E-01
Heptachlor	76-44-8	4.50E+00	B2	i	5.00E-04	i	1.35E+00	5.98E-03	6.0E-03	1.0E+00	1.0E+00	assumed	8.8E-04	8.8E-04
Heptachlor epoxide	1024-57-3	9.10E+00	B2	i	1.30E-05	i	3.50E-02	2.96E-03	3.0E-03	1.8E+00	1.8E+00	Palmer Barge	2.4E-04	2.4E-04
Toxaphene	8001-35-2	1.10E+00	B2	i	NA		NA	2.45E-02	2.4E-02	1.0E+00	1.0E+00	assumed	3.6E-03	3.6E-03
PCBs	1336-36-3	2.00E+00	B2	i	NA		NA	1.35E-02	1.3E-02	1.3E+01	1.3E+01	Oliver and Niimi 1988	1.5E-04	1.5E-04
Hexachlorobenzene	118-74-1	1.60E+00	B2	i	8.00E-04	i	2.15E+00	1.68E-02	1.7E-02	5.3E-02	2.4E-01	RI report	4.7E-02	1.0E-02

RL	1.00E-05	Risk Level
BW	70	Body weight (kg)
IR_fish	0.026	Ingestion rate of fish (kg/day)
HQ	1	Hazard quotient
OC_sed	0.0103	Fraction of organic carbon in sediment (%)
F_lipid	0.07	Fish lipid content (%)

PCL - Protective Concentration Level

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Attachment 4

PRO UCL OUTPUT

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Data File		
Variable:	BENZO(a)ANTHRACENE	
Raw Statistics		
Number of Observations	19	
Number of Missing Data	0	
Number of Valid Observations	19	
Number of Distinct Observations	18	
Minimum	0.022	
Maximum	10.8	
Mean	1.088658	
Standard Deviation	2.395737	
Variance	5.739558	
Coefficient of Variation	2.200634	
Skewness	4.098051	
Too Few Distinct Observations?	NO	
Normal Statistics		
Lilliefors Test Statisitic	N/R	Shapiro Wilk method yields a more accurate result
Lilliefors 5% Critical Value	N/R	Shapiro Wilk method yields a more accurate result
Shapiro-Wilk Test Statisitic	0.408583	
Shapiro-Wilk 5% Critical Value	0.901	
5% Normality Test Result	NOT NORMAL	Data not normal at 5% significance level
95% Student's-t UCL	2.041734	
Gamma Statistics		
k hat	0.564316	
k star (bias corrected)	0.510301	
Theta hat	1.929164	
Theta star	2.133364	
nu hat	21.444	
nu star	19.39144	
5% Approximate Chi Square Value	10.40231	
Adjusted Level of Significance	0.03687	
Adjusted Chi Square Value	9.82913	
Anderson-Darling Test Statistic	0.853737	
Anderson-Darling 5% Critical Value	0.796621	
Anderson-Darling 5% Gamma Test Result	NOT AD GAMMA	Data not gamma distributed at 5% significance level
Kolmogrov-Smirnov Test Statistic	0.228202	
Kolmogrov-Smirnov 5% Critical Value	0.208987	
Kolmogrov-Smirnov 5% Gamma Test Result	NOT KS GAMMA	Data not gamma distributed at 5% significance level
5% Gamma Test Result	NOT GAMMA	Data not gamma distributed at 5% significance level
95% Approximate Gamma UCL	2.029418	
95% Adjusted Gamma UCL	2.147763	
Lognormal Statistics		
Minimum of log data	-3.81671	
Maximum of log data	2.379546	
Mean of log data	-1.02001	
Standard Deviation of log data	1.545585	
Variance of log data	2.388833	
Lilliefors Test Statisitic	N/R	Shapiro Wilk method yields a more accurate result
Lilliefors 5% Critical Value	N/R	Shapiro Wilk method yields a more accurate result
Shapiro-Wilk Test Statisitic	0.953288	
Shapiro-Wilk 5% Critical Value	0.901	
5% Lognormality Test Result	LOGNORMAL	Data are lognormal at 5% significance level
MLE Mean	1.190537	
MLE Standard Deviation	3.746083	
MLE Coefficient of Variation	3.146549	
MLE Skewness	40.5929	
MLE Median	0.360591	
MLE 80% Quantile	1.331102	
MLE 90% Quantile	2.627584	
MLE 95% Quantile	4.583558	
MLE 99% Quantile	13.13157	
MVU Estimate of Median	0.338553	
MVU Estimate of Mean	1.056523	
MVU Estimate of Standard Deviation	2.261745	

MVU Estimate of SE of Mean	0.446226	
95% H-UCL	4.242088	
95% Chebyshev (MVUE) UCL	3.001578	
97.5% Chebyshev (MVUE) UCL	3.843205	
99% Chebyshev (MVUE) UCL	5.496418	
Non-parametric Statisitics		
95% CLT UCL	1.992702	
95% Adjusted-CLT UCL	2.544835	
95% Modified-t UCL	2.127855	
95% Jackknife UCL	2.041734	
95% Chebyshev (Mean, Sd) UCL	3.484395	
97.5% Chebyshev (Mean, Sd) UCL	4.521033	
99% Chebyshev (Mean, Sd) UCL	6.557307	
Bootstrap Statistics		
Number of Bootstrap Runs	2000	
95% Standard Bootstrap UCL	1.98588	
95% Bootstrap-t UCL	4.841304	
95% Hall's Bootstrap UCL	5.558117	
95% Percentile Bootstrap UCL	2.111868	
95% BCA Bootstrap UCL	2.770053	
Recommendations		
Human Inspection Recommended?	NO	
Appropriate Distribution	LOGNORMAL	
1st Recommended UCL	5.496418	99% Chebyshev (MVUE) UCL
2nd Recommended UCL		
3rd Recommended UCL		
Recommended UCL > Max Data Value		
Recommendation Warning!	NONE	
Alternative UCL	NONE	

Data File		
Variable:	BENZO(a)PYRENE	
Raw Statistics		
Number of Observations	19	
Number of Missing Data	0	
Number of Valid Observations	19	
Number of Distinct Observations	17	
Minimum	0.041	
Maximum	10.8	
Mean	1.1945	
Standard Deviation	2.418322	
Variance	5.848279	
Coefficient of Variation	2.024547	
Skewness	3.852714	
Too Few Distinct Observations?	NO	
Normal Statistics		
Lilliefors Test Statisitic	N/R	Shapiro Wilk method yields a more accurate result
Lilliefors 5% Critical Value	N/R	Shapiro Wilk method yields a more accurate result
Shapiro-Wilk Test Statisitic	0.464858	
Shapiro-Wilk 5% Critical Value	0.901	
5% Normality Test Result	NOT NORMAL	Data not normal at 5% significance level
95% Student's-t UCL	2.15656	
Gamma Statistics		
k hat	0.578087	
k star (bias corrected)	0.521898	
Theta hat	2.066297	
Theta star	2.288761	
nu hat	21.96732	
nu star	19.83213	
5% Approximate Chi Square Value	10.726	
Adjusted Level of Significance	0.03687	
Adjusted Chi Square Value	10.14286	
Anderson-Darling Test Statistic	0.813779	
Anderson-Darling 5% Critical Value	0.795297	
Anderson-Darling 5% Gamma Test Result	NOT AD GAMMA	Data not gamma distributed at 5% significance level
Kolmogrov-Smirnov Test Statistic	0.201228	
Kolmogrov-Smirnov 5% Critical Value	0.208772	
Kolmogrov-Smirnov 5% Gamma Test Result	KS GAMMA	Data follow gamma distribution at 5% signifcance level
5% Gamma Test Result	APPROX GAMMA	Data follow approximate gamma distribution at 5% significance level
95% Approximate Gamma UCL	2.208604	
95% Adjusted Gamma UCL	2.335581	
Lognormal Statistics		
Minimum of log data	-3.19418	
Maximum of log data	2.379546	
Mean of log data	-0.89702	
Standard Deviation of log data	1.509897	
Variance of log data	2.279788	
Lilliefors Test Statisitic	N/R	Shapiro Wilk method yields a more accurate result
Lilliefors 5% Critical Value	N/R	Shapiro Wilk method yields a more accurate result
Shapiro-Wilk Test Statisitic	0.948432	
Shapiro-Wilk 5% Critical Value	0.901	
5% Lognormality Test Result	LOGNORMAL	Data are lognormal at 5% significance level
MLE Mean	1.27491	
MLE Standard Deviation	3.776534	
MLE Coefficient of Variation	2.962197	
MLE Skewness	34.8787	
MLE Median	0.407784	
MLE 80% Quantile	1.460596	
MLE 90% Quantile	2.838282	
MLE 95% Quantile	4.887895	
MLE 99% Quantile	13.66724	
MVU Estimate of Median	0.383969	
MVU Estimate of Mean	1.140086	
MVU Estimate of Standard Deviation	2.352632	

MVU Estimate of SE of Mean	0.468908	
95% H-UCL	4.318123	
95% Chebyshev (MVUE) UCL	3.18401	
97.5% Chebyshev (MVUE) UCL	4.068418	
99% Chebyshev (MVUE) UCL	5.805665	
Non-parametric Statisitics		
95% CLT UCL	2.107066	
95% Adjusted-CLT UCL	2.631038	
95% Modified-t UCL	2.238289	
95% Jackknife UCL	2.15656	
95% Chebyshev (Mean, Sd) UCL	3.612822	
97.5% Chebyshev (Mean, Sd) UCL	4.659231	
99% Chebyshev (Mean, Sd) UCL	6.7147	
Bootstrap Statistics		
Number of Bootstrap Runs	2000	
95% Standard Bootstrap UCL	2.079155	
95% Bootstrap-t UCL	4.532954	
95% Hall's Bootstrap UCL	5.860004	
95% Percentile Bootstrap UCL	2.253974	
95% BCA Bootstrap UCL	2.888105	
Recommendations		
Human Inspection Recommended?	NO	
Appropriate Distribution	GAMMA	
1st Recommended UCL	2.208604	95% Approximate Gamma UCL
2nd Recommended UCL		
3rd Recommended UCL		
Recommended UCL > Max Data Value		
Recommendation Warning!	NONE	
Alternative UCL	NONE	

Data File		
Variable:	BENZO(b)FLUORANTHENE	
Raw Statistics		
Number of Observations	19	
Number of Missing Data	0	
Number of Valid Observations	19	
Number of Distinct Observations	19	
Minimum	0.05	
Maximum	15.1	
Mean	1.587026	
Standard Deviation	3.401375	
Variance	11.56935	
Coefficient of Variation	2.143238	
Skewness	3.861649	
Too Few Distinct Observations?	NO	
Normal Statistics		
Lilliefors Test Statisitic	N/R	Shapiro Wilk method yields a more accurate result
Lilliefors 5% Critical Value	N/R	Shapiro Wilk method yields a more accurate result
Shapiro-Wilk Test Statisitic	0.458189	
Shapiro-Wilk 5% Critical Value	0.901	
5% Normality Test Result	NOT NORMAL	Data not normal at 5% significance level
95% Student's-t UCL	2.940166	
Gamma Statistics		
k hat	0.530379	
k star (bias corrected)	0.481722	
Theta hat	2.992251	
Theta star	3.294483	
nu hat	20.15439	
nu star	18.30545	
5% Approximate Chi Square Value	9.610582	
Adjusted Level of Significance	0.03687	
Adjusted Chi Square Value	9.062398	
Anderson-Darling Test Statistic	0.748282	
Anderson-Darling 5% Critical Value	0.799881	
Anderson-Darling 5% Gamma Test Result	AD GAMMA	Data follow gamma distribution at 5% signifcance level.
Kolmogrov-Smirnov Test Statistic	0.163586	
Kolmogrov-Smirnov 5% Critical Value	0.209516	
Kolmogrov-Smirnov 5% Gamma Test Result	KS GAMMA	Data follow gamma distribution at 5% signifcance level
5% Gamma Test Result	GAMMA	Data follow gamma distribution at 5% signifcance level
95% Approximate Gamma UCL	3.022838	
95% Adjusted Gamma UCL	3.20569	
Lognormal Statistics		
Minimum of log data	-2.99573	
Maximum of log data	2.714695	
Mean of log data	-0.72491	
Standard Deviation of log data	1.58513	
Variance of log data	2.512638	
Lilliefors Test Statisitic	N/R	Shapiro Wilk method yields a more accurate result
Lilliefors 5% Critical Value	N/R	Shapiro Wilk method yields a more accurate result
Shapiro-Wilk Test Statisitic	0.957828	
Shapiro-Wilk 5% Critical Value	0.901	
5% Lognormality Test Result	LOGNORMAL	Data are lognormal at 5% significance level
MLE Mean	1.701333	
MLE Standard Deviation	5.728577	
MLE Coefficient of Variation	3.367111	
MLE Skewness	48.27573	
MLE Median	0.48437	
MLE 80% Quantile	1.848784	
MLE 90% Quantile	3.71354	
MLE 95% Quantile	6.570779	
MLE 99% Quantile	19.33866	
MVU Estimate of Median	0.453278	
MVU Estimate of Mean	1.496428	
MVU Estimate of Standard Deviation	3.335163	

MVU Estimate of SE of Mean	0.650333	
95% H-UCL	6.421207	
95% Chebyshev (MVUE) UCL	4.331165	
97.5% Chebyshev (MVUE) UCL	5.557758	
99% Chebyshev (MVUE) UCL	7.967161	
Non-parametric Statisitics		
95% CLT UCL	2.870553	
95% Adjusted-CLT UCL	3.609229	
95% Modified-t UCL	3.055385	
95% Jackknife UCL	2.940166	
95% Chebyshev (Mean, Sd) UCL	4.988401	
97.5% Chebyshev (Mean, Sd) UCL	6.460179	
99% Chebyshev (Mean, Sd) UCL	9.351201	
Bootstrap Statistics		
Number of Bootstrap Runs	2000	
95% Standard Bootstrap UCL	2.832016	
95% Bootstrap-t UCL	6.848389	
95% Hall's Bootstrap UCL	7.643287	
95% Percentile Bootstrap UCL	3.028816	
95% BCA Bootstrap UCL	3.812684	
Recommendations		
Human Inspection Recommended?	NO	
Appropriate Distribution	GAMMA	
1st Recommended UCL	3.022838	95% Approximate Gamma UCL
2nd Recommended UCL		
3rd Recommended UCL		
Recommended UCL > Max Data Value		
Recommendation Warning!	NONE	
Alternative UCL	NONE	

Data File		
Variable:	DIBENZ(a,h)ANTHRACENE	
Raw Statistics		
Number of Observations	19	
Number of Missing Data	0	
Number of Valid Observations	19	
Number of Distinct Observations	16	
Minimum	0.02	
Maximum	1.04	
Mean	0.3575	
Standard Deviation	0.38755	
Variance	0.150195	
Coefficient of Variation	1.084056	
Skewness	0.861834	
Too Few Distinct Observations?	NO	
Normal Statistics		
Lilliefors Test Statisitic	N/R	Shapiro Wilk method yields a more accurate result
Lilliefors 5% Critical Value	N/R	Shapiro Wilk method yields a more accurate result
Shapiro-Wilk Test Statisitic	0.770526	
Shapiro-Wilk 5% Critical Value	0.901	
5% Normality Test Result	NOT NORMAL	Data not normal at 5% significance level
95% Student's-t UCL	0.511676	
Gamma Statistics		
k hat	0.798005	
k star (bias corrected)	0.707092	
Theta hat	0.447992	
Theta star	0.505592	
nu hat	30.3242	
nu star	26.8695	
5% Approximate Chi Square Value	16.0487	
Adjusted Level of Significance	0.03687	
Adjusted Chi Square Value	15.31911	
Anderson-Darling Test Statistic	0.956028	
Anderson-Darling 5% Critical Value	0.776946	
Anderson-Darling 5% Gamma Test Result	NOT AD GAMMA	Data not gamma distributed at 5% significance level
Kolmogrov-Smirnov Test Statistic	0.211147	
Kolmogrov-Smirnov 5% Critical Value	0.20575	
Kolmogrov-Smirnov 5% Gamma Test Result	NOT KS GAMMA	Data not gamma distributed at 5% significance level
5% Gamma Test Result	NOT GAMMA	Data not gamma distributed at 5% significance level
95% Approximate Gamma UCL	0.598544	
95% Adjusted Gamma UCL	0.62705	
Lognormal Statistics		
Minimum of log data	-3.91202	
Maximum of log data	0.039221	
Mean of log data	-1.77258	
Standard Deviation of log data	1.349625	
Variance of log data	1.821487	
Lilliefors Test Statisitic	N/R	Shapiro Wilk method yields a more accurate result
Lilliefors 5% Critical Value	N/R	Shapiro Wilk method yields a more accurate result
Shapiro-Wilk Test Statisitic	0.89943	
Shapiro-Wilk 5% Critical Value	0.901	
5% Lognormality Test Result	NOT LOGNORMAL	Data not lognormal at 5% significance level
MLE Mean	0.422384	
MLE Standard Deviation	0.961426	
MLE Coefficient of Variation	2.27619	
MLE Skewness	18.62161	
MLE Median	0.169893	
MLE 80% Quantile	0.531447	
MLE 90% Quantile	0.962408	
MLE 95% Quantile	1.564472	
MLE 99% Quantile	3.922162	
MVU Estimate of Median	0.161923	
MVU Estimate of Mean	0.389237	
MVU Estimate of Standard Deviation	0.677818	

MVU Estimate of SE of Mean	0.14075	
95% H-UCL	1.154985	
95% Chebyshev (MVUE) UCL	1.002754	
97.5% Chebyshev (MVUE) UCL	1.268223	
99% Chebyshev (MVUE) UCL	1.789686	
Non-parametric Statisitics		
95% CLT UCL	0.503744	
95% Adjusted-CLT UCL	0.522528	
95% Modified-t UCL	0.514606	
95% Jackknife UCL	0.511676	
95% Chebyshev (Mean, Sd) UCL	0.74505	
97.5% Chebyshev (Mean, Sd) UCL	0.912743	
99% Chebyshev (Mean, Sd) UCL	1.242144	
Bootstrap Statistics		
Number of Bootstrap Runs	2000	
95% Standard Bootstrap UCL	0.502175	
95% Bootstrap-t UCL	0.536788	
95% Hall's Bootstrap UCL	0.50005	
95% Percentile Bootstrap UCL	0.500289	
95% BCA Bootstrap UCL	0.512132	
Recommendations		
Human Inspection Recommended?	YES	
Appropriate Distribution	NON-PARAMETRIC	
1st Recommended UCL	1.242144	99% Chebyshev (Mean, Sd) UCL
2nd Recommended UCL		
3rd Recommended UCL		
Recommended UCL > Max Data Value	YES	Recommended UCL exceeds the maximum data value
Recommendation Warning!	NONE	
Alternative UCL	YES	Cosider using 95% or 97.5% Chebyshev (Mean, Sd) UCL

Data File		
Variable:	INDENO(1,2,3-c,d)PYRENE	
Raw Statistics		
Number of Observations	19	
Number of Missing Data	0	
Number of Valid Observations	19	
Number of Distinct Observations	16	
Minimum	0.039	
Maximum	4.81	
Mean	0.783553	
Standard Deviation	1.206034	
Variance	1.454517	
Coefficient of Variation	1.539186	
Skewness	2.579153	
Too Few Distinct Observations?	NO	
Normal Statistics		
Lilliefors Test Statisitic	N/R	Shapiro Wilk method yields a more accurate result
Lilliefors 5% Critical Value	N/R	Shapiro Wilk method yields a more accurate result
Shapiro-Wilk Test Statisitic	0.6318	
Shapiro-Wilk 5% Critical Value	0.901	
5% Normality Test Result	NOT NORMAL	Data not normal at 5% significance level
95% Student's-t UCL	1.263339	
Gamma Statistics		
k hat	0.634979	
k star (bias corrected)	0.569807	
Theta hat	1.233982	
Theta star	1.37512	
nu hat	24.12919	
nu star	21.65265	
5% Approximate Chi Square Value	12.07666	
Adjusted Level of Significance	0.03687	
Adjusted Chi Square Value	11.45351	
Anderson-Darling Test Statistic	1.021946	
Anderson-Darling 5% Critical Value	0.789831	
Anderson-Darling 5% Gamma Test Result	NOT AD GAMMA	Data not gamma distributed at 5% significance level
Kolmogrov-Smirnov Test Statistic	0.236669	
Kolmogrov-Smirnov 5% Critical Value	0.207884	
Kolmogrov-Smirnov 5% Gamma Test Result	NOT KS GAMMA	Data not gamma distributed at 5% significance level
5% Gamma Test Result	NOT GAMMA	Data not gamma distributed at 5% significance level
95% Approximate Gamma UCL	1.404858	
95% Adjusted Gamma UCL	1.481293	
Lognormal Statistics		
Minimum of log data	-3.24419	
Maximum of log data	1.570697	
Mean of log data	-1.20896	
Standard Deviation of log data	1.462633	
Variance of log data	2.139295	
Lilliefors Test Statisitic	N/R	Shapiro Wilk method yields a more accurate result
Lilliefors 5% Critical Value	N/R	Shapiro Wilk method yields a more accurate result
Shapiro-Wilk Test Statisitic	0.909391	
Shapiro-Wilk 5% Critical Value	0.901	
5% Lognormality Test Result	LOGNORMAL	Data are lognormal at 5% significance level
MLE Mean	0.869958	
MLE Standard Deviation	2.381439	
MLE Coefficient of Variation	2.737417	
MLE Skewness	28.72495	
MLE Median	0.298508	
MLE 80% Quantile	1.027334	
MLE 90% Quantile	1.955265	
MLE 95% Quantile	3.310416	
MLE 99% Quantile	8.963196	
MVU Estimate of Median	0.282122	
MVU Estimate of Mean	0.785444	

MVU Estimate of Standard Deviation	1.542996	
MVU Estimate of SE of Mean	0.311531	
95% H-UCL	2.759501	
95% Chebyshev (MVUE) UCL	2.143374	
97.5% Chebyshev (MVUE) UCL	2.730951	
99% Chebyshev (MVUE) UCL	3.885133	
Non-parametric Statisitics		
95% CLT UCL	1.238656	
95% Adjusted-CLT UCL	1.413585	
95% Modified-t UCL	1.290624	
95% Jackknife UCL	1.263339	
95% Chebyshev (Mean, Sd) UCL	1.989586	
97.5% Chebyshev (Mean, Sd) UCL	2.511438	
99% Chebyshev (Mean, Sd) UCL	3.536514	
Bootstrap Statistics		
Number of Bootstrap Runs	2000	
95% Standard Bootstrap UCL	1.228542	
95% Bootstrap-t UCL	1.94945	
95% Hall's Bootstrap UCL	3.56097	
95% Percentile Bootstrap UCL	1.262684	
95% BCA Bootstrap UCL	1.509421	
Recommendations		
Human Inspection Recommended?	NO	
Appropriate Distribution	LOGNORMAL	
1st Recommended UCL	2.143374	95% Chebyshev (MVUE) UCL
2nd Recommended UCL		
3rd Recommended UCL		
Recommended UCL > Max Data Value		
Recommendation Warning!	NONE	
Alternative UCL	NONE	

Data File		
Variable:	Iron	
Raw Statistics		
Number of Observations	7	
Number of Missing Data	0	
Number of Valid Observations	7	
Number of Distinct Observations	7	
Minimum	12700	
Maximum	200000	
Mean	47342.85714	
Standard Deviation	68399.87469	
Variance	4678542857	
Coefficient of Variation	1.444777075	
Skewness	2.485333848	
Too Few Distinct Observations?	NO	
Normal Statistics		
Lilliefors Test Statisitic	N/R	Shapiro Wilk method yields a more accurate result
Lilliefors 5% Critical Value	N/R	Shapiro Wilk method yields a more accurate result
Shapiro-Wilk Test Statisitic	0.579660757	
Shapiro-Wilk 5% Critical Value	0.803	
5% Normality Test Result	NOT NORMAL	Data not normal at 5% significance level
95% Student's-t UCL	97579.33998	
Gamma Statistics		
k hat	1.044128683	
k star (bias corrected)	0.691883057	
Theta hat	45341.9755	
Theta star	68426.09698	
nu hat	14.61780156	
nu star	9.686362795	
5% Approximate Chi Square Value	3.745881316	
Adjusted Level of Significance	0.01584	
Adjusted Chi Square Value	2.71853388	
Anderson-Darling Test Statistic	1.055489318	
Anderson-Darling 5% Critical Value	0.726947509	
Anderson-Darling 5% Gamma Test	NOT AD GAMMA	Data not gamma distributed at 5% significance level
Kolmogrov-Smirnov Test Statistic	0.363229219	
Kolmogrov-Smirnov 5% Critical Va	0.319371413	
Kolmogrov-Smirnov 5% Gamma Te	NOT KS GAMMA	Data not gamma distributed at 5% significance level
5% Gamma Test Result	NOT GAMMA	Data not gamma distributed at 5% significance level
95% Approximate Gamma UCL	122422.4825	
95% Adjusted Gamma UCL	168686.5459	
Lognormal Statistics		
Minimum of log data	9.449357272	
Maximum of log data	12.20607265	
Mean of log data	10.21511003	
Standard Deviation of log data	0.979149393	
Variance of log data	0.958733535	
Lilliefors Test Statisitic	N/R	Shapiro Wilk method yields a more accurate result
Lilliefors 5% Critical Value	N/R	Shapiro Wilk method yields a more accurate result
Shapiro-Wilk Test Statisitic	0.77496665	
Shapiro-Wilk 5% Critical Value	0.803	
5% Lognormality Test Result	NOT LOGNORMAL	Data not lognormal at 5% significance level
MLE Mean	44111.54392	
MLE Standard Deviation	55943.29832	
MLE Coefficient of Variation	1.268223539	
MLE Skewness	5.84446987	
MLE Median	27312.78063	
MLE 80% Quantile	62473.09507	

MLE 90% Quantile	96116.56929	
MLE 95% Quantile	136736.4704	
MLE 99% Quantile	266361.9869	
MVU Estimate of Median	25489.75544	
MVU Estimate of Mean	40414.0523	
MVU Estimate of Standard Deviatic	40342.05189	
MVU Estimate of SE of Mean	15021.8745	
95% H-UCL	188924.2447	
95% Chebyshev (MVUE) UCL	105892.8852	
97.5% Chebyshev (MVUE) UCL	134225.6285	
99% Chebyshev (MVUE) UCL	189879.8164	
Non-parametric Statisitics		
95% CLT UCL	89866.80169	
95% Adjusted-CLT UCL	115815.9086	
95% Modified-t UCL	101626.8763	
95% Jackknife UCL	97579.33998	
95% Chebyshev (Mean, Sd) UCL	160032.2623	
97.5% Chebyshev (Mean, Sd) UCL	208793.058	
99% Chebyshev (Mean, Sd) UCL	304574.1991	
Bootstrap Statistics		
Number of Bootstrap Runs	2000	
95% Standard Bootstrap UCL	86807.37658	
95% Bootstrap-t UCL	826448.3848	
95% Hall's Bootstrap UCL	369276.851	
95% Percentile Bootstrap UCL	94714.28571	
95% BCA Bootstrap UCL	120600	
Recommendations		
Human Inspection Recommended?	YES	
Appropriate Distribution	NON-PARAMETRIC	
1st Recommended UCL	160032.2623	95% Chebyshev (Mean, Sd) UCL
2nd Recommended UCL		
3rd Recommended UCL		
Recommended UCL > Max Data V	YES	Recommended UCL exceeds the maximum data value
Recommendation Warning!	NONE	
Alternative UCL	NONE	

Data File		
Variable:	BENZO(a)PYRENE	
Raw Statistics		
Number of Observations	7	
Number of Missing Data	0	
Number of Valid Observations	7	
Number of Distinct Observations	5	
Minimum	0.0425	
Maximum	0.65	
Mean	0.189285714	
Standard Deviation	0.213154454	
Variance	0.045434821	
Coefficient of Variation	1.126099004	
Skewness	2.169902887	
Too Few Distinct Observations?	NO	
Normal Statistics		
Lilliefors Test Statisitic	N/R	Shapiro Wilk method yields a more accurate result
Lilliefors 5% Critical Value	N/R	Shapiro Wilk method yields a more accurate result
Shapiro-Wilk Test Statisitic	0.71749549	
Shapiro-Wilk 5% Critical Value	0.803	
5% Normality Test Result	NOT NORMAL	Data not normal at 5% significance level
95% Student's-t UCL	0.345837611	
Gamma Statistics		
k hat	1.313387144	
k star (bias corrected)	0.845745034	
Theta hat	0.144120274	
Theta star	0.22380943	
nu hat	18.38742001	
nu star	11.84043048	
5% Approximate Chi Square Value	5.121119942	
Adjusted Level of Significance	0.01584	
Adjusted Chi Square Value	3.871334241	
Anderson-Darling Test Statistic	0.422549821	
Anderson-Darling 5% Critical Value	0.723576393	
Anderson-Darling 5% Gamma Test	AD GAMMA	Data follow gamma distribution at 5% signifcance level.
Kolmogrov-Smirnov Test Statistic	0.210178527	
Kolmogrov-Smirnov 5% Critical Va	0.317976655	
Kolmogrov-Smirnov 5% Gamma Te	KS GAMMA	Data follow gamma distribution at 5% signifcance level
5% Gamma Test Result	GAMMA	Data follow gamma distribution at 5% signifcance level
95% Approximate Gamma UCL	0.4376434	
95% Adjusted Gamma UCL	0.578928143	
Lognormal Statistics		
Minimum of log data	-3.158251203	
Maximum of log data	-0.430782916	
Mean of log data	-2.091220012	
Standard Deviation of log data	0.962503449	
Variance of log data	0.92641289	
Lilliefors Test Statisitic	N/R	Shapiro Wilk method yields a more accurate result
Lilliefors 5% Critical Value	N/R	Shapiro Wilk method yields a more accurate result
Shapiro-Wilk Test Statisitic	0.929245808	
Shapiro-Wilk 5% Critical Value	0.803	
5% Lognormality Test Result	LOGNORMAL	Data are lognormal at 5% significance level
MLE Mean	0.196319162	
MLE Standard Deviation	0.242470768	
MLE Coefficient of Variation	1.235084573	
MLE Skewness	5.589293596	
MLE Median	0.123536328	
MLE 80% Quantile	0.278620511	
MLE 90% Quantile	0.425537127	

MLE 95% Quantile	0.601756839	
MLE 99% Quantile	1.159006313	
MVU Estimate of Median	0.115561828	
MVU Estimate of Mean	0.180496795	
MVU Estimate of Standard Deviatic	0.177025167	
MVU Estimate of SE of Mean	0.065973443	
95% H-UCL	0.805349545	
95% Chebyshev (MVUE) UCL	0.468068364	
97.5% Chebyshev (MVUE) UCL	0.592500812	
99% Chebyshev (MVUE) UCL	0.83692426	
Non-parametric Statisitics		
95% CLT UCL	0.321803036	
95% Adjusted-CLT UCL	0.392405049	
95% Modified-t UCL	0.356850098	
95% Jackknife UCL	0.345837611	
95% Chebyshev (Mean, Sd) UCL	0.540459584	
97.5% Chebyshev (Mean, Sd) UCL	0.692412798	
99% Chebyshev (Mean, Sd) UCL	0.990895463	
Bootstrap Statistics		
Number of Bootstrap Runs	2000	
95% Standard Bootstrap UCL	0.311429918	
95% Bootstrap-t UCL	0.621664838	
95% Hall's Bootstrap UCL	0.862585122	
95% Percentile Bootstrap UCL	0.336428571	
95% BCA Bootstrap UCL	0.364642857	
Recommendations		
Human Inspection Recommended?	NO	
Appropriate Distribution	GAMMA	
1st Recommended UCL	0.4376434	95% Approximate Gamma UCL
2nd Recommended UCL		
3rd Recommended UCL		
Recommended UCL > Max Data Value		
Recommendation Warning!	NONE	
Alternative UCL	NONE	

Data File		
Variable:	BENZO(a)ANTHRACENE	
Raw Statistics		
Number of Observations	5	
Number of Missing Data	0	
Number of Valid Observations	5	
Number of Distinct Observations	5	
Minimum	0.034	
Maximum	3	
Mean	0.6492	
Standard Deviation	1.31458328	
Variance	1.7281292	
Coefficient of Variation	2.02492803	
Skewness	2.23230652	
Too Few Distinct Observations?	NO	
Normal Statistics		
Lilliefors Test Statisitic	N/R	Shapiro Wilk method yields a more accurate result
Lilliefors 5% Critical Value	N/R	Shapiro Wilk method yields a more accurate result
Shapiro-Wilk Test Statisitic	0.57290269	
Shapiro-Wilk 5% Critical Value	0.762	
5% Normality Test Result	NOT NORMAL	Data not normal at 5% significance level
95% Student's-t UCL	1.90251119	
Gamma Statistics		
k hat	0.39247916	
k star (bias corrected)	0.290325	
Theta hat	1.65410057	
Theta star	2.23611473	
nu hat	3.92479158	
nu star	2.90324997	
5% Approximate Chi Square Value	0.34417972	
Adjusted Level of Significance	0.0086	
Adjusted Chi Square Value	0.1285184	
Anderson-Darling Test Statistic	0.92882593	
Anderson-Darling 5% Critical Value	0.72612044	
Anderson-Darling 5% Gamma Test Result	NOT AD GAMMA	Data not gamma distributed at 5% significance level
Kolmogrov-Smirnov Test Statistic	0.40575459	
Kolmogrov-Smirnov 5% Critical Value	0.37607674	
Kolmogrov-Smirnov 5% Gamma Test Result	NOT KS GAMMA	Data not gamma distributed at 5% significance level
5% Gamma Test Result	NOT GAMMA	Data not gamma distributed at 5% significance level
95% Approximate Gamma UCL	5.47617937	
95% Adjusted Gamma UCL	14.6655259	
Lognormal Statistics		
Minimum of log data	-3.3813948	
Maximum of log data	1.09861229	
Mean of log data	-2.1137728	
Standard Deviation of log data	1.85876134	
Variance of log data	3.45499372	
Lilliefors Test Statisitic	N/R	Shapiro Wilk method yields a more accurate result
Lilliefors 5% Critical Value	N/R	Shapiro Wilk method yields a more accurate result
Shapiro-Wilk Test Statisitic	0.75525804	
Shapiro-Wilk 5% Critical Value	0.762	
5% Lognormality Test Result	NOT LOGNORMAL	Data not lognormal at 5% significance level
MLE Mean	0.67958298	
MLE Standard Deviation	3.76283385	
MLE Coefficient of Variation	5.53697479	
MLE Skewness	186.363995	
MLE Median	0.12078142	
MLE 80% Quantile	0.58093323	
MLE 90% Quantile	1.31618255	
MLE 95% Quantile	2.56995816	
MLE 99% Quantile	9.11303759	

MVU Estimate of Median	0.08359001	
MVU Estimate of Mean	0.38499528	
MVU Estimate of Standard Deviation	0.64705898	
MVU Estimate of SE of Mean	0.27120126	
95% H-UCL	2298.54153	
95% Chebyshev (MVUE) UCL	1.56713417	
97.5% Chebyshev (MVUE) UCL	2.07864661	
99% Chebyshev (MVUE) UCL	3.08341376	
Non-parametric Statisitics		
95% CLT UCL	1.61620865	
95% Adjusted-CLT UCL	2.24333109	
95% Modified-t UCL	2.00032962	
95% Jackknife UCL	1.90251119	
95% Chebyshev (Mean, Sd) UCL	3.21179458	
97.5% Chebyshev (Mean, Sd) UCL	4.3206313	
99% Chebyshev (Mean, Sd) UCL	6.49872632	
Bootstrap Statistics		
Number of Bootstrap Runs	2000	
95% Standard Bootstrap UCL	1.51659997	
95% Bootstrap-t UCL	112.791033	
95% Hall's Bootstrap UCL	44.3502667	
95% Percentile Bootstrap UCL	1.8152	
95% BCA Bootstrap UCL	1.834	
Recommendations		
Human Inspection Recommended?	YES	
Appropriate Distribution	NON-PARAMETRIC	
1st Recommended UCL	6.49872632	99% Chebyshev (Mean, Sd) UCL
2nd Recommended UCL		
3rd Recommended UCL		
Recommended UCL > Max Data Value	YES	Recommended UCL exceeds the maximum data value
Recommendation Warning!	NONE	
Alternative UCL	YES	Cosider using 95% or 97.5% Chebyshev (Mean, Sd) UCL

Data File		
Variable:	BENZO(a)PYRENE	
Raw Statistics		
Number of Observations	5	
Number of Missing Data	0	
Number of Valid Observations	5	
Number of Distinct Observations	5	
Minimum	0.043	
Maximum	2.7	
Mean	0.5982	
Standard Deviation	1.17542512	
Variance	1.3816242	
Coefficient of Variation	1.96493667	
Skewness	2.23151424	
Too Few Distinct Observations?	NO	
Normal Statistics		
Lilliefors Test Statisitic	N/R	Shapiro Wilk method yields a more accurate result
Lilliefors 5% Critical Value	N/R	Shapiro Wilk method yields a more accurate result
Shapiro-Wilk Test Statisitic	0.57538414	
Shapiro-Wilk 5% Critical Value	0.762	
5% Normality Test Result	NOT NORMAL	Data not normal at 5% significance level
95% Student's-t UCL	1.71883912	
Gamma Statistics		
k hat	0.44413239	
k star (bias corrected)	0.31098629	
Theta hat	1.34689568	
Theta star	1.92355746	
nu hat	4.44132393	
nu star	3.10986291	
5% Approximate Chi Square Value	0.40550764	
Adjusted Level of Significance	0.0086	
Adjusted Chi Square Value	0.15203528	
Anderson-Darling Test Statistic	0.95294123	
Anderson-Darling 5% Critical Value	0.71883733	
Anderson-Darling 5% Gamma Test Result	NOT AD GAMMA	Data not gamma distributed at 5% significance level
Kolmogrov-Smirnov Test Statistic	0.41183902	
Kolmogrov-Smirnov 5% Critical Value	0.37393571	
Kolmogrov-Smirnov 5% Gamma Test Result	NOT KS GAMMA	Data not gamma distributed at 5% significance level
5% Gamma Test Result	NOT GAMMA	Data not gamma distributed at 5% significance level
95% Approximate Gamma UCL	4.58763244	
95% Adjusted Gamma UCL	12.2361069	
Lognormal Statistics		
Minimum of log data	-3.1465552	
Maximum of log data	0.99325177	
Mean of log data	-1.9708494	
Standard Deviation of log data	1.70668457	
Variance of log data	2.91277223	
Lilliefors Test Statisitic	N/R	Shapiro Wilk method yields a more accurate result
Lilliefors 5% Critical Value	N/R	Shapiro Wilk method yields a more accurate result
Shapiro-Wilk Test Statisitic	0.74493551	
Shapiro-Wilk 5% Critical Value	0.762	
5% Lognormality Test Result	NOT LOGNORMAL	Data not lognormal at 5% significance level
MLE Mean	0.59782134	
MLE Standard Deviation	2.49426644	
MLE Coefficient of Variation	4.1722606	
MLE Skewness	85.1464867	
MLE Median	0.13933845	
MLE 80% Quantile	0.58937008	
MLE 90% Quantile	1.24887137	
MLE 95% Quantile	2.30861247	
MLE 99% Quantile	7.38092432	

MVU Estimate of Median	0.1025071	
MVU Estimate of Mean	0.37851954	
MVU Estimate of Standard Deviation	0.59203737	
MVU Estimate of SE of Mean	0.2515399	
95% H-UCL	577.013701	
95% Chebyshev (MVUE) UCL	1.47495655	
97.5% Chebyshev (MVUE) UCL	1.94938572	
99% Chebyshev (MVUE) UCL	2.88130996	
Non-parametric Statisitics		
95% CLT UCL	1.46284378	
95% Adjusted-CLT UCL	2.02338175	
95% Modified-t UCL	1.80627172	
95% Jackknife UCL	1.71883912	
95% Chebyshev (Mean, Sd) UCL	2.88952537	
97.5% Chebyshev (Mean, Sd) UCL	3.88098369	
99% Chebyshev (Mean, Sd) UCL	5.82851157	
Bootstrap Statistics		
Number of Bootstrap Runs	2000	
95% Standard Bootstrap UCL	1.37944434	
95% Bootstrap-t UCL	78.7420448	
95% Hall's Bootstrap UCL	34.5128161	
95% Percentile Bootstrap UCL	1.6402	
95% BCA Bootstrap UCL	1.658	
Recommendations		
Human Inspection Recommended?	YES	
Appropriate Distribution	NON-PARAMETRIC	
1st Recommended UCL	5.82851157	99% Chebyshev (Mean, Sd) UCL
2nd Recommended UCL		
3rd Recommended UCL		
Recommended UCL > Max Data Value	YES	Recommended UCL exceeds the maximum data value
Recommendation Warning!	NONE	
Alternative UCL	YES	Cosider using 95% or 97.5% Chebyshev (Mean, Sd) UCL

Data File		
Variable:	BENZO(b)FLUORANTHENE	
Raw Statistics		
Number of Observations	5	
Number of Missing Data	0	
Number of Valid Observations	5	
Number of Distinct Observations	5	
Minimum	0.055	
Maximum	4.4	
Mean	0.9692	
Standard Deviation	1.91877714	
Variance	3.6817057	
Coefficient of Variation	1.97975355	
Skewness	2.23086172	
Too Few Distinct Observations?	NO	
Normal Statistics		
Lilliefors Test Statisitic	N/R	Shapiro Wilk method yields a more accurate result
Lilliefors 5% Critical Value	N/R	Shapiro Wilk method yields a more accurate result
Shapiro-Wilk Test Statisitic	0.5781183	
Shapiro-Wilk 5% Critical Value	0.762	
5% Normality Test Result	NOT NORMAL	Data not normal at 5% significance level
95% Student's-t UCL	2.79854387	
Gamma Statistics		
k hat	0.42668463	
k star (bias corrected)	0.30400719	
Theta hat	2.27146686	
Theta star	3.18808253	
nu hat	4.26684632	
nu star	3.04007186	
5% Approximate Chi Square Value	0.38420833	
Adjusted Level of Significance	0.0086	
Adjusted Chi Square Value	0.1436456	
Anderson-Darling Test Statistic	0.88652369	
Anderson-Darling 5% Critical Value	0.72129747	
Anderson-Darling 5% Gamma Test Result	NOT AD GAMMA	Data not gamma distributed at 5% significance level
Kolmogrov-Smirnov Test Statistic	0.40242108	
Kolmogrov-Smirnov 5% Critical Value	0.37465892	
Kolmogrov-Smirnov 5% Gamma Test Result	NOT KS GAMMA	Data not gamma distributed at 5% significance level
5% Gamma Test Result	NOT GAMMA	Data not gamma distributed at 5% significance level
95% Approximate Gamma UCL	7.66885414	
95% Adjusted Gamma UCL	20.511855	
Lognormal Statistics		
Minimum of log data	-2.9004221	
Maximum of log data	1.48160454	
Mean of log data	-1.5575953	
Standard Deviation of log data	1.76642301	
Variance of log data	3.12025026	
Lilliefors Test Statisitic	N/R	Shapiro Wilk method yields a more accurate result
Lilliefors 5% Critical Value	N/R	Shapiro Wilk method yields a more accurate result
Shapiro-Wilk Test Statisitic	0.78521602	
Shapiro-Wilk 5% Critical Value	0.762	
5% Lognormality Test Result	LOGNORMAL	Data are lognormal at 5% significance level
MLE Mean	1.00253305	
MLE Standard Deviation	4.66496283	
MLE Coefficient of Variation	4.6531761	
MLE Skewness	114.71032	
MLE Median	0.210642	
MLE 80% Quantile	0.9370976	
MLE 90% Quantile	2.03858979	
MLE 95% Quantile	3.8503751	
MLE 99% Quantile	12.8212589	

MVU Estimate of Median	0.15140779	
MVU Estimate of Mean	0.60876314	
MVU Estimate of Standard Deviation	0.98032957	
MVU Estimate of SE of Mean	0.41436686	
95% H-UCL	1563.6901	
95% Chebyshev (MVUE) UCL	2.41494641	
97.5% Chebyshev (MVUE) UCL	3.19648335	
99% Chebyshev (MVUE) UCL	4.73166134	
Non-parametric Statisitics		
95% CLT UCL	2.3806542	
95% Adjusted-CLT UCL	3.2954151	
95% Modified-t UCL	2.94122808	
95% Jackknife UCL	2.79854387	
95% Chebyshev (Mean, Sd) UCL	4.70958523	
97.5% Chebyshev (Mean, Sd) UCL	6.32805291	
99% Chebyshev (Mean, Sd) UCL	9.50721926	
Bootstrap Statistics		
Number of Bootstrap Runs	2000	
95% Standard Bootstrap UCL	2.20906014	
95% Bootstrap-t UCL	91.3529174	
95% Hall's Bootstrap UCL	39.480465	
95% Percentile Bootstrap UCL	2.6702	
95% BCA Bootstrap UCL	2.7012	
Recommendations		
Human Inspection Recommended?	YES	
Appropriate Distribution	LOGNORMAL	
1st Recommended UCL	4.73166134	99% Chebyshev (MVUE) UCL
2nd Recommended UCL		
3rd Recommended UCL		
Recommended UCL > Max Data Value	YES	Recommended UCL exceeds the maximum data value
Recommendation Warning!	NONE	
Alternative UCL	NONE	

Data File		
Variable:	Dibenzo(a,h)anthracene	
Raw Statistics		
Number of Observations	5	
Number of Missing Data	0	
Number of Valid Observations	5	
Number of Distinct Observations	5	
Minimum	0.031	
Maximum	0.33	
Mean	0.1327	
Standard Deviation	0.11439602	
Variance	0.01308645	
Coefficient of Variation	0.86206498	
Skewness	1.81710184	
Too Few Distinct Observations?	NO	
Normal Statistics		
Lilliefors Test Statisitic	N/R	Shapiro Wilk method yields a more accurate result
Lilliefors 5% Critical Value	N/R	Shapiro Wilk method yields a more accurate result
Shapiro-Wilk Test Statisitic	0.76816738	
Shapiro-Wilk 5% Critical Value	0.762	
5% Normality Test Result	NORMAL	Data are normal at 5% significance level
95% Student's-t UCL	0.24176408	
Gamma Statistics		
k hat	1.97739866	
k star (bias corrected)	0.9242928	
Theta hat	0.06710837	
Theta star	0.14356922	
nu hat	19.7739866	
nu star	9.24292798	
5% Approximate Chi Square Value	3.47356825	
Adjusted Level of Significance	0.0086	
Adjusted Chi Square Value	2.11736768	
Anderson-Darling Test Statistic	0.49722574	
Anderson-Darling 5% Critical Value	0.68453769	
Anderson-Darling 5% Gamma Test Result	AD GAMMA	Data follow gamma distribution at 5% signifcance level.
Kolmogrov-Smirnov Test Statistic	0.32932539	
Kolmogrov-Smirnov 5% Critical Value	0.36052424	
Kolmogrov-Smirnov 5% Gamma Test Result	KS GAMMA	Data follow gamma distribution at 5% signifcance level
5% Gamma Test Result	GAMMA	Data follow gamma distribution at 5% signifcance level
95% Approximate Gamma UCL	0.35310564	
95% Adjusted Gamma UCL	0.57927424	
Lognormal Statistics		
Minimum of log data	-3.4737681	
Maximum of log data	-1.1086626	
Mean of log data	-2.2933427	
Standard Deviation of log data	0.83661742	
Variance of log data	0.6999287	
Lilliefors Test Statisitic	N/R	Shapiro Wilk method yields a more accurate result
Lilliefors 5% Critical Value	N/R	Shapiro Wilk method yields a more accurate result
Shapiro-Wilk Test Statisitic	0.9026797	
Shapiro-Wilk 5% Critical Value	0.762	
5% Lognormality Test Result	LOGNORMAL	Data are lognormal at 5% significance level
MLE Mean	0.14321928	
MLE Standard Deviation	0.14419054	
MLE Coefficient of Variation	1.00678157	
MLE Skewness	4.04082771	
MLE Median	0.10092852	
MLE 80% Quantile	0.20466086	
MLE 90% Quantile	0.29573564	
MLE 95% Quantile	0.3996736	
MLE 99% Quantile	0.70654342	

MVU Estimate of Median	0.09402715	
MVU Estimate of Mean	0.13194925	
MVU Estimate of Standard Deviation	0.10787323	
MVU Estimate of SE of Mean	0.04799523	
95% H-UCL	0.83421445	
95% Chebyshev (MVUE) UCL	0.34115563	
97.5% Chebyshev (MVUE) UCL	0.43167939	
99% Chebyshev (MVUE) UCL	0.6094958	
Non-parametric Statisitics		
95% CLT UCL	0.21684982	
95% Adjusted-CLT UCL	0.26127207	
95% Modified-t UCL	0.24869305	
95% Jackknife UCL	0.24176408	
95% Chebyshev (Mean, Sd) UCL	0.3556989	
97.5% Chebyshev (Mean, Sd) UCL	0.4521907	
99% Chebyshev (Mean, Sd) UCL	0.64173017	
Bootstrap Statistics		
Number of Bootstrap Runs	2000	
95% Standard Bootstrap UCL	0.20904274	
95% Bootstrap-t UCL	1.29785724	
95% Hall's Bootstrap UCL	1.12238771	
95% Percentile Bootstrap UCL	0.2242	
95% BCA Bootstrap UCL	0.2385	
Recommendations		
Human Inspection Recommended?	NO	
Appropriate Distribution	NORMAL	
1st Recommended UCL	0.24176408	95% Student's-t UCL
2nd Recommended UCL		
3rd Recommended UCL		
Recommended UCL > Max Data Value		
Recommendation Warning!	NONE	
Alternative UCL	NONE	

Data File		
Variable:	Lead	
Raw Statistics		
Number of Observations	4	
Number of Missing Data	0	
Number of Valid Observations	4	
Number of Distinct Observations	4	
Minimum	38.7	
Maximum	967	
Mean	320.175	
Standard Deviation	433.734007	
Variance	188125.189	
Coefficient of Variation	1.35467793	
Skewness	1.92912646	
Too Few Distinct Observations?	NO	
Normal Statistics		
Lilliefors Test Statisitic	N/R	Shapiro Wilk method yields a more accurate result
Lilliefors 5% Critical Value	N/R	Shapiro Wilk method yields a more accurate result
Shapiro-Wilk Test Statisitic	0.72372185	
Shapiro-Wilk 5% Critical Value	0.748	
5% Normality Test Result	NOT NORMAL	Data not normal at 5% significance level
95% Student's-t UCL	830.541839	
Gamma Statistics		
k hat	0.8701361	
k star (bias corrected)	0.38420069	
Theta hat	367.959678	
Theta star	833.353522	
nu hat	6.96108882	
nu star	3.07360554	
5% Approximate Chi Square Value	0.39437014	
Adjusted Level of Significance	N/A	
Adjusted Chi Square Value	N/A	
Anderson-Darling Test Statistic	0.46007079	
Anderson-Darling 5% Critical Value	0.66852679	
Anderson-Darling 5% Gamma Test Result	AD GAMMA	Data follow gamma distribution at 5% signifcance level.
Kolmogrov-Smirnov Test Statistic	0.3660716	
Kolmogrov-Smirnov 5% Critical Value	0.40376942	
Kolmogrov-Smirnov 5% Gamma Test Result	KS GAMMA	Data follow gamma distribution at 5% signifcance level
5% Gamma Test Result	GAMMA	Data follow gamma distribution at 5% signifcance level
95% Approximate Gamma UCL	2495.35029	
95% Adjusted Gamma UCL	N/A	
Lognormal Statistics		
Minimum of log data	3.6558396	
Maximum of log data	6.8741985	
Mean of log data	5.09415945	
Standard Deviation of log data	1.32878208	
Variance of log data	1.76566181	
Lilliefors Test Statisitic	N/R	Shapiro Wilk method yields a more accurate result
Lilliefors 5% Critical Value	N/R	Shapiro Wilk method yields a more accurate result
Shapiro-Wilk Test Statisitic	0.93057991	
Shapiro-Wilk 5% Critical Value	0.748	
5% Lognormality Test Result	LOGNORMAL	Data are lognormal at 5% significance level
MLE Mean	394.252021	
MLE Standard Deviation	867.841717	
MLE Coefficient of Variation	2.20123594	
MLE Skewness	17.2696637	
MLE Median	163.066721	
MLE 80% Quantile	501.18751	
MLE 90% Quantile	899.324941	
MLE 95% Quantile	1450.99668	
MLE 99% Quantile	3586.40849	

MVU Estimate of Median	129.385853	
MVU Estimate of Mean	294.62858	
MVU Estimate of Standard Deviation	349.911462	
MVU Estimate of SE of Mean	172.273158	
95% H-UCL	3516077.15	
95% Chebyshev (MVUE) UCL	1045.54987	
97.5% Chebyshev (MVUE) UCL	1370.47411	
99% Chebyshev (MVUE) UCL	2008.72486	
Non-parametric Statisitics		
95% CLT UCL	676.889478	
95% Adjusted-CLT UCL	900.403408	
95% Modified-t UCL	865.405495	
95% Jackknife UCL	830.541839	
95% Chebyshev (Mean, Sd) UCL	1265.47635	
97.5% Chebyshev (Mean, Sd) UCL	1674.509	
99% Chebyshev (Mean, Sd) UCL	2477.97444	
Bootstrap Statistics		
Number of Bootstrap Runs	2000	
95% Standard Bootstrap UCL	N/R	Not enough distinct data warning
95% Bootstrap-t UCL	N/R	Not enough distinct data warning
95% Hall's Bootstrap UCL	N/R	Not enough distinct data warning
95% Percentile Bootstrap UCL	N/R	Not enough distinct data warning
95% BCA Bootstrap UCL	N/R	Not enough distinct data warning
Recommendations		
Human Inspection Recommended?	YES	
Appropriate Distribution	GAMMA	
1st Recommended UCL	2495.35029	95% Approximate Gamma UCL
2nd Recommended UCL		
3rd Recommended UCL		
Recommended UCL > Max Data Value	YES	Recommended UCL exceeds the maximum data value
Recommendation Warning!	NONE	
Alternative UCL	NONE	

Data File		
Variable:	BENZO(a)PYRENE	
Raw Statistics		
Number of Observations	4	
Number of Missing Data	0	
Number of Valid Observations	4	
Number of Distinct Observations	4	
Minimum	0.075	
Maximum	1.2	
Mean	0.54625	
Standard Deviation	0.47894633	
Variance	0.22938958	
Coefficient of Variation	0.87678961	
Skewness	1.01455289	
Too Few Distinct Observations?	NO	
Normal Statistics		
Lilliefors Test Statisitic	N/R	Shapiro Wilk method yields a more accurate result
Lilliefors 5% Critical Value	N/R	Shapiro Wilk method yields a more accurate result
Shapiro-Wilk Test Statisitic	0.94944208	
Shapiro-Wilk 5% Critical Value	0.748	
5% Normality Test Result	NORMAL	Data are normal at 5% significance level
95% Student's-t UCL	1.10981734	
Gamma Statistics		
k hat	1.37831133	
k star (bias corrected)	0.5112445	
Theta hat	0.3963183	
Theta star	1.06847116	
nu hat	11.0264906	
nu star	4.08995599	
5% Approximate Chi Square Value	0.75725534	
Adjusted Level of Significance	N/A	
Adjusted Chi Square Value	N/A	
Anderson-Darling Test Statistic	0.20760943	
Anderson-Darling 5% Critical Value	0.66340192	
Anderson-Darling 5% Gamma Test Result	AD GAMMA	Data follow gamma distribution at 5% signifcance level.
Kolmogrov-Smirnov Test Statistic	0.17614937	
Kolmogrov-Smirnov 5% Critical Value	0.4002104	
Kolmogrov-Smirnov 5% Gamma Test Result	KS GAMMA	Data follow gamma distribution at 5% signifcance level
5% Gamma Test Result	GAMMA	Data follow gamma distribution at 5% signifcance level
95% Approximate Gamma UCL	2.9503106	
95% Adjusted Gamma UCL	N/A	
Lognormal Statistics		
Minimum of log data	-2.5902672	
Maximum of log data	0.18232156	
Mean of log data	-1.0093966	
Standard Deviation of log data	1.16983125	
Variance of log data	1.36850516	
Lilliefors Test Statisitic	N/R	Shapiro Wilk method yields a more accurate result
Lilliefors 5% Critical Value	N/R	Shapiro Wilk method yields a more accurate result
Shapiro-Wilk Test Statisitic	0.95891047	
Shapiro-Wilk 5% Critical Value	0.748	
5% Lognormality Test Result	LOGNORMAL	Data are lognormal at 5% significance level
MLE Mean	0.72242333	
MLE Standard Deviation	1.23647821	
MLE Coefficient of Variation	1.71157015	
MLE Skewness	10.1487079	
MLE Median	0.36443883	
MLE 80% Quantile	0.97932752	
MLE 90% Quantile	1.6385908	
MLE 95% Quantile	2.49671497	
MLE 99% Quantile	5.53798622	

MVU Estimate of Median	0.30521903	
MVU Estimate of Mean	0.58246276	
MVU Estimate of Standard Deviation	0.62269665	
MVU Estimate of SE of Mean	0.30818966	
95% H-UCL	845.910746	
95% Chebyshev (MVUE) UCL	1.92583033	
97.5% Chebyshev (MVUE) UCL	2.50710655	
99% Chebyshev (MVUE) UCL	3.64891112	
Non-parametric Statisitics		
95% CLT UCL	0.9401483	
95% Adjusted-CLT UCL	1.06995047	
95% Modified-t UCL	1.13006386	
95% Jackknife UCL	1.10981734	
95% Chebyshev (Mean, Sd) UCL	1.59008932	
97.5% Chebyshev (Mean, Sd) UCL	2.04175942	
99% Chebyshev (Mean, Sd) UCL	2.92897789	
Bootstrap Statistics		
Number of Bootstrap Runs	2000	
95% Standard Bootstrap UCL	N/R	Not enough distinct data warning
95% Bootstrap-t UCL	N/R	Not enough distinct data warning
95% Hall's Bootstrap UCL	N/R	Not enough distinct data warning
95% Percentile Bootstrap UCL	N/R	Not enough distinct data warning
95% BCA Bootstrap UCL	N/R	Not enough distinct data warning
Recommendations		
Human Inspection Recommended?	NO	
Appropriate Distribution	NORMAL	
1st Recommended UCL	1.10981734	95% Student's-t UCL
2nd Recommended UCL		
3rd Recommended UCL		
Recommended UCL > Max Data Value		
Recommendation Warning!	NONE	
Alternative UCL	NONE	

Data File		
Variable:	Aroclor-1254	
Raw Statistics		
Number of Observations	6	
Number of Missing Data	0	
Number of Valid Observations	6	
Number of Distinct Observations	2	
Minimum	0.00825	
Maximum	1.1	
Mean	0.19020833	
Standard Deviation	0.44570507	
Variance	0.19865301	
Coefficient of Variation	2.34324681	
Skewness	2.44948974	
Too Few Distinct Observations?	NO	
Normal Statistics		
Lilliefors Test Statisitic	N/R	Shapiro Wilk method yields a more accurate result
Lilliefors 5% Critical Value	N/R	Shapiro Wilk method yields a more accurate result
Shapiro-Wilk Test Statisitic	0.49629313	
Shapiro-Wilk 5% Critical Value	0.788	
5% Normality Test Result	NOT NORMAL	Data not normal at 5% significance level
95% Student's-t UCL	0.55686315	
Gamma Statistics		
k hat	0.29734607	
k star (bias corrected)	0.25978415	
Theta hat	0.63968672	
Theta star	0.73217837	
nu hat	3.56815284	
nu star	3.11740975	
5% Approximate Chi Square Value	0.40784526	
Adjusted Level of Significance	0.01222	
Adjusted Chi Square Value	0.18378582	
Anderson-Darling Test Statistic	1.70854128	
Anderson-Darling 5% Critical Value	0.7676309	
Anderson-Darling 5% Gamma Test Result	NOT AD GAMMA	Data not gamma distributed at 5% significance level
Kolmogrov-Smirnov Test Statistic	0.52878051	
Kolmogrov-Smirnov 5% Critical Value	0.35696445	
Kolmogrov-Smirnov 5% Gamma Test Result	NOT KS GAMMA	Data not gamma distributed at 5% significance level
5% Gamma Test Result	NOT GAMMA	Data not gamma distributed at 5% significance level
95% Approximate Gamma UCL	1.45387816	
95% Adjusted Gamma UCL	3.22634955	
Lognormal Statistics		
Minimum of log data	-4.7975421	
Maximum of log data	0.09531018	
Mean of log data	-3.9820667	
Standard Deviation of log data	1.99749857	
Variance of log data	3.99000054	
Lilliefors Test Statisitic	N/R	Shapiro Wilk method yields a more accurate result
Lilliefors 5% Critical Value	N/R	Shapiro Wilk method yields a more accurate result
Shapiro-Wilk Test Statisitic	0.49629313	
Shapiro-Wilk 5% Critical Value	0.788	
5% Lognormality Test Result	NOT LOGNORMAL	Data not lognormal at 5% significance level
MLE Mean	0.13709702	
MLE Standard Deviation	0.99859834	
MLE Coefficient of Variation	7.28388072	
MLE Skewness	408.29734	
MLE Median	0.01864706	
MLE 80% Quantile	0.10084401	
MLE 90% Quantile	0.24285735	
MLE 95% Quantile	0.49848511	
MLE 99% Quantile	1.94277035	
MVU Estimate of Median	0.01313952	
MVU Estimate of Mean	0.07494246	
MVU Estimate of Standard Deviation	0.14560272	
MVU Estimate of SE of Mean	0.05357428	
95% H-UCL	183.206698	
95% Chebyshev (MVUE) UCL	0.30846732	
97.5% Chebyshev (MVUE) UCL	0.40951371	
99% Chebyshev (MVUE) UCL	0.60799979	
Non-parametric Statisitics		
95% CLT UCL	0.48950316	
95% Adjusted-CLT UCL	0.68392827	
95% Modified-t UCL	0.58718954	

95% Jackknife UCL	0.55686315	
95% Chebyshev (Mean, Sd) UCL	0.98334632	
97.5% Chebyshev (Mean, Sd) UCL	1.32653776	
99% Chebyshev (Mean, Sd) UCL	2.00067089	
Bootstrap Statistics		
Number of Bootstrap Runs	2000	
95% Standard Bootstrap UCL	N/R	Not enough distinct data warning
95% Bootstrap-t UCL	N/R	Not enough distinct data warning
95% Hall's Bootstrap UCL	N/A	Not enough distinct data error
95% Percentile Bootstrap UCL	N/R	Not enough distinct data warning
95% BCA Bootstrap UCL	N/R	Not enough distinct data warning
Recommendations		
Human Inspection Recommended?	YES	
Appropriate Distribution	NON-PARAMETRIC	
1st Recommended UCL	2.00067089	99% Chebyshev (Mean, Sd) UCL
2nd Recommended UCL		
3rd Recommended UCL		
Recommended UCL > Max Data Value	YES	Recommended UCL exceeds the maximum data value
Recommendation Warning!	NONE	
Alternative UCL	YES	Cosider using 95% or 97.5% Chebyshev (Mean, Sd) UCL

Data File		
Variable:	Dieldrin	
Raw Statistics		
Number of Observations	6	
Number of Missing Data	0	
Number of Valid Observations	6	
Number of Distinct Observations	4	
Minimum	0.000825	
Maximum	17	
Mean	4.5094125	
Standard Deviation	7.30744978	
Variance	53.3988223	
Coefficient of Variation	1.62048821	
Skewness	1.34608742	
Too Few Distinct Observations?	NO	
Normal Statistics		
Lilliefors Test Statisitic	N/R	Shapiro Wilk method yields a more accurate result
Lilliefors 5% Critical Value	N/R	Shapiro Wilk method yields a more accurate result
Shapiro-Wilk Test Statisitic	0.70735193	
Shapiro-Wilk 5% Critical Value	0.788	
5% Normality Test Result	NOT NORMAL	Data not normal at 5% significance level
95% Student's-t UCL	10.520813	
Gamma Statistics		
k hat	0.16212798	
k star (bias corrected)	0.1921751	
Theta hat	27.8139071	
Theta star	23.4651238	
nu hat	1.94553573	
nu star	2.3061012	
5% Approximate Chi Square Value	0.20044131	
Adjusted Level of Significance	0.01222	
Adjusted Chi Square Value	0.09929401	
Anderson-Darling Test Statistic	0.73323578	
Anderson-Darling 5% Critical Value	0.81845412	
Anderson-Darling 5% Gamma Test Result	AD GAMMA	Data follow gamma distribution at 5% signifcance level.
Kolmogrov-Smirnov Test Statistic	0.30146519	
Kolmogrov-Smirnov 5% Critical Value	0.36566526	
Kolmogrov-Smirnov 5% Gamma Test Result	KS GAMMA	Data follow gamma distribution at 5% signifcance level
5% Gamma Test Result	GAMMA	Data follow gamma distribution at 5% signifcance level
95% Approximate Gamma UCL	51.8813283	
95% Adjusted Gamma UCL	104.731007	
Lognormal Statistics		
Minimum of log data	-7.1001272	
Maximum of log data	2.83321334	
Mean of log data	-3.1805591	
Standard Deviation of log data	4.74105271	
Variance of log data	22.4775808	
Lilliefors Test Statisitic	N/R	Shapiro Wilk method yields a more accurate result
Lilliefors 5% Critical Value	N/R	Shapiro Wilk method yields a more accurate result
Shapiro-Wilk Test Statisitic	0.78493497	
Shapiro-Wilk 5% Critical Value	0.788	
5% Lognormality Test Result	NOT LOGNORMAL	Data not lognormal at 5% significance level
MLE Mean	3159.69671	
MLE Standard Deviation	240209423	
MLE Coefficient of Variation	76022.9368	
MLE Skewness	4.39E+14	
MLE Median	0.04156241	
MLE 80% Quantile	2.28331991	
MLE 90% Quantile	18.3879153	
MLE 95% Quantile	101.339133	
MLE 99% Quantile	2558.38004	
MVU Estimate of Median	0.00107058	
MVU Estimate of Mean	9.52420131	
MVU Estimate of Standard Deviation	40.8265397	
MVU Estimate of SE of Mean	9.34989779	
95% H-UCL	6.32E+20	
95% Chebyshev (MVUE) UCL	50.2794609	
97.5% Chebyshev (MVUE) UCL	67.9142943	
99% Chebyshev (MVUE) UCL	102.55451	
Non-parametric Statisitics		
95% CLT UCL	9.41642847	
95% Adjusted-CLT UCL	11.1681629	
95% Modified-t UCL	10.7940481	

95% Jackknife UCL	10.520813	
95% Chebyshev (Mean, Sd) UCL	17.5131147	
97.5% Chebyshev (Mean, Sd) UCL	23.139827	
99% Chebyshev (Mean, Sd) UCL	34.1924138	
Bootstrap Statistics		
Number of Bootstrap Runs	2000	
95% Standard Bootstrap UCL	N/R	Not enough distinct data warning
95% Bootstrap-t UCL	N/R	Not enough distinct data warning
95% Hall's Bootstrap UCL	N/R	Not enough distinct data warning
95% Percentile Bootstrap UCL	N/R	Not enough distinct data warning
95% BCA Bootstrap UCL	N/R	Not enough distinct data warning
Recommendations		
Human Inspection Recommended?	YES	
Appropriate Distribution	GAMMA	
1st Recommended UCL	104.731007	95% Adjusted Gamma UCL
2nd Recommended UCL		
3rd Recommended UCL		
Recommended UCL > Max Data Value	YES	Recommended UCL exceeds the maximum data value
Recommendation Warning!	NONE	
Alternative UCL	NONE	

Data File		
Variable:	p,p'-DDD	
Raw Statistics		
Number of Observations	6	
Number of Missing Data	0	
Number of Valid Observations	6	
Number of Distinct Observations	2	
Minimum	0.000825	
Maximum	15	
Mean	5.00055	
Standard Deviation	7.74554066	
Variance	59.9934002	
Coefficient of Variation	1.54893775	
Skewness	0.96824584	
Too Few Distinct Observations?	NO	
Normal Statistics		
Lilliefors Test Statisitic	N/R	Shapiro Wilk method yields a more accurate result
Lilliefors 5% Critical Value	N/R	Shapiro Wilk method yields a more accurate result
Shapiro-Wilk Test Statisitic	0.63991627	
Shapiro-Wilk 5% Critical Value	0.788	
5% Normality Test Result	NOT NORMAL	Data not normal at 5% significance level
95% Student's-t UCL	11.3723415	
Gamma Statistics		
k hat	0.14234676	
k star (bias corrected)	0.18228449	
Theta hat	35.1293567	
Theta star	27.4326686	
nu hat	1.70816109	
nu star	2.18741388	
5% Approximate Chi Square Value	0.1789275	
Adjusted Level of Significance	0.01222	
Adjusted Chi Square Value	0.09301433	
Anderson-Darling Test Statistic	1.18460046	
Anderson-Darling 5% Critical Value	0.82678202	
Anderson-Darling 5% Gamma Test Result	NOT AD GAMMA	Data not gamma distributed at 5% significance level
Kolmogrov-Smirnov Test Statistic	0.43227118	
Kolmogrov-Smirnov 5% Critical Value	0.36667608	
Kolmogrov-Smirnov 5% Gamma Test Result	NOT KS GAMMA	Data not gamma distributed at 5% significance level
5% Gamma Test Result	NOT GAMMA	Data not gamma distributed at 5% significance level
95% Approximate Gamma UCL	61.1324278	
95% Adjusted Gamma UCL	117.597708	
Lognormal Statistics		
Minimum of log data	-7.1001272	
Maximum of log data	2.7080502	
Mean of log data	-3.8307347	
Standard Deviation of log data	5.06492102	
Variance of log data	25.6534249	
Lilliefors Test Statisitic	N/R	Shapiro Wilk method yields a more accurate result
Lilliefors 5% Critical Value	N/R	Shapiro Wilk method yields a more accurate result
Shapiro-Wilk Test Statisitic	0.63991627	
Shapiro-Wilk 5% Critical Value	0.788	
5% Lognormality Test Result	NOT LOGNORMAL	Data not lognormal at 5% significance level
MLE Mean	8070.55665	
MLE Standard Deviation	3002437170	
MLE Coefficient of Variation	372023.555	
MLE Skewness	5.15E+16	
MLE Median	0.02169367	
MLE 80% Quantile	1.56693823	
MLE 90% Quantile	14.551423	
MLE 95% Quantile	90.1126323	
MLE 99% Quantile	2836.34511	
MVU Estimate of Median	-0.0003859	
MVU Estimate of Mean	8.49890117	
MVU Estimate of Standard Deviation	38.7173543	
MVU Estimate of SE of Mean	8.39099527	
95% H-UCL	4.43E+23	
95% Chebyshev (MVUE) UCL	45.0744016	
97.5% Chebyshev (MVUE) UCL	60.9006498	
99% Chebyshev (MVUE) UCL	91.9882499	
Non-parametric Statisitics		
95% CLT UCL	10.2017478	
95% Adjusted-CLT UCL	11.5373175	
95% Modified-t UCL	11.5806634	

95% Jackknife UCL	11.3723415	
95% Chebyshev (Mean, Sd) UCL	18.7838406	
97.5% Chebyshev (Mean, Sd) UCL	24.7478815	
99% Chebyshev (Mean, Sd) UCL	36.4630849	
Bootstrap Statistics		
Number of Bootstrap Runs	2000	
95% Standard Bootstrap UCL	N/R	Not enough distinct data warning
95% Bootstrap-t UCL	N/R	Not enough distinct data warning
95% Hall's Bootstrap UCL	N/A	Not enough distinct data error
95% Percentile Bootstrap UCL	N/R	Not enough distinct data warning
95% BCA Bootstrap UCL	N/R	Not enough distinct data warning
Recommendations		
Human Inspection Recommended?	YES	
Appropriate Distribution	NON-PARAMETRIC	
1st Recommended UCL	N/A	95% Hall's Bootstrap UCL
2nd Recommended UCL		
3rd Recommended UCL		
Recommended UCL > Max Data Value		
Recommendation Warning!	PLEASE CHECK	Hall's Bootstrap/Bootstrap-t may yield erratic values,
Alternative UCL	NONE	in that case use 99% Chebyshev (Mean, Sd) UCL

