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FINAL

SITE INSPECTION REPORT

SITE 43 AGAN STREET DUMP
MCB, CAMP LEJEUNE, NORTH CAROLINA

CONTRACT TASK ORDER 0003

Prepared For:

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LIST OF ACRONYMS AND ABBREVIATIONS

ASTM	American Society for Testing and Materials
AWQC	Ambient Water Quality Criteria
Baker	Baker Environmental, Inc.
bgs	below ground surface
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act of 1980
CLEAN	Comprehensive Long-Term Environmental Action Navy
CLP	Contract Laboratory Program
CRQL	Contract Required Quantitation Limit
CS_2	carbon disulfide
DoN	Department of the Navy
DOT	Department of Transportation
EMD	Environmental Management Department
ER-L	Effects Range-Low
ER-M	Effects Range-Median
ESE	Environmental Science and Engineering, Inc.
eV	electron volt
°F	degree Fahrenheit
FFA	Federal Facilities Agreement
FWSV	Freshwater Water Quality Screening Values
gpm	gallons per minute
IAS	Initial Assessment Study
I.D.	inside diameter
IRP	Installation Restoration Program
K_{oc}	organic carbon partition coefficient
LANTDIV	Atlantic Division, Naval Facilities Engineering Command
MCAS	Marine Corps Air Station
MCB	Marine Corps Base
MCL	Maximum Contaminant Level
mgd	million gallons per day
mg/kg	milligram per kilogram
mg/L	milligrams per liter
msl	mean sea level
NC DEHNR	North Carolina Department of Environment, Health and Natural Resources
NCWQS	North Carolina Water Quality Standards
NEESA	Naval Energy and Environmental Support Activity
NPL	National Priorities List
NREA	National Resources and Environmental Affairs

PAH	polynuclear aromatic hydrocarbon
PCB	polychlorinated biphenyl
PID	photoionization detector
ppm	parts per million
PVC	polyvinyl chloride
QA/QC	Quality Assurance/Quality Control
RCRA	Resource Conservation and Recovery Act
RI/FS	Remedial Investigation/Feasibility Study
SI	Site Inspection
SMCL	Secondary Maximum Contaminant Level
SSV	Sediment Screening Values
STP	Sewage treatment plant
SVOC	Semivolatile Organic Compound
TAL	Target Analyte List
TCL	Target Compound List
TSCA	Toxic Substances Control Act
µg/kg	microgram per kilogram
µg/L	micrograms per liter
USEPA	United States Environmental Protection Agency
USGS	United States Geological Survey
VOC	Volatile Organic Compound

EXECUTIVE SUMMARY

Introduction

This report presents the results of a Site Inspection (SI) conducted at Site 43, Agan Street Dump, Marine Corps Base (MCB), Camp Lejeune. This SI has been conducted by Baker Environmental, Inc. (Baker) for the Atlantic Division, Naval Facilities Engineering Command (LANTDIV) under Contract Number N62470-89-D-4814.

The objectives of the SI are to (1) determine whether there is a release or potential release of hazardous substances and the nature of the associated threats; (2) preliminarily assess the nature and extent of contamination and volume/type of wastes at the site; and (3) determine whether further action or investigations are required.

The Agan Street Dump (Site 43) is located adjacent to Agan Road on the Marine Corps Air Station (MCAS) portion of MCB, Camp Lejeune. The site is approximately 20 acres in size and heavily wooded and vegetated. Edwards Creek and Strawhorn Creek form the northern, eastern, and southern borders of the site. Agan Street borders the site to the west. A large marsh is present along both creeks. This marsh extends to the New River, which is approximately one-half mile east of the site. The site experienced flooding during portions of the field investigation in July and August 1991 due to periodic heavy rainstorms.

An abandoned sewage treatment plant (STP) is located adjacent to the site along Agan Street. Construction related debris and sludge from the STP were reportedly disposed of on the surface at the site. The construction debris was encountered sporadically, but no large debris piles were noted. No signs of sludge disposal were noted during the SI investigation.

Study Description

The SI was conducted in accordance with the document entitled Site Inspection Work Plan for Marine Corps Base, Camp Lejeune (NUS, 1991b). The field investigation consisted of the following:

- Installation of three shallow two-inch polyvinyl chloride (PVC) monitoring wells to a depth of approximately 12 feet. The locations of these wells are shown on Figure 1-3.

- Collection of two soil samples from each well boring: one near the ground surface and one just above the water table. (The subsurface sample could not be collected at all locations due to a high water table.)

- Augering of five soil borings (one less than 15 feet deep) at those locations identified on Figure 1-3. Collection of two soil samples from each borehole: one near the surface and one just above the water table. The subsurface sample could not be collected at all locations due to a high water table.

- Collection of one round of groundwater samples for analysis of Target Compound List (TCL) organics and Target Analyte List (TAL) inorganics.

- Collection of five surface water/sediment samples in two creeks and the marsh, as shown on Figure 1-3. Analysis of all surface water/sediment samples for TCL organics and TAL inorganics.

- Collection of Quality Assurance/Quality Control (QA/QC) samples in accordance with Naval Energy and Environmental Support Activity (NEESA) 20.02-047B (Table 3-4).

- Validation of all samples in accordance with United States Environmental Protection Agency (USEPA) guidelines.

Study Findings

Following is a summary of the types of contaminants that were detected in soil, groundwater, surface water, and sediment samples, and the significance thereof, based upon the limited data collected under this SI.

Soil

Polynuclear aromatic hydrocarbons (PAHs) were detected in one surface soil sample (less than 2 parts per million [ppm] total PAH) at location 43MW01. PAHs may be present in this area of the site since two downgradient sediment samples also exhibited low levels of PAHs. No other area of the site exhibited similar organic soil contamination. Various inorganic contaminants such as copper, chromium, manganese, nickel, and zinc exceeded base-specific background levels in one or more samples. No inorganic level exceeded regional background values.

Groundwater

Groundwater was not contaminated with PAHs even at the location where PAHs were observed in soil. This is likely due to the "immobile" nature of PAHs. The only organic contaminant present in groundwater is carbon disulfide. This contaminant was not detected in any other medium. In general, the groundwater does not appear to be contaminated with organics, based on the single occurrence and low level of this contaminant.

Two monitoring wells, 43MW01 and 43MW02, exhibited elevated inorganic levels of beryllium, cadmium, chromium, lead, manganese, and nickel. The concentrations of these contaminants in these wells exceeded either federal maximum contaminant levels (MCLs) and/or state groundwater standards. Groundwater near this site is not utilized as a potable water supply. The nearest water supply wells are located over one-half mile away. These supply wells obtain water from the deeper portion (greater than 160 feet) of the Castle Hayne Aquifer.

Surface Water

Slightly elevated levels of copper, iron, lead, manganese, and zinc were detected in surface water above state and/or federal standards. Based on these standards, aquatic life could potentially be adversely impacted. Benzoic acid (a semivolatile organic compound) was the only organic contaminant detected in the surface water samples. There is no state water quality standard, federal Ambient Water Quality Criteria (AWQC), or Freshwater Water Quality Screening Value (FWSV) for benzoic acid.

Sediments

PAHs may have migrated via surface runoff into Edwards Creek and the low-lying marsh areas. PAHs were detected at the confluence of Edwards Creek and Strawhorn Creek, just downgradient from the soil sample location where PAHs were detected at the surface. Along with the occurrences of PAHs at two of the five sediment sampling locations, the pesticides 4,4'-DDE and 4,4'-DDD were present in low concentrations (less than 580 micrograms per kilogram [µg/kg]) at three locations. No pesticides were detected in soil, groundwater, or surface water. The pesticides may be associated with historical mosquito control practices.

(Low pesticide levels have been detected in most streams and creeks throughout MCB, Camp Lejeune.)

Sediment screening values for the protection of biota were exceeded by lead and zinc levels in sediment. The concentrations of these contaminants fall in the range as potentially causing "possible" adverse effects on biota. The pesticides detected in the sediment were at levels where adverse effects on biota are "probable."

Conclusions

Based on background information regarding the site and the analytical results of the SI, the following conclusions are presented.

1. No conclusive signs of hazardous waste disposal are apparent throughout the site area. Frequent flooding of the site area (during the wet seasons) may have washed away most of the sludges that were previously disposed.

2. PAH constituents were detected in one soil boring at relatively low levels. The source of the PAHs cannot be determined without any knowledge of what the sludges contained.

3. The presence of inorganic contaminants within the soil at Site 43 may be the result of past disposal practices. The concentrations of several inorganic contaminants were above base-specific background levels. However, no inorganic contaminants in soil were present in concentrations above published regional values.

4. No organic contaminants in soil exceeded the USEPA Region III risk-based concentrations.

5. No debris (i.e., visual evidence of disposal) was encountered in any of the test borings.

6. Concentrations of metals within groundwater samples collected from all three monitoring wells exceed state and/or federal drinking water standards. However, studies conducted at many sites throughout MCB, Camp Lejeune also show that levels of metals within shallow groundwater are elevated. Furthermore, total (rather than dissolved) levels were determined for groundwater samples. As such, elevated levels of turbidity or sediment may tend to falsely indicate excessive concentrations of certain contaminants.

7. Surface water and sediments contain inorganics above standards for the protection of aquatic life/biota. Contamination was not widespread and the concentration levels were only slightly above the standards. No conclusion can be made with respect to whether the inorganic levels are a result of the disposal activities or whether the levels are elevated throughout the MCAS, New River marshes and streams.

8. Pesticides in sediment are more likely associated with pest control measures rather than sludge disposal. Many of the streams sampled throughout MCB, Camp Lejeune have exhibited low levels of pesticides in sediments.