Data File		
Variable:	p,p'-DDE	
Raw Statistics		
Number of Observations	6	
Number of Missing Data	0	
Number of Valid Observations	6	
Number of Distinct Observations	3	
Minimum	0.000825	
Maximum	10	
Mean	1.67555	
Standard Deviation	4.07817842	
Variance	16.6315392	
Coefficient of Variation	2.43393418	
Skewness	2.44936178	
Too Few Distinct Observations?	NO	
Normal Statistics		
Lilliefors Test Statisitic	N/R	Shapiro Wilk method yields a more accurate result
Lilliefors 5% Critical Value	N/R	Shapiro Wilk method yields a more accurate result
Shapiro-Wilk Test Statisitic	0.49939562	
Shapiro-Wilk 5% Critical Value	0.788	
5% Normality Test Result	NOT NORMAL	Data not normal at 5% significance level
95% Student's-t UCL	5.03042268	
Gamma Statistics		
k hat	0.14409032	
k star (bias corrected)	0.18315627	
Theta hat	11.6284704	
Theta star	9.14819896	
nu hat	1.72908382	
nu star	2.19787524	
5% Approximate Chi Square Value	0.18071574	
Adjusted Level of Significance	0.01222	
Adjusted Chi Square Value	0.09350761	
Anderson-Darling Test Statistic	1.18296312	
Anderson-Darling 5% Critical Value	0.82604798	
Anderson-Darling 5% Gamma Test Result	NOT AD GAMMA	Data not gamma distributed at 5% significance level
Kolmogrov-Smirnov Test Statistic	0.39668444	
Kolmogrov-Smirnov 5% Critical Value	0.36658698	
Kolmogrov-Smirnov 5% Gamma Test Result	NOT KS GAMMA	Data not gamma distributed at 5% significance level
5% Gamma Test Result	NOT GAMMA	Data not gamma distributed at 5% significance level
95% Approximate Gamma UCL	20.3781355	
95% Adjusted Gamma UCL	39.3834257	
Lognormal Statistics		
Minimum of log data	-7.1001272	
Maximum of log data	2.30258509	
Mean of log data	-4.8489426	
Standard Deviation of log data	3.8691101	
Variance of log data	14.970013	
Lilliefors Test Statisitic	N/R	Shapiro Wilk method yields a more accurate result
Lilliefors 5% Critical Value	N/R	Shapiro Wilk method yields a more accurate result
Shapiro-Wilk Test Statisitic	0.69231092	
Shapiro-Wilk 5% Critical Value	0.788	
5% Lognormality Test Result	NOT LOGNORMAL	Data not lognormal at 5% significance level
MLE Mean	13.9581537	
MLE Standard Deviation	24861.362	
MLE Coefficient of Variation	1781.13542	
MLE Skewness	5650556658	
MLE Median	0.00783666	
MLE 80% Quantile	0.20606892	
MLE 90% Quantile	1.13073044	
MLE 95% Quantile	4.55280473	
MLE 99% Quantile	63.4725446	
MVU Estimate of Median	0.0015397	
MVU Estimate of Mean	0.44297728	
MVU Estimate of Standard Deviation	1.57699065	
MVU Estimate of SE of Mean	0.42203639	
95% H-UCL	4.91E+12	
95% Chebyshev (MVUE) UCL	2.28259125	
97.5% Chebyshev (MVUE) UCL	3.07859369	
99% Chebyshev (MVUE) UCL	4.64218634	
Non-parametric Statisitics		
95% CLT UCL	4.41408221	
95% Adjusted-CLT UCL	6.19296905	
95% Modified-t UCL	5.30789308	

95% Jackknife UCL	5.03042268	
95% Chebyshev (Mean, Sd) UCL	8.93272168	
97.5% Chebyshev (Mean, Sd) UCL	12.0729057	
99% Chebyshev (Mean, Sd) UCL	18.241189	
Bootstrap Statistics		
Number of Bootstrap Runs	2000	
95% Standard Bootstrap UCL	N/R	Not enough distinct data warning
95% Bootstrap-t UCL	N/R	Not enough distinct data warning
95% Hall's Bootstrap UCL	N/R	Not enough distinct data warning
95% Percentile Bootstrap UCL	N/R	Not enough distinct data warning
95% BCA Bootstrap UCL	N/R	Not enough distinct data warning
Recommendations		
Human Inspection Recommended?	YES	
Appropriate Distribution	NON-PARAMETRIC	
1st Recommended UCL	N/R	95% Hall's Bootstrap UCL
2nd Recommended UCL		
3rd Recommended UCL		
Recommended UCL > Max Data Value		
Recommendation Warning!	PLEASE CHECK	Hall's Bootstrap/Bootstrap-t may yield erratic values,
Alternative UCL	NONE	in that case use 99% Chebyshev (Mean, Sd) UCL

Data File		
Variable:	p,p'-DDT	
Raw Statistics		
Number of Observations	6	
Number of Missing Data	0	
Number of Valid Observations	6	
Number of Distinct Observations	4	
Minimum	0.000825	
Maximum	18	
Mean	5.34324583	
Standard Deviation	8.35106694	
Variance	69.740319	
Coefficient of Variation	1.56292022	
Skewness	1.06683209	
Too Few Distinct Observations?	NO	
Normal Statistics		
Lilliefors Test Statisitic	N/R	Shapiro Wilk method yields a more accurate result
Lilliefors 5% Critical Value	N/R	Shapiro Wilk method yields a more accurate result
Shapiro-Wilk Test Statisitic	0.68972733	
Shapiro-Wilk 5% Critical Value	0.788	
5% Normality Test Result	NOT NORMAL	Data not normal at 5% significance level
95% Student's-t UCL	12.2131675	
Gamma Statistics		
k hat	0.15931758	
k star (bias corrected)	0.1907699	
Theta hat	33.5383312	
Theta star	28.0088514	
nu hat	1.91181098	
nu star	2.28923883	
5% Approximate Chi Square Value	0.19722409	
Adjusted Level of Significance	0.01222	
Adjusted Chi Square Value	0.09830943	
Anderson-Darling Test Statistic	0.77853551	
Anderson-Darling 5% Critical Value	0.8196373	
Anderson-Darling 5% Gamma Test Result	AD GAMMA	Data follow gamma distribution at 5% signifcance level.
Kolmogrov-Smirnov Test Statistic	0.30175707	
Kolmogrov-Smirnov 5% Critical Value	0.36580887	
Kolmogrov-Smirnov 5% Gamma Test Result	KS GAMMA	Data follow gamma distribution at 5% signifcance level
5% Gamma Test Result	GAMMA	Data follow gamma distribution at 5% signifcance level
95% Approximate Gamma UCL	62.020649	
95% Adjusted Gamma UCL	124.423116	
Lognormal Statistics		
Minimum of log data	-7.1001272	
Maximum of log data	2.89037176	
Mean of log data	-3.1059427	
Standard Deviation of log data	4.83486375	
Variance of log data	23.3759075	
Lilliefors Test Statisitic	N/R	Shapiro Wilk method yields a more accurate result
Lilliefors 5% Critical Value	N/R	Shapiro Wilk method yields a more accurate result
Shapiro-Wilk Test Statisitic	0.7767706	
Shapiro-Wilk 5% Critical Value	0.788	
5% Lognormality Test Result	NOT LOGNORMAL	Data not lognormal at 5% significance level
MLE Mean	5334.82302	
MLE Standard Deviation	635526738	
MLE Coefficient of Variation	119127.989	
MLE Skewness	1.69E+15	
MLE Median	0.04478228	
MLE 80% Quantile	2.66316996	
MLE 90% Quantile	22.3506896	
MLE 95% Quantile	127.409732	
MLE 99% Quantile	3428.74759	
MVU Estimate of Median	0.00053672	
MVU Estimate of Mean	11.9770145	
MVU Estimate of Standard Deviation	52.2742114	
MVU Estimate of SE of Mean	11.7797173	
95% H-UCL	5.22E+21	
95% Chebyshev (MVUE) UCL	63.3236117	
97.5% Chebyshev (MVUE) UCL	85.5413254	
99% Chebyshev (MVUE) UCL	129.183722	
Non-parametric Statisitics		
95% CLT UCL	10.9510598	
95% Adjusted-CLT UCL	12.5376589	
95% Modified-t UCL	12.4606449	

95% Jackknife UCL	12.2131675	
95% Chebyshev (Mean, Sd) UCL	20.2040784	
97.5% Chebyshev (Mean, Sd) UCL	26.6343725	
99% Chebyshev (Mean, Sd) UCL	39.2654401	
Bootstrap Statistics		
Number of Bootstrap Runs	2000	
95% Standard Bootstrap UCL	N/R	Not enough distinct data warning
95% Bootstrap-t UCL	N/R	Not enough distinct data warning
95% Hall's Bootstrap UCL	N/R	Not enough distinct data warning
95% Percentile Bootstrap UCL	N/R	Not enough distinct data warning
95% BCA Bootstrap UCL	N/R	Not enough distinct data warning
Recommendations		
Human Inspection Recommended?	YES	
Appropriate Distribution	GAMMA	
1st Recommended UCL	124.423116	95% Adjusted Gamma UCL
2nd Recommended UCL		
3rd Recommended UCL		
Recommended UCL > Max Data Value	YES	Recommended UCL exceeds the maximum data value
Recommendation Warning!	NONE	
Alternative UCL	NONE	

Data File		
Variable:	BENZO(a)PYRENE	
Raw Statistics		
Number of Observations	9	
Number of Missing Data	0	
Number of Valid Observations	9	
Number of Distinct Observations	8	
Minimum	0.018	
Maximum	1.3	
Mean	0.33544444	
Standard Deviation	0.49616602	
Variance	0.24618072	
Coefficient of Variation	1.47913022	
Skewness	1.60431256	
Too Few Distinct Observations?	NO	
Normal Statistics		
Lilliefors Test Statisitic	N/R	Shapiro Wilk method yields a more accurate result
Lilliefors 5% Critical Value	N/R	Shapiro Wilk method yields a more accurate result
Shapiro-Wilk Test Statisitic	0.6573787	
Shapiro-Wilk 5% Critical Value	0.829	
5% Normality Test Result	NOT NORMAL	Data not normal at 5% significance level
95% Student's-t UCL	0.64299262	
Gamma Statistics		
k hat	0.62537871	
k star (bias corrected)	0.49099321	
Theta hat	0.5363861	
Theta star	0.68319569	
nu hat	11.2568167	
nu star	8.8378778	
5% Approximate Chi Square Value	3.22857962	
Adjusted Level of Significance	0.02308	
Adjusted Chi Square Value	2.55619606	
Anderson-Darling Test Statistic	0.75429512	
Anderson-Darling 5% Critical Value	0.76104587	
Anderson-Darling 5% Gamma Test Result	AD GAMMA	Data follow gamma distribution at 5% signifcance level.
Kolmogrov-Smirnov Test Statistic	0.26639787	
Kolmogrov-Smirnov 5% Critical Value	0.29167273	
Kolmogrov-Smirnov 5% Gamma Test Result	KS GAMMA	Data follow gamma distribution at 5% signifcance level
5% Gamma Test Result	GAMMA	Data follow gamma distribution at 5% signifcance level
95% Approximate Gamma UCL	0.91824188	
95% Adjusted Gamma UCL	1.15977685	
Lognormal Statistics		
Minimum of log data	-4.0173835	
Maximum of log data	0.26236426	
Mean of log data	-2.0743224	
Standard Deviation of log data	1.48045233	
Variance of log data	2.1917391	
Lilliefors Test Statisitic	N/R	Shapiro Wilk method yields a more accurate result
Lilliefors 5% Critical Value	N/R	Shapiro Wilk method yields a more accurate result
Shapiro-Wilk Test Statisitic	0.90765439	
Shapiro-Wilk 5% Critical Value	0.829	
5% Lognormality Test Result	LOGNORMAL	Data are lognormal at 5% significance level
MLE Mean	0.37589221	
MLE Standard Deviation	1.05990712	
MLE Coefficient of Variation	2.81971024	
MLE Skewness	30.8779866	
MLE Median	0.12564153	
MLE 80% Quantile	0.43896299	
MLE 90% Quantile	0.84202872	
MLE 95% Quantile	1.43479457	
MLE 99% Quantile	3.9322419	
MVU Estimate of Median	0.11106831	
MVU Estimate of Mean	0.30762736	
MVU Estimate of Standard Deviation	0.50689924	
MVU Estimate of SE of Mean	0.1568989	
95% H-UCL	3.92592281	
95% Chebyshev (MVUE) UCL	0.99153383	
97.5% Chebyshev (MVUE) UCL	1.2874607	
99% Chebyshev (MVUE) UCL	1.86875174	
Non-parametric Statisitics		
95% CLT UCL	0.6074846	
95% Adjusted-CLT UCL	0.70198941	
95% Modified-t UCL	0.65773346	

95% Jackknife UCL	0.64299262	
95% Chebyshev (Mean, Sd) UCL	1.05635695	
97.5% Chebyshev (Mean, Sd) UCL	1.36829637	
99% Chebyshev (Mean, Sd) UCL	1.98104095	
Bootstrap Statistics		
Number of Bootstrap Runs	2000	
95% Standard Bootstrap UCL	0.59459919	
95% Bootstrap-t UCL	2.25163609	
95% Hall's Bootstrap UCL	2.61408512	
95% Percentile Bootstrap UCL	0.60566667	
95% BCA Bootstrap UCL	0.69705556	
Recommendations		
Human Inspection Recommended?	NO	
Appropriate Distribution	GAMMA	
1st Recommended UCL	0.91824188	95% Approximate Gamma UCL
2nd Recommended UCL		
3rd Recommended UCL		
Recommended UCL > Max Data Value		
Recommendation Warning!	NONE	
Alternative UCL	NONE	

Data File		
Variable:	BENZO(b)FLUORANTHENE	
Raw Statistics		
Number of Observations	9	
Number of Missing Data	0	
Number of Valid Observations	9	
Number of Distinct Observations	6	
Minimum	0.0425	
Maximum	3.4	
Mean	0.52177778	
Standard Deviation	1.08667829	
Variance	1.18086969	
Coefficient of Variation	2.08264578	
Skewness	2.92318001	
Too Few Distinct Observations?	NO	
Normal Statistics		
Lilliefors Test Statisitic	N/R	Shapiro Wilk method yields a more accurate result
Lilliefors 5% Critical Value	N/R	Shapiro Wilk method yields a more accurate result
Shapiro-Wilk Test Statisitic	0.49025559	
Shapiro-Wilk 5% Critical Value	0.829	
5% Normality Test Result	NOT NORMAL	Data not normal at 5% significance level
95% Student's-t UCL	1.1953546	
Gamma Statistics		
k hat	0.53474058	
k star (bias corrected)	0.43056779	
Theta hat	0.97575871	
Theta star	1.21183653	
nu hat	9.62533041	
nu star	7.75022027	
5% Approximate Chi Square Value	2.59058146	
Adjusted Level of Significance	0.02308	
Adjusted Chi Square Value	2.00583305	
Anderson-Darling Test Statistic	1.02825308	
Anderson-Darling 5% Critical Value	0.76801775	
Anderson-Darling 5% Gamma Test Result	NOT AD GAMMA	Data not gamma distributed at 5% significance level
Kolmogrov-Smirnov Test Statistic	0.29102025	
Kolmogrov-Smirnov 5% Critical Value	0.29341298	
Kolmogrov-Smirnov 5% Gamma Test Result	KS GAMMA	Data follow gamma distribution at 5% signifcance level
5% Gamma Test Result	APPROX GAMMA	Data follow approximate gamma distribution at 5% significance level
95% Approximate Gamma UCL	1.56099809	
95% Adjusted Gamma UCL	2.01606645	
Lognormal Statistics		
Minimum of log data	-3.1582512	
Maximum of log data	1.22377543	
Mean of log data	-1.8261306	
Standard Deviation of log data	1.46886538	
Variance of log data	2.15756551	
Lilliefors Test Statisitic	N/R	Shapiro Wilk method yields a more accurate result
Lilliefors 5% Critical Value	N/R	Shapiro Wilk method yields a more accurate result
Shapiro-Wilk Test Statisitic	0.84275022	
Shapiro-Wilk 5% Critical Value	0.829	
5% Lognormality Test Result	LOGNORMAL	Data are lognormal at 5% significance level
MLE Mean	0.47362102	
MLE Standard Deviation	1.30997559	
MLE Coefficient of Variation	2.76587302	
MLE Skewness	29.4566959	
MLE Median	0.16103548	
MLE 80% Quantile	0.55713966	
MLE 90% Quantile	1.06328316	
MLE 95% Quantile	1.80426441	
MLE 99% Quantile	4.90595761	
MVU Estimate of Median	0.14263424	
MVU Estimate of Mean	0.38921451	
MVU Estimate of Standard Deviation	0.63550257	
MVU Estimate of SE of Mean	0.19703973	
95% H-UCL	4.78194944	
95% Chebyshev (MVUE) UCL	1.24809079	
97.5% Chebyshev (MVUE) UCL	1.61972725	
99% Chebyshev (MVUE) UCL	2.3497351	
Non-parametric Statisitics		
95% CLT UCL	1.11758668	
95% Adjusted-CLT UCL	1.49471961	
95% Modified-t UCL	1.25417971	

95% Jackknife UCL	1.1953546	
95% Chebyshev (Mean, Sd) UCL	2.10068472	
97.5% Chebyshev (Mean, Sd) UCL	2.78387902	
99% Chebyshev (Mean, Sd) UCL	4.12588192	
Bootstrap Statistics		
Number of Bootstrap Runs	2000	
95% Standard Bootstrap UCL	1.07694674	
95% Bootstrap-t UCL	4.44543509	
95% Hall's Bootstrap UCL	4.03561769	
95% Percentile Bootstrap UCL	1.23666667	
95% BCA Bootstrap UCL	1.32972222	
Recommendations		
Human Inspection Recommended?	NO	
Appropriate Distribution	GAMMA	
1st Recommended UCL	1.56099809	95% Approximate Gamma UCL
2nd Recommended UCL		
3rd Recommended UCL		
Recommended UCL > Max Data Value		
Recommendation Warning!	NONE	
Alternative UCL	NONE	

Data File		
Variable:	Dibenzo(a,h)anthracene	
Raw Statistics		
Number of Observations	9	
Number of Missing Data	0	
Number of Valid Observations	9	
Number of Distinct Observations	7	
Minimum	0.035	
Maximum	0.49	
Mean	0.11961111	
Standard Deviation	0.14776878	
Variance	0.02183561	
Coefficient of Variation	1.23541011	
Skewness	2.4390094	
Too Few Distinct Observations?	NO	
Normal Statistics		
Lilliefors Test Statisitic	N/R	Shapiro Wilk method yields a more accurate result
Lilliefors 5% Critical Value	N/R	Shapiro Wilk method yields a more accurate result
Shapiro-Wilk Test Statisitic	0.62809618	
Shapiro-Wilk 5% Critical Value	0.829	
5% Normality Test Result	NOT NORMAL	Data not normal at 5% significance level
95% Student's-t UCL	0.21120549	
Gamma Statistics		
k hat	1.3086376	
k star (bias corrected)	0.94649914	
Theta hat	0.09140125	
Theta star	0.12637213	
nu hat	23.5554767	
nu star	17.0369845	
5% Approximate Chi Square Value	8.6973346	
Adjusted Level of Significance	0.02308	
Adjusted Chi Square Value	7.47484845	
Anderson-Darling Test Statistic	0.94764907	
Anderson-Darling 5% Critical Value	0.73784662	
Anderson-Darling 5% Gamma Test Result	NOT AD GAMMA	Data not gamma distributed at 5% significance level
Kolmogrov-Smirnov Test Statistic	0.27059551	
Kolmogrov-Smirnov 5% Critical Value	0.28509756	
Kolmogrov-Smirnov 5% Gamma Test Result	KS GAMMA	Data follow gamma distribution at 5% signifcance level
5% Gamma Test Result	APPROX GAMMA	Data follow approximate gamma distribution at 5% significance level
95% Approximate Gamma UCL	0.23430312	
95% Adjusted Gamma UCL	0.2726226	
Lognormal Statistics		
Minimum of log data	-3.3524072	
Maximum of log data	-0.7133499	
Mean of log data	-2.5519343	
Standard Deviation of log data	0.87364238	
Variance of log data	0.76325101	
Lilliefors Test Statisitic	N/R	Shapiro Wilk method yields a more accurate result
Lilliefors 5% Critical Value	N/R	Shapiro Wilk method yields a more accurate result
Shapiro-Wilk Test Statisitic	0.83718969	
Shapiro-Wilk 5% Critical Value	0.829	
5% Lognormality Test Result	LOGNORMAL	Data are lognormal at 5% significance level
MLE Mean	0.11414237	
MLE Standard Deviation	0.12215042	
MLE Coefficient of Variation	1.07015845	
MLE Skewness	4.43606263	
MLE Median	0.07793078	
MLE 80% Quantile	0.16304869	
MLE 90% Quantile	0.23947559	
MLE 95% Quantile	0.32798332	
MLE 99% Quantile	0.59461445	
MVU Estimate of Median	0.07468182	
MVU Estimate of Mean	0.10823769	
MVU Estimate of Standard Deviation	0.0988851	
MVU Estimate of SE of Mean	0.03252211	
95% H-UCL	0.289778	
95% Chebyshev (MVUE) UCL	0.24999829	
97.5% Chebyshev (MVUE) UCL	0.31133821	
99% Chebyshev (MVUE) UCL	0.4318286	
Non-parametric Statisitics		
95% CLT UCL	0.20063045	
95% Adjusted-CLT UCL	0.24341964	
95% Modified-t UCL	0.21787974	

95% Jackknife UCL	0.21120549	
95% Chebyshev (Mean, Sd) UCL	0.33431416	
97.5% Chebyshev (Mean, Sd) UCL	0.42721635	
99% Chebyshev (Mean, Sd) UCL	0.6097047	
Bootstrap Statistics		
Number of Bootstrap Runs	2000	
95% Standard Bootstrap UCL	0.19805388	
95% Bootstrap-t UCL	0.62696177	
95% Hall's Bootstrap UCL	0.56998222	
95% Percentile Bootstrap UCL	0.20538889	
95% BCA Bootstrap UCL	0.25338889	
Recommendations		
Human Inspection Recommended?	NO	
Appropriate Distribution	GAMMA	
1st Recommended UCL	0.23430312	95% Approximate Gamma UCL
2nd Recommended UCL		
3rd Recommended UCL		
Recommended UCL > Max Data Value		
Recommendation Warning!	NONE	
Alternative UCL	NONE	

Data File		
Variable:	Lead	
Raw Statistics		
Number of Observations	56	
Number of Missing Data	0	
Number of Valid Observations	56	
Number of Distinct Observations	53	
Minimum	8.6	
Maximum	4090	
Mean	226.6160714	
Standard Deviation	609.1314158	
Variance	371041.0817	
Coefficient of Variation	2.687944469	
Skewness	5.311543354	
Too Few Distinct Observations?	NO	
Normal Statistics		
Lilliefors Test Statisitic	0.360204258	
Lilliefors 5% Critical Value	0.11839673	
Shapiro-Wilk Test Statisitic	N/A	
Shapiro-Wilk 5% Critical Value	N/A	
5% Normality Test Result	NOT NORMAL	Data not normal at 5% significance level
95% Student's-t UCL	362.798681	
Gamma Statistics		
k hat	0.497483565	
k star (bias corrected)	0.482737422	
Theta hat	455.5247398	
Theta star	469.4396194	
nu hat	55.71815926	
nu star	54.06659121	
5% Approximate Chi Square Value	38.16932699	
Adjusted Level of Significance	0.045714286	
Adjusted Chi Square Value	37.81621038	
Anderson-Darling Test Statistic	4.320176249	
Anderson-Darling 5% Critical Value	0.815895163	
Anderson-Darling 5% Gamma Test Result	NOT AD GAMMA	Data not gamma distributed at 5% significance level
Kolmogrov-Smirnov Test Statistic	0.211131764	
Kolmogrov-Smirnov 5% Critical Value	0.125817748	
Kolmogrov-Smirnov 5% Gamma Test Result	NOT KS GAMMA	Data not gamma distributed at 5% significance level
5% Gamma Test Result	NOT GAMMA	Data not gamma distributed at 5% significance level
95% Approximate Gamma UCL	321.0001188	
95% Adjusted Gamma UCL	323.9975231	
Lognormal Statistics		
Minimum of log data	2.151762203	
Maximum of log data	8.316300249	
Mean of log data	4.145468349	
Standard Deviation of log data	1.420300719	
Variance of log data	2.017254131	
Lilliefors Test Statisitic	0.16581284	
Lilliefors 5% Critical Value	0.11839673	
Shapiro-Wilk Test Statisitic	N/A	
Shapiro-Wilk 5% Critical Value	N/A	
5% Lognormality Test Result	NOT LOGNORMAL	Data not lognormal at 5% significance level
MLE Mean	173.1391168	
MLE Standard Deviation	442.0189119	
MLE Coefficient of Variation	2.552969658	
MLE Skewness	24.29828207	
MLE Median	63.14718991	

MLE 80% Quantile	209.6883658	
MLE 90% Quantile	391.7229276	
MLE 95% Quantile	653.1867207	
MLE 99% Quantile	1718.295037	
MVU Estimate of Median	62.01966149	
MVU Estimate of Mean	167.2675758	
MVU Estimate of Standard Deviation	373.4210149	
MVU Estimate of SE of Mean	41.71287433	
95% H-UCL	293.5528238	
95% Chebyshev (MVUE) UCL	349.0897797	
97.5% Chebyshev (MVUE) UCL	427.7643925	
99% Chebyshev (MVUE) UCL	582.3054351	
Non-parametric Statisitics		
95% CLT UCL	360.5048693	
95% Adjusted-CLT UCL	422.2388265	
95% Modified-t UCL	372.4279308	
95% Jackknife UCL	362.798681	
95% Chebyshev (Mean, Sd) UCL	581.4243837	
97.5% Chebyshev (Mean, Sd) UCL	734.9502238	
99% Chebyshev (Mean, Sd) UCL	1036.522008	
Bootstrap Statistics		
Number of Bootstrap Runs	2000	
95% Standard Bootstrap UCL	357.0702642	
95% Bootstrap-t UCL	642.211026	
95% Hall's Bootstrap UCL	918.45948	
95% Percentile Bootstrap UCL	369.35	
95% BCA Bootstrap UCL	470.4392857	
Recommendations		
Human Inspection Recommended?	NO	
Appropriate Distribution	NON-PARAMETRIC	
1st Recommended UCL	734.9502238	97.5% Chebyshev (Mean, Sd) UCL
2nd Recommended UCL		
3rd Recommended UCL		
Recommended UCL > Max Data Value		
Recommendation Warning!	NONE	
Alternative UCL	NONE	

Data File	
Variable:	BENZO(a)ANTHRACENE
Raw Statistics	
Number of Observations	57
Number of Missing Data	0
Number of Valid Observations	57
Number of Distinct Observations	46
Minimum	0.012
Maximum	24
Mean	0.640131579
Standard Deviation	3.167495782
Variance	10.03302953
Coefficient of Variation	4.94819485
Skewness	7.419373389
Too Few Distinct Observations?	NO
Normal Statistics	
Lilliefors Test Statisitic	0.421403076
Lilliefors 5% Critical Value	0.117353567
Shapiro-Wilk Test Statisitic	N/A

Shapiro-Wilk 5% Critical Value	N/A	
5% Normality Test Result	NOT NORMAL	Data not normal at 5% significance level
95% Student's-t UCL	1.341829944	
Gamma Statistics		
k hat	0.381473315	
k star (bias corrected)	0.373091678	
Theta hat	1.678050743	
Theta star	1.715748746	
nu hat	43.48795786	
nu star	42.53245131	
5% Approximate Chi Square Value	28.57829291	
Adjusted Level of Significance	0.045789474	
Adjusted Chi Square Value	28.28111759	
Anderson-Darling Test Statistic	7.084478814	
Anderson-Darling 5% Critical Value	0.84363783	
Anderson-Darling 5% Gamma Test Result	NOT AD GAMMA	Data not gamma distributed at 5% significance level
Kolmogrov-Smirnov Test Statistic	0.283754263	
Kolmogrov-Smirnov 5% Critical Value	0.126604578	
Kolmogrov-Smirnov 5% Gamma Test Result	NOT KS GAMMA	Data not gamma distributed at 5% significance level
5% Gamma Test Result	NOT GAMMA	Data not gamma distributed at 5% significance level
95% Approximate Gamma UCL	0.952693896	
95% Adjusted Gamma UCL	0.962704714	
Lognormal Statistics		
Minimum of log data	-4.42284863	
Maximum of log data	3.17805383	
Mean of log data	-2.18433521	
Standard Deviation of log data	1.400242308	
Variance of log data	1.960678521	
Lilliefors Test Statisitic	0.17195609	
Lilliefors 5% Critical Value	0.117353567	
Shapiro-Wilk Test Statisitic	N/A	
Shapiro-Wilk 5% Critical Value	N/A	
5% Lognormality Test Result	NOT LOGNORMAL	Data not lognormal at 5% significance level
MLE Mean	0.299993058	
MLE Standard Deviation	0.741179931	
MLE Coefficient of Variation	2.470656945	
MLE Skewness	22.49322091	
MLE Median	0.112552533	
MLE 80% Quantile	0.367463805	
MLE 90% Quantile	0.680434414	
MLE 95% Quantile	1.126441321	
MLE 99% Quantile	2.923052368	
MVU Estimate of Median	0.110632736	
MVU Estimate of Mean	0.29038675	
MVU Estimate of Standard Deviation	0.632083736	
MVU Estimate of SE of Mean	0.070501872	
95% H-UCL	0.499792505	
95% Chebyshev (MVUE) UCL	0.597697284	
97.5% Chebyshev (MVUE) UCL	0.730670798	
99% Chebyshev (MVUE) UCL	0.991871516	
Non-parametric Statisitics		
95% CLT UCL	1.330221802	
95% Adjusted-CLT UCL	1.770765336	
95% Modified-t UCL	1.410545833	
95% Jackknife UCL	1.341829944	
95% Chebyshev (Mean, Sd) UCL	2.468886122	
97.5% Chebyshev (Mean, Sd) UCL	3.260189673	

99% Chebyshev (Mean, Sd) UCL	4.814552273	
Bootstrap Statistics		
Number of Bootstrap Runs	2000	
95% Standard Bootstrap UCL	1.313469645	
95% Bootstrap-t UCL	6.316993533	
95% Hall's Bootstrap UCL	3.820096488	
95% Percentile Bootstrap UCL	1.457429825	
95% BCA Bootstrap UCL	1.926087719	
Recommendations		
Human Inspection Recommended?	NO	
Appropriate Distribution	NON-PARAMETRIC	
1st Recommended UCL	3.260189673	97.5% Chebyshev (Mean, Sd) UCL
2nd Recommended UCL		
3rd Recommended UCL		
Recommended UCL > Max Data Value		
Recommendation Warning!	NONE	
Alternative UCL	NONE	

Data File		
Variable:	BENZO(a)PYRENE	
Raw Statistics		
Number of Observations	57	
Number of Missing Data	0	
Number of Valid Observations	57	
Number of Distinct Observations	48	
Minimum	0.012	
Maximum	19	
Mean	0.58727193	
Standard Deviation	2.518821373	
Variance	6.344461108	
Coefficient of Variation	4.289020545	
Skewness	7.228983574	
Too Few Distinct Observations?	NO	
Normal Statistics		
Lilliefors Test Statisitic	0.409671832	
Lilliefors 5% Critical Value	0.117353567	
Shapiro-Wilk Test Statisitic	N/A	
Shapiro-Wilk 5% Critical Value	N/A	
5% Normality Test Result	NOT NORMAL	Data not normal at 5% significance level
95% Student's-t UCL	1.145268834	
Gamma Statistics		
k hat	0.383693454	
k star (bias corrected)	0.375194968	
Theta hat	1.530575839	
Theta star	1.565244687	
nu hat	43.74105372	
nu star	42.77222633	
5% Approximate Chi Square Value	28.77513668	
Adjusted Level of Significance	0.045789474	
Adjusted Chi Square Value	28.47686801	
Anderson-Darling Test Statistic	5.5367504	
Anderson-Darling 5% Critical Value	0.843110158	
Anderson-Darling 5% Gamma Test Result	NOT AD GAMMA	Data not gamma distributed at 5% significance level
Kolmogrov-Smirnov Test Statistic	0.274729336	
Kolmogrov-Smirnov 5% Critical Value	0.126568378	
Kolmogrov-Smirnov 5% Gamma Test Result	NOT KS GAMMA	Data not gamma distributed at 5% significance level
5% Gamma Test Result	NOT GAMMA	Data not gamma distributed at 5% significance level
95% Approximate Gamma UCL	0.872938613	
95% Adjusted Gamma UCL	0.882081832	
Lognormal Statistics		
Minimum of log data	-4.42284863	
Maximum of log data	2.944438979	
Mean of log data	-2.2588406	
Standard Deviation of log data	1.539212278	
Variance of log data	2.369174437	
Lilliefors Test Statisitic	0.15377954	
Lilliefors 5% Critical Value	0.117353567	
Shapiro-Wilk Test Statisitic	N/A	
Shapiro-Wilk 5% Critical Value	N/A	
5% Lognormality Test Result	NOT LOGNORMAL	Data not lognormal at 5% significance level
MLE Mean	0.341552669	
MLE Standard Deviation	1.063132517	
MLE Coefficient of Variation	3.11264591	
MLE Skewness	39.49500858	
MLE Median	0.104471539	

MLE 80% Quantile	0.383580325	
MLE 90% Quantile	0.755063954	
MLE 95% Quantile	1.314115209	
MLE 99% Quantile	3.748542717	
MVU Estimate of Median	0.102322029	
MVU Estimate of Mean	0.327175266	
MVU Estimate of Standard Deviation	0.860384155	
MVU Estimate of SE of Mean	0.09026228	
95% H-UCL	0.619637801	
95% Chebyshev (MVUE) UCL	0.720619425	
97.5% Chebyshev (MVUE) UCL	0.890863026	
99% Chebyshev (MVUE) UCL	1.225273617	
Non-parametric Statisitics		
95% CLT UCL	1.136037934	
95% Adjusted-CLT UCL	1.477372418	
95% Modified-t UCL	1.198510115	
95% Jackknife UCL	1.145268834	
95% Chebyshev (Mean, Sd) UCL	2.041514127	
97.5% Chebyshev (Mean, Sd) UCL	2.670765888	
99% Chebyshev (Mean, Sd) UCL	3.906809125	
Bootstrap Statistics		
Number of Bootstrap Runs	2000	
95% Standard Bootstrap UCL	1.144691082	
95% Bootstrap-t UCL	3.601274249	
95% Hall's Bootstrap UCL	3.085605018	
95% Percentile Bootstrap UCL	1.232666667	
95% BCA Bootstrap UCL	1.605561404	
Recommendations		
Human Inspection Recommended?	NO	
Appropriate Distribution	NON-PARAMETRIC	
1st Recommended UCL	2.670765888	97.5% Chebyshev (Mean, Sd) UCL
2nd Recommended UCL		
3rd Recommended UCL		
Recommended UCL > Max Data Value		
Recommendation Warning!	NONE	
Alternative UCL	NONE	

Data File		
Variable:	BENZO(b)FLUORANTHENE	
Raw Statistics		
Number of Observations	57	
Number of Missing Data	0	
Number of Valid Observations	57	
Number of Distinct Observations	48	
Minimum	0.019	
Maximum	25	
Mean	0.794157895	
Standard Deviation	3.320231554	
Variance	11.02393757	
Coefficient of Variation	4.180820434	
Skewness	7.172610871	
Too Few Distinct Observations?	NO	
Normal Statistics		
Lilliefors Test Statisitic	0.407700211	
Lilliefors 5% Critical Value	0.117353567	
Shapiro-Wilk Test Statisitic	N/A	
Shapiro-Wilk 5% Critical Value	N/A	
5% Normality Test Result	NOT NORMAL	Data not normal at 5% significance level
95% Student's-t UCL	1.529691961	
Gamma Statistics		
k hat	0.396237513	
k star (bias corrected)	0.387078813	
Theta hat	2.004247124	
Theta star	2.051669758	
nu hat	45.17107642	
nu star	44.12698468	
5% Approximate Chi Square Value	29.88957831	
Adjusted Level of Significance	0.045789474	
Adjusted Chi Square Value	29.58518817	
Anderson-Darling Test Statistic	5.704727203	
Anderson-Darling 5% Critical Value	0.840128749	
Anderson-Darling 5% Gamma Test Result	NOT AD GAMMA	Data not gamma distributed at 5% significance level
Kolmogrov-Smirnov Test Statistic	0.257301747	
Kolmogrov-Smirnov 5% Critical Value	0.126363847	
Kolmogrov-Smirnov 5% Gamma Test Result	NOT KS GAMMA	Data not gamma distributed at 5% significance level
5% Gamma Test Result	NOT GAMMA	Data not gamma distributed at 5% significance level
95% Approximate Gamma UCL	1.172441876	
95% Adjusted Gamma UCL	1.18450466	
Lognormal Statistics		
Minimum of log data	-3.9633163	
Maximum of log data	3.218875825	
Mean of log data	-1.8937198	
Standard Deviation of log data	1.496859889	
Variance of log data	2.240589529	
Lilliefors Test Statisitic	0.174183708	
Lilliefors 5% Critical Value	0.117353567	
Shapiro-Wilk Test Statisitic	N/A	
Shapiro-Wilk 5% Critical Value	N/A	
5% Lognormality Test Result	NOT LOGNORMAL	Data not lognormal at 5% significance level
MLE Mean	0.461429944	
MLE Standard Deviation	1.337261119	
MLE Coefficient of Variation	2.898080495	
MLE Skewness	33.03484443	
MLE Median	0.150510896	

MLE 80% Quantile	0.533192266	
MLE 90% Quantile	1.030191962	
MLE 95% Quantile	1.765819195	
MLE 99% Quantile	4.893835248	
MVU Estimate of Median	0.147580607	
MVU Estimate of Mean	0.44352215	
MVU Estimate of Standard Deviation	1.100993252	
MVU Estimate of SE of Mean	0.117820372	
95% H-UCL	0.815039474	
95% Chebyshev (MVUE) UCL	0.957089244	
97.5% Chebyshev (MVUE) UCL	1.179310136	
99% Chebyshev (MVUE) UCL	1.615820048	
Non-parametric Statisitics		
95% CLT UCL	1.517524078	
95% Adjusted-CLT UCL	1.963951847	
95% Modified-t UCL	1.599325672	
95% Jackknife UCL	1.529691961	
95% Chebyshev (Mean, Sd) UCL	2.711094476	
97.5% Chebyshev (Mean, Sd) UCL	3.540554466	
99% Chebyshev (Mean, Sd) UCL	5.169868002	
Bootstrap Statistics		
Number of Bootstrap Runs	2000	
95% Standard Bootstrap UCL	1.504324485	
95% Bootstrap-t UCL	4.491493267	
95% Hall's Bootstrap UCL	3.896877439	
95% Percentile Bootstrap UCL	1.637482456	
95% BCA Bootstrap UCL	2.137157895	
Recommendations		
Human Inspection Recommended?	NO	
Appropriate Distribution	NON-PARAMETRIC	
1st Recommended UCL	3.540554466	97.5% Chebyshev (Mean, Sd) UCL
2nd Recommended UCL		
3rd Recommended UCL		
Recommended UCL > Max Data Value		
Recommendation Warning!	NONE	
Alternative UCL	NONE	

Data File		
Variable:	Dibenzo(a,h)anthracene	
Raw Statistics		
Number of Observations	57	
Number of Missing Data	0	
Number of Valid Observations	57	
Number of Distinct Observations	38	
Minimum	0.014	
Maximum	2.2	
Mean	0.17954386	
Standard Deviation	0.361242416	
Variance	0.130496083	
Coefficient of Variation	2.012000947	
Skewness	4.541718238	
Too Few Distinct Observations?	NO	
Normal Statistics		
Lilliefors Test Statisitic	0.365647181	
Lilliefors 5% Critical Value	0.117353567	
Shapiro-Wilk Test Statisitic	N/A	
Shapiro-Wilk 5% Critical Value	N/A	
5% Normality Test Result	NOT NORMAL	Data not normal at 5% significance level
95% Student's-t UCL	0.259570237	
Gamma Statistics		
k hat	0.818759468	
k star (bias corrected)	0.787362771	
Theta hat	0.219287674	
Theta star	0.228031939	
nu hat	93.33857938	
nu star	89.7593559	
5% Approximate Chi Square Value	68.91098325	
Adjusted Level of Significance	0.045789474	
Adjusted Chi Square Value	68.43768695	
Anderson-Darling Test Statistic	4.129581865	
Anderson-Darling 5% Critical Value	0.78885473	
Anderson-Darling 5% Gamma Test Result	NOT AD GAMMA	Data not gamma distributed at 5% significance level
Kolmogrov-Smirnov Test Statistic	0.279813665	
Kolmogrov-Smirnov 5% Critical Value	0.122230626	
Kolmogrov-Smirnov 5% Gamma Test Result	NOT KS GAMMA	Data not gamma distributed at 5% significance level
5% Gamma Test Result	NOT GAMMA	Data not gamma distributed at 5% significance level
95% Approximate Gamma UCL	0.233863173	
95% Adjusted Gamma UCL	0.235480507	
Lognormal Statistics		
Minimum of log data	-4.26869795	
Maximum of log data	0.78845736	
Mean of log data	-2.44000547	
Standard Deviation of log data	1.078372017	
Variance of log data	1.162886207	
Lilliefors Test Statisitic	0.180371106	
Lilliefors 5% Critical Value	0.117353567	
Shapiro-Wilk Test Statisitic	N/A	
Shapiro-Wilk 5% Critical Value	N/A	
5% Lognormality Test Result	NOT LOGNORMAL	Data not lognormal at 5% significance level
MLE Mean	0.155896592	
MLE Standard Deviation	0.231187518	
MLE Coefficient of Variation	1.482954276	
MLE Skewness	7.710106739	

MLE Median	0.087160375	
MLE 80% Quantile	0.216799761	
MLE 90% Quantile	0.348437145	
MLE 95% Quantile	0.513716615	
MLE 99% Quantile	1.070673452	
MVU Estimate of Median	0.086275638	
MVU Estimate of Mean	0.153469838	
MVU Estimate of Standard Deviation	0.214275471	
MVU Estimate of SE of Mean	0.026435285	
95% H-UCL	0.219293257	
95% Chebyshev (MVUE) UCL	0.268698574	
97.5% Chebyshev (MVUE) UCL	0.318558141	
99% Chebyshev (MVUE) UCL	0.416497603	
Non-parametric Statisitics		
95% CLT UCL	0.258246367	
95% Adjusted-CLT UCL	0.289001987	
95% Modified-t UCL	0.264367492	
95% Jackknife UCL	0.259570237	
95% Chebyshev (Mean, Sd) UCL	0.388107266	
97.5% Chebyshev (Mean, Sd) UCL	0.478352818	
99% Chebyshev (Mean, Sd) UCL	0.655622731	
Bootstrap Statistics		
Number of Bootstrap Runs	2000	
95% Standard Bootstrap UCL	0.258323301	
95% Bootstrap-t UCL	0.407754614	
95% Hall's Bootstrap UCL	0.58469676	
95% Percentile Bootstrap UCL	0.262464912	
95% BCA Bootstrap UCL	0.297736842	
Recommendations		
Human Inspection Recommended?	NO	
Appropriate Distribution	NON-PARAMETRIC	
1st Recommended UCL	0.478352818	97.5% Chebyshev (Mean, Sd) UCL
2nd Recommended UCL		
3rd Recommended UCL		
Recommended UCL > Max Data Value		
Recommendation Warning!	NONE	
Alternative UCL	NONE	

Data File		
Variable:	Indeno(1,2,3-cd)pyrene	
Raw Statistics		
Number of Observations	57	
Number of Missing Data	0	
Number of Valid Observations	57	
Number of Distinct Observations	47	
Minimum	0.016	
Maximum	6.9	
Mean	0.326026316	
Standard Deviation	0.943675562	
Variance	0.890523566	
Coefficient of Variation	2.894476661	
Skewness	6.34327465	
Too Few Distinct Observations?	NO	
Normal Statistics		
Lilliefors Test Statisitic	0.371255313	
Lilliefors 5% Critical Value	0.117353567	
Shapiro-Wilk Test Statisitic	N/A	
Shapiro-Wilk 5% Critical Value	N/A	
5% Normality Test Result	NOT NORMAL	Data not normal at 5% significance level
95% Student's-t UCL	0.535079664	
Gamma Statistics		
k hat	0.561528671	
k star (bias corrected)	0.543670437	
Theta hat	0.580604931	
Theta star	0.599676373	
nu hat	64.01426854	
nu star	61.97842985	
5% Approximate Chi Square Value	44.86747654	
Adjusted Level of Significance	0.045789474	
Adjusted Chi Square Value	44.4897674	
Anderson-Darling Test Statistic	4.186470352	
Anderson-Darling 5% Critical Value	0.80980144	
Anderson-Darling 5% Gamma Test Result	NOT AD GAMMA	Data not gamma distributed at 5% significance level
Kolmogrov-Smirnov Test Statistic	0.274882329	
Kolmogrov-Smirnov 5% Critical Value	0.124159343	
Kolmogrov-Smirnov 5% Gamma Test Result	NOT KS GAMMA	Data not gamma distributed at 5% significance level
5% Gamma Test Result	NOT GAMMA	Data not gamma distributed at 5% significance level
95% Approximate Gamma UCL	0.450361837	
95% Adjusted Gamma UCL	0.454185318	
Lognormal Statistics		
Minimum of log data	-4.13516656	
Maximum of log data	1.931521412	
Mean of log data	-2.2320467	
Standard Deviation of log data	1.286347031	
Variance of log data	1.654688684	
Lilliefors Test Statisitic	0.173639083	
Lilliefors 5% Critical Value	0.117353567	
Shapiro-Wilk Test Statisitic	N/A	
Shapiro-Wilk 5% Critical Value	N/A	
5% Lognormality Test Result	NOT LOGNORMAL	Data not lognormal at 5% significance level
MLE Mean	0.245440099	
MLE Standard Deviation	0.504882336	
MLE Coefficient of Variation	2.057049108	
MLE Skewness	14.8754499	

MLE Median	0.107308577	
MLE 80% Quantile	0.31819736	
MLE 90% Quantile	0.560407677	
MLE 95% Quantile	0.890470028	
MLE 99% Quantile	2.138268723	
MVU Estimate of Median	0.105761878	
MVU Estimate of Mean	0.2392572	
MVU Estimate of Standard Deviation	0.44587605	
MVU Estimate of SE of Mean	0.051868213	
95% H-UCL	0.383470682	
95% Chebyshev (MVUE) UCL	0.465345499	
97.5% Chebyshev (MVUE) UCL	0.563174087	
99% Chebyshev (MVUE) UCL	0.755339404	
Non-parametric Statisitics		
95% CLT UCL	0.531621311	
95% Adjusted-CLT UCL	0.643833951	
95% Modified-t UCL	0.552582568	
95% Jackknife UCL	0.535079664	
95% Chebyshev (Mean, Sd) UCL	0.870857656	
97.5% Chebyshev (Mean, Sd) UCL	1.106606611	
99% Chebyshev (Mean, Sd) UCL	1.569689785	
Bootstrap Statistics		
Number of Bootstrap Runs	2000	
95% Standard Bootstrap UCL	0.526596115	
95% Bootstrap-t UCL	0.99178655	
95% Hall's Bootstrap UCL	1.276733777	
95% Percentile Bootstrap UCL	0.568333333	
95% BCA Bootstrap UCL	0.713535088	
Recommendations		
Human Inspection Recommended?	NO	
Appropriate Distribution	NON-PARAMETRIC	
1st Recommended UCL	1.106606611	97.5% Chebyshev (Mean, Sd) UCL
2nd Recommended UCL		
3rd Recommended UCL		
Recommended UCL > Max Data Value		
Recommendation Warning!	NONE	
Alternative UCL	NONE	

Data File		
Variable:	Lead	
Raw Statistics		
Number of Observations	13	
Number of Missing Data	0	
Number of Valid Observations	13	
Number of Distinct Observations	13	
Minimum	15.7	
Maximum	1030	
Mean	137.0076923	
Standard Deviation	272.0103995	
Variance	73989.65744	
Coefficient of Variation	1.985365894	
Skewness	3.439334578	
Too Few Distinct Observations?	NO	
Normal Statistics		
Lilliefors Test Statisitic	N/R	Shapiro Wilk method yields a more accurate result
Lilliefors 5% Critical Value	N/R	Shapiro Wilk method yields a more accurate result
Shapiro-Wilk Test Statisitic	0.453460101	
Shapiro-Wilk 5% Critical Value	0.866	
5% Normality Test Result	NOT NORMAL	Data not normal at 5% significance level
95% Student's-t UCL	271.4672216	
Gamma Statistics		
k hat	0.74135554	
k star (bias corrected)	0.621555544	
Theta hat	184.8069987	
Theta star	220.4271102	
nu hat	19.27524404	
nu star	16.16044413	
5% Approximate Chi Square Value	8.074219631	
Adjusted Level of Significance	0.03009	
Adjusted Chi Square Value	7.273079454	
Anderson-Darling Test Statistic	1.202304226	
Anderson-Darling 5% Critical Value	0.770989109	
Anderson-Darling 5% Gamma Test Result	NOT AD GAMMA	Data not gamma distributed at 5% significance level
Kolmogrov-Smirnov Test Statistic	0.249813412	
Kolmogrov-Smirnov 5% Critical Value	0.246006237	
Kolmogrov-Smirnov 5% Gamma Test Result	NOT KS GAMMA	Data not gamma distributed at 5% significance level
5% Gamma Test Result	NOT GAMMA	Data not gamma distributed at 5% significance level
95% Approximate Gamma UCL	274.2190897	
95% Adjusted Gamma UCL	304.4247174	
Lognormal Statistics		
Minimum of log data	2.753660712	
Maximum of log data	6.937314081	
Mean of log data	4.111277697	
Standard Deviation of log data	1.125847347	
Variance of log data	1.267532249	
Lilliefors Test Statisitic	N/R	Shapiro Wilk method yields a more accurate result
Lilliefors 5% Critical Value	N/R	Shapiro Wilk method yields a more accurate result
Shapiro-Wilk Test Statisitic	0.909020983	
Shapiro-Wilk 5% Critical Value	0.866	
5% Lognormality Test Result	LOGNORMAL	Data are lognormal at 5% significance level
MLE Mean	115.0128454	
MLE Standard Deviation	183.7355349	
MLE Coefficient of Variation	1.597521861	
MLE Skewness	8.869562939	
MLE Median	61.02463879	
MLE 80% Quantile	158.0037403	
MLE 90% Quantile	259.3015157	
MLE 95% Quantile	388.8900216	
MLE 99% Quantile	837.1461158	

MVU Estimate of Median	58.11101889	
MVU Estimate of Mean	107.1219554	
MVU Estimate of Standard Deviation	137.2584502	
MVU Estimate of SE of Mean	36.44617579	
95% H-UCL	313.1324597	
95% Chebyshev (MVUE) UCL	265.9871525	
97.5% Chebyshev (MVUE) UCL	334.7282502	
99% Chebyshev (MVUE) UCL	469.7568258	
Non-parametric Statisitics		
95% CLT UCL	261.0989223	
95% Adjusted-CLT UCL	337.9937266	
95% Modified-t UCL	283.4612571	
95% Jackknife UCL	271.4672216	
95% Chebyshev (Mean, Sd) UCL	465.8522302	
97.5% Chebyshev (Mean, Sd) UCL	608.1435244	
99% Chebyshev (Mean, Sd) UCL	887.6472189	
Bootstrap Statistics		
Number of Bootstrap Runs	2000	
95% Standard Bootstrap UCL	253.6370358	
95% Bootstrap-t UCL	831.8149225	
95% Hall's Bootstrap UCL	742.1700735	
95% Percentile Bootstrap UCL	281.4923077	
95% BCA Bootstrap UCL	361.6307692	
Recommendations		
Human Inspection Recommended?	NO	
Appropriate Distribution	LOGNORMAL	
1st Recommended UCL	265.9871525	95% Chebyshev (MVUE) UCL
2nd Recommended UCL		
3rd Recommended UCL		
Recommended UCL > Max Data Value		
Recommendation Warning!	NONE	
Alternative UCL	NONE	

Data File		
Variable:	Alpha-chlordane	
Raw Statistics		
Number of Observations	6	
Number of Missing Data	0	
Number of Valid Observations	6	
Number of Distinct Observations	2	
Minimum	0.000425	
Maximum	13	
Mean	2.167020833	
Standard Deviation	5.307054271	
Variance	28.16482503	
Coefficient of Variation	2.449009344	
Skewness	2.449489743	
Too Few Distinct Observations?	NO	
Normal Statistics		
Lilliefors Test Statisitic	N/R	Shapiro Wilk method yields a more accurate result
Lilliefors 5% Critical Value	N/R	Shapiro Wilk method yields a more accurate result
Shapiro-Wilk Test Statisitic	0.496293132	
Shapiro-Wilk 5% Critical Value	0.788	
5% Normality Test Result	NOT NORMAL	Data not normal at 5% significance level
95% Student's-t UCL	6.532815939	
Gamma Statistics		
k hat	0.116783473	
k star (bias corrected)	0.169502848	
Theta hat	18.55588614	
Theta star	12.78456889	

nu hat	1.401401679	
nu star	2.034034173	
5% Approximate Chi Square Value	0.155253975	
Adjusted Level of Significance	0.01222	
Adjusted Chi Square Value	0.087055348	
Anderson-Darling Test Statistic	1.673282083	
Anderson-Darling 5% Critical Value	0.837544158	
Anderson-Darling 5% Gamma Test Result	NOT AD GAMMA	Data not gamma distributed at 5% significance level
Kolmogrov-Smirnov Test Statistic	0.52940315	
Kolmogrov-Smirnov 5% Critical Value	0.367982365	
Kolmogrov-Smirnov 5% Gamma Test Result	NOT KS GAMMA	Data not gamma distributed at 5% significance level
5% Gamma Test Result	NOT GAMMA	Data not gamma distributed at 5% significance level
95% Approximate Gamma UCL	28.39086354	
95% Adjusted Gamma UCL	50.63209234	
Lognormal Statistics		
Minimum of log data	-7.76342139	
Maximum of log data	2.564949357	
Mean of log data	-6.04202627	
Standard Deviation of log data	4.216539701	
Variance of log data	17.77920705	
Lilliefors Test Statisitic	N/R	Shapiro Wilk method yields a more accurate result
Lilliefors 5% Critical Value	N/R	Shapiro Wilk method yields a more accurate result
Shapiro-Wilk Test Statisitic	0.496293132	
Shapiro-Wilk 5% Critical Value	0.788	
5% Lognormality Test Result	NOT LOGNORMAL	Data not lognormal at 5% significance level
MLE Mean	17.24594871	
MLE Standard Deviation	125139.0468	
MLE Coefficient of Variation	7256.141652	
MLE Skewness	3.82E+11	
MLE Median	0.002376738	
MLE 80% Quantile	0.083822801	
MLE 90% Quantile	0.535918732	
MLE 95% Quantile	2.445333569	
MLE 99% Quantile	43.19155884	
MVU Estimate of Median	0.000284459	
MVU Estimate of Mean	0.232645649	
MVU Estimate of Standard Deviation	0.895725422	
MVU Estimate of SE of Mean	0.225060003	
95% H-UCL	8.65E+14	
95% Chebyshev (MVUE) UCL	1.21365946	
97.5% Chebyshev (MVUE) UCL	1.638144919	
99% Chebyshev (MVUE) UCL	2.471964407	
Non-parametric Statisitics		
95% CLT UCL	5.73075385	
95% Adjusted-CLT UCL	8.045792883	
95% Modified-t UCL	6.893915245	
95% Jackknife UCL	6.532815939	
95% Chebyshev (Mean, Sd) UCL	11.61099312	
97.5% Chebyshev (Mean, Sd) UCL	15.69740748	
99% Chebyshev (Mean, Sd) UCL	23.72437719	
Bootstrap Statistics		
Number of Bootstrap Runs	2000	
95% Standard Bootstrap UCL	N/R	Not enough distinct data warning
95% Bootstrap-t UCL	N/R	Not enough distinct data warning
95% Hall's Bootstrap UCL	N/A	Not enough distinct data error
95% Percentile Bootstrap UCL	N/R	Not enough distinct data warning
95% BCA Bootstrap UCL	N/R	Not enough distinct data warning
Recommendations		
Human Inspection Recommended?	YES	
Appropriate Distribution	NON-PARAMETRIC	
1st Recommended UCL	N/A	95% Hall's Bootstrap UCL

2nd Recommended UCL		
3rd Recommended UCL		
Recommended UCL > Max Data Value		
Recommendation Warning!	PLEASE CHECK	Hall's Bootstrap/Bootstrap-t may yield erratic values,
Alternative UCL	NONE	in that case use 99% Chebyshev (Mean, Sd) UCL

Data File		
Variable:	BENZO(a)ANTHRACENE	
Raw Statistics		
Number of Observations	13	
Number of Missing Data	0	
Number of Valid Observations	13	
Number of Distinct Observations	12	
Minimum	0.03	
Maximum	4.2	
Mean	0.503269231	
Standard Deviation	1.147460886	
Variance	1.316666484	
Coefficient of Variation	2.280013987	
Skewness	3.257463192	
Too Few Distinct Observations?	NO	
Normal Statistics		
Lilliefors Test Statisitic	N/R	Shapiro Wilk method yields a more accurate result
Lilliefors 5% Critical Value	N/R	Shapiro Wilk method yields a more accurate result
Shapiro-Wilk Test Statisitic	0.461894361	
Shapiro-Wilk 5% Critical Value	0.866	
5% Normality Test Result	NOT NORMAL	Data not normal at 5% significance level
95% Student's-t UCL	1.070479348	
Gamma Statistics		
k hat	0.4954609	
k star (bias corrected)	0.43240582	
Theta hat	1.015759732	
Theta star	1.163881722	
nu hat	12.88198339	
nu star	11.24255133	
5% Approximate Chi Square Value	4.731516788	
Adjusted Level of Significance	0.03009	
Adjusted Chi Square Value	4.145866423	
Anderson-Darling Test Statistic	1.604156233	
Anderson-Darling 5% Critical Value	0.790854416	
Anderson-Darling 5% Gamma Test Result	NOT AD GAMMA	Data not gamma distributed at 5% significance level
Kolmogrov-Smirnov Test Statistic	0.330191217	
Kolmogrov-Smirnov 5% Critical Value	0.249958202	
Kolmogrov-Smirnov 5% Gamma Test Result	NOT KS GAMMA	Data not gamma distributed at 5% significance level
5% Gamma Test Result	NOT GAMMA	Data not gamma distributed at 5% significance level
95% Approximate Gamma UCL	1.195817412	
95% Adjusted Gamma UCL	1.3647401	
Lognormal Statistics		
Minimum of log data	-3.5065579	
Maximum of log data	1.435084525	
Mean of log data	-1.97044765	
Standard Deviation of log data	1.4230166	
Variance of log data	2.024976244	
Lilliefors Test Statisitic	N/R	Shapiro Wilk method yields a more accurate result
Lilliefors 5% Critical Value	N/R	Shapiro Wilk method yields a more accurate result
Shapiro-Wilk Test Statisitic	0.858975255	
Shapiro-Wilk 5% Critical Value	0.866	
5% Lognormality Test Result	NOT LOGNORMAL	Data not lognormal at 5% significance level
MLE Mean	0.383674966	
MLE Standard Deviation	0.983879895	
MLE Coefficient of Variation	2.564357808	
MLE Skewness	24.55611335	
MLE Median	0.139394443	
MLE 80% Quantile	0.463940661	
MLE 90% Quantile	0.867732911	
MLE 95% Quantile	1.448335054	
MLE 99% Quantile	3.81709233	

MVU Estimate of Median	0.1288933	
MVU Estimate of Mean	0.336179587	
MVU Estimate of Standard Deviation	0.581251709	
MVU Estimate of SE of Mean	0.147161773	
95% H-UCL	1.716864733	
95% Chebyshev (MVUE) UCL	0.977642883	
97.5% Chebyshev (MVUE) UCL	1.255204563	
99% Chebyshev (MVUE) UCL	1.800420738	
Non-parametric Statisitics		
95% CLT UCL	1.026741248	
95% Adjusted-CLT UCL	1.333964774	
95% Modified-t UCL	1.118400009	
95% Jackknife UCL	1.070479348	
95% Chebyshev (Mean, Sd) UCL	1.890481798	
97.5% Chebyshev (Mean, Sd) UCL	2.490729784	
99% Chebyshev (Mean, Sd) UCL	3.669800722	
Bootstrap Statistics		
Number of Bootstrap Runs	2000	
95% Standard Bootstrap UCL	0.995391938	
95% Bootstrap-t UCL	5.257157347	
95% Hall's Bootstrap UCL	3.548325298	
95% Percentile Bootstrap UCL	1.113653846	
95% BCA Bootstrap UCL	1.457	
Recommendations		
Human Inspection Recommended?	NO	
Appropriate Distribution	NON-PARAMETRIC	
1st Recommended UCL	3.669800722	99% Chebyshev (Mean, Sd) UCL
2nd Recommended UCL		
3rd Recommended UCL		
Recommended UCL > Max Data Value		
Recommendation Warning!	NONE	
Alternative UCL	NONE	

Data File		
Variable:	BENZO(a)PYRENE	
Raw Statistics		
Number of Observations	13	
Number of Missing Data	0	
Number of Valid Observations	13	
Number of Distinct Observations	12	
Minimum	0.0425	
Maximum	5.1	
Mean	0.599692308	
Standard Deviation	1.381929939	
Variance	1.909730356	
Coefficient of Variation	2.304398307	
Skewness	3.360849047	
Too Few Distinct Observations?	NO	
Normal Statistics		
Lilliefors Test Statisitic	N/R	Shapiro Wilk method yields a more accurate result
Lilliefors 5% Critical Value	N/R	Shapiro Wilk method yields a more accurate result
Shapiro-Wilk Test Statisitic	0.448783803	
Shapiro-Wilk 5% Critical Value	0.866	
5% Normality Test Result	NOT NORMAL	Data not normal at 5% significance level
95% Student's-t UCL	1.282804606	
Gamma Statistics		
k hat	0.511347914	
k star (bias corrected)	0.4446266	
Theta hat	1.172767683	
Theta star	1.348754904	
nu hat	13.29504576	
nu star	11.56029161	
5% Approximate Chi Square Value	4.937878566	
Adjusted Level of Significance	0.03009	
Adjusted Chi Square Value	4.337135677	
Anderson-Darling Test Statistic	1.390338317	
Anderson-Darling 5% Critical Value	0.789058508	
Anderson-Darling 5% Gamma Test Result	NOT AD GAMMA	Data not gamma distributed at 5% significance level
Kolmogrov-Smirnov Test Statistic	0.263436261	
Kolmogrov-Smirnov 5% Critical Value	0.249631157	
Kolmogrov-Smirnov 5% Gamma Test Result	NOT KS GAMMA	Data not gamma distributed at 5% significance level
5% Gamma Test Result	NOT GAMMA	Data not gamma distributed at 5% significance level
95% Approximate Gamma UCL	1.403966877	
95% Adjusted Gamma UCL	1.598432345	
Lognormal Statistics		
Minimum of log data	-3.1582512	
Maximum of log data	1.62924054	
Mean of log data	-1.74920418	
Standard Deviation of log data	1.408423545	
Variance of log data	1.983656883	
Lilliefors Test Statisitic	N/R	Shapiro Wilk method yields a more accurate result
Lilliefors 5% Critical Value	N/R	Shapiro Wilk method yields a more accurate result
Shapiro-Wilk Test Statisitic	0.883413988	
Shapiro-Wilk 5% Critical Value	0.866	
5% Lognormality Test Result	LOGNORMAL	Data are lognormal at 5% significance level
MLE Mean	0.468895316	
MLE Standard Deviation	1.17404471	
MLE Coefficient of Variation	2.503852499	
MLE Skewness	23.20890323	
MLE Median	0.173912291	
MLE 80% Quantile	0.571731223	
MLE 90% Quantile	1.062495167	
MLE 95% Quantile	1.764121	
MLE 99% Quantile	4.603371564	

MVU Estimate of Median	0.16106942	
MVU Estimate of Mean	0.412351678	
MVU Estimate of Standard Deviation	0.70325052	
MVU Estimate of SE of Mean	0.178549266	
95% H-UCL	2.042183281	
95% Chebyshev (MVUE) UCL	1.190629886	
97.5% Chebyshev (MVUE) UCL	1.527391489	
99% Chebyshev (MVUE) UCL	2.188894447	
Non-parametric Statisitics		
95% CLT UCL	1.230129181	
95% Adjusted-CLT UCL	1.611873071	
95% Modified-t UCL	1.342348938	
95% Jackknife UCL	1.282804606	
95% Chebyshev (Mean, Sd) UCL	2.270364138	
97.5% Chebyshev (Mean, Sd) UCL	2.993265174	
99% Chebyshev (Mean, Sd) UCL	4.413264278	
Bootstrap Statistics		
Number of Bootstrap Runs	2000	
95% Standard Bootstrap UCL	1.205211408	
95% Bootstrap-t UCL	6.473655079	
95% Hall's Bootstrap UCL	3.777815704	
95% Percentile Bootstrap UCL	1.327115385	
95% BCA Bootstrap UCL	1.793153846	
Recommendations		
Human Inspection Recommended?	NO	
Appropriate Distribution	LOGNORMAL	
1st Recommended UCL	1.190629886	95% Chebyshev (MVUE) UCL
2nd Recommended UCL		
3rd Recommended UCL		
Recommended UCL > Max Data Value		
Recommendation Warning!	NONE	
Alternative UCL	NONE	

Data File		
Variable:	BENZO(b)FLUORANTHENE	
Raw Statistics		
Number of Observations	13	
Number of Missing Data	0	
Number of Valid Observations	13	
Number of Distinct Observations	12	
Minimum	0.0425	
Maximum	7.1	
Mean	0.702230769	
Standard Deviation	1.927870367	
Variance	3.716684151	
Coefficient of Variation	2.745351601	
Skewness	3.569216066	
Too Few Distinct Observations?	NO	
Normal Statistics		
Lilliefors Test Statisitic	N/R	Shapiro Wilk method yields a more accurate result
Lilliefors 5% Critical Value	N/R	Shapiro Wilk method yields a more accurate result
Shapiro-Wilk Test Statisitic	0.371661149	
Shapiro-Wilk 5% Critical Value	0.866	
5% Normality Test Result	NOT NORMAL	Data not normal at 5% significance level
95% Student's-t UCL	1.655211032	
Gamma Statistics		
k hat	0.444139028	
k star (bias corrected)	0.392927457	
Theta hat	1.581105746	
Theta star	1.78717663	
nu hat	11.54761473	
nu star	10.21611389	
5% Approximate Chi Square Value	4.076426114	
Adjusted Level of Significance	0.03009	
Adjusted Chi Square Value	3.540887842	
Anderson-Darling Test Statistic	1.995793365	
Anderson-Darling 5% Critical Value	0.801080299	
Anderson-Darling 5% Gamma Test Result	NOT AD GAMMA	Data not gamma distributed at 5% significance level
Kolmogrov-Smirnov Test Statistic	0.319647893	
Kolmogrov-Smirnov 5% Critical Value	0.251633861	
Kolmogrov-Smirnov 5% Gamma Test Result	NOT KS GAMMA	Data not gamma distributed at 5% significance level
5% Gamma Test Result	NOT GAMMA	Data not gamma distributed at 5% significance level
95% Approximate Gamma UCL	1.759891954	
95% Adjusted Gamma UCL	2.026065167	
Lognormal Statistics		
Minimum of log data	-3.1582512	
Maximum of log data	1.960094784	
Mean of log data	-1.81048729	
Standard Deviation of log data	1.396521752	
Variance of log data	1.950273005	
Lilliefors Test Statisitic	N/R	Shapiro Wilk method yields a more accurate result
Lilliefors 5% Critical Value	N/R	Shapiro Wilk method yields a more accurate result
Shapiro-Wilk Test Statisitic	0.826317101	
Shapiro-Wilk 5% Critical Value	0.866	
5% Lognormality Test Result	NOT LOGNORMAL	Data not lognormal at 5% significance level
MLE Mean	0.433722312	
MLE Standard Deviation	1.065104618	
MLE Coefficient of Variation	2.455729364	
MLE Skewness	22.17672606	
MLE Median	0.16357441	
MLE 80% Quantile	0.53236475	
MLE 90% Quantile	0.984169802	
MLE 95% Quantile	1.627086508	
MLE 99% Quantile	4.211514452	

MVU Estimate of Median	0.151691748	
MVU Estimate of Mean	0.382536017	
MVU Estimate of Standard Deviation	0.645107884	
MVU Estimate of SE of Mean	0.164156404	
95% H-UCL	1.848146991	
95% Chebyshev (MVUE) UCL	1.098077192	
97.5% Chebyshev (MVUE) UCL	1.40769243	
99% Chebyshev (MVUE) UCL	2.015871612	
Non-parametric Statisitics		
95% CLT UCL	1.581725838	
95% Adjusted-CLT UCL	2.147297615	
95% Modified-t UCL	1.7434288	
95% Jackknife UCL	1.655211032	
95% Chebyshev (Mean, Sd) UCL	3.032912394	
97.5% Chebyshev (Mean, Sd) UCL	4.041400195	
99% Chebyshev (Mean, Sd) UCL	6.022379198	
Bootstrap Statistics		
Number of Bootstrap Runs	2000	
95% Standard Bootstrap UCL	1.566928888	
95% Bootstrap-t UCL	10.54301954	
95% Hall's Bootstrap UCL	6.664820676	
95% Percentile Bootstrap UCL	1.761346154	
95% BCA Bootstrap UCL	2.309576923	
Recommendations		
Human Inspection Recommended?	NO	
Appropriate Distribution	NON-PARAMETRIC	
1st Recommended UCL	6.022379198	99% Chebyshev (Mean, Sd) UCL
2nd Recommended UCL		
3rd Recommended UCL		
Recommended UCL > Max Data Value		
Recommendation Warning!	NONE	
Alternative UCL	NONE	

Data File		
Variable:	Dibenzo(a,h)anthracene	
Raw Statistics		
Number of Observations	13	
Number of Missing Data	0	
Number of Valid Observations	13	
Number of Distinct Observations	11	
Minimum	0.022	
Maximum	1.1	
Mean	0.206769231	
Standard Deviation	0.363641342	
Variance	0.132235026	
Coefficient of Variation	1.758682086	
Skewness	2.184977185	
Too Few Distinct Observations?	NO	
Normal Statistics		
Lilliefors Test Statisitic	N/R	Shapiro Wilk method yields a more accurate result
Lilliefors 5% Critical Value	N/R	Shapiro Wilk method yields a more accurate result
Shapiro-Wilk Test Statisitic	0.530677525	
Shapiro-Wilk 5% Critical Value	0.866	
5% Normality Test Result	NOT NORMAL	Data not normal at 5% significance level
95% Student's-t UCL	0.386523548	
Gamma Statistics		
k hat	0.655196537	
k star (bias corrected)	0.555279387	
Theta hat	0.315583522	
Theta star	0.372369722	
nu hat	17.03510995	
nu star	14.43726406	
5% Approximate Chi Square Value	6.870635487	
Adjusted Level of Significance	0.03009	
Adjusted Chi Square Value	6.14100315	
Anderson-Darling Test Statistic	1.887104061	
Anderson-Darling 5% Critical Value	0.77775776	
Anderson-Darling 5% Gamma Test Result	NOT AD GAMMA	Data not gamma distributed at 5% significance level
Kolmogrov-Smirnov Test Statistic	0.336127332	
Kolmogrov-Smirnov 5% Critical Value	0.247364103	
Kolmogrov-Smirnov 5% Gamma Test Result	NOT KS GAMMA	Data not gamma distributed at 5% significance level
5% Gamma Test Result	NOT GAMMA	Data not gamma distributed at 5% significance level
95% Approximate Gamma UCL	0.434484116	
95% Adjusted Gamma UCL	0.486106571	
Lognormal Statistics		
Minimum of log data	-3.81671283	
Maximum of log data	0.09531018	
Mean of log data	-2.50720317	
Standard Deviation of log data	1.225761574	
Variance of log data	1.502491436	
Lilliefors Test Statisitic	N/R	Shapiro Wilk method yields a more accurate result
Lilliefors 5% Critical Value	N/R	Shapiro Wilk method yields a more accurate result
Shapiro-Wilk Test Statisitic	0.804986248	
Shapiro-Wilk 5% Critical Value	0.866	
5% Lognormality Test Result	NOT LOGNORMAL	Data not lognormal at 5% significance level
MLE Mean	0.172741771	
MLE Standard Deviation	0.322840868	
MLE Coefficient of Variation	1.868921837	
MLE Skewness	12.13466435	
MLE Median	0.081495851	
MLE 80% Quantile	0.229595861	
MLE 90% Quantile	0.393726194	
MLE 95% Quantile	0.612120951	
MLE 99% Quantile	1.410463324	