9. Low levels of PAHs were detected in sediment samples collected from Edwards Creek and the marsh area. The presence of PAHs in sediments could suggest that these contaminants have migrated from the site. There are no criteria to assess whether the PAH levels adversely impact aquatic life/biota.

10. The database with respect to the background quality of soil, surface water, groundwater, and sediment is limited. As such, it is not possible at this point to accurately assess the nature of contaminants present at Site 43.

11. It is not possible, based upon the limited sample locations, to accurately define the extent of contamination at Site 43.

Recommendations

1. A remedial investigation/feasibility study (RI/FS) should be conducted to further evaluate the nature and extent of soil, sediment, surface water, and groundwater contamination. As part of the RI, a baseline human health and ecological risk assessment should be performed.

2. Historical aerial photographs should be acquired to identify surrounding areas in which disposal activities may have occurred.

3. Background and upgradient shallow groundwater quality should be assessed to determine whether elevated levels of inorganic contaminants within the shallow aquifer are due to disposal operations or to the "natural" composition of local waters.

4. Additional groundwater information should be collected regarding the shallow aquifer to determine the horizontal extent of inorganic contamination. In addition, the quality of groundwater within the deeper Castle Hayne Aquifer should be assessed (on site and off site) to evaluate the vertical extent of contamination.

5. The influence that contamination from the site has had (or may potentially have) upon local water supply wells should be evaluated.

6. The composition of off-site soils, surface water and sediment should be determined to characterize background contaminant levels, thus allowing for more accurate assessment of on-site conditions.

1.0 INTRODUCTION

This report presents and evaluates the results of a Site Inspection (SI) completed at Site 43, Agan Street Dump, at Marine Corps Base (MCB), Camp Lejeune, North Carolina. This SI has been prepared by Baker Environmental, Inc. (Baker) under contract to the Atlantic Division, Naval Facilities Engineering Command (LANTDIV).

MCB, Camp Lejeune was placed on the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) National Priorities List (NPL) effective November 4, 1989 (54 Federal Register 41015, October 4, 1989). Subsequent to this listing, the United States Environmental Protection Agency (USEPA) Region IV, the North Carolina Department of Environment, Health and Natural Resources (NC DEHNR), and the United States Department of the Navy (DoN) entered into a Federal Facilities Agreement (FFA) for MCB, Camp Lejeune. The primary purpose of the FFA was to ensure that environmental impacts associated with past and present activities at the MCB are thoroughly investigated, and that appropriate CERCLA response/Resource Conservation and Recovery Act (RCRA) corrective action alternatives are developed and implemented as necessary to protect the public health and welfare, and the environment (MCB, Camp Lejeune FFA, 1989).

As part of the FFA, a SI was determined to be required at Site 43. The purpose of the SI is to (1) determine whether there is a release or potential release of hazardous substances and the nature of the associated threats; (2) preliminarily assess the nature and extent of contamination and the volume/type of wastes at the site; and (3) to determine whether further action or investigations are required. This was accomplished through environmental sampling and chemical analysis of various media.

The objectives of this SI Report are to: (1) describe the site investigation activities performed on site during July and August 1991; (2) present the findings of the site investigation; and (3) present conclusions based on present or potential human health or environmental risks. The report also is provided to make recommendations regarding the status of the site with respect to the Installation Restoration Program (IRP).

This report documents the following:

- Environmental Setting (Section 2).
- Operational History and Waste Characteristics (Section 3).
- Preliminary Site Characterization (Section 4).
- Conclusions and Recommendations (Section 5).

Test boring logs and monitoring well information are provided in Appendix A. Laboratory data (Form I) for soil, groundwater, surface water, and sediment are given in Appendices B, C, D, and E, respectively. Quality Assurance/Quality Control (QA/QC) data (e.g., trip blanks, rinsate blanks, etc.) are provided in Appendix F. Data validation reports for this SI, as well as the data for SIs at Sites 44, 63, and 65 have been submitted under separate cover.

This SI was conducted in conjunction with SIs at the following MCB, Camp Lejeune sites:

- Jones Street Dump (Site 44)
- Verona Loop Dump (Site 63)
- Engineer Area Dump (Site 65)

The field investigations were conducted concurrently as one field program.

1.1 Background and Setting

The purpose of this section is to summarize and evaluate existing information pertaining to Site 43. The current understanding of the physical setting of the site, the history of the site, and the existing information related to previous environmental investigative activities are described herein.

This section specifically addresses the location and setting of the site, historical events associated with past usage or disposal activities, permit and regulatory history, and past remedial actions.

Additional information can be found in the following documents:

- Initial Assessment Study (IAS) of Marine Corps Base Camp Lejeune, North Carolina (Water and Air Research, 1983)
- Hydrogeology of Aquifers in Cretaceous and Younger Rocks in the Vicinity of Onslow and Southern Jones Counties, North Carolina (U.S. Geological Survey [USGS], 1990b)
- Continuous Seismic Reflection Profiling of Hydrogeologic Features Beneath New River, Camp Lejeune, North Carolina (USGS, 1990a)
- Assessment of Hydrologic and Hydrogeologic Data at Camp Lejeune Marine Corps Base, North Carolina (USGS, 1989)

1.1.1 Site Location and Setting

MCB, Camp Lejeune is located within the Coastal Plain Physiographic Province in Onslow County, North Carolina, approximately 45 miles south of New Bern and 47 miles north of Wilmington. The facility covers approximately 236 square miles. This includes the recent acquisition of approximately 64 square miles west of the facility within the Greater Sandy Run Area of the county. The military reservation is bisected by the New River, which flows in a southeasterly direction and forms a large estuary before entering the Atlantic Ocean.

The eastern border of MCB, Camp Lejeune is the Atlantic shoreline. The western and northwestern boundaries are U.S. Route 17 and State Route 24, respectively. The City of Jacksonville, North Carolina, borders MCB, Camp Lejeune to the north. MCB, Camp Lejeune is depicted in Figure 1-1.

Site 43 is located at the Marine Corps Air Station (MCAS), New River portion of MCB, Camp Lejeune, to the southeast of the Camp Geiger area. The Air Station and Camp Geiger are considered as a single urban area possessing two separate missions and supported by two unrelated groups of personnel. MCAS, New River encompasses 2,772 acres and is located in the northwestern section of the Complex and lies approximately five miles south of Jacksonville. MCAS, New River includes air support activities, troop housing and personnel support facilities, all of which immediately surround the aircraft operations and maintenance areas.

Camp Geiger, located directly north of MCAS, New River, contains a mixture of troop housing, personnel support and training facilities. Currently, the area is utilized by a number of groups which have no direct relationship to one another. The majority of the land surrounding this area is comprised of buffer zones and unbuildable marshland.

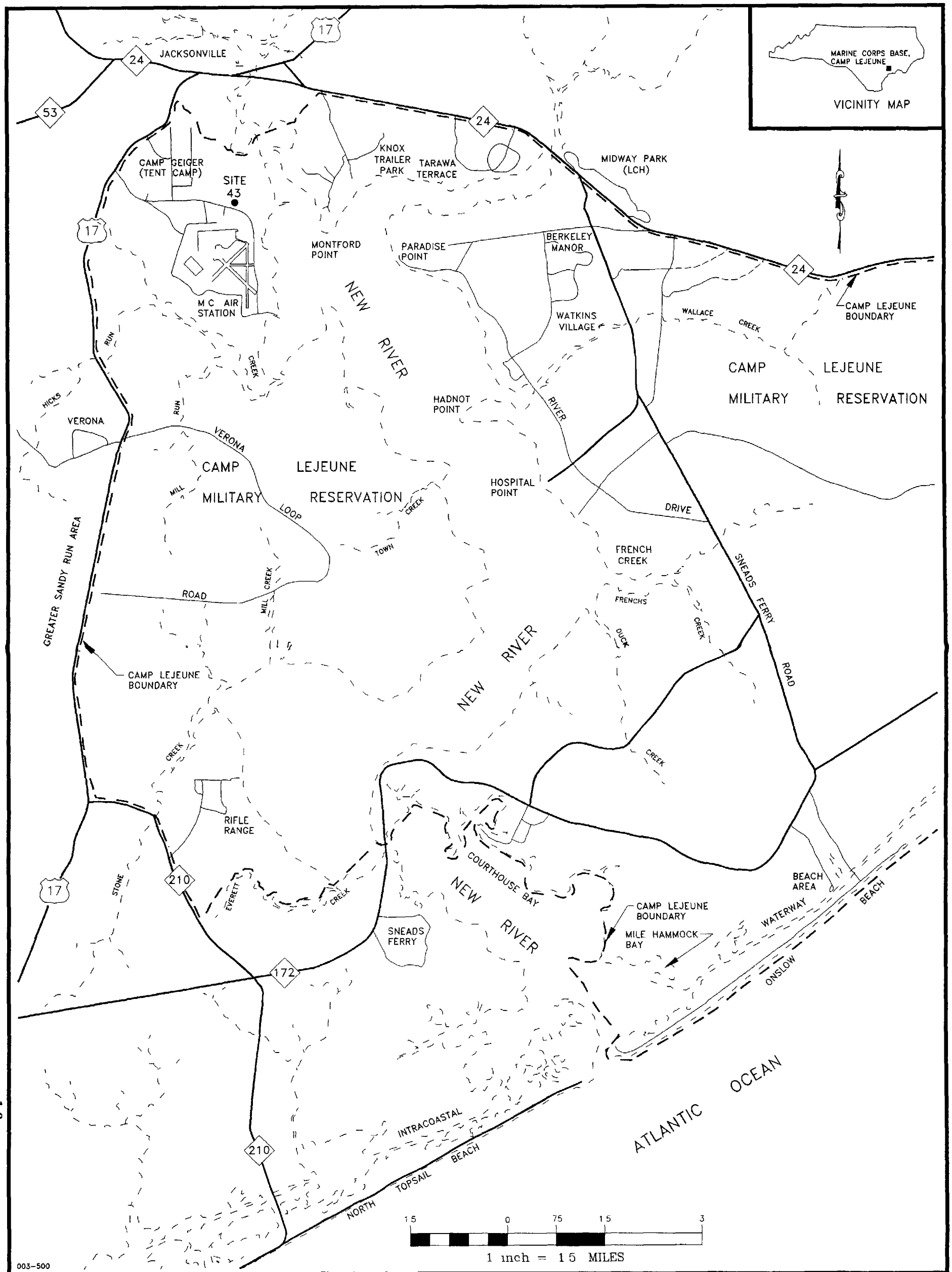


FIGURE 1-1
LOCATION MAP
SITE 43 - AGAN STREET DUMP

MCB, CAMP LEJEUNE
JACKSONVILLE, NORTH CAROLINA

The site is located about one mile north of the main entrance to MCAS, New River and one mile west of the runway, as shown on Figure 1-1. Site 43 is located off of Agan Street and adjacent to an abandoned sewage treatment plant (STP) and Edwards Creek, as shown on Figure 1-2. To the immediate north of the site is Edwards Creek. Strawhorn Creek, which discharges into Edwards Creek, borders the site to the east and south. Edwards Creek discharges into the New River approximately one-half mile north of the site.

The Agan Street Dump is a level area approximately 20 acres in size. Boards, trash, fiberglass and STP sludge reportedly were disposed on the ground surface. The years of operation are unknown (Halliburton/NUS, 1991). However, the STP ceased operations in 1975. There is little evidence of construction debris and/or sludge disposal areas at the site. Much of the area is heavily overgrown and wooded with various narrow dirt roads present throughout the site. It is unlikely that these roads are utilized by military vehicles. It is more probable that the roads presently are used for biking or as walking trails.

During the field investigation (July to August 1991), much of the site experienced flooding due to several rainy periods. Marshes are present around most of the site as shown on Figure 1-2.

1.1.2 Site History

The dump reportedly received mainly construction debris, fiberglass, and sludge from the wastewater treatment plant. The actual years of operation are unknown. It is reported that minor quantities of solid wastes and possibly petroleum, oil, and lubricants (POL) wastes may also have been disposed on site (Water and Air Research, 1983). However, the type and quantity of the wastes are not known. Figure 1-2 is a site map of the Agan Street Dump.

1.1.3 Permit and Regulatory History

The Agan Street Dump, Site 43, has no permit or regulatory history for waste disposal. The STP was only permitted to accept sanitary sewage.

1.1.4 Remedial Actions to Date

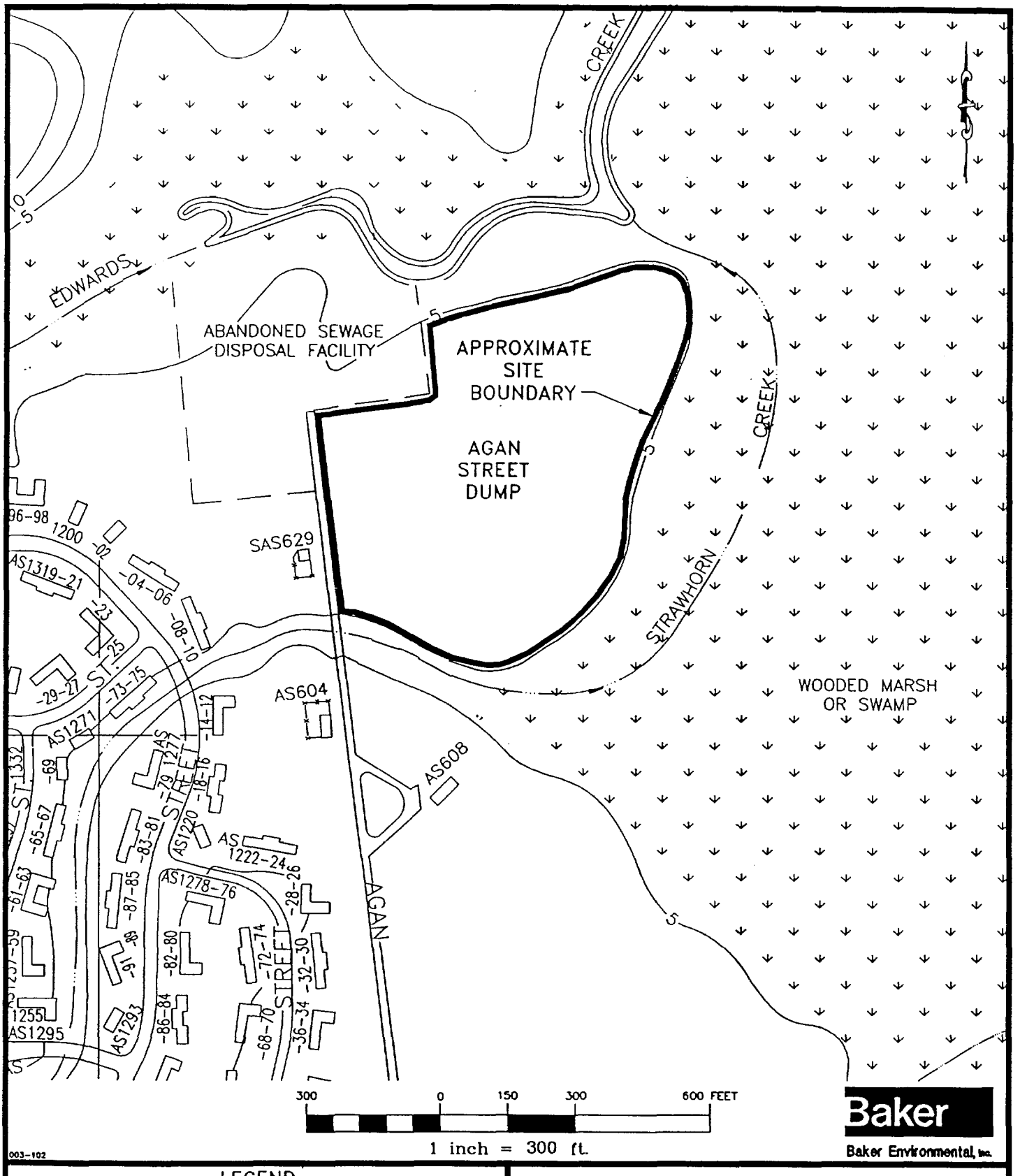
There have been no remedial actions undertaken at Site 43.

1.2 Summary of Site Investigations

An Initial Assessment Study (IAS) was conducted in 1983 by Water & Air Research, Inc. The IAS is analogous to USEPA's Preliminary Assessment, where existing information is compiled and evaluated (i.e., no sampling activities are performed). The IAS concluded that only construction debris was burned on site and no hazardous waste activities occurred.

In 1991, a Site Inspection was conducted by the Navy/Marine Corps. Halliburton/NUS developed the SI Project Plans. These Plans were finalized in July 1991. Baker initiated the field investigations.

The SI was conducted to preliminarily characterize the site through the collection of environmental data. Environmental sampling and chemical analysis was performed on soil, groundwater, surface water and sediments. The SI field activities were conducted in accordance with the Final Sampling and Analysis Plan for this site (NUS, 1991a). SI field activities were conducted in conjunction with SIs at other MCB, Camp Lejeune sites:



LEGEND

CREEK LOCATION AND FLOW DIRECTION

—5— TOPOGRAPHIC CONTOUR (FEET/MSL)

FIGURE 1-2
SITE MAP
AGAN STREET DUMP
SITE 43

MCB, CAMP LEJEUNE
JACKSONVILLE, NORTH CAROLINA

- Jones Street Dump (Site 44)
- Verona Loop Dump (Site 63)
- Engineer Area Dump (Site 65)

The Baker field team mobilized to MCB, Camp Lejeune on July 22, 1991 and initiated field activities on July 23, 1991. Field activities were completed on August 26, 1991. The following sections describe the methods utilized in the performance of the SI.

1.2.1 Soil Investigation

Five (5) soil borings were drilled on site using a CME-75 drilling rig. The borings were advanced to the water table using 3-1/4-inch hollow stem augers. Split-spoon samples were collected at three-foot intervals in accordance with American Society of Testing Materials (ASTM) Method D1586. Figure 1-3 depicts the sampling locations. The sampling areas are located where disposal activities allegedly occurred.

Soil lithology was recorded by the site geologist. Soil boring logs are included in Appendix A. Portions of soil from each split-spoon were placed in glass jars and screened for total volatile organics using an HNu photoionization (10.2 electron volt (eV) lamp) detector (PID). All PID readings were below the background concentration [1.0 parts per million (ppm)].