MVU Estimate of Median	0.076901326	
MVU Estimate of Mean	0.158083655	
MVU Estimate of Standard Deviation	0.225224623	
MVU Estimate of SE of Mean	0.058984858	
95% H-UCL	0.54894538	
95% Chebyshev (MVUE) UCL	0.415192689	
97.5% Chebyshev (MVUE) UCL	0.526443974	
99% Chebyshev (MVUE) UCL	0.74497558	
Non-parametric Statisitics		
95% CLT UCL	0.372662526	
95% Adjusted-CLT UCL	0.437969148	
95% Modified-t UCL	0.396710061	
95% Jackknife UCL	0.386523548	
95% Chebyshev (Mean, Sd) UCL	0.646390177	
97.5% Chebyshev (Mean, Sd) UCL	0.836614511	
99% Chebyshev (Mean, Sd) UCL	1.210273381	
Bootstrap Statistics		
Number of Bootstrap Runs	2000	
95% Standard Bootstrap UCL	0.365308906	
95% Bootstrap-t UCL	1.966342903	
95% Hall's Bootstrap UCL	1.500621891	
95% Percentile Bootstrap UCL	0.370615385	
95% BCA Bootstrap UCL	0.433846154	
Recommendations		
Human Inspection Recommended?	YES	
Appropriate Distribution	NON-PARAMETRIC	
1st Recommended UCL	1.210273381	99% Chebyshev (Mean, Sd) UCL
2nd Recommended UCL		
3rd Recommended UCL		
Recommended UCL > Max Data Value	YES	Recommended UCL exceeds the maximum data value
Recommendation Warning!	NONE	
Alternative UCL	YES	Cosider using 95% or 97.5% Chebyshev (Mean, Sd) UCL

Data File		
Variable:	Copper	
Raw Statistics		
Number of Observations	11	
Number of Missing Data	0	
Number of Valid Observations	11	
Number of Distinct Observations	11	
Minimum	1.9	
Maximum	312	
Mean	52.80909091	
Standard Deviation	93.32191012	
Variance	8708.978909	
Coefficient of Variation	1.767156157	
Skewness	2.561293925	
Too Few Distinct Observations?	NO	
Normal Statistics		
Lilliefors Test Statisitic	N/R	Shapiro Wilk method yields a more accurate result
Lilliefors 5% Critical Value	N/R	Shapiro Wilk method yields a more accurate result
Shapiro-Wilk Test Statisitic	0.611690332	
Shapiro-Wilk 5% Critical Value	0.85	
5% Normality Test Result	NOT NORMAL	Data not normal at 5% significance level
95% Student's-t UCL	103.8074222	
Gamma Statistics		
k hat	0.521547	
k star (bias corrected)	0.439912969	
Theta hat	101.2547114	
Theta star	120.0444056	
nu hat	11.47403399	
nu star	9.678085325	
5% Approximate Chi Square Value	3.740760581	
Adjusted Level of Significance	0.02783	
Adjusted Chi Square Value	3.162722164	
Anderson-Darling Test Statistic	0.654603269	
Anderson-Darling 5% Critical Value	0.779489489	
Anderson-Darling 5% Gamma Test Result	AD GAMMA	Data follow gamma distribution at 5% signifcance level.
Kolmogrov-Smirnov Test Statistic	0.281696792	
Kolmogrov-Smirnov 5% Critical Value	0.268704905	
Kolmogrov-Smirnov 5% Gamma Test Result	NOT KS GAMMA	Data not gamma distributed at 5% significance level
5% Gamma Test Result	APPROX GAMMA	Data follow approximate gamma distribution at 5% significance level
95% Approximate Gamma UCL	136.6275325	
95% Adjusted Gamma UCL	161.5984147	
Lognormal Statistics		
Minimum of log data	0.641853886	
Maximum of log data	5.743003188	
Mean of log data	2.756708577	
Standard Deviation of log data	1.627281408	
Variance of log data	2.648044781	
Lilliefors Test Statisitic	N/R	Shapiro Wilk method yields a more accurate result
Lilliefors 5% Critical Value	N/R	Shapiro Wilk method yields a more accurate result
Shapiro-Wilk Test Statisitic	0.948011678	
Shapiro-Wilk 5% Critical Value	0.85	
5% Lognormality Test Result	LOGNORMAL	Data are lognormal at 5% significance level
MLE Mean	59.18871908	
MLE Standard Deviation	214.442873	
MLE Coefficient of Variation	3.623036219	
MLE Skewness	58.42650027	
MLE Median	15.74792447	
MLE 80% Quantile	62.28753757	
MLE 90% Quantile	127.4552326	
MLE 95% Quantile	228.9689703	
MLE 99% Quantile	693.5096346	
MVU Estimate of Median	13.9448054	
MVU Estimate of Mean	47.52220012	
MVU Estimate of Standard Deviation	93.53729935	
MVU Estimate of SE of Mean	25.06858102	
95% H-UCL	550.1957916	
95% Chebyshev (MVUE) UCL	156.7936114	
97.5% Chebyshev (MVUE) UCL	204.0754384	
99% Chebyshev (MVUE) UCL	296.9514319	
Non-parametric Statisitics		
95% CLT UCL	99.09134837	
95% Adjusted-CLT UCL	122.3096671	
95% Modified-t UCL	107.4290108	
95% Jackknife UCL	103.8074222	
95% Chebyshev (Mean, Sd) UCL	175.4581095	
97.5% Chebyshev (Mean, Sd) UCL	228.5284378	
99% Chebyshev (Mean, Sd) UCL	332.7748213	
Bootstrap Statistics		
Number of Bootstrap Runs	2000	
95% Standard Bootstrap UCL	97.73568474	
95% Bootstrap-t UCL	242.392291	
95% Hall's Bootstrap UCL	275.930212	
95% Percentile Bootstrap UCL	102.9181818	
95% BCA Bootstrap UCL	121.7363636	
Recommendations		
Human Inspection Recommended?	NO	
Appropriate Distribution	GAMMA	
1st Recommended UCL	136.6275325	95% Approximate Gamma UCL
2nd Recommended UCL		
3rd Recommended UCL		
Recommended UCL > Max Data Value		
Recommendation Warning!	NONE	
Alternative UCL	NONE	

Data File		
Variable:	Zinc	
Raw Statistics		
Number of Observations	11	
Number of Missing Data	0	
Number of Valid Observations	11	
Number of Distinct Observations	11	
Minimum	14.2	
Maximum	3910	
Mean	630.2909091	
Standard Deviation	1204.540348	
Variance	1450917.449	
Coefficient of Variation	1.911086342	
Skewness	2.403180995	
Too Few Distinct Observations?	NO	
Normal Statistics		
Lilliefors Test Statisitic	N/R	Shapiro Wilk method yields a more accurate result
Lilliefors 5% Critical Value	N/R	Shapiro Wilk method yields a more accurate result
Shapiro-Wilk Test Statisitic	0.592702484	
Shapiro-Wilk 5% Critical Value	0.85	
5% Normality Test Result	NOT NORMAL	Data not normal at 5% significance level
95% Student's-t UCL	1288.5452	
Gamma Statistics		
k hat	0.373516882	
k star (bias corrected)	0.332254702	
Theta hat	1687.449591	
Theta star	1897.011256	
nu hat	8.217371393	
nu star	7.309603437	
5% Approximate Chi Square Value	2.34141391	
Adjusted Level of Significance	0.02783	
Adjusted Chi Square Value	1.909894357	
Anderson-Darling Test Statistic	1.233017898	
Anderson-Darling 5% Critical Value	0.805766856	
Anderson-Darling 5% Gamma Test Result	NOT AD GAMMA	Data not gamma distributed at 5% significance level
Kolmogrov-Smirnov Test Statistic	0.329973197	
Kolmogrov-Smirnov 5% Critical Value	0.27336675	
Kolmogrov-Smirnov 5% Gamma Test Result	NOT KS GAMMA	Data not gamma distributed at 5% significance level
5% Gamma Test Result	NOT GAMMA	Data not gamma distributed at 5% significance level
95% Approximate Gamma UCL	1967.68994	
95% Adjusted Gamma UCL	2412.267767	
Lognormal Statistics		
Minimum of log data	2.653241965	
Maximum of log data	8.271292653	
Mean of log data	4.6648266	
Standard Deviation of log data	1.962503937	
Variance of log data	3.851421705	
Lilliefors Test Statisitic	N/R	Shapiro Wilk method yields a more accurate result
Lilliefors 5% Critical Value	N/R	Shapiro Wilk method yields a more accurate result
Shapiro-Wilk Test Statisitic	0.844444698	
Shapiro-Wilk 5% Critical Value	0.85	
5% Lognormality Test Result	NOT LOGNORMAL	Data not lognormal at 5% significance level
MLE Mean	728.1721224	
MLE Standard Deviation	4941.919225	
MLE Coefficient of Variation	6.78674598	
MLE Skewness	332.9572216	
MLE Median	106.1471777	
MLE 80% Quantile	557.321586	
MLE 90% Quantile	1321.660473	
MLE 95% Quantile	2678.857233	
MLE 99% Quantile	10194.57259	
MVU Estimate of Median	88.86506134	
MVU Estimate of Mean	502.9751724	
MVU Estimate of Standard Deviation	1272.31324	
MVU Estimate of SE of Mean	315.2768039	
95% H-UCL	17171.04033	
95% Chebyshev (MVUE) UCL	1877.2349	
97.5% Chebyshev (MVUE) UCL	2471.878181	
99% Chebyshev (MVUE) UCL	3639.939763	
Non-parametric Statisitics		
95% CLT UCL	1227.673093	
95% Adjusted-CLT UCL	1508.860302	
95% Modified-t UCL	1332.404722	
95% Jackknife UCL	1288.5452	
95% Chebyshev (Mean, Sd) UCL	2213.367072	
97.5% Chebyshev (Mean, Sd) UCL	2898.365393	
99% Chebyshev (Mean, Sd) UCL	4243.911952	
Bootstrap Statistics		
Number of Bootstrap Runs	2000	
95% Standard Bootstrap UCL	1194.043409	
95% Bootstrap-t UCL	2150.431073	
95% Hall's Bootstrap UCL	2743.583081	
95% Percentile Bootstrap UCL	1232.918182	
95% BCA Bootstrap UCL	1559.818182	
Recommendations		
Human Inspection Recommended?	YES	
Appropriate Distribution	NON-PARAMETRIC	
1st Recommended UCL	4243.911952	99% Chebyshev (Mean, Sd) UCL
2nd Recommended UCL		
3rd Recommended UCL		
Recommended UCL > Max Data Value	YES	Recommended UCL exceeds the maximum data value
Recommendation Warning!	NONE	
Alternative UCL	YES	Cosider using 95% or 97.5% Chebyshev (Mean, Sd) UCL

Data File		
Variable:	Aroclor-1242	
Raw Statistics		
Number of Observations	7	
Number of Missing Data	0	
Number of Valid Observations	7	
Number of Distinct Observations	2	
Minimum	0.00825	
Maximum	0.084	
Mean	0.019071429	
Standard Deviation	0.028630809	
Variance	0.000819723	
Coefficient of Variation	1.501240912	
Skewness	2.645751311	
Too Few Distinct Observations?	NO	
Normal Statistics		
Lilliefors Test Statisitic	N/R	Shapiro Wilk method yields a more accurate result
Lilliefors 5% Critical Value	N/R	Shapiro Wilk method yields a more accurate result
Shapiro-Wilk Test Statisitic	0.453253372	
Shapiro-Wilk 5% Critical Value	0.803	
5% Normality Test Result	NOT NORMAL	Data not normal at 5% significance level
95% Student's-t UCL	0.040099408	
Gamma Statistics		
k hat	1.124624309	
k star (bias corrected)	0.737880558	
Theta hat	0.016958044	
Theta star	0.025846227	
nu hat	15.74474033	
nu star	10.33032781	
5% Approximate Chi Square Value	4.14839554	
Adjusted Level of Significance	0.01584	
Adjusted Chi Square Value	3.052518669	
Anderson-Darling Test Statistic	2.145771858	
Anderson-Darling 5% Critical Value	0.725939704	
Anderson-Darling 5% Gamma Test Result	NOT AD GAMMA	Data not gamma distributed at 5% significance level
Kolmogrov-Smirnov Test Statistic	0.529539017	
Kolmogrov-Smirnov 5% Critical Value	0.318954446	
Kolmogrov-Smirnov 5% Gamma Test Result	NOT KS GAMMA	Data not gamma distributed at 5% significance level
5% Gamma Test Result	NOT GAMMA	Data not gamma distributed at 5% significance level
95% Approximate Gamma UCL	0.04749164	
95% Adjusted Gamma UCL	0.064541492	
Lognormal Statistics		
Minimum of log data	-4.79754208	
Maximum of log data	-2.47693848	
Mean of log data	-4.46602728	
Standard Deviation of log data	0.877105716	
Variance of log data	0.769314437	
Lilliefors Test Statisitic	N/R	Shapiro Wilk method yields a more accurate result
Lilliefors 5% Critical Value	N/R	Shapiro Wilk method yields a more accurate result
Shapiro-Wilk Test Statisitic	0.453253372	
Shapiro-Wilk 5% Critical Value	0.803	
5% Lognormality Test Result	NOT LOGNORMAL	Data not lognormal at 5% significance level
MLE Mean	0.016884317	
MLE Standard Deviation	0.018171527	
MLE Coefficient of Variation	1.076237012	
MLE Skewness	4.475301414	
MLE Median	0.011492883	
MLE 80% Quantile	0.024116164	
MLE 90% Quantile	0.035474313	
MLE 95% Quantile	0.04864587	
MLE 99% Quantile	0.088400347	
MVU Estimate of Median	0.010874209	
MVU Estimate of Mean	0.015782867	
MVU Estimate of Standard Deviation	0.014070502	
MVU Estimate of SE of Mean	0.005264088	
95% H-UCL	0.05619576	
95% Chebyshev (MVUE) UCL	0.038728494	
97.5% Chebyshev (MVUE) UCL	0.048657085	
99% Chebyshev (MVUE) UCL	0.068159879	
Non-parametric Statisitics		
95% CLT UCL	0.036871095	
95% Adjusted-CLT UCL	0.048433948	
95% Modified-t UCL	0.041902979	
95% Jackknife UCL	0.040099408	
95% Chebyshev (Mean, Sd) UCL	0.066240942	
97.5% Chebyshev (Mean, Sd) UCL	0.086651228	
99% Chebyshev (Mean, Sd) UCL	0.126743283	
Bootstrap Statistics		
Number of Bootstrap Runs	2000	
95% Standard Bootstrap UCL	N/R	Not enough distinct data warning
95% Bootstrap-t UCL	N/R	Not enough distinct data warning
95% Hall's Bootstrap UCL	N/A	Not enough distinct data error
95% Percentile Bootstrap UCL	N/R	Not enough distinct data warning
95% BCA Bootstrap UCL	N/R	Not enough distinct data warning
Recommendations		
Human Inspection Recommended?	YES	
Appropriate Distribution	NON-PARAMETRIC	
1st Recommended UCL	0.066240942	95% Chebyshev (Mean, Sd) UCL
2nd Recommended UCL		
3rd Recommended UCL		
Recommended UCL > Max Data Value	YES	Recommended UCL exceeds the maximum data value
Recommendation Warning!	NONE	
Alternative UCL	NONE	

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Attachment 5

EVALUATION OF SAMPLE QUANTITATION LIMITS

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AOCID	StationID	SampleID	Date Collected	Sample Type	Matrix	Upper Depth	Lower Depth	Param Class	FormlParamName	AnaValue	ProjQual	Unit	Criteria
SED_ALL	SM95-SE-8	FBN56		N	SE			PEST	ALDRIN	0.0017	U	mg/kg	2.33E-04
SED_ALL	SM95-SE-11	FBN55		N	SE			PEST	ALDRIN	0.0017	U	mg/kg	2.33E-04
SED_ALL	SM95-SE-15	FBN51		N	SE			PEST	ALDRIN	0.0017	U	mg/kg	2.33E-04
SED_ALL	SM95-SE-14	FBN52		N	SE			PEST	ALDRIN	0.0017	U	mg/kg	2.33E-04
SED_ALL	SM95-SE-7	FBN59		N	SE			PEST	ALDRIN	0.0017	U	mg/kg	2.33E-04
SED_ALL	SM95-SE-9	FBN57		N	SE			PEST	ALDRIN	0.0017	U	mg/kg	2.33E-04
SED_ALL	SM95-SE-11	FBN55		N	SE			PEST	DIELDRIN	0.0033	U	mg/kg	2.48E-04
SED_ALL	SM95-SE-15	FBN51		N	SE			PEST	DIELDRIN	0.0033	U	mg/kg	2.48E-04
SED_ALL	SM95-SE-14	FBN52		N	SE			PEST	DIELDRIN	0.0033	U	mg/kg	2.48E-04
SED_ALL	SM95-SE-7	FBN59		N	SE			PEST	DIELDRIN	0.0033	U	mg/kg	2.48E-04
SED_ALL	SM95-SE-8	FBN56		N	SE			PEST	DIELDRIN	0.0033	U	mg/kg	2.48E-04
SED_ALL	SM95-SE-9	FBN57		N	SE			PEST	DIELDRIN	0.0033	U	mg/kg	2.48E-04
SED_ALL	SM95-SE-11	FBN55		N	SE			PEST	HEPTACHLOR	0.0017	U	mg/kg	8.80E-04
SED_ALL	SM95-SE-15	FBN51		N	SE			PEST	HEPTACHLOR	0.0017	U	mg/kg	8.80E-04
SED_ALL	SM95-SE-14	FBN52		N	SE			PEST	HEPTACHLOR	0.0017	U	mg/kg	8.80E-04
SED_ALL	SM95-SE-7	FBN59		N	SE			PEST	HEPTACHLOR	0.0017	U	mg/kg	8.80E-04
SED_ALL	SM95-SE-8	FBN56		N	SE			PEST	HEPTACHLOR	0.0017	U	mg/kg	8.80E-04
SED_ALL	SM95-SE-9	FBN57		N	SE			PEST	HEPTACHLOR	0.0017	U	mg/kg	8.80E-04
SED_ALL	SM95-SE-11	FBN55		N	SE			PEST	HEPTACHLOR EPOXIDE	0.0017	U	mg/kg	2.42E-04
SED_ALL	SM95-SE-15	FBN51		N	SE			PEST	HEPTACHLOR EPOXIDE	0.0017	U	mg/kg	2.42E-04
SED_ALL	SM95-SE-14	FBN52		N	SE			PEST	HEPTACHLOR EPOXIDE	0.0017	U	mg/kg	2.42E-04
SED_ALL	SM95-SE-7	FBN59		N	SE			PEST	HEPTACHLOR EPOXIDE	0.0017	U	mg/kg	2.42E-04
SED_ALL	SM95-SE-8	FBN56		N	SE			PEST	HEPTACHLOR EPOXIDE	0.0017	U	mg/kg	2.42E-04
SED_ALL	SM95-SE-9	FBN57		N	SE			PEST	HEPTACHLOR EPOXIDE	0.0017	U	mg/kg	2.42E-04
SED_ALL	SM95-SE-11	FBN55		N	SE			SVOC	HEXACHLOROBENZENE	0.17	U	mg/kg	1.03E-02
SED_ALL	SM95-SE-15	FBN51		N	SE			SVOC	HEXACHLOROBENZENE	0.17	U	mg/kg	1.03E-02
SED_ALL	SM95-SE-14	FBN52		N	SE			SVOC	HEXACHLOROBENZENE	0.17	U	mg/kg	1.03E-02
SED_ALL	SM95-SE-7	FBN59		N	SE			SVOC	HEXACHLOROBENZENE	0.17	U	mg/kg	1.03E-02
SED_ALL	SM002	SM002-51-1	9/28/01 13:20	N	SE	0	0.5	SVOC	HEXACHLOROBENZENE	0.021	UJL	MG/KG	1.03E-02
SED_ALL	SM003	SM003-51-1	9/28/01 13:30	N	SE	0	0.5	SVOC	HEXACHLOROBENZENE	0.015	U	MG/KG	1.03E-02
SED_ALL	SM95-SE-8	FBN56		N	SE			SVOC	HEXACHLOROBENZENE	0.17	U	mg/kg	1.03E-02
SED_ALL	SM004	SM004-51-1	9/28/01 13:49	N	SE	0	0.5	SVOC	HEXACHLOROBENZENE	0.011	U	MG/KG	1.03E-02
SED_ALL	SM95-SE-9	FBN57		N	SE			SVOC	HEXACHLOROBENZENE	0.17	U	mg/kg	1.03E-02
SED_ALL	SM95-SE-11	FBN55		N	SE			PEST	P,P'-DDE	0.0033	U	mg/kg	4.45E-04
SED_ALL	SM95-SE-15	FBN51		N	SE			PEST	P,P'-DDE	0.0033	U	mg/kg	4.45E-04
SED_ALL	SM95-SE-8	FBN56		N	SE			PEST	P,P'-DDE	0.0033	U	mg/kg	4.45E-04
SED_ALL	SM95-SE-14	FBN52		N	SE			PEST	P,P'-DDE	0.0033	U	mg/kg	4.45E-04
SED_ALL	SM95-SE-7	FBN59		N	SE			PEST	P,P'-DDE	0.0033	U	mg/kg	4.45E-04
SED_ALL	SM95-SE-9	FBN57		N	SE			PEST	P,P'-DDE	0.0033	U	mg/kg	4.45E-04
SED_ALL	SM95-SE-11	FBN55		N	SE			PEST	P,P'-DDT	0.0033	U	mg/kg	1.32E-03
SED_ALL	SM95-SE-15	FBN51		N	SE			PEST	P,P'-DDT	0.0033	U	mg/kg	1.32E-03
SED_ALL	SM95-SE-14	FBN52		N	SE			PEST	P,P'-DDT	0.0033	U	mg/kg	1.32E-03
SED_ALL	SM95-SE-7	FBN59		N	SE			PEST	P,P'-DDT	0.0033	U	mg/kg	1.32E-03
SED_ALL	SM95-SE-8	FBN56		N	SE			PEST	P,P'-DDT	0.0033	U	mg/kg	1.32E-03
SED_ALL	SM95-SE-9	FBN57		N	SE			PEST	P,P'-DDT	0.0033	U	mg/kg	1.32E-03
SED_ALL	SM95-SE-14	FBN52		N	SE			PEST	PCB-1016 (AROCHLOR 1016)	0.033	U	mg/kg	1.54E-04
SED_ALL	SM95-SE-11	FBN55		N	SE			PEST	PCB-1016 (AROCHLOR 1016)	0.033	U	mg/kg	1.54E-04
SED_ALL	SM95-SE-15	FBN51		N	SE			PEST	PCB-1016 (AROCHLOR 1016)	0.033	U	mg/kg	1.54E-04
SED_ALL	SM95-SE-7	FBN59		N	SE			PEST	PCB-1016 (AROCHLOR 1016)	0.033	U	mg/kg	1.54E-04
SED_ALL	SM95-SE-8	FBN56		N	SE			PEST	PCB-1016 (AROCHLOR 1016)	0.033	U	mg/kg	1.54E-04
SED_ALL	SM95-SE-9	FBN57		N	SE			PEST	PCB-1016 (AROCHLOR 1016)	0.033	U	mg/kg	1.54E-04
SED_ALL	SM95-SE-14	FBN52		N	SE			PEST	PCB-1221 (AROCHLOR 1221)	0.033	U	mg/kg	1.54E-04
SED_ALL	SM95-SE-11	FBN55		N	SE			PEST	PCB-1221 (AROCHLOR 1221)	0.033	U	mg/kg	1.54E-04
SED_ALL	SM95-SE-15	FBN51		N	SE			PEST	PCB-1221 (AROCHLOR 1221)	0.033	U	mg/kg	1.54E-04
SED_ALL	SM95-SE-9	FBN57		N	SE			PEST	PCB-1221 (AROCHLOR 1221)	0.033	U	mg/kg	1.54E-04
SED_ALL	SM95-SE-7	FBN59		N	SE			PEST	PCB-1221 (AROCHLOR 1221)	0.033	U	mg/kg	1.54E-04
SED_ALL	SM95-SE-8	FBN56		N	SE			PEST	PCB-1221 (AROCHLOR 1221)	0.033	U	mg/kg	1.54E-04
SED_ALL	SM95-SE-11	FBN55		N	SE			PEST	PCB-1232 (AROCHLOR 1232)	0.033	U	mg/kg	1.54E-04
SED_ALL	SM95-SE-15	FBN51		N	SE			PEST	PCB-1232 (AROCHLOR 1232)	0.033	U	mg/kg	1.54E-04
SED_ALL	SM95-SE-14	FBN52		N	SE			PEST	PCB-1232 (AROCHLOR 1232)	0.033	U	mg/kg	1.54E-04
SED_ALL	SM95-SE-9	FBN57		N	SE			PEST	PCB-1232 (AROCHLOR 1232)	0.033	U	mg/kg	1.54E-04
SED_ALL	SM95-SE-7	FBN59		N	SE			PEST	PCB-1232 (AROCHLOR 1232)	0.033	U	mg/kg	1.54E-04
SED_ALL	SM95-SE-8	FBN56		N	SE			PEST	PCB-1232 (AROCHLOR 1232)	0.033	U	mg/kg	1.54E-04
SED_ALL	SM95-SE-14	FBN52		N	SE			PEST	PCB-1242 (AROCHLOR 1242)	0.033	U	mg/kg	1.54E-04
SED_ALL	SM95-SE-11	FBN55		N	SE			PEST	PCB-1242 (AROCHLOR 1242)	0.033	U	mg/kg	1.54E-04
SED_ALL	SM95-SE-15	FBN51		N	SE			PEST	PCB-1242 (AROCHLOR 1242)	0.033	U	mg/kg	1.54E-04
SED_ALL	SM95-SE-7	FBN59		N	SE			PEST	PCB-1242 (AROCHLOR 1242)	0.033	U	mg/kg	1.54E-04
SED_ALL	SM95-SE-8	FBN56		N	SE			PEST	PCB-1242 (AROCHLOR 1242)	0.033	U	mg/kg	1.54E-04
SED_ALL	SM95-SE-14	FBN52		N	SE			PEST	PCB-1248 (AROCHLOR 1248)	0.033	U	mg/kg	1.54E-04
SED_ALL	SM95-SE-11	FBN55		N	SE			PEST	PCB-1248 (AROCHLOR 1248)	0.033	U	mg/kg	1.54E-04
SED_ALL	SM95-SE-15	FBN51		N	SE			PEST	PCB-1248 (AROCHLOR 1248)	0.033	U	mg/kg	1.54E-04
SED_ALL	SM95-SE-7	FBN59		N	SE			PEST	PCB-1248 (AROCHLOR 1248)	0.033	U	mg/kg	1.54E-04
SED_ALL	SM95-SE-9	FBN57		N	SE			PEST	PCB-1248 (AROCHLOR 1248)	0.033	U	mg/kg	1.54E-04

AOCID	StationID	SampleID	Date Collected	Sample Type	Matrix	Upper Depth	Lower Depth	Param Class	FormlParamName	AnaValue	ProjQual	Unit	Criteria
SED_ALL	SM95-SE-8	FBN56		N	SE			PEST	PCB-1248 (AROCHLOR 1248)	0.033	U	mg/kg	1.54E-04
SED_ALL	SM95-SE-14	FBN52		N	SE			PEST	PCB-1254 (AROCHLOR 1254)	0.033	U	mg/kg	1.54E-04
SED_ALL	SM95-SE-11	FBN55		N	SE			PEST	PCB-1254 (AROCHLOR 1254)	0.033	U	mg/kg	1.54E-04
SED_ALL	SM95-SE-15	FBN51		N	SE			PEST	PCB-1254 (AROCHLOR 1254)	0.033	U	mg/kg	1.54E-04
SED_ALL	SM95-SE-9	FBN57		N	SE			PEST	PCB-1254 (AROCHLOR 1254)	0.033	U	mg/kg	1.54E-04
SED_ALL	SM95-SE-7	FBN59		N	SE			PEST	PCB-1254 (AROCHLOR 1254)	0.033	U	mg/kg	1.54E-04
SED_ALL	SM95-SE-8	FBN56		N	SE			PEST	PCB-1254 (AROCHLOR 1254)	0.033	U	mg/kg	1.54E-04
SED_ALL	SM95-SE-14	FBN52		N	SE			PEST	PCB-1260 (AROCHLOR 1260)	0.033	U	mg/kg	1.54E-04
SED_ALL	SM95-SE-11	FBN55		N	SE			PEST	PCB-1260 (AROCHLOR 1260)	0.033	U	mg/kg	1.54E-04
SED_ALL	SM95-SE-15	FBN51		N	SE			PEST	PCB-1260 (AROCHLOR 1260)	0.033	U	mg/kg	1.54E-04
SED_ALL	SM95-SE-9	FBN57		N	SE			PEST	PCB-1260 (AROCHLOR 1260)	0.033	U	mg/kg	1.54E-04
SED_ALL	SM95-SE-7	FBN59		N	SE			PEST	PCB-1260 (AROCHLOR 1260)	0.033	U	mg/kg	1.54E-04
SED_ALL	SM95-SE-8	FBN56		N	SE			PEST	PCB-1260 (AROCHLOR 1260)	0.033	U	mg/kg	1.54E-04
SED_ALL	SM95-SE-14	FBN52		N	SE			PEST	TOXAPHENE	0.17	U	mg/kg	3.60E-03
SED_ALL	SM95-SE-15	FBN51		N	SE			PEST	TOXAPHENE	0.17	U	mg/kg	3.60E-03
SED_ALL	SM95-SE-11	FBN55		N	SE			PEST	TOXAPHENE	0.17	U	mg/kg	3.60E-03
SED_ALL	SM95-SE-9	FBN57		N	SE			PEST	TOXAPHENE	0.17	U	mg/kg	3.60E-03
SED_ALL	SM95-SE-7	FBN59		N	SE			PEST	TOXAPHENE	0.17	U	mg/kg	3.60E-03
SED_ALL	SM95-SE-8	FBN56		N	SE			PEST	TOXAPHENE	0.17	U	mg/kg	3.60E-03

AOCID	StationID	SampleID	DateCollected	Sample Type	Matrix	Upper Depth	Lower Depth	Param Class	FormlParamName	AnaValue	ProjQual	Unit	Criteria
SB_NS	SM085	SM085-51-1	10/17/01 0:00	N	SO	0	0.5	SVOC	3,3'-DICHLOROBENZIDINE	6.6	U	MG/KG	4.3
SB_NS	SM100	SM100-51-2	10/16/01 0:00	N	SO	4	5	METAL	ARSENIC	7.8	UC	MG/KG	1.8
SB_NS	SM094	SM094-51-1	10/16/01 0:00	N	SO	0	0.5	METAL	ARSENIC	5.7	UCB	MG/KG	1.8
SB_NS	SM085	SM085-51-1	10/17/01 0:00	N	SO	0	0.5	SVOC	BENZO(A)ANTHRACENE	6.6	U	MG/KG	2.3
SB_NS	SM95-SO-13	FBN79		N	SO			SVOC	BENZO(A)PYRENE	0.35	U	mg/Kg	0.23
SB_NS	SM051	SM051-51-1	10/17/01 0:00	N	SO	0	0.5	SVOC	BENZO(A)PYRENE	0.45	U	MG/KG	0.23
SB_NS	SM048	SM048-51-1	10/18/01 0:00	N	SO	0	0.5	SVOC	BENZO(A)PYRENE	0.44	U	MG/KG	0.23
SB_NS	SM047	SM047-51-1	10/18/01 7:40	N	SO	0	0.5	SVOC	BENZO(A)PYRENE	0.43	U	MG/KG	0.23
SB_NS	SM071	SM071-51-1	10/18/01 0:00	N	SO	0	0.5	SVOC	BENZO(A)PYRENE	0.47	U	MG/KG	0.23
SB_NS	SM069	SM069-51-1	10/18/01 0:00	N	SO	0	0.5	SVOC	BENZO(A)PYRENE	0.45	U	MG/KG	0.23
SB_NS	SM067	SM067-51-1	10/18/01 0:00	N	SO	0	0.5	SVOC	BENZO(A)PYRENE	0.46	U	MG/KG	0.23
SB_NS	SM087	SM087-51-1	10/22/01 8:40	N	SO	0	0.5	SVOC	BIS(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHER)	2.4	U	MG/KG	0.62
SB_NS	SM084	SM084-51-1	10/22/01 8:30	N	SO	0	0.5	SVOC	BIS(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHER)	1.3	U	MG/KG	0.62
SB_NS	SM079	SM079-51-1	10/19/01 0:00	N	SO	0	0.5	SVOC	BIS(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHER)	0.84	U	MG/KG	0.62
SB_NS	SM085	SM085-51-1	10/17/01 0:00	N	SO	0	0.5	SVOC	BIS(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHER)	6.6	U	MG/KG	0.62
SB_NS	SM093	SM093-51-1	10/18/01 7:45	N	SO	0	0.5	SVOC	BIS(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHER)	1.3	U	MG/KG	0.62
SB_NS	SM092	SM092-51-1	10/17/01 0:00	N	SO	0	0.5	SVOC	BIS(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHER)	2.4	U	MG/KG	0.62
SB_NS	SM091	SM091-51-1	10/17/01 0:00	N	SO	0	0.5	SVOC	BIS(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHER)	4.3	U	MG/KG	0.62
SB_NS	SM058	SM058-51-1	10/18/01 0:00	N	SO	0	0.5	SVOC	BIS(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHER)	4.2	U	MG/KG	0.62
SB_NS	SM052	SM052-51-1	10/18/01 8:00	N	SO	0	0.5	SVOC	BIS(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHER)	1.1	U	MG/KG	0.62
SB_NS	SM075	SM075-51-1	10/19/01 0:00	N	SO	0	0.5	SVOC	BIS(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHER)	1.2	U	MG/KG	0.62
SB_NS	SM085	SM085-51-1	10/17/01 0:00	N	SO	0	0.5	SVOC	DIBENZ(A,H)ANTHRACENE	6.6	U	MG/KG	0.23
SB_NS	SM084	SM084-51-1	10/22/01 8:30	N	SO	0	0.5	SVOC	DIBENZ(A,H)ANTHRACENE	1.3	U	MG/KG	0.23
SB_NS	SM083	SM083-51-1	10/22/01 8:05	N	SO	0	0.5	SVOC	DIBENZ(A,H)ANTHRACENE	0.42	U	MG/KG	0.23
SB_NS	SM082	SM082-51-1	10/22/01 8:00	N	SO	0	0.5	SVOC	DIBENZ(A,H)ANTHRACENE	0.45	U	MG/KG	0.23
SB_NS	SM081	SM081-51-1	10/22/01 7:40	N	SO	0	0.5	SVOC	DIBENZ(A,H)ANTHRACENE	0.42	U	MG/KG	0.23
SB_NS	SM099	SM099-51-1	10/16/01 0:00	N	SO	0	0.5	SVOC	DIBENZ(A,H)ANTHRACENE	0.42	U	MG/KG	0.23
SB_NS	SM097	SM097-51-1	10/22/01 0:00	N	SO	0	0.5	SVOC	DIBENZ(A,H)ANTHRACENE	0.42	U	MG/KG	0.23
SB_NS	SM089	SM089-51-1	10/22/01 9:20	N	SO	0	0.5	SVOC	DIBENZ(A,H)ANTHRACENE	0.44	U	MG/KG	0.23
SB_NS	SM100	SM100-51-1	10/16/01 0:00	N	SO	0	0.5	SVOC	DIBENZ(A,H)ANTHRACENE	0.42	U	MG/KG	0.23
SB_NS	SM093	SM093-51-1	10/18/01 7:45	N	SO	0	0.5	SVOC	DIBENZ(A,H)ANTHRACENE	1.3	U	MG/KG	0.23
SB_NS	SM092	SM092-51-2	10/17/01 0:00	N	SO	3	4	SVOC	DIBENZ(A,H)ANTHRACENE	0.44	U	MG/KG	0.23
SB_NS	SM051	SM051-51-1	10/17/01 0:00	N	SO	0	0.5	SVOC	DIBENZ(A,H)ANTHRACENE	0.45	U	MG/KG	0.23
SB_NS	SM057	SM057-51-1	10/18/01 0:00	N	SO	0	0.5	SVOC	DIBENZ(A,H)ANTHRACENE	0.44	U	MG/KG	0.23
SB_NS	SM059	SM059-51-1	10/18/01 0:00	N	SO	0	0.5	SVOC	DIBENZ(A,H)ANTHRACENE	0.45	U	MG/KG	0.23
SB_NS	SM047	SM047-51-1	10/18/01 7:40	N	SO	0	0.5	SVOC	DIBENZ(A,H)ANTHRACENE	0.43	U	MG/KG	0.23
SB_NS	SM050	SM050-51-1	10/18/01 7:55	N	SO	0	0.5	SVOC	DIBENZ(A,H)ANTHRACENE	0.44	U	MG/KG	0.23
SB_NS	SM048	SM048-51-1	10/18/01 0:00	N	SO	0	0.5	SVOC	DIBENZ(A,H)ANTHRACENE	0.44	U	MG/KG	0.23
SB_NS	SM077	SM077-51-1	10/22/01 7:30	N	SO	0	0.5	SVOC	DIBENZ(A,H)ANTHRACENE	0.37	U	MG/KG	0.23
SB_NS	SM100	SM100-51-2	10/16/01 0:00	N	SO	4	5	SVOC	DIBENZ(A,H)ANTHRACENE	0.43	U	MG/KG	0.23
SB_NS	SM073	SM073-51-1	10/19/01 0:00	N	SO	0	0.5	SVOC	DIBENZ(A,H)ANTHRACENE	0.38	U	MG/KG	0.23
SB_NS	SM072	SM072-51-1	10/19/01 0:00	N	SO	0	0.5	SVOC	DIBENZ(A,H)ANTHRACENE	0.4	U	MG/KG	0.23
SB_NS	SM071	SM071-51-1	10/18/01 0:00	N	SO	0	0.5	SVOC	DIBENZ(A,H)ANTHRACENE	0.47	U	MG/KG	0.23
SB_NS	SM069	SM069-51-1	10/18/01 0:00	N	SO	0	0.5	SVOC	DIBENZ(A,H)ANTHRACENE	0.45	U	MG/KG	0.23
SB_NS	SM064	SM064-51-1	10/18/01 0:00	N	SO	0	0.5	SVOC	DIBENZ(A,H)ANTHRACENE	0.46	U	MG/KG	0.23
SB_NS	SM067	SM067-51-1	10/18/01 0:00	N	SO	0	0.5	SVOC	DIBENZ(A,H)ANTHRACENE	0.46	U	MG/KG	0.23
SB_NS	SM068	SM068-51-1	10/18/01 0:00	N	SO	0	0.5	SVOC	DIBENZ(A,H)ANTHRACENE	0.45	U	MG/KG	0.23
SB_NS	SM084	SM084-51-1	10/22/01 8:30	N	SO	0	0.5	SVOC	HEXACHLOROBENZENE	1.3	U	MG/KG	1.2
SB_NS	SM087	SM087-51-1	10/22/01 8:40	N	SO	0	0.5	SVOC	HEXACHLOROBENZENE	2.4	U	MG/KG	1.2
SB_NS	SM085	SM085-51-1	10/17/01 0:00	N	SO	0	0.5	SVOC	HEXACHLOROBENZENE	6.6	U	MG/KG	1.2
SB_NS	SM093	SM093-51-1	10/18/01 7:45	N	SO	0	0.5	SVOC	HEXACHLOROBENZENE	1.3	U	MG/KG	1.2
SB_NS	SM092	SM092-51-1	10/17/01 0:00	N	SO	0	0.5	SVOC	HEXACHLOROBENZENE	2.4	U	MG/KG	1.2
SB_NS	SM091	SM091-51-1	10/17/01 0:00	N	SO	0	0.5	SVOC	HEXACHLOROBENZENE	4.3	U	MG/KG	1.2
SB_NS	SM058	SM058-51-1	10/18/01 0:00	N	SO	0	0.5	SVOC	HEXACHLOROBENZENE	4.2	U	MG/KG	1.2
SB_NS	SM077	SM077-51-1	10/22/01 7:30	N	SO	0	0.5	SVOC	N-NITROSODI-N-PROPYLAMINE	0.37	U	MG/KG	0.27
SB_NS	SM087	SM087-51-1	10/22/01 8:40	N	SO	0	0.5	SVOC	N-NITROSODI-N-PROPYLAMINE	2.4	U	MG/KG	0.27
SB_NS	SM086	SM086-51-1	10/17/01 0:00	N	SO	0	0.5	SVOC	N-NITROSODI-N-PROPYLAMINE	0.41	U	MG/KG	0.27
SB_NS	SM085	SM085-51-1	10/17/01 0:00	N	SO	0	0.5	SVOC	N-NITROSODI-N-PROPYLAMINE	6.6	U	MG/KG	0.27
SB_NS	SM089	SM089-51-1	10/22/01 9:20	N	SO	0	0.5	SVOC	N-NITROSODI-N-PROPYLAMINE	0.44	U	MG/KG	0.27
SB_NS	SM084	SM084-51-1	10/22/01 8:30	N	SO	0	0.5	SVOC	N-NITROSODI-N-PROPYLAMINE	1.3	U	MG/KG	0.27
SB_NS	SM090	SM090-51-1	10/22/01 10:55	N	SO	0	0.5	SVOC	N-NITROSODI-N-PROPYLAMINE	0.43	U	MG/KG	0.27
SB_NS	SM083	SM083-51-1	10/22/01 8:05	N	SO	0	0.5	SVOC	N-NITROSODI-N-PROPYLAMINE	0.42	U	MG/KG	0.27
SB_NS	SM082	SM082-51-1	10/22/01 8:00	N	SO	0	0.5	SVOC	N-NITROSODI-N-PROPYLAMINE	0.45	U	MG/KG	0.27
SB_NS	SM081	SM081-51-1	10/22/01 7:40	N	SO	0	0.5	SVOC	N-NITROSODI-N-PROPYLAMINE	0.42	U	MG/KG	0.27
SB_NS	SM080	SM080-51-1	10/18/01 16:50	N	SO	0	0.5	SVOC	N-NITROSODI-N-PROPYLAMINE	0.42	U	MG/KG	0.27
SB_NS	SM079	SM079-51-1	10/19/01 0:00	N	SO	0	0.5	SVOC	N-NITROSODI-N-PROPYLAMINE	0.84	U	MG/KG	0.27
SB_NS	SM078	SM078-51-1	10/22/01 7:35	N	SO	0	0.5	SVOC	N-NITROSODI-N-PROPYLAMINE	0.42	U	MG/KG	0.27
SB_NS	SM093	SM093-51-1	10/18/01 7:45	N	SO	0	0.5	SVOC	N-NITROSODI-N-PROPYLAMINE	1.3	U	MG/KG	0.27
SB_NS	SM100	SM100-51-2	10/16/01 0:00	N	SO	4	5	SVOC	N-NITROSODI-N-PROPYLAMINE	0.43	U	MG/KG	0.27
SB_NS	SM100	SM100-51-1	10/16/01 0:00	N	SO	0	0.5	SVOC	N-NITROSODI-N-PROPYLAMINE	0.42	U	MG/KG	0.27
SB_NS	SM099	SM099-51-1	10/16/01 0:00	N	SO	0	0.5	SVOC	N-NITROSODI-N-PROPYLAMINE	0.42	U	MG/KG	0.27
SB_NS	SM098	SM098-51-1	10/16/01 0:00	N	SO	0	0.5	SVOC	N-NITROSODI-N-PROPYLAMINE	0.43	U	MG/KG	0.27
SB_NS	SM097	SM097-51-1	10/22/01 0:00	N	SO	0	0.5	SVOC	N-NITROSODI-N-PROPYLAMINE	0.42	U	MG/KG	0.27
SB_NS	SM096	SM096-51-1	10/16/01 0:00	N	SO	0	0.5	SVOC	N-NITROSODI-N-PROPYLAMINE	0.42	U	MG/KG	0.27
SB_NS	SM095	SM095-51-1	10/16/01 0:00	N	SO	0	0.5	SVOC	N-NITROSODI-N-PROPYLAMINE	0.41	U	MG/KG	0.27
SB_NS	SM094	SM094-51-1	10/16/01 0:00	N	SO	0	0.5	SVOC	N-NITROSODI-N-PROPYLAMINE	0.41	U	MG/KG	0.27
SB_NS	SM092	SM092-51-2	10/17/01 0:00	N	SO	3	4	SVOC	N-NITROSODI-N-PROPYLAMINE	0.44	U	MG/KG	0.27
SB_NS	SM092	SM092-51-1	10/17/01 0:00	N	SO	0	0.5	SVOC	N-NITROSODI-N-PROPYLAMINE	2.4	U	MG/KG	0.27
SB_NS	SM091	SM091-51-1	10/17/01 0:00	N	SO	0	0.5	SVOC	N-NITROSODI-N-PROPYLAMINE	4.3	U	MG/KG	0.27
SB_NS	SM058	SM058-51-1	10/18/01 0:00	N	SO	0	0.5	SVOC	N-NITROSODI-N-PROPYLAMINE	4.2	U	MG/KG	0.27
SB_NS	SM057	SM057-51-1	10/18/01 0:00	N	SO	0	0.5	SVOC	N-NITROSODI-N-PROPYLAMINE	0.44	U	MG/KG	0.27
SB_NS	SM056	SM056-51-1	10/18/01 9:12	N	SO	0	0.5	SVOC	N-NITROSODI-N-PROPYLAMINE	0.41	U	MG/KG	0.27
SB_NS	SM055	SM055-51-1	10/18/01 9:10	N	SO	0	0.5	SVOC	N-NITROSODI-N-PROPYLAMINE	0.4	U	MG/KG	0.27

AOCID	StationID	SampleID	DateCollected	Sample Type	Matrix	Upper Depth	Lower Depth	Param Class	FormlParamName	AnaValue	ProjQual	Unit	Criteria
SB_NS	SM054	SM054-51-1	10/18/01 9:05	N	SO	0	0.5	SVOC	N-NITROSODI-N-PROPYLAMINE	0.44	U	MG/KG	0.27
SB_NS	SM053	SM053-51-1	10/18/01 9:00	N	SO	0	0.5	SVOC	N-NITROSODI-N-PROPYLAMINE	0.43	U	MG/KG	0.27
SB_NS	SM052	SM052-51-1	10/18/01 8:00	N	SO	0	0.5	SVOC	N-NITROSODI-N-PROPYLAMINE	1.1	U	MG/KG	0.27
SB_NS	SM051	SM051-51-1	10/17/01 0:00	N	SO	0	0.5	SVOC	N-NITROSODI-N-PROPYLAMINE	0.45	U	MG/KG	0.27
SB_NS	SM050	SM050-51-1	10/18/01 7:55	N	SO	0	0.5	SVOC	N-NITROSODI-N-PROPYLAMINE	0.44	U	MG/KG	0.27
SB_NS	SM049	SM049-51-1	10/18/01 7:50	N	SO	0	0.5	SVOC	N-NITROSODI-N-PROPYLAMINE	0.43	U	MG/KG	0.27
SB_NS	SM048	SM048-51-1	10/18/01 0:00	N	SO	0	0.5	SVOC	N-NITROSODI-N-PROPYLAMINE	0.44	U	MG/KG	0.27
SB_NS	SM046	SM046-51-1	10/18/01 7:45	N	SO	0	0.5	SVOC	N-NITROSODI-N-PROPYLAMINE	0.37	U	MG/KG	0.27
SB_NS	SM047	SM047-51-1	10/18/01 7:40	N	SO	0	0.5	SVOC	N-NITROSODI-N-PROPYLAMINE	0.43	U	MG/KG	0.27
SB_NS	SM071	SM071-51-1	10/18/01 0:00	N	SO	0	0.5	SVOC	N-NITROSODI-N-PROPYLAMINE	0.47	U	MG/KG	0.27
SB_NS	SM076	SM076-51-1	10/19/01 0:00	N	SO	0	0.5	SVOC	N-NITROSODI-N-PROPYLAMINE	0.45	U	MG/KG	0.27
SB_NS	SM075	SM075-51-1	10/19/01 0:00	N	SO	0	0.5	SVOC	N-NITROSODI-N-PROPYLAMINE	1.2	U	MG/KG	0.27
SB_NS	SM074	SM074-51-1	10/19/01 0:00	N	SO	0	0.5	SVOC	N-NITROSODI-N-PROPYLAMINE	0.45	U	MG/KG	0.27
SB_NS	SM073	SM073-51-1	10/19/01 0:00	N	SO	0	0.5	SVOC	N-NITROSODI-N-PROPYLAMINE	0.38	U	MG/KG	0.27
SB_NS	SM059	SM059-51-1	10/18/01 0:00	N	SO	0	0.5	SVOC	N-NITROSODI-N-PROPYLAMINE	0.45	U	MG/KG	0.27
SB_NS	SM070	SM070-51-1	10/18/01 16:05	N	SO	0	0.5	SVOC	N-NITROSODI-N-PROPYLAMINE	0.38	U	MG/KG	0.27
SB_NS	SM069	SM069-51-1	10/18/01 0:00	N	SO	0	0.5	SVOC	N-NITROSODI-N-PROPYLAMINE	0.45	U	MG/KG	0.27
SB_NS	SM061	SM061-51-1	10/18/01 0:00	N	SO	0	0.5	SVOC	N-NITROSODI-N-PROPYLAMINE	0.41	U	MG/KG	0.27
SB_NS	SM072	SM072-51-1	10/19/01 0:00	N	SO	0	0.5	SVOC	N-NITROSODI-N-PROPYLAMINE	0.4	U	MG/KG	0.27
SB_NS	SM060	SM060-51-1	10/18/01 0:00	N	SO	0	0.5	SVOC	N-NITROSODI-N-PROPYLAMINE	0.43	U	MG/KG	0.27
SB_NS	SM063	SM063-51-1	10/18/01 0:00	N	SO	0	0.5	SVOC	N-NITROSODI-N-PROPYLAMINE	0.45	U	MG/KG	0.27
SB_NS	SM064	SM064-51-1	10/18/01 0:00	N	SO	0	0.5	SVOC	N-NITROSODI-N-PROPYLAMINE	0.46	U	MG/KG	0.27
SB_NS	SM066	SM066-51-1	10/18/01 0:00	N	SO	0	0.5	SVOC	N-NITROSODI-N-PROPYLAMINE	0.41	U	MG/KG	0.27
SB_NS	SM067	SM067-51-1	10/18/01 0:00	N	SO	0	0.5	SVOC	N-NITROSODI-N-PROPYLAMINE	0.46	U	MG/KG	0.27
SB_NS	SM068	SM068-51-1	10/18/01 0:00	N	SO	0	0.5	SVOC	N-NITROSODI-N-PROPYLAMINE	0.45	U	MG/KG	0.27
SB_NS	SM065	SM065-51-1	10/18/01 0:00	N	SO	0	0.5	SVOC	N-NITROSODI-N-PROPYLAMINE	0.49	U	MG/KG	0.27
SB_NS	SM085	SM085-51-1	10/17/01 0:00	N	SO	0	0.5	SVOC	PENTACHLOROPHENOL	17	U	MG/KG	10
SB_NS	SM091	SM091-51-1	10/17/01 0:00	N	SO	0	0.5	SVOC	PENTACHLOROPHENOL	11	U	MG/KG	10
SB_NS	SM058	SM058-51-1	10/18/01 0:00	N	SO	0	0.5	SVOC	PENTACHLOROPHENOL	11	U	MG/KG	10

AOCID	StationID	SampleID	DateCollected	Sample Type	Matrix	Upper Depth	Lower Depth	Param Class	FormlParamName	AnaValue	ProjQual	Unit	Criteria
SS_AST	SM130	SM130-51-1	10/19/01 0:00	N	SO	0	0.5	SVOC	DIBENZ(A,H)ANTHRACENE	0.42	U	MG/KG	0.23
SS_AST	SM129	SM129-51-1	10/19/01 0:00	N	SO	0	0.5	SVOC	DIBENZ(A,H)ANTHRACENE	0.4	U	MG/KG	0.23
SS_AST	SM128	SM128-51-1	10/19/01 0:00	N	SO	0	0.5	SVOC	DIBENZ(A,H)ANTHRACENE	0.39	U	MG/KG	0.23
SS_AST	SM132	SM132-51-1	10/19/01 0:00	N	SO	0	0.5	SVOC	N-NITROSODI-N-PROPYLAMINE	0.4	U	MG/KG	0.27
SS_AST	SM131	SM131-51-1	10/19/01 0:00	N	SO	0	0.5	SVOC	N-NITROSODI-N-PROPYLAMINE	0.55	U	MG/KG	0.27
SS_AST	SM130	SM130-51-1	10/19/01 0:00	N	SO	0	0.5	SVOC	N-NITROSODI-N-PROPYLAMINE	0.42	U	MG/KG	0.27
SS_AST	SM128	SM128-51-1	10/19/01 0:00	N	SO	0	0.5	SVOC	N-NITROSODI-N-PROPYLAMINE	0.39	U	MG/KG	0.27
SS_AST	SM129	SM129-51-1	10/19/01 0:00	N	SO	0	0.5	SVOC	N-NITROSODI-N-PROPYLAMINE	0.4	U	MG/KG	0.27

AOCID	StationID	SampleID	DateCollected	Sample Type	Matrix	Upper Depth	Lower Depth	Param Class	FormlParamName	AnaValue	ProjQual	Unit	Criteria
SS_FWI	SM136	SM136SB01052206	5/22/06 8:05	N	SO	0.5	1.67	SVOC	BENZO(a)PYRENE	0.95	U	MG/KG	0.23
SS_FWI	SM137	SM137SB01052306	5/23/06 9:20	N	SO	2	4	SVOC	BENZO(a)PYRENE	1.96	U	MG/KG	0.23
SS_FWI	SM138	SM138SB01052306	5/23/06 11:20	N	SO	0	2	SVOC	BENZO(a)PYRENE	1.88	U	MG/KG	0.23
SS_FWI	SM139	SM139SB01052306	5/23/06 14:05	N	SO	0	2	SVOC	BENZO(a)PYRENE	2.08	U	MG/KG	0.23
SS_FWI	SM140	SM140SB01052306	5/23/06 15:20	N	SO	0.5	2	SVOC	BENZO(a)PYRENE	1.79	U	MG/KG	0.23
SS_FWI	SM122	SM122-51-1	10/22/01 12:55	N	SO	0	0.5	SVOC	bis(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHER)	0.92	U	MG/KG	0.62
SS_FWI	SM125	SM125-51-1	10/22/01 0:00	N	SO	0	0.5	SVOC	bis(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHER)	0.92	U	MG/KG	0.62
SS_FWI	SM126	SM126-51-1	10/22/01 0:00	N	SO	0	0.5	SVOC	bis(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHER)	2.3	U	MG/KG	0.62
SS_FWI	SM136	SM136SB01052206	5/22/06 8:05	N	SO	0.5	1.67	SVOC	bis(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHER)	0.95	U	MG/KG	0.62
SS_FWI	SM137	SM137SB01052306	5/23/06 9:20	N	SO	2	4	SVOC	bis(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHER)	1.96	U	MG/KG	0.62
SS_FWI	SM138	SM138SB01052306	5/23/06 11:20	N	SO	0	2	SVOC	bis(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHER)	1.88	U	MG/KG	0.62
SS_FWI	SM139	SM139SB01052306	5/23/06 14:05	N	SO	0	2	SVOC	bis(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHER)	2.08	U	MG/KG	0.62
SS_FWI	SM140	SM140SB01052306	5/23/06 15:20	N	SO	0.5	2	SVOC	bis(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHER)	1.79	U	MG/KG	0.62
SS_FWI	SM142	SM142SB01052406	5/24/06 9:20	N	SO	0	2	SVOC	bis(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHER)	1.8	U	MG/KG	0.62
SS_FWI	SM121	SM121-51-1	10/22/01 11:05	N	SO	0	0.5	SVOC	DIBENZ(a,h)ANTHRACENE	0.45	U	MG/KG	0.23
SS_FWI	SM136	SM136SB01052206	5/22/06 8:05	N	SO	0.5	1.67	SVOC	DIBENZ(a,h)ANTHRACENE	0.95	U	MG/KG	0.23
SS_FWI	SM137	SM137SB01052306	5/23/06 9:20	N	SO	2	4	SVOC	DIBENZ(a,h)ANTHRACENE	1.96	U	MG/KG	0.23
SS_FWI	SM138	SM138SB01052306	5/23/06 11:20	N	SO	0	2	SVOC	DIBENZ(a,h)ANTHRACENE	1.88	U	MG/KG	0.23
SS_FWI	SM139	SM139SB01052306	5/23/06 14:05	N	SO	0	2	SVOC	DIBENZ(a,h)ANTHRACENE	2.08	U	MG/KG	0.23
SS_FWI	SM140	SM140SB01052306	5/23/06 15:20	N	SO	0.5	2	SVOC	DIBENZ(a,h)ANTHRACENE	1.79	U	MG/KG	0.23
SS_FWI	SM142	SM142SB01052406	5/24/06 9:20	N	SO	0	2	SVOC	DIBENZ(a,h)ANTHRACENE	1.8	U	MG/KG	0.23
SS_FWI	SM126	SM126-51-1	10/22/01 0:00	N	SO	0	0.5	SVOC	HEXACHLOROBENZENE	2.3	U	MG/KG	1.2
SS_FWI	SM137	SM137SB01052306	5/23/06 9:20	N	SO	2	4	SVOC	HEXACHLOROBENZENE	1.96	U	MG/KG	1.2
SS_FWI	SM138	SM138SB01052306	5/23/06 11:20	N	SO	0	2	SVOC	HEXACHLOROBENZENE	1.88	U	MG/KG	1.2
SS_FWI	SM139	SM139SB01052306	5/23/06 14:05	N	SO	0	2	SVOC	HEXACHLOROBENZENE	2.08	U	MG/KG	1.2
SS_FWI	SM140	SM140SB01052306	5/23/06 15:20	N	SO	0.5	2	SVOC	HEXACHLOROBENZENE	1.79	U	MG/KG	1.2
SS_FWI	SM142	SM142SB01052406	5/24/06 9:20	N	SO	0	2	SVOC	HEXACHLOROBENZENE	1.8	U	MG/KG	1.2
SS_FWI	SM120	SM120-51-1	10/22/01 11:00	N	SO	0	0.5	SVOC	N-NITROSODI-n-PROPYLAMINE	0.43	U	MG/KG	0.27
SS_FWI	SM121	SM121-51-1	10/22/01 11:05	N	SO	0	0.5	SVOC	N-NITROSODI-n-PROPYLAMINE	0.45	U	MG/KG	0.27
SS_FWI	SM122	SM122-51-1	10/22/01 12:55	N	SO	0	0.5	SVOC	N-NITROSODI-n-PROPYLAMINE	0.92	U	MG/KG	0.27
SS_FWI	SM123	SM123-51-1	10/22/01 13:03	N	SO	0	0.5	SVOC	N-NITROSODI-n-PROPYLAMINE	0.4	U	MG/KG	0.27
SS_FWI	SM124	SM124-51-1	10/22/01 13:05	N	SO	0	0.5	SVOC	N-NITROSODI-n-PROPYLAMINE	0.43	U	MG/KG	0.27
SS_FWI	SM125	SM125-51-1	10/22/01 0:00	N	SO	0	0.5	SVOC	N-NITROSODI-n-PROPYLAMINE	0.92	U	MG/KG	0.27
SS_FWI	SM126	SM126-51-1	10/22/01 0:00	N	SO	0	0.5	SVOC	N-NITROSODI-n-PROPYLAMINE	2.3	U	MG/KG	0.27
SS_FWI	SM127	SM127-51-1	10/22/01 0:00	N	SO	0	0.5	SVOC	N-NITROSODI-n-PROPYLAMINE	0.39	U	MG/KG	0.27
SS_FWI	SM136	SM136SB01052206	5/22/06 8:05	N	SO	0.5	1.67	SVOC	N-NITROSODI-n-PROPYLAMINE	0.95	U	MG/KG	0.27
SS_FWI	SM137	SM137SB01052306	5/23/06 9:20	N	SO	2	4	SVOC	N-NITROSODI-n-PROPYLAMINE	1.96	U	MG/KG	0.27
SS_FWI	SM138	SM138SB01052306	5/23/06 11:20	N	SO	0	2	SVOC	N-NITROSODI-n-PROPYLAMINE	1.88	U	MG/KG	0.27
SS_FWI	SM139	SM139SB01052306	5/23/06 14:05	N	SO	0	2	SVOC	N-NITROSODI-n-PROPYLAMINE	2.08	U	MG/KG	0.27
SS_FWI	SM140	SM140SB01052306	5/23/06 15:20	N	SO	0.5	2	SVOC	N-NITROSODI-n-PROPYLAMINE	1.79	U	MG/KG	0.27
SS_FWI	SM142	SM142SB01052406	5/24/06 9:20	N	SO	0	2	SVOC	N-NITROSODI-n-PROPYLAMINE	1.8	U	MG/KG	0.27

AOCID	StationID	SampleID	DateCollected	Sample Type	Matrix	Upper Depth	Lower Depth	Param Class	FormlParamName	AnaValue	ProjQual	Unit	Criteria
SS_LTF	SM107	SM107-51-1	10/22/01 0:00	N	SO	0	0.5	SVOC	3,3'-DICHLOROBENZIDINE	4.4	U	MG/KG	4.3
SS_LTF	SM107	SM107-51-1	10/22/01 0:00	N	SO	0	0.5	SVOC	BENZO(A)ANTHRACENE	4.4	U	MG/KG	2.3
SS_LTF	SM107	SM107-51-1	10/22/01 0:00	N	SO	0	0.5	SVOC	BENZO(A)PYRENE	4.4	U	MG/KG	0.23
SS_LTF	SM107	SM107-51-1	10/22/01 0:00	N	SO	0	0.5	SVOC	BIS(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHER)	4.4	U	MG/KG	0.62
SS_LTF	SM106	SM106-51-1	10/18/01 0:00	N	SO	0	0.5	SVOC	BIS(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHER)	2	U	MG/KG	0.62
SS_LTF	SM107	SM107-51-1	10/22/01 0:00	N	SO	0	0.5	SVOC	DIBENZ(A,H)ANTHRACENE	4.4	U	MG/KG	0.23
SS_LTF	SM104	SM104-51-1	10/17/01 0:00	N	SO	0	0.5	SVOC	DIBENZ(A,H)ANTHRACENE	0.47	U	MG/KG	0.23
SS_LTF	SM107	SM107-51-1	10/22/01 0:00	N	SO	0	0.5	SVOC	HEXACHLOROBENZENE	4.4	U	MG/KG	1.2
SS_LTF	SM106	SM106-51-1	10/18/01 0:00	N	SO	0	0.5	SVOC	HEXACHLOROBENZENE	2	U	MG/KG	1.2
SS_LTF	SM107	SM107-51-1	10/22/01 0:00	N	SO	0	0.5	SVOC	N-NITROSODI-N-PROPYLAMINE	4.4	U	MG/KG	0.27
SS_LTF	SM105	SM105-51-1	10/18/01 10:18	N	SO	0	0.5	SVOC	N-NITROSODI-N-PROPYLAMINE	0.44	U	MG/KG	0.27
SS_LTF	SM104	SM104-51-1	10/17/01 0:00	N	SO	0	0.5	SVOC	N-NITROSODI-N-PROPYLAMINE	0.47	U	MG/KG	0.27
SS_LTF	SM103	SM103-51-1	10/18/01 10:10	N	SO	0	0.5	SVOC	N-NITROSODI-N-PROPYLAMINE	0.45	U	MG/KG	0.27
SS_LTF	SM106	SM106-51-1	10/18/01 0:00	N	SO	0	0.5	SVOC	N-NITROSODI-N-PROPYLAMINE	2	U	MG/KG	0.27
SS_LTF	SM101	SM101-51-1	10/18/01 9:25	N	SO	0	0.5	SVOC	N-NITROSODI-N-PROPYLAMINE	0.42	U	MG/KG	0.27
SS_LTF	SM102	SM102-51-1	10/18/01 9:30	N	SO	0	0.5	SVOC	N-NITROSODI-N-PROPYLAMINE	0.43	U	MG/KG	0.27
SS_LTF	SM107	SM107-51-1	10/22/01 0:00	N	SO	0	0.5	SVOC	PENTACHLOROPHENOL	11	U	MG/KG	10

SQLs Exceeding Screening Levels - Maintenance Shed Area

AOCID	StationID	SampleID	DateCollected	Sample Type	Matrix	Upper Depth	Lower Depth	Param Class	FormlParamName	AnaValue	ProjQual	Unit	Criteria
SS_MSA	SM108	SM108-51-1	10/18/01 0:00	N	SO	0	0.5	SVOC	BIS(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHER)	0.79	U	MG/KG	0.62
SS_MSA	SM110	SM110-51-1	10/19/01 0:00	N	SO	0	0.5	SVOC	DIBENZ(A,H)ANTHRACENE	0.37	U	MG/KG	0.23
SS_MSA	SM108	SM108-51-1	10/18/01 0:00	N	SO	0	0.5	SVOC	DIBENZ(A,H)ANTHRACENE	0.79	U	MG/KG	0.23
SS_MSA	SM110	SM110-51-1	10/19/01 0:00	N	SO	0	0.5	SVOC	N-NITROSODI-N-PROPYLAMINE	0.37	U	MG/KG	0.27
SS_MSA	SM108	SM108-51-1	10/18/01 0:00	N	SO	0	0.5	SVOC	N-NITROSODI-N-PROPYLAMINE	0.79	U	MG/KG	0.27
SS_MSA	SM111	SM111-51-1	10/19/01 0:00	N	SO	0	0.5	SVOC	N-NITROSODI-N-PROPYLAMINE	0.45	U	MG/KG	0.27

SQLs Exceeding Screening Levels - Tar Burn Area

AOCID	StationID	SampleID	DateCollected	Sample Type	Matrix	Upper Depth	Lower Depth	Param Class	FormlParamName	AnaValue	ProjQual	Unit	Criteria
SS_TBA	SM115	SM115-51-1	10/18/01 11:15	N	SO	0	0.5	SVOC	BIS(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHER)	0.81	U	MG/KG	0.62
SS_TBA	SM112	SM112-51-1	10/19/01 0:00	N	SO	0	0.5	SVOC	N-NITROSODI-N-PROPYLAMINE	0.44	U	MG/KG	0.27
SS_TBA	SM115	SM115-51-1	10/18/01 11:15	N	SO	0	0.5	SVOC	N-NITROSODI-N-PROPYLAMINE	0.81	U	MG/KG	0.27
SS_TBA	SM113	SM113-51-1	10/18/01 10:10	N	SO	0	0.5	SVOC	N-NITROSODI-N-PROPYLAMINE	0.47	U	MG/KG	0.27
SS_TBA	SM114	SM114-51-1	10/18/01 11:00	N	SO	0	0.5	SVOC	N-NITROSODI-N-PROPYLAMINE	0.49	U	MG/KG	0.27

SQLs Exceeding Screening Levels - Wastewater Treatment Facility

AOCID	StationID	SampleID	DateCollected	Sample Type	Matrix	Upper Depth	Lower Depth	Param Class	FormlParamName	AnaValue	ProjQual	Unit	Criteria
SS_WWTF	SM119	SM119-51-1	10/22/01 9:20	N	SO	0	0.5	SVOC	N-NITROSODI-N-PROPYLAMINE	0.45	U	MG/KG	0.27
SS_WWTF	SM116	SM116-51-1	10/22/01 0:00	N	SO	0	0.5	SVOC	N-NITROSODI-N-PROPYLAMINE	0.41	U	MG/KG	0.27
SS_WWTF	SM117	SM117-51-1	10/18/01 0:00	N	SO	0	0.5	SVOC	N-NITROSODI-N-PROPYLAMINE	0.42	U	MG/KG	0.27
SS_WWTF	SM117A	SM117A-51-1	10/22/01 0:00	N	SO	0	0.5	SVOC	N-NITROSODI-N-PROPYLAMINE	0.48	U	MG/KG	0.27
SS_WWTF	SM118	SM118-51-1	10/22/01 9:15	N	SO	0	0.5	SVOC	N-NITROSODI-N-PROPYLAMINE	0.41	U	MG/KG	0.27