Soil samples from two depths (0 to 2 feet depth, and from just above the groundwater/soil interface) were collected from each borehole and were submitted to the laboratory for analyses of the following parameters using Contract Laboratory Program (CLP) protocols:

- Target Compound List (TCL)
  - Volatile organic compounds (VOCs)
  - Semivolatile organic compounds (SVOCs)
  - Polychlorinated biphenyls (PCBs) and pesticides
- Target Analyte List (TAL)
  - Inorganic compounds (metals and cyanide)

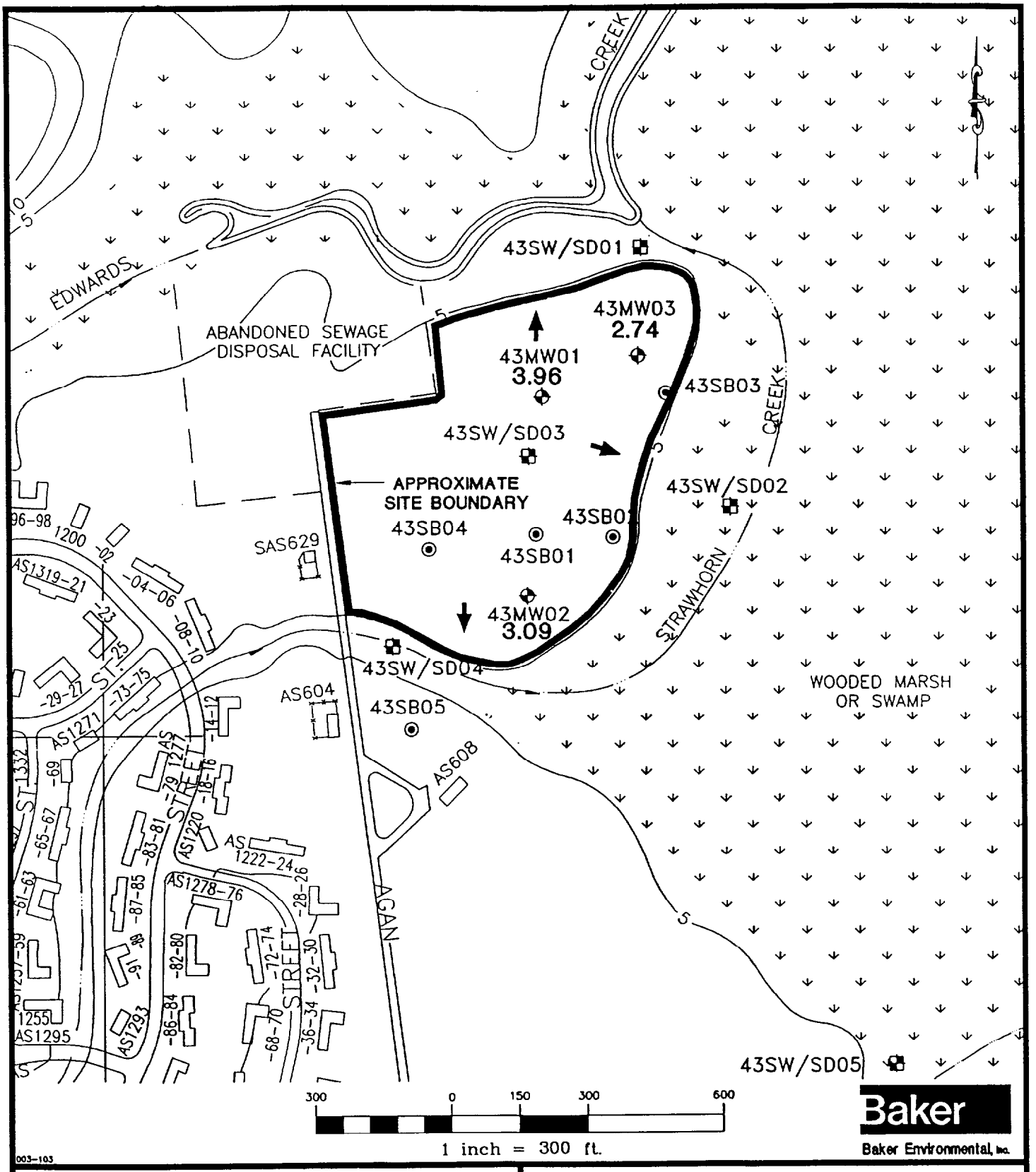
Each soil boring was properly abandoned by backfilling to grade with a cement/bentonite grout.

Soil samples were also collected during drilling and installation of three (3) groundwater monitoring wells (Section 1.2.2). Split-spoon samples were collected at the surface. Auger cuttings were then collected to total depth (12 feet below ground surface [bgs]). Procedures for lithologic description, PID screening, and submission of samples for laboratory analysis of soil collected from monitoring well boreholes were identical to those for the soil borings described above.

1.2.2 Groundwater Investigation

Three (3) shallow monitoring wells were installed on site to evaluate the groundwater quality in the vicinity of the disposal area. The well locations are shown on Figure 1-3. Monitoring well boreholes were advanced using 4-1/4-inch inside diameter (I.D.) hollow stem augers. Soil samples were collected as described in Section 1.2.1. Upon advancing the hollow stem augers to the appropriate depth (determined by the site geologist), construction of the monitoring well was initiated.

The monitoring wells were constructed inside the hollow stem augers. Well construction materials included:



LEGEND

- SURFACE WATER/SEDIMENT SAMPLE LOCATION
- SOIL BORING LOCATION
- MONITORING WELL LOCATION
- APPROXIMATE GROUNDWATER FLOW DIRECTION
- 3.09 GROUNDWATER ELEVATION (FEET/MSL)
- CREEK LOCATION AND FLOW DIRECTION
- —5— TOPOGRAPHIC CONTOUR (FEET/MSL)

NOTE:
-SOIL BORING AND SURFACE WATER/SEDIMENT LOCATIONS WERE NOT SURVEYED

FIGURE 1-3
SAMPLE LOCATION MAP
AGAN STREET DUMP
SITE 43

MCB, CAMP LEJEUNE
JACKSONVILLE, NORTH CAROLINA

- Two-inch I.D. schedule 40 polyvinyl chloride (PVC) screen (0.010-inch slot) and riser;
- A clean quartz sand pack;
- Bentonite pellets;
- Bentonite/cement slurry;
- Protective steel casings with hinged locking cap;
- Surface cement apron; and,
- Steel guard posts.

Typical monitoring well installation procedures for this site included:

- Installation of screen (10 foot) and riser;
- Installation of sand pack from total depth to 0.5 feet above top of screen;
- Installation of 0.5 feet of hydrated bentonite pellets above the top of the sand pack;
- Installation of bentonite/cement slurry from the top of the bentonite pellets to grade;
- Installation of the protective steel casing;
- Placement of the surface cement apron and three steel guard posts around the protective casing; and,
- Surveying top of PVC casing, top of steel casing, and top of concrete apron.

Due to the shallow occurrence of groundwater, it was necessary to deviate for standard well construction procedures. For instance, because the well screens were installed to screen across the upper groundwater surface, it was only possible to place 0.5 feet of sand above the top of well screen and 0.5 feet of hydrated bentonite pellets above the top of sand. Well construction diagrams are included in Appendix A.

To insure proper hydraulic communication between the aquifer (saturated soil) and the monitoring well, the monitoring wells were developed. Monitoring well development was completed by pulsed pumping until the extruded water was relatively sediment-free.

Prior to sampling the wells, depth to water and total well depth measurements were obtained with a decontaminated electronic water level meter. The total well volume was calculated from these measurements, and a minimum of three well volumes were purged from the well. The groundwater was then monitored for temperature, specific conductivity and pH. When the readings stabilized, purging ceased and a groundwater sample was obtained from each well. Samples were analyzed for full TCL organics using CLP analytical protocols.

In accordance with the Final Sampling and Analysis Plan and USEPA Region IV guidelines, groundwater samples collected for metals analyses were not filtered. The samples, along with one trip blank per cooler containing samples for volatile organic analysis, were sent to the laboratory for analyses.

1.2.3 Surface Water/Sediment Investigation

A total of five (5) surface water and five (5) sediment samples were collected from Edwards Creek, Strawhorn Creek, the marsh east of the site, and a marshy area in the center of the site in accordance with the Final Sampling and Analysis Plan (1991a). Surface water samples were collected directly into laboratory-supplied sample containers and sediment samples were collected using decontaminated stainless steel trowels. Sample locations are shown on Figure 1-3.

1.2.4 Decontamination Procedures

The drilling rig, augers, rods, split-spoons and other downhole equipment were decontaminated by steam cleaning between each drilling event at a location designated by a

Camp Lejeune Environmental Management Department (EMD) representative. This location was a vehicle wash rack used for cleaning military vehicles. All washwaters drain to the site treatment plant.

Hand trowels used for soil and sediment sample collection and the bailers used to collect the groundwater samples and purge the wells were decontaminated between samples. The decontamination procedure for this equipment, as specified in the Final Sampling and Analysis Plan (1991a), was as follows:

- Alconox detergent and distilled water wash;
- Distilled water rinse;
- Nitric acid rinse;
- Distilled water rinse;
- Pesticide-grade hexane rinse;
- Distilled water rinse; and,
- Air dry.

1.2.5 Management of Material Generated During the Site Inspection

Soil cuttings generated during drilling of the soil borings and monitoring wells were collected in 55-gallon Department of Transportation (DOT) approved drums. One drum was staged (on site) per borehole. Cuttings from various boreholes were not mixed to maintain drum disposal flexibility. Following receipt of the analytical results (including full toxicity characteristic leaching procedure [TCLP]), the soil cuttings were disposed at the site in accordance with USEPA guidance on the handling of investigation derived wastes.

Water generated during decontamination, monitoring well development and monitoring well purging was also collected in 55-gallon DOT approved drums which were staged on site and identified. Following receipt of analytical results, the water was combined with other investigation-derived wastewaters and taken to an off-site treatment, storage, and disposal facility (TSDF).

2.0 ENVIRONMENTAL SETTING

This section describes the regional and site-specific environmental settings. A discussion of topography, surface hydrology and drainage, geology, hydrogeology, climate/meteorology, land use, demographics, water supply, and critical environments is presented for MCB, Camp Lejeune and Site 43.

2.1 MCB, Camp Lejeune

This section summarizes the general environmental settings at MCB, Camp Lejeune.

2.1.1 Topography

The generally flat topography of MCB, Camp Lejeune is typical of the seaward portions of the North Carolina coastal plain. Elevations on the base vary from sea level to 72 feet above mean sea level (msl); however, the elevation of most of MCB, Camp Lejeune is between 20 and 40 feet above msl.

2.1.2 Surface Water Hydrology

The following summary of surface water hydrology was originally presented in the IAS report (Water and Air Research, Inc., 1983).

The dominant surface water feature at MCB, Camp Lejeune is the New River. It receives drainage from most of the base. The New River is short, with a course of approximately 50 miles on the central coastal plain of North Carolina. Over most of its course, the New River is confined to a relatively narrow channel entrenched in the Eocene and Oligocene limestones. South of Jacksonville, the river widens dramatically as it flows across less resistant sands, clays, and marls. At MCB, Camp Lejeune, the New River flows in a southerly direction into the Atlantic Ocean through the New River Inlet. Several small coastal creeks drain the area of MCB, Camp Lejeune that is not associated with the New River and its tributaries. These creeks flow into the Intracoastal Waterway, which is connected to the Atlantic Ocean by Bear Inlet, Brown's Inlet, and the New River Inlet (Water and Air Research, 1983). The New River, the Intracoastal Waterway, and the Atlantic Ocean meet the New River Inlet.

Water quality criteria for surface waters in North Carolina have been published under Title 15 of the North Carolina Administrative Code. At MCB, Camp Lejeune, the New River falls into two classifications: SC (estuarine waters not suited for body contact sports or commercial shellfishing) and SA (estuarine waters suited for commercial shellfishing). The SC classification applies to three areas of the New River at MCB, Camp Lejeune, including the area of MCAS, New River. The rest of the New River at MCB, Camp Lejeune falls into the SA classification (Environmental Science and Engineering, Inc. [ESE], 1991).

Drainage at MCB, Camp Lejeune is generally toward the New River, except in areas near the coast, which drain through the Intracoastal Waterway. In developed areas, natural drainage has been altered by asphalt cover, storm sewers, and drainage ditches. Approximately 70 percent of MCB, Camp Lejeune is in broad, flat interstream areas. Drainage is poor in these areas (Water and Air Research, 1983).

The U.S. Army Corps of Engineers has mapped the limits of 100-year floodplain at MCB, Camp Lejeune at 7 feet above msl in the upper reaches of the New River (Water and Air Research, 1983).

2.1.3 Geology and Soils

MCB, Camp Lejeune is located in the Atlantic Coastal Plain physiographic province. The Atlantic Coastal Plain consist of interbedded sands, clays, calcareous clays, shell beds, sandstone, and limestone. These strata lay in interfingering beds and lenses that gently dip and thicken to the southeast (ESE, 1991).. These sediments were deposited in marine or near-marine environments, range in age from early Cretaceous to Quaternary time, and overlie igneous and metamorphic basement rocks of pre-Cretaceous age. Figure 2-1 presents a generalized stratigraphic column for this area.

United States Geological Survey (USGS) studies at MCB, Camp Lejeune indicate that the base is underlain by seven sand and limestone aquifers separated by confining units of silt and clay. These include the water table (i.e., surficial, water-bearing layer), Castle Hayne, Beaufort, Peedee, Black Creek, and upper and lower Cape Fear Aquifers. The combined thickness of these sediments is approximately 1,500 feet. Less permeable clay and silt beds function as confining units or semiconfining units which separate the aquifers and impede the flow of groundwater between aquifers.

2.1.4 Groundwater

The following summary of regional hydrogeology was originally presented in Harned et al. (1989).

The surficial water-bearing layer (i.e., surficial aquifer) is a water table aquifer in a series of sediments, primarily sand and clay, which commonly extend to depths of 50 to 100 feet. This unit is not used as a water supply on the base.

The principal water-supply aquifer for the base is found in the series of sand and limestone beds that occur between 50 and 300 feet below land surface. This series of sediments generally is known as the Castle Hayne Formation, associated with the Castle Hayne Aquifer. This aquifer is about 150 to 350 feet thick in the area and is the most productive aquifer in North Carolina.

Clay layers occur in both of the aquifers. However, the layers are thin and discontinuous in most of the area, and no continuous clay layer separates the surficial aquifer from the Castle Hayne Aquifer. The clay layers range from 5 to 30 feet thick and comprise between 15 and 24 percent of the combined thickness of the two aquifers. The clay layers appear to be thicker and more continuous in the northwestern part of the base, particularly in the area of the MCAS, New River. It is inferred from their generally thin and discontinuous nature that considerable leakage of groundwater occurs across and around the clay layers, particularly in the upper part of the Castle Hayne Aquifer.

Onslow County and MCB, Camp Lejeune lie in an area where the Castle Hayne Aquifer contains freshwater, although the proximity of saltwater in deeper layers just below the aquifer and in the New River estuary is of concern in managing water withdrawals. Overpumping of the deeper parts of the aquifer could cause encroachment of saltwater. The aquifer contains water having less than 250 milligrams per liter (mg/L) chloride throughout the area of the base.

The aquifers that lie below the Castle Hayne lie in a thick sequence of sand and clay. Although some of these aquifers are used for water supply elsewhere in the Coastal Plain, they contain saltwater in the MCB, Camp Lejeune area and are not used.

FIGURE 2-1

GEOLOGIC AND HYDROGEOLOGIC UNITS IN THE COASTAL PLAIN OF NORTH CAROLINA

GEOLOGIC UNITS			HYDROGEOLOGIC UNITS
System	Series	Formation	Aquifer and Confining Unit
Quaternary	Holocene/Pleistocene	Undifferentiated	Surficial aquifer
Tertiary	Pliocene	Yorktown Formation(1)	Yorktown confining unit
			Yorktown Aquifer
	Miocene	Eastover Formation(1)	Pungo River confining unit
		Pungo River Formation(1)	Pungo River Aquifer
		Belgrade Formation(2)	Castle Hayne confining unit
	Oligocene	River Bend Formation	Castle Hayne Aquifer
	Eocene	Castle Hayne Formation	Beaufort confining unit(3)
	Paleocene	Beaufort Formation	Beaufort Aquifer
Cretaceous	Upper Cretaceous	Peedee Formation	Peedee confining unit
			Peedee Aquifer
		Black Creek and Middendorf Formations	Black Creek confining unit
			Black Creek Aquifer
		Cape Fear Formation	Upper Cape Fear confining unit
			Upper Cape Fear Aquifer
			Lower Cape Fear confining unit
			Lower Cape Fear Aquifer
	Lower Cretaceous(1)	Unnamed deposits(1)	Lower Cretaceous confining unit
			Lower Cretaceous Aquifer(1)
Pre-Cretaceous basement rocks		--	--

(1) Geologic and hydrologic units probably not present beneath MCB, Camp Lejeune.
(2) Constitutes part of the surficial aquifer and Castle Hayne confining unit in the study area.
(3) Estimated to be confined to deposits of Paleocene age in the study area.

Source: Harned et al., 1989.

Rainfall in the MCB, Camp Lejeune area enters the ground in recharge areas, infiltrates the soil, and moves downward until it reaches the water table, which is the top of the saturated zone. In the saturated zone, groundwater flows in the direction of lower hydraulic head, moving through the system to discharge areas like the New River and its tributaries, or the ocean.

The water table varies seasonally. The water table receives more recharge in the winter than in the summer when much of the water evaporates or is transpired by plants before it can reach the water table. Therefore, the water table generally is highest in the winter months and lowest in summer or early fall.

In confined aquifers, water is under excess hydraulic (i.e., head) pressure and the level to which it rises in a tightly cased well is called the potentiometric surface. The hydraulic head in a confined or semiconfined aquifer, such as the Castle Hayne, shows a different pattern of variation over time than that in an unconfined aquifer. Some seasonal variation also is common in the water levels of the Castle Hayne Aquifer, but the changes tend to be slower and over a smaller range than for wells screened across the water table.

According to the North Carolina Administrative Code, Title 15, Subchapter 2L, "Classifications and Water Quality Standards Applicable to the Groundwaters of North Carolina," the Castle Hayne Aquifer should be classified as GA. The classification of groundwater is for existing or potential sources of drinking water supplies for humans. This groundwater classification is for waters which are considered suitable for drinking in their natural state. The surficial aquifer is classified GC. A GC classification indicates that the aquifer is a source of water other than for drinking.

2.1.5 Climate and Meteorology

MCB, Camp Lejeune experiences mild winters and hot and humid summers. The average yearly rainfall is greater than 50 inches, and the potential evapotranspiration in the region varies from 34 to 36 inches of rainfall equivalent per year. The winter and summer seasons usually receive the most precipitation. Temperature ranges are reported to be 33 to 53 degrees Fahrenheit (°F) in the winter (i.e., January) and 71 to 88°F in the summer (i.e., July). Winds are generally south-southwest in the summer and north-northwest in the winter (Water and Air Research, 1983).

2.1.6 Land Use and Demographics

Present military population of MCB, Camp Lejeune is approximately 40,928 active duty personnel, with military dependent community in excess of 32,081. About 36,086 of these personnel and dependents reside in base housing units. The remaining personnel and dependents live off base and have had dramatic effects on the surrounding area. An additional 4,412 civilian employees perform facilities management and support functions. The population of Onslow County has grown from 17,739 in 1940, prior to the formation of the base, to its present population of 121,350.

The existing land use patterns for various developed geographic areas within MCB, Camp Lejeune are described in this section and listed, per geographic area, on Table 2-1. The areas listed on Table 2-1 are shown on Figure 1-1. In addition, the number of acres comprising each land use category has been estimated and provided on the table.

Site 43 is located approximately three-fourths of a mile to the east of the Camp Geiger area. The following description of the Camp Geiger area was extracted from the document "Master Plan, Camp Lejeune Complex, North Carolina" (DON, 1988).