AOCID	StationID	SampleID	Date Collected	Sample Type	Matrix	Upper Depth	Lower Depth	Param Class	FormlParamName	AnaValue	ProjQual	Unit	Criteria
SED_ALL	SM95-SE-8	FBN56		N	SE			PEST	ALDRIN	0.0017	U	mg/kg	2.33E-04
SED_ALL	SM95-SE-11	FBN55		N	SE			PEST	ALDRIN	0.0017	U	mg/kg	2.33E-04
SED_ALL	SM95-SE-15	FBN51		N	SE			PEST	ALDRIN	0.0017	U	mg/kg	2.33E-04
SED_ALL	SM95-SE-14	FBN52		N	SE			PEST	ALDRIN	0.0017	U	mg/kg	2.33E-04
SED_ALL	SM95-SE-7	FBN59		N	SE			PEST	ALDRIN	0.0017	U	mg/kg	2.33E-04
SED_ALL	SM95-SE-9	FBN57		N	SE			PEST	ALDRIN	0.0017	U	mg/kg	2.33E-04
SED_ALL	SM95-SE-11	FBN55		N	SE			PEST	DIELDRIN	0.0033	U	mg/kg	2.48E-04
SED_ALL	SM95-SE-15	FBN51		N	SE			PEST	DIELDRIN	0.0033	U	mg/kg	2.48E-04
SED_ALL	SM95-SE-14	FBN52		N	SE			PEST	DIELDRIN	0.0033	U	mg/kg	2.48E-04
SED_ALL	SM95-SE-7	FBN59		N	SE			PEST	DIELDRIN	0.0033	U	mg/kg	2.48E-04
SED_ALL	SM95-SE-8	FBN56		N	SE			PEST	DIELDRIN	0.0033	U	mg/kg	2.48E-04
SED_ALL	SM95-SE-9	FBN57		N	SE			PEST	DIELDRIN	0.0033	U	mg/kg	2.48E-04
SED_ALL	SM95-SE-11	FBN55		N	SE			PEST	HEPTACHLOR	0.0017	U	mg/kg	8.80E-04
SED_ALL	SM95-SE-15	FBN51		N	SE			PEST	HEPTACHLOR	0.0017	U	mg/kg	8.80E-04
SED_ALL	SM95-SE-14	FBN52		N	SE			PEST	HEPTACHLOR	0.0017	U	mg/kg	8.80E-04
SED_ALL	SM95-SE-7	FBN59		N	SE			PEST	HEPTACHLOR	0.0017	U	mg/kg	8.80E-04
SED_ALL	SM95-SE-8	FBN56		N	SE			PEST	HEPTACHLOR	0.0017	U	mg/kg	8.80E-04
SED_ALL	SM95-SE-9	FBN57		N	SE			PEST	HEPTACHLOR	0.0017	U	mg/kg	8.80E-04
SED_ALL	SM95-SE-11	FBN55		N	SE			PEST	HEPTACHLOR EPOXIDE	0.0017	U	mg/kg	2.42E-04
SED_ALL	SM95-SE-15	FBN51		N	SE			PEST	HEPTACHLOR EPOXIDE	0.0017	U	mg/kg	2.42E-04
SED_ALL	SM95-SE-14	FBN52		N	SE			PEST	HEPTACHLOR EPOXIDE	0.0017	U	mg/kg	2.42E-04
SED_ALL	SM95-SE-7	FBN59		N	SE			PEST	HEPTACHLOR EPOXIDE	0.0017	U	mg/kg	2.42E-04
SED_ALL	SM95-SE-8	FBN56		N	SE			PEST	HEPTACHLOR EPOXIDE	0.0017	U	mg/kg	2.42E-04
SED_ALL	SM95-SE-9	FBN57		N	SE			PEST	HEPTACHLOR EPOXIDE	0.0017	U	mg/kg	2.42E-04
SED_ALL	SM95-SE-11	FBN55		N	SE			SVOC	HEXACHLOROBENZENE	0.17	U	mg/kg	1.03E-02
SED_ALL	SM95-SE-15	FBN51		N	SE			SVOC	HEXACHLOROBENZENE	0.17	U	mg/kg	1.03E-02
SED_ALL	SM95-SE-14	FBN52		N	SE			SVOC	HEXACHLOROBENZENE	0.17	U	mg/kg	1.03E-02
SED_ALL	SM95-SE-7	FBN59		N	SE			SVOC	HEXACHLOROBENZENE	0.17	U	mg/kg	1.03E-02
SED_ALL	SM002	SM002-51-1	9/28/01 13:20	N	SE	0	0.5	SVOC	HEXACHLOROBENZENE	0.021	UJL	MG/KG	1.03E-02
SED_ALL	SM003	SM003-51-1	9/28/01 13:30	N	SE	0	0.5	SVOC	HEXACHLOROBENZENE	0.015	U	MG/KG	1.03E-02
SED_ALL	SM95-SE-8	FBN56		N	SE			SVOC	HEXACHLOROBENZENE	0.17	U	mg/kg	1.03E-02
SED_ALL	SM004	SM004-51-1	9/28/01 13:49	N	SE	0	0.5	SVOC	HEXACHLOROBENZENE	0.011	U	MG/KG	1.03E-02
SED_ALL	SM95-SE-9	FBN57		N	SE			SVOC	HEXACHLOROBENZENE	0.17	U	mg/kg	1.03E-02
SED_ALL	SM95-SE-11	FBN55		N	SE			PEST	P,P'-DDE	0.0033	U	mg/kg	4.45E-04
SED_ALL	SM95-SE-15	FBN51		N	SE			PEST	P,P'-DDE	0.0033	U	mg/kg	4.45E-04
SED_ALL	SM95-SE-8	FBN56		N	SE			PEST	P,P'-DDE	0.0033	U	mg/kg	4.45E-04
SED_ALL	SM95-SE-14	FBN52		N	SE			PEST	P,P'-DDE	0.0033	U	mg/kg	4.45E-04
SED_ALL	SM95-SE-7	FBN59		N	SE			PEST	P,P'-DDE	0.0033	U	mg/kg	4.45E-04
SED_ALL	SM95-SE-9	FBN57		N	SE			PEST	P,P'-DDE	0.0033	U	mg/kg	4.45E-04
SED_ALL	SM95-SE-11	FBN55		N	SE			PEST	P,P'-DDT	0.0033	U	mg/kg	1.32E-03
SED_ALL	SM95-SE-15	FBN51		N	SE			PEST	P,P'-DDT	0.0033	U	mg/kg	1.32E-03
SED_ALL	SM95-SE-14	FBN52		N	SE			PEST	P,P'-DDT	0.0033	U	mg/kg	1.32E-03
SED_ALL	SM95-SE-7	FBN59		N	SE			PEST	P,P'-DDT	0.0033	U	mg/kg	1.32E-03
SED_ALL	SM95-SE-8	FBN56		N	SE			PEST	P,P'-DDT	0.0033	U	mg/kg	1.32E-03
SED_ALL	SM95-SE-9	FBN57		N	SE			PEST	P,P'-DDT	0.0033	U	mg/kg	1.32E-03
SED_ALL	SM95-SE-14	FBN52		N	SE			PEST	PCB-1016 (AROCHLOR 1016)	0.033	U	mg/kg	1.54E-04
SED_ALL	SM95-SE-11	FBN55		N	SE			PEST	PCB-1016 (AROCHLOR 1016)	0.033	U	mg/kg	1.54E-04
SED_ALL	SM95-SE-15	FBN51		N	SE			PEST	PCB-1016 (AROCHLOR 1016)	0.033	U	mg/kg	1.54E-04
SED_ALL	SM95-SE-7	FBN59		N	SE			PEST	PCB-1016 (AROCHLOR 1016)	0.033	U	mg/kg	1.54E-04
SED_ALL	SM95-SE-8	FBN56		N	SE			PEST	PCB-1016 (AROCHLOR 1016)	0.033	U	mg/kg	1.54E-04
SED_ALL	SM95-SE-9	FBN57		N	SE			PEST	PCB-1016 (AROCHLOR 1016)	0.033	U	mg/kg	1.54E-04
SED_ALL	SM95-SE-14	FBN52		N	SE			PEST	PCB-1221 (AROCHLOR 1221)	0.033	U	mg/kg	1.54E-04
SED_ALL	SM95-SE-11	FBN55		N	SE			PEST	PCB-1221 (AROCHLOR 1221)	0.033	U	mg/kg	1.54E-04
SED_ALL	SM95-SE-15	FBN51		N	SE			PEST	PCB-1221 (AROCHLOR 1221)	0.033	U	mg/kg	1.54E-04
SED_ALL	SM95-SE-9	FBN57		N	SE			PEST	PCB-1221 (AROCHLOR 1221)	0.033	U	mg/kg	1.54E-04
SED_ALL	SM95-SE-7	FBN59		N	SE			PEST	PCB-1221 (AROCHLOR 1221)	0.033	U	mg/kg	1.54E-04
SED_ALL	SM95-SE-8	FBN56		N	SE			PEST	PCB-1221 (AROCHLOR 1221)	0.033	U	mg/kg	1.54E-04
SED_ALL	SM95-SE-11	FBN55		N	SE			PEST	PCB-1232 (AROCHLOR 1232)	0.033	U	mg/kg	1.54E-04
SED_ALL	SM95-SE-15	FBN51		N	SE			PEST	PCB-1232 (AROCHLOR 1232)	0.033	U	mg/kg	1.54E-04
SED_ALL	SM95-SE-14	FBN52		N	SE			PEST	PCB-1232 (AROCHLOR 1232)	0.033	U	mg/kg	1.54E-04
SED_ALL	SM95-SE-9	FBN57		N	SE			PEST	PCB-1232 (AROCHLOR 1232)	0.033	U	mg/kg	1.54E-04
SED_ALL	SM95-SE-7	FBN59		N	SE			PEST	PCB-1232 (AROCHLOR 1232)	0.033	U	mg/kg	1.54E-04
SED_ALL	SM95-SE-8	FBN56		N	SE			PEST	PCB-1232 (AROCHLOR 1232)	0.033	U	mg/kg	1.54E-04
SED_ALL	SM95-SE-14	FBN52		N	SE			PEST	PCB-1242 (AROCHLOR 1242)	0.033	U	mg/kg	1.54E-04
SED_ALL	SM95-SE-11	FBN55		N	SE			PEST	PCB-1242 (AROCHLOR 1242)	0.033	U	mg/kg	1.54E-04
SED_ALL	SM95-SE-15	FBN51		N	SE			PEST	PCB-1242 (AROCHLOR 1242)	0.033	U	mg/kg	1.54E-04
SED_ALL	SM95-SE-7	FBN59		N	SE			PEST	PCB-1242 (AROCHLOR 1242)	0.033	U	mg/kg	1.54E-04
SED_ALL	SM95-SE-8	FBN56		N	SE			PEST	PCB-1242 (AROCHLOR 1242)	0.033	U	mg/kg	1.54E-04
SED_ALL	SM95-SE-14	FBN52		N	SE			PEST	PCB-1248 (AROCHLOR 1248)	0.033	U	mg/kg	1.54E-04
SED_ALL	SM95-SE-11	FBN55		N	SE			PEST	PCB-1248 (AROCHLOR 1248)	0.033	U	mg/kg	1.54E-04
SED_ALL	SM95-SE-15	FBN51		N	SE			PEST	PCB-1248 (AROCHLOR 1248)	0.033	U	mg/kg	1.54E-04
SED_ALL	SM95-SE-7	FBN59		N	SE			PEST	PCB-1248 (AROCHLOR 1248)	0.033	U	mg/kg	1.54E-04
SED_ALL	SM95-SE-9	FBN57		N	SE			PEST	PCB-1248 (AROCHLOR 1248)	0.033	U	mg/kg	1.54E-04

AOCID	StationID	SampleID	Date Collected	Sample Type	Matrix	Upper Depth	Lower Depth	Param Class	FormlParamName	AnaValue	ProjQual	Unit	Criteria
SED_ALL	SM95-SE-8	FBN56		N	SE			PEST	PCB-1248 (AROCHLOR 1248)	0.033	U	mg/kg	1.54E-04
SED_ALL	SM95-SE-14	FBN52		N	SE			PEST	PCB-1254 (AROCHLOR 1254)	0.033	U	mg/kg	1.54E-04
SED_ALL	SM95-SE-11	FBN55		N	SE			PEST	PCB-1254 (AROCHLOR 1254)	0.033	U	mg/kg	1.54E-04
SED_ALL	SM95-SE-15	FBN51		N	SE			PEST	PCB-1254 (AROCHLOR 1254)	0.033	U	mg/kg	1.54E-04
SED_ALL	SM95-SE-9	FBN57		N	SE			PEST	PCB-1254 (AROCHLOR 1254)	0.033	U	mg/kg	1.54E-04
SED_ALL	SM95-SE-7	FBN59		N	SE			PEST	PCB-1254 (AROCHLOR 1254)	0.033	U	mg/kg	1.54E-04
SED_ALL	SM95-SE-8	FBN56		N	SE			PEST	PCB-1254 (AROCHLOR 1254)	0.033	U	mg/kg	1.54E-04
SED_ALL	SM95-SE-14	FBN52		N	SE			PEST	PCB-1260 (AROCHLOR 1260)	0.033	U	mg/kg	1.54E-04
SED_ALL	SM95-SE-11	FBN55		N	SE			PEST	PCB-1260 (AROCHLOR 1260)	0.033	U	mg/kg	1.54E-04
SED_ALL	SM95-SE-15	FBN51		N	SE			PEST	PCB-1260 (AROCHLOR 1260)	0.033	U	mg/kg	1.54E-04
SED_ALL	SM95-SE-9	FBN57		N	SE			PEST	PCB-1260 (AROCHLOR 1260)	0.033	U	mg/kg	1.54E-04
SED_ALL	SM95-SE-7	FBN59		N	SE			PEST	PCB-1260 (AROCHLOR 1260)	0.033	U	mg/kg	1.54E-04
SED_ALL	SM95-SE-8	FBN56		N	SE			PEST	PCB-1260 (AROCHLOR 1260)	0.033	U	mg/kg	1.54E-04
SED_ALL	SM95-SE-14	FBN52		N	SE			PEST	TOXAPHENE	0.17	U	mg/kg	3.60E-03
SED_ALL	SM95-SE-15	FBN51		N	SE			PEST	TOXAPHENE	0.17	U	mg/kg	3.60E-03
SED_ALL	SM95-SE-11	FBN55		N	SE			PEST	TOXAPHENE	0.17	U	mg/kg	3.60E-03
SED_ALL	SM95-SE-9	FBN57		N	SE			PEST	TOXAPHENE	0.17	U	mg/kg	3.60E-03
SED_ALL	SM95-SE-7	FBN59		N	SE			PEST	TOXAPHENE	0.17	U	mg/kg	3.60E-03
SED_ALL	SM95-SE-8	FBN56		N	SE			PEST	TOXAPHENE	0.17	U	mg/kg	3.60E-03

AOCID	StationID	SampleID	DateCollected	Sample Type	Matrix	Upper Depth	Lower Depth	Param Class	FormlParamName	AnaValue	ProjQual	Unit	Criteria
SB_NS	SM085	SM085-51-1	10/17/01 0:00	N	SO	0	0.5	SVOC	3,3'-DICHLOROBENZIDINE	6.6	U	MG/KG	4.3
SB_NS	SM100	SM100-51-2	10/16/01 0:00	N	SO	4	5	METAL	ARSENIC	7.8	UC	MG/KG	1.8
SB_NS	SM094	SM094-51-1	10/16/01 0:00	N	SO	0	0.5	METAL	ARSENIC	5.7	UCB	MG/KG	1.8
SB_NS	SM085	SM085-51-1	10/17/01 0:00	N	SO	0	0.5	SVOC	BENZO(A)ANTHRACENE	6.6	U	MG/KG	2.3
SB_NS	SM95-SO-13	FBN79		N	SO			SVOC	BENZO(A)PYRENE	0.35	U	mg/Kg	0.23
SB_NS	SM051	SM051-51-1	10/17/01 0:00	N	SO	0	0.5	SVOC	BENZO(A)PYRENE	0.45	U	MG/KG	0.23
SB_NS	SM048	SM048-51-1	10/18/01 0:00	N	SO	0	0.5	SVOC	BENZO(A)PYRENE	0.44	U	MG/KG	0.23
SB_NS	SM047	SM047-51-1	10/18/01 7:40	N	SO	0	0.5	SVOC	BENZO(A)PYRENE	0.43	U	MG/KG	0.23
SB_NS	SM071	SM071-51-1	10/18/01 0:00	N	SO	0	0.5	SVOC	BENZO(A)PYRENE	0.47	U	MG/KG	0.23
SB_NS	SM069	SM069-51-1	10/18/01 0:00	N	SO	0	0.5	SVOC	BENZO(A)PYRENE	0.45	U	MG/KG	0.23
SB_NS	SM067	SM067-51-1	10/18/01 0:00	N	SO	0	0.5	SVOC	BENZO(A)PYRENE	0.46	U	MG/KG	0.23
SB_NS	SM087	SM087-51-1	10/22/01 8:40	N	SO	0	0.5	SVOC	BIS(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHER)	2.4	U	MG/KG	0.62
SB_NS	SM084	SM084-51-1	10/22/01 8:30	N	SO	0	0.5	SVOC	BIS(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHER)	1.3	U	MG/KG	0.62
SB_NS	SM079	SM079-51-1	10/19/01 0:00	N	SO	0	0.5	SVOC	BIS(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHER)	0.84	U	MG/KG	0.62
SB_NS	SM085	SM085-51-1	10/17/01 0:00	N	SO	0	0.5	SVOC	BIS(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHER)	6.6	U	MG/KG	0.62
SB_NS	SM093	SM093-51-1	10/18/01 7:45	N	SO	0	0.5	SVOC	BIS(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHER)	1.3	U	MG/KG	0.62
SB_NS	SM092	SM092-51-1	10/17/01 0:00	N	SO	0	0.5	SVOC	BIS(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHER)	2.4	U	MG/KG	0.62
SB_NS	SM091	SM091-51-1	10/17/01 0:00	N	SO	0	0.5	SVOC	BIS(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHER)	4.3	U	MG/KG	0.62
SB_NS	SM058	SM058-51-1	10/18/01 0:00	N	SO	0	0.5	SVOC	BIS(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHER)	4.2	U	MG/KG	0.62
SB_NS	SM052	SM052-51-1	10/18/01 8:00	N	SO	0	0.5	SVOC	BIS(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHER)	1.1	U	MG/KG	0.62
SB_NS	SM075	SM075-51-1	10/19/01 0:00	N	SO	0	0.5	SVOC	BIS(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHER)	1.2	U	MG/KG	0.62
SB_NS	SM085	SM085-51-1	10/17/01 0:00	N	SO	0	0.5	SVOC	DIBENZ(A,H)ANTHRACENE	6.6	U	MG/KG	0.23
SB_NS	SM084	SM084-51-1	10/22/01 8:30	N	SO	0	0.5	SVOC	DIBENZ(A,H)ANTHRACENE	1.3	U	MG/KG	0.23
SB_NS	SM083	SM083-51-1	10/22/01 8:05	N	SO	0	0.5	SVOC	DIBENZ(A,H)ANTHRACENE	0.42	U	MG/KG	0.23
SB_NS	SM082	SM082-51-1	10/22/01 8:00	N	SO	0	0.5	SVOC	DIBENZ(A,H)ANTHRACENE	0.45	U	MG/KG	0.23
SB_NS	SM081	SM081-51-1	10/22/01 7:40	N	SO	0	0.5	SVOC	DIBENZ(A,H)ANTHRACENE	0.42	U	MG/KG	0.23
SB_NS	SM099	SM099-51-1	10/16/01 0:00	N	SO	0	0.5	SVOC	DIBENZ(A,H)ANTHRACENE	0.42	U	MG/KG	0.23
SB_NS	SM097	SM097-51-1	10/22/01 0:00	N	SO	0	0.5	SVOC	DIBENZ(A,H)ANTHRACENE	0.42	U	MG/KG	0.23
SB_NS	SM089	SM089-51-1	10/22/01 9:20	N	SO	0	0.5	SVOC	DIBENZ(A,H)ANTHRACENE	0.44	U	MG/KG	0.23
SB_NS	SM100	SM100-51-1	10/16/01 0:00	N	SO	0	0.5	SVOC	DIBENZ(A,H)ANTHRACENE	0.42	U	MG/KG	0.23
SB_NS	SM093	SM093-51-1	10/18/01 7:45	N	SO	0	0.5	SVOC	DIBENZ(A,H)ANTHRACENE	1.3	U	MG/KG	0.23
SB_NS	SM092	SM092-51-2	10/17/01 0:00	N	SO	3	4	SVOC	DIBENZ(A,H)ANTHRACENE	0.44	U	MG/KG	0.23
SB_NS	SM051	SM051-51-1	10/17/01 0:00	N	SO	0	0.5	SVOC	DIBENZ(A,H)ANTHRACENE	0.45	U	MG/KG	0.23
SB_NS	SM057	SM057-51-1	10/18/01 0:00	N	SO	0	0.5	SVOC	DIBENZ(A,H)ANTHRACENE	0.44	U	MG/KG	0.23
SB_NS	SM059	SM059-51-1	10/18/01 0:00	N	SO	0	0.5	SVOC	DIBENZ(A,H)ANTHRACENE	0.45	U	MG/KG	0.23
SB_NS	SM047	SM047-51-1	10/18/01 7:40	N	SO	0	0.5	SVOC	DIBENZ(A,H)ANTHRACENE	0.43	U	MG/KG	0.23
SB_NS	SM050	SM050-51-1	10/18/01 7:55	N	SO	0	0.5	SVOC	DIBENZ(A,H)ANTHRACENE	0.44	U	MG/KG	0.23
SB_NS	SM048	SM048-51-1	10/18/01 0:00	N	SO	0	0.5	SVOC	DIBENZ(A,H)ANTHRACENE	0.44	U	MG/KG	0.23
SB_NS	SM077	SM077-51-1	10/22/01 7:30	N	SO	0	0.5	SVOC	DIBENZ(A,H)ANTHRACENE	0.37	U	MG/KG	0.23
SB_NS	SM100	SM100-51-2	10/16/01 0:00	N	SO	4	5	SVOC	DIBENZ(A,H)ANTHRACENE	0.43	U	MG/KG	0.23
SB_NS	SM073	SM073-51-1	10/19/01 0:00	N	SO	0	0.5	SVOC	DIBENZ(A,H)ANTHRACENE	0.38	U	MG/KG	0.23
SB_NS	SM072	SM072-51-1	10/19/01 0:00	N	SO	0	0.5	SVOC	DIBENZ(A,H)ANTHRACENE	0.4	U	MG/KG	0.23
SB_NS	SM071	SM071-51-1	10/18/01 0:00	N	SO	0	0.5	SVOC	DIBENZ(A,H)ANTHRACENE	0.47	U	MG/KG	0.23
SB_NS	SM069	SM069-51-1	10/18/01 0:00	N	SO	0	0.5	SVOC	DIBENZ(A,H)ANTHRACENE	0.45	U	MG/KG	0.23
SB_NS	SM064	SM064-51-1	10/18/01 0:00	N	SO	0	0.5	SVOC	DIBENZ(A,H)ANTHRACENE	0.46	U	MG/KG	0.23
SB_NS	SM067	SM067-51-1	10/18/01 0:00	N	SO	0	0.5	SVOC	DIBENZ(A,H)ANTHRACENE	0.46	U	MG/KG	0.23
SB_NS	SM068	SM068-51-1	10/18/01 0:00	N	SO	0	0.5	SVOC	DIBENZ(A,H)ANTHRACENE	0.45	U	MG/KG	0.23
SB_NS	SM084	SM084-51-1	10/22/01 8:30	N	SO	0	0.5	SVOC	HEXACHLOROBENZENE	1.3	U	MG/KG	1.2
SB_NS	SM087	SM087-51-1	10/22/01 8:40	N	SO	0	0.5	SVOC	HEXACHLOROBENZENE	2.4	U	MG/KG	1.2
SB_NS	SM085	SM085-51-1	10/17/01 0:00	N	SO	0	0.5	SVOC	HEXACHLOROBENZENE	6.6	U	MG/KG	1.2
SB_NS	SM093	SM093-51-1	10/18/01 7:45	N	SO	0	0.5	SVOC	HEXACHLOROBENZENE	1.3	U	MG/KG	1.2
SB_NS	SM092	SM092-51-1	10/17/01 0:00	N	SO	0	0.5	SVOC	HEXACHLOROBENZENE	2.4	U	MG/KG	1.2
SB_NS	SM091	SM091-51-1	10/17/01 0:00	N	SO	0	0.5	SVOC	HEXACHLOROBENZENE	4.3	U	MG/KG	1.2
SB_NS	SM058	SM058-51-1	10/18/01 0:00	N	SO	0	0.5	SVOC	HEXACHLOROBENZENE	4.2	U	MG/KG	1.2
SB_NS	SM077	SM077-51-1	10/22/01 7:30	N	SO	0	0.5	SVOC	N-NITROSODI-N-PROPYLAMINE	0.37	U	MG/KG	0.27
SB_NS	SM087	SM087-51-1	10/22/01 8:40	N	SO	0	0.5	SVOC	N-NITROSODI-N-PROPYLAMINE	2.4	U	MG/KG	0.27
SB_NS	SM086	SM086-51-1	10/17/01 0:00	N	SO	0	0.5	SVOC	N-NITROSODI-N-PROPYLAMINE	0.41	U	MG/KG	0.27
SB_NS	SM085	SM085-51-1	10/17/01 0:00	N	SO	0	0.5	SVOC	N-NITROSODI-N-PROPYLAMINE	6.6	U	MG/KG	0.27
SB_NS	SM089	SM089-51-1	10/22/01 9:20	N	SO	0	0.5	SVOC	N-NITROSODI-N-PROPYLAMINE	0.44	U	MG/KG	0.27
SB_NS	SM084	SM084-51-1	10/22/01 8:30	N	SO	0	0.5	SVOC	N-NITROSODI-N-PROPYLAMINE	1.3	U	MG/KG	0.27
SB_NS	SM090	SM090-51-1	10/22/01 10:55	N	SO	0	0.5	SVOC	N-NITROSODI-N-PROPYLAMINE	0.43	U	MG/KG	0.27
SB_NS	SM083	SM083-51-1	10/22/01 8:05	N	SO	0	0.5	SVOC	N-NITROSODI-N-PROPYLAMINE	0.42	U	MG/KG	0.27
SB_NS	SM082	SM082-51-1	10/22/01 8:00	N	SO	0	0.5	SVOC	N-NITROSODI-N-PROPYLAMINE	0.45	U	MG/KG	0.27
SB_NS	SM081	SM081-51-1	10/22/01 7:40	N	SO	0	0.5	SVOC	N-NITROSODI-N-PROPYLAMINE	0.42	U	MG/KG	0.27
SB_NS	SM080	SM080-51-1	10/18/01 16:50	N	SO	0	0.5	SVOC	N-NITROSODI-N-PROPYLAMINE	0.42	U	MG/KG	0.27
SB_NS	SM079	SM079-51-1	10/19/01 0:00	N	SO	0	0.5	SVOC	N-NITROSODI-N-PROPYLAMINE	0.84	U	MG/KG	0.27
SB_NS	SM078	SM078-51-1	10/22/01 7:35	N	SO	0	0.5	SVOC	N-NITROSODI-N-PROPYLAMINE	0.42	U	MG/KG	0.27
SB_NS	SM093	SM093-51-1	10/18/01 7:45	N	SO	0	0.5	SVOC	N-NITROSODI-N-PROPYLAMINE	1.3	U	MG/KG	0.27
SB_NS	SM100	SM100-51-2	10/16/01 0:00	N	SO	4	5	SVOC	N-NITROSODI-N-PROPYLAMINE	0.43	U	MG/KG	0.27
SB_NS	SM100	SM100-51-1	10/16/01 0:00	N	SO	0	0.5	SVOC	N-NITROSODI-N-PROPYLAMINE	0.42	U	MG/KG	0.27
SB_NS	SM099	SM099-51-1	10/16/01 0:00	N	SO	0	0.5	SVOC	N-NITROSODI-N-PROPYLAMINE	0.42	U	MG/KG	0.27
SB_NS	SM098	SM098-51-1	10/16/01 0:00	N	SO	0	0.5	SVOC	N-NITROSODI-N-PROPYLAMINE	0.43	U	MG/KG	0.27
SB_NS	SM097	SM097-51-1	10/22/01 0:00	N	SO	0	0.5	SVOC	N-NITROSODI-N-PROPYLAMINE	0.42	U	MG/KG	0.27
SB_NS	SM096	SM096-51-1	10/16/01 0:00	N	SO	0	0.5	SVOC	N-NITROSODI-N-PROPYLAMINE	0.42	U	MG/KG	0.27
SB_NS	SM095	SM095-51-1	10/16/01 0:00	N	SO	0	0.5	SVOC	N-NITROSODI-N-PROPYLAMINE	0.41	U	MG/KG	0.27
SB_NS	SM094	SM094-51-1	10/16/01 0:00	N	SO	0	0.5	SVOC	N-NITROSODI-N-PROPYLAMINE	0.41	U	MG/KG	0.27
SB_NS	SM092	SM092-51-2	10/17/01 0:00	N	SO	3	4	SVOC	N-NITROSODI-N-PROPYLAMINE	0.44	U	MG/KG	0.27
SB_NS	SM092	SM092-51-1	10/17/01 0:00	N	SO	0	0.5	SVOC	N-NITROSODI-N-PROPYLAMINE	2.4	U	MG/KG	0.27
SB_NS	SM091	SM091-51-1	10/17/01 0:00	N	SO	0	0.5	SVOC	N-NITROSODI-N-PROPYLAMINE	4.3	U	MG/KG	0.27
SB_NS	SM058	SM058-51-1	10/18/01 0:00	N	SO	0	0.5	SVOC	N-NITROSODI-N-PROPYLAMINE	4.2	U	MG/KG	0.27
SB_NS	SM057	SM057-51-1	10/18/01 0:00	N	SO	0	0.5	SVOC	N-NITROSODI-N-PROPYLAMINE	0.44	U	MG/KG	0.27
SB_NS	SM056	SM056-51-1	10/18/01 9:12	N	SO	0	0.5	SVOC	N-NITROSODI-N-PROPYLAMINE	0.41	U	MG/KG	0.27
SB_NS	SM055	SM055-51-1	10/18/01 9:10	N	SO	0	0.5	SVOC	N-NITROSODI-N-PROPYLAMINE	0.4	U	MG/KG	0.27

AOCID	StationID	SampleID	DateCollected	Sample Type	Matrix	Upper Depth	Lower Depth	Param Class	FormlParamName	AnaValue	ProjQual	Unit	Criteria
SB_NS	SM054	SM054-51-1	10/18/01 9:05	N	SO	0	0.5	SVOC	N-NITROSODI-N-PROPYLAMINE	0.44	U	MG/KG	0.27
SB_NS	SM053	SM053-51-1	10/18/01 9:00	N	SO	0	0.5	SVOC	N-NITROSODI-N-PROPYLAMINE	0.43	U	MG/KG	0.27
SB_NS	SM052	SM052-51-1	10/18/01 8:00	N	SO	0	0.5	SVOC	N-NITROSODI-N-PROPYLAMINE	1.1	U	MG/KG	0.27
SB_NS	SM051	SM051-51-1	10/17/01 0:00	N	SO	0	0.5	SVOC	N-NITROSODI-N-PROPYLAMINE	0.45	U	MG/KG	0.27
SB_NS	SM050	SM050-51-1	10/18/01 7:55	N	SO	0	0.5	SVOC	N-NITROSODI-N-PROPYLAMINE	0.44	U	MG/KG	0.27
SB_NS	SM049	SM049-51-1	10/18/01 7:50	N	SO	0	0.5	SVOC	N-NITROSODI-N-PROPYLAMINE	0.43	U	MG/KG	0.27
SB_NS	SM048	SM048-51-1	10/18/01 0:00	N	SO	0	0.5	SVOC	N-NITROSODI-N-PROPYLAMINE	0.44	U	MG/KG	0.27
SB_NS	SM046	SM046-51-1	10/18/01 7:45	N	SO	0	0.5	SVOC	N-NITROSODI-N-PROPYLAMINE	0.37	U	MG/KG	0.27
SB_NS	SM047	SM047-51-1	10/18/01 7:40	N	SO	0	0.5	SVOC	N-NITROSODI-N-PROPYLAMINE	0.43	U	MG/KG	0.27
SB_NS	SM071	SM071-51-1	10/18/01 0:00	N	SO	0	0.5	SVOC	N-NITROSODI-N-PROPYLAMINE	0.47	U	MG/KG	0.27
SB_NS	SM076	SM076-51-1	10/19/01 0:00	N	SO	0	0.5	SVOC	N-NITROSODI-N-PROPYLAMINE	0.45	U	MG/KG	0.27
SB_NS	SM075	SM075-51-1	10/19/01 0:00	N	SO	0	0.5	SVOC	N-NITROSODI-N-PROPYLAMINE	1.2	U	MG/KG	0.27
SB_NS	SM074	SM074-51-1	10/19/01 0:00	N	SO	0	0.5	SVOC	N-NITROSODI-N-PROPYLAMINE	0.45	U	MG/KG	0.27
SB_NS	SM073	SM073-51-1	10/19/01 0:00	N	SO	0	0.5	SVOC	N-NITROSODI-N-PROPYLAMINE	0.38	U	MG/KG	0.27
SB_NS	SM059	SM059-51-1	10/18/01 0:00	N	SO	0	0.5	SVOC	N-NITROSODI-N-PROPYLAMINE	0.45	U	MG/KG	0.27
SB_NS	SM070	SM070-51-1	10/18/01 16:05	N	SO	0	0.5	SVOC	N-NITROSODI-N-PROPYLAMINE	0.38	U	MG/KG	0.27
SB_NS	SM069	SM069-51-1	10/18/01 0:00	N	SO	0	0.5	SVOC	N-NITROSODI-N-PROPYLAMINE	0.45	U	MG/KG	0.27
SB_NS	SM061	SM061-51-1	10/18/01 0:00	N	SO	0	0.5	SVOC	N-NITROSODI-N-PROPYLAMINE	0.41	U	MG/KG	0.27
SB_NS	SM072	SM072-51-1	10/19/01 0:00	N	SO	0	0.5	SVOC	N-NITROSODI-N-PROPYLAMINE	0.4	U	MG/KG	0.27
SB_NS	SM060	SM060-51-1	10/18/01 0:00	N	SO	0	0.5	SVOC	N-NITROSODI-N-PROPYLAMINE	0.43	U	MG/KG	0.27
SB_NS	SM063	SM063-51-1	10/18/01 0:00	N	SO	0	0.5	SVOC	N-NITROSODI-N-PROPYLAMINE	0.45	U	MG/KG	0.27
SB_NS	SM064	SM064-51-1	10/18/01 0:00	N	SO	0	0.5	SVOC	N-NITROSODI-N-PROPYLAMINE	0.46	U	MG/KG	0.27
SB_NS	SM066	SM066-51-1	10/18/01 0:00	N	SO	0	0.5	SVOC	N-NITROSODI-N-PROPYLAMINE	0.41	U	MG/KG	0.27
SB_NS	SM067	SM067-51-1	10/18/01 0:00	N	SO	0	0.5	SVOC	N-NITROSODI-N-PROPYLAMINE	0.46	U	MG/KG	0.27
SB_NS	SM068	SM068-51-1	10/18/01 0:00	N	SO	0	0.5	SVOC	N-NITROSODI-N-PROPYLAMINE	0.45	U	MG/KG	0.27
SB_NS	SM065	SM065-51-1	10/18/01 0:00	N	SO	0	0.5	SVOC	N-NITROSODI-N-PROPYLAMINE	0.49	U	MG/KG	0.27
SB_NS	SM085	SM085-51-1	10/17/01 0:00	N	SO	0	0.5	SVOC	PENTACHLOROPHENOL	17	U	MG/KG	10
SB_NS	SM091	SM091-51-1	10/17/01 0:00	N	SO	0	0.5	SVOC	PENTACHLOROPHENOL	11	U	MG/KG	10
SB_NS	SM058	SM058-51-1	10/18/01 0:00	N	SO	0	0.5	SVOC	PENTACHLOROPHENOL	11	U	MG/KG	10

AOCID	StationID	SampleID	DateCollected	Sample Type	Matrix	Upper Depth	Lower Depth	Param Class	FormlParamName	AnaValue	ProjQual	Unit	Criteria
SS_AST	SM130	SM130-51-1	10/19/01 0:00	N	SO	0	0.5	SVOC	DIBENZ(A,H)ANTHRACENE	0.42	U	MG/KG	0.23
SS_AST	SM129	SM129-51-1	10/19/01 0:00	N	SO	0	0.5	SVOC	DIBENZ(A,H)ANTHRACENE	0.4	U	MG/KG	0.23
SS_AST	SM128	SM128-51-1	10/19/01 0:00	N	SO	0	0.5	SVOC	DIBENZ(A,H)ANTHRACENE	0.39	U	MG/KG	0.23
SS_AST	SM132	SM132-51-1	10/19/01 0:00	N	SO	0	0.5	SVOC	N-NITROSODI-N-PROPYLAMINE	0.4	U	MG/KG	0.27
SS_AST	SM131	SM131-51-1	10/19/01 0:00	N	SO	0	0.5	SVOC	N-NITROSODI-N-PROPYLAMINE	0.55	U	MG/KG	0.27
SS_AST	SM130	SM130-51-1	10/19/01 0:00	N	SO	0	0.5	SVOC	N-NITROSODI-N-PROPYLAMINE	0.42	U	MG/KG	0.27
SS_AST	SM128	SM128-51-1	10/19/01 0:00	N	SO	0	0.5	SVOC	N-NITROSODI-N-PROPYLAMINE	0.39	U	MG/KG	0.27
SS_AST	SM129	SM129-51-1	10/19/01 0:00	N	SO	0	0.5	SVOC	N-NITROSODI-N-PROPYLAMINE	0.4	U	MG/KG	0.27

AOCID	StationID	SampleID	DateCollected	Sample Type	Matrix	Upper Depth	Lower Depth	Param Class	FormlParamName	AnaValue	ProjQual	Unit	Criteria
SS_FWI	SM125	SM125-51-1	10/22/01 0:00	N	SO	0	0.5	SVOC	BIS(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHER)	0.92	U	MG/KG	0.62
SS_FWI	SM122	SM122-51-1	10/22/01 12:55	N	SO	0	0.5	SVOC	BIS(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHER)	0.92	U	MG/KG	0.62
SS_FWI	SM126	SM126-51-1	10/22/01 0:00	N	SO	0	0.5	SVOC	BIS(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHER)	2.3	U	MG/KG	0.62
SS_FWI	SM121	SM121-51-1	10/22/01 11:05	N	SO	0	0.5	SVOC	DIBENZ(A,H)ANTHRACENE	0.45	U	MG/KG	0.23
SS_FWI	SM126	SM126-51-1	10/22/01 0:00	N	SO	0	0.5	SVOC	HEXACHLOROBENZENE	2.3	U	MG/KG	1.2
SS_FWI	SM127	SM127-51-1	10/22/01 0:00	N	SO	0	0.5	SVOC	N-NITROSODI-N-PROPYLAMINE	0.39	U	MG/KG	0.27
SS_FWI	SM126	SM126-51-1	10/22/01 0:00	N	SO	0	0.5	SVOC	N-NITROSODI-N-PROPYLAMINE	2.3	U	MG/KG	0.27
SS_FWI	SM125	SM125-51-1	10/22/01 0:00	N	SO	0	0.5	SVOC	N-NITROSODI-N-PROPYLAMINE	0.92	U	MG/KG	0.27
SS_FWI	SM124	SM124-51-1	10/22/01 13:05	N	SO	0	0.5	SVOC	N-NITROSODI-N-PROPYLAMINE	0.43	U	MG/KG	0.27
SS_FWI	SM123	SM123-51-1	10/22/01 13:03	N	SO	0	0.5	SVOC	N-NITROSODI-N-PROPYLAMINE	0.4	U	MG/KG	0.27
SS_FWI	SM122	SM122-51-1	10/22/01 12:55	N	SO	0	0.5	SVOC	N-NITROSODI-N-PROPYLAMINE	0.92	U	MG/KG	0.27
SS_FWI	SM121	SM121-51-1	10/22/01 11:05	N	SO	0	0.5	SVOC	N-NITROSODI-N-PROPYLAMINE	0.45	U	MG/KG	0.27
SS_FWI	SM120	SM120-51-1	10/22/01 11:00	N	SO	0	0.5	SVOC	N-NITROSODI-N-PROPYLAMINE	0.43	U	MG/KG	0.27

AOCID	StationID	SampleID	DateCollected	Sample Type	Matrix	Upper Depth	Lower Depth	Param Class	FormlParamName	AnaValue	ProjQual	Unit	Criteria
SS_LTF	SM107	SM107-51-1	10/22/01 0:00	N	SO	0	0.5	SVOC	3,3'-DICHLOROBENZIDINE	4.4	U	MG/KG	4.3
SS_LTF	SM107	SM107-51-1	10/22/01 0:00	N	SO	0	0.5	SVOC	BENZO(A)ANTHRACENE	4.4	U	MG/KG	2.3
SS_LTF	SM107	SM107-51-1	10/22/01 0:00	N	SO	0	0.5	SVOC	BENZO(A)PYRENE	4.4	U	MG/KG	0.23
SS_LTF	SM107	SM107-51-1	10/22/01 0:00	N	SO	0	0.5	SVOC	BIS(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHER)	4.4	U	MG/KG	0.62
SS_LTF	SM106	SM106-51-1	10/18/01 0:00	N	SO	0	0.5	SVOC	BIS(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHER)	2	U	MG/KG	0.62
SS_LTF	SM107	SM107-51-1	10/22/01 0:00	N	SO	0	0.5	SVOC	DIBENZ(A,H)ANTHRACENE	4.4	U	MG/KG	0.23
SS_LTF	SM104	SM104-51-1	10/17/01 0:00	N	SO	0	0.5	SVOC	DIBENZ(A,H)ANTHRACENE	0.47	U	MG/KG	0.23
SS_LTF	SM107	SM107-51-1	10/22/01 0:00	N	SO	0	0.5	SVOC	HEXACHLOROBENZENE	4.4	U	MG/KG	1.2
SS_LTF	SM106	SM106-51-1	10/18/01 0:00	N	SO	0	0.5	SVOC	HEXACHLOROBENZENE	2	U	MG/KG	1.2
SS_LTF	SM107	SM107-51-1	10/22/01 0:00	N	SO	0	0.5	SVOC	N-NITROSODI-N-PROPYLAMINE	4.4	U	MG/KG	0.27
SS_LTF	SM105	SM105-51-1	10/18/01 10:18	N	SO	0	0.5	SVOC	N-NITROSODI-N-PROPYLAMINE	0.44	U	MG/KG	0.27
SS_LTF	SM104	SM104-51-1	10/17/01 0:00	N	SO	0	0.5	SVOC	N-NITROSODI-N-PROPYLAMINE	0.47	U	MG/KG	0.27
SS_LTF	SM103	SM103-51-1	10/18/01 10:10	N	SO	0	0.5	SVOC	N-NITROSODI-N-PROPYLAMINE	0.45	U	MG/KG	0.27
SS_LTF	SM106	SM106-51-1	10/18/01 0:00	N	SO	0	0.5	SVOC	N-NITROSODI-N-PROPYLAMINE	2	U	MG/KG	0.27
SS_LTF	SM101	SM101-51-1	10/18/01 9:25	N	SO	0	0.5	SVOC	N-NITROSODI-N-PROPYLAMINE	0.42	U	MG/KG	0.27
SS_LTF	SM102	SM102-51-1	10/18/01 9:30	N	SO	0	0.5	SVOC	N-NITROSODI-N-PROPYLAMINE	0.43	U	MG/KG	0.27
SS_LTF	SM107	SM107-51-1	10/22/01 0:00	N	SO	0	0.5	SVOC	PENTACHLOROPHENOL	11	U	MG/KG	10

SQLs Exceeding Screening Levels - Maintenance Shed Area

AOCID	StationID	SampleID	DateCollected	Sample Type	Matrix	Upper Depth	Lower Depth	Param Class	FormlParamName	AnaValue	ProjQual	Unit	Criteria
SS_MSA	SM108	SM108-51-1	10/18/01 0:00	N	SO	0	0.5	SVOC	BIS(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHER)	0.79	U	MG/KG	0.62
SS_MSA	SM110	SM110-51-1	10/19/01 0:00	N	SO	0	0.5	SVOC	DIBENZ(A,H)ANTHRACENE	0.37	U	MG/KG	0.23
SS_MSA	SM108	SM108-51-1	10/18/01 0:00	N	SO	0	0.5	SVOC	DIBENZ(A,H)ANTHRACENE	0.79	U	MG/KG	0.23
SS_MSA	SM110	SM110-51-1	10/19/01 0:00	N	SO	0	0.5	SVOC	N-NITROSODI-N-PROPYLAMINE	0.37	U	MG/KG	0.27
SS_MSA	SM108	SM108-51-1	10/18/01 0:00	N	SO	0	0.5	SVOC	N-NITROSODI-N-PROPYLAMINE	0.79	U	MG/KG	0.27
SS_MSA	SM111	SM111-51-1	10/19/01 0:00	N	SO	0	0.5	SVOC	N-NITROSODI-N-PROPYLAMINE	0.45	U	MG/KG	0.27

SQLs Exceeding Screening Levels - Tar Burn Area

AOCID	StationID	SampleID	DateCollected	Sample Type	Matrix	Upper Depth	Lower Depth	Param Class	FormlParamName	AnaValue	ProjQual	Unit	Criteria
SS_TBA	SM115	SM115-51-1	10/18/01 11:15	N	SO	0	0.5	SVOC	BIS(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHER)	0.81	U	MG/KG	0.62
SS_TBA	SM112	SM112-51-1	10/19/01 0:00	N	SO	0	0.5	SVOC	N-NITROSODI-N-PROPYLAMINE	0.44	U	MG/KG	0.27
SS_TBA	SM115	SM115-51-1	10/18/01 11:15	N	SO	0	0.5	SVOC	N-NITROSODI-N-PROPYLAMINE	0.81	U	MG/KG	0.27
SS_TBA	SM113	SM113-51-1	10/18/01 10:10	N	SO	0	0.5	SVOC	N-NITROSODI-N-PROPYLAMINE	0.47	U	MG/KG	0.27
SS_TBA	SM114	SM114-51-1	10/18/01 11:00	N	SO	0	0.5	SVOC	N-NITROSODI-N-PROPYLAMINE	0.49	U	MG/KG	0.27

SQLs Exceeding Screening Levels - Wastewater Treatment Facility

AOCID	StationID	SampleID	DateCollected	Sample Type	Matrix	Upper Depth	Lower Depth	Param Class	FormlParamName	AnaValue	ProjQual	Unit	Criteria
SS_WWTF	SM119	SM119-51-1	10/22/01 9:20	N	SO	0	0.5	SVOC	N-NITROSODI-N-PROPYLAMINE	0.45	U	MG/KG	0.27
SS_WWTF	SM116	SM116-51-1	10/22/01 0:00	N	SO	0	0.5	SVOC	N-NITROSODI-N-PROPYLAMINE	0.41	U	MG/KG	0.27
SS_WWTF	SM117	SM117-51-1	10/18/01 0:00	N	SO	0	0.5	SVOC	N-NITROSODI-N-PROPYLAMINE	0.42	U	MG/KG	0.27
SS_WWTF	SM117A	SM117A-51-1	10/22/01 0:00	N	SO	0	0.5	SVOC	N-NITROSODI-N-PROPYLAMINE	0.48	U	MG/KG	0.27
SS_WWTF	SM118	SM118-51-1	10/22/01 9:15	N	SO	0	0.5	SVOC	N-NITROSODI-N-PROPYLAMINE	0.41	U	MG/KG	0.27

Attachment 6

TEXAS DEPARTMENT OF HEALTH FISH SAMPLING

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EPA NEAR COASTAL WATER GRANT

SUMMARY OF RESULTS

AND RISK ASSESSMENT

Prepared by: Texas Department of Health
Division of Seafood Safety

March 1995

008106

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EXECUTIVE SUMMARY

A grant was provided to Texas Department of Health to investigate the presence of toxins in four locations on the Texas Coast that have historically posed potential health risks due to contaminants in seafood. These areas include a portion of Lavaca Bay in the Point Comfort area which has exhibited high levels of mercury in fish and crabs; the Houston Ship Channel and Upper Galveston Bay which have had fish and crabs with unsafe levels of dioxin; and the lower Neches River below an advisory area for dioxins in fish.

Field procedures for sample collection and handling and laboratory procedures followed EPA's "Guidance For Assessing Chemical Contaminant Data For Use in Fish Advisories, Fish Sampling and Analysis" (EPA, 1993). Analyses were performed using EPA approved methods for detection of metals, pesticides, PCB's, semi-volatile and volatile organic chemicals. Dioxin analyses were performed for three fish collected from the confluence of Sabine Lake and the Neches River and for five samples collected from the Houston Ship Channel and Upper Galveston Bay.

Human health risks were calculated using EPA's "Guidance For Assessing Chemical Contaminant Data For Use in Fish Advisories, Risk Assessment and Fish Consumption Limits" (EPA, 1994). In cases where both carcinogenic and noncarcinogenic risks existed in a single set of samples, the more protective value was used to evaluate health risks. Carcinogenic risk was additive in each data set to include all chemicals with potential to cause cancer of similar organs.

A slight decrease was observed in average dioxin levels for catfish, crabs, and oysters collected in 1994 from the Houston Ship Channel and Upper Galveston Bay as compared to 1990 data (EPA, 1990). The current data set also includes a complete list of priority pollutants and indicates extremely low levels of metals, DDT metabolites, dacthal, and aroclor 1254.

Dioxin levels for the confluence of Sabine Lake and the Neches River were extremely low. Average TCDD equivalent values were found to be below detection limits. Risk for other priority pollutants scanned for do not pose a threat to public health. The TDH advisory for the Neches River south of U.S. 96 to the Interstate 10 bridge was re-evaluated in 1993 and the results are not included with this report (TDH, 1993).

The closed portion of Lavaca Bay continues to pose a threat to human health due to high levels of mercury found in a large percentage of fish and crabs sampled.

008108

INTRODUCTION

The Texas Department of Health has identified four locations on or near the Texas coast with contaminants in seafood that pose potential health risks. The U.S. Environmental Protection Agency, Region 6 provided TDH with the Near Coastal Waters Grant in order for the State to conduct additional fish sampling of these locations and to re-evaluate the necessity of a fish consumption advisory in each area. The sampling would be considered a preliminary component of a routine monitoring program.

In 1990, EPA Region 6, along with the State's assistance collected fish from three areas of the Texas coast downstream of bleach kraft pulp and paper mill discharges. This sampling was conducted as a follow-up to the EPA National Bioaccumulation Study of 1987 in which eleven sites downstream of paper mills in Region 6 were found to exceed EPA criteria for levels of dioxin in edible fish tissue. The three dioxin contaminated areas of the Texas coast included the Houston Ship Channel (tidal San Jacinto River) at Morgans Point, the Houston Ship Channel at San Jacinto monument, and the Neches River downstream of Evadale.

Houston Ship Channel and Upper Galveston Bay

A consumption advisory has been in place since September of 1990 in the Houston Ship Channel and Upper Galveston Bay due to dioxin contamination of blue crabs and catfish. The advisory recommends consumption of no more than one meal per month and recommends no consumption for women of child-bearing age and children. As part of the Near Coastal Water Grant, fifteen samples were collected from Upper Galveston Bay near Morgans Point and from the Houston Ship Channel. Five samples were analyzed for dioxin only, and ten samples were analyzed for priority pollutants. The limited 1994 data set indicates that dioxin levels have decreased since 1990 in all species collected.

Sabine Lake (Neches River)

A consumption advisory has been in place since September of 1990 for all fish species in the Neches River near Evadale to the Interstate 10 Bridge due to dioxin contamination. The advisory recommends consumption of no more than one meal per month and recommends no consumption for women of child-bearing age and children. In 1993, 22 fish were collected inside the advisory area of the Neches River to re-evaluate the necessity of the advisory. The 1993 data inside the current advisory area of the Neches River is not included in this report. One of the purposes of the Near Coastal Water Grant is to evaluate the need for extension of the advisory area to the area between Interstate 10 and Sabine Lake. Thirteen samples were collected from the confluence of Sabine Lake and the Neches River. Three samples were analyzed for dioxin only and ten samples were analyzed for priority pollutants. The Sabine

008109

Lake data indicate extremely low levels of dioxins and metals.

LAVACA BAY

One hundred samples of fish, crabs, and oysters were collected from Lavaca Bay for analysis of mercury by the Texas Department of Health Lab. A portion of Lavaca Bay was declared a prohibited area for the taking of fish and crabs in 1988 due to elevated levels of mercury.

Sixty eight samples were collected inside the prohibited area and thirty two samples were collected outside of the prohibited area to determine whether a health concern exists for persons consuming fish near an area known to be contaminated with mercury.

008110

OBJECTIVES

The purpose of the study is to re-evaluate the current fish consumption advisories and closures on the Texas Coast, including Lavaca Bay and Galveston Bay, and to determine the need for an advisory in Sabine Lake downstream of the current advisory area of the Neches River. Edible fish tissue will be analyzed for priority pollutants, including dioxin in Sabine Lake, Galveston Bay, and the Houston Ship Channel. Edible tissue samples will be collected for mercury analysis to whether the closure area of Lavaca Bay is sufficient for protection of public health. All data will be used to maintain a continuity with historical sampling data.

008111

METHODS

Site and Species Selection

The four sites selected along the Texas Coast include three areas under consumption advisories or bans due to chemical contamination of fish. Sabine Lake is not under a fish consumption advisory, but is located approximately 15 miles downstream of a portion of the Neches River under a fish consumption advisory due to dioxin contamination.

Species were collected to represent commonly consumed edible tissue taken by the public and included fish, crabs and oysters.

Field Procedures

Fish were collected using gill nets, weighed and measured individually, and filleted on a hard plastic cutting board covered with clean foil. Fillets were then wrapped in aluminum foil and placed in sterile quart jars. **Crabs** are collected using crab traps. The crab was individually measured, the back was removed, and all edible tissue was placed in sterile jars to include the shell and claws. Composites of 3-6 crabs are placed in each jar. Oysters were collected using a dredge. **Oysters** were shucked and placed in sterile quart jars in composites of 20-30 three inch oysters, including the liquor.

The sample container was labelled with sample number, date, location, length and weight of specimen. The jar was immediately placed on ice in a cooler and frozen within 24 hours. Samples were logged into the laboratory with a chain of custody attached to each sample.

Laboratory Procedures

Triangle Laboratories performed all analyses for dioxins and furans. Priority pollutant analyses was conducted by Texas Department of Health Laboratory. The TDH laboratory is under annual review by EPA staff.

Method 8080 was used for detection of PCB's and chlorinated pesticides, method 8260 was used for detection of volatile organic chemicals, method 8270 for semi-volatile organic chemicals, and method 8140 for organophoshate pesticides. Metals were analyzed according to EPA approved methodology.

008112

Risk Assessment

Assessment of carcinogenic risk was consistent with EPA's guidance document (EPA, 1994). Cancer risk was cumulative if similar organs were affected and was calculated as the sum of:

$$\text{risk} = \frac{\text{cancer potency factor } (q^*) \times \text{consumption} \times \text{concentration}}{\text{body weight}}$$

If both noncarcinogenic and carcinogenic chemicals were present in the same fish, the risk was calculated for both and the more protective value was applied.

For dioxins and furans, a concentration was determined by using toxicity weighted concentrations for each congener with comparison to 2,3,7,8-TCDD. The toxicity equivalency factors are documented in table 5-4 of volume I of the EPA guidance document for assessing chemical contaminants (EPA, 1993).

The assumptions used in calculation of carcinogenic risk were that a 70 kg adult is exposed over a period of 30 years. Exceedance of the 10^{-4} risk level indicated the need for an advisory.

Determination of fish consumption advisories or bans for mercury was based on protection of children and women of reproductive age. Mercury consumption limits were calculated as:

$$\text{consumption rate} = \frac{\text{reference dose} \times \text{body weight}}{\text{average concentration}}$$

008113

RESULTS

008114

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AQUATIC LIFE SAMPLE DESCRIPTION INFORMATION
UPPER GALVESTON BAY AND THE HOUSTON SHIP CHANNEL

SAMPLE LOCATION	SAMPLE NO.	SPECIES	COMPOSITE/SINGLE; LENGTH (CM)
Samples collected June 1994			
GALVESTON-TABBS BAY HOUSTON SHIP CHANNEL	1	SEA CATFISH* (SKIN ON)	COMPOSITE; 41,38
MORGAN'S POINT; SYLVAN BEACH	2	OYSTERS*	COMPOSITE; 20# 3"
	3	BLUE CRABS*	COMPOSITE; 6# 14cm
	4	BLUE CRABS*	COMPOSITE; 6# 15cm
	5	BLUE CRABS*	COMPOSITE; 6# 14cm
GALVESTON - TABBS BAY HOUSTON SHIP CHANNEL	6	SHEEPSHEAD	SINGLE; 50
	7	SHEEPSHEAD	SINGLE; 38
	8	RED DRUM	SINGLE; 65
	9	RED DRUM	SINGLE; 69
	10	SOUTHERN FLOUNDER	SINGLE; 41
	11	SOUTHERN FLOUNDER	SINGLE; 40
GALVESTON BAY MORGAN'S POINT, SYLVAN BEACH	12	OYSTERS	COMPOSITE; 20# 3"
	13	BLUE CRABS	COMPOSITE 4# 15cm
	14	BLUE CRABS	COMPOSITE 4# 16cm
	15	BLUE CRABS	COMPOSITE 4# 14cm

*DIOXIN ANALYSIS ONLY

008116

POLYCHLORINATED DIOXINS AND FURANS IN FISH TISSUE TAKEN FROM UPPER GALVESTON BAY AND THE HOUSTON SHIP CHANNEL

LOCATION	HOUSTON SHIP CHANNEL	MORGANS POINT UPPER GALVESTON BAY			
Sample	1	2	3	4	5
	Sea Catfish (skin on); 41cm,38cm	Oysters; 20# 3"	Blue Crabs; 6# 14cm	Blue Crabs; 6# 15cm	Blue Crabs; 6# 14cm
DIOXINS					
	CONCENTRATION (PARTS PER TRILLION)				
2378 TCDD	3.9	2.4	1.1	0.97	1.6
TOTAL TCDD	3.9	11.1	1.1	1.3	1.8
12378 PeCDD	0.55	<0.3	<0.1	<0.2	<0.3
TOTAL PeCDD	0.55	6.0	0.64	0.62	0.9
123478 HxCDD	0.53	<0.22	<0.2	<0.3	<0.2
123678 HxCDD	2.0	<0.83	<0.2	<0.3	0.23
123789 HxCDD	0.74	<0.4	<0.2	<0.3	<0.2
TOTAL HxCDD	3.3	15.5	3.2	3.1	3.3
1234678 HpCDD	2.0	1.7	0.62	0.48	0.51
TOTAL HpCDD	2.0	5.7	1.8	1.4	1.5
12346789 OCDD	<0.27	20.0	4.1	4.0	2.6
FURANS					
2378 TCDF	0.36	10.7	3.1	2.7	5.1
TOTAL TCDF	0.53	33.7	5.0	6.2	8.2
12378 PeCDF	<0.2	<0.2	0.18	<0.14	<0.15
23478 PeCDF	0.49	<0.2	<0.16	<0.13	0.28
TOTAL PeCDF	0.69	1.7	1.8	1.5	2.1
123478 HxCDF	<0.2	<0.3	<0.13	0.2	0.19
123678 HxCDF	<0.2	<0.3	<0.09	<0.1	<0.09
234678 HxCDF	0.16	<0.21	0.18	<0.16	0.19
123789 HxCDF	<0.2	<0.3	<0.1	<0.2	<0.2
TOTAL HxCDF	0.32	0.56	0.36	0.55	1.1
1234678 HpCDF	<0.2	<0.3	<1.5	<0.2	3.6
1234789 HpCDF	<0.3	<0.4	<0.1	<0.2	<0.2
TOTAL HpCDF	<0.3	<0.3	<0.2	<0.2	0.38
12346789 OCDF	0.4	0.59	<0.3	<0.4	<0.5
TOXICITY WEIGHTED CONCENTRATION* PG/G	4.8	3.5	1.4	1.3	2.3
CARCINOGENIC RISK**	1.4×10^{-4}	1.0×10^{-4}	4.0×10^{-5}	3.7×10^{-5}	6.6×10^{-5}

*concentration determined by using toxicity weighted total concentrations for furan and dioxin congeners with comparison to 2,3,7,8 TCDD
**risk calculated for a 70 kg adult consuming 30 grams/day for 30 years

008117

METALS IN FISH TISSUE TAKEN FROM UPPER GALVESTON BAY AND THE HOUSTON SHIP CHANNEL

METAL	LOCATION AND SAMPLE NO.									
	HOUSTON SHIP CHANNEL						MORGANS POINT			
	6	7	8	9	10	11	12	13	14	15
	CONCENTRATION (PPM)									
ARSENIC	0.039	0.056	0.05	0.036	0.037	0.028	0.14	0.061	0.087	0.024
CADMIUM	0.054	<0.04	0.16	0.068	0.096	0.044	0.451	0.191	0.119	0.075
COPPER	<0.4	<0.4	<0.4	0.46	<0.4	<0.40	24.6	8.3	5.4	5.9
LEAD	<0.039	<0.04	0.048	<0.036	0.043	<0.16	0.133	0.084	<0.04	<0.075
MERCURY	0.394	<0.059	0.099	<0.081	<0.074	0.086	<0.08	<0.081	<0.081	<0.053
ZINC	3.4	3.3	4.7	4.2	3.6	4.7	41.5	25.4	37	35.6

008118

PESTICIDES IN FISH TISSUE TAKEN FROM UPPER GALVESTON BAY AND THE HOUSTON SHIP CHANNEL

PESTICIDE	Detection Limit (PPB)	LOCATION AND SAMPLE NO.									
		HOUSTON SHIP CHANNEL						MORGANS POINT			
		6	7	8	9	10	11	12	13	14	15
		CONCENTRATION (PPB)									
DDT	10	nd[a]	nd	nd	nd	nd	nd	nd	nd	nd	nd
DDD	10	nd	nd	5.3[b]	nd	nd	nd	nd	nd	nd	nd
DDE	5	nd	nd	8.8	nd	nd	nd	nd	nd	nd	nd
ALDRIN	2	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
DIELDRIN	6	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
ENDRIN	6	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
CHLORDANE	10	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
HEPTACHLOR	2	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
HEPTACHLOR EPOX	4	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
METHOXYCHLOR	30	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
TOXAPHENE	100	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
HEXACHLOROBENZENE	2	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
MALATHION	20	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
ETHYL PARATHION	10	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
METHYL PARATHION	10	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
DIAZINON	10	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
CHLOROPYRIFOS	10	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
ENDOSULFAN	10	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
ENDOSULFAN SULFATE	10	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
ALACHLOR	8	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
DACTHAL	3	nd	4.9	nd	nd	3.1	2.5	2.4[b]	nd	nd	nd
ALPHA BHC	2	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
BETA BHC	2	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
DELTA BHC	2	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
LINDANE	2	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd

[a]non-detectable
[b]reported below detection limits

008119

PCB'S IN FISH TISSUE TAKEN FROM UPPER GALVESTON BAY AND THE HOUSTON SHIP CHANNEL

PCB	Detection Limit (PPB)	LOCATION AND SAMPLE NO.									
		HOUSTON SHIP CHANNEL						MORGANS POINT			
		6	7	8	9	10	11	12	13	14	15
		CONCENTRATION (PPB)									
AROCLOR 1016	40	nd*	nd	nd	nd	nd	nd	nd	nd	nd	nd
AROCLOR 1221	40	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
AROCLOR 1232	40	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
AROCLOR 1242	40	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
AROCLOR 1248	40	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
AROCLOR 1254	40	nd	nd	77	nd	nd	nd	nd	nd	nd	nd
AROCLOR 1260	40	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
AROCLOR 1262	40	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd

*non-detectable

008120

VOLATILE ORGANIC COMPOUNDS IN FISH TISSUE TAKEN FROM UPPER GALVESTON BAY AND THE HOUSTON SHIP CHANNEL

COMPOUND	Detection Limit (PPB)	LOCATION AND SAMPLE NO.									
		HOUSTON SHIP CHANNEL						MORGANS POINT			
		6	7	8	9	10	11	12	13	14	15
		CONCENTRATION (PPB)									
CHLOROMETHANE	47	nd[a]	nd	nd	nd	nd	nd	nd	nd	nd	nd
BROMOMETHANE	47	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
VINYL CHLORIDE	47	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
CHLOROETHANE	47	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
DICHLORODIFLUOROMETHANE	47	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
TRICHLOROFLUOROMETHANE	19	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
1,1-DICHLOROETHENE	19	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
METHYLENE CHLORIDE[b]	19	nd	nd	35	66	nd	nd	30	62	40	nd
CARBON DISULFIDE[c]	19	54	22	nd	nd	nd	nd	nd	nd	23	nd
1,2-DICHLOROETHENE (TRANS)	19	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
1,2-DICHLOROETHENE (CIS)	19	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
1,1-DICHLOROETHANE	19	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
METHYL-T-BUTYL ETHER	19	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
BROMOCHLOROMETHANE	19	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
2,2-DICHLOROPROPANE	19	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
CHLOROFORM	19	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
TETRAHYDROFURAN	19	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
1,2-DICHLOROETHANE	19	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
1,1,1-TRICHLOROETHANE	19	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
BENZENE	19	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
CARBON TETRACHLORIDE	19	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
1,1-DICHLOROPROPENE	19	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
1,2-DICHLOROPROPANE	19	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
DIBROMOMETHANE	19	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
TRICHLOROETHENE	19	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
DICHLOROBROMOMETHANE	19	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
METHYL METHACRYLATE	19	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
METHYL ISOBUTYL KETONE	19	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
1,3-DICHLOROPROPENE (TRANS)	19	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
1,3-DICHLOROPROPENE (CIS)	19	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
1,1,2-TRICHLOROETHANE	19	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
1,3-DICHLOROPROPANE	19	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
TOLUENE	19	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
ETHYL METHACRYLATE	19	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
2-HEXANONE	19	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd

[a]non-detectable [b]common lab contaminant [c]possible degredation product

008121

VOLATILE ORGANIC COMPOUNDS IN FISH TISSUE TAKEN FROM UPPER GALVESTON BAY AND THE HOUSTON SHIP CHANNEL (cont.)

COMPOUND	Detection Limit (PPB)	LOCATION AND SAMPLE NO.									
		HOUSTON SHIP CHANNEL						MORGANS POINT			
		6	7	8	9	10	11	12	13	14	15
		CONCENTRATION (PPB)									
DIBROMOCHLOROMETHANE	19	nd[a]	nd	nd	nd	nd	nd	nd	nd	nd	nd
1,2-DIBROMOETHANE	19	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
TETRACHLOROETHENE	19	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
1,1,1,2-TETRACHLOROETHANE	19	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
CHLOROBENZENE	19	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
ETHYL BENZENE	19	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
BROMOFORM	19	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
STYRENE	19	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
1,1,2,2-TETRACHLOROETHANE	19	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
BROMOBENZENE	19	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
1,2,3-TRICHLOROPROPANE	19	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
ISOPROPYLBENZENE	19	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
N-PROPYLBENZENE	19	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
2-CHLOROTOLUENE	19	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
4-CHLOROTOLUENE	19	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
1,3,5-TRIMETHYLBENZENE	19	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
T-BUTYLBENZENE	19	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
1,2,4-TRIMETHYLBENZENE	19	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
SEC-BUTYLBENZENE	19	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
1,3-DICHLOROBENZENE	19	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
1,4-DICHLOROBENZENE	19	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
P-ISOPROPYLTOLUENE	19	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
1,2-DICHLOROBENZENE	19	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
N-BUTYLBENZENE	19	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
1,2-DIBROMO-3-CHLOROPROPANE	19	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
1,2,4-TRICHLOROBENZENE	19	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
NAPTHALENE	19	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
1,2,3-TRICHLOROBENZENE	19	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
HEXACHLOROBUTADIENE	19	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
TOTAL XYLENES	56	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
METHYL ETHYL KETONE	94	nd	nd	nd	nd	nd	178	nd	nd	nd	nd
ACETONE[b]	94	496	1301	395	484	363	499	409	235	294	nd
ACRYLONITRILE	94	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
VINYL ACETATE	94	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
2-CHLOROETHOXYETHENE	187	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
2,4-DICHLORO-2-BUTENE(TRANS)	187	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd

[a]non-detectable [b]common lab contaminant

008122

SEMI-VOLATILE COMPOUNDS IN FISH TISSUE TAKEN FROM UPPER GALVESTON BAY AND THE HOUSTON SHIP CHANNEL

COMPOUND	Detection Limit (PPM)	LOCATION AND SAMPLE NO.									
		HOUSTON SHIP CHANNEL						MORGANS POINT			
		6	7	8	9	10	11	12	13	14	15
		CONCENTRATION (PPM)									
PHENOL	2	nd*	nd	nd	nd	nd	nd	nd	nd	nd	nd
2-CHLOROPHENOL	2	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
2-NITROPHENOL	2	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
2,4-DIMETHYLPHENOL	2	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
2,4-DICHLOROPHENOL	2	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
3-METHYL-4-CHLOROPHENOL	2	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
2,4,6-TRICHLOROPHENOL	2	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
2,4,5-TRICHLOROPHENOL	2	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
2,4-DINITROPHENOL	4	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
4-NITROPHENOL	4	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
4,6-DINITRO-2-CRESOL	4	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
PENTACHLOROPHENOL	4	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
n-NITROSO-n-DIMETHYLAMINE	1	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
PYRIDINE	1	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
n-NITROSODIETHYLAMINE	1	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
n-NITROSODIBUTYLAMINE	1	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
ANILINE	1	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
bis(2-CHLOROETHYL)ETHER	1	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
1,3-DICHLOROBENZENE	1	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
BENZYL ALCOHOL	1	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
1,4-DICHLOROBENZENE	1	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
1,2-DICHLOROBENZENE	1	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
o-CRESOL	1	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
bis(2-CHLOROISOPROPYL)ETHER	1	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
m&p-CRESOL (coelute)	1	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
HEXACHLOROETHANE	1	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
n-NITROSO-di-n-PROPYLAMINE	1	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
NITROBENZENE	1	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
BENZOIC ACID	1	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
ISOPHORONE	1	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
bis(2-CHLOROETHOXY)METHANE	1	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
1,2,4-TRICHLOROBENZENE	1	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
NAPTHALENE	1	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
4-CHLOROANILINE	1	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
HEXACHLOROBUTADIENE	1	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd

*non-detectable

008123

SEMI-VOLATILE COMPOUNDS IN FISH TISSUE TAKEN FROM UPPER GALVESTON BAY AND THE HOUSTON SHIP CHANNEL

COMPOUND	Detection Limit (PPM)	LOCATION AND SAMPLE NO.									
		HOUSTON SHIP CHANNEL						MORGANS POINT			
		6	7	8	9	10	11	12	13	14	15
		CONCENTRATION (PPM)									
2-METHYL-NAPTHALENE	1	nd*	nd	nd	nd	nd	nd	nd	nd	nd	nd
1,2,4,5-TETRACHLOROBENZENE	1	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
HEXACHLOROCYCLOPENTADIENE	1	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
2-CHLORONAPTHALENE	1	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
TOTAL NITROANILINES	1	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
ACENAPHTHYLENE	1	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
DIMETHYL PHTHALATE	1	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
2,6-DINITROTOLUENE	1	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
ACENAPHTHENE	1	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
DIBENZOFURAN	1	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
2,4-DINITROTOLUENE	1	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
FLUORENE	1	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
4-CHLORODIPHENYL ETHER	1	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
DIETHYL PHTHALATE	1	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
N-NITROSODIPHENYLAMINE	1	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
DIPHENYL HYDRAZINE	1	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
4-BROMODIPHENYL ETHER	1	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
HEXACHLOROBENZENE	1	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
PHENANTHRENE	1	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
ANTHRACENE	1	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
DI-N-BUTYL PHTHALATE	1	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
FLUORANTHENE	1	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
PYRENE	1	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
BIS(2-ETHYLHEXYL) ADIPATE	1	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
BUTYLBENZYL PHTHALATE	1	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
BENZ(A) ANTHRACENE	1	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
CHRYSENE	1	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
BIS(2-ETHYLHEXYL) PHTHALATE	1	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
DI-N-OCTYL PHTHALATE	1	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
BENZO(B) FLUORANTHENE	1	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
BENZO(K) FLUORANTHENE	1	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
BENZO(A) PYRENE	1	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
INDENO(1,2,3-CD) PYRENE	1	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
DIBENZ(A,H) ANTHRACENE	1	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
BENZO(G,H,I) PERYLENE	1	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd

*non-detectable

008124

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Sample data from the Houston Ship Channel and upper Galveston Bay in 1990 were as follows:

HOUSTON SHIP CHANNEL

SPECIES	TCDD EQUIVALENCY	SOURCE OF DATA
Sea Catfish	14.96	EPA
Croaker	1.19	EPA
Blue Crab	3.53	TDH
Oysters	8.72	EPA
Oysters	7.69	EPA
Blue Catfish	3.2	EPA
Red Drum	0.66	TDH

UPPER GALVESTON BAY

SPECIES	TCDD EQUIVALENCY	
Blue Crab	6.23	TDH
Oyster	4.8	TDH
Red Drum	nd	TDH
Oyster	2.6	TDH
Red Drum	0.041	TDH

008126

AQUATIC LIFE SAMPLE DESCRIPTION INFORMATION
SABINE LAKE

SAMPLE LOCATION	SAMPLE NO.	SPECIES	COMPOSITE/SINGLE; LENGTH (CM)
Samples collected 6/94			
SABINE LAKE (SOUTH)	1	OYSTERS*	COMPOSITE; 23-30# 2"
	2	BLUE CRABS*	COMPOSITE; 5# 16cm
SABINE PASS	3	BLACK DRUM*	SINGLE; 49cm
SABINE LAKE (SOUTH)	4	OYSTERS	COMPOSITE 25-30# 2"
	5	BLUE CRABS	COMPOSITE; 4# 16cm
	6	SHEEPSHEAD	SINGLE; 46cm
	7	BLUE CRABS	COMPOSITE; 3# 15cm
SABINE PASS	8	SPECKLED TROUT	SINGLE; 56cm
Samples collected 1/94			
SABINE LAKE (NORTH) - STEWTS ISLAND	9	SOUTHERN FLOUNDER	SINGLE; 44cm
	10	RED DRUM	SINGLE; 50cm
	11	RED DRUM	SINGLE; 52cm
	12	BLACK DRUM	SINGLE; 44cm
	13	BLACK DRUM	SINGLE; 43cm

*DIOXIN ANALYSIS ONLY

008127

POLYCHLORINATED DIOXINS AND FURANS IN FISH TISSUE TAKEN FROM SABINE LAKE

LOCATION	SABINE LAKE (SOUTH)		SABINE PASS
Sample	1	2	3
	Oysters; #28 2"	Blue Crabs; #5 16cm	Black Drum; 49cm
DIOXINS			
	CONCENTRATION (PARTS PER TRILLION)		
2378 TCDD	<0.3	0.25	<0.1
TOTAL TCDD	7.5	1.4	<0.1
12378 PeCDD	<0.4	0.53	<0.1
TOTAL PeCDD	10.4	2.0	<0.1
123478 HxCDD	0.7	0.37	<0.1
123678 HxCDD	<0.9	<0.62	<0.83
123789 HxCDD	1.4	0.61	0.55
TOTAL HxCDD	26.2	9.2	0.57
1234678 HpCDD	5.2	1.2	0.96
TOTAL HpCDD	17.2	3.4	0.96
12346789 OCDD	91.3	9.7	3.6
FURANS			
2378 TCDF	1.2	1.0	<0.62
TOTAL TCDF	3.0	4.6	0.23
12378 PeCDF	<0.3	<0.2	0.1
23478 PeCDF	<0.3	0.19	<0.08
TOTAL PeCDF	2.2	2.4	0.38
123478 HxCDF	<0.3	<0.17	<0.09
123678 HxCDF	<0.4	<0.1	0.06
234678 HxCDF	<0.3	<0.16	0.15
123789 HxCDF	<0.4	<0.2	<0.09
TOTAL HxCDF	0.4	0.61	0.22
1234678 HpCDF	<0.21	<0.2	<0.1
1234789 HpCDF	<0.4	<0.2	<0.1
TOTAL HpCDF	<0.23	<0.2	<0.1
12346789 OCDF	<0.49	<0.5	<0.3
TOXICITY WEIGHTED CONCENTRATION (ppt)*	0.47	0.83	0.13
CARCINOGENIC RISK**	1.3×10^{-5}	2.3×10^{-5}	3.7×10^{-6}

*concentration determined by using toxicity weighted total concentrations for furan and dioxin congeners with comparison to 2,3,7,8 TCDD

**risk calculated for a 70 kg adult consuming 30 grams/day for a 30 years

008128

METALS IN FISH TISSUE TAKEN FROM SABINE LAKE

METAL	LOCATION AND SAMPLE NO.									
	SABINE LAKE (SOUTH)				SABINE PASS	SABINE LAKE (NORTH)				
	4	5	6	7	8	9	10	11	12	13
	CONCENTRATION (PPM)									
ARSENIC	0.12	0.088	0.017	0.048	0.041	0.023	0.038	<0.014	0.031	0.038
CADMIUM	0.41	0.497	0.43	0.355	<0.037	0.513	<0.034	0.177	<0.039	0.162
COPPER	19.6	8.6	<0.4	8.8	<0.4	<0.4	<0.4	<0.5	<0.4	<0.4
LEAD	<0.074	0.163	0.055	<0.075	<0.037	0.047	<0.034	0.063	<0.039	0.049
MERCURY	<0.062	<0.049	<0.074	<0.072	0.161	<0.07	0.074	0.188	0.186	0.156
ZINC	344	35.3	2.9	31.6	3.1	3.1	3.5	3.9	2.9	3.6

008129

PESTICIDES IN FISH TISSUE TAKEN FROM SABINE LAKE

PESTICIDE	Detection Limit (PPB)	LOCATION AND SAMPLE NO.									
		SABINE LAKE (SOUTH)				SABINE PASS	SABINE LAKE (NORTH)				
		4	5	6	7	8	9	10	11	12	13
		CONCENTRATION (PPB)									
DDT	10	nd	nd*	nd	11	nd	nd	nd	nd	nd	nd
DDD	10	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
DDE	5	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
ALDRIN	2	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
DIELDRIN	6	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
ENDRIN	6	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
CHLORDANE	10	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
HEPTACHLOR	2	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
HEPTACHLOR EPOX	4	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
METHOXYCHLOR	30	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
TOXAPHENE	100	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
HEXACHLOROBENZENE	2	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
MALATHION	20	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
ETHYL PARATHION	10	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
METHYL PARATHION	10	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
DIAZINON	10	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
CHLOROPYRIFOS	10	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
ENDOSULFAN	10	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
ENDOSULFAN SULFATE	10	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
ALACHLOR	8	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
DACTHAL	3	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
ALPHA BHC	2	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
BETA BHC	2	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
DELTA BHC	2	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
LINDANE	2	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd

*non-detectable

008130

PCB'S IN FISH TISSUE TAKEN FROM SABINE LAKE

PCB	Detection Limit (PPB)	LOCATION AND SAMPLE NO.									
		SABINE LAKE (SOUTH)				SABINE PASS	SABINE LAKE (NORTH)				
		4	5	6	7	8	9	10	11	12	13
		CONCENTRATION (PPB)									
AROCLOR 1016	40	nd	nd[a]	nd	nd	nd	nd	nd	nd	nd	nd
AROCLOR 1221	40	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
AROCLOR 1232	40	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
AROCLOR 1242	40	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
AROCLOR 1248	40	nd	nd	nd	nd	38[b]	nd	nd	nd	nd	nd
AROCLOR 1254	40	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
AROCLOR 1260	40	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
AROCLOR 1262	40	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd

[a]non-detectable
[b]reported below quantitation limits

008131

VOLATILE ORGANIC COMPOUNDS IN FISH TISSUE TAKEN FROM SABINE LAKE

COMPOUND	Detection Limit (PPB)	LOCATION AND SAMPLE NO.									
		SABINE LAKE (SOUTH)				SABINE PASS	SABINE LAKE (NORTH)				
		4	5	6	7	8	9	10	11	12	13
		CONCENTRATION (PPB)									
CHLOROMETHANE	47	nd	nd[a]	nd	nd	nd	nd	nd	nd	nd	nd
BROMOMETHANE	47	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
VINYL CHLORIDE	47	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
CHLOROETHANE	47	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
DICHLORODIFLUOROMETHANE	47	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
TRICHLOROFLUOROMETHANE	19	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
1,1-DICHLOROETHENE	19	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
METHYLENE CHLORIDE[b]	19	32	nd	42	nd	19	nd	38	24	38	78
CARBON DISULFIDE	19	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
1,2-DICHLOROETHENE (TRANS)	19	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
1,2-DICHLOROETHENE (CIS)	19	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
1,1-DICHLOROETHANE	19	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
METHYL-T-BUTYL ETHER	19	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
BROMOCHLOROMETHANE	19	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
2,2-DICHLOROPROPANE	19	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
CHLOROFORM	19	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
TETRAHYDROFURAN	19	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
1,2-DICHLOROETHANE	19	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
1,1,1-TRICHLOROETHANE	19	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
BENZENE	19	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
CARBON TETRACHLORIDE	19	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
1,1-DICHLOROPROPENE	19	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
1,2-DICHLOROPROPANE	19	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
DIBROMOMETHANE	19	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
TRICHLOROETHENE	19	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
DICHLOROBROMOMETHANE	19	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
METHYL METHACRYLATE	19	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
METHYL ISOBUTYL KETONE	19	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
1,3-DICHLOROPROPENE (TRANS)	19	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
1,3-DICHLOROPROPENE (CIS)	19	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
1,1,2-TRICHLOROETHANE	19	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
1,3-DICHLOROPROPANE	19	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
TOLUENE	19	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
ETHYL METHACRYLATE	19	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
2-HEXANONE	19	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd

[a]non-detectable [b]common lab contaminant

008132

VOLATILE ORGANIC COMPOUNDS IN FISH TISSUE TAKEN FROM SABINE LAKE (cont.)