TABLE 2-1

LAND UTILIZATION: DEVELOPED AREAS ACRES/LAND USE (PERCENT)
MCB, CAMP LEJEUNE, NORTH CAROLINA

Geographic Area	Oper.	Training (Instruc.)	Maint.	Supply/ Storage	Medical	Admin.	Family Housing	Troop Housing	Com- munity	Com- mercial	Recreat.	Utility	Total
Hadnot Point	31 (2.9)	15 (1.4)	154 (14.3)	157 (14.4)	10 (0.9)	122 (11.3)	22 (2.0)	196 (18.1)	115 (10.7)	36 (3.3)	182 (16.9)	40 (3.7)	1,080 (100)
Paradise Point	1 (0)		3 (0.4)	1 (0)			343 (34)	19 (1.9)	31 (3.1)		610 (60.4)	2 (0.2)	1,010 (100)
Berkeley Manor/ Watkins Village							406 (80)		41 (8.1)	1 (0.2)	57 (11.2)	2 (0.5)	507 (100)
Midway Park		1 (0.4)		2 (0.7)		2 (0.7)	248 (92.2)		8 (3.0)	3 (1.1)	4 (1.5)	1 (0.4)	269 (100)
Tarawa Terrace I and II			3 (0.5)			1 (0.3)	428 (77.4)		55 (9.9)	11 (2.0)	47 (8.5)	8 (1.4)	553 (100)
Knox Trailer							57 (100)						57 (100)
French Creek	8 (1.4)	1 (0.2)	74 (12.7)	266 (45.6)	3 (0.5)	7 (1.2)		122 (20.9)	22 (3.8)	6 (1.0)	74 (12.7)		583 (100)
Courthouse Bay		73 (28.6)	28 (10.9)	14 (5.5)		12 (4.7)	12 (4.7)	43 (16.9)	15 (5.9)	4 (1.6)	43 (16.9)	11 (4.3)	255 (100)
Onslow Beach	6 (9.8)	1 (1.6)	3 (4.8)	2 (3.2)	1 (1.6)	2 (3.2)		2 (3.2)	12 (19.3)		25 (40.3)	8 (13.0)	62 (100)
Rifle Range		1 (1.3)	1 (1.3)	7 (8.8)	1 (1.3)	5 (6.3)	7 (8.8)	30 (37.5)	5 (6.3)	1 (1.3)	9 (11.3)	13 (16.3)	80 (100)
Camp Geiger	4 (1.9)	15 (6.9)	19 (8.8)	50 (23.1)		23 (10.6)		54 (25.0)	27 (12.5)	2 (1.0)	16 (7.4)	6 (2.8)	216 (100)
Montford Point	6 (2.6)	48 (20.5)	2 (0.9)	4 (1.7)	2 (0.9)	9 (3.9)		82 (35.2)	20 (8.6)	1 (0.4)	49 (21.0)	10 (4.3)	233 (100)
Base-wide Misc.	1 (0.8)			87 (68.0)		3 (2.3)			19 (14.8)			18 (14.1)	128 (100)
TOTAL	57 (1.1)	155 (3.1)	287 (5.7)	590 (11.7)	17 (0.38)	186 (3.7)	1,523 (30.2)	548 (10.8)	370 (7.4)	65 (1.3)	1.116 (22.2)	119 (2.4)	5,033 (100)

Source: DON, 1988.

A mixture of old and new facilities exists at Camp Geiger, the result of which is a patchwork of land use areas arranged in a north to south configuration. The evolution of the approximately 216 acres of development has resulted in uses that are not interrelated, physically or functionally.

Supply and storage facilities, which are concentrated along the eastern edge of the developed area and in the central portion, covers about 50 acres of land. Maintenance buildings, which cover about 19 acres, are located adjacent to the supply/storage areas. Combined, supply/storage and maintenance areas account for nearly 32 percent of the developed land in Camp Geiger.

No family housing exists at Camp Geiger. Troop housing (situated on 54 acres) is located in three areas, interspersed with community and commercial facilities. Training facilities tend to be conveniently accessible by foot from troop housing although less accessible from community areas, such as the dining facilities. The 16 acres of recreational facilities are scarce in terms of number and inconvenient in terms of access.

To comprehensively evaluate existing land use in this area it is important to examine the relationship of Camp Geiger to its neighbor to the south; the MCAS, New River. Recent commercial and community development at the Curtis Road Triangle serves effectively to pull the orientation of Camp Geiger southward.

The Site 43 area is no longer used for dumping. The area is currently heavily vegetated except for a small area in the center of the site. Marshy and mosquito ridden surface water areas are not used recreationally. There is an abandoned sewage disposal facility to the west of the site. A housing area (AS1200's) is located southwest of the site, as shown in Figure 1-2. The housing area is used for enlisted personnel and their families.

2.1.7 Water Supply

MCB, Camp Lejeune water is supplied entirely from groundwater obtained from approximately 90 water supply wells and treated. There are eight water treatment plants with a total capacity of 15.821 million gallons per day (mgd). Groundwater usage is estimated at over 7 mgd (Harned, et al., 1989).

The water supply wells are all located within the boundaries of the base. The average water supply well at the base has a depth of 162 feet, a casing diameter of 8 inches, and yields 174 gallons per minute (gpm) (Harned, et al., 1989).

All of the water supply wells utilize the Castle Hayne Aquifer. The Castle Hayne Aquifer is a highly permeable, semiconfined aquifer that is capable of yielding several hundred to 1,000 gpm in municipal and industrial wells in the MCB, Camp Lejeune area. The water retrieved is typically a hard, calcium bicarbonate type.

2.1.8 Critical Environments

The following summary of natural resources and ecological features was obtained from the IAS Report (Water and Air Research, 1983).

The Camp Lejeune Complex is predominantly tree-covered, with large amounts of softwood shortleaf, longleaf, pond, and pines, primarily loblolly and substantial stands of hardwood species. Approximately 60,000 of the 112,000 acres of MCB, Camp Lejeune are under forestry management. Timber producing areas are under even-aged management with the exception

of those areas along streams and swamps. These areas are managed to provide both wildlife habitat and erosion control. Forest management provides wood production, increased wildlife populations, enhancement of natural beauty, soil protection, prevention of stream pollution, and protection of endangered species.

Upland game species including black bear, whitetail deer, gray squirrel, fox squirrel, quail, turkey, and migratory waterfowl are abundant and are considered in the wildlife management programs.

Aquatic ecosystems on MCB, Camp Lejeune consist of small lakes, New River estuary, numerous tributaries, creeks, and part of the Intracoastal Waterway. A wide variety of freshwater and saltwater fish species exist here. Freshwater ponds are under management to produce optimum yields and ensure continued harvest of desirable fish species (Water and Air Research, 1983). Freshwater fish in the streams and ponds include largemouth bass, redbreast sunfish, bluegill, chain pickerel, yellow perch, and catfish. Reptiles include alligators, turtles, and snakes (including venomous). Both recreational and commercial fishing are practiced in the waterways of the New River and its tributaries.

Wetland ecosystems at MCB, Camp Lejeune can be categorized into five habitat types: (1) pond pine or pocosin; (2) sweet gum, water oak, cypress, and tupelo; (3) sweet bay, swamp black gum, and red maple; (4) tidal marshes; and (5) coastal beaches. Pocosins provide excellent habitat for bear and deer because these areas are seldom disturbed by humans. The presence of pocosin type habitat at MCB, Camp Lejeune is primarily responsible for the continued existence of black bear in the area. Many of the pocosins are overgrown with brush and pine species that would not be profitable to harvest. Sweet gum, water oak, cypress, and tupelo habitat is found in the rich, moist bottomlands along streams and rivers. This habitat extends to the marine shorelines. Deer, bear, turkey, and waterfowl are commonly found in this type of habitat. Sweet bay, swamp black gum, and red maple habitat exist in the floodplain areas of MCB, Camp Lejeune. Fauna including waterfowl, mink, otter, raccoon, deer, bear, and gray squirrel frequent this habitat. The tidal marsh at the mouth of the New River is one of the few remaining North Carolina coastal areas relatively free from filling or other manmade changes. This habitat, which consists of marsh and aquatic plants such as algae, cattails, saltgrass, cordgrass, bulrush, and spikerush, provides wildlife with food and cover. Migratory waterfowl, alligators, raccoons, and river otter exist in this habitat. Coastal beaches along the Intracoastal Waterway and along the outer banks of MCB, Camp Lejeune are used for recreation and to house a small military command unit. Basic assault training maneuvers are also conducted along these beaches. Training regulations presently restrict activities that would impact ecologically sensitive coastal barrier dunes. The coastal beaches provide habitat for many shorebirds (Water and Air Research, 1983).

The Natural Resources and Environmental Affairs (NREA) Division of MCB, Camp Lejeune, the U.S. Fish and Wildlife Service, and the North Carolina Wildlife Resource Commission have entered into an agreement for the protection of endangered and threatened species that might inhabit MCB, Camp Lejeune. Habitats are maintained at MCB, Camp Lejeune for the preservation and protection of rare and endangered species through the base's forest and wildlife management programs. Full protection is provided to such species and critical habitat is designated in management plans to prevent or mitigate adverse effects of base activities. Special emphasis is placed on habitat and sightings of alligators, osprey, bald eagles, cougars, dusky seaside sparrows, and red-cockaded woodpeckers (Water and Air Research, 1983).

Within 15 miles of MCB, Camp Lejeune are three publicly owned forests: Croatan National Forest; Hofmann Forest; and Camp Davis Forest. The remaining land surrounding MCB, Camp Lejeune is primarily used for agriculture. Typical crops include soybeans, small grains, and tobacco (Water and Air Research, 1983).

2.2 Site 43 - Agan Street Dump

This section describes the environmental setting at Site 43.