COMPOUND	Detection Limit (PPB)	LOCATION AND SAMPLE NO.									
		SABINE LAKE (SOUTH)				SABINE PASS	SABINE LAKE (NORTH)				
		4	5	6	7	8	9	10	11	12	13
		CONCENTRATION (PPB)									
DIBROMOCHLOROMETHANE	19	nd	nd[a]	nd	nd	nd	nd	nd	nd	nd	nd
1,2-DIBROMOETHANE	19	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
TETRACHLOROETHENE	19	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
1,1,1,2-TETRACHLOROETHANE	19	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
CHLOROBENZENE	19	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
ETHYL BENZENE	19	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
BROMOFORM	19	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
STYRENE	19	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
1,1,2,2-TETRACHLOROETHANE	19	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
BROMOBENZENE	19	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
1,2,3-TRICHLOROPROPANE	19	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
ISOPROPYLBENZENE	19	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
N-PROPYLBENZENE	19	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
2-CHLOROTOLUENE	19	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
4-CHLOROTOLUENE	19	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
1,3,5-TRIMETHYLBENZENE	19	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
T-BUTYLBENZENE	19	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
1,2,4-TRIMETHYLBENZENE	19	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
SEC-BUTYLBENZENE	19	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
1,3-DICHLOROBENZENE	19	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
1,4-DICHLOROBENZENE	19	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
P-ISOPROPYLTOLUENE	19	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
1,2-DICHLOROBENZENE	19	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
N-BUTYLBENZENE	19	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
1,2-DIBROMO-3-CHLOROPROPANE	19	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
1,2,4-TRICHLOROBENZENE	19	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
NAPTHALENE	19	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
1,2,3-TRICHLOROBENZENE	19	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
HEXACHLOROBUTADIENE	19	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
TOTAL XYLENES	56	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
METHYL ETHYL KETONE	94	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
ACETONE[b]	94	nd	225	134	251	1187	122	933	780	98	nd
ACRYLONITRILE	94	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
VINYL ACETATE	94	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
2-CHLOROETHOXYETHENE	187	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
2,4-DICHLORO-2-BUTENE(TRANS)	187	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd

[a]non-detectable [b]common lab contaminant

008133

SEMI-VOLATILE COMPOUNDS IN FISH TISSUE TAKEN FROM SABINE LAKE

COMPOUND	Detection Limit (PPM)	LOCATION AND SAMPLE NO.									
		SABINE LAKE (SOUTH)				SABINE PASS	SABINE LAKE (NORTH)				
		4	5	6	7	8	9	10	11	12	13
		CONCENTRATION (PPM)									
PHENOL	2	nd	nd[a]	nd	nd	nd	nd	nd	nd	nd	nd
2-CHLOROPHENOL	2	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
2-NITROPHENOL	2	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
2,4-DIMETHYLPHENOL	2	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
2,4-DICHLOROPHENOL	2	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
3-METHYL-4-CHLOROPHENOL	2	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
2,4,6-TRICHLOROPHENOL	2	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
2,4,5-TRICHLOROPHENOL	2	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
2,4-DINITROPHENOL	4	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
4-NITROPHENOL	4	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
4,6-DINITRO-2-CRESOL	4	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
PENTACHLOROPHENOL	4	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
n-NITROSO-n-DIMETHYLAMINE	1	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
PYRIDINE	1	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
n-NITROSODIETHYLAMINE	1	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
n-NITROSODIBUTYLAMINE	1	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
ANILINE	1	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
bis(2-CHLOROETHYL)ETHER	1	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
1,3-DICHLOROBENZENE	1	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
BENZYL ALCOHOL	1	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
1,4-DICHLOROBENZENE	1	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
1,2-DICHLOROBENZENE	1	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
o-CRESOL	1	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
bis(2-CHLOROISOPROPYL)ETHER	1	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
m&p-CRESOL (coelute)	1	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
HEXACHLOROETHANE	1	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
n-NITROSO-di-n-PROPYLAMINE	1	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
NITROBENZENE	1	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
BENZOIC ACID	1	nd	nd	0.4[b]	nd	nd	nd	nd	nd	nd	nd
ISOPHORONE	1	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
bis(2-CHLOROETHOXY)METHANE	1	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
1,2,4-TRICHLOROBENZENE	1	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
NAPTHALENE	1	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
4-CHLOROANILINE	1	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
HEXACHLOROBUTADIENE	1	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd

[a]non-detectable [b]reported at less than quantitation limits

008134

SEMI-VOLATILE COMPOUNDS IN FISH TISSUE TAKEN FROM SABINE LAKE

COMPOUND	Detection Limit (PPM)	LOCATION AND SAMPLE NO.									
		SABINE LAKE (SOUTH)				SABINE PASS	SABINE LAKE (NORTH)				
		4	5	6	7	8	9	10	11	12	13
		CONCENTRATION (PPM)									
2-METHYL-NAPTHALENE	1	nd	nd*	nd	nd	nd	nd	nd	nd	nd	nd
1,2,4,5-TETRACHLOROBENZENE	1	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
HEXACHLOROCYCLOPENTADIENE	1	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
2-CHLORONAPTHALENE	1	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
TOTAL NITROANILINES	1	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
ACENAPHTHYLENE	1	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
DIMETHYL PHTHALATE	1	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
2,6-DINITROTOLUENE	1	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
ACENAPHTHENE	1	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
DIBENZOFURAN	1	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
2,4-DINITROTOLUENE	1	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
FLUORENE	1	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
4-CHLORODIPHENYL ETHER	1	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
DIETHYL PHTHALATE	1	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
N-NITROSODIPHENYLAMINE	1	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
DIPHENYL HYDRAZINE	1	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
4-BROMODIPHENYL ETHER	1	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
HEXACHLOROBENZENE	1	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
PHENANTHRENE	1	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
ANTHRACENE	1	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
DI-N-BUTYL PHTHALATE	1	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
FLUORANTHENE	1	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
PYRENE	1	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
BIS(2-ETHYLHEXYL)ADIPATE	1	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
BUTYLBENZYL PHTHALATE	1	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
BENZ(A)ANTHRACENE	1	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
CHRYSENE	1	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
BIS(2-ETHYLHEXYL)PHTHALATE	1	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
DI-N-OCTYL PHTHALATE	1	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
BENZO(B)FLUORANTHENE	1	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
BENZO(K)FLUORANTHENE	1	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
BENZO(A)PYRENE	1	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
INDENO(1,2,3-CD)PYRENE	1	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
DIBENZ(A,H)ANTHRACENE	1	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
BENZO(G,H,I)PERYLENE	1	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd

*non-detectable

008135

ADDITIONAL DATA COLLECTED BY TEXAS DEPARTMENT OF HEALTH FOR FISH TISSUE TAKEN FROM SABINE LAKE (Stewts Island) (COLLECTED JANUARY 18, 1994)

SPECIES LENGTH; CM.		ARSENIC (ppm)	COPPER (ppm)	LEAD (ppm)	MERCURY (ppm)	ZINC (ppm)
		DETECTION LIMIT (PPM)				
	Sample No.	0.04	0.4	0.4	0.02	0.4
SOUTHERN FLOUNDER; COMPOSITE; 37,41	14	nd	nd	nd	0.114	2.90
BLACK DRUM; SINGLE; 43	15	nd	nd	nd	0.244	3.87
BLACK DRUM; SINGLE; 46	16	nd	nd	nd	0.107	3.42
RED DRUM; SINGLE; 56	17	nd	nd	nd	0.163	3.60
RED DRUM; SINGLE; 53	18	0.08	nd	nd	0.137	3.60

[a]nondetectable
[b]reported below quantitation limits

ALL SAMPLES REPORTED BELOW DETECTION LIMITS FOR:

- SEMI-VOLATILE ORGANIC COMPOUNDS
- VOLATILE ORGANIC COMPOUNDS
- PESTICIDES
- PCB'S

008136

MERCURY CONCENTRATIONS IN AQUATIC SPECIES TAKEN FROM LAVACA BAY (FEB. 1993)

Date	State Land Tract #	Species	Sample Type	Length (cm)	Total Hg (ppm)	Methyl Hg (ppm)
02/02/93	LAV 13-1	Black Drum	single	41	0.343	*
	LAV 13-2	Black Drum	single	44	3.98	3.33
	LAV 13-3	Black Drum	single	48	0.12	
	LAV 13-4	Black Drum	single	40	2.07	1.81
	LAV 13-5	Black Drum	single	41	0.439	
	LAV 13-6	Black Drum	single	44	2.85	2.80
	LAV 13-7	Black Drum	single	37	3.46	3.19
	LAV 13-8	Black Drum	single	32	0.726	
	LAV 13-9	Black Drum	single	41	1.21	1.10
	LAV 13-10	Black Drum	single	50	0.740	
	LAV 13-11	Black Drum	single	30	1.07	0.87
	LAV 13-12	Sheepshead	single	30	0.826	
	LAV 13-13	Sheepshead	single	29	1.12	1.04
	LAV 13-14	Red Drum	single	65	2.37	1.90
	LAV 13-15	Red Drum	single	42	0.949	
	LAV 13-16	Red Drum	single	62	0.814	
	LAV 13-17	Red Drum	single	43	1.63	1.60
	LAV 13-18	Red Drum	single	43	1.64	1.26
	LAV 13-19	Red Drum	single	62	4.62	3.64
	LAV 13-20	Red Drum	single	39	2.17	1.76
	LAV 13-21	Speckled Trout	single	41	0.401	
	LAV 15	Oyster	composite		0.081	
	LAV 13-1	Oyster	composite		0.124	
	LAV 13-2	Oyster	composite		0.093	

* samples below 1ppm total Hg not analyzed for methyl mercury

008137

MERCURY CONCENTRATIONS IN AQUATIC SPECIES TAKEN FROM LAVACA BAY (cont.) FEB. 1993

Date	State Land Tract #	Species	Sample Type	Length (cm)	Total Hg (ppm)	Methyl Hg (ppm)
02/03/93	LAV 1-1	Red Drum	single	68	0.443	*
	LAV 1-2	Red Drum	single	45	0.480	
	LAV 1-3	Red Drum	single	60	0.482	
	LAV 1-4	Red Drum	single	58	0.242	
	LAV 1-5	Red Drum	single	47	0.220	
	LAV 1-6	Red Drum	single	42	0.331	
	LAV 1-7	Red Drum	single	44	0.289	
	LAV 1-8	Red Drum	single	43	0.255	
	LAV 1-9	Red Drum	single	33	0.235	
	LAV 1-10	Red Drum	single	45	0.271	
	LAV 1-11	Black Drum	single	35	0.356	
	LAV 1-12	Black Drum	single	43	nd**	
	LAV 1-13	Black Drum	single	65	0.168	
	LAV 1-14	Speckled Trout	single	37	nd	
	LAV 1-15	Oyster	composite		nd	
02/04/93	LAV 13-1	Black Drum	single	46	0.083	
	LAV 13-2	Black Drum	single	43	0.428	
	LAV 13-3	Black Drum	single	46	nd	
	LAV 13-4	Black Drum	single	58	0.920	
	LAV 13-5	Black Drum	single	50	0.840	
	LAV 13-6	Black Drum	single	57	1.52	1.56
	LAV 13-7	Black Drum	single	43	nd	
	LAV 13-8	Sheepshead	single	32	1.73	1.80
	LAV 13-9	Sheepshead	single	36	0.179	
	LAV 13-10	Sheepshead	single	43	0.655	
	LAV 13-11	Red Drum	single	45	1.70	1.72
	LAV 13-12	Red Drum	single	34	1.25	1.44
	LAV 13-13	Red Drum	single		2.25	2.16

* samples below 1ppm total Hg not analyzed for methyl mercury
** non-detectable

008138

MERCURY CONCENTRATIONS IN AQUATIC SPECIES TAKEN FROM
LAVACA BAY (cont.)
MARCH 1993

Date	State Land Tract #	Species	Sample Type	Length (cm)	Total Hg (ppm)
03/24/93	LAV 40-1	Black Drum	single	58	0.308
	LAV 40-2	Black Drum	single	64	0.066
	LAV 40-3	Black Drum	single	63	0.087
	LAV 40-4	Black Drum	single	58	0.274
	LAV 40-5	Black Drum	single	54	0.161
	LAV 40-6	Red Drum	single	73	0.260
	LAV 40-7	Red Drum	single	69	0.286
	LAV 40-8	Red Drum	single	72	0.333
	LAV 40-9	Red Drum	single	44	0.251
	LAV 40-10	Red Drum	single	49	0.237
	LAV 40-11	Southern Flounder	single	44	0.108
	LAV 40-12	Blue Crab	composite	16,16	0.124
	LAV 40-13	Blue Crab	composite	14,17	0.151
	LAV 40-14	Blue Crab	composite	12,18,14	nd
	LAV 40-15	Oyster	composite		nd
	LAV 40-16	Oyster	composite		nd
03/25/93	LAV 14-1	Blue Crab	composite	13,14,15	nd
	LAV 14-2	Blue Crab	composite	14,15,14	nd
	LAV 14-3	Blue Crab	composite	12,12,13,15	0.287
	LAV 25-1	Blue Crab	composite	18,18	0.634
	LAV 25-2	Blue Crab	composite	16,17	0.472
	LAV 25-3	Blue Crab	composite	13,13,15	0.327
	LAV 25-4	Blue Crab	composite	17,14,14	0.077
	LAV 14A-1	Black Drum	single	56	0.070
	LAV 14A-2	Black Drum	single	46	0.120
	LAV 14A-3	Black Drum	single	54	0.108
	LAV 14A-4	Black Drum	single	48	0.092
	LAV 14A-5	Black Drum	single	58	nd
	LAV 14A-6	Black Drum	single	52	0.087
	LAV 14A-7	Red Drum	single	64	0.272
	LAV 14A-8	Blue Crab	composite	14,14,12,13	0.068
	LAV 14A-9	Blue Crab	composite	10,12,12,12	0.047

008139

MERCURY CONCENTRATIONS IN AQUATIC SPECIES TAKEN FROM LAVACA BAY (JUNE 1994)

LOCATION	STATE LAND TRACT #	SPECIES	SAMPLE TYPE	LENGTH (cm)	TOTAL Hg (ppm)	METHYL Hg (ppm)
OFFSHORE LAGOON	LAV 25-1	Black Drum	single	42	0.649	--
	LAV 25-2	Black Drum	single	46	1.05	1.08
	LAV 25-3	Red Drum	single	39	0.504	--
	LAV 25-4	Black Drum	single	54	0.959	--
	LAV 25-5	Black Drum	single	40	1.11	0.99
	LAV 25-6	Black Drum	single	41	1.32	1.4
	LAV 25-7	Blue Crabs	composite	13,18,15	0.177	--
	LAV 25-8	Blue Crabs	composite	13,20,12 ,12	0.246	--
	LAV 25-9	Oysters	composite	25-30# 3"	0.120	--
	LAV 25-10	Oysters	composite	25-30# 3"	0.096	--
	LAV 14-1	Oysters	composite	50# 1-2"	<0.073	--
LAVACA RIVER	LAV 14A-1	Red Drum	single	58	0.497	--
	LAV 14A-2	Black Drum	single	57	0.271	--
	LAV 14A-3	Black Drum	single	46	0.274	--
	LAV 14A-4	Blue Crabs	composite	18,14,13 ,16	0.104	--
CHOCOLATE BAY	LAV 6-1	Blue Crabs	composite	12,21,15	0.182	--

008140

DATA SUMMARY
AND RISK ANALYSIS
FOR GALVESTON BAY AND UPPER SHIP CHANNEL

CHEMICALS DETECTED	AVERAGE CONCENTRATION
*Dioxin (TCDD Equiv.)	2.66 ppt
Arsenic	0.06 ppm
Cadmium	0.13 ppm
Copper	4.5 ppm
Lead	0.003 ppm
Mercury	0.06 ppm
Zinc	16.3 ppm
*DDD	0.53 ppb
*DDE	0.88 ppb
Dacthal	1.3 ppb
Methyl ethyl ketone	17.8 ppb
*PCB Aroclor 1254	7.7 ppb

NO. SAMPLES	ANALYSIS PERFORMED	AFFECTED SPECIES	CANCER RISK*	CARCINOGEN
1	DIOXIN	OYSTERS	$1x10^{-4}$	DIOXIN
3	DIOXIN	BLUE CRABS (3)	$4.8x10^{-5}$	DIOXIN
1	DIOXIN	SEA CATFISH	$1.4x10^{-4}$	DIOXIN
10	PRIORITY POLLUTANTS	RED DRUM (1)	$1x10^{-5}$	DDD, DDE PCB 1254
COMBINED OVERALL CANCER RISK			$8.6x10^{-5}$	

Carcinogenic risk is based on dioxin concentration for oysters, crabs, and catfish and on average DDD, DDE, and PCB's for ten samples analyzed for priority pollutants. Risk based on increased incidence of liver carcinogenesis for persons consuming 30 grams per day (1 meal per month) seafood from Galveston Bay and the Upper Ship Channel.

008141

DATA SUMMARY
AND RISK ANALYSIS
FOR SABINE LAKE

CHEMICALS DETECTED	AVERAGE CONCENTRATION
*Dioxin (TCDD Equiv.)	0.47 ppt
Arsenic	0.04 ppm
Cadmium	0.26 ppm
Copper	2.5 ppm
Lead	0.03 ppm
Mercury	0.102 ppm
Zinc	30 ppm
*PCB Aroclor 1248	3.8 ppb
Benzoic acid	0.04 ppm

NO. SAMPLES	ANALYSIS PERFORMED	AFFECTED SPECIES	CANCER RISK*	CARCINOGEN
1	Dioxin	OYSTERS	1.3×10^{-5}	DIOXIN
1	Dioxin	BLUE CRABS	2.3×10^{-5}	DIOXIN
1	Dioxin	BLACK DRUM	3.7×10^{-6}	DIOXIN
10	Priority Pollutants	SPECKLED TROUT (1)	5.3×10^{-6}	PCB 1248
COMBINED OVERALL CANCER RISK			1.8×10^{-5}	

Carcinogenic risk is based on dioxin concentration for oysters, crabs, and black drum and on an average Aroclor 1248 concentration for ten samples analyzed for priority pollutants. Risk based on increased incidence of liver carcinogenesis for persons consuming 30 grams per day (1 meal per month) seafood from Sabine Lake.

008142

DATA SUMMARY
AND RISK ANALYSIS
FOR LAVACA BAY

LOCATION	NO. SAMPLES	AVERAGE MERCURY (PPM)
CLOSURE AREA	68	0.762
OUTSIDE CLOSURE AREA	32	0.210

LOCATION	CONSUMPTION LIMITS (MEALS PER MONTH)	
INSIDE CLOSURE AREA	CHILDREN UNDER SIX	0.6
	WOMEN OF REPRODUCTIVE AGE	1.3
OUTSIDE CLOSURE AREA	CHILDREN UNDER SIX	2
	WOMEN OF REPRODUCTIVE AGE	5

008143

DISCUSSION

This study provides TDH and EPA with current information regarding potential chemical contamination of seafood in four areas of the Texas Coast. The action level for issuance of a fish consumption advisory due to carcinogenic contamination used by TDH is $1x10^{-4}$. In cases of mercury contamination, advisories or closures are based on protection of children and women of reproductive age. This is due to the increased risk of damage to the developing nervous system and brain of infants and children exposed prenatally.

For upper **Galveston Bay and the Houston Ship Channel**, 10 samples of a variety of species were collected and analyzed for priority pollutants, excluding dioxin. The results show extremely low levels of commonly detected metals, one fish contained an extremely low level of methyl ethyl ketone, four fish contained dacthal levels near detection, and one fish contained extremely low levels of aroclor 1254, DDD, and DDE. Common lab contaminants and possible degredation products were not included in overall risk calculations.

Carcinogenic risk was calculated for the ten samples analyzed for priority pollutants using the average concentration of aroclor 1254, DDD, and DDE. All three chemicals were found in a single red drum sample. The resulting theoretical risk for the ten samples was $1x10^{-5}$ and was derived from contamination of a single fish.

Dioxin analysis, excluding priority pollutants was performed on three crab samples, one sea catfish, and one oyster sample. The cancer risk for sea catfish was calculated as $1.4x10^{-4}$. The risk for oysters was calculated as $1x10^{-4}$. The risk for blue crabs was calculated as $4.8x10^{-5}$. Average dioxin risk was calculated as $7.6x10^{-5}$. The current advisory recommends limited consumption of catfish and blue crabs. The data indicate that dioxin levels have decreased from 6 ppt in 1990 to 1.6 ppt in 1994 for blue crabs. **The limited 1994 data indicate that risk from dioxin in blue crabs does not exceed the TDH action level of $1x10^{-4}$.** Although oysters exceed the 10^{-4} risk level, this area of Galveston Bay is closed to oystering and is therefore not considered a public health concern at this time.

An overall carcinogenic risk was calculated to include all samples containing an average concentration level of dioxin, DDD, DDE, and aroclor 1254. The resulting carcinogenic risk is $8.6x10^{-5}$. This level may underrepresent actual risk since some samples were analyzed for dioxin and were not analyzed for priority pollutants and visa versa. The risk represents consumption of one meal per week of fish, crabs, and oysters from the current advisory area of Galveston Bay and the Houston Ship Channel.

008144

For **Sabine Lake**, 10 samples of a variety of species were collected and analyzed for priority pollutants, excluding dioxin. The results show extremely low levels of commonly detected metals, one fish contained 38 ppb PCB Aroclor 1248, and one fish had a level of benzoic acid reported below detection level. Carcinogenic risk was calculated using the average PCB level for all 10 samples and resulted in a 5.3×10^{-6} risk level. This level was derived from contamination of a single speckled trout.

Dioxin analysis, excluding priority pollutants was performed on one oyster composite, one blue crab composite, and one black drum. For oysters, the risk was calculated as 1.3×10^{-5}; for blue crabs, the risk was calculated as 2.3×10^{-5}; for black drum, the risk was calculated as 3.7×10^{-6}. Average dioxin risk was calculated as 1.3×10^{-5}. An overall carcinogenic risk was calculated to include all samples containing an average concentration of dioxin and PCB's and resulted in a 1.8×10^{-5} risk level.

Sixty-eight samples of fish, crabs, and oysters collected inside the closure area of Lavaca Bay contained an average mercury concentration of 0.762 ppm. Oysters contained very low levels in comparison to fish and crabs. The limit of consumption for children under six, based on this average, is 0.6 meals per month. Women of reproductive age should consume no more than one meal per month of fish and crabs inside the closure area.

Thirty-two samples of fish, crabs, and oysters collected outside the closure area of Lavaca Bay contained an average mercury concentration of 0.210 ppm. This level is close to the national background level of mercury in fish and is considered toxicologically insignificant. Limits of consumption calculated for children and women of reproductive age are two meals and five meals per month, respectively.

008145

CONCLUSION

Upper Galveston Bay and the Houston Ship Channel

Texas Department of Health issued a fish consumption advisory for Upper Galveston Bay and the Houston Ship Channel in 1990 due to dioxin contamination of catfish and blue crabs. The average toxicity weighted concentration of dioxins and furans at that time was 4.5 parts per trillion. Dioxin levels have decreased to an average toxicity weighted concentration for oysters, crabs, and catfish of 2.7 parts per trillion. Catfish and oysters continue to exceed the $1x10^{-4}$ risk level. The average dioxin concentration in blue crabs is 1.7 ppt. The resulting risk does not exceed criteria for issuance of an advisory.

The parameters analyzed for in the current data set include not only dioxins and furans, but a complete list of priority pollutants of potential public health concern. The vast majority of chemicals were found below detection limits. Very low levels of DDT metabolites and PCB's were added to the overall carcinogenic risk for all species analyzed since the cumulative risk may result in toxicity to a similar target organ (liver). The current additive carcinogenic risk due to average levels of chemicals found in Galveston Bay and the Upper Ship Channel is 8.6×10^{-5} for adults consuming one meal per week from this waterbody. **This level does not exceed the action level for issuance of a fish consumption advisory and indicates that additional samples should be collected to re-evaluate the advisory area, particularly the decreased levels of dioxin in blue crabs.**

Sabine Lake (Neches River)

A fish consumption advisory exists on the Neches River above Interstate 10 due to dioxin contamination. However, sampling of fish, crabs, and oysters below the advisory area and extending to Sabine Lake has not previously been performed. The data collected for this study indicate that seafood collected from the confluence of the Neches River and Sabine Lake do not exceed TDH criteria for issuance of a consumption advisory.

Priority pollutants, as well as dioxins were analyzed. The average dioxin level for oysters, crabs and fish was below detection. The majority of samples were below detection limits for priority pollutants. Commonly detected metals were found at insignificant levels of concern. One fish contained PCB aroclor 1248 at a reporting level below detection.

Lavaca Bay

Thirty percent of sixty-eight samples collected inside the area declared as prohibited for the taking of fish and crabs exceeded 1 ppm mercury in edible fish tissue. The mean concentration was 0.762 parts per million methylmercury. Oysters contained very low levels of mercury in comparison to fish and crabs.

None of the thirty-two samples collected outside of the closure

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area exceeded 1 ppm mercury. The mean concentration in edible fish tissue was 0.21 parts per million methylmercury for fish, crabs, and oysters collected outside the advisory area.

These data indicate that **the current closure in Lavaca Bay should remain in effect** and that fish and crabs taken from this area are unfit for human consumption.

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REFERENCES

1. EPA, 1990. Tetrachlorodibenzo-p-dioxins and Dibenzofurans In Edible Fish Tissue At Selected Sites in Arkansas, Louisiana, and Texas.

2. EPA, 1993. Guidance For Assessing Chemical Contaminant Data For Use In Fish Advisories. Volume I, Fish Sampling and Analysis.

3. EPA, 1994. Guidance For Assessing Chemical Contaminant Data For Use In Fish Advisories. Volume II, Risk Assessment and Fish Consumption Limits.

4. Texas Department of Health, Division of Shellfish Sanitation, 1993. Analysis Of Risk From Consumption Of Fish Taken From The Lower Neches River.

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RECOMMENDATIONS

1. Collect additional blue crab samples from Upper Galveston Bay and the Houston Ship Channel to verify the apparent decrease in dioxin concentration of this species and to determine the continued inclusion of blue crabs in the current consumption advisory.

2. Continue monitoring fish and crabs from the closure area of Lavaca Bay for mercury contamination of these species.

3. No regulatory action is necessary for Sabine Lake or the Neches River between Interstate 10 and Sabine Lake.

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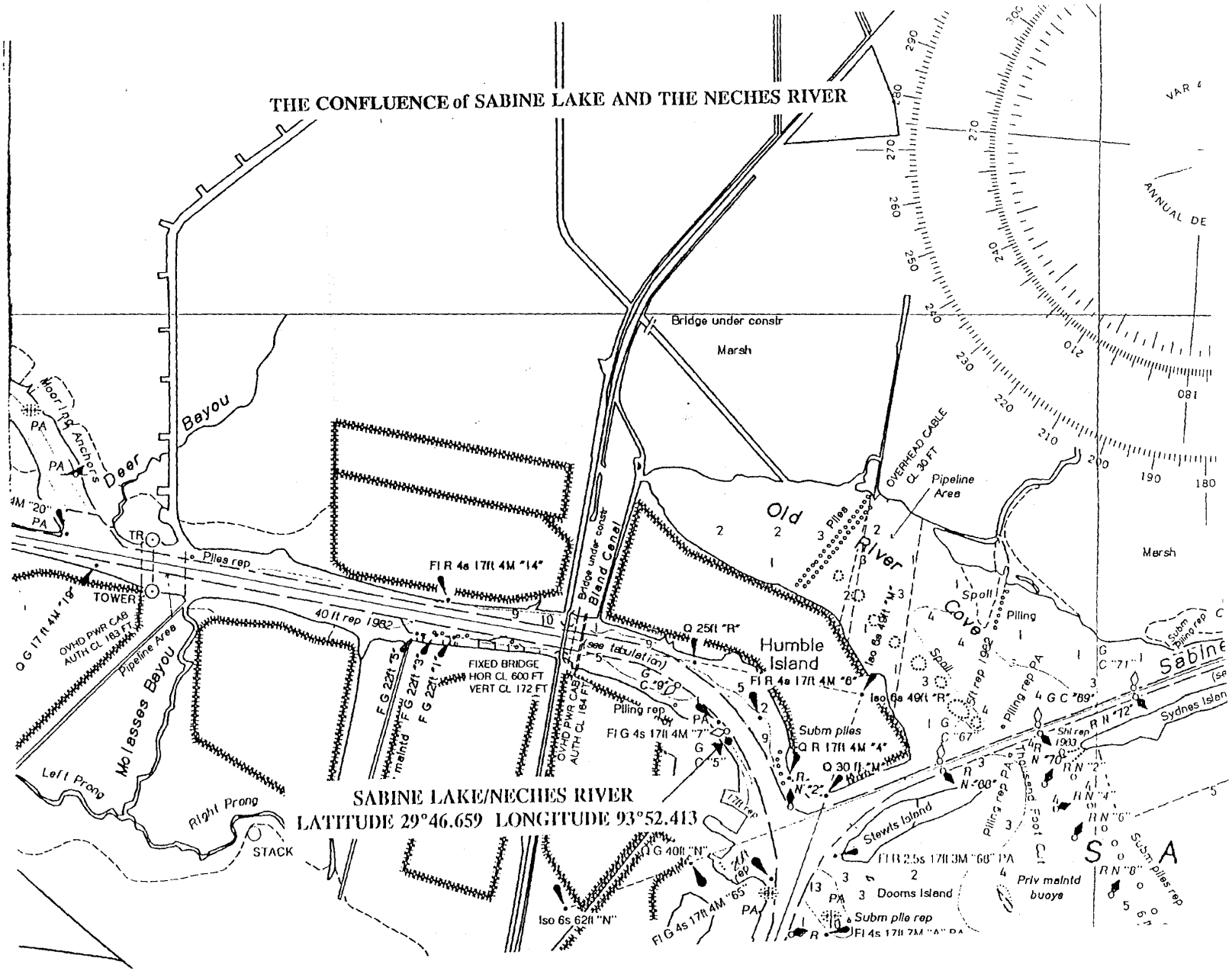
THE CONFLUENCE of SABINE LAKE AND THE NECHES RIVER
SABINE LAKE/NECHES RIVER
LATITUDE 29°46.659 LONGITUDE 93°52.413
Bridge under constr
Marsh
Deer Bayou
Moorings Anchors
Piles rep
TOWER
OVHD PWR CAB AUTH CL 183 FT
Pipeline Area
Molasses Bayou
Left Prong
Right Prong
STACK
40 ft rep 1982
Fl R 4s 17ft 4M "14"
FIXED BRIDGE HOR CL 600 FT VERT CL 172 FT
Bridge under constr
Bland Canal
(see tabulation)
Q 25ft "R"
Humble Island
Fl R 4s 17ft 4M "6"
Iso 6s 49ft "R"
Piling rep
Fl G 4s 17ft 4M "7"
Subm piles
Q R 17ft 4M "4"
Q 30 ft "M"
Old River Cove
OVERHEAD CABLE CL 30 FT
Pipeline Area
Spoil
Piling
Sabine
Sydnes Island
Stewts Island
Dooms Island
Priv maintd buoys
Iso 6s 62ft "N"
Fl G 4s 17ft 4M "65"
Q G 40ft "N"
Fl R 2.5s 17ft 3M "68" PA
Subm pile rep
Fl 4s 17ft 7M "A" PA
Subm piles rep
Thousand Foot Cut
Piling rep PA
Shl rep 1983
ANNUAL DE
VAR 4

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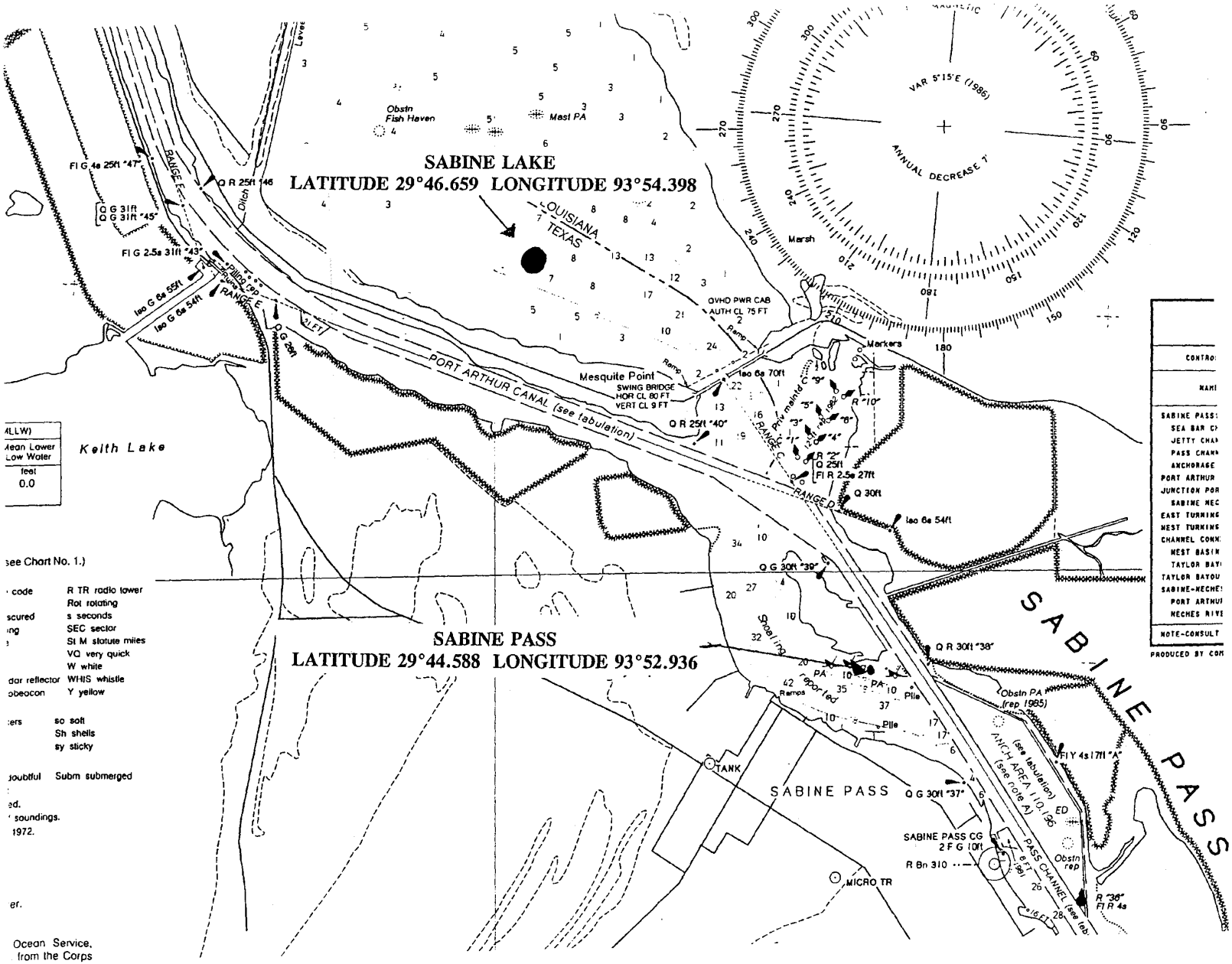
SABINE LAKE
LATITUDE 29°46.659 LONGITUDE 93°54.398
SABINE PASS
LATITUDE 29°44.588 LONGITUDE 93°52.936
LOUISIANA
TEXAS
PORT ARTHUR CANAL (see tabulation)
Mesquite Point
SWING BRIDGE
HOR CL 80 FT
VERT CL 9 FT
QVHD PWR CAB
AUTH CL 75 FT
Markers
Keith Lake
SABINE PASS
SABINE PASS CG
2 F G 10ft
R Bn 310
MICRO TR
TANK
Obstn
Fish Haven
Mast PA
Marsh
Obstn PA
(rep 1985)
PASS CHANNEL (see tab)
ANCH AREA 110,196 ED
(see tabulation)
(see note A)
VAR 5°15'E (1986)
ANNUAL DECREASE 1'
Fl G 4s 25ft "47"
Q R 25ft "46"
Fl G 2.5s 31ft "43"
Iso G 6s 55ft
Iso G 6s 54ft
Q G 25ft
Q R 25ft "40"
Iso 6s 70ft
Fl R 2.5s 27ft
Q 30ft
Iso 6s 54ft
Q G 30ft "39"
Q R 30ft "38"
Q G 30ft "37"
Fl Y 4s 17ft "A"
R "36"
Fl R 4s
RANGE E
RANGE C
RANGE D
Spoiling
Ramps
Pile
Ramp
Dredged
reported
Chart No. 1.)
code
scured
ing
dar reflector
obeacon
ers
joubtful
ed.
soundings.
1972.
er.
Ocean Service,
from the Corps
R TR radio tower
Rot rotating
s seconds
SEC sector
St M statute miles
VQ very quick
W white
WHIS whistle
Y yellow
so soft
Sh shells
sy sticky
Subm submerged
Mean Lower Low Water
feet
0.0
CONTRO
NAMI
SABINE PASS
SEA BAR C
JETTY CHAN
PASS CHANN
ANCHORAGE
PORT ARTHUR
JUNCTION POR
SABINE NEC
EAST TURNING
WEST TURNING
CHANNEL CONN
WEST BASIN
TAYLOR BAY
TAYLOR BAYOU
SABINE-NECHES
PORT ARTHUR
NECHES RIVE
NOTE-CONSULT
PRODUCED BY COM

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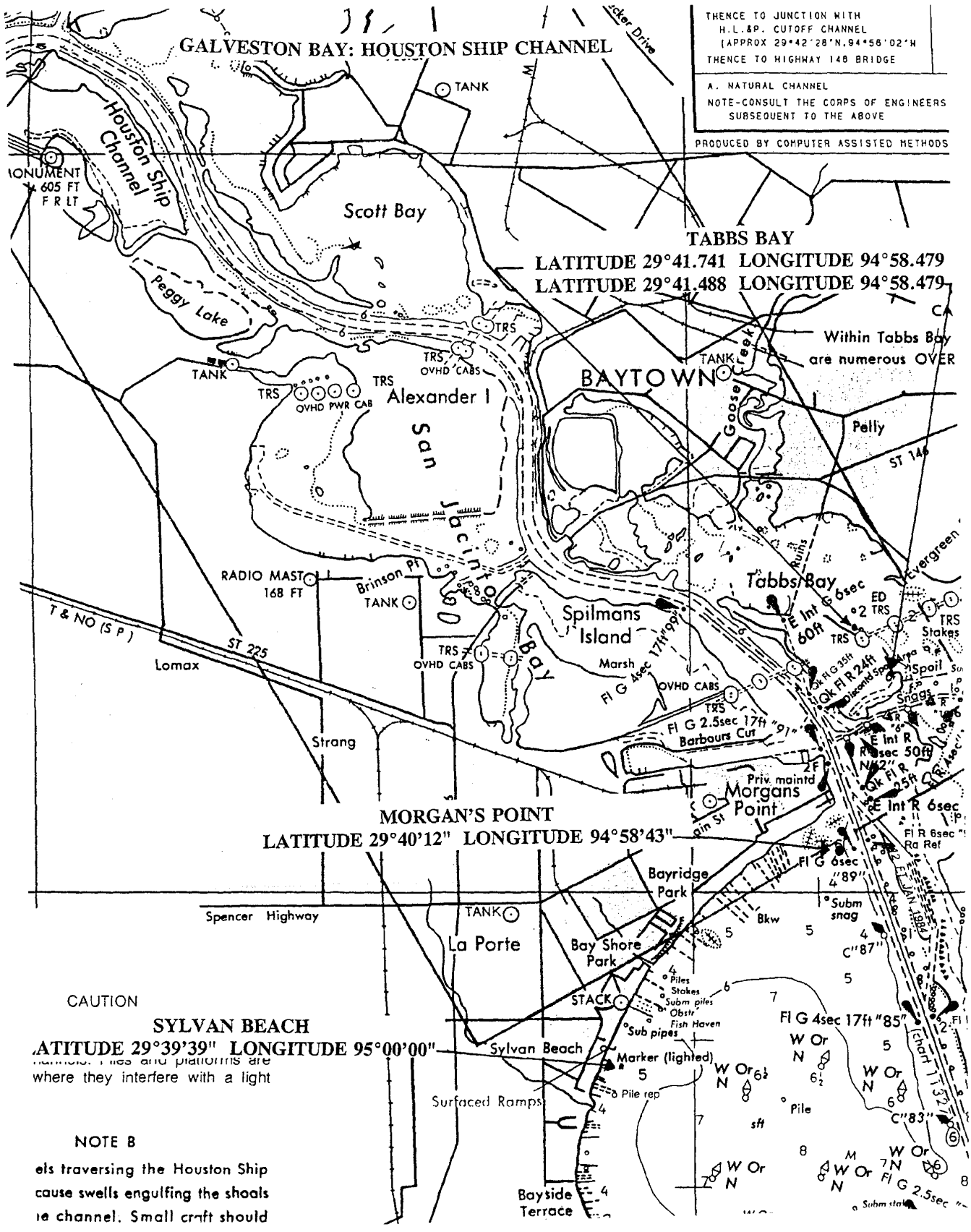
GALVESTON BAY: HOUSTON SHIP CHANNEL
THENCE TO JUNCTION WITH H.L.&P. CUTOFF CHANNEL (APPROX 29°42'28"N,94°56'02"W
THENCE TO HIGHWAY 146 BRIDGE
A. NATURAL CHANNEL
NOTE-CONSULT THE CORPS OF ENGINEERS SUBSEQUENT TO THE ABOVE
PRODUCED BY COMPUTER ASSISTED METHODS
Houston Ship Channel
Scott Bay
Peggy Lake
TABBS BAY
LATITUDE 29°41.741 LONGITUDE 94°58.479
LATITUDE 29°41.488 LONGITUDE 94°58.479
Within Tabbs Bay are numerous OVER
BAYTOWN
Goose Creek
Pelly
ST 146
Alexander I
San Jacinto Bay
Spilmans Island
Marsh
Tabbs Bay
Evergreen
Brinson Pt
RADIO MAST 168 FT
T & NO (S P)
ST 225
Lomax
Strang
MORGAN'S POINT
LATITUDE 29°40'12" LONGITUDE 94°58'43"
Barbours Cut
Morgans Point
Bayridge Park
Spencer Highway
La Porte
Bay Shore Park
Sylvan Beach
Surfaced Ramps
Bayside Terrace
CAUTION
SYLVAN BEACH
LONGITUDE 95°00'00"
where they interfere with a light
NOTE B
els traversing the Houston Ship
cause swells engulfing the shoals
ie channel. Small craft should

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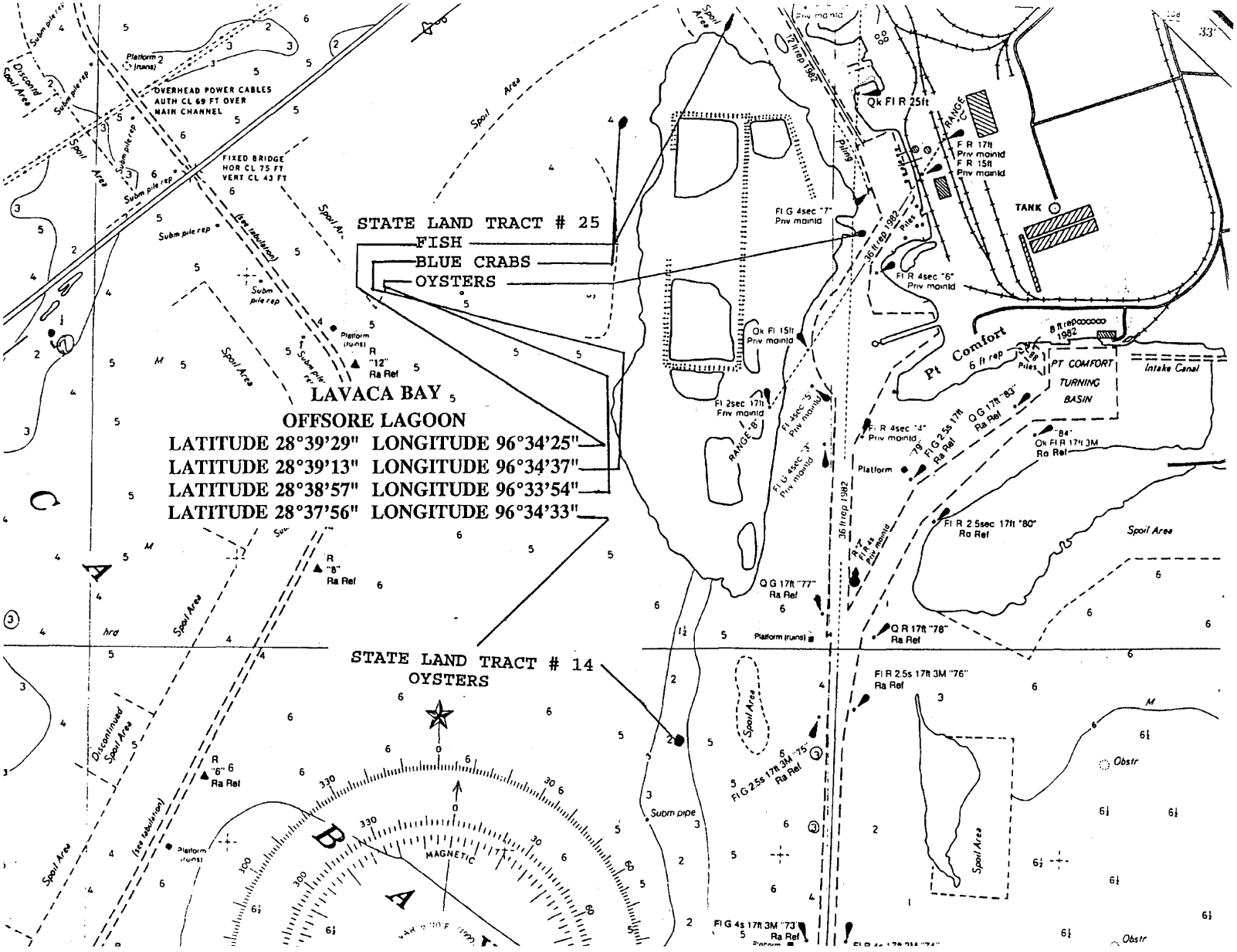
STATE LAND TRACT # 25
FISH
BLUE CRABS
OYSTERS
LAVACA BAY
OFFSORE LAGOON
LATITUDE 28°39'29" LONGITUDE 96°34'25"
LATITUDE 28°39'13" LONGITUDE 96°34'37"
LATITUDE 28°38'57" LONGITUDE 96°33'54"
LATITUDE 28°37'56" LONGITUDE 96°34'33"
STATE LAND TRACT # 14
OYSTERS
OVERHEAD POWER CABLES
AUTH CL 69 FT OVER
MAIN CHANNEL
FIXED BRIDGE
HOR CL 75 FT
VERT CL 43 FT
Pt Comfort
PT COMFORT
TURNING
BASIN
Intake Canal
TANK
Platform (ruins)
Spoil Area
Discontinued Spoil Area
Subm pipe
Obstr
MAGNETIC

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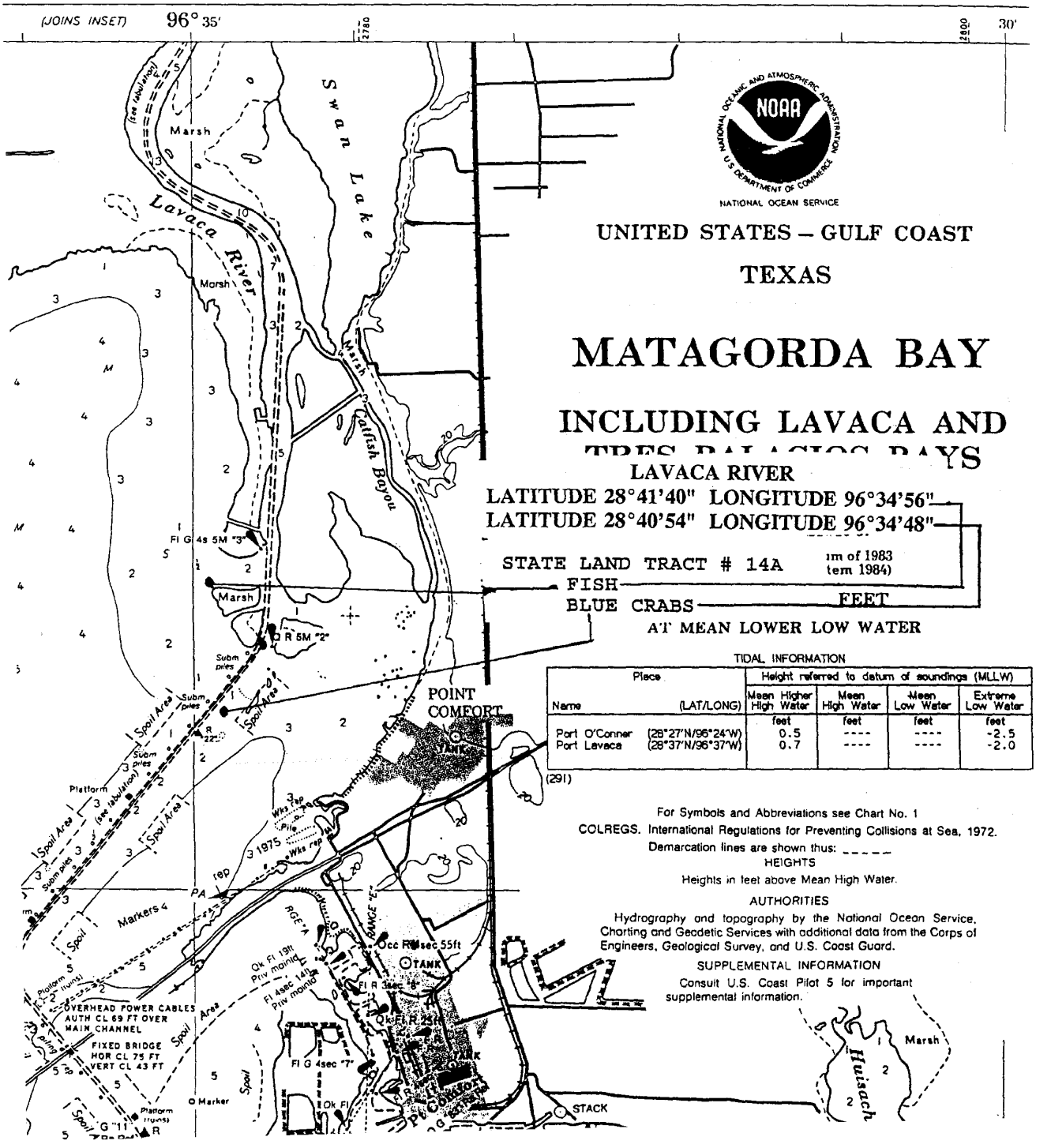
Nautical Miles

Yards



NOAA

NATIONAL OCEAN SERVICE

UNITED STATES – GULF COAST

TEXAS

MATAGORDA BAY

INCLUDING LAVACA AND TRES PALACIOS BAYS

LAVACA RIVER

LATITUDE 28°41'40" LONGITUDE 96°34'56"

LATITUDE 28°40'54" LONGITUDE 96°34'48"

STATE LAND TRACT # 14A

FISH

BLUE CRABS

1m of 1983
tem 1984)

FEET

AT MEAN LOWER LOW WATER

TIDAL INFORMATION

Place Name	(LAT/LONG)	Height referred to datum of soundings (MLLW) Mean Higher High Water	Mean High Water	Mean Low Water	Extreme Low Water
		feet	feet	feet	feet
Port O'Conner	(28°27'N/96°24'W)	0.5	----	----	-2.5
Port Lavaca	(28°37'N/96°37'W)	0.7	----	----	-2.0

(291)

For Symbols and Abbreviations see Chart No. 1

COLREGS. International Regulations for Preventing Collisions at Sea, 1972.

Demarcation lines are shown thus: _____

HEIGHTS

Heights in feet above Mean High Water.

AUTHORITIES

Hydrography and topography by the National Ocean Service, Charting and Geodetic Services with additional data from the Corps of Engineers, Geological Survey, and U.S. Coast Guard.

SUPPLEMENTAL INFORMATION

Consult U.S. Coast Pilot 5 for important supplemental information.

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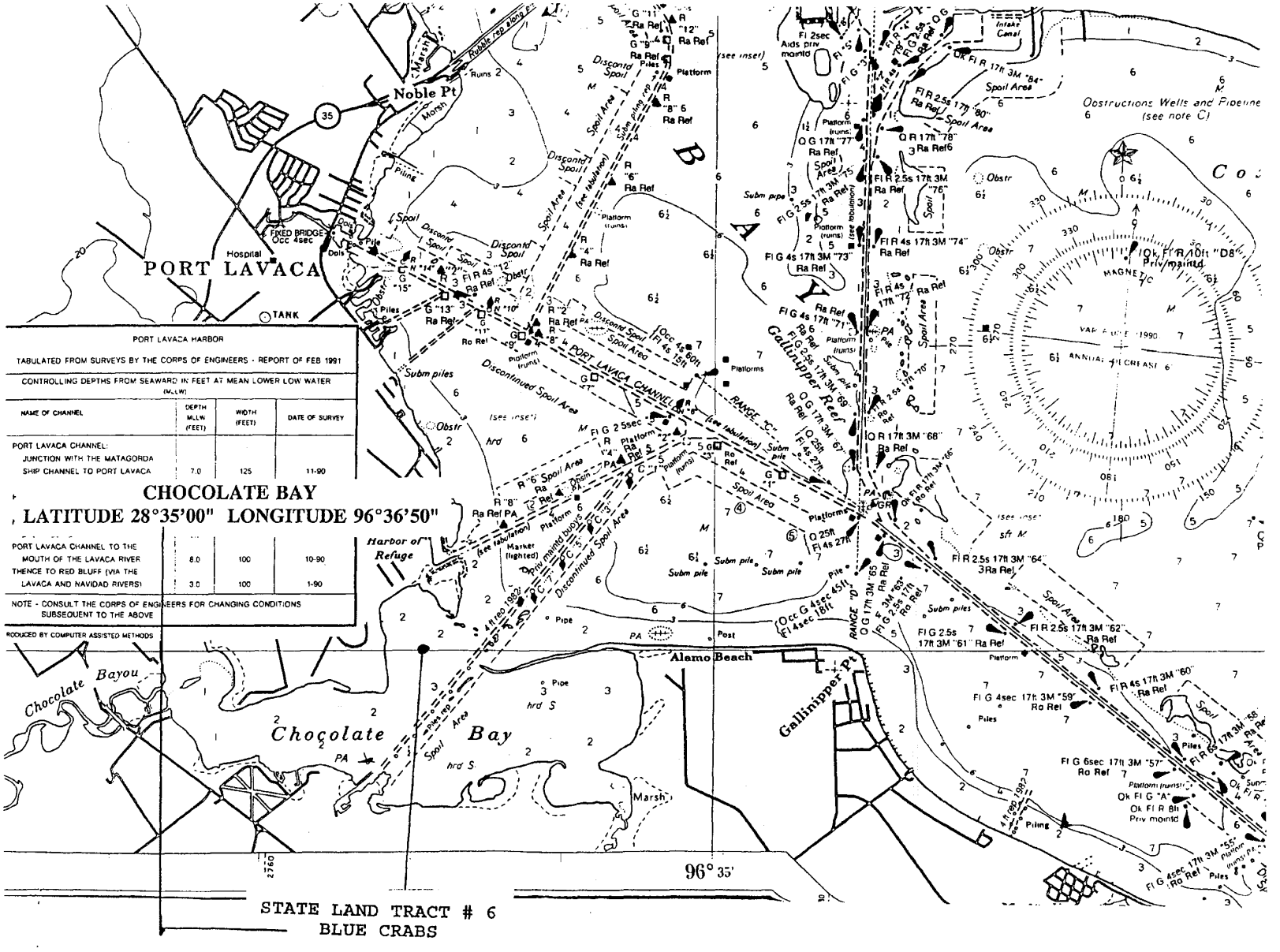

PORT LAVACA HARBOR

TABULATED FROM SURVEYS BY THE CORPS OF ENGINEERS - REPORT OF FEB 1991

CONTROLLING DEPTHS FROM SEAWARD IN FEET AT MEAN LOWER LOW WATER (MLLW)

NAME OF CHANNEL	DEPTH MLLW (FEET)	WIDTH (FEET)	DATE OF SURVEY
PORT LAVACA CHANNEL: JUNCTION WITH THE MATAGORDA SHIP CHANNEL TO PORT LAVACA	7.0	125	11-90
PORT LAVACA CHANNEL TO THE MOUTH OF THE LAVACA RIVER	8.0	100	10-90
THENCE TO RED BLUFF (VIA THE LAVACA AND NAVIDAD RIVERS)	3.0	100	1-90

NOTE - CONSULT THE CORPS OF ENGINEERS FOR CHANGING CONDITIONS SUBSEQUENT TO THE ABOVE

RODUCED BY COMPUTER ASSISTED METHODS

CHOCOLATE BAY

LATITUDE 28°35'00" LONGITUDE 96°36'50"

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Preliminary Remediation Goals for Protection of Human Health

Area/Chemical of Concern	PRG (mg/kg)	Basis
Lake Sabine Sediment		
Aroclor 1242	0.00015	ELCR = $1x10^{-5}$
Copper	91	HI = 1
Zinc	734	HI = 1

ELCR = Excess lifetime cancer risk
HI = Hazard Index
PRG = Preliminary Remediation Goal

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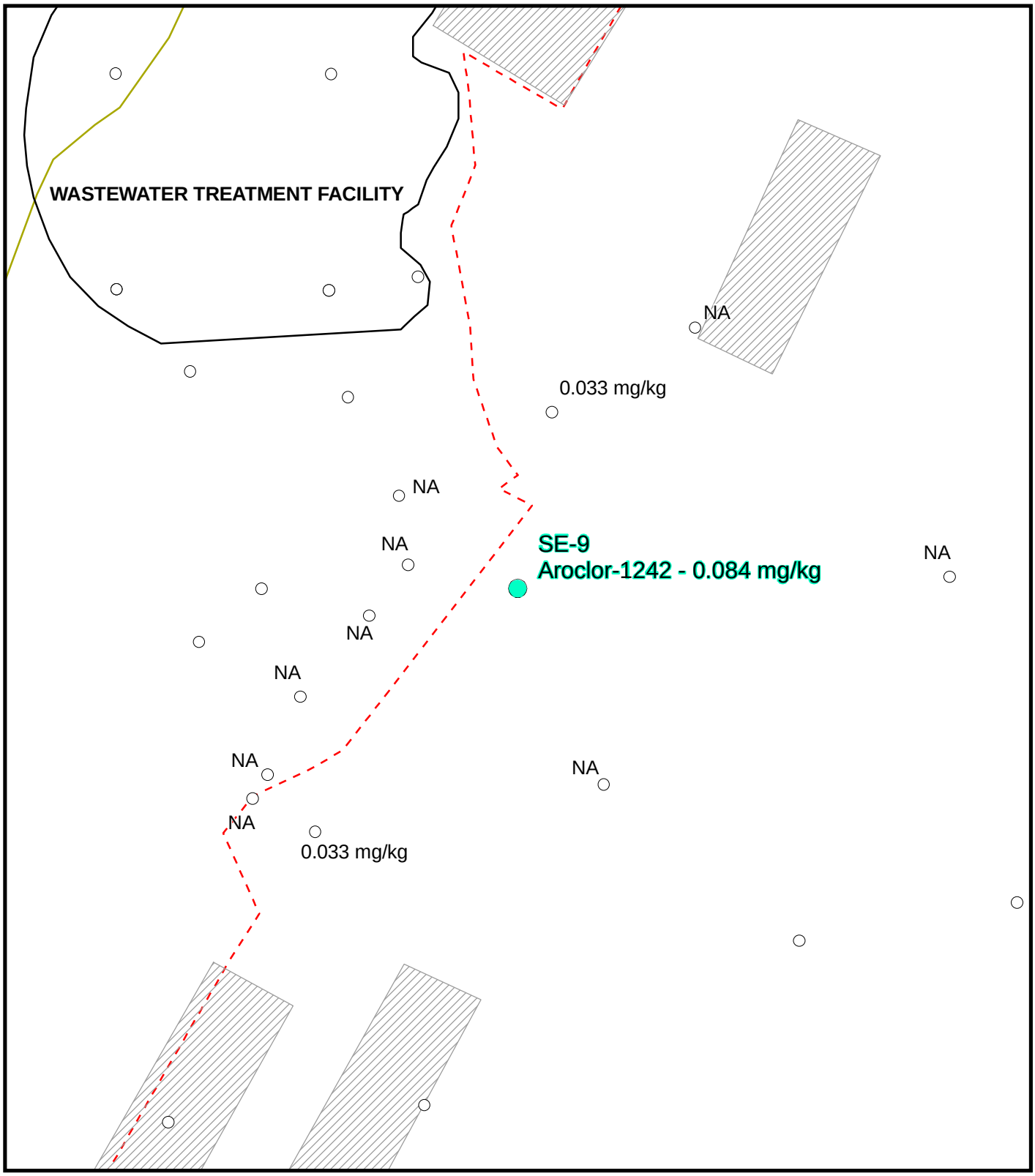

LEGEND

- Area of Interest
- Landfill Area
- Property Boundary
- Road
- Navigation Channel
- Sunken Barge
- Sediment Sample Location where Aroclor-1242 exceeds Remedial Goal
- Sediment Sample Where Aroclor-1242 Does Not Exceed the Remedial Goal

N

50 25 0 50

SCALE IN FEET

Figure 1

Sediment Sample that Exceeds Remedial Goal for Aroclor-1242

State Marine Superfund Site

CH2MHILL

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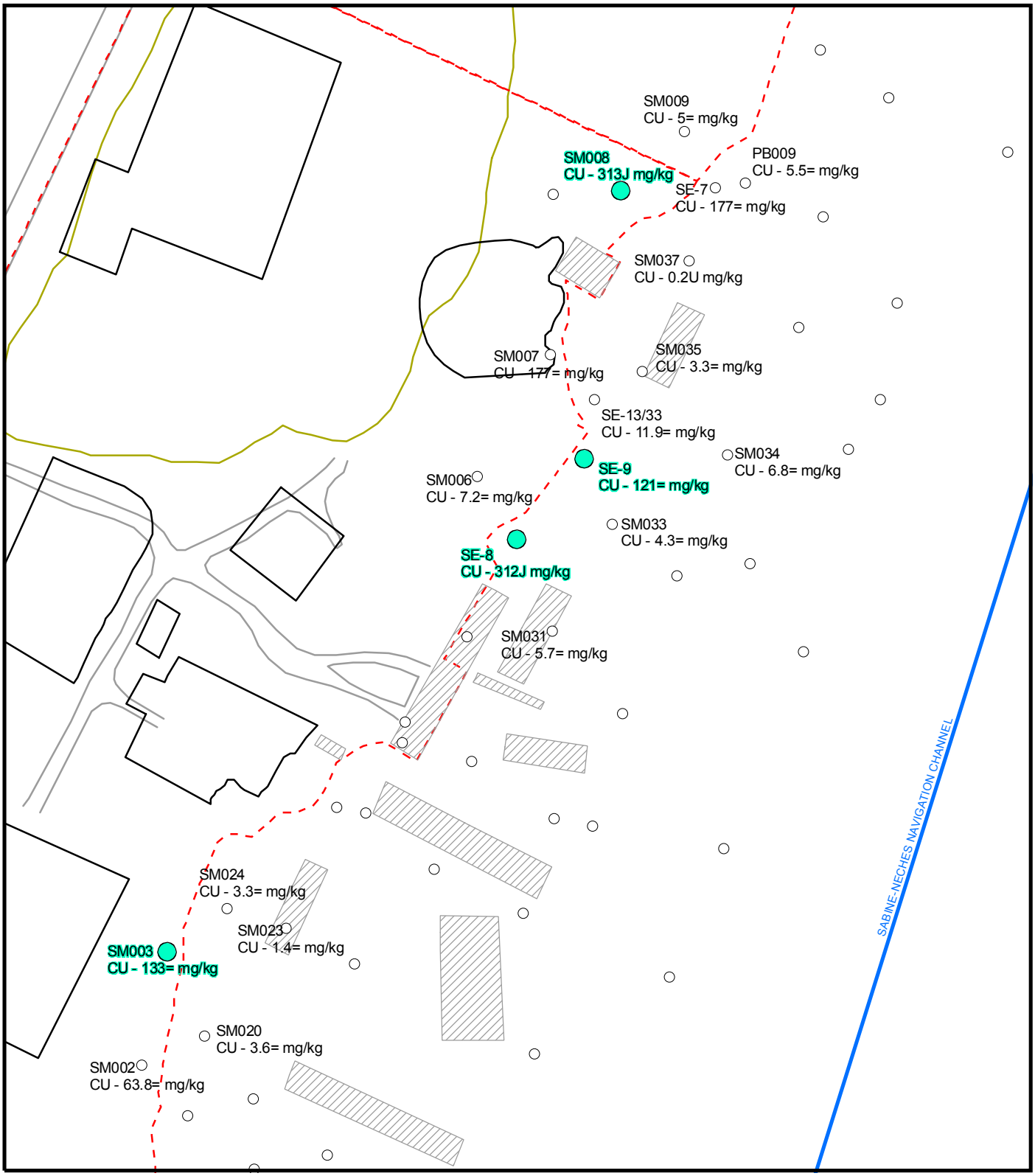

LEGEND

- Area of Interest
- Landfill Area
- Property Boundary
- Road
- Navigation Channel
- Sunken Barge
- Sediment Sample where Copper exceeds Remedial Goal
- Sediment Sample where Copper Does Not Exceed the Remedial Goal

N

200 100 0 200

SCALE IN FEET

Figure 2

Sediment Samples that Exceed Remedial Goal for Copper

State Marine Superfund Site

CH2MHILL

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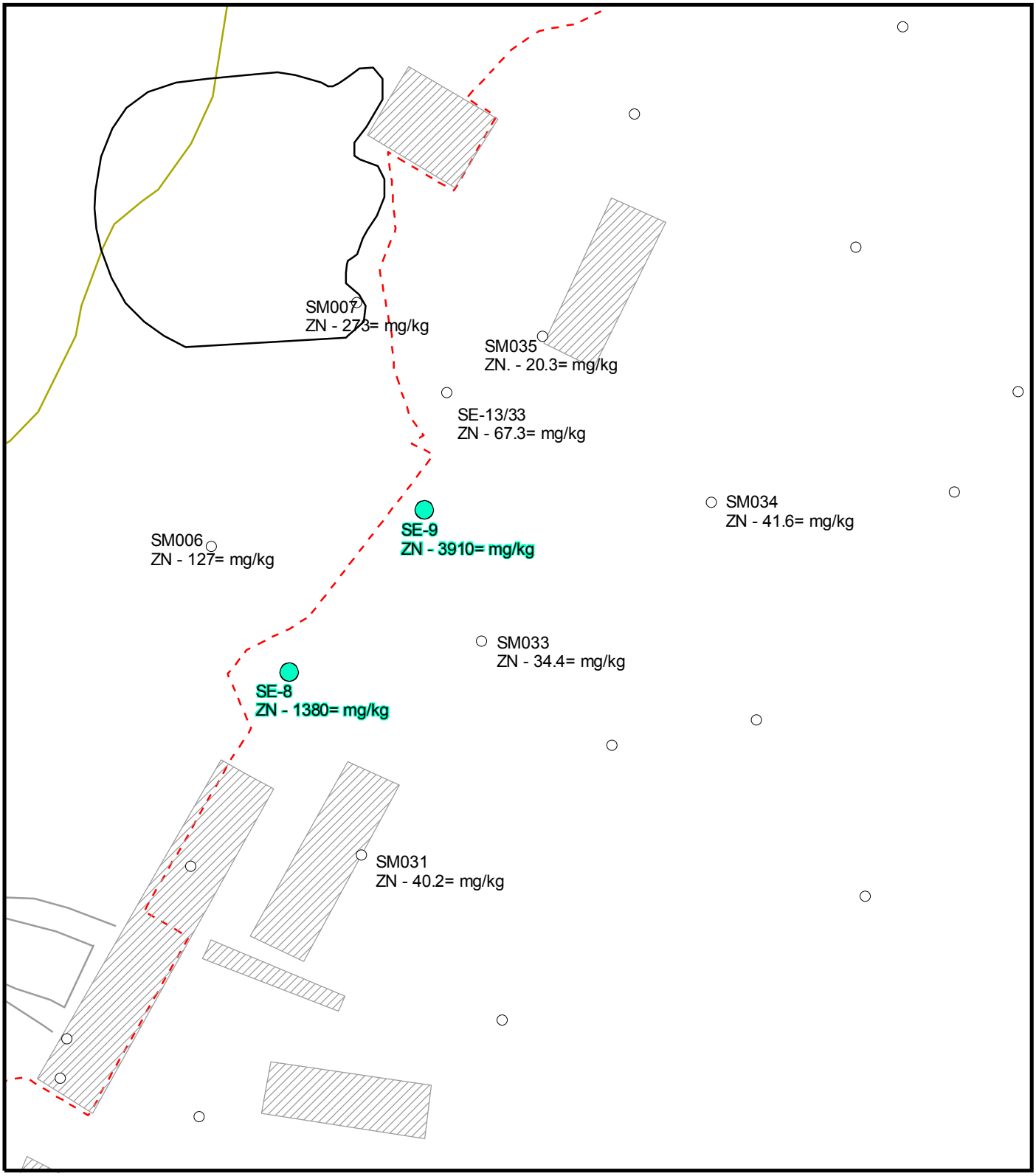

Figure 3

Sediment Samples that Exceed Remedial Goal for Zinc

State Marine Superfund Site

CH2MHILL

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Appendix E-2

Supplemental Baseline Ecological Risk Assessment

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REMEDIAL ACTION CONTRACT

United States Environmental Protection Agency Region 6

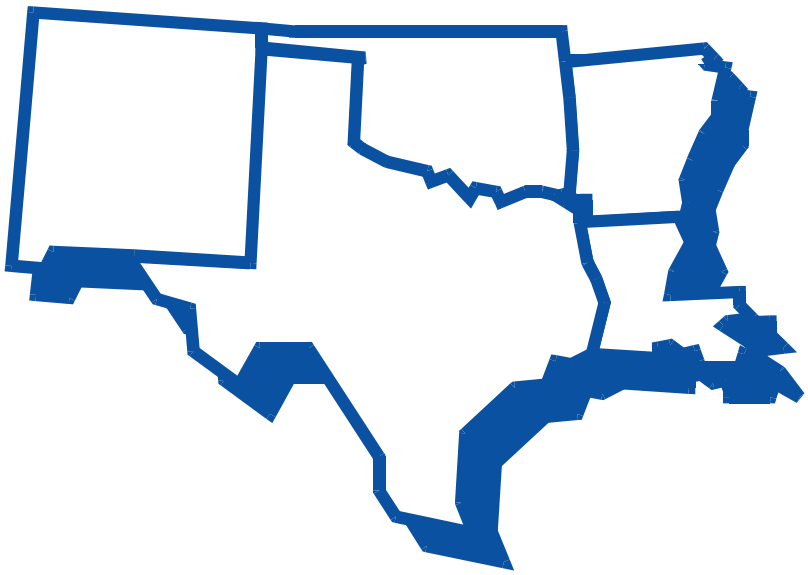
Contract No. EP-W-06-021

Supplemental Remedial Investigation
State Marine Superfund Site
Port Arthur, Texas

Final
Supplemental Baseline Risk Assessment

EPA Task Order No. 0002-RICO-06BX
DCN 0002-02011

October 2006



CH2MHILL

In Association With:

Weston Solutions, Inc.
Geo-Marine, Inc.
E2 Consulting Engineers, Inc.
Arrowhead Contracting, Inc.