2.2.1 Site Topography

Site 43, the Agan Street Dump, is a relatively flat area bounded on the north by Edwards Creek and on the south and east by Strawhorn Creek. The site's elevation ranges from 0 to 6 feet above msl. The site is bounded on the north, east, and south by wooded marsh and swamps. The local high elevation is 15 feet above msl to the west of the site, with elevations continuously decreasing to Edwards and Strawhorn Creeks.

2.2.2 Surface Water Hydrology

Site 43 is bounded by two creeks as mentioned in Section 2.2.1, Edwards and Strawhorn. Strawhorn Creek runs along the south and east of the site and flows into Edwards Creek which borders the site to the north. Edwards Creek flows north into the New River. Swampy areas are found adjacent to each creek and continue east of the creeks to the New River. Stormwater runoff from the site generally drains radially (i.e., away from the site), towards the nearest body of water. The area was partially flooded during the field investigation due to frequent periods of heavy precipitation. Due to low elevation, the creeks and adjacent marshes are likely influenced by the tide. The surface water classification at Site 43 is SC (estuarine waters not suited for body contact sports or commercial shell fishing).

2.2.3 Geology and Soils

Five soil borings and three monitoring wells were installed at Site 43. The maximum depth of drilling was 12 feet bgs. The soils encountered generally consists of one foot of humic material underlain by gray to brown, medium grained sand. The humic material may be a result of frequent flooding in the area. The estimated density, calculated from the hammer blows during drilling, ranged from very loose to medium dense, with the majority of the samples falling in the medium dense range. No debris was encountered in any of the soil samples.

2.2.4 Groundwater

Groundwater was encountered during drilling operations at depths ranging from 0.9 to 6.0 feet bgs. Based upon topographic conditions and static water levels, shallow groundwater flow most likely emanates radially from the site in the direction of the local streams. Drilling and groundwater information pertaining to this site inspection can be found in Table 2-2.

2.2.5 Population

There is a housing area approximately 500 feet southwest of the site. The area contains approximately 325 units, which are used for military family housing.

2.2.6 Water Supply Wells

Within an approximate one mile radius of Site 43, there are five water supply wells, as shown on Figure 2-2. Table 2-3 presents available drilling dates, construction and water information. All of the wells are screened in the Castle Hayne Aquifer. The closet supply well is located approximately 3,300 feet west of the site.

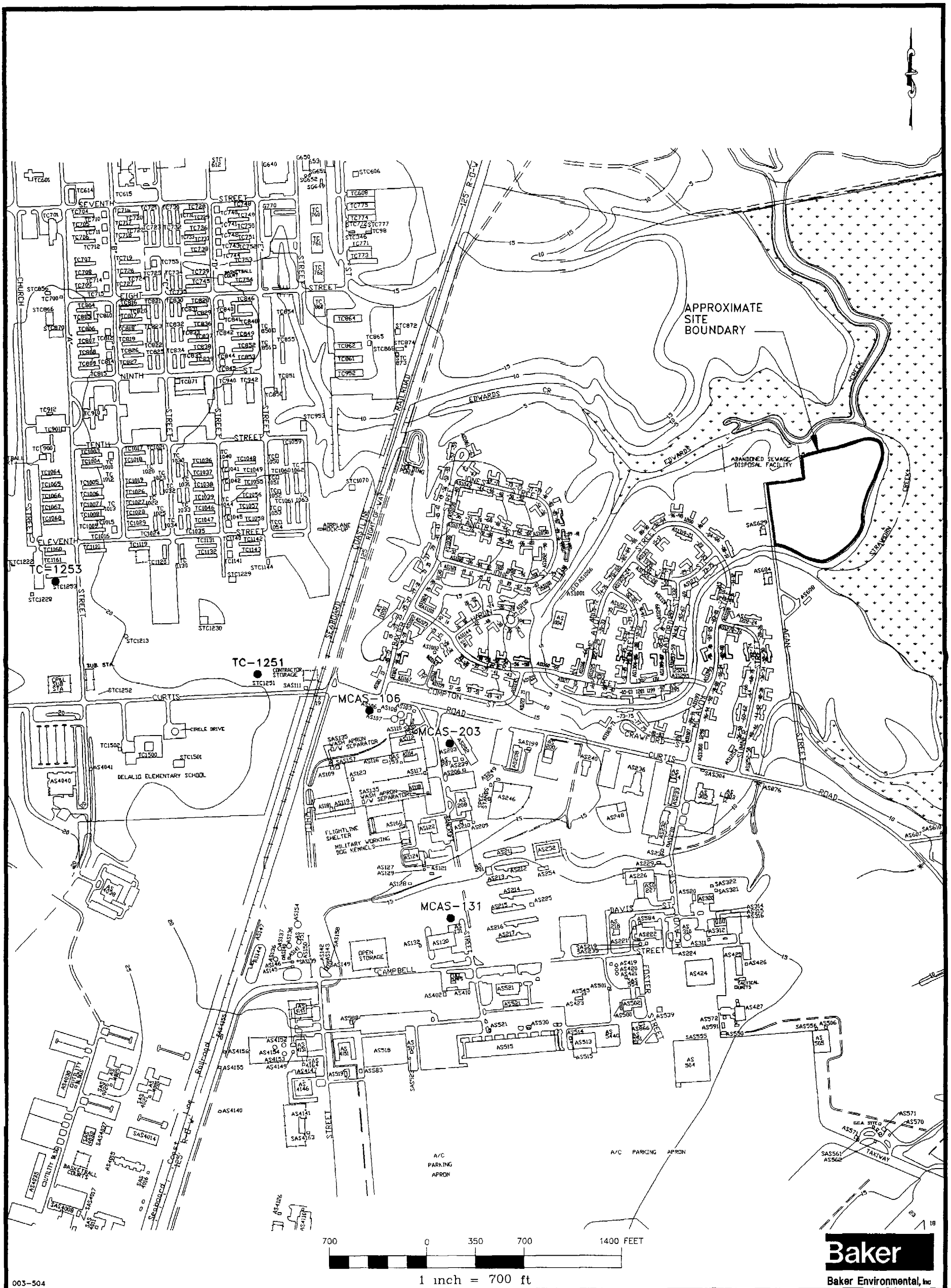
In 1992, four of the five supply wells were sampled as part of a wellhead monitoring study (well MCAS-106 was not included, since it is no longer active due to trichloroethylene [TCE]

TABLE 2-2

MONITORING WELL SUMMARY
SITE 43 - AGAN STREET DUMP
MCB, CAMP LEJEUNE, NORTH CAROLINA

Well Number	Ground Surface Elevation (feet above msl)	Top of Casing Elevation (feet above msl)	Depth of Well(1) (feet)	Screened Interval(1) (feet)	Depth to Water (feet)	Groundwater Elevation (feet above msl)
43MW01	5.73	8.32	12	10	1.77	3.96
43MW02	5.10	8.05	11.8	10	2.01	3.09
43MW03	3.77	6.59	12	10	1.03	2.74

msl = mean sea level
(1) Taken from Well Construction Record (Appendix A).



LEGEND

MCAS-131
● – APPROXIMATE SUPPLY WELL LOCATION
—15— – TOPOGRAPHIC CONTOUR (FEET/MSL)

NOTE: WATER SUPPLY WELLS WITHIN ONE-MILE RADIUS OF SITE 43 ARE SHOWN

SOURCE. LANTDIV, FEB. 1992

FIGURE 2-2
WATER SUPPLY WELL LOCATION PLAN
AGAN STREET DUMP
SITE 43

MCB, CAMP LEJEUNE
JACKSONVILLE, NORTH CAROLINA

02316.B027

TABLE 2-3

POTABLE WATER SUPPLY WELL SPECIFICATIONS
SITE 43 - AGAN STREET DUMP
MCB, CAMP LEJEUNE, NORTH CAROLINA

Well Number	Date Drilled	Total Depth (feet)	Diameter (inches)	Type of Finish	Screened Intervals (feet)	Altitude of Land Surface (feet)	Water Level (feet below land surface)	Date of Water Level Measurement	Specific Conductance (microsiemens per centimeter at 25°C)	Approximate Distance/ Direction from Site
TC-1251	1975	240	--	Screen	120-140 160-170	20	27P 27P	4/7/87 10/19/86	882	3,800 feet/ West-southwest
TC-1253	1975	250	--	Screen	120-135 155-170	22	32P 32P 16.6	4/7/87 10/19/86 8/11/75	789	5,200 feet/ West
MCAS-106	1954e	--	--	--	--	17*	15.6 26P	4/7/87 10/19/86	500	3,100 feet/ West-southwest
MCAS-131	--	200	--	--	--	17*	15 17.3	4/7/87 10/19/86	1,213	3,600 feet/ Southwest
MCAS-203	--	173	--	--	--	17*	14.4 33P	4/7/87 10/19/86	537	2,800 feet/ Southwest

°C = Degrees Celsius
e = Estimated
P = Pumping water level
-- = Unavailable/not reported

*Scaled from USGS topographic map.

Reference: Assessment of Hydrologic and Hydrogeologic Data at Camp Lejeune Marine Corps Base, North Carolina, USGS Water-Resources Investigations Report 89-4096.

contamination). Samples were collected for full TCL organic and TAL inorganic analysis. None of the four wells exhibited organic contamination. Two wells exhibited aluminum above secondary maximum contaminant levels (SMCLs). Three of the wells exhibited iron above the state drinking water standard and SMCL. Manganese was detected in one well above state criteria and SMCL. The report indicated that iron, aluminum, and manganese were detected consistently in the 75 wells sampled during the study (Greenhorne & O'Mara, 1992).