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Acronyms

AET	Apparent Effect Threshold
AVS/SEM	Acid Volatile Sulfide/Simultaneously Extracted Metals
BERA	Baseline Ecological Risk Assessment
bgs	below ground surface
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
COC	Contaminant of Concern
COPEC	Chemical of Potential Ecological Concern
CSM	Conceptual Site Model
DQO	Data Quality Objective
EPA	United States Environmental Protection Agency
EPC	Exposure Point Concentration
ERL	Effect Range Low
ERM	Effect Range Median
ESV	Ecological Screening Value
FS	Feasibility Study
FSP	Field Sampling Plan
FWI	Former Wastewater Impoundment
HQ	Hazard Quotient
MDC	Maximum Detected Concentration
NEBA	Net Environmental Benefit Analysis
PAH	Polycyclic Aromatic Hydrocarbon
PRG	preliminary remediation goal
QAPP	Quality Assurance Project Plan
RI	Remedial Investigation
ROD	Record of Decision
SMS	State Marine Superfund Site
SVOC	Semivolatile Organic Compound
TNRCC	Texas Natural Resource Conservation Commission
TRRP	Texas Risk Reduction Program

VOC	Volatile Organic Compound
RPM	Remedial Project Manager

1. Introduction

Under the direction of the U.S. Environmental Protection Agency (EPA) - Region 6, CH2M HILL is conducting the Remedial Investigation/Feasibility Analysis (RI/FS) for the State Marine Superfund Site (SMS) to investigate and evaluate the extent of contamination and potential risk posed by sediment contaminants to benthic invertebrates. A baseline ecological risk assessment (BERA) was completed under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) for SMS by CH2M HILL (**2005a**). The Supplemental BERA for SMS was performed in accordance with federal and state guidelines. The ERA process will follow the *U.S. EPA's Ecological Risk Assessment Guidance for Superfund: Process for Designing and Conducting Ecological Risk Assessments* (**1997**) and *Guidance for Conducting Ecological Risk Assessments at Remediation Sites in Texas* (**2001**). The process for ERA is virtually the same as described in both guidance documents. However, when there were differences, the more conservative of the two approaches was taken.

Potential risks from sediment and soil media to avian and mammalian wildlife receptors and soil invertebrates were evaluated in the 2005 BERA and concluded to have no unacceptable risk. However, the potential for risk to benthic organisms from sediment at SMS could not be excluded for seven metals and two polycyclic aromatic hydrocarbons (PAHs). Additional sediment samples were collected to reduce uncertainties associated with these risk conclusions for sediment. The approach, analysis, and conclusions resulting from this additional sampling are presented in the following sections of this Supplemental BERA.

The conclusions of this supplemental BERA are intended to support the selection of a remedy to eliminate, reduce, or control risks to ecological receptors. Additional data will support the remedy selection and be used in a Record of Decision (ROD).

1.1 BERA Framework

The Supplemental BERA considers steps 4 through 8 of the *Ecological Risk Assessment for Superfund Framework* (**EPA, 1997**), and revises risk calculations based on new information in the evaluation of potential risk to benthic organisms from sediment at the SMS. This document is organized into the following sections:

Step 4: Study design and data quality objectives

- Establishing measurement endpoints
- Developing a site-specific work plan
- Quality Assurance Project Plan
- Summary of the Field Sampling Plan

Step 5: Field Verification of Sampling Design

Step 6: Site Investigation and Analysis

- Data used in supplemental BERA

Step 7: Risk Characterization

- Risk Estimation
- Additional Lines of Evidence (e.g., source evaluation)
- Uncertainty Analysis

Step 8: Risk Management

2. Study Design/Data Quality Objectives

Section 2 presents the study design and data quality objectives. This section includes the sampling strategy and rationale behind the proposed investigation activities at the BERA ecological focus areas, or areas identified as having the highest potential for ecological risk as determined in the Step 3A (**CH2M HILL, 2005a**). Establishing the measurement endpoints (**Section 2.1**) and developing a site-specific work plan constitutes Step 4 of the ERA process (**EPA, 1997**). Other products of Step 4 include a Quality Assurance Project Plan (QAPP) (**Section 2.2**) and a summary of the Field Sampling Plan (FSP) (**Section 2.3**).

2.1 Measurement Endpoints

The EPA's ERA Superfund guidance (**EPA, 1997**) defines assessment endpoints as "explicit expressions of the actual environmental values" (e.g., ecological resources that are to be protected). "Valuable ecological resources, including those without which ecosystem function would be significantly impaired, those providing critical resources, and those perceived as valuable by humans …" Because assessment endpoints typically encompass many ecological attributes (some of which are difficult to evaluate), measurement endpoints were selected to evaluate potential risks to the assessment endpoints. EPA (**1997**) defines a measurement endpoint as "a measurable biological response to a stressor that can be related to the valued characteristic chosen as the assessment endpoint." Measurable effects may include reduced survival, reduced growth, reproductive impairment, and changes in community structure or function.

For this supplemental BERA, the assessment endpoints identified for the SMS targeted ecological resources that, because of their ecological characteristics, represent important components of the local ecosystem that are most likely to be in direct contact with potentially contaminated media. These receptors include benthic invertebrates. The potential for risk to other receptors with complete exposure pathways was evaluated and concluded to have no unacceptable risk in the BERA (**CH2M HILL, 2005a**).

Refined assessment and measurement endpoints for the supplemental BERA are presented in **Table 1**. Risk hypotheses were developed for each endpoint and conclusions were drawn at the end of the risk assessment as to whether the hypothesis was supported or not supported.

2.2 Quality Assurance Project Plan

The data quality objectives (DQOs) are presented in the QAPP. DQOs represent a series of planning steps that are employed throughout the development of the work plan and sampling analysis plan to ensure the environmental data to be collected are adequate to support the intended application (**CH2M HILL 2006a**).

2.3 Work Plan and Field Sampling Plan Summary

A focused sediment sampling program was executed to investigate current chemical concentrations at target areas (areas of elevated concentrations or hot spots) identified during the 2006 feasibility study as requiring further investigation. Based on the results of the original BERA metals and PAHs were targeted as COPECs for the supplemental BERA. The sampling program included metals and SVOC analysis of sediment samples. Based on those analytical suites the following were evaluated as COPECs during this supplemental analysis:

ALUMINUM	ACENAPHTHENE	4-CHLORO-3-METHYLPHENOL
ANTIMONY	ACENAPHTHYLENE	4-CHLOROANILINE
ARSENIC	ANTHRACENE	4-CHLOROPHENYL PHENYL ETHER
BARIUM	BENZO(a)ANTHRACENE	4-NITROANILINE
BERYLLIUM	BENZO(a)PYRENE	4-NITROPHENOL
CADMIUM	BENZO(b)FLUORANTHENE	ACETOPHENONE
CALCIUM	BENZO(g,h,i)PERYLENE	ATRAZINE
CHROMIUM, TOTAL	BENZO(k)FLUORANTHENE	BENZALDEHYDE
COBALT	CHRYSENE	BENZYL BUTYL PHTHALATE
COPPER	DIBENZ(a,h)ANTHRACENE	BIPHENYL (DIPHENYL)
IRON	FLUORANTHENE	bis(2-CHLOROETHOXY) METHANE
LEAD	FLUORENE	bis(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHER)
MAGNESIUM	INDENO(1,2,3-c,d)PYRENE	bis(2-CHLOROISOPROPYL) ETHER
MANGANESE	NAPHTHALENE	bis(2-ETHYLHEXYL) PHTHALATE
MERCURY	PHENANTHRENE	CAPROLACTAM
NICKEL	1,2,4,5-TETRACHLOROBENZENE	CARBAZOLE
POTASSIUM	2,4,5-TRICHLOROPHENOL	DIBENZOFURAN
SELENIUM	2,4,6-TRICHLOROPHENOL	DIETHYL PHTHALATE
SILVER	2,4-DICHLOROPHENOL	DIMETHYL PHTHALATE
SODIUM	2,4-DIMETHYLPHENOL	DI-n-BUTYL PHTHALATE
THALLIUM	2,4-DINITROPHENOL	DI-n-OCTYLPHTHALATE
VANADIUM	2,4-DINITROTOLUENE	HEXACHLOROBENZENE
ZINC	2,6-DINITROTOLUENE	HEXACHLOROBUTADIENE
	2-CHLORONAPHTHALENE	HEXACHLOROCYCLOPENTADIENE
	2-CHLOROPHENOL	HEXACHLOROETHANE
	2-METHYLNAPHTHALENE	ISOPHORONE
	2-METHYLPHENOL (o-CRESOL)	m & p CRESOLS
	2-NITROANILINE	NITROBENZENE
	2-NITROPHENOL	N-NITROSODI-n-PROPYLAMINE
	3,3'-DICHLOROBENZIDINE	N-NITROSODIPHENYLAMINE
	3-NITROANILINE	PENTACHLOROPHENOL
	4,6-DINITRO-2-METHYLPHENOL	PHENOL
	4-BROMOPHENYL PHENYL ETHER	PYRENE

Surface sediment composites of two to five samples were collected from each of ten locations where concentrations of historical samples exceeded ecological risk-based criteria.

The workplan and field sampling plan for this effort are described in the Field Sampling Plan (**CH2M HILL, 2006b)**.

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3. Field Verification of Sampling Design

The primary purpose of field verification of the sampling plan is to determine the feasibility of collecting samples at the site and in the chosen reference areas associated with a measurement endpoint or exposure point concentration. CH2M HILL staff visited the Site on several occasions in 2005 and 2006 prior to developing the work plan. The assessment endpoint for sediment media at Lake Sabine was the protection of benthic invertebrates from impairment of growth, reproduction, or survival of populations. The measurement endpoints selected were concentrations of metals and organic contaminants in the top six inches of sediment. Previous site assessments and investigations indicated that the substrate composition of Lake Sabine is a thin layer of sediment sufficient for composite sampling. Periodic dredging and frequent barge activity prevent the accumulation of large amounts of sediment in the area. Although the actual dredged area is 500 feet from the site boundary, sediment samples were collected anywhere 500-50 feet from the dredged navigation channel. The process of dredging is highly disruptive, stirring up sediment from the dredged area that could redeposit at an unspecified distance for the dredge area. For this reason, the process of dredging could disturb and mix sediment in the area adjacent to the site at sample locations. Wave activity caused by barges will act similarly to natural tidal activity, pulling and moving sediment in all areas of the lake.

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4. Site Investigation and Analysis

Sediments located in such an active area are not likely to remain constant, and as such, the available data from 2001, 1999, and 1995 are not necessarily reflective solely of site-related influence, nor were they definitively representative of existing conditions. The Site is adjacent to a canal that receives regular boat traffic which is dredged every two to three years. The sediments in this area are also subject to disturbance by tidal forces and high intensity weather patterns. Additional sediment samples from the 0-6 inch depth were collected in the May 2006 supplemental investigation, to reflect current sediment exposure conditions in this dynamic environment.

Sample collection and analysis met the DQOs described in the QAPP (**CH2M HILL, 2006a**). Eight sediment samples and one field duplicate were collected in 2006. One sample was analyzed from each station. A sample consisted of a composite of sediment collected from 1 to 5 collection areas within a station. Multiple grabs (i.e, 3 to 30) were taken from the collection areas until sufficient sample volume was acquired. Descriptions of field sampling locations, including surface water quality measurements at sampling locations and particle size analyses, are provided in **Attachment B**. A background composite sample was also collected from Station I (I-SD-09). The selected location was the same as was used for historical background samples reported in the 2003 RI report (**Weston, 2003**). The 2006 background sample was composited from 12 grabs in a single location. Sampling locations are presented on **Figure 1 and Figure 2**. Samples were analyzed for metals and organic contaminants (**Table 2**). These data were used in the supplemental BERA to evaluate potential risk to benthic invertebrates in the areas of concern as identified in the FS. Sampling was intended to be as close to or directly on the hotspot as practicable. It should be noted that the ability is low for a sampling technician to perfectly duplicate the previous sampling location as the boat moves with the current and wind. This comprehensive analysis does not distinguish between the near shore or intidal area demonstrated by overlying water depths or ecological niches as in the BERA.

The work plan states that bioassays would be performed on an as needed basis after the screening of the supplemental data. Toxicity bioassays using *Leptocheirus plumulosus* or *Neanthes virens* 10-day sediment bioassays, and that macroinvertebrate taxonomic identification for community analysis were not performed due to the very low likelihood for adverse effects expected from sediments adjacent to the SMS as indicated by the supplemental data. This risk management decision was based on the fact that the only constituents with the any suggestion of unacceptable risk are not those known to be toxic to sediment dwelling organisms and no sources of these constituents were identified on site.

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5. Revised Risk Characterization

5.1 Evaluation of Chemicals of Potential Ecological Concern

The same procedures followed for the completion of the BERA were followed in the process of updating sediment chemicals of potential ecological concern (COPECs) selection and risk characterization for the supplemental BERA. COPECs were identified by a multi-part screening process that considered 1) frequency of detection, 2) background comparison, 3) risk-based screening levels, and 4) bioaccumulative COPECs. Chemicals that are considered essential nutrients (calcium, magnesium, potassium, and sodium) were not selected as COPECs.

5.2 Part 1: Frequency of Detection Evaluation

In conformity with the BERA process, the frequency at which each chemical was detected was evaluated. Those constituents detected at a frequency of five percent or less were eliminated from further evaluation, unless the detection limits were insufficient. A detection limits evaluation is provided in Section 5.4. Eight samples (excluding the background sample) were collected in the supplemental investigations, and any one detected sample would equal a detection frequency of 12.5%. Therefore, any constituent with at least one detection was retained for further consideration. . A total of 53 semivolatile organic compounds (SVOCs) below detection limits in all samples were eliminated from the supplemental BERA (**Table 2**). Another 36 metals and SVOCs detected at a frequency greater than five percent were carried to Part 2 of the COPEC screening process.

5.3 Part 2: Comparison to Background

A comparison was made between site chemical concentrations and background concentrations of inorganics. Chemicals with a maximum detected concentration greater than background concentrations were retained for Step 3 of the COPEC screening process. A summary of the background evaluation for each exposure area is provided in **Table 3**. As in the BERA, antimony was eliminated from further consideration in sediments based upon the background comparison of inorganics.

5.4 Part 3: Comparison to Screening Levels

Benthic invertebrates were evaluated for toxicity to chemicals in sediment. Lower trophic-level organisms (e.g., sediment invertebrates) are exposed to more localized concentrations of contaminants than are more mobile, higher trophic level receptors. As a measure of conservatism, potential toxicity of chemicals to these receptors was evaluated by using the maximum detected concentrations (MDCs) as the exposure point concentrations (EPCs).

The EPC was compared to a media-specific ecological risk-based screening level for each constituent (**Table 2**). These primary ecological screening values (ESVs) are unchanged from

the original BERA. Detected analytes with EPCs greater than ESVs were identified as COPECs and retained for further analysis. Those constituents without ESVs were not evaluated quantitatively and are described in the uncertainties section (Section 5.11).

Four metals (barium, beryllium, selenium, and thallium) were identified as COPECs in sediment at the Site following the COPEC identification screening. The work plan stated only the new data set would be re-screened because it was more representative of current conditions. The four metals identified from the 2006 data set are fewer than the 33 detected COPECs with benthic invertebrate toxicity screening values that were identified in the original BERA. These previously identified COPECs included 12 metals, 7 PAHs, and pentachlorophenol in the intertidal area; 10 metals, 15 PAHs, and 4 volatile organic compounds (VOCs) in the nearshore area; and, 5 metals in the offshore area. No organics were identified as COPECs in the supplemental BERA where MDCs were below their primary ESVs or concentrations were below detection in all samples. There were 12 non-detected organics with maximum detection limits that exceeded the primary ESVs (2,4-dimethylphenol, 2-methylphenol [o-cresol], acenaphthene, benzyl butyl phthalate, bis[2-ethylhexyl] phthalate, dibenzofuran, diethyl phthalate, fluorene, hexachlorobutadiene, hexachloroethane, nitrobenzene, and pentachlorophenol). The potential for adverse effects to benthic organisms due to non-detected concentrations of organics are uncertain (Section 5.11) and is not considered an unacceptable risk. The MDC for selenium was lower than the MDC in historical data from the BERA. Only the barium MDC was greater in recent samples (264 mg/kg) than in historical samples (220 mg/kg – nearshore). Barium (HQ_{max} =5.5), and selenium (HQ_{max}=4.7) were the only detected constituents with maximum concentrations that exceeded primary ESVs (**Table 3**) in the 2006 sampling event.

5.5 Part 4: Determination of Bioaccumulative COPECs

In accordance with Section 3.4.3 in the *Guidance for Conducting Ecological Risk Assessments at Remediation Sites in Texas* (**TNRCC, 2001**), bioaccumulative constituents are addressed in the comparison to screening levels for benthic communities in the supplemental BERA. Bioaccumulative analytes sampled during the 2006 supplemental investigation (cadmium, copper, mercury, nickel, zinc) did not exceed primary ESVs and, therefore, current risk estimations are acceptable to benthic invertebrate communities. The contributions of bioaccumulative contaminants to upper trophic level receptors were evaluated in the BERA and were determined to pose no unacceptable risk to wildlife receptors; therefore, these metals were not addressed further in this supplemental BERA.

5.6 Fate and Transport

Table 4 highlights fate and transport mechanisms while **Table 5** highlights mechanisms of ecotoxicity for barium, and selenium, the only COPECs remaining after Step 4 of the COPEC identification.

Bioavailability is also an important component of the environmental fate for selenium and how it relates to exposure. Acid volatile sulfide/simultaneously extracted metals (AVS/SEM) analysis reported in the 2003 RI report (**Weston, 2003**) suggests the metals concentrations are potentially bioavailable, although lead, zinc, and copper had the highest individual ratios to AVS. AVS/SEM was not analyzed in recent sediment samples, and it is

assumed that past conditions would persist and metals would still be potentially bioavailable. However, SEM>AVS does not mean that toxicity will be observed. Selenium is predominantly immobilized in the reducing environment of surface sediments, where it is found as insoluble Se(0) and tends to accumulate (**Tokunaga, 1997**). Therefore, selenium is not generally bioavailable to sediment organisms unless it is chemically or biologically oxidized (**Alemi, 1988**). The reducing conditions of SMS sediment is supported by the low oxidation-reduction potential determined in surface water quality measurements where sediment samples were collected (Weston, 2003).

5.7 Conceptual Site Model

The refined ecological conceptual site model (CSM) presents potential chemical sources, release mechanisms, receptors, and exposure routes (Figure 3). Media not excluded from posing potential risk in SLERA and original BERA were evaluated in the supplemental BERA. Pathways that are potentially complete and were quantitatively or qualitatively evaluated in the SLERA and/or BERA. All pathways are assumed to be potentially complete and are presented in the CSM.

5.8 Exposure Assessment

Benthic invertebrates were evaluated for toxicity to COPECs in sediment using maximum detection based EPCs compared directly to media-specific screening levels. For those COPECs suggesting risk based on maximum detected concentrations, average concentrations were compared to primary screening values in order to assist in the evaluation of the potential level of risk.

5.9 Effects Assessment

The selection hierarchy for identifying ESVs for all COPEC carried forward in the BERA was unchanged for this supplemental BERA. Screening levels and processes for derivation of benchmarks were followed (**TNRCC, 2001**) as described in the BERA. In addition, primary screening levels from other EPA sources were used as necessary. For example, the source of the primary screening value (460 mg/kg) for manganese was the effects range low (ERL) from **MacDonald et al. (2000).** For those constituents with missing toxicity values, toxicity values for proxy chemicals were used (e.g., TNRCC high molecular PAH ESV used as a surrogate value for high molecular PAHs without individual ESVs). Constituents with no appropriate proxy toxicity values were retained as uncertainties.

COPECs were carried forward into a comparison against secondary screening levels for benthic invertebrates if the maximum concentration within an exposure area was at or above the primary effects level (e.g., ERL). Secondary ESVs for barium, and selenium are based on 85th percentile concentrations in Texas tidal streams (**TNRCC, 1996**). Although these are not effects based criteria, they indicate the ambient conditions in sediments found in the region near the SMS. Barium, and selenium are not typical risk drivers for benthic invertebrates in sediments and there are few published screening values for them.

5.10 Risk Characterization

Chemicals identified as COPECs were further evaluated in the risk characterization to determine their potential for risk to benthic invertebrates. Because of the conservative assumptions used during the COPEC selection, some of the retained COPECs may not present elevated risk. The refinement step provides a more realistic estimate of COPEC exposures to benthic invertebrates across the site.

Multiple lines of evidence were considered in the risk characterization, including the following:

- Comparison to secondary ESVs
- Evaluation of potential source media
- Consideration of site associated risk

Together, these lines of evidence provide a weight-of-evidence conclusion for the potential risks to benthic invertebrates from sediment at the Site. Those COPECs that cannot be excluded from posing an elevated risk to benthic invertebrates were retained as COCs and are discussed in terms of Risk Management (**Section 6**). Risk characterizations are presented in **Table 6**.

5.10.1 Comparison to Secondary ESVs

The Secondary ESV was not exceeded by the MDC or average concentration of barium (HQ_{max}=0.91) and the potential for risk to benthic invertebrates from this metal is not elevated. Thus, this COPEC is not considered to pose an unreasonable risk to benthic organisms. The secondary ESV for selenium was exceeded by the MDC (HQ_{max}=3.6) and by the average concentration (HQ_{ave}=2.3). Selenium is often identified as a risk driver for wildlife based on sediment concentrations, because it is bioaccumulated through dietary exposure. However, selenium was not identified as a risk COC for avian wildlife in the BERA. The US Department of the Interior (**Lemley and Smith, 1987**) reported that no toxicity studies could be found in the literature that report selenium toxicity thresholds for invertebrates based on exposure to sediment in nature. Effects on invertebrates for the few studies available usually report effects based on selenium concentrations in tissue. The potential for risk to benthic invertebrates from selenium in sediment cannot be excluded, but there is much uncertainty associated with this conclusion.

5.10.2 Source Evaluation

The origins of elevated concentrations of COCs in sediment could be from several different sources including the buried landfill under the site, ground water, storm water runoff carrying particulates of existing surface soils, nearby superfund sites, other sites adjacent to the lake, or sunken barges in the near shore area.

The BERA suggested that ground water from the site could be a potential source of contamination to sediments. However, the distribution maximum concentrations from shallow monitor wells were not spatially associated with sediment exceedances, thus ground water does not appear to be an ongoing source of COCs to the sediments. Low ground water hydraulic gradients across the site combined with high surface water flows in the shipping canal also suggest a low influence of ground water on site sediments. A

quantitative evaluation of the contribution of ground water-to-sediment concentrations of selenium is presented in **Table 7**. The ground water-to-sediment benchmark was developed in accordance with the TCEQ guidance for *Determining PCLs for Surface Water and Sediment RG-366/TRRP 24* (**TCEQ, 2002**). Comparison of ground water concentrations to the ground water-to-sediment protective concentration levels are intended to be protective of benthic invertebrate communities within waters of the state. Water bodies dredged at least once every three years are not required under state guidance to have a ground water-to-sediment screening conducted. However, this quantitative evaluation was conducted at SMS in order to demonstrate that ground water from the site is not contributing to an unacceptable risk to benthic invertebrates in Lake Sabine near the site. Total selenium was not detected in ground water. Dissolved selenium was reportedly detected at a low concentration in ground water, but this detected concentration is suspect, because the total selenium concentration in the same sample was below detection. Both the maximum detection limit for total selenium and the estimated concentration for dissolved selenium are below the ground water-to-sediment screening value, indicating that the source of selenium concentrations in sediment is not likely due to a ground water source from SMS.

The universal soil loss equation described in the TCEQ guidance document (**TCEQ, 2002**) was used to evaluate the potential for soil selenium to act as a source for sediment contamination via overland flow (see **Table 8** and **Attachment C)**. Modeled runoff calculations indicate a low risk to sediment benthic invertebrates from soil selenium in the former wastewater impoundment (FWI) area. The assumption within the calculation, that the lake bottom in the area of investigation only receives overland flow from the State Marine Site and no other watershed runoff to the lake, may overestimate the impacts of soil runoff to sediment from the site, due to the transient nature of sediments and the highly active surroundings. Several other watersheds contribute to Lake Sabine and their contribution to selenium concentrations in the lake have not been investigated in this BERA.

An additional consideration is that the MDC for selenium in soil was the only detected concentration in the Former Waste Impoundment (FWI). This detected sample was collected from a depth of 0.5-1.67 feet bgs. Soil erosion at this depth due to runoff from this heavily vegetated area is improbable. Selenium was not detected in the five remaining locations collected in the FWI during the 2006 supplemental investigation. Furthermore, evaluation of the historical soil data from 0-0.5-foot throughout the 17-acre State Marine Site reveals only one other detected selenium concentration in the former areas of concern presented in the BERA (**Table 8**). The one soil location currently detecting selenium and the one soil location historically detected are essentially the same concentrations as the current sediment concentration collected. For this soil to be the source of elevated selenium in the sediment, the soil from one spot would have to erode to a depth of over 0.5-foot and be transported to one specific sediment location. Additionally, no soil from any other location would be transported to that spot. The likelihood of this being the case is improbable. These two sample locations are not near Lake Sabine. Finally, the hazard quotients (HQs) for the two locations do not represent a high frequency of exceedance. Therefore, the possibility that the detected concentrations of selenium in sediment of Lake Sabine are coming from soil via overland flow from the SMS is unlikely.

5.11 Site Specific Uncertainty Assessment

In the Supplemental BERA, risk was evaluated for benthic invertebrates due to elevated concentrations of barium, and selenium in sediments. Potential risk was indicated by measured concentrations in sediment exceeding primary screening values. However, estimated risk to the benthic invertebrate community in these exposure areas is uncertain for various reasons.

- AVS/SEM data suggest the concentrations of metals in the intertidal area are potentially bioavailable (RI Report Appendix D [Weston, 2003]). Although the potential for risk in the intertidal area exists, there is still uncertainty associated with the risk evaluation in this area. SEM concentrations exceeding AVS only indicate that metals may be bioavailable, but do not indicate that adverse effects will occur. The magnitude of excess SEM that will cause effects is not readily agreed upon in the scientific community.
- Barium and selenium are not generally considered risk drivers to benthic invertebrates, as suggested by their limited availability of toxicity data in commonly used sediment quality references, published studies, or guidance documents. The primary effects value for barium and selenium are from apparent effects thresholds (AETs) for amphipod toxicity. These AETs originate from a single marine sediment bioassay study (Barrick, 1988; reported in Buchman, 1999). The use of these same effect concentrations in numerous criteria attests to the limited sediment toxicity data for these metals. The limited basis of these effects thresholds also indicates much uncertainty with the potential for adverse effects in SMS sediments. Differences between organic carbon concentration, particle size, and other chemical interactions in Site sediments compared to tested sediments may lead to an underestimation or overestimation of risk.
- Secondary ESVs for barium and selenium are based on 85th percentile concentrations in Texas tidal streams (TNRCC 1996). Although these are not effects based criteria, they indicate the ambient conditions in sediments found in the region near the SMS. Consequently, the risk may be either overestimated or underestimated.
- Literature-derived toxicity data based on laboratory studies were the only available toxicity data used to evaluate risk to all receptor groups. It was assumed that effects observed in laboratory species were indicative of effects that would occur in wild species. The suitability of this assumption is unknown. Consequently, the risk may be either overestimated or underestimated.
- Reducing conditions are typically found in subsurface sediment, where selenium would be found as insoluble elemental Se(0) and selenite (Se IV). However, the surface sediment layer can be an oxidizing environment if in contact with oxygenated water, forming soluble selenate (Se VI). The bioavailability of selenium depends on the redox potential of these surficial sediments and the overlying water, which is not known at the State Marine Site. Therefore, the potential for risk to benthic organisms from selenium is uncertain and may be overestimated by comparisons to ESVs based on tests under oxidizing conditions.
- The detection limits for 12 organic compounds exceeded primary ecological screening benchmarks and no concentrations were found above these detection limits. In these

cases, detection limits are inadequate (not sufficiently low) and risk may be either overestimated or underestimated.

- Toxicity data were not available to evaluate the effects of all COPECs. Listed in Table 2 are two detected constituents and 32 non-detected constituents for which there was no toxicological information and the potential for risk to ecological receptors is uncertain.

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6. Risk Management

Previous risk analysis determined that elevated risks in much of the Site were marginal and limited to small hot spots. Recent sediment sampling around previous hot spots indicates that concentrations of almost all inorganic and organic constituents were lower in May 2006 than in the historical dataset. Supplemental sampling was designed to be as close to or directly on top of previously identified hotspots as practicable. It should be noted that the ability is low for a sampling technician to perfectly duplicate the previous sampling location as the boat moves with the current and wind. These reduced sediment concentrations for organic analytes suggest natural attenuation is occurring in the areas of the hot spots. Fewer inorganic COCs under these current conditions (selenium) than the seven inorganic COCs identified in the BERA based on historical sediment data (barium, copper, manganese, lead, nickel, selenium, and zinc) further suggests that risk to benthic invertebrates has diminished. The reduction in metals concentrations may be attributed to water currents, boat traffic, and natural occurrences (i.e. hurricane Rita).

The exact source of low level selenium risk in sediments is uncertain; however, based on further evaluation, SMS is not the likely source of the these chemical concentrations. The original BERA concluded that ground water was a potential source of contaminants to sediment. Current Site ground water concentrations do not exceed aquatic organism exposure to water screening benchmarks protective of benthic invertebrates. In addition, the distribution of shallow monitor wells with maximum detected groundwater concentrations was not associated with sediment locations with elevated concentrations, a low ground water hydraulic gradient exists across the site, and the high surface water flows in the shipping canal all suggest a low influence of ground water on site sediments. Surface runoff was also investigated as a potential source of contaminants to the sediment. Few detected concentrations of selenium in soils, the depth of high concentration samples in soils, surface hydrology, and unlikely soil erosion due to heavy vegetation suggest that this source is also unlikely. The source of selenium in sediment is unknown.

Table 1 presents a summary of the assessment and measurement endpoints and risk hypotheses with conclusions determined from this assessment. Based on calculated risks, PRGs were developed for the COC in sediment, based on benthic invertebrate ESVs, and in this case represents the primary (e.g., ERL) effect level (**Table 9**).

Within Step 8 of the *Ecological Risk Assessment Guidance for Superfund: Process for Designing and Conducting Ecological Risk Assessments – Interim Final* (**EPA, 1997**), the following two statements are made:

> "The risk manager must balance (1) residual risks posed by site contaminants before and after implementation of the selected remedy with (2) the potential impacts of the selected remedy on the environment independent of contaminant effects."
>
> "In instances where substantial ecological impact will result from the remedy (e.g., dredging a wetland), the risk manager will need to consider

> ways to mitigate the impact of the remedy and compare mitigated impacts to the threats posed by the site contamination."

It appears that the potential risk in much of the relatively small area around hot spots (e.g., where only selenium exceeds the secondary ESV would be marginal and limited in extent. That is, although a potentially elevated risk may be identified in this supplemental BERA, it is unlikely, there is a substantial amount of uncertainty, and conflicting information prohibits quantification of the magnitude of the risk. Given this, the decision to remediate sediments should consider other ecological aspects of the habitat as it currently exists in comparison to the damage that could be caused by remedial action. In addition, given the level of uncertainty associated with the primary ESVs and bioavailability of COCs, any preliminary remediation goals (PRGs) developed for benthic invertebrates are also uncertain.

Sediment removal actions such as dredging or capping contaminated contaminants in place are viable options for addressing identified risks. These actions can eliminate existing and even future risk by eliminating exposure to existing or future contaminant sources. However, dredging sediments will cause additional risks to those already occurring, by resuspending sediments and potentially increasing bioavailability to surface water receptors. Removing existing habitat that is providing an ecological function, even if it is less than the full functional capacity of the habitat, is itself an adverse effect. Thus, until habitat recovers after these remedial actions, ecological function is lost, sometimes at a loss greater than the original risk the action was addressing.

A Net Environmental Benefit Analysis (NEBA) was conducted for the SMS based on results of the original BERA to provide a framework to meet the guidance described above (**CH2M HILL, 2005b**). The purpose of the NEBA is to develop information for the EPA remedial project manager (RPM) and other stakeholders to enable the development of a defensible, scientifically based cleanup approach at the Site. The overall goal is to identify potential remedial alternatives that would provide for the protection of human health and the environment while providing the greatest net ecological value.

The NEBA was used to consider the potential influence that prospective remedial alternatives will have on the environment. The NEBA allows for the consideration, as stated earlier, that:

> 1) The affected habitats provide natural resource services and have value
> 2) The remediation may not necessarily increase the level of natural resource services
> 3) Habitats can be impacted as a result of remediation, resulting in a loss of ecological services causing natural resource injury

Three remedial options were considered in the NEBA:

- Sediment Removal
- Monitoring Natural Attenuation (MNA)
- No Further Action (NFA)

The NEBA concluded that a decision to remediate sediments by removal of the existing contamination results in a greater net loss of ecological services than do options that leave sediment in place. In addition, the costs associated with the removal actions are significantly higher than other options. When the NEBA was conducted in 2005, Option 2 - MNA represented a better solution than NFA because there was insufficient data to determine if the natural attenuation would be successful and if active sources of contamination still existed. Since the new 2006 data suggest that concentrations do not pose unacceptable risk to benthic communities, and since the Site is not considered a source of potential risk to these communities, the NEBA was not updated.

Based upon the uncertainties in the data set, the data do not support a conclusive statement of risk to macroinvertebrates associated with exposure to COCs in surface sediments. If risk is present, it is marginal at best. That is, although a slight risk may be identified in the supplemental BERA, there is a substantial amount of uncertainty that indicates the potential for an ecological injury to occur may not be present. Furthermore, the potential value of the habitat is greater when no action is taken than by remediation using sediment removal. Monitoring the natural attenuation of these COCs does not present an unacceptable risk to benthic communities at the SMS. However, monitoring may not be necessary based on the current data and the decision to continue monitoring is left to the discretion of the risk managers for the site (the EPA RPM and other stakeholders).

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7. Conclusions

The weight of evidence analysis for COPECs concluded there is very low probability of any elevated risk to sediment dwelling organisms from COCs originating at the SMS. Confidence is low in any conclusion that indicates a potential risk, due to the low magnitude of ESV exceedances by conservative EPCs. Specifically, selenium bioavailability is likely low due to the reducing conditions of sediments that drive it to an insoluble form. The source evaluation of COC concentrations indicates an unlikelihood that any selenium risk could be coming from the SMS site. Previous NEBA reports on older SMS data indicated natural attenuation is a viable remedial option. The results of the supplemental BERA indicates SMS not likely to cause unacceptable risk to benthic invertebrates, therefore, no further action is necessary.

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8. References

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Tables

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Table 1
Assessment and Measurement Endpoints
Supplemental Baseline Ecological Risk Assessment Report
State Marine Superfund Site, Port Arthur, TX

Assessment Endpoint	Guild (Food Web)	Representative Species	Measurement Endpoints	Exposure Routes	Null Hypotheses	Hypothesis Supported/ Not Supported	COCs Identified
1. Impairment of growth, reproduction, or survival of populations of benthic invertebrates that use the habitat on-site due to exposure to COCs attributable to the site	Benthic Invertebrates (Aquatic)	NA	Comparison of concentrations of chemicals in on-site surface sediment to literature-based screening levels	Direct exposure, ingestion	measured concentrations do not exceed literature-based screening levels	Not Supported	selenium

Notes:
NA = not applicable

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Table 2
Occurrence and selection of chemicals of potential concern in Lake Sabine Sediment
Supplemental Baseline Ecological Risk Assessment Report
State Marine Superfund Site, Port Arthur, TX

Chemical	MDC	MDC Sample ID	Minimun Detected Concentrations	Range of Detection Limits		Average	Unit	Frequency of Detection	Percentage of Detection	Primary ESV	HQ	Rationale	COPEC
ALUMINUM	16200	D-SD-04	4040	10.2	15.7	9487	mg/kg	8/8	100%	18000	0.900	BSL	No
ANTIMONY	0.237	C-SD-03	0.121	0.0765	0.102	0.07039	mg/kg	2/8	25%	9.3	0.025	BSL/BKGD	No
ARSENIC	6	A-SD-01	3.59	0.508	0.783	4.441	mg/kg	8/8	100%	8.2	0.732	BSL	No
BARIUM	264	C-SD-03	27.7	0.102	0.157	87.28	mg/kg	8/8	100%	48	5.5	ASL	**Yes**
BERYLLIUM	0.826	D-SD-04	0.266	0.0122	0.0188	0.5389	mg/kg	8/8	100%	--	--	NSL	Yes
CADMIUM	0.158	H-SD-08	0.0846	0.051	0.0783	0.09139	mg/kg	7/8	88%	1.2	0.132	BAC	No
CALCIUM	2820	A-SD-01	556	5.08	7.83	1400	mg/kg	8/8	100%	--	--	NUT	No
CHROMIUM, TOTAL	17.3	D-SD-04	6.32	0.122	0.188	11.08	mg/kg	8/8	100%	81	0.214	BSL	No
COBALT	6.7	C-SD-03	3.13	0.122	0.188	4.586	mg/kg	8/8	100%	10	0.670	BSL	No
COPPER	18.3	E-SD-05	5.24	0.508	0.783	8.633	mg/kg	8/8	100%	34	0.538	BAC	No
IRON	17100	C-SD-03	9840	1.02	1.57	12370	mg/kg	8/8	100%	220000	0.078	BSL	No
LEAD	18.7	A-SD-01	10.9	0.508	0.783	12.81	mg/kg	8/8	100%	46.7	0.400	BSL	No
MAGNESIUM	4620	C-SD-03	1050	12.2	18.8	2670	mg/kg	8/8	100%	--	--	NUT	No
MANGANESE	405	C-SD-03	65.7	0.102	0.691	168.4	mg/kg	8/8	100%	460	0.9	BSL	No
MERCURY	0.0405	C-SD-03	0.0201	0.0128	0.0195	0.02656	mg/kg	8/8	100%	0.15	0.270	BAC	No
NICKEL	12.4	A-SD-01	5.38	0.508	0.783	8.73	mg/kg	8/8	100%	20.9	0.593	BAC	No
POTASSIUM	3200	C-SD-03	717	25.4	39.1	1885	mg/kg	8/8	100%	--	--	NUT	No
SELENIUM	4.66	A-SD-01	2.22	0.508	0.783	3.04	mg/kg	8/8	100%	1	4.7	ASL	**Yes**
SILVER	0.263	F-SD-06	0.263	0.254	0.254	0.1649	mg/kg	1/8	13%	1	0.263	BSL	No
SODIUM	7290	C-SD-03	1610	5.08	7.83	3671	mg/kg	8/8	100%	--	--	NUT	No
THALLIUM	0.28	A-SD-01	0.0347	0.0127	0.0205	0.08753	mg/kg	8/8	100%	--	--	NSL	Yes
VANADIUM	30.2	C-SD-03	9.89	0.254	0.391	18.88	mg/kg	8/8	100%	57	0.530	BSL	No
ZINC	94.7	A-SD-01	27.2	0.508	0.783	54.04	mg/kg	8/8	100%	150	0.631	BAC	No
1,2,4,5-				134	258	87.94	ug/kg	0/8	0%	--	--	ND / NSL	No
2,4,5-TRICHLOROPHENOL				134	258	87.94	ug/kg	0/8	0%	--	--	ND / NSL	No
2,4,6-TRICHLOROPHENOL				134	258	87.94	ug/kg	0/8	0%	--	--	ND / NSL	No
2,4-DICHLOROPHENOL				134	258	87.94	ug/kg	0/8	0%	--	--	ND / NSL	No
2,4-DIMETHYLPHENOL				134	258	87.94	ug/kg	0/8	0%	29	0.000	ND/ASL	No
2,4-DINITROPHENOL				535	1030	346.1	ug/kg	0/7	0%	--	--	ND / NSL	No
2,4-DINITROTOLUENE				134	258	87.94	ug/kg	0/8	0%	--	--	ND / NSL	No
2,6-DINITROTOLUENE				134	258	87.94	ug/kg	0/8	0%	--	--	ND / NSL	No
2-CHLORONAPHTHALENE				134	258	87.94	ug/kg	0/8	0%	--	--	ND / NSL	No
2-CHLOROPHENOL				134	258	87.94	ug/kg	0/8	0%	--	--	ND / NSL	No
2-METHYLNAPHTHALENE	17.9	F-SD-06DL	17.9	5.19	29.4	6.928	ug/kg	1/8	13%	70	0.256	BSL	No
2-METHYLPHENOL (o-CRESOL)				134	258	87.94	ug/kg	0/8	0%	63	0.000	ND/ASL	No
2-NITROANILINE				535	1030	351.6	ug/kg	0/8	0%	1430	0.72	ND	No
2-NITROPHENOL				134	258	87.94	ug/kg	0/8	0%	--	--	ND / NSL	No
3,3'-DICHLOROBENZIDINE				268	516	175.8	ug/kg	0/8	0%	--	--	ND / NSL	No
3-NITROANILINE				535	1030	351.6	ug/kg	0/8	0%	1596	0.65	ND	No
4,6-DINITRO-2-				535	1030	351.6	ug/kg	0/8	0%	--	--	ND / NSL	No
4-BROMOPHENYL PHENYL ETHER				134	258	87.94	ug/kg	0/8	0%	--	--	ND / NSL	No
4-CHLORO-3-METHYLPHENOL				134	258	87.94	ug/kg	0/8	0%	--	--	ND / NSL	No
4-CHLOROANILINE				134	258	87.94	ug/kg	0/8	0%	--	--	ND / NSL	No
4-CHLOROPHENYL PHENYL ETHER				134	258	87.94	ug/kg	0/8	0%	--	--	ND / NSL	No
4-NITROANILINE				535	1030	351.6	ug/kg	0/8	0%	1051	0.98	ND	No
4-NITROPHENOL				535	1030	351.6	ug/kg	0/8	0%	--	--	ND / NSL	No
ACENAPHTHENE				5.19	29.4	5.39	ug/kg	0/8	0%	16	0.000	ND/ASL	No
ACENAPHTHYLENE				5.19	29.4	5.691	ug/kg	0/7	0%	44	0.67	ND	No
ACETOPHENONE				134	258	87.94	ug/kg	0/8	0%	--	--	ND / NSL	No
ANTHRACENE	10	B-SD-02DL	10	5.19	29.4	5.954	ug/kg	1/8	13%	85.3	0.117	BSL	No
ATRAZINE				114	220	75.06	ug/kg	0/8	0%	--	--	ND / NSL	No
BENZALDEHYDE				114	220	75.06	ug/kg	0/8	0%	--	--	ND / NSL	No
BENZO(a)ANTHRACENE	56	A-SD-01DL	8.23	5.19	5.67	15.58	ug/kg	6/8	75%	260	0.215	BSL	No
BENZO(a)PYRENE	54.8	A-SD-01DL	9.2	5.19	19.6	13.95	ug/kg	5/8	63%	430	0.127	BSL	No
BENZO(b)FLUORANTHENE	143	A-SD-01DL	10.5	5.19	19.6	25.15	ug/kg	5/8	63%	1700	0.084	BSL	No
BENZO(g,h,i)PERYLENE	16.6	B-SD-02DL	9.06	5.19	29.4	7.819	ug/kg	3/8	38%	670	0.025	BSL	No

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Table 2
Occurrence and selection of chemicals of potential concern in Lake Sabine Sediment
Supplemental Baseline Ecological Risk Assessment Report
State Marine Superfund Site, Port Arthur, TX

Chemical	MDC	MDC Sample ID	Minimun Detected Concentrations	Range of Detection Limits		Average	Unit	Frequency of Detection	Percentage of Detection	Primary ESV	HQ	Rationale	COPEC
BENZO(k)FLUORANTHENE	29.8	A-SD-01DL	29.8	5.19	19.6	7.068	ug/kg	1/8	13%	1700	0.018	BSL	No
BENZYL BUTYL PHTHALATE				134	258	87.94	ug/kg	0/8	0%	62	0.000	ND/ASL	No
BIPHENYL (DIPHENYL)				114	220	75.06	ug/kg	0/8	0%	1100	0.20	ND	No
bis(2-CHLOROETHOXY) METHANE				134	258	87.94	ug/kg	0/8	0%	--	--	ND / NSL	No
bis(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHER)				134	258	87.94	ug/kg	0/8	0%	--	--	ND / NSL	No
bis(2-CHLOROISOPROPYL) ETHER				134	258	87.94	ug/kg	0/8	0%	--	--	ND / NSL	No
bis(2-ETHYLHEXYL) PHTHALATE				134	258	87.94	ug/kg	0/8	0%	182	0.000	ND/ASL	No
CAPROLACTAM				114	220	75.06	ug/kg	0/8	0%	--	--	ND / NSL	No
CARBAZOLE				134	258	87.94	ug/kg	0/8	0%	--	--	ND / NSL	No
CHRYSENE	82.6	A-SD-01DL	8.09	5.19	5.67	18.88	ug/kg	6/8	75%	384	0.215	BSL	No
DI-n-BUTYL PHTHALATE				134	258	87.94	ug/kg	0/8	0%	1400	0.18	ND	No
DI-n-OCTYLPHTHALATE				134	258	87.94	ug/kg	0/8	0%	6200	0.04	ND	No
DIBENZ(a,h)ANTHRACENE				5.19	29.4	5.39	ug/kg	0/8	0%	63.4	0.46	ND	No
DIBENZOFURAN				134	258	87.94	ug/kg	0/8	0%	110	0.000	ND/ASL	No
DIETHYL PHTHALATE				134	258	87.94	ug/kg	0/8	0%	200	0.000	ND/ASL	No
DIMETHYL PHTHALATE				134	258	87.94	ug/kg	0/8	0%	--	--	ND / NSL	No
FLUORANTHENE	170	A-SD-01DL	5.73	5.19	5.19	33.3	ug/kg	7/8	88%	600	0.283	BSL	No
FLUORENE				5.19	29.4	5.39	ug/kg	0/8	0%	19	0.000	ND/ASL	No
HEXACHLOROBENZENE				134	258	87.94	ug/kg	0/8	0%	--	--	ND / NSL	No
HEXACHLOROBUTADIENE				134	258	87.94	ug/kg	0/8	0%	22.33	0.000	ND/ASL	No
HEXACHLOROCYCLOPENTADIENE				134	258	86.56	ug/kg	0/7	0%	--	--	ND / NSL	No
HEXACHLOROETHANE				134	258	87.94	ug/kg	0/8	0%	177	0.000	ND/ASL	No
INDENO(1,2,3-c,d)PYRENE	10.9	B-SD-02DL	10.9	5.19	29.4	6.054	ug/kg	1/8	13%	1700	0.006	BSL	No
ISOPHORONE				134	258	87.94	ug/kg	0/8	0%	--	--	ND / NSL	No
m & p CRESOLS				134	258	87.94	ug/kg	0/8	0%	--	--	ND / NSL	No
N-NITROSODI-n-PROPYLAMINE				134	258	87.94	ug/kg	0/8	0%	--	--	ND / NSL	No
N-NITROSODIPHENYLAMINE				134	258	87.94	ug/kg	0/8	0%	--	--	ND / NSL	No
NAPHTHALENE	10.6	F-SD-06DL	10.6	5.19	29.4	6.117	ug/kg	1/8	13%	160	0.066	BSL	No
NITROBENZENE				134	258	87.94	ug/kg	0/8	0%	127	0.000	ND/ASL	No
PENTACHLOROPHENOL				535	1030	351.6	ug/kg	0/8	0%	360	0.000	ND/ASL	No
PHENANTHRENE	58.9	A-SD-01DL	8.76	5.19	9.47	14.05	ug/kg	5/8	63%	240	0.245	BSL	No
PHENOL				134	258	87.94	ug/kg	0/8	0%	420	0.61	ND	No
PYRENE	104	A-SD-01DL	14.4	5.19	5.67	30.27	ug/kg	6/8	75%	665	0.156	BSL	No

Notes:
HQ - Hazard Quotient = MDC or maximum detection limit / ESV
Primary ESV - primary ecological screening value
MDC - Maximum Detected Concentration
Average was calculated based on detected concentrations and 1/2 detection limits
Chemicals identified as COPECs are in bold
ug/kg - microgram per milligram
mg/kg - milligram per kilogram

Rationale for Elimination/Selection:
ASL: Above Screening Levels
BSL: Below Screening Level
ND: Not Detected futher discussed in the uncertainty section of the BERA
NSL: No Screening Level further discussed in the uncertainty section of the BERA
ND/ASL: Not detected. Detection limit exceeds the screening level
ND/NSL: Not detected and no screening value available to compare to detection limit
NUT: Essential Nutrient
BAC: Bioaccumulative Compund (refer to text)
BKGD: Eliminated based on detection less than site-specific background

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Table 3
Comparison of Surface Sediment (0-6 in) to Background
Supplemental Baseline Ecological Risk Assessment Report
State Marine Superfund Site, Port Arthur, TX

Chemical Group	Parameter	Site Detection Frequency	Background Detection Frequency	Site Mean	Bkgd Mean	Standard Deviation (n-1)	Background Exceeded
METAL	ALUMINUM	8/8	6/6	9487	484.83	164.33	Yes
METAL	ANTIMONY	1/8	5/6	0.101	0.26	0.12	No
METAL	ARSENIC	8/8	6/6	4.441	0.78	0.29	Yes
METAL	BARIUM	8/8	6/6	87.28	4.69	1.04	Yes
METAL	BERYLLIUM	8/8	3/6	0.5389	0.05	0.01	Yes
METAL	CADMIUM	6/8	5/6	0.0968	0.05	0.02	Yes
METAL	CALCIUM	8/8	6/6	1400	117.18	41.24	Yes
METAL	CHROMIUM, TOTAL	8/8	6/6	11.08	1.14	0.20	Yes
METAL	COBALT	8/8	6/6	4.586	0.90	0.26	Yes
METAL	COPPER	7/8	0/6	8.658	0.23	0.05	Yes
METAL	IRON	8/8	6/6	12370	1798.33	437.24	Yes
METAL	LEAD	8/8	6/6	12.81	1.98	0.32	Yes
METAL	MAGNESIUM	8/8	6/6	2670	215.83	61.99	Yes
METAL	MANGANESE	8/8	6/6	168.4	30.32	9.80	Yes
METAL	MERCURY	8/8	2/6	0.02726	0.0034	0.0019	Yes
METAL	NICKEL	8/8	6/6	8.73	0.79	0.20	Yes
METAL	POTASSIUM	8/8	6/6	1885	129.68	38.03	Yes
METAL	SELENIUM	8/8	1/6	3.04	0.14	0.20	Yes
METAL	SILVER	1/8	0/6	0.3007	0.06	0.03	Yes
METAL	SODIUM	8/8	6/6	3671	510.50	267.14	Yes
METAL	THALLIUM	8/8	0/6	0.08823	0.10	0.05	Yes
METAL	VANADIUM	8/8	6/6	18.88	2.41	0.54	Yes
METAL	ZINC	8/8	6/6	54.04	4.90	1.14	Yes

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Table 4
Environmental Fate and Transport
Supplemental Baseline Ecological Risk Assessment Report
State Marine Superfund Site, Port Arthur, TX

Analyte	Environmental Fate	Reference
Barium	Nature barium occurs in a combined state, the principal forms being barite (barium sulfate) and witherite (barium carbonate). Barium sulfate has a very low water solubility. In water, barium precipitates out of solution as an insoluble salt or adsorbs to suspended particulate matter. Barium in sediments is found mostly in the form of barium sulfate. Barium is not very mobile in most soil systems. The rate of transportation of barium in soil is dependent on soil characteristics such as cation exchange capacity and calcium carbonate content. Barium naturally forms compounds in the 2+ oxidation state. Only trace amounts of barium dissolve in surface water. In general, the solubility of barium compounds increases with decreasing pH. Dissolved barium in aquatic environments may represent a risk to aquatic organisms such as daphnids, but it is apparently of lesser risk to fish and aquatic plants, although data are limited. No adverse effects have been reported in ecological assessments of terrestrial plants or wildlife, although some plants are known to bioaccumulate barium from the soil.	Bodek et al., 1988; USEPA, 1984; Lagas et al., 1984; Benes et al., 1983; Bates, 1988; Kabata-Pendias and Pendias, 1984
Selenium	In nature, selenium exists as six stable isotopes. Changes in the valence state of selenium are associated with its geologic distribution, redistribution, and use. Soluble selenates occur in alkaline soils and are slowly reduced to selenites, which are then readily taken up by plants. Selenium volatilizes from soils and sediments. BCFs ranging from 200 to 3,600 for selenite and 65 to 500 for selenate suggest bioconcentration in aquatic organisms will be moderate to very high. In sediments, reduced and tightly bound selenium will remain relatively immobile unless the sediments are chemically or biologically oxidized. Selenium is normally found at low levels in aquatic ecosystems. Female fish have been shown to transfer selenium to their progeny and embryos showed an increased incidence of edema and lordosis. Selenium can biomagnify sufficiently to cause acute toxicity to fishes.	Cappon and Smith, 1982; Lo and Sandi, 1980; SRC, 2000; EPA, 1995 in EPA, 2000.

Notes:
Information on the fate and transport of chemicals was researched through TOXNET (http://toxnet.nlm.nih.gov/) in the Hazardous Substances Data Bank. Full citations for the primary references listed can be found on the HSDB summary for each chemical listed.

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Table 5
Mechanisms of Ecotoxicity
Supplemental Baseline Ecological Risk Assessment Report
State Marine Superfund Site, Port Arthur, TX

Analyte	Mechanisms of Ecotoxicity	References
Barium	Barium can inhibit intestinal absorption in the winter flounder. Barium accumulates in plants and the bones in birds and mammals. It affects affects potassium metabolism in muscles and causes respiratory weakness, muscle paralysis and stimulation, irregular cardiac contractions and lowered pulse rate in mammals. Some reproductive effects (reduced ovary weight) have been observed. Barium compounds have low toxicity to aquatic organisms and plants. The low toxicity of barium compounds to aquatic species is attributable to the presence of sulfate in waters; barium ion liberated from a barium compound reacts with sulfate to form barium sulfate, which precipitates from solution.	Amdur et al. 1991; ATSDR 1990b; Schroeder 1970 as cited in ATSDR 1990b; Charney and Taglietta 1992; Borzelleca et al., 1988; USEPA, 1993.
Selenium	Selenium causes systemic and reproductive effects in birds and mammals. In birds, there are embryo development effects, including an increase in malformed embryos and decreased hatchling and adult weight. Adverse effects on body weight and increases in the death of young animals and the frequency of runts have been observed in mammals. In fish, selenium can cause reproductive failures, including an increase in birth defects.	Eisler 1985b; ATSDR, 1994b; Sorensen, 1991, as cited in Irwin et al., 1997; Moore et al., as cited in Irwin et al., 1997.

Notes
Full citations for the primary references listed can be found on the HSDB summary for each chemical listed.

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Table 6
Analysis of Risk to Benthic Invertebrates in the Lake Sabine
Supplemental Baseline Ecological Risk Assessment Report
State Marine Superfund Site, Port Arthur, TX

COPC	Units	Frequency of Detection	COPEC Concentration			Primary ESV	Primary ESV Risk Characterization		2ndary ESV		Secondary ESV Risk Characterization		Identified as a COC
			MDC	Max ND Concentration	Average Concentration		MDC HQ	Average HQ			MDC HQ	Average HQ	
BARIUM	mg/kg	8/8	264	--	87.3	48	**5.50**	**1.82**	290	a	0.910	0.3	No
SELENIUM	mg/kg	8/8	4.66	--	3.04	1	**4.66**	**3.04**	1.3	a	**3.585**	**2.3**	Yes

Notes:
MDC - Maximum Detected Concentration
-- = Not available
mg/kg = milligrams per kilogram
Compounds were identified as COCs if the both the primary and secondary ESV-HQs were greater than 10 or if the frequency of exceedance exceeded 20 %
HQ = Hazard Quotient = Maximum Detect / Benchmark
a SQG - 85th %ile level in tidal streams (TNRCC 1996).

secondary ESV	value	units	source	basis
BARIUM	290	mg/kg	TNRCC 1996	SQG - 85th %ile level in tidal streams
SELENIUM	1.3	mg/kg	TNRCC 1996	SQG - 85th %ile level in tidal streams

a TNRCC (Texas Natural Resource Conservation Commission). 1996. The surfacewater quality monitoring program supplementary information manual,statewide percentile report. Water Planning and Assessment Division. TexasNatural Resource Conservation Commission. Austin, Texas. (As cited inMacDonald 1998).

b Barrick et al. 1988. As cited in MacDonald 1998.

c Nagpal, N.K., L.W. Pommen, and L.G. Swain, 1998. Water Quality Guidelines: A Compendium of Working Water Quality Guidelines for British Columbia. ISBN 0-7726-3774-1. Water Quality Branch, Ministry of Environment, Lands and Parks. Victoria, British Columbia. .

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Table 7
Maximum Groundwater Concentrations Versus Groundwater to Sediment Screening Criteria
Supplemental Baseline Ecological Risk Assessment Report
State Marine Superfund Site, Port Arthur, TX

Analyte	Frequency of Detection	MDC	MDC Qual	Max ND Result	Max ND Qual	Units	ESV	MDC Criteria Quotient	Maximum ND Criteria Quotient
Selenium	0/3	--	--	0.00877	U	mg/L	0.0331744	--	0.264
Selenium, dissolved	1/3	0.00941*	J	0.00877	U	mg/L	0.0331744	0.284	0.264

Notes:
* This detected concentration is suspect, because the total Se concentration in the same sample was below detection.

Summary of Groundwater to Sediment Benchmark Development

SedGW = SedRBEL * Ksed-w*SWMF	Values
where:	
SedGW = Groundwater-sediment protection PCL (mg COC/L groundwater)	Calculated Below
SedRBEL = Risk-based exposure limit for sediment (mg COC/kg sediment)	COC Specific
Ksed-w = Sediment-groundwater partition coefficient (mg/L-groundwater/mg/kg-sediment) = ρsed/(Θ+Kdρsed)	Calculated Below
ρsed = Sediment bulk density (g-soil/cm3-sediment) as dry weight	1.67
Θ = Total Sediment Porosity (cm3-por space/cm3-sediment)	0.37
Kd = Sediment-water sorption coefficient (g-H2O/g-sediment)	COC Specific
Kd = foc * koc when Kd not available foc = site specific TOC/100=98.11g/g	
SWMF = Surface water mixing factor (unitless)	0.15

Analyte	Marine Sed ESV (mg/L)	2ndary Marine Sed ESV (mg/L)	logKoc	Koc	Kd	Ksed-w	Marine SEDGW RBEL (mg/L)	2ndary Marine SEDGW RBEL (mg/L)
Selenium	1.00E+00	NA	---	---	4.30E+00	2.21E-01	3.32E-02	NA

Acronyms:
NA = not available
Source of Kd values is TNRCC, 2002a

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Table 8
Calculation of Soil Protective Concentration Levels for the Protection of Benthic Organisms
Supplemental Baseline Ecological Risk Assessment Report
State Marine Superfund Site, Port Arthur, TX

$SL = A * DR * Acreage$

where:	State Marine Site	State Marine Site	Lake Sabine Watershed*
SL = Sediment Load (kg/yr) =	595,694	595,694	-
A = Estimated Average Annual Soil Loss (tons/acre) from the universal soil loss equation =	38.00	38.00	0.00
DR = Delivery Ratio =	1.0	1.0	0.00
Acreage of site =	17	17	665,597
$SL_D = SL_{up}+SL_{JEB}$ =			595,693.79

$$^{Sed}\text{Soil PCL} = \frac{(SL_D * \text{Sed PCL}) - (Sl_{OA} * C_{OA})}{SL_{JEB}}$$

where:

SL_D = Sediment Load Downstream for the entire watershed (kg/yr)

SL_{OA} = Sediment Load other areas (kg/yr)

SL_{JEB} = Sediment Load of State Marine Superfund Surface water runoff (kg/yr)

Sed PCL = Critical Sediment PCL (mg/kg)

C_{OA} = Concentration of chemical in other areas (State Median Soil Background Concentration) (mg/kg)

^{Sed}Soil PCL = Soil PCL protective of receptors exposed to sediments due to runoff (mg/kg)

*This site is completely isolated, and, therefore, has no upstream or downstream portion of the watershed.

Facility Areas of Concern	Analyte	SED PCL Ecological Receptors (mg/kg)	C_{OA} (mg/kg)	^{SED}Soil (mg/kg)	Maximum Detected Soil Concentration (mg/kg)	Maximum ND Soil Concentration (mg/kg)	Ratio Maximum Detected Concentration to ^{SED}Soil
FWI (current)	Selenium	1.3	0.3	1.3	4.68	---	***3.600***
NS	Selenium	1.3	0.3	1.3		0.7	0.538
AST	Selenium	1.3	0.3	1.3		0.8	0.615
FWI	Selenium	1.3	0.3	1.3		0.65	0.500
LTF	Selenium	1.3	0.3	1.3	4.4	---	***3.385***
MSA	Selenium	1.3	0.3	1.3		0.65	0.500
TBA	Selenium	1.3	0.3	1.3		0.7	0.538
WWTF	Selenium	1.3	0.3	1.3		0.7	0.538

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Table 9
Sediment PRGs for Lake Sabine
Supplemental Baseline Ecological Risk Assessment Report
State Marine Superfund Site, Port Arthur, TX

Parameter	PRG (mg/kg)
SELENIUM	1

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Figures

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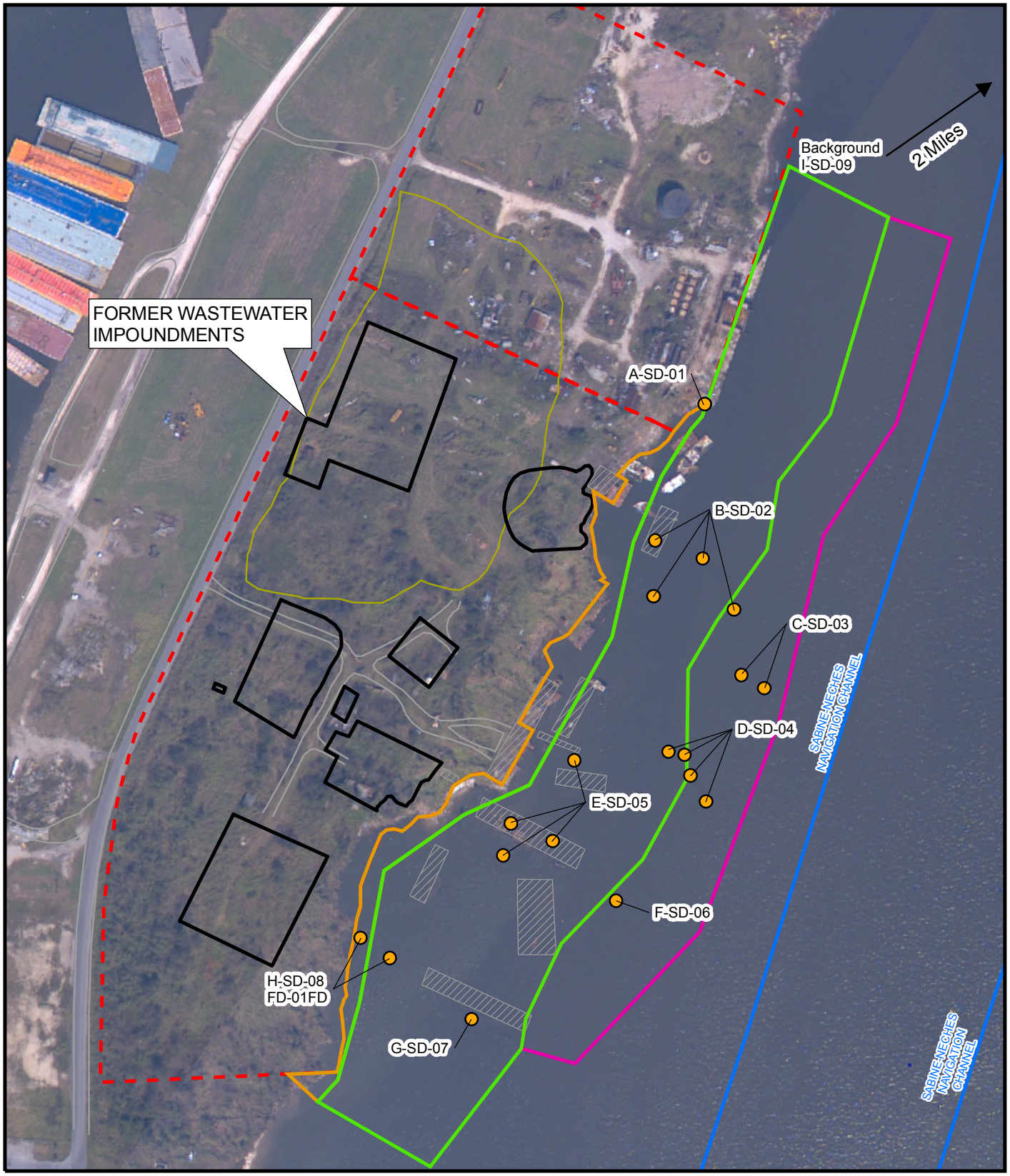

LEGEND

- Area of Interest
- Property Boundary
- Landfill Area
- Road
- Navigation Channel
- Sunken Barge
- Location of Grab Sample for Composite Sediment Sample
- Intertidal Area
- Nearshore Area
- Offshore Area

N

200 100 0 200

SCALE IN FEET

Figure 1
2006 Supplemental Sampling Locations

State Marine Superfund Site

CH2MHILL

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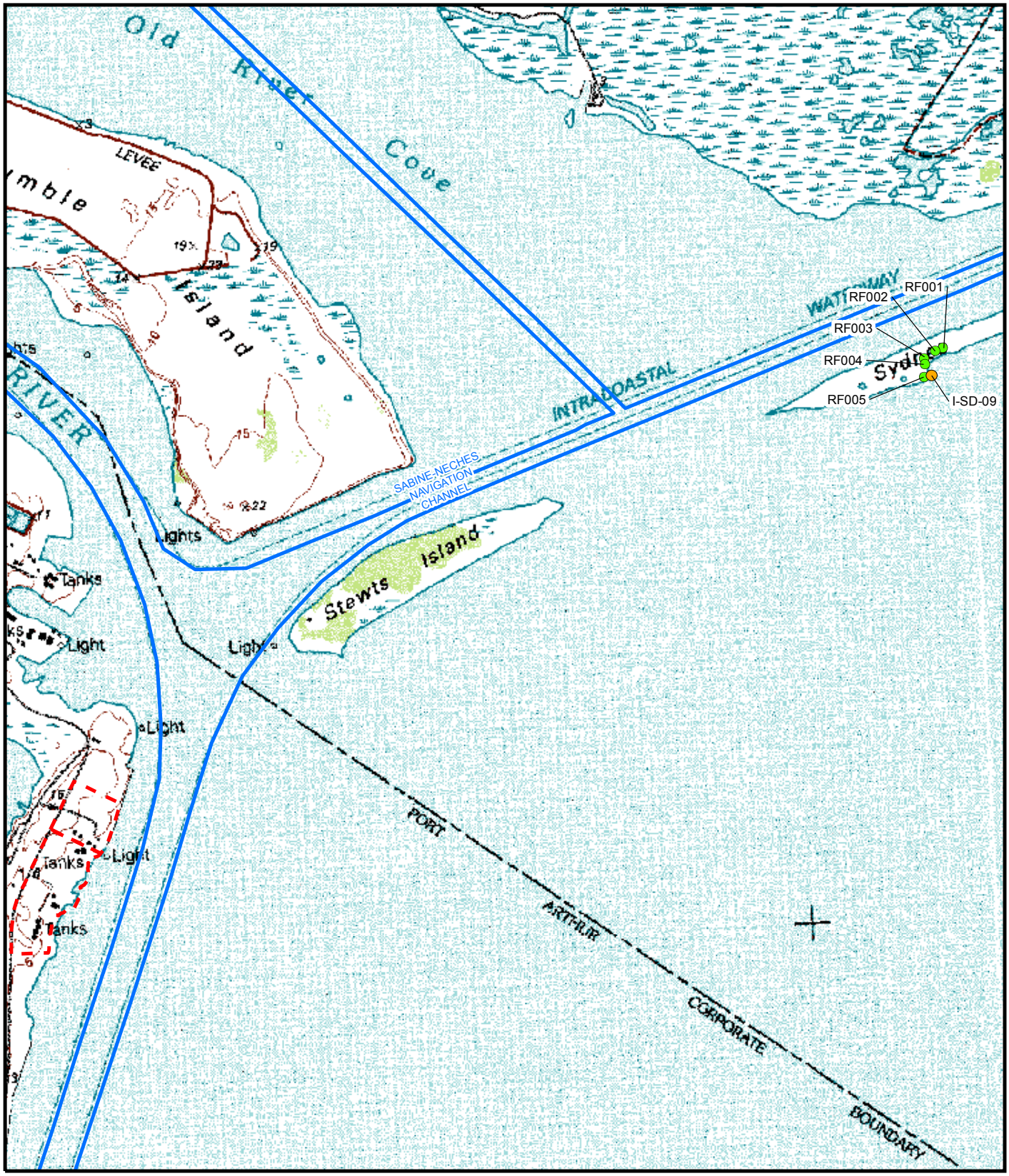

LEGEND

- Property Boundary
- Navigation Channel
- Offsite Background Sample Locations From 2001
- Offsite Background Sample Locations From 2006

* Image Data: Provided by the US Army Corps of Engineers. Map Projection is NAD 83 State Plane (feet) South Central TX. Date Flown: 2005

N

1,000 500 0 1,000

SCALE IN FEET

Figure 2
Background Sample Location Map

State Marine
Superfund Site

CH2MHILL

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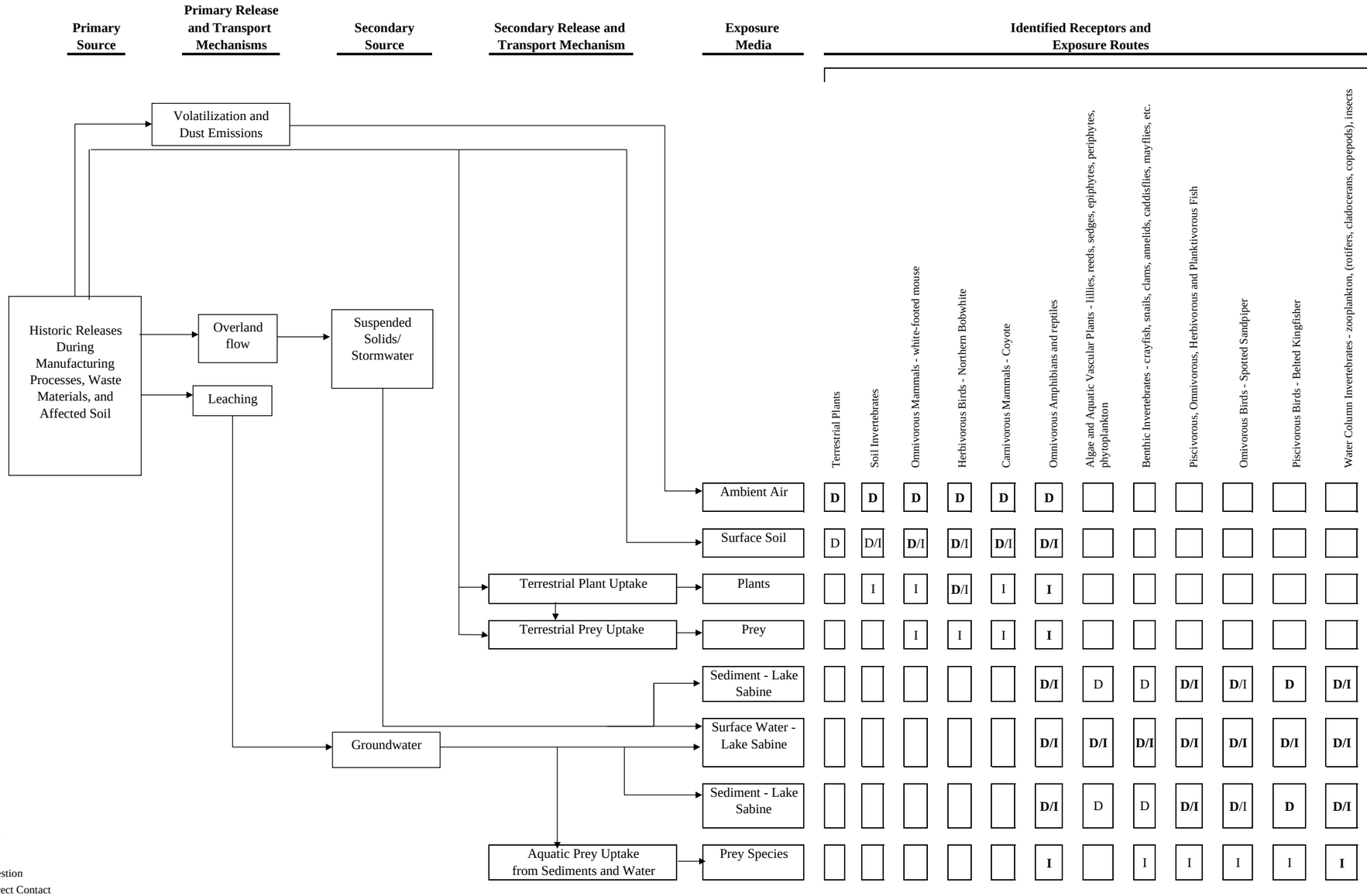

Legend

I = Ingestion
D = Direct Contact
A = Inhalation
Exposure pathways shown in **BOLD** are potentially complete but were not evaluated due to an unlikelihood or risk or lack of standardized methodologies for evaluation (e.g ambient air)

→ Denotes a potentia

FIGURE 3
Conceptual Site Model for Pathways to Ecological Receptors
State Marine Superfund Site

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Attachment A

RAW ANALYTICAL DATA

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Attachment A - Table 1
Sediment Raw Data
Supplemental Baseline Ecological Risk Assessment Report
State Marine Superfund Site, Port Arthur, TX

FieldID	QAQCType	LRType	CAS	Analyte	Result	Units	Dilution	MDL	RL	FinalQualifier	det	MDLAdjusted	RLAdjusted	SampleDescription	ESV	criteria quotient	2nd ESV	2ndary criteria quotient
C-SD-03	N		208-96-8	ACENAPHTHYLENE	5.96	ug/kg	1	2.91	5.82	R	-	5.96	11.9	C-SD-03	44	0.14	640	0.01
C-SD-03	N		51-28-5	2,4-DINITROPHENOL	792	ug/kg	1	386	965	R	-	792	1980	C-SD-03	--	--	--	--
C-SD-03	N		77-47-4	HEXACHLOROCYCLOPENTADIENE	198	ug/kg	1	96.5	193	R	-	198	396	C-SD-03	--	--	--	--
FD-01FD	FD		TOC	TOTAL ORGANIC CARBON	8730	mg/kg	1	500	1000	=	1	883	1770	H-SD-08	--	--	--	--
FD-01FD	FD		7439-97-6	MERCURY	0.0246	mg/kg	1	0.00951	0.238	J	1	0.0168	0.42	H-SD-08	0.15	0.16	0.71	0.03
FD-01FD	FD		7440-36-0	ANTIMONY	0.0883	mg/kg	1	0.05	0.1	U	0	0.0883	0.177	H-SD-08	9.3	0.01	--	--
FD-01FD	FD		7440-28-0	THALLIUM	0.0806	mg/kg	1	0.01	0.02	=	1	0.0177	0.0353	H-SD-08	--	--	--	--
FD-01FD	FD		7429-90-5	ALUMINUM	10200	mg/kg	1	7.14	14.3	=	1	12.6	25.2	H-SD-08	18000	0.57	--	--
FD-01FD	FD		7440-38-2	ARSENIC	5.03	mg/kg	1	0.357	0.714	=	1	0.631	1.26	H-SD-08	8.2	0.61	70	0.07
FD-01FD	FD		7440-39-3	BARIUM	40.4	mg/kg	1	0.0714	0.357	=	1	0.126	0.631	H-SD-08	48	0.84	--	--
FD-01FD	FD		7440-41-7	BERYLLIUM	0.625	mg/kg	1	0.00857	0.357	J	1	0.0151	0.631	H-SD-08	--	--	--	--
FD-01FD	FD		7440-43-9	CADMIUM	0.131	mg/kg	1	0.0357	0.0714	=	1	0.0631	0.126	H-SD-08	1.2	0.11	9.6	0.01
FD-01FD	FD		7440-70-2	CALCIUM	1480	mg/kg	1	3.57	7.14	=	1	6.31	12.6	H-SD-08	--	--	--	--
FD-01FD	FD		7440-47-3	CHROMIUM, TOTAL	11.3	mg/kg	1	0.0857	0.714	=	1	0.151	1.26	H-SD-08	81	0.14	370	0.03
FD-01FD	FD		7440-48-4	COBALT	7.01	mg/kg	1	0.0857	0.714	=	1	0.151	1.26	H-SD-08	10	0.7	--	--
FD-01FD	FD		7440-50-8	COPPER	5.64	mg/kg	1	0.357	0.714	=	1	0.631	1.26	H-SD-08	34	0.17	270	0.02
FD-01FD	FD		7439-89-6	IRON	14300	mg/kg	1	0.714	1.43	B	1	1.26	2.52	H-SD-08	220000	0.07	--	--
FD-01FD	FD		7439-92-1	LEAD	13	mg/kg	1	0.357	3.57	=	1	0.631	6.31	H-SD-08	46.7	0.28	218	0.06
FD-01FD	FD		7439-95-4	MAGNESIUM	2840	mg/kg	1	8.57	17.9	=	1	15.1	31.5	H-SD-08	--	--	--	--
FD-01FD	FD		7439-96-5	MANGANESE	149	mg/kg	1	0.0714	0.357	=	1	0.126	0.631	H-SD-08	460	0.57	--	--
FD-01FD	FD		7440-02-0	NICKEL	9.37	mg/kg	1	0.357	1.43	=	1	0.631	2.52	H-SD-08	20.9	0.45	51.6	0.18
FD-01FD	FD		09/07/7440	POTASSIUM	1940	mg/kg	1	17.9	35.7	=	1	31.5	63.1	H-SD-08	--	--	--	--
FD-01FD	FD		7782-49-2	SELENIUM	3.63	mg/kg	1	0.357	0.714	=	1	0.631	1.26	H-SD-08	1	3.63	--	--
FD-01FD	FD		7440-22-4	SILVER	0.315	mg/kg	1	0.179	0.357	U	0	0.315	0.631	H-SD-08	1	0.32	3.7	0.09
FD-01FD	FD		7440-23-5	SODIUM	3590	mg/kg	1	3.57	17.9	=	1	6.31	31.5	H-SD-08	--	--	--	--
FD-01FD	FD		7440-62-2	VANADIUM	20.6	mg/kg	1	0.179	0.357	=	1	0.315	0.631	H-SD-08	57	0.36	--	--
FD-01FD	FD		7440-66-6	ZINC	66	mg/kg	1	0.357	0.714	=	1	0.631	1.26	H-SD-08	150	0.44	410	0.16
~~FD-01FD~~	~~FD~~		~~91-57-6~~	~~2-METHYLNAPHTHALENE~~	~~5.17~~	~~ug/kg~~	~~1~~	~~2.93~~	~~5.86~~	~~U~~	~~0~~	~~5.17~~	~~10.3~~	~~H-SD-08~~	~~70~~	~~0.07~~	~~670~~	~~0.01~~
FD-01FD	FD		83-32-9	ACENAPHTHENE	5.17	ug/kg	1	2.93	5.86	U	0	5.17	10.3	H-SD-08	16	0.32	500	0.01
FD-01FD	FD		208-96-8	ACENAPHTHYLENE	5.17	ug/kg	1	2.93	5.86	U	0	5.17	10.3	H-SD-08	44	0.12	640	0.01
FD-01FD	FD		120-12-7	ANTHRACENE	5.17	ug/kg	1	2.93	5.86	U	0	5.17	10.3	H-SD-08	85.3	0.06	1100	0
FD-01FD	FD		56-55-3	BENZO(a)ANTHRACENE	5.17	ug/kg	1	2.93	5.86	U	0	5.17	10.3	H-SD-08	260	0.02	1600	0
FD-01FD	FD		50-32-8	BENZO(a)PYRENE	5.17	ug/kg	1	2.93	5.86	U	0	5.17	10.3	H-SD-08	430	0.01	1600	0
FD-01FD	FD		205-99-2	BENZO(b)FLUORANTHENE	5.17	ug/kg	1	2.93	5.86	U	0	5.17	10.3	H-SD-08	1700	0	9600	0
FD-01FD	FD		191-24-2	BENZO(g,h,i)PERYLENE	5.17	ug/kg	1	2.93	5.86	U	0	5.17	10.3	H-SD-08	670	0.01	--	--
FD-01FD	FD		207-08-9	BENZO(k)FLUORANTHENE	5.17	ug/kg	1	2.93	5.86	U	0	5.17	10.3	H-SD-08	1700	0	9600	0
FD-01FD	FD		218-01-9	CHRYSENE	5.17	ug/kg	1	2.93	5.86	U	0	5.17	10.3	H-SD-08	384	0.01	2800	0
FD-01FD	FD		53-70-3	DIBENZ(a,h)ANTHRACENE	5.17	ug/kg	1	2.93	5.86	U	0	5.17	10.3	H-SD-08	63.4	0.08	260	0.02
FD-01FD	FD		206-44-0	FLUORANTHENE	5.17	ug/kg	1	2.93	5.86	U	0	5.17	10.3	H-SD-08	600	0.01	5100	0
FD-01FD	FD		86-73-7	FLUORENE	5.17	ug/kg	1	2.93	5.86	U	0	5.17	10.3	H-SD-08	19	0.27	540	0.01
FD-01FD	FD		193-39-5	INDENO(1,2,3-c,d)PYRENE	5.17	ug/kg	1	2.93	5.86	U	0	5.17	10.3	H-SD-08	1700	0	9600	0
FD-01FD	FD		91-20-3	NAPHTHALENE	5.17	ug/kg	1	2.93	5.86	U	0	5.17	10.3	H-SD-08	160	0.03	2100	0
FD-01FD	FD		85-01-8	PHENANTHRENE	5.17	ug/kg	1	2.93	5.86	U	0	5.17	10.3	H-SD-08	240	0.02	1500	0
FD-01FD	FD		129-00-0	PYRENE	5.17	ug/kg	1	2.93	5.86	U	0	5.17	10.3	H-SD-08	665	0.01	2600	0
FD-01FD	FD		92-52-4	BIPHENYL (DIPHENYL)	146	ug/kg	1	82.5	165	U	0	146	291	H-SD-08	1100	0.13	0	#DIV/0!
FD-01FD	FD		95-94-3	1,2,4,5-TETRACHLOROBENZENE	170	ug/kg	1	96.2	192	U	0	170	340	H-SD-08	--	--		#DIV/0!
FD-01FD	FD		95-95-4	2,4,5-TRICHLOROPHENOL	170	ug/kg	1	96.2	192	U	0	170	340	H-SD-08	--	--	--	--
FD-01FD	FD		88-06-2	2,4,6-TRICHLOROPHENOL	170	ug/kg	1	96.2	192	U	0	170	340	H-SD-08	--	--	--	--
FD-01FD	FD		120-83-2	2,4-DICHLOROPHENOL	170	ug/kg	1	96.2	192	U	0	170	340	H-SD-08	--	--	--	--

Attachment A - Table 1
Sediment Raw Data
Supplemental Baseline Ecological Risk Assessment Report
State Marine Superfund Site, Port Arthur, TX

FieldID	QAQCType	LRType	CAS	Analyte	Result	Units	Dilution	MDL	RL	FinalQualifier	det	MDLAdjusted	RLAdjusted	SampleDescription	ESV	criteria quotient	2nd ESV	2ndary criteria quotient
FD-01FD	FD		105-67-9	2,4-DIMETHYLPHENOL	170	ug/kg	1	96.2	192	U	0	170	340	H-SD-08	29	5.86	--	--
FD-01FD	FD		51-28-5	2,4-DINITROPHENOL	680	ug/kg	1	385	962	U	0	680	1700	H-SD-08	--	--	--	--
FD-01FD	FD		121-14-2	2,4-DINITROTOLUENE	170	ug/kg	1	96.2	192	U	0	170	340	H-SD-08	--	--	--	--
FD-01FD	FD		606-20-2	2,6-DINITROTOLUENE	170	ug/kg	1	96.2	192	U	0	170	340	H-SD-08	--	--	--	--
FD-01FD	FD		91-58-7	2-CHLORONAPHTHALENE	170	ug/kg	1	96.2	192	U	0	170	340	H-SD-08	--	--	--	--
FD-01FD	FD		95-57-8	2-CHLOROPHENOL	170	ug/kg	1	96.2	192	U	0	170	340	H-SD-08	--	--	--	--
FD-01FD	FD		95-48-7	2-METHYLPHENOL (o-CRESOL)	170	ug/kg	1	96.2	192	U	0	170	340	H-SD-08	63	2.7	--	--
FD-01FD	FD		88-74-4	2-NITROANILINE	680	ug/kg	1	385	962	U	0	680	1700	H-SD-08	1430	0.48	--	--
FD-01FD	FD		88-75-5	2-NITROPHENOL	170	ug/kg	1	96.2	192	U	0	170	340	H-SD-08	--	--	--	--
FD-01FD	FD		91-94-1	3,3'-DICHLOROBENZIDINE	340	ug/kg	1	192	385	U	0	340	680	H-SD-08	--	--	--	--
FD-01FD	FD		65794-96-9	m & p CRESOLS	170	ug/kg	1	96.2	192	U	0	170	340	H-SD-08	--	--		#DIV/0!
FD-01FD	FD		99-09-2	3-NITROANILINE	680	ug/kg	1	385	962	U	0	680	1700	H-SD-08	1595.67	0.43	--	--
FD-01FD	FD		534-52-1	4,6-DINITRO-2-METHYLPHENOL	680	ug/kg	1	385	962	U	0	680	1700	H-SD-08	--	--	--	--
FD-01FD	FD		101-55-3	4-BROMOPHENYL PHENYL ETHER	170	ug/kg	1	96.2	192	U	0	170	340	H-SD-08	--	--	--	--
FD-01FD	FD		59-50-7	4-CHLORO-3-METHYLPHENOL	170	ug/kg	1	96.2	192	U	0	170	340	H-SD-08	--	--	--	--
FD-01FD	FD		106-47-8	4-CHLOROANILINE	170	ug/kg	1	96.2	192	U	0	170	340	H-SD-08	--	--	--	--
FD-01FD	FD		7005-72-3	4-CHLOROPHENYL PHENYL ETHER	170	ug/kg	1	96.2	192	U	0	170	340	H-SD-08	--	--	--	--
FD-01FD	FD		100-01-6	4-NITROANILINE	680	ug/kg	1	385	962	U	0	680	1700	H-SD-08	1050.94	0.65	--	--
FD-01FD	FD		100-02-7	4-NITROPHENOL	680	ug/kg	1	385	962	U	0	680	1700	H-SD-08	--	--	--	--
FD-01FD	FD		98-86-2	ACETOPHENONE	170	ug/kg	1	96.2	192	U	0	170	340	H-SD-08	--	--	--	--
FD-01FD	FD		1912-24-9	ATRAZINE	146	ug/kg	1	82.5	165	U	0	146	291	H-SD-08	--	--	--	--
FD-01FD	FD		100-52-7	BENZALDEHYDE	146	ug/kg	1	82.5	165	U	0	146	291	H-SD-08	--	--	--	--
FD-01FD	FD		111-91-1	bis(2-CHLOROETHOXY) METHANE	170	ug/kg	1	96.2	192	U	0	170	340	H-SD-08	--	--	--	--
FD-01FD	FD		111-44-4	bis(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHER)	170	ug/kg	1	96.2	192	U	0	170	340	H-SD-08	--	--	--	--
FD-01FD	FD		85-68-7	BENZYL BUTYL PHTHALATE	170	ug/kg	1	96.2	192	U	0	170	340	H-SD-08	62	2.74	--	--
FD-01FD	FD		105-60-2	CAPROLACTAM	146	ug/kg	1	82.5	165	U	0	146	291	H-SD-08	--	--	--	--
FD-01FD	FD		86-74-8	CARBAZOLE	170	ug/kg	1	96.2	192	U	0	170	340	H-SD-08	--	--	--	--
FD-01FD	FD		84-74-2	DI-n-BUTYL PHTHALATE	170	ug/kg	1	96.2	192	U	0	170	340	H-SD-08	1400	0.12	--	--
FD-01FD	FD		117-84-0	DI-n-OCTYLPHTHALATE	170	ug/kg	1	96.2	192	U	0	170	340	H-SD-08	6200	0.03	--	--
FD-01FD	FD		132-64-9	DIBENZOFURAN	170	ug/kg	1	96.2	192	U	0	170	340	H-SD-08	110	1.55	--	--
FD-01FD	FD		84-66-2	DIETHYL PHTHALATE	170	ug/kg	1	96.2	192	U	0	170	340	H-SD-08	200	0.85	--	--
FD-01FD	FD		131-11-3	DIMETHYL PHTHALATE	170	ug/kg	1	96.2	192	U	0	170	340	H-SD-08	--	--	--	--
FD-01FD	FD		118-74-1	HEXACHLOROBENZENE	170	ug/kg	1	96.2	192	U	0	170	340	H-SD-08	--	--	--	--
FD-01FD	FD		87-68-3	HEXACHLOROBUTADIENE	170	ug/kg	1	96.2	192	U	0	170	340	H-SD-08	22.33	7.61	12760	0.01
FD-01FD	FD		77-47-4	HEXACHLOROCYCLOPENTADIENE	170	ug/kg	1	96.2	192	U	0	170	340	H-SD-08	--	--	--	--
FD-01FD	FD		67-72-1	HEXACHLOROETHANE	170	ug/kg	1	96.2	192	U	0	170	340	H-SD-08	176.57	0.96	13770	0.01
FD-01FD	FD		78-59-1	ISOPHORONE	170	ug/kg	1	96.2	192	U	0	170	340	H-SD-08	--	--	--	--
FD-01FD	FD		621-64-7	N-NITROSODI-n-PROPYLAMINE	170	ug/kg	1	96.2	192	U	0	170	340	H-SD-08	--	--	--	--
FD-01FD	FD		86-30-6	N-NITROSODIPHENYLAMINE	170	ug/kg	1	96.2	192	U	0	170	340	H-SD-08	--	--	--	--
FD-01FD	FD		98-95-3	NITROBENZENE	170	ug/kg	1	96.2	192	U	0	170	340	H-SD-08	127.29	1.34	161060	0
FD-01FD	FD		87-86-5	PENTACHLOROPHENOL	680	ug/kg	1	385	962	U	0	680	1700	H-SD-08	360	1.89	--	--
FD-01FD	FD		108-95-2	PHENOL	170	ug/kg	1	96.2	192	U	0	170	340	H-SD-08	420	0.4	--	--
FD-01FD	FD		108-60-1	bis(2-CHLOROISOPROPYL) ETHER	170	ug/kg	1	96.2	192	U	0	170	340	H-SD-08	--	--		#DIV/0!
FD-01FD	FD		117-81-7	bis(2-ETHYLHEXYL) PHTHALATE	170	ug/kg	1	96.2	192	U	0	170	340	H-SD-08	182	0.93	2647	0.06
WG215136-0201	LB		95-94-3	1,2,4,5-TETRACHLOROBENZENE	N/A	N/A	N/A	N/A	N/A	N/A		N/A	N/A	N/A	--	--		N/A
WG215136-0201	LB		95-95-4	2,4,5-TRICHLOROPHENOL	N/A	N/A	N/A	N/A	N/A	N/A		N/A	N/A	N/A	--	--	--	--
WG215136-0201	LB		88-06-2	2,4,6-TRICHLOROPHENOL	N/A	N/A	N/A	N/A	N/A	N/A		N/A	N/A	N/A	--	--	--	--
WG215136-0201	LB		120-83-2	2,4-DICHLOROPHENOL	N/A	N/A	N/A	N/A	N/A	N/A		N/A	N/A	N/A	--	--	--	--
WG215136-0201	LB		105-67-9	2,4-DIMETHYLPHENOL	N/A	N/A	N/A	N/A	N/A	N/A		N/A	N/A	N/A	29	N/A	--	--

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Sediment Raw Data
Supplemental Baseline Ecological Risk Assessment Report
State Marine Superfund Site, Port Arthur, TX

FieldID	QAQCType	LRType	CAS	Analyte	Result	Units	Dilution	MDL	RL	FinalQualifier	det	MDLAdjusted	RLAdjusted	SampleDescription	ESV	criteria quotient	2nd ESV	2ndary criteria quotient
WG215136-0201	LB		51-28-5	2,4-DINITROPHENOL	N/A	N/A	N/A	N/A	N/A	N/A		N/A	N/A	N/A	--	--	--	--
WG215136-0201	LB		121-14-2	2,4-DINITROTOLUENE	N/A	N/A	N/A	N/A	N/A	N/A		N/A	N/A	N/A	--	--	--	--
WG215136-0201	LB		606-20-2	2,6-DINITROTOLUENE	N/A	N/A	N/A	N/A	N/A	N/A		N/A	N/A	N/A	--	--	--	--
WG215136-0201	LB		91-58-7	2-CHLORONAPHTHALENE	N/A	N/A	N/A	N/A	N/A	N/A		N/A	N/A	N/A	--	--	--	--
WG215136-0201	LB		95-57-8	2-CHLOROPHENOL	N/A	N/A	N/A	N/A	N/A	N/A		N/A	N/A	N/A	--	--	--	--
WG215136-0201	LB		95-48-7	2-METHYLPHENOL (o-CRESOL)	N/A	N/A	N/A	N/A	N/A	N/A		N/A	N/A	N/A	63	N/A	--	--
WG215136-0201	LB		88-74-4	2-NITROANILINE	N/A	N/A	N/A	N/A	N/A	N/A		N/A	N/A	N/A	1430	N/A	--	--
WG215136-0201	LB		88-75-5	2-NITROPHENOL	N/A	N/A	N/A	N/A	N/A	N/A		N/A	N/A	N/A	--	--	--	--
WG215136-0201	LB		91-94-1	3,3'-DICHLOROBENZIDINE	N/A	N/A	N/A	N/A	N/A	N/A		N/A	N/A	N/A	--	--	--	--
WG215136-0201	LB		65794-96-9	m & p CRESOLS	N/A	N/A	N/A	N/A	N/A	N/A		N/A	N/A	N/A	--	--		N/A
WG215136-0201	LB		99-09-2	3-NITROANILINE	N/A	N/A	N/A	N/A	N/A	N/A		N/A	N/A	N/A	1595.67	N/A	--	--
WG215136-0201	LB		534-52-1	4,6-DINITRO-2-METHYLPHENOL	N/A	N/A	N/A	N/A	N/A	N/A		N/A	N/A	N/A	--	--	--	--
WG215136-0201	LB		101-55-3	4-BROMOPHENYL PHENYL ETHER	N/A	N/A	N/A	N/A	N/A	N/A		N/A	N/A	N/A	--	--	--	--
WG215136-0201	LB		59-50-7	4-CHLORO-3-METHYLPHENOL	N/A	N/A	N/A	N/A	N/A	N/A		N/A	N/A	N/A	--	--	--	--
WG215136-0201	LB		106-47-8	4-CHLOROANILINE	N/A	N/A	N/A	N/A	N/A	N/A		N/A	N/A	N/A	--	--	--	--
WG215136-0201	LB		7005-72-3	4-CHLOROPHENYL PHENYL ETHER	N/A	N/A	N/A	N/A	N/A	N/A		N/A	N/A	N/A	--	--	--	--
WG215136-0201	LB		100-01-6	4-NITROANILINE	N/A	N/A	N/A	N/A	N/A	N/A		N/A	N/A	N/A	1050.94	N/A	--	--
WG215136-0201	LB		100-02-7	4-NITROPHENOL	N/A	N/A	N/A	N/A	N/A	N/A		N/A	N/A	N/A	--	--	--	--
WG215136-0201	LB		98-86-2	ACETOPHENONE	N/A	N/A	N/A	N/A	N/A	N/A		N/A	N/A	N/A	--	--	--	--
WG215136-0201	LB		111-91-1	bis(2-CHLOROETHOXY) METHANE	N/A	N/A	N/A	N/A	N/A	N/A		N/A	N/A	N/A	--	--	--	--
WG215136-0201	LB		111-44-4	bis(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHER)	N/A	N/A	N/A	N/A	N/A	N/A		N/A	N/A	N/A	--	--	--	--
WG215136-0201	LB		85-68-7	BENZYL BUTYL PHTHALATE	N/A	N/A	N/A	N/A	N/A	N/A		N/A	N/A	N/A	62	N/A	--	--
WG215136-0201	LB		86-74-8	CARBAZOLE	N/A	N/A	N/A	N/A	N/A	N/A		N/A	N/A	N/A	--	--	--	--
WG215136-0201	LB		84-74-2	DI-n-BUTYL PHTHALATE	N/A	N/A	N/A	N/A	N/A	N/A		N/A	N/A	N/A	1400	N/A	--	--
WG215136-0201	LB		117-84-0	DI-n-OCTYLPHTHALATE	N/A	N/A	N/A	N/A	N/A	N/A		N/A	N/A	N/A	6200	N/A	--	--
WG215136-0201	LB		132-64-9	DIBENZOFURAN	N/A	N/A	N/A	N/A	N/A	N/A		N/A	N/A	N/A	110	N/A	--	--
WG215136-0201	LB		84-66-2	DIETHYL PHTHALATE	N/A	N/A	N/A	N/A	N/A	N/A		N/A	N/A	N/A	200	N/A	--	--
WG215136-0201	LB		131-11-3	DIMETHYL PHTHALATE	N/A	N/A	N/A	N/A	N/A	N/A		N/A	N/A	N/A	--	--	--	--
WG215136-0201	LB		118-74-1	HEXACHLOROBENZENE	N/A	N/A	N/A	N/A	N/A	N/A		N/A	N/A	N/A	--	--	--	--
WG215136-0201	LB		87-68-3	HEXACHLOROBUTADIENE	N/A	N/A	N/A	N/A	N/A	N/A		N/A	N/A	N/A	22.33	N/A	12760	N/A
WG215136-0201	LB		77-47-4	HEXACHLOROCYCLOPENTADIENE	N/A	N/A	N/A	N/A	N/A	N/A		N/A	N/A	N/A	--	--	--	--
WG215136-0201	LB		67-72-1	HEXACHLOROETHANE	N/A	N/A	N/A	N/A	N/A	N/A		N/A	N/A	N/A	176.57	N/A	13770	N/A
WG215136-0201	LB		78-59-1	ISOPHORONE	N/A	N/A	N/A	N/A	N/A	N/A		N/A	N/A	N/A	--	--	--	--
WG215136-0201	LB		621-64-7	N-NITROSODI-n-PROPYLAMINE	N/A	N/A	N/A	N/A	N/A	N/A		N/A	N/A	N/A	--	--	--	--
WG215136-0201	LB		86-30-6	N-NITROSODIPHENYLAMINE	N/A	N/A	N/A	N/A	N/A	N/A		N/A	N/A	N/A	--	--	--	--
WG215136-0201	LB		98-95-3	NITROBENZENE	N/A	N/A	N/A	N/A	N/A	N/A		N/A	N/A	N/A	127.29	N/A	161060	N/A
WG215136-0201	LB		87-86-5	PENTACHLOROPHENOL	N/A	N/A	N/A	N/A	N/A	N/A		N/A	N/A	N/A	360	N/A	0	N/A
WG215136-0201	LB		108-95-2	PHENOL	N/A	N/A	N/A	N/A	N/A	N/A		N/A	N/A	N/A	420	N/A	--	--
WG215136-0201	LB		108-60-1	bis(2-CHLOROISOPROPYL) ETHER	N/A	N/A	N/A	N/A	N/A	N/A		N/A	N/A	N/A	--	--		N/A
WG215136-0201	LB		117-81-7	bis(2-ETHYLHEXYL) PHTHALATE	N/A	N/A	N/A	N/A	N/A	N/A		N/A	N/A	N/A	182	N/A	2647	N/A
WG215136-0301	BS		95-95-4	2,4,5-TRICHLOROPHENOL	N/A	N/A	N/A	N/A	N/A	N/A		N/A	N/A	N/A	--	--	--	--
WG215136-0301	BS		88-06-2	2,4,6-TRICHLOROPHENOL	N/A	N/A	N/A	N/A	N/A	N/A		N/A	N/A	N/A	--	--	--	--
WG215136-0301	BS		120-83-2	2,4-DICHLOROPHENOL	N/A	N/A	N/A	N/A	N/A	N/A		N/A	N/A	N/A	--	--	--	--
WG215136-0301	BS		105-67-9	2,4-DIMETHYLPHENOL	N/A	N/A	N/A	N/A	N/A	N/A		N/A	N/A	N/A	29	N/A	--	--
WG215136-0301	BS		51-28-5	2,4-DINITROPHENOL	N/A	N/A	N/A	N/A	N/A	N/A		N/A	N/A	N/A	--	--	--	--
WG215136-0301	BS		121-14-2	2,4-DINITROTOLUENE	N/A	N/A	N/A	N/A	N/A	N/A		N/A	N/A	N/A	--	--	--	--
WG215136-0301	BS		606-20-2	2,6-DINITROTOLUENE	N/A	N/A	N/A	N/A	N/A	N/A		N/A	N/A	N/A	--	--	--	--
WG215136-0301	BS		91-58-7	2-CHLORONAPHTHALENE	N/A	N/A	N/A	N/A	N/A	N/A		N/A	N/A	N/A	--	--	--	--
WG215136-0301	BS		95-57-8	2-CHLOROPHENOL	N/A	N/A	N/A	N/A	N/A	N/A		N/A	N/A	N/A	--	--	--	--

Attachment A - Table 1
Sediment Raw Data
Supplemental Baseline Ecological Risk Assessment Report
State Marine Superfund Site, Port Arthur, TX

FieldID	QAQCType	LRType	CAS	Analyte	Result	Units	Dilution	MDL	RL	FinalQualifier	det	MDLAdjusted	RLAdjusted	SampleDescription	ESV	criteria quotient	2nd ESV	2ndary criteria quotient
WG215136-0301	BS		95-48-7	2-METHYLPHENOL (o-CRESOL)	N/A	N/A	N/A	N/A	N/A	N/A		N/A	N/A	N/A	63	N/A	--	--
WG215136-0301	BS		88-74-4	2-NITROANILINE	N/A	N/A	N/A	N/A	N/A	N/A		N/A	N/A	N/A	1430	N/A	--	--
WG215136-0301	BS		88-75-5	2-NITROPHENOL	N/A	N/A	N/A	N/A	N/A	N/A		N/A	N/A	N/A	--	--	--	--
WG215136-0301	BS		91-94-1	3,3'-DICHLOROBENZIDINE	N/A	N/A	N/A	N/A	N/A	N/A		N/A	N/A	N/A	--	--	--	--
WG215136-0301	BS		65794-96-9	m & p CRESOLS	N/A	N/A	N/A	N/A	N/A	N/A		N/A	N/A	N/A	--	--		N/A
WG215136-0301	BS		99-09-2	3-NITROANILINE	N/A	N/A	N/A	N/A	N/A	N/A		N/A	N/A	N/A	1595.67	N/A	--	--
WG215136-0301	BS		534-52-1	4,6-DINITRO-2-METHYLPHENOL	N/A	N/A	N/A	N/A	N/A	N/A		N/A	N/A	N/A	--	--	--	--
WG215136-0301	BS		101-55-3	4-BROMOPHENYL PHENYL ETHER	N/A	N/A	N/A	N/A	N/A	N/A		N/A	N/A	N/A	--	--	--	--
WG215136-0301	BS		59-50-7	4-CHLORO-3-METHYLPHENOL	N/A	N/A	N/A	N/A	N/A	N/A		N/A	N/A	N/A	--	--	--	--
WG215136-0301	BS		106-47-8	4-CHLOROANILINE	N/A	N/A	N/A	N/A	N/A	N/A		N/A	N/A	N/A	--	--	--	--
WG215136-0301	BS		7005-72-3	4-CHLOROPHENYL PHENYL ETHER	N/A	N/A	N/A	N/A	N/A	N/A		N/A	N/A	N/A	--	--	--	--
WG215136-0301	BS		100-01-6	4-NITROANILINE	N/A	N/A	N/A	N/A	N/A	N/A		N/A	N/A	N/A	1050.94	N/A	--	--
WG215136-0301	BS		100-02-7	4-NITROPHENOL	N/A	N/A	N/A	N/A	N/A	N/A		N/A	N/A	N/A	--	--	--	--
WG215136-0301	BS		98-86-2	ACETOPHENONE	N/A	N/A	N/A	N/A	N/A	N/A		N/A	N/A	N/A	--	--	--	--
WG215136-0301	BS		111-91-1	bis(2-CHLOROETHOXY) METHANE	N/A	N/A	N/A	N/A	N/A	N/A		N/A	N/A	N/A	--	--	--	--
WG215136-0301	BS		111-44-4	bis(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHER)	N/A	N/A	N/A	N/A	N/A	N/A		N/A	N/A	N/A	--	--	--	--
WG215136-0301	BS		85-68-7	BENZYL BUTYL PHTHALATE	N/A	N/A	N/A	N/A	N/A	N/A		N/A	N/A	N/A	62	N/A	--	--
WG215136-0301	BS		86-74-8	CARBAZOLE	N/A	N/A	N/A	N/A	N/A	N/A		N/A	N/A	N/A	--	--	--	--
WG215136-0301	BS		84-74-2	DI-n-BUTYL PHTHALATE	N/A	N/A	N/A	N/A	N/A	N/A		N/A	N/A	N/A	1400	N/A	--	--
WG215136-0301	BS		117-84-0	DI-n-OCTYLPHTHALATE	N/A	N/A	N/A	N/A	N/A	N/A		N/A	N/A	N/A	6200	N/A	--	--
WG215136-0301	BS		132-64-9	DIBENZOFURAN	N/A	N/A	N/A	N/A	N/A	N/A		N/A	N/A	N/A	110	N/A	--	--
WG215136-0301	BS		84-66-2	DIETHYL PHTHALATE	N/A	N/A	N/A	N/A	N/A	N/A		N/A	N/A	N/A	200	N/A	--	--
WG215136-0301	BS		131-11-3	DIMETHYL PHTHALATE	N/A	N/A	N/A	N/A	N/A	N/A		N/A	N/A	N/A	--	--	--	--
WG215136-0301	BS		118-74-1	HEXACHLOROBENZENE	N/A	N/A	N/A	N/A	N/A	N/A		N/A	N/A	N/A	--	--	--	--
WG215136-0301	BS		87-68-3	HEXACHLOROBUTADIENE	N/A	N/A	N/A	N/A	N/A	N/A		N/A	N/A	N/A	22.33	N/A	12760	N/A
WG215136-0301	BS		77-47-4	HEXACHLOROCYCLOPENTADIENE	N/A	N/A	N/A	N/A	N/A	N/A		N/A	N/A	N/A	--	--	--	--
WG215136-0301	BS		67-72-1	HEXACHLOROETHANE	N/A	N/A	N/A	N/A	N/A	N/A		N/A	N/A	N/A	176.57	N/A	13770	N/A
WG215136-0301	BS		78-59-1	ISOPHORONE	N/A	N/A	N/A	N/A	N/A	N/A		N/A	N/A	N/A	--	--	--	--
WG215136-0301	BS		621-64-7	N-NITROSODI-n-PROPYLAMINE	N/A	N/A	N/A	N/A	N/A	N/A		N/A	N/A	N/A	--	--	--	--
WG215136-0301	BS		86-30-6	N-NITROSODIPHENYLAMINE	N/A	N/A	N/A	N/A	N/A	N/A		N/A	N/A	N/A	--	--	--	--
WG215136-0301	BS		98-95-3	NITROBENZENE	N/A	N/A	N/A	N/A	N/A	N/A		N/A	N/A	N/A	127.29	N/A	161060	N/A
WG215136-0301	BS		87-86-5	PENTACHLOROPHENOL	N/A	N/A	N/A	N/A	N/A	N/A		N/A	N/A	N/A	360	N/A	--	--
WG215136-0301	BS		108-95-2	PHENOL	N/A	N/A	N/A	N/A	N/A	N/A		N/A	N/A	N/A	420	N/A	--	--
WG215136-0301	BS		108-60-1	bis(2-CHLOROISOPROPYL) ETHER	N/A	N/A	N/A	N/A	N/A	N/A		N/A	N/A	N/A	--	--		N/A
WG215136-0301	BS		117-81-7	bis(2-ETHYLHEXYL) PHTHALATE	N/A	N/A	N/A	N/A	N/A	N/A		N/A	N/A	N/A	182	N/A	2647	N/A
~~WG215137-0201~~	~~LB~~		~~91-57-6~~	~~2-METHYLNAPHTHALENE~~	~~N/A~~	~~N/A~~	~~N/A~~	~~N/A~~	~~N/A~~	~~N/A~~		~~N/A~~	~~N/A~~	~~N/A~~	~~70~~	~~N/A~~	~~670~~	~~N/A~~
WG215137-0201	LB		83-32-9	ACENAPHTHENE	N/A	N/A	N/A	N/A	N/A	N/A		N/A	N/A	N/A	16	N/A	500	N/A
WG215137-0201	LB		208-96-8	ACENAPHTHYLENE	N/A	N/A	N/A	N/A	N/A	N/A		N/A	N/A	N/A	44	N/A	640	N/A
WG215137-0201	LB		120-12-7	ANTHRACENE	N/A	N/A	N/A	N/A	N/A	N/A		N/A	N/A	N/A	85.3	N/A	1100	N/A
WG215137-0201	LB		56-55-3	BENZO(a)ANTHRACENE	N/A	N/A	N/A	N/A	N/A	N/A		N/A	N/A	N/A	260	N/A	1600	N/A
WG215137-0201	LB		50-32-8	BENZO(a)PYRENE	N/A	N/A	N/A	N/A	N/A	N/A		N/A	N/A	N/A	430	N/A	1600	N/A
WG215137-0201	LB		205-99-2	BENZO(b)FLUORANTHENE	N/A	N/A	N/A	N/A	N/A	N/A		N/A	N/A	N/A	1700	N/A	9600	N/A
WG215137-0201	LB		191-24-2	BENZO(g,h,i)PERYLENE	N/A	N/A	N/A	N/A	N/A	N/A		N/A	N/A	N/A	670	N/A	--	--
WG215137-0201	LB		207-08-9	BENZO(k)FLUORANTHENE	N/A	N/A	N/A	N/A	N/A	N/A		N/A	N/A	N/A	1700	N/A	9600	N/A
WG215137-0201	LB		218-01-9	CHRYSENE	N/A	N/A	N/A	N/A	N/A	N/A		N/A	N/A	N/A	384	N/A	2800	N/A
WG215137-0201	LB		53-70-3	DIBENZ(a,h)ANTHRACENE	N/A	N/A	N/A	N/A	N/A	N/A		N/A	N/A	N/A	63.4	N/A	260	N/A
WG215137-0201	LB		206-44-0	FLUORANTHENE	N/A	N/A	N/A	N/A	N/A	N/A		N/A	N/A	N/A	600	N/A	5100	N/A
WG215137-0201	LB		86-73-7	FLUORENE	N/A	N/A	N/A	N/A	N/A	N/A		N/A	N/A	N/A	19	N/A	540	N/A
WG215137-0201	LB		193-39-5	INDENO(1,2,3-c,d)PYRENE	N/A	N/A	N/A	N/A	N/A	N/A		N/A	N/A	N/A	1700	N/A	9600	N/A

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State Marine Superfund Site, Port Arthur, TX

FieldID	QAQCType	LRType	CAS	Analyte	Result	Units	Dilution	MDL	RL	FinalQualifier	det	MDLAdjusted	RLAdjusted	SampleDescription	ESV	criteria quotient	2nd ESV	2ndary criteria quotient
WG215137-0201	LB		91-20-3	NAPHTHALENE	N/A	N/A	N/A	N/A	N/A	N/A		N/A	N/A	N/A	160	N/A	2100	N/A
WG215137-0201	LB		85-01-8	PHENANTHRENE	N/A	N/A	N/A	N/A	N/A	N/A		N/A	N/A	N/A	240	N/A	1500	N/A
WG215137-0201	LB		129-00-0	PYRENE	N/A	N/A	N/A	N/A	N/A	N/A		N/A	N/A	N/A	665	N/A	2600	N/A
~~WG215137-0301~~	~~BS~~		~~91-57-6~~	~~2-METHYLNAPHTHALENE~~	~~N/A~~	~~N/A~~	~~N/A~~	~~N/A~~	~~N/A~~	~~N/A~~		~~N/A~~	~~N/A~~	~~N/A~~	~~70~~	~~N/A~~	~~670~~	~~N/A~~
WG215137-0301	BS		83-32-9	ACENAPHTHENE	N/A	N/A	N/A	N/A	N/A	N/A		N/A	N/A	N/A	16	N/A	500	N/A
WG215137-0301	BS		208-96-8	ACENAPHTHYLENE	N/A	N/A	N/A	N/A	N/A	N/A		N/A	N/A	N/A	44	N/A	640	N/A
WG215137-0301	BS		120-12-7	ANTHRACENE	N/A	N/A	N/A	N/A	N/A	N/A		N/A	N/A	N/A	85.3	N/A	1100	N/A
WG215137-0301	BS		56-55-3	BENZO(a)ANTHRACENE	N/A	N/A	N/A	N/A	N/A	N/A		N/A	N/A	N/A	260	N/A	1600	N/A
WG215137-0301	BS		50-32-8	BENZO(a)PYRENE	N/A	N/A	N/A	N/A	N/A	N/A		N/A	N/A	N/A	430	N/A	1600	N/A
WG215137-0301	BS		205-99-2	BENZO(b)FLUORANTHENE	N/A	N/A	N/A	N/A	N/A	N/A		N/A	N/A	N/A	1700	N/A	9600	N/A
WG215137-0301	BS		191-24-2	BENZO(g,h,i)PERYLENE	N/A	N/A	N/A	N/A	N/A	N/A		N/A	N/A	N/A	670	N/A	--	--
WG215137-0301	BS		207-08-9	BENZO(k)FLUORANTHENE	N/A	N/A	N/A	N/A	N/A	N/A		N/A	N/A	N/A	1700	N/A	9600	N/A
WG215137-0301	BS		218-01-9	CHRYSENE	N/A	N/A	N/A	N/A	N/A	N/A		N/A	N/A	N/A	384	N/A	2800	N/A
WG215137-0301	BS		53-70-3	DIBENZ(a,h)ANTHRACENE	N/A	N/A	N/A	N/A	N/A	N/A		N/A	N/A	N/A	63.4	N/A	260	N/A
WG215137-0301	BS		206-44-0	FLUORANTHENE	N/A	N/A	N/A	N/A	N/A	N/A		N/A	N/A	N/A	600	N/A	5100	N/A
WG215137-0301	BS		86-73-7	FLUORENE	N/A	N/A	N/A	N/A	N/A	N/A		N/A	N/A	N/A	19	N/A	540	N/A
WG215137-0301	BS		193-39-5	INDENO(1,2,3-c,d)PYRENE	N/A	N/A	N/A	N/A	N/A	N/A		N/A	N/A	N/A	1700	N/A	9600	N/A
WG215137-0301	BS		91-20-3	NAPHTHALENE	N/A	N/A	N/A	N/A	N/A	N/A		N/A	N/A	N/A	160	N/A	2100	N/A
WG215137-0301	BS		85-01-8	PHENANTHRENE	N/A	N/A	N/A	N/A	N/A	N/A		N/A	N/A	N/A	240	N/A	1500	N/A
WG215137-0301	BS		129-00-0	PYRENE	N/A	N/A	N/A	N/A	N/A	N/A		N/A	N/A	N/A	665	N/A	2600	N/A
WG215159-0301	LB		7429-90-5	ALUMINUM	N/A	N/A	N/A	N/A	N/A	N/A		N/A	N/A	N/A	18000	N/A	--	--
WG215159-0301	LB		7440-38-2	ARSENIC	N/A	N/A	N/A	N/A	N/A	N/A		N/A	N/A	N/A	8.2	N/A	70	N/A
WG215159-0301	LB		7440-39-3	BARIUM	N/A	N/A	N/A	N/A	N/A	N/A		N/A	N/A	N/A	48	N/A	--	--
WG215159-0301	LB		7440-41-7	BERYLLIUM	N/A	N/A	N/A	N/A	N/A	N/A		N/A	N/A	N/A	--	--	--	--
WG215159-0301	LB		7440-43-9	CADMIUM	N/A	N/A	N/A	N/A	N/A	N/A		N/A	N/A	N/A	1.2	N/A	9.6	N/A
WG215159-0301	LB		7440-70-2	CALCIUM	N/A	N/A	N/A	N/A	N/A	N/A		N/A	N/A	N/A	--	--	--	--
WG215159-0301	LB		7440-47-3	CHROMIUM, TOTAL	N/A	N/A	N/A	N/A	N/A	N/A		N/A	N/A	N/A	81	N/A	370	N/A
WG215159-0301	LB		7440-48-4	COBALT	N/A	N/A	N/A	N/A	N/A	N/A		N/A	N/A	N/A	10	N/A	--	--
WG215159-0301	LB		7440-50-8	COPPER	N/A	N/A	N/A	N/A	N/A	N/A		N/A	N/A	N/A	34	N/A	270	N/A
WG215159-0301	LB		7439-89-6	IRON	N/A	N/A	N/A	N/A	N/A	N/A		N/A	N/A	N/A	220000	N/A	--	--
WG215159-0301	LB		7439-92-1	LEAD	N/A	N/A	N/A	N/A	N/A	N/A		N/A	N/A	N/A	46.7	N/A	218	N/A
WG215159-0301	LB		7439-95-4	MAGNESIUM	N/A	N/A	N/A	N/A	N/A	N/A		N/A	N/A	N/A	--	--	--	--
~~WG215159-0301~~	~~LB~~		~~7439-96-5~~	~~MANGANESE~~	~~N/A~~	~~N/A~~	~~N/A~~	~~N/A~~	~~N/A~~	~~N/A~~		~~N/A~~	~~N/A~~	~~N/A~~	~~260~~	~~N/A~~	~~--~~	~~--~~
WG215159-0301	LB		7440-02-0	NICKEL	N/A	N/A	N/A	N/A	N/A	N/A		N/A	N/A	N/A	20.9	N/A	51.6	N/A
WG215159-0301	LB		09/07/7440	POTASSIUM	N/A	N/A	N/A	N/A	N/A	N/A		N/A	N/A	N/A	--	--	--	--
WG215159-0301	LB		7782-49-2	SELENIUM	N/A	N/A	N/A	N/A	N/A	N/A		N/A	N/A	N/A	1	N/A	--	--
WG215159-0301	LB		7440-22-4	SILVER	N/A	N/A	N/A	N/A	N/A	N/A		N/A	N/A	N/A	1	N/A	3.7	N/A
WG215159-0301	LB		7440-23-5	SODIUM	N/A	N/A	N/A	N/A	N/A	N/A		N/A	N/A	N/A	--	--	--	--
WG215159-0301	LB		7440-62-2	VANADIUM	N/A	N/A	N/A	N/A	N/A	N/A		N/A	N/A	N/A	57	N/A	--	--
WG215159-0301	LB		7440-66-6	ZINC	N/A	N/A	N/A	N/A	N/A	N/A		N/A	N/A	N/A	150	N/A	410	N/A
WG215159-0401	BS		7429-90-5	ALUMINUM	N/A	N/A	N/A	N/A	N/A	N/A		N/A	N/A	N/A	18000	N/A	--	--
WG215159-0401	BS		7440-38-2	ARSENIC	N/A	N/A	N/A	N/A	N/A	N/A		N/A	N/A	N/A	8.2	N/A	70	N/A
WG215159-0401	BS		7440-39-3	BARIUM	N/A	N/A	N/A	N/A	N/A	N/A		N/A	N/A	N/A	48	N/A	--	--
WG215159-0401	BS		7440-41-7	BERYLLIUM	N/A	N/A	N/A	N/A	N/A	N/A		N/A	N/A	N/A	--	--	--	--
WG215159-0401	BS		7440-43-9	CADMIUM	N/A	N/A	N/A	N/A	N/A	N/A		N/A	N/A	N/A	1.2	N/A	9.6	N/A
WG215159-0401	BS		7440-70-2	CALCIUM	N/A	N/A	N/A	N/A	N/A	N/A		N/A	N/A	N/A	--	--	--	--
WG215159-0401	BS		7440-47-3	CHROMIUM, TOTAL	N/A	N/A	N/A	N/A	N/A	N/A		N/A	N/A	N/A	81	N/A	370	N/A
WG215159-0401	BS		7440-48-4	COBALT	N/A	N/A	N/A	N/A	N/A	N/A		N/A	N/A	N/A	10	N/A	--	--
WG215159-0401	BS		7440-50-8	COPPER	N/A	N/A	N/A	N/A	N/A	N/A		N/A	N/A	N/A	34	N/A	270	N/A

Attachment A - Table 1
Sediment Raw Data
Supplemental Baseline Ecological Risk Assessment Report
State Marine Superfund Site, Port Arthur, TX

FieldID	QAQCType	LRType	CAS	Analyte	Result	Units	Dilution	MDL	RL	FinalQualifier	det	MDLAdjusted	RLAdjusted	SampleDescription	ESV	criteria quotient	2nd ESV	2ndary criteria quotient
WG215159-0401	BS		7439-89-6	IRON	N/A	N/A	N/A	N/A	N/A	N/A		N/A	N/A	N/A	220000	N/A	--	--
WG215159-0401	BS		7439-92-1	LEAD	N/A	N/A	N/A	N/A	N/A	N/A		N/A	N/A	N/A	46.7	N/A	218	N/A
WG215159-0401	BS		7439-95-4	MAGNESIUM	N/A	N/A	N/A	N/A	N/A	N/A		N/A	N/A	N/A	--	--	--	--
~~WG215159-0401~~	~~BS~~		~~7439-96-5~~	~~MANGANESE~~	~~N/A~~	~~N/A~~	~~N/A~~	~~N/A~~	~~N/A~~	~~N/A~~		~~N/A~~	~~N/A~~	~~N/A~~	~~260~~	~~N/A~~	~~--~~	~~--~~
WG215159-0401	BS		7440-02-0	NICKEL	N/A	N/A	N/A	N/A	N/A	N/A		N/A	N/A	N/A	20.9	N/A	51.6	N/A
WG215159-0401	BS		09/07/7440	POTASSIUM	N/A	N/A	N/A	N/A	N/A	N/A		N/A	N/A	N/A	--	--	--	--
WG215159-0401	BS		7782-49-2	SELENIUM	N/A	N/A	N/A	N/A	N/A	N/A		N/A	N/A	N/A	1	N/A	--	--
WG215159-0401	BS		7440-22-4	SILVER	N/A	N/A	N/A	N/A	N/A	N/A		N/A	N/A	N/A	1	N/A	3.7	N/A
WG215159-0401	BS		7440-23-5	SODIUM	N/A	N/A	N/A	N/A	N/A	N/A		N/A	N/A	N/A	--	--	--	--
WG215159-0401	BS		7440-62-2	VANADIUM	N/A	N/A	N/A	N/A	N/A	N/A		N/A	N/A	N/A	57	N/A	--	--
WG215159-0401	BS		7440-66-6	ZINC	N/A	N/A	N/A	N/A	N/A	N/A		N/A	N/A	N/A	150	N/A	410	N/A
WG215180-0301	LB		7439-97-6	MERCURY	N/A	N/A	N/A	N/A	N/A	N/A		N/A	N/A	N/A	0.15	N/A	0.71	N/A
WG215180-0401	BS		7439-97-6	MERCURY	N/A	N/A	N/A	N/A	N/A	N/A		N/A	N/A	N/A	0.15	N/A	0.71	N/A
WG215189-0301	LB		7440-36-0	ANTIMONY	N/A	N/A	N/A	N/A	N/A	N/A		N/A	N/A	N/A	9.3	N/A	--	--
WG215189-0301	LB		7440-28-0	THALLIUM	N/A	N/A	N/A	N/A	N/A	N/A		N/A	N/A	N/A	--	--	--	--
WG215189-0401	BS		7440-36-0	ANTIMONY	N/A	N/A	N/A	N/A	N/A	N/A		N/A	N/A	N/A	9.3	N/A	--	--
WG215189-0401	BS		7440-28-0	THALLIUM	N/A	N/A	N/A	N/A	N/A	N/A		N/A	N/A	N/A	--	--	--	--
WG215300-01	LB		TOC	TOTAL ORGANIC CARBON	N/A	N/A	N/A	N/A	N/A	N/A		N/A	N/A	N/A	--	--	--	--
WG215300-02	BS		TOC	TOTAL ORGANIC CARBON	N/A	N/A	N/A	N/A	N/A	N/A		N/A	N/A	N/A	--	--	--	--
WG215300-03	BD		TOC	TOTAL ORGANIC CARBON	N/A	N/A	N/A	N/A	N/A	N/A		N/A	N/A	N/A	--	--	--	--
WG215300-05DUP	LR	D	TOC	TOTAL ORGANIC CARBON	N/A	N/A	N/A	N/A	N/A	N/A		N/A	N/A	N/A	--	--	--	--

Attachment A - Table 2

Sediment Raw Data

Supplemental Baseline Ecological Risk Assessment Repor

State Marine Superfund Site, Port Arthur, TX

SAMPLE ID	RESULTS			
	Particle Size Analyses			
	Gravel (%)	Sand (%)	Silt (%)	Clay (%)
FD-01	1.9	17.1	55.8	25.2
A-SD-01	0.0	29.3	38.3	32.4
B-SD-02	0.0	30.4	48.8	20.8
C-SD-03	0.0	30.6	35.4	34.0
D-SD-04	0.0	38.7	36.9	24.4
E-SD-05	0.8	71.6	21.0	6.6
F-SD-06	0.3	64.5	25.0	10.2
G-SD-07	1.3	35.7	28.2	34.8
H-SD-08	3.0	15.5	51.7	29.8
I-SD-09	0.0	90.2	6.1	1.7

Notes:

Analyzed by Kemron Environmental Services, Inc.

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Attachment B

SAMPLING DOCUMENTATION

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State Marine Superfund Site
Supplemental Remedial Investigation
Project No. 344479

DATE:___/___/2006

SEDIMENT INVESTIGATION SAMPLING FORM

Samplers/Inspectors: RP, BF, BC, RB
Subcontractor/Crew: RP Price, Barry Fox, Brian Cain, Ron Brush

Station ID: A
Time: 1010
Northing: 139330 Easting: 3596062.42
Weather: Clear Sunny

Surface Water ☐ Sediment ☑ Sediment Bioassay ☑ Taxonomic Identification ☑

☐ Intertidal Area ☒ Near Shore ☐ Far Shore

Depth of SW 8-9'
Depth of Sed

SW Sampling Equipment	Sediment Sampling Equipment
☐ Bailer	☐ Vibra-Core
☐ Subsurface bottle type	☐ Hand Auger
☐ _____	☐ Trowel / Spoon
☐ _____	☐ Dredge(type)
	☐ Wildco
	☒ Other Ponar

Comments/Description/Additional equipment

Type of Sediment Sample
☐ Grab ☒ Composite of 3 grabs - 1 location

Field Screening Data

TIME	Temp.	pH	Cond.	ORP	Turbidity	D.O.	PID	Comments
1020	29.04	5.74	20.3	187	5.4	7.16		Sal 1.21 tds = 12.5

SEDIMENT AND SURFACE WATER SAMPLE DATA

Sample Collection Date/Time 6/8/06 11:00 Samplers RP, BF

QA/QC Samples Collected: (None), Duplicate _____, Equipment Blank _____, MS/MSD _____

Sample Parameters: VOCs, (SVOCs), (TAL Metals), PCBs, (TOC), Dioxins, Bulk Density, Porosity, Others PCT Solids, PAH grain size

Sample and QA/QC
☒ Normal A-SD-01 ☐ Equipment Blank _____
☐ Duplicate _____ ☐ MS/MSD _____

SED SAMPLE DESCRIPTION

Color: grey **Moisture:** Dry Sl. Moist Moist V.Moist (Wet)

Major Description: Clay (Silty Clay) Silt Clayey Sand Sandy Clay Sand Gravelly Sand Gravel Grvly Clay

Minor Description: Organic Mottled Plastic M.Plastic ____Nodules vf f coarse-grained Ang / SA / SR / Rounded
Well / poorly / mod - sorted well / poorly / mod - cemented Loose

Other Descriptors: 3-5cm of sand on top/surface
soupy layer of sediment

Organisms Observed:

Sampler Signature: [signature] FTL Review/Siganature: _____ Date: _____

008244

State Marine Superfund Site
Supplemental Remedial Investigation
Project No. 344479

DATE:____/____/2006

SEDIMENT INVESTIGATION SAMPLING FORM

Samplers/Inspectors: RP, BF, BC, RB

Subcontractor/Crew:

Station ID: Station B
Time: 12:00 pm
Northing: 13932680. Easting: 3595978.7 IE
Weather: Clear Sunny

Surface Water ☐ Sediment ☒ Sediment Bioassay ☒ Taxonomic Identification ☒

☐ Intertidal Area
☒ Near Shore
☐ Far Shore

Depth of SW 8-9'
Depth of Sed

SW Sampling Equipment
☐ Bailer
☐ Subsurface bottle type
☐
☐

Sediment Sampling Equipment
☐ Vibra-Core
☐ Hand Auger
☐ Trowel / Spoon
☐ Dredge(type)
☐ Wildco
☒ Other Ponar

Comments/Description/Additional equipment
~~Oily Sheen on Sample~~
- see field book for sample details
- poor recovery at many sites

Type of Sediment Sample
☐ Grab ☒ Composite of ~~2~~ ~~3~~ grabs 5 locations 30+ grabs

Field Screening Data

TIME	Temp.	pH	Cond.	ORP	Turbidity	D.O.	PID	Comments
1200	29.16	6.95	19.7	90	37.9	7.55		sal 1.18, 12.2 TDS

SEDIMENT AND SURFACE WATER SAMPLE DATA

Sample Collection Date/Time 6/8/06 1205 Samplers BF

QA/QC Samples Collected: None, Duplicate _____, Equipment Blank _____, MS/MSD _____
Sample Parameters: VOCs, SVOCs, TAL Metals, PCBs, TOC, Dioxins, Bulk Density, Porosity, Others PAH, % Solids, Grain Size

Sample and QA/QC ☒ Normal B-SD-02 ☐ Equipment Blank _____
☐ Duplicate _____ ☐ MS/MSD _____

SED SAMPLE DESCRIPTION

Color: Gray **Moisture:** Dry Sl. Moist Moist V.Moist Wet
Major Description: Clay Silty Clay Silt Clayey Sand Sandy Clay Sand Gravelly Sand Gravel Grvly Clay
Minor Description: Organic Mottled Plastic M.Plastic ____Nodules vf f coarse-grained Ang / SA / SR / Rounded
Sandy silt Well / poorly / mod - sorted well / poorly / mod - cemented Loose
Other Descriptors: 3-5mm of sand
oily sheen on surface of water

Organisms Observed:

Sampler Signature: [signature] FTL Review/Siganature: _____ Date: _____

State Marine Superfund Site
Supplemental Remedial Investigation
Project No. 344479

DATE:___/___/2006

SEDIMENT INVESTIGATION SAMPLING FORM

Samplers/Inspectors: RP, BF, BC, RB

Subcontractor/Crew:

Station ID: Station C
Time: 1527
Northing: ____ Easting: -see field book
Weather: Clear / Sunny

Surface Water ☐ Sediment ☒ Sediment Bioassay ☒ Taxonomic Identification ☒

☐ Intertidal Area ☐ Far Shore Depth of SW 15
☒ Near Shore Depth of Sed ____

SW Sampling Equipment
☐ Bailer
☐ Subsurface bottle type
☐ ____
☐ ____

Sediment Sampling Equipment
☐ Vibra-Core
☐ Hand Auger
☐ Trowel / Spoon
☐ Dredge(type)
☐ Wildco
☒ Other Ponar

Comments/Description/Additional equipment
Sample C SD-03

Type of Sediment Sample
☐ Grab ☐ Composite of 2 location grabs
30+ grabs

Field Screening Data

TIME	Temp.	pH	Cond.	ORP	Turbidity	D.O.	PID	Comments
1527	29.34	7.27	22.1	8.4	43.5	8.44		Sal = 1.29 TDS = 13.3

SEDIMENT AND SURFACE WATER SAMPLE DATA

Sample Collection Date/Time 1530 Samplers RP, BF

QA/QC Samples Collected: None, Duplicate ____, Equipment Blank ____ MS/MSD
Sample Parameters: VOCs, SVOCs, TAL Metals, PCBs, TOC, Dioxins, Bulk Density, Porosity, Others PAH, w solids grain size

Sample and QA/QC ☒ Normal C-SD-03 ☐ Equipment Blank ____
☐ Duplicate ____ ☒ MS/MSD MS/MSD

SED SAMPLE DESCRIPTION

Color: Gray **Moisture:** Dry Sl. Moist Moist V.Moist Wet
Major Description: Clay Silty Clay Silt Clayey Sand Sandy Clay Sand Gravelly Sand Gravel Grvly Clay
Minor Description: Organic Mottled Plastic M.Plastic ____Nodules vf f coarse-grained Ang / SA / SR / Rounded
Well / poorly / mod - sorted well / poorly / mod - cemented Loose
Other Descriptors: hard bottom, low amounts of sediment present

Organisms Observed:

Sampler Signature: [signature] FTL Review/Siganature: ____ Date: ____

State Marine Superfund Site
Supplemental Remedial Investigation
Project No. 344479

DATE:____/____/2006

SEDIMENT INVESTIGATION SAMPLING FORM

Samplers/Inspectors: RP, BF, BC, RB

Subcontractor/Crew:

Station ID: Station D
Time: 16:15
Northing: Easting: - see field book
Weather: Clear Sunny

Surface Water ☐ Sediment ☒ Sediment Bioassay ☒ Taxonomic Identification ☒

☐ Intertidal Area ☒ Near Shore ☐ Far Shore

Depth of SW ~~X~~ 10 ft
Depth of Sed

SW Sampling Equipment
☐ Bailer
☐ Subsurface bottle type
☐
☐

Sediment Sampling Equipment
☐ Vibra-Core
☐ Hand Auger
☐ Trowel / Spoon
☐ Dredge(type)
☐ Wildco
☒ Other Pomar

Comments/Description/Additional equipment

Type of Sediment Sample
☐ Grab ☒ Composite of 5 ~~4~~ location grabs
30+ grabs

Field Screening Data

TIME	Temp.	pH	Cond.	ORP	Turbidity	D.O.	PID	Comments
1530	29.5	7.36	24.0	90	58.3	7.46		Sal = 1.34 TDS = 13.5

SEDIMENT AND SURFACE WATER SAMPLE DATA

Sample Collection Date/Time 6/8/06 16:15 Samplers RP, BF

QA/QC Samples Collected: None, Duplicate _____, Equipment Blank _____, MS/MSD _____

Sample Parameters: VOCs, SVOCs, TAL Metals, PCBs, TOC, Dioxins, Bulk Density, Porosity, Others PAH, % solids, Grain size

Sample and QA/QC ☒ Normal D-SD-04 ☐ Equipment Blank _____

☐ Duplicate _____ ☐ MS/MSD _____

SED SAMPLE DESCRIPTION

Color: Grey **Moisture:** Dry Sl. Moist Moist V.Moist Wet

Major Description: Clay Silty Clay Silt Clayey Sand Sandy Clay Sand Gravelly Sand Gravel Grvly Clay

Minor Description: Organic Mottled Plastic M.Plastic _____Nodules vf f coarse-grained Ang / SA / SR / Rounded
Well / poorly / mod - sorted well / poorly / mod - cemented Loose

Other Descriptors: best recovered from ~~5th~~ 5th location - most sample from that

Organisms Observed:

Sampler Signature: _____ FTL Review/Siganature: _____ Date: _____

State Marine Superfund Site
Supplemental Remedial Investigation
Project No. 344479

DATE:____/____/2006

SEDIMENT INVESTIGATION SAMPLING FORM

Samplers/Inspectors: RP, BF, BC, RB

Subcontractor/Crew:

Station ID: Station E
Time: 1420
Northing: ____ Easting: ____
Weather: Clear sunny

Surface Water ☐ Sediment ☒ Sediment Bioassay ☒ Taxonomic Identification ☒

☐ Intertidal Area
☐ Near Shore
☐ Far Shore

Depth of SW ~~8-9~~ 3-4
Depth of Sed ____

SW Sampling Equipment
☐ Bailer
☐ Subsurface bottle type
☐ ____
☐ ____

Sediment Sampling Equipment
☐ Vibra-Core
☐ Hand Auger
☐ Trowel / Spoon
☐ Dredge(type)
☐ Wildco
☒ Other Ponar

Comments/Description/Additional equipment
Sample E-SD-05

Type of Sediment Sample
☐ Grab ☒ Composite of 45 locations grabs
30+ ponar grabs

Field Screening Data

TIME	Temp.	pH	Cond.	ORP	Turbidity	D.O.	PID	Comments
1420	29.12	7.2	20.5	80	21.5	9.11		Sal = 1.25 TDS = 12.8

SEDIMENT AND SURFACE WATER SAMPLE DATA

Sample Collection Date/Time 6/8/06, 1420 Samplers RP, BF

QA/QC Samples Collected: None, Duplicate ____, Equipment Blank ____, MS/MSD ____
Sample Parameters: VOCs, SVOCs, TAL Metals, PCBs, TOC, Dioxins, Bulk Density, Porosity, Others PAH, Grain Size
% solids

Sample and QA/QC ☒ Normal E-SD-05 ☐ Equipment Blank ____
☐ Duplicate ____ ☐ MS/MSD ____

SED SAMPLE DESCRIPTION

Color: gray **Moisture:** Dry Sl. Moist Moist V.Moist Wet
Major Description: Clay Silty Clay Silt Clayey Sand Sandy Clay Sand Gravelly Sand Gravel Grvly Clay
Minor Description: Organic Mottled Plastic M.Plastic ____Nodules vf f coarse-grained Ang / SA / SR / Rounded
Well / poorly / mod - sorted well / poorly / mod - cemented Loose
Other Descriptors: little sediment - mostly hard clay + sand
poor recovery of sediment in ponar

Organisms Observed:

Sampler Signature: [signature] FTL Review/Siganature: ____ Date: ____

State Marine Superfund Site
Supplemental Remedial Investigation
Project No. 344479

DATE:____/____/2006

SEDIMENT INVESTIGATION SAMPLING FORM

Samplers/Inspectors: ~~RB~~ RP, BF, BC, RB

Subcontractor/Crew:

Station ID: Station F
Time: 17:05
Northing: Easting: ~8 feet back
Weather: Clear / Sunny

Surface Water ☐ Sediment ☒ Sediment Bioassay ☒ Taxonomic Identification ☒

☐ Intertidal Area ☐ Far Shore
☐ Near Shore

Depth of SW 8
Depth of Sed

SW Sampling Equipment
☐ Bailer
☐ Subsurface bottle type
☐
☐

Sediment Sampling Equipment
☐ Vibra-Core
☐ Hand Auger
☐ Trowel / Spoon
☐ Dredge(type)
☐ Wildco
☒ Other ponar

Comments/Description/Additional equipment

Type of Sediment Sample
☐ Grab ☒ Composite of 2 location ~~grabs~~ 3 of grabs

Field Screening Data

TIME	Temp.	pH	Cond.	ORP	Turbidity	D.O.	PID	Comments
1705	30.48	7.58	20.4	79	1.4	7.54		Sal 1.19, TDS 12.3

SEDIMENT AND SURFACE WATER SAMPLE DATA

Sample Collection Date/Time 17:05 6/8/06 Samplers

QA/QC Samples Collected: None, Duplicate _____, Equipment Blank _____, MS/MSD _____
Sample Parameters: VOCs, SVOCs, TAL Metals, PCBs, TOC, Dioxins, Bulk Density, Porosity, Others PAH, % Solids, Grain size

Sample and QA/QC ☒ Normal F-SD-06 ☐ Equipment Blank _____
☐ Duplicate _____ ☐ MS/MSD _____

SED SAMPLE DESCRIPTION

Color: Gray **Moisture:** Dry Sl. Moist Moist V.Moist Wet
Major Description: Clay Silty Clay Silt Clayey Sand Sandy Clay Sand Gravelly Sand Gravel Grvly Clay
Minor Description: Organic Mottled Plastic M.Plastic _____Nodules vf f coarse-grained Ang / SA / SR / Rounded
Well / poorly / mod - sorted well / poorly / mod - cemented Loose
Other Descriptors: Silty / sand + clayey sand
Poor recovery from ponar

Organisms Observed:

Sampler Signature: [signature] FTL Review/Siganature: _____ Date: _____

008249

State Marine Superfund Site
Supplemental Remedial Investigation
Project No. 344479

DATE:____/____/2006

SEDIMENT INVESTIGATION SAMPLING FORM

Samplers/Inspectors: RP, BF, RB, BC

Subcontractor/Crew:

Station ID: Station G
Time: 1030 6/19/06
Northing: Easting:
Weather: clear Sunny

Surface Water ☐ Sediment ☒ Sediment Bioassay ☒ Taxonomic Identification ☒

☐ Intertidal Area
☒ Near Shore
☐ Far Shore

Depth of SW ~~8-12~~ 8-10
Depth of Sed

SW Sampling Equipment
☐ Bailer
☐ Subsurface bottle type
☐
☐

Sediment Sampling Equipment
☐ Vibra-Core
☐ Hand Auger
☐ Trowel / Spoon
☐ Dredge(type)
☐ Wildco
☒ Other Ponar

Comments/Description/Additional equipment

Type of Sediment Sample
☐ Grab ☒ Composite of 2 locations 12 grabs

Field Screening Data

TIME	Temp.	pH	Cond.	ORP	Turbidity	D.O.	PID	Comments
1035	29.36	6.72	23.7	100	16.2	7.33		Sal 1.43, TDS 14.6

SEDIMENT AND SURFACE WATER SAMPLE DATA

Sample Collection Date/Time 1050 Samplers RP BF

QA/QC Samples Collected: None, Duplicate _____, Equipment Blank _____, MS/MSD _____
Sample Parameters: VOCs, SVOCs, TAL Metals, PCBs, TOC, Dioxins, Bulk Density, Porosity, Others [illegible] PAH

Sample and QA/QC ☒ Normal G-SD-07 ☐ Equipment Blank _____
☐ Duplicate _____ ☐ MS/MSD _____

SED SAMPLE DESCRIPTION

Color: grey / black **Moisture:** Dry Sl. Moist Moist V.Moist Wet
Major Description: Clay Silty Clay Silt Clayey Sand Sandy Clay Sand Gravelly Sand Gravel Grvly Clay
Minor Description: Organic Mottled Plastic M.Plastic _____Nodules vf f coarse-grained Ang / SA / SR / Rounded
Well / poorly / mod - sorted well / poorly / mod - cemented Loose
Other Descriptors: dark color
good recovery

Organisms Observed:

Sampler Signature: [signature] FTL Review/Siganature: _____ Date: _____

State Marine Superfund Site
Supplemental Remedial Investigation
Project No. 344479

DATE:___/___/2006

SEDIMENT INVESTIGATION SAMPLING FORM

Samplers/Inspectors: RP, BF, RB, BL
Subcontractor/Crew:
Station ID: Station H
Time: 945
Northing: _____ Easting: _____
Weather: Sunny Hazy

Surface Water ☐ Sediment ☑ Sediment Bioassay ☑ Taxonomic Identification ☒

☐ Intertidal Area ☑ Near Shore ☐ Far Shore

Depth of SW 41
Depth of Sed _____

SW Sampling Equipment
- ☐ Bailer
- ☐ Subsurface bottle type
- ☐ _____
- ☐ _____

Sediment Sampling Equipment
- ☐ Vibra-Core
- ☐ Hand Auger
- ☐ Trowel / Spoon
- ☐ Dredge(type)
- ☐ Wildco
- ☒ Other Ponar

Comments/Description/Additional equipment

Type of Sediment Sample
☐ Grab ☒ Composite of 41 arch's 12 grabs grabs

Field Screening Data

TIME	Temp.	pH	Cond.	ORP	Turbidity	D.O.	PID	Comments
945	29.03	6.07	21.5	171	11.0	6.30		Sal 1.3J TDS 13.3

SEDIMENT AND SURFACE WATER SAMPLE DATA

Sample Collection Date/Time 1015 6/19/06 Samplers RP, BF H-SD-08

QA/QC Samples Collected: None, (Duplicate), Equipment Blank _____, MS/MSD _____
Sample Parameters: VOCs, SVOCs, TAL Metals, PCBs, TOC, Dioxins, Bulk Density, Porosity, Others_____, _____

Sample and QA/QC
- ☒ Normal H-SD-08 ☐ Equipment Blank _____
- ☒ Duplicate FD-01 ☐ MS/MSD _____

SED SAMPLE DESCRIPTION

Color: Grey **Moisture:** Dry Sl. Moist Moist V.Moist (Wet)
Major Description: (Clay) Silty Clay Silt Clayey Sand Sandy Clay Sand Gravelly Sand Gravel Grvly Clay
Minor Description: Organic Mottled Plastic M.Plastic _____Nodules vf f coarse-grained Ang / SA / SR / Rounded
Well / poorly / mod - sorted well / poorly / mod - cemented Loose
Other Descriptors: good recovery
mostly clay substrate
Organisms Observed:

Sampler Signature: Robert R FTL Review/Siganature: _____ Date: _____

008251

State Marine Superfund Site
Supplemental Remedial Investigation
Project No. 344479

DATE:___/___/2006

SEDIMENT INVESTIGATION SAMPLING FORM

Samplers/Inspectors: RP, BF, Bc, RB
Subcontractor/Crew:
Station ID: State Marine Reference
Time: 1125
Northing: _____ Easting: _____
Weather: Sunny clear

Surface Water ☐ Sediment ☒ Sediment Bioassay ☒ Taxonomic Identification ☒

☐ Intertidal Area ☒ Near Shore ☐ Far Shore
Depth of SW 2'
Depth of Sed _____

SW Sampling Equipment
☐ Bailer
☐ Subsurface bottle type
☐ _____
☐ _____

Sediment Sampling Equipment
☐ Vibra-Core
☐ Hand Auger
☐ Trowel / Spoon
☐ Dredge(type)
☐ Wildco
☒ Other poor

Comments/Description/Additional equipment

Type of Sediment Sample 1 location ~~0.5 ft~~ 0.5 ft in intersection
☐ Grab ☒ Composite of _____ grabs 12 scabs

Field Screening Data

TIME	Temp.	pH	Cond.	ORP	Turbidity	D.O.	PID	Comments
1125	30.46	6.98	14.3	71	24.9	8.50		Sal 0.84 9 0 TDS

SEDIMENT AND SURFACE WATER SAMPLE DATA

Sample Collection Date/Time 6/9/06 1145 Samplers ~~RB~~ RP, BF

QA/QC Samples Collected: (None,) Duplicate _____, Equipment Blank _____, MS/MSD _____
Sample Parameters: VOCs, (SVOCs), TAL Metals, PCBs (TOC), Dioxins, Bulk Density, Porosity, Others PAH, grain size

Sample and QA/QC
☒ Normal Reference I-SD-09 ☐ Equipment Blank _____
☐ Duplicate _____ ☐ MS/MSD _____

SED SAMPLE DESCRIPTION

Color: brown **Moisture:** Dry Sl. Moist Moist V.Moist Wet
Major Description: Clay Silty Clay Silt Clayey Sand Sandy Clay (Sand) Gravelly Sand Gravel Grvly Clay
Minor Description: Organic Mottled Plastic M.Plastic _____Nodules vf f coarse-grained Ang / SA / SR / Rounded
Well / poorly / mod - sorted well / poorly / mod - cemented Loose
Other Descriptors: Very Sandy site
Organisms Observed:

Sampler Signature: RPuyPE FTL Review/Siganature: _____ Date: _____

008252

156 Starlite Drive, Marietta, OH 45750 * TEL 740-373-4071 * FAX 740-373-4835 * http://www.kemron.com

Laboratory Report Number: L0606269

Please find enclosed the analytical results for the samples you submitted to KEMRON Environmental Services.

These analyses were subcontracted to another laboratory. If you have questions, comments or require further assistance regarding this report, please contact our team member noted in the Reviewed box below at 800-373-4071. Team member e-mail addresses also appear here for your convenience.

Debra Elliott - Team Leader
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Annie Bock - Client Services Specialist
abock@kemron-lab.com

This report was reviewed on 29-JUN-06.

CHERYL KOELSCH

I certify that all test results meet all of the requirments of the NELAP standards and other applicable contract terms and conditions. All results for soil samples are reported on a 'dry-weight' basis unless specified otherwise. Analytical results for water and wastes are reported on an 'as received' basis unless specified otherwise. A statement of uncertainty for each analysis is available upon request. This laboratory report shall not be reproduced, except in full, without the written approval of KEMRON Environmental Services.

This report was certified on 29-JUN-06.

DAVID VANDENBERG

FL DOH NELAP ID: E8755

This report contains a total of 24 pages.

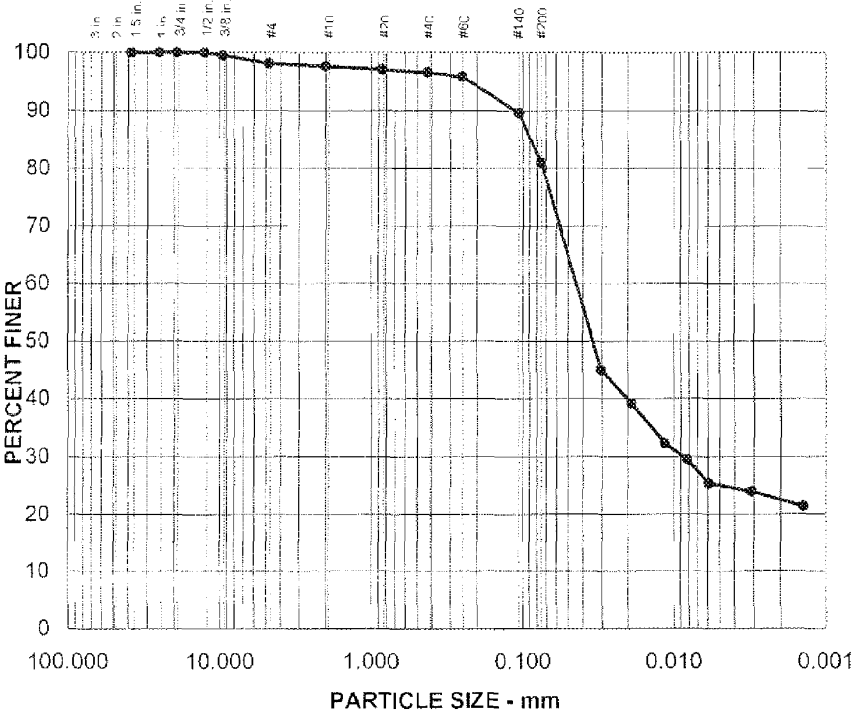
Protecting Our Environmental Future

KEMRON ENVIRONMENTAL SERVICES, INC.
STATE MARINE SUPERFUND SITE

TABLE 1
Particle Size Analyses
Summary of Results

SAMPLE ID	RESULTS			
	Particle Size Analyses			
	Gravel (%)	Sand (%)	Silt (%)	Clay (%)
FD-01	1.9	17.1	56.0	25.0
A-SD-01	0.0	29.3	38.5	32.2
B-SD-02	0.0	30.4	49.0	20.6
C-SD-03	0.0	30.6	35.7	33.7
D-SD-04	0.0	38.7	37.1	24.2
E-SD-05	0.8	71.6	21.0	6.6
F-SD-06	0.3	64.5	25.0	10.2
G-SD-07	1.3	35.7	28.4	34.6
H-SD-08	3.0	15.5	51.9	29.6
I-SD-09	0.0	90.2	6.1	1.7

PARTICLE SIZE DISTRIBUTION TEST REPORT



% GRAVEL	% SAND	% SILT	% CLAY
1.9	17.1	56.0	25.0

SAMPLE INFORMATION	
Project Name:	State Marine Superfund
Project Number:	SE-0178
Sample ID:	FD-01
Sample Description:	Dark gray
Testing Date:	06/16/06

SAMPLE CLASSIFICATION	
Liquid Limit:	
Plastic Limit:	
Plasticity Index:	
USCS Classification	
Classification	
AASHTO Classification	
Classification	
Group Index	
DESCRIPTION:	
Sandy Clayey Silt	

KEMRON
ENVIRONMENTAL SERVICES

PARTICLE SIZE DISTRIBUTION TEST REPORT PAGE 1 OF 2

PARTICLE SIZE DISTRIBUTION DATA REPORT

REPORT FORM
ASTM D422

PROJECT:	State Marine Superfund Site
PROJECT No.:	SE-0178
SAMPLE No.	FD-01
SAMPLE DESCRIPT:	Dark gray
TESTING DATE:	06/16/06
TESTED BY:	CLG/KFS
TRACKING CODE:	3752

MOISTURE CONTENT (DRY AND WET BASIS)	
TARE WEIGHT	197.78 g
WT WET SOIL + TARE	318.84 g
WT DRY SOIL + TARE	269.24 g
WT WATER, Ww	49.60 g
WT DRY SOIL, Ws	71.46 g
ASTM MOISTURE	69.41 %
EPA MOISTURE	40.97 %

SIEVE NUMBER	PERCENT PASSING
1.5	100.0 %
1.0	100.0 %
0.75	100.0 %
0.5	100.0 %
0.375	99.5 %
#4	98.1 %
#10	97.6 %
#20	97.1 %
#40	96.6 %
#60	95.8 %
#140	89.6 %
#200	81.0 %

HYDROMETER ANALYSIS	
HYDROMETER No.	2
Wt OF DRY SOIL, Ws	57.86
DATE TESTING INITIATED	06/27/06
TIME TESTING INITIATED	1:39:00 PM

ELAPSED TIME (minutes)	ACTUAL READING	CORRECTED READING	DIAMETER (mm)	PERCENT FINER (%)
2	38.0	32.5	0.0302	45.0
5	33.0	28.3	0.0190	39.2
15	28.0	23.3	0.0114	32.3
30	26.0	21.3	0.0082	29.5
60	23.0	18.3	0.0059	25.4
222	22.0	17.3	0.0031	24.0
1130	20.5	15.4	0.0014	21.3

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ENVIRONMENTAL SERVICES

PARTICLE SIZE DISTRIBUTION TEST REPORT PAGE 2 OF 2

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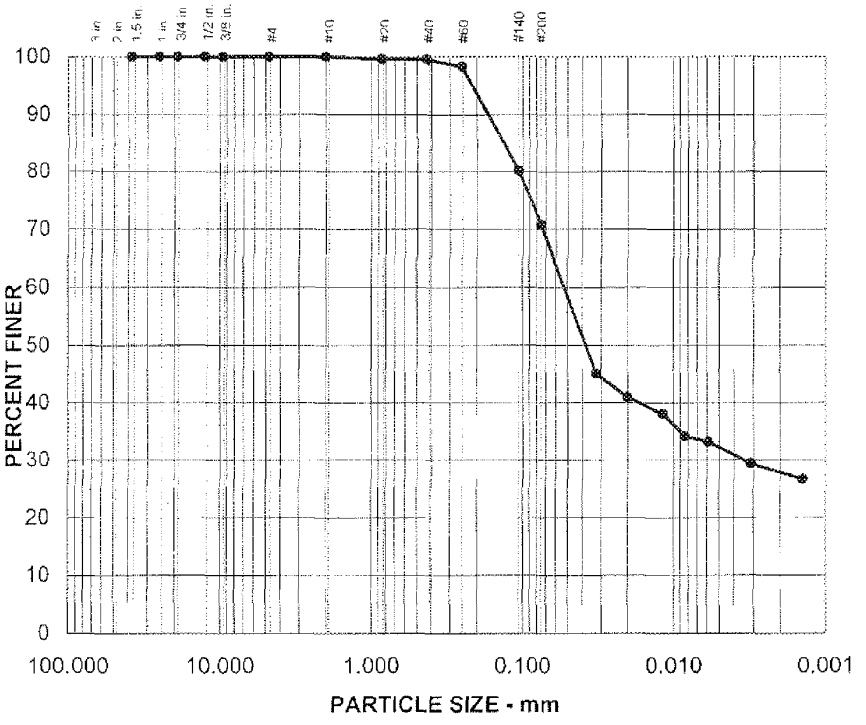
PARTICLE SIZE DISTRIBUTION TEST REPORT



% GRAVEL	% SAND	% SILT	% CLAY
0.0	29.3	38.5	32.2

SAMPLE INFORMATION	
Project Name:	State Marine Superfund Site
Project Number:	SE-0178
Sample ID:	A-SD-01
Sample Description:	Dark gray
Testing Date:	06/16/06

SAMPLE CLASSIFICATION	
Liquid Limit:	
Plastic Limit:	
Plasticity Index:	
USCS Classification	
Classification	
AASHTO Classification	
Classification	
Group Index	
DESCRIPTION:	
Sandy Clayey Silt	

KEMRON
ENVIRONMENTAL SERVICES

PARTICLE SIZE DISTRIBUTION TEST REPORT PAGE 1 OF 2

PARTICLE SIZE DISTRIBUTION DATA REPORT

REPORT FORM
ASTM D422

PROJECT:	State Marine Superfund Site
PROJECT No.:	SE-0178
SAMPLE No.:	A-SD-01
SAMPLE DESCRIPT:	Dark gray
TESTING DATE:	06/16/06
TESTED BY:	CLG/KFS
TRACKING CODE:	3753

MOISTURE CONTENT (DRY AND WET BASIS)	
TARE WEIGHT	180.22 g
WT WET SOIL + TARE	282.38 g
WT DRY SOIL + TARE	231.76 g
WT WATER, Ww	50.62 g
WT DRY SOIL, Ws	51.54 g
ASTM MOISTURE	98.21 %
EPA MOISTURE	49.55 %

SIEVE NUMBER	PERCENT PASSING
1.5	100.0 %
1.0	100.0 %
0.75	100.0 %
0.5	100.0 %
0.375	100.0 %
#4	100.0 %
#10	100.0 %
#20	99.7 %
#40	99.5 %
#60	98.3 %
#140	80.2 %
#200	70.7 %

HYDROMETER ANALYSIS	
HYDROMETER No.	2
Wt OF DRY SOIL, Ws	36.46
DATE TESTING INITIATED	06/27/06
TIME TESTING INITIATED	1:30:00 PM

ELAPSED TIME (minutes)	ACTUAL READING	CORRECTED READING	DIAMETER (mm)	PERCENT FINER (%)
2	29.0	23.5	0.0323	45.1
5	26.0	21.3	0.0200	40.9
15	24.5	19.8	0.0117	38.0
30	22.5	17.8	0.0084	34.2
60	22.0	17.3	0.0059	33.2
222	20.0	15.3	0.0031	29.4
1130	19.0	13.9	0.0014	26.7

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ENVIRONMENTAL SERVICES

PARTICLE SIZE DISTRIBUTION TEST REPORT PAGE 2 OF 2

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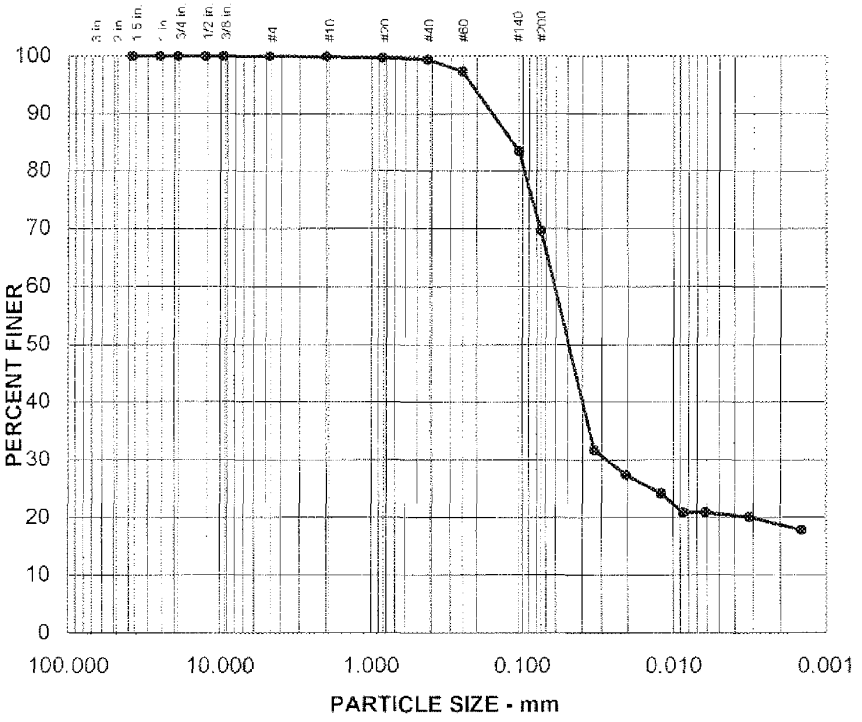
PARTICLE SIZE DISTRIBUTION TEST REPORT



% GRAVEL	% SAND	% SILT	% CLAY
0.0	30.4	49.0	20.6

SAMPLE INFORMATION	
Project Name:	State Marine Superfund Site
Project Number:	SE-0178
Sample ID:	B-SD-02
Sample Description:	Dark gray
Testing Date:	06/16/06

SAMPLE CLASSIFICATION	
Liquid Limit:	
Plastic Limit:	
Plasticity Index:	
USCS Classification	
Classification	
AASHTO Classification	
Classification	
Group Index	
DESCRIPTION: Sandy Clayey Silt	

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ENVIRONMENTAL SERVICES

PARTICLE SIZE DISTRIBUTION TEST REPORT PAGE 1 OF 2

PARTICLE SIZE DISTRIBUTION DATA REPORT

REPORT FORM
ASTM D422

PROJECT:	State Marine Superfund Site
PROJECT No.:	SE-0178
SAMPLE No.:	B-SD-02
SAMPLE DESCRIPT:	Dark gray
TESTING DATE:	06/16/06
TESTED BY:	CLG/KFS
TRACKING CODE:	3754

MOISTURE CONTENT (DRY AND WET BASIS)	
TARE WEIGHT	236.79 g
WT WET SOIL + TARE	338.64 g
WT DRY SOIL + TARE	297.61 g
WT WATER, Ww	41.23 g
WT DRY SOIL, Ws	60.82 g
ASTM MOISTURE	67.79 %
EPA MOISTURE	40.40 %

SIEVE NUMBER	PERCENT PASSING
1.5	100.0 %
1.0	100.0 %
0.75	100.0 %
0.5	100.0 %
0.375	100.0 %
#4	100.0 %
#10	99.9 %
#20	99.7 %
#40	99.4 %
#60	97.3 %
#140	83.4 %
#200	69.6 %

HYDROMETER ANALYSIS	
HYDROMETER No.	2
Wt OF DRY SOIL, Ws	42.35
DATE TESTING INITIATED	06/27/06
TIME TESTING INITIATED	1:31:00 PM

ELAPSED TIME (minutes)	ACTUAL READING	CORRECTED READING	DIAMETER (mm)	PERCENT FINER (%)
2	25.0	19.5	0.0332	31.7
5	21.5	16.8	0.0206	27.4
15	19.5	14.8	0.0121	24.1
30	17.5	12.8	0.0086	20.8
60	17.5	12.8	0.0061	20.8
222	17.0	12.3	0.0032	20.0
1130	16.0	10.9	0.0014	17.8

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ENVIRONMENTAL SERVICES

PARTICLE SIZE DISTRIBUTION TEST REPORT PAGE 2 OF 2

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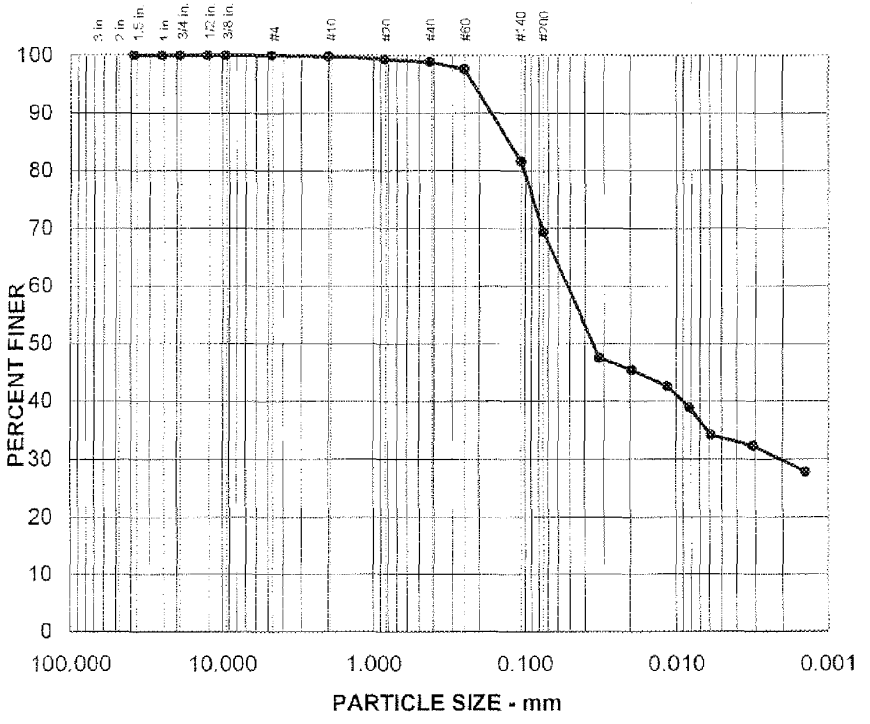
PARTICLE SIZE DISTRIBUTION TEST REPORT



% GRAVEL	% SAND	% SILT	% CLAY
0.0	30.6	35.7	33.7

SAMPLE INFORMATION	
Project Name:	State Marine Superfund Site
Project Number:	SE-0178
Sample ID:	C-SD-03
Sample Description:	Dark gray
Testing Date:	06/16/06

SAMPLE CLASSIFICATION	
Liquid Limit:	
Plastic Limit:	
Plasticity Index:	
USCS Classification	
Classification	
AASHTO Classification	
Classification	
Group Index	
DESCRIPTION:	
Sandy Clayey Silt	

KEMRON
ENVIRONMENTAL SERVICES

PARTICLE SIZE DISTRIBUTION TEST REPORT PAGE 1 OF 2

PARTICLE SIZE DISTRIBUTION DATA REPORT

REPORT FORM
ASTM D422

PROJECT:	State Marine Superfund Site
PROJECT No.:	SE-0178
SAMPLE No.:	C-SD-03
SAMPLE DESCRIPT:	Dark gray
TESTING DATE:	06/16/06
TESTED BY:	CLG/KFS
TRACKING CODE:	3755

MOISTURE CONTENT (DRY AND WET BASIS)	
TARE WEIGHT	198.13 g
WT WET SOIL + TARE	302.83 g
WT DRY SOIL + TARE	251.16 g
WT WATER, Ww	51.67 g
WT DRY SOIL, Ws	53.03 g
ASTM MOISTURE	97.44 %
EPA MOISTURE	49.35 %

SIEVE NUMBER	PERCENT PASSING
1.5	100.0 %
1.0	100.0 %
0.75	100.0 %
0.5	100.0 %
0.375	100.0 %
#4	100.0 %
#10	99.8 %
#20	99.3 %
#40	98.8 %
#60	97.6 %
#140	81.7 %
#200	69.4 %

HYDROMETER ANALYSIS	
HYDROMETER No.	2
Wt OF DRY SOIL, Ws	36.81
DATE TESTING INITIATED	06/27/06
TIME TESTING INITIATED	1:32:00 PM

ELAPSED TIME (minutes)	ACTUAL READING	CORRECTED READING	DIAMETER (mm)	PERCENT FINER (%)
2	31.0	25.5	0.0318	47.5
5	29.0	24.3	0.0196	45.4
15	27.5	22.8	0.0114	42.6
30	25.5	20.8	0.0082	38.8
60	23.0	18.3	0.0059	34.2
222	22.0	17.3	0.0031	32.3
1130	20.0	14.9	0.0014	27.8

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ENVIRONMENTAL SERVICES

PARTICLE SIZE DISTRIBUTION TEST REPORT PAGE 2 OF 2

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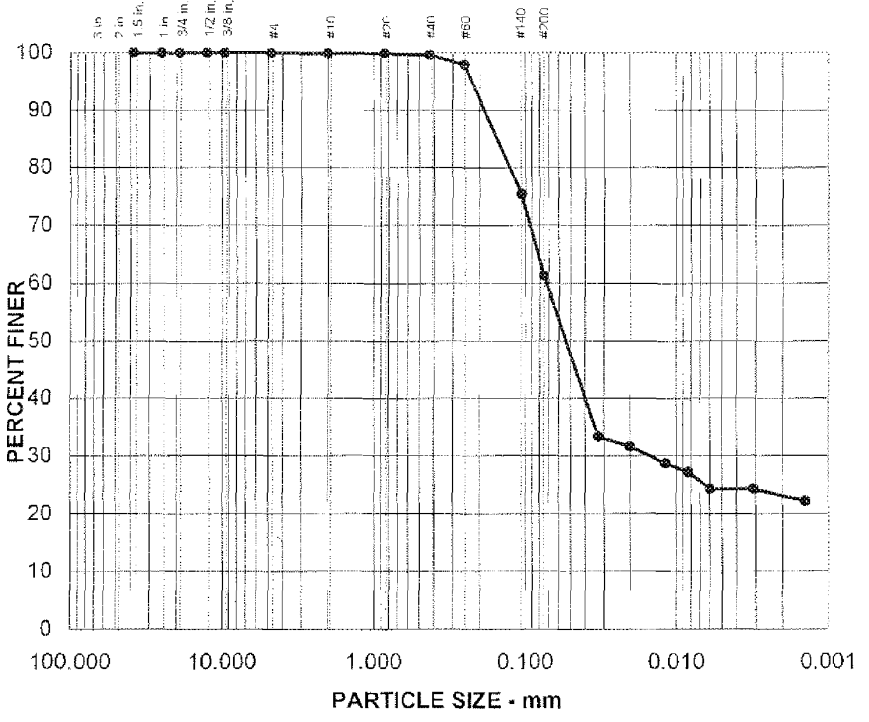
PARTICLE SIZE DISTRIBUTION TEST REPORT



% GRAVEL	% SAND	% SILT	% CLAY
0.0	38.7	37.1	24.2

SAMPLE INFORMATION	
Project Name:	State Marine Superfund Site
Project Number:	SE-0178
Sample ID:	D-SD-04
Sample Description:	Dark gray
Testing Date:	08/16/06

SAMPLE CLASSIFICATION	
Liquid Limit:	
Plastic Limit:	
Plasticity Index:	
USCS Classification	
Classification	
AASHTO Classification	
Classification	
Group Index	
DESCRIPTION:	
Sandy Clayey Silt	

KEMRON
ENVIRONMENTAL SERVICES

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PARTICLE SIZE DISTRIBUTION DATA REPORT

REPORT FORM
ASTM D422

PROJECT:	State Marine Superfund Site
PROJECT No.:	SE-0178
SAMPLE No.:	D-SD-04
SAMPLE DESCRIPT:	Dark gray
TESTING DATE:	06/16/06
TESTED BY:	CLG/KFS
TRACKING CODE:	3756

MOISTURE CONTENT (DRY AND WET BASIS)	
TARE WEIGHT	211.53 g
WT WET SOIL + TARE	316.98 g
WT DRY SOIL + TARE	278.26 g
WT WATER, Ww	38.70 g
WT DRY SOIL, Ws	66.75 g
ASTM MOISTURE	57.98 %
EPA MOISTURE	36.70 %

SIEVE NUMBER	PERCENT PASSING
1.5	100.0 %
1.0	100.0 %
0.75	100.0 %
0.5	100.0 %
0.375	100.0 %
#4	100.0 %
#10	99.9 %
#20	99.9 %
#40	99.6 %
#60	97.9 %
#140	75.4 %
#200	61.3 %

HYDROMETER ANALYSIS	
HYDROMETER No.	2
Wt OF DRY SOIL, Ws	40.93
DATE TESTING INITIATED	06/27/06
TIME TESTING INITIATED	1:33:00 PM

ELAPSED TIME (minutes)	ACTUAL READING	CORRECTED READING	DIAMETER (mm)	PERCENT FINER (%)
2	28.0	22.5	0.0325	33.3
5	26.0	21.3	0.0200	31.6
15	24.0	19.3	0.0117	28.6
30	23.0	18.3	0.0083	27.1
60	21.0	16.3	0.0060	24.2
222	21.0	16.3	0.0031	24.2
1130	20.0	14.9	0.0014	22.1

KEMRON
ENVIRONMENTAL SERVICES

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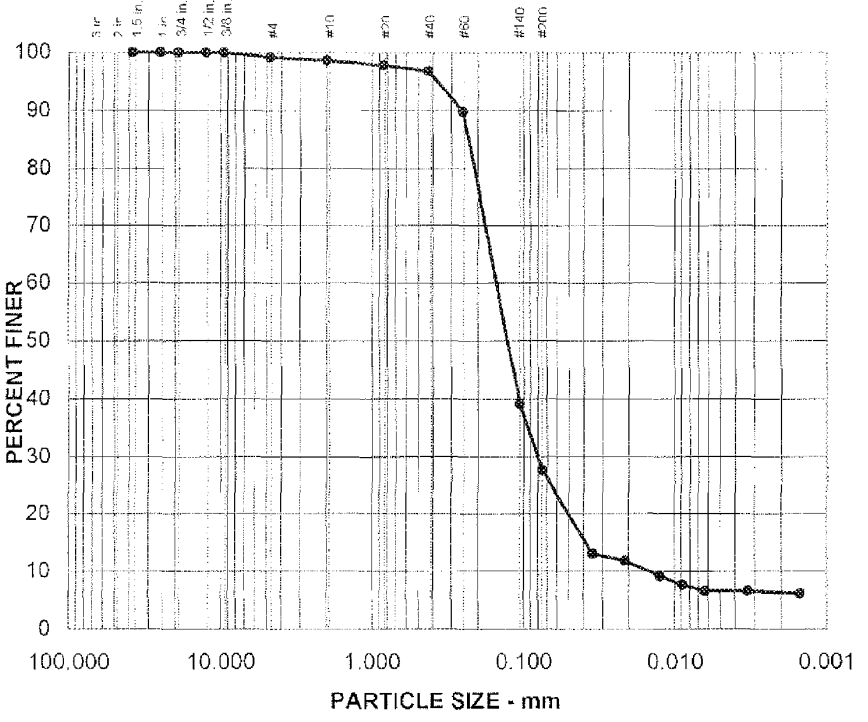
PARTICLE SIZE DISTRIBUTION TEST REPORT



% GRAVEL	% SAND	% SILT	% CLAY
0.8	71.6	21.0	6.6

SAMPLE INFORMATION	
Project Name:	State Marine Superfund Site
Project Number:	SE-0178
Sample ID:	E-SD-05
Sample Description:	Dark gray, shells
Testing Date:	06/16/06

SAMPLE CLASSIFICATION	
Liquid Limit:	
Plastic Limit:	
Plasticity Index:	
USCS Classification	
Classification	
AASHTO Classification	
Classification	
Group Index	
DESCRIPTION:	
Silty Sand	

KEMRON
ENVIRONMENTAL SERVICES

PARTICLE SIZE DISTRIBUTION TEST REPORT PAGE 1 OF 2

PARTICLE SIZE DISTRIBUTION DATA REPORT

REPORT FORM
ASTM D422

PROJECT:	State Marine Superfund Site
PROJECT No.:	SE-0178
SAMPLE No.:	E-SD-05
SAMPLE DESCRIPT:	Dark gray, shells
TESTING DATE:	06/16/06
TESTED BY:	CLG/KFS
TRACKING CODE:	3757

MOISTURE CONTENT (DRY AND WET BASIS)	
TARE WEIGHT	206.57 g
WT WET SOIL + TARE	334.12 g
WT DRY SOIL + TARE	301.41 g
WT WATER, Ww	32.71 g
WT DRY SOIL, Ws	94.84 g
ASTM MOISTURE	34.49 %
EPA MOISTURE	25.64 %

SIEVE NUMBER	PERCENT PASSING
1.5	100.0 %
1.0	100.0 %
0.75	100.0 %
0.5	100.0 %
0.375	100.0 %
#4	99.2 %
#10	98.5 %
#20	97.8 %
#40	96.8 %
#60	89.8 %
#140	39.1 %
#200	27.6 %

HYDROMETER ANALYSIS	
HYDROMETER No.	2
Wt OF DRY SOIL, Ws	26.16
DATE TESTING INITIATED	06/27/06
TIME TESTING INITIATED	1:34:00 PM

ELAPSED TIME (minutes)	ACTUAL READING	CORRECTED READING	DIAMETER (mm)	PERCENT FINER (%)
2	18.0	12.5	0.0347	13.0
5	16.0	11.3	0.0213	11.8
15	13.5	8.8	0.0125	9.2
30	12.0	7.3	0.0089	7.6
60	11.0	6.3	0.0063	6.6
222	11.0	6.3	0.0033	6.6
1130	11.0	5.9	0.0015	6.2

KEMRON
ENVIRONMENTAL SERVICES

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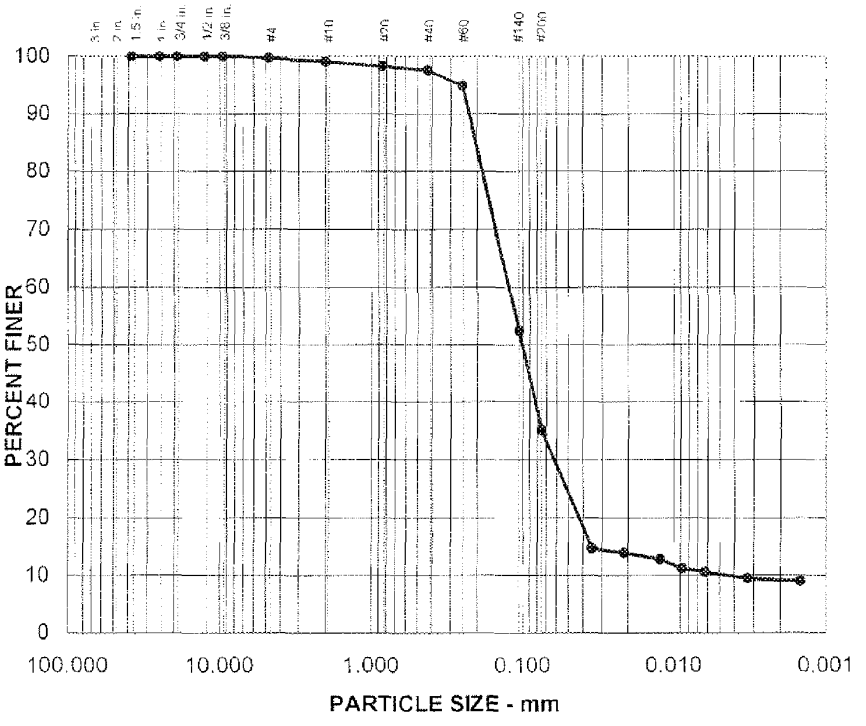
PARTICLE SIZE DISTRIBUTION TEST REPORT



% GRAVEL	% SAND	% SILT	% CLAY
0.3	64.5	25.0	10.2

SAMPLE INFORMATION	
Project Name:	State Marine Superfund Site
Project Number:	SE-0178
Sample ID:	F-SD-06
Sample Description:	Dark gray, shells
Testing Date:	06/16/06

SAMPLE CLASSIFICATION	
Liquid Limit:	
Plastic Limit:	
Plasticity Index:	
USCS Classification	
Classification	
AASHTO Classification	
Classification	
Group Index	
DESCRIPTION:	
Clayey Silty Sand	

KEMRON ENVIRONMENTAL SERVICES

PARTICLE SIZE DISTRIBUTION TEST REPORT PAGE 1 OF 2

PARTICLE SIZE DISTRIBUTION DATA REPORT

REPORT FORM
ASTM D422

PROJECT:	State Marine Superfund Site
PROJECT No.:	SE-0178
SAMPLE No.:	F-SD-06
SAMPLE DESCRIPT:	Dark gray, shells
TESTING DATE:	06/16/06
TESTED BY:	CLG/KFS
TRACKING CODE:	3758

MOISTURE CONTENT (DRY AND WET BASIS)	
TARE WEIGHT	240.45 g
WT WET SOIL + TARE	361.02 g
WT DRY SOIL + TARE	327.75 g
WT WATER, Ww	33.27 g
WT DRY SOIL, Ws	87.30 g
ASTM MOISTURE	38.11 %
EPA MOISTURE	27.59 %

SIEVE NUMBER	PERCENT PASSING
1.5	100.0 %
1.0	100.0 %
0.75	100.0 %
0.5	100.0 %
0.375	100.0 %
#4	99.7 %
#10	99.1 %
#20	98.3 %
#40	97.6 %
#60	94.9 %
#140	52.4 %
#200	35.1 %

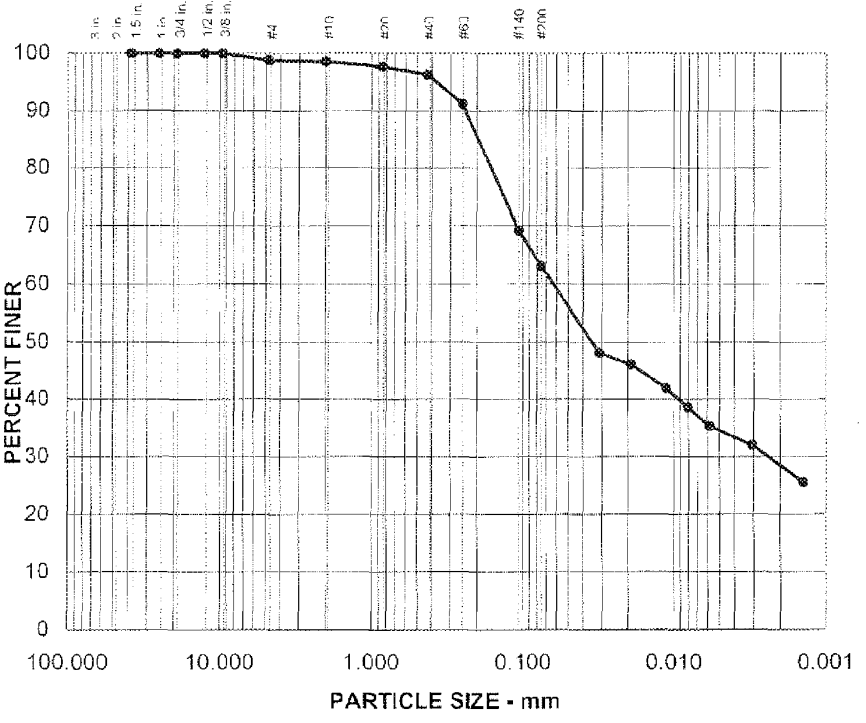
HYDROMETER ANALYSIS	
HYDROMETER No.	2
Wt OF DRY SOIL, Ws	30.68
DATE TESTING INITIATED	06/27/06
TIME TESTING INITIATED	1:35:00 PM

ELAPSED TIME (minutes)	ACTUAL READING	CORRECTED READING	DIAMETER (mm)	PERCENT FINER (%)
2	18.5	13.0	0.0346	14.7
5	17.0	12.3	0.0212	14.0
15	16.0	11.3	0.0123	12.8
30	14.5	9.8	0.0088	11.1
60	14.0	9.3	0.0062	10.5
222	13.0	8.3	0.0033	9.4
1130	13.0	7.9	0.0015	9.0

KEMRON
ENVIRONMENTAL SERVICES

PARTICLE SIZE DISTRIBUTION TEST REPORT PAGE 2 OF 2

PARTICLE SIZE DISTRIBUTION TEST REPORT



% GRAVEL	% SAND	% SILT	% CLAY
1.3	35.7	28.4	34.6

SAMPLE INFORMATION	
Project Name:	State Marine Superfund Site
Project Number:	SE-0178
Sample ID:	G-SD-07
Sample Description:	Dark blackish brown
Testing Date:	06/16/06

SAMPLE CLASSIFICATION	
Liquid Limit:	
Plastic Limit:	
Plasticity Index:	
USCS Classification	
Classification	
AASHTO Classification	
Classification	
Group Index	
DESCRIPTION: Sandy Silty Clay	

KEMRON ENVIRONMENTAL SERVICES

PARTICLE SIZE DISTRIBUTION TEST REPORT PAGE 1 OF 2

PARTICLE SIZE DISTRIBUTION DATA REPORT

REPORT FORM
ASTM D422

PROJECT:	State Marine Superfund Site
PROJECT No.:	SE-0178
SAMPLE No.:	G-SD-07
SAMPLE DESCRIPT:	Dark blackish brown
TESTING DATE:	06/16/06
TESTED BY:	CLG/KFS
TRACKING CODE:	3759

MOISTURE CONTENT (DRY AND WET BASIS)	
TARE WEIGHT	206.56 g
WT WET SOIL + TARE	326.52 g
WT DRY SOIL + TARE	266.37 g
WT WATER, Ww	60.15 g
WT DRY SOIL, Ws	59.71 g
ASTM MOISTURE	100.74 %
EPA MOISTURE	50.18 %

SIEVE NUMBER	PERCENT PASSING
1.5	100.0 %
1.0	100.0 %
0.75	100.0 %
0.5	100.0 %
0.375	100.0 %
#4	98.7 %
#10	98.5 %
#20	97.7 %
#40	96.3 %
#60	91.2 %
#140	69.2 %
#200	63.0 %

HYDROMETER ANALYSIS	
HYDROMETER No.	2
Wt OF DRY SOIL, Ws	37.64
DATE TESTING INITIATED	06/27/06
TIME TESTING INITIATED	1:36:00 PM

ELAPSED TIME (minutes)	ACTUAL READING	CORRECTED READING	DIAMETER (mm)	PERCENT FINER (%)
2	34.5	29.0	0.0310	48.0
5	32.5	27.8	0.0191	46.1
15	30.0	25.3	0.0112	42.0
30	28.0	23.3	0.0081	38.6
60	26.0	21.3	0.0058	35.3
222	24.0	19.3	0.0030	32.0
1130	20.5	15.4	0.0014	25.5

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ENVIRONMENTAL SERVICES

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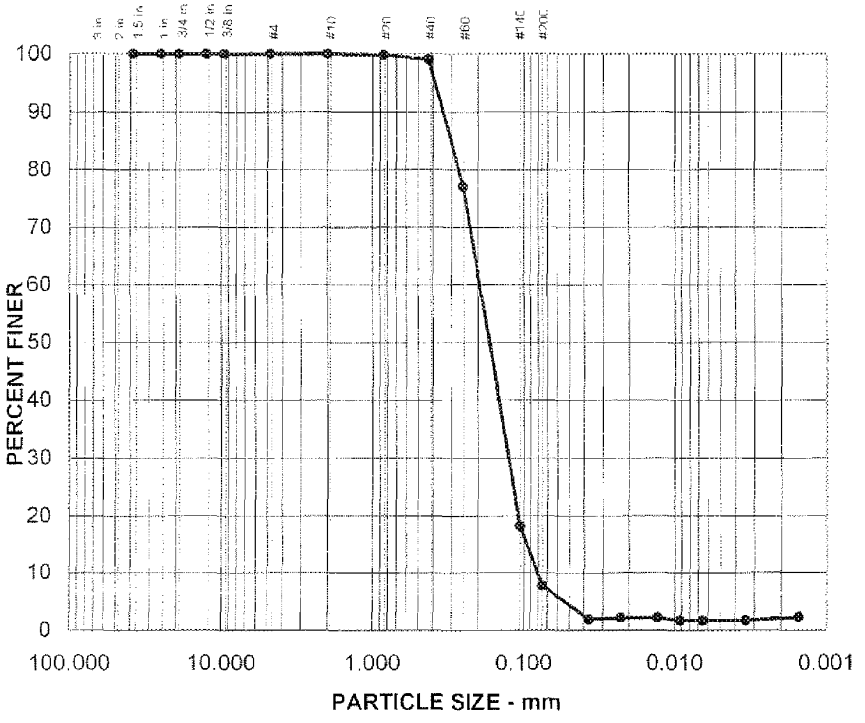
PARTICLE SIZE DISTRIBUTION TEST REPORT



% GRAVEL	% SAND	% SILT	% CLAY
0.0	92.2	6.1	1.7

SAMPLE INFORMATION	
Project Name:	State Marine Superfund Site
Project Number:	SE-0178
Sample ID:	I-SD-09
Sample Description:	Medium brown
Testing Date:	06/16/06

SAMPLE CLASSIFICATION	
Liquid Limit:	
Plastic Limit:	
Plasticity Index:	
USCS Classification	
Classification	
AASHTO Classification	
Classification	
Group Index	
DESCRIPTION: Sand	

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ENVIRONMENTAL SERVICES

PARTICLE SIZE DISTRIBUTION TEST REPORT PAGE 1 OF 2

PARTICLE SIZE DISTRIBUTION DATA REPORT

REPORT FORM
ASTM D422

PROJECT:	State Marine Superfund Site
PROJECT No.:	SE-0178
SAMPLE No.:	I-SD-09
SAMPLE DESCRIPT:	Medium brown
TESTING DATE:	06/16/06
TESTED BY:	CLG/KFS
TRACKING CODE:	3761

MOISTURE CONTENT (DRY AND WET BASIS)	
TARE WEIGHT	185.34 g
WT WET SOIL + TARE	321.15 g
WT DRY SOIL + TARE	288.62 g
WT WATER, Ww	32.53 g
WT DRY SOIL, Ws	103.28 g
ASTM MOISTURE	31.50 %
EPA MOISTURE	23.95 %

SIEVE NUMBER	PERCENT PASSING
1.5	100.0 %
1.0	100.0 %
0.75	100.0 %
0.5	100.0 %
0.375	100.0 %
#4	100.0 %
#10	100.0 %
#20	99.8 %
#40	99.1 %
#60	77.1 %
#140	18.1 %
#200	7.8 %

HYDROMETER ANALYSIS	
HYDROMETER No.	2
Wt OF DRY SOIL, Ws	8.02
DATE TESTING INITIATED	06/27/06
TIME TESTING INITIATED	1:38:00 PM

ELAPSED TIME (minutes)	ACTUAL READING	CORRECTED READING	DIAMETER (mm)	PERCENT FINER (%)
2	7.5	2.0	0.0369	1.9
5	7.0	2.3	0.0224	2.2
15	7.0	2.3	0.0130	2.2
30	6.5	1.8	0.0092	1.7
60	6.5	1.8	0.0065	1.7
222	6.5	1.8	0.0034	1.7
1130	7.5	2.4	0.0015	2.3

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ENVIRONMENTAL SERVICES

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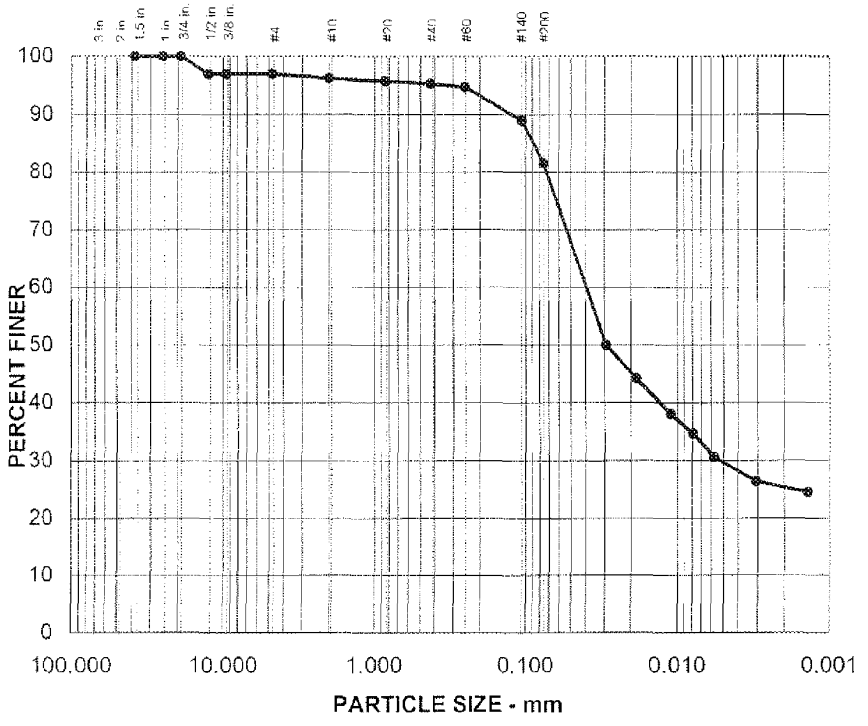
PARTICLE SIZE DISTRIBUTION TEST REPORT



% GRAVEL	% SAND	% SILT	% CLAY
3.0	15.5	51.9	29.6

SAMPLE INFORMATION	
Project Name:	State Marine Superfund
Project Number:	SE-0178
Sample ID:	H-SD-08
Sample Description:	Dark med gray, shells
Testing Date:	06/16/06

SAMPLE CLASSIFICATION	
Liquid Limit:	
Plastic Limit:	
Plasticity Index:	
USCS Classification	
Classification	
AASHTO Classification	
Classification	
Group Index	
DESCRIPTION:	
Sandy Clayey Silt	

KEMRON
ENVIRONMENTAL SERVICES

PARTICLE SIZE DISTRIBUTION TEST REPORT PAGE 1 OF 2

PARTICLE SIZE DISTRIBUTION DATA REPORT

REPORT FORM
ASTM D422

PROJECT:	State Marine Superfund
PROJECT No.:	SE-0178
SAMPLE No.:	H-SD-08
SAMPLE DESCRIPT:	Dark med gray, shells
TESTING DATE:	06/16/06
TESTED BY:	CLG/KFS
TRACKING CODE:	3760

MOISTURE CONTENT (DRY AND WET BASIS)	
TARE WEIGHT	179.21 g
WT WET SOIL + TARE	304.58 g
WT DRY SOIL + TARE	251.52 g
WT WATER, Ww	53.06 g
WT DRY SOIL, Ws	72.31 g
ASTM MOISTURE	73.38 %
EPA MOISTURE	42.32 %

SIEVE NUMBER	PERCENT PASSING
1.5	100.0 %
1.0	100.0 %
0.75	100.0 %
0.5	97.0 %
0.375	97.0 %
#4	97.0 %
#10	96.2 %
#20	95.7 %
#40	95.2 %
#60	94.7 %
#140	89.0 %
#200	81.5 %

HYDROMETER ANALYSIS	
HYDROMETER No.	2
WT OF DRY SOIL, Ws	58.94
DATE TESTING INITIATED	06/27/06
TIME TESTING INITIATED	1:37:00 PM

ELAPSED TIME (minutes)	ACTUAL READING	CORRECTED READING	DIAMETER (mm)	PERCENT FINER (%)
2	42.0	36.5	0.0292	49.9
5	37.0	32.3	0.0184	44.2
15	32.5	27.8	0.0110	38.1
30	30.0	25.3	0.0079	34.6
60	27.0	22.3	0.0057	30.5
222	24.0	19.3	0.0030	26.4
1130	23.0	17.9	0.0014	24.5

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ENVIRONMENTAL SERVICES

PARTICLE SIZE DISTRIBUTION TEST REPORT PAGE 2 OF 2

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B2202

Kemron
CHAIN OF CUSTODY RECORD

156 Starlite Drive
Marietta, OH 45750
Phone: (800) 373-4071 x176; FAX: (740) 373-483

Project/Contact Information	
Project #	344479.SN.01
Project Name	State Marine Superfund Site
Report Copy to	John Ynfante
Company Name/Contact	CH2M HILL-Houston / John Ynfante

Sampling Date	Sampling Time	Type: Comp	Type: Grab	Matrix: Water	Matrix: Sediment	Matrix: Air	Client Sample ID (9 Characters Max)	LAB QC	Total Number of Containers	TAL Metals	SVOCs (8270C)	PAHs (8270-SIM)	TOC	Grain Size
06/08/06	1100	X			X		A-SD-01			X	X	X	X	X
06/08/06	1205	X			X		B-SD-02			X	X	X	X	X
06/08/06	1530	X			X		C-SD-03			X	X	X	X	X
06/08/06	1640	X			X		D-SD-04			X	X	X	X	X
06/08/06	1420	X			X		E-SD-05			X	X	X	X	X
06/08/06	1725	X			X		F-SD-06			X	X	X	X	X
06/09/06	1050	X			X		G-SD-07			X	X	X	X	X
06/09/06	1015	X			X		H-SD-08			X	X	X	X	X
06/09/06	1145	X			X		I-SD-09			X	X	X	X	X
06/09/06	1015	X			X		FD-01			X	X	X	X	X
06/08/06	1530	X			X		MS/MSD	X						

Preservative

THIS AREA FOR LAB USE ONLY		
Lab #	Pg 1	of 1
Lab PM	Custody Review	
Log In	LIMS Verification	
pH	Cust Seals Y N Ice Y N	
QC Level 1 2 3		
Cooler Temperature		
Alternate Description	Lab ID	

Sampled By: Rob Price	Relinquished By: Rob Price
Received By:	Relinquished By:
Received By: Cara Strickler	Date/Time: 6/10/06 @ 0821

Special Instructions: SxS stored in a locked cooler over weekend.
C/C sealed, SxS intact; Cooler temp = 2° C

File: Lab_COC2.XLS

SAMPLE RECEIPT FORM

156 STARLITE DRIVE
MARIETTA, OH
45750
(740) 373-4071

Date: 6-10-06 Client: Chem Hill - State Maine

Shipped By: ( ) Fed-Ex ( ) UPS ( )DHL ( ) KEMRON ( ) Client ( ) Other 0821

Opened By: CHD

Logged By: CHD Login # L06 6-269

IR Temp Gun: (✓) D ( ) F

COOLER INFORMATION

Number	Cooler ID	Temp °C	Airbill#	COC#	Other
1	1363	2	790952870008		
2					
3					
4					
5					
6					

Were all coolers sealed?	(Y)	N	N/A
Were custody seals used on all coolers?	Y	(N)	N/A
Were custody seals intact?	Y	N	(N/A)
Was visible ice present?	(Y)	N	N/A
Were all coolers in the temperature range of 2-6C? (>6C*)	(Y)	N	N/A
Were the samples frozen?*	Y	(N)	N/A
Were COC papers provided?	(Y)	N	N/A
Were all sample containers intact?*	(Y)	N	N/A
Were all sample labels intact?	(Y)	N	N/A
Were all sample labels legible?*	(Y)	N	N/A
Did all sample labels match the COC?*	(Y)	N	N/A
Was the label information complete?*	(Y)	N	N/A
Were the correct containers used?*	(Y)	N	N/A
Were the correct preservatives added to water samples?*	Y	N	(N/A)
Was the pH tested on preserved water samples?	Y	N	(N/A)
Were pH ranges acceptable?*	Y	N	(N/A)
Was sufficient amount of sample provided?*	(Y)	N	N/A
Were bubbles present in VOA samples?*	Y	N	(N/A)
Were COC's signed and dated?	(Y)	N	N/A
Did samples arrive before hold time expired?*	(Y)	N	N/A
Are discrepancy forms attached?	Y	N	(N/A)

**Requires a discrepancy form*

Comments:

CRF #1
Revised 8/22/03

008276

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Attachment C

DEVELOPMENT OF OVERLAND FLOW SCREENING VALUES

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1. Introduction

This section presents the development of overland flow screening values for the protection of the benthic and fish communities in Sabine Lake. Complete exposure pathways were identified for the soil being transported to surface water and partitioned to sediment during storm events. The values were developed and evaluated using an overland flow pathway model developed by CH2M HILL and based on TCEQ guidance (TRRP 24) (**TNRCC, 2002**).

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2. Overland Flow to Sediment (^{SED}SOIL)

Screening values were developed for the soil being transported to surface water and partitioned to sediment by overland flow of stormwater (^{SED}Soil). ^{SED}Soil values for the site were calculated using the Universal Soil Loss Equation (USLE), which is defined as:

$$A = R * K * LS * C * P$$

where:

A = estimated average annual soil loss in tons per acre
R = rainfall-runoff erosivity factor
K = soil-erodibility factor
LS = topographic factor
C = cover-management factor
P = support practice factor

A detailed description of each variable in the USLE and how these variables were assigned or determined is presented below.

2.1 Rainfall-Runoff Erosivity Factor (R)

The Rainfall-Runoff Erositivity Factor (R factor) is an empirical value derived from several different sources. The literature indicates that when factors other than rainfall are held constant, soil losses from cultivated fields are directly proportional to a rainstorm parameter: total storm energy (E) * the maximum thirty-minute intensity (I). This parameter incorporates both raindrop impact and overland flow.

Isoderent maps covering the entire United States with R factor "contours" are available from the United States Department of Agriculture (USDA) and the United States Environmental Protection Agency (EPA). These maps must be visually interpolated to assign an R factor to the area of interest.

Sabine Lake is located within a hydrologic unit named for the lake, Hydrologic Unit Code (HUC) #12040201, which is halfway between the contours for an R factor of 550 and an R factor of 600. Thus, an R value of 575 was used for the area of interest.

2.2 Soil-Erodibility Factor (K)

The Soil-Erodibility Factor (K factor) is, in simple terms, the ease with which soil is detached by splash during rainfall or by surface flow or by a combination of both. Technically speaking, K is the rate of soil loss per rainfall erosion index unit as measured on a unit plot, which is 72.6 feet long with a 9 percent slope. It can also be thought of as the average long-term soil and soil-profile response to the erosive processes of rainstorms. These processes include soil detachment and transport by raindrop impact and surface flow, localized deposition due to topography and tillage-induced roughness, and rainwater infiltration into the soil profile.

There are many different soil series within the area of interest, mainly because the peninsula is man-made and the site is composed mostly of dredged soils. The soil cores analyzed for this project found mostly soils that can be described as silty clay, clayey silt, and clays. However, since the area was a landfill, the K factor used is a value associated with dumps. This produces a value of 0.38.

2.3 Topographic Factor (LS)

The effect of topography on erosion is measured in the topographic factor (LS factor). A value is calculated using the rill susceptibility, slope length, and slope incline, providing a representation of the ratio of soil loss on a given slope length and steepness to soil loss from a slope that has a length of 72.6 feet and a steepness of 9 percent, all other conditions being the same.

2.4 Slope Length Factor (L)

Erosion increases as slope length increases, and this is taken into account using the slope length factor (L factor). Slope length is defined as the horizontal distance from the origin of overland flow to the point where either (1) the slope gradient decreases enough that deposition begins, or (2) runoff becomes concentrated in a defined channel (Wischmeier and Smith, 1978). Slope lengths, as well as steepness values, are typically estimated from topographic contour maps. In this study, contour maps were used to estimate the longest length of flow and the steepest possible elevation drop for the site. These values were then used in the calculations to provide the worst case scenario. The slope length is the horizontal projection of plot length, not the length measured along the slope. In other words, this length is measured from each edge of the slope, but the length is completely horizontal, as opposed to parallel, to the slope.

An important factor to consider in the calculation of L is the ratio of rill erosion, caused by flow, to interrill erosion, caused mainly by raindrop impact (**Foster et al., 1977**). Land use is the main issue affecting the rill to interrill ratio. Because the pervious areas within the study site are mostly covered by bamboo, it was assumed the rill to interrill ratio is moderate in the area of interest.

2.5 Slope Steepness Factor (S)

Slope steepness plays an even greater role in erosion than slope length. The slope steepness factor, S, can be seen in McCool et al. (**1987**). There are separate equations for slopes longer than 15 feet and slopes shorter than 15 feet. Slopes with steepness values of 9 percent or less are also calculated differently from those slopes having steepness values greater than 9 percent.

As was mentioned earlier, contour maps were used in this study to estimate the slope steepness for each individual site in the area of interest. The estimated slope for the purposes of this calculation was 1.25%, producing an LS value of 0.25.

2.6 Cover Management Factor (C)

The cover management (C factor) is the ratio of soil loss with specific cropping and management practices to the corresponding loss with upslope and downslope tillage and continuously fallow conditions. This factor includes the effects of cover, crop sequence, productivity level, length of growing season, tillage practices, residue management, and the expected time distribution of erosive rainstorms. The Natural Resources Conservation Service (NRCS) provides charts of C-factor values for various land uses.

Again, the great majority of the pervious areas associated with the site are covered in bamboo. Therefore, using an estimated percentage of groundcover near 80% and noting this is a weed-filled area (as opposed to intentional planting and cultivating), a C-factor 0.04 was assigned.

2.7 Support Practice Factor (P)

The support practice factor (P factor) is the ratio of soil loss with a specific support practice to the corresponding loss with upslope and downslope tillage and continually fallow conditions. These practices mainly affect erosion by modifying the flow pattern, grade, or direction of surface runoff and by reducing the amount and rate of runoff (Renard and Foster, 1985). For cultivated land, the support practices considered include contouring, strip cropping, terracing, and sub-surface drainage. On dry land or rangeland areas, soil-disturbing practices oriented on or near the contour that result in storage of moisture and reduction of runoff are also used as support practices.

The reduction in soil loss at a given slope is about 50 percent for the next more intensive practice. An overall P factor value is computed as a product of P subfactors for individual support practices (those mentioned above), which are typically used in combination. Factor values can be found on charts provided by USDA, among other entities. In this study, however, few, if any, erosion reducing practices are used. Therefore, a P factor of 1 was used for each site representing practices that neither inhibit erosion nor encourage erosion.

2.8 Delivery Ratio

The edge of stream load is not always equal to the edge of field load because not all of the sediment created by upland erosion reaches the watershed outlet. Several processes occur within each site that prohibits the eroded material from reaching the watershed outlet. These processes include redeposition in surface water storage, trapping by vegetation and plant residues, and local scour and redeposition in rills and channels. In addition, many factors inhibit the delivery of eroded material to the watershed outlet, including climate soil particle size and texture, size and proximity of the upland erosion source, ratio of rill versus sheet erosion, total watershed area, watershed length and relief, and drainage density (the ratio of total stream length within the system divided by the area).

To determine the delivery ratio, a calculation can be performed using the area, relief, length, and bifurcation ratio of the stream of interest, or it can be found on graphs provided by USDA. These graphs show that as drainage area increases, the delivery ratio decreases. In

this study, however, the site is a small area immediately adjacent to the lake. Therefore, it was assumed that the delivery ratio is 100 percent.

Combining all of the above factors and the site area (17.28 acres), the USLE produces a value of 38 tons of soil lost per acre per year for this site. This is quite high, mainly due to the very high rainfall (and, thus, high R factor) per year in the area.

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3. Site- and Chemical-Specific (^{SED}SOIL) Values

The following algebraic equation is the basis for the calculation of the ^{SED}Soil PCL for an affected property (AP):

$$(SL_{AP} * C_{AP}) + (SL_{OA} * C_{OA}) = SL_{TOT} * C_{TOT}$$

where:

- SL_{AP} = Sediment load from the affected property (kg/year) estimated using the method presented above.
- C_{AP} = The ^{SED}Soil PCL (mg/kg) for the surface water runoff pathway from the affected property.
- SL_{OA} = Sediment load (kg/year) estimated for areas of the watershed upstream of the site using the method presented above.
- C_{OA} = Texas-specific median background soil concentration (mg/kg) for inorganic COCs (if available) or affected property "background" (if available). This term is zero for organic compounds.
- SL_{TOT} = Total sediment load (kg/year) estimated for the entire contributing watershed using the method presented above. C_{TOT} = COC Sediment RBEL (mg/kg)
- OA = Other Area, this is the area of the contributing watershed other than the AP.

Solving for C_{AP} (the ^{SED}Soil PCL) gives:

$$C_{AP} = \frac{(SL_{TOT} * C_{TOT}) - (SL_{OA} * C_{OA})}{SL_{AP}}$$

This equation is used for inorganic COCs. For organic COCs, there are no Texas-specific median background soil concentrations (C_{OA} = 0), and the equation simplifies to:

$$C_{AP} = \frac{(SL_{TOT} * C_{TOT})}{SL_{AP}}$$

According to the recommended methods for developing ^{SED}Soil (**TNRCC, 2002**), concentrations of other areas upstream in the same watershed are considered the baseline. Stormwater contributions are added to this baseline prior to comparing measured site concentrations to screening values. Note, however, that there is no area "upstream" of the site contributing overland flow to Sabine lake. In other words, all overland flow transported to the lake by this site will have only ever been on this site, and the value of SL_{OA} for this particular study is zero.

Site- and chemical-specific ^{SED}Soil values are presented in **Attachment A, Table 1**. The reader will note that, while these values are exceeded by the analyzed samples taken from the site, the size of the entire watershed contributing to Sabine Lake is 1,040 square miles (approximately 665,600 acres) and the lake itself is a 90,000 acre lake used for recreation purposes. Any sediment contribution made by this site would be diluted greatly simply due to the amount of overland flow that enters the lake, as well as constantly resuspended due to the high boat traffic.

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