2.2.7 Receptors

The receptors identified at the site currently consist of adult and children residents living in base housing, who may access the site and streams. It is possible that children may be exposed to contaminated sediment and surface water while hunting for frogs and/or tadpoles in the creeks associated with the site.

Potential ecological receptors have also been identified at this site. These include terrestrial wildlife, such as deer, that may ingest creek water, birds, and aquatic organisms such as benthic macroinvertebrates, and water column organisms, such as fish.

2.2.8 Exposure Pathways

The primary human health exposure pathways are dermal contact with soil, sediment, and surface water, and incidental soil ingestion. Groundwater may also be considered a pathway since the shallow aquifer, which is contaminated, is hydraulically connected to the Castle Hayne Aquifer. However, there is no information indicating that the nearest supply wells are contaminated (except with iron and manganese, which are elevated in many wells throughout the base) based on recent sampling and analysis of supply wells (Greenhorne & O'Mara, 1992). In addition, water obtained from the Castle Hayne Aquifer is treated (via conventional means) prior to distribution.

Ecological receptors include wildlife (e.g., deer), rodents, reptiles, waterfowl, birds, and aquatic organisms. Exposure pathways would include dermal contact and ingestions of soil, surface water, and sediment.

2.2.9 Critical Environments

Site 43, with an average surface elevation of 6 feet above msl, is in the 100-year floodplain. The 100-year floodplain elevation for the southern part of the New River is 11 feet. The USGS quadrangle map has areas directly east, south and north of the site marked as wooded marsh or swamp. These areas are likely wetlands. Strawhorn and Edwards Creeks, both adjacent to Site 43, drain into the New River.

2.2.10 Sensitive Environments

Sensitive environments identified at Site 43 include the two creeks and marsh areas that are described in Section 2.2.10. The creeks, which appeared to be slow moving during the field investigation, discharge into the New River approximately one-half mile north of the site. Contaminated surface water and sediments associated with the creeks and marsh areas could potentially migrate to the New River.

During the SI field investigation, the creeks and marshes were observed to be stagnant, and likely tidally influenced. These types of environments elicit many types of ecological receptors, such as benthic macroinvertebrates, worms, insects, birds and terrestrial wildlife.

3.0 OPERATIONAL HISTORY AND WASTE CHARACTERISTICS

The purpose of this section is to describe the wastes allegedly disposed of at Site 43. This section includes a discussion on the types and locations of wastes, estimated quantity and form of wastes, and the behavior of the waste components.

3.1 Waste Types and Locations

Existing information indicates that boards, trash, wastewater treatment plant sludge and fiberglass were disposed of on about 20 acres within Site 43 (Water and Air Research, 1983). There are no maps or figures which depict the exact location of the disposal areas. The IAS indicates that the area was used for surface disposal of materials and only construction debris, trash and STP sludge are present. Based on a site reconnaissance, very little debris were noted and no signs of sludge disposal was evident. Because this area floods frequently, it is possible that the sludge is no longer present in one general area.

3.2 Estimated Quantity and Form of Wastes

No information is available on the quantity or form of wastes disposed of at this site. It is unknown from where the debris originated. No information is available on the quantities of sludges disposed. Sludges were possibly disposed of in bulk form when the holding containers were filled.

3.3 Behavior of the Waste Components

The former STP was permitted to accept only sanitary wastes from local housing areas and base operations at MCAS, New River. Based on this information, no hazardous or toxic constituents are expected to be present in sludges generated by the treatment plant.

4.0 PRELIMINARY SITE CHARACTERIZATION

This section presents the analytical results of environmental samples collected during the SI at Site 43. The occurrence and distribution of these contaminants in the various site media (e.g., soil, groundwater, surface water, sediments) are discussed in the following subsections. A comparison of the contaminant levels against state and federal standards or guidelines is also presented.

4.1 Quality Assurance/Quality Control

Analytical data are limited by the precision and accuracy of the analytical method of analysis. For example, CLP methods have, in general, a precision of about plus or minus 50 percent depending on the sample media and the presence of interfering compounds. A value of 100 micrograms per kilogram (µg/kg) could be as high as 150 µg/kg or as low as 50 µg/kg. In addition, the statistical methods used to compile and analyze the data (i.e., detection frequencies) are subject to the uncertainty in the ability to acquire data.

Data validation serves to reduce some of the inherent uncertainty associated with the analytical data by establishing the usability of the data. The individual that is interpreting the data may or may not choose to include data points that are questionable (in terms of reliability).

Data qualified with a "U" has not been detected above the Contract Required Quantitation Limit (CRQL). Data qualified as "J" (estimated) is retained for the determination of maxima and detection frequencies. Data can be qualified as estimated for many reasons including a slight exceedance of holding times, high or low surrogate recovery, or intrasample variability. Organic data qualified by "R" (unreliable) are not used in interpretation of results due to the unusable nature of the data. The loss of some data points qualified by "R" has not significantly increased the uncertainty of the interpretation of the data.

QA/QC consisted of duplicate samples and trip blanks. Because the SI field investigation at Site 43 was conducted in conjunction with three other SI field investigations (Sites 44, 63, and 65), the collection of field QA/QC samples was based on the number of samples collected, of duplicate samples (e.g., one per 10 or 20 samples collected), or the number of sampling events, as in the case of field blanks or rinsate blanks. Trip blanks were submitted to the laboratory when samples for volatile organic analysis were submitted. A total of twelve QA/QC samples were collected for this site in accordance with the Final Sampling Plan. Three field duplicate samples were collected to assess the overall precision of the sampling and analysis program. Two soil and one groundwater duplicate were collected. Nine trip blank samples for evaluation of potential cross-contamination generated during sample storage and shipping.

The field duplicate samples were analyzed for the same TCL and TAL parameters as the soil, groundwater, and surface water/sediment samples. The trip blanks were sampled for TCL VOCs only.

Results of these and all laboratory analyses were reported to Baker. The laboratory analytical results were submitted to Weston Analytical (a third party) for data validation. Data validation was performed in accordance with USEPA guidelines identified in the NUS Quality Assurance Project Plan and submitted under separate cover.

Methylene chloride and acetone were detected in one trip blank. These compounds are common laboratory contaminants.

Results of the field duplicate (43SB0200D, 43MW0100D, 43GW031D) were similar to those of the samples from which they were replicated (43SB0200, 43MW0100, 43GW031) indicating a high degree of precision in the sampling and analyses program.

4.2 Soil

The results of the soil samples collected from the test borings and monitoring well boreholes are summarized on Table 4-1.

Metals were detected in surface and subsurface soil samples. There does not appear to be a significant (i.e., one order of magnitude) difference between metals concentrations in surface and subsurface samples. The distribution of organic contaminants detected in soil samples collected on site is illustrated on Figure 4-1 and summarized on Table 4-1. Table 4-1 only lists contaminants above quantitation limit. The laboratory Form I data sheets for the soil results can be found in Appendix B. Data validation reports have been submitted under separate cover.

As illustrated on Figure 4-1, SVOCs (primarily polynuclear aromatic hydrocarbons [PAHs]) were detected at location 43MW01 in a surface soil sample at a depth of 0-2 feet bgs. Subsurface samples were not collected due to the high water table. No other surface or subsurface samples collected at the site exhibited PAHs.

The only other organic contaminant detected in any of the soil samples is bis(2-ethylhexyl)phthalate, which was detected in two surface soil samples (0 to 2 feet at 43MW02 and 43MW03) and one subsurface soil sample (4 to 6 feet at 43MW02).

No volatiles, PCBs, or pesticides were detected in any of the soil samples. Metals were detected in all of the subsurface and surface soil samples. A comparison of contaminants detected in soil samples to background concentrations is presented in Section 4.2.2.

4.2.1 Soil Migration Pathways

Contaminants which come into contact with soil can migrate off site due to leaching, tracking, surface runoff, and fugitive dust generation/deposition. Tracking and fugitive dust generation can be due to mechanical effects (e.g., walking, vehicular traffic, wind erosion). Migration of contaminants through air in this form is dependent on the amount of exposed soil (as opposed to vegetative cover), climatic conditions (e.g., wind, precipitation), and dust-generating site activities (e.g., traffic, heavy equipment). Site 43 is well vegetated and grass-covered except for a small area located in the center of the site. Thus, it has been assumed that the potential for fugitive dust generation is not significant.

The factors which control contaminant migration through soil is dependent on the chemical and physical nature of the contaminants and of the soil. Some of the factors which influence the migration of chemicals in soil include pH, oxidation/reduction reactions, particle size distribution, pore size distribution, lime content, content of organic matter, concentration of ions or salts, aerobic and anaerobic conditions, presence or absence of hydrous oxides, vegetative cover, topography and climate (USEPA, 1977). Due to the high organic carbon partition coefficient (K_{oc}) values, for most of the contaminants detected at this site, (e.g., PAHs), these compounds would tend to adhere to the soil, and not leach into the groundwater. None of the organics detected in the soil were detected in the groundwater at this site.

TABLE 4-1
SOIL ANALYTICAL RESULTS
SITE 43 - AGAN STREET DUMP
MCB, CAMP LEJEUNE, NORTH CAROLINA

Sample Number	43SB0100		43SB0103		43SB0200		43SB0200D		43SB0204		43SB0300		43SB0400		43SB0403	
Sample Depth (feet)	0-2		3-5		0-2		0-2		4-6		0-2		0-2		3-5	
Duplicate							Duplicate									
Parameter: Units																
Semi-volatiles: ug/kg																
Phenanthrene	380	U	490	U	350	U	350	U	400	U	400	U	380	U	440	U
Di-n-butylphthalate	380	U	490	U	350	U	350	U	400	U	400	U	380	U	440	U
Fluoranthene	380	U	490	U	350	U	350	U	400	U	400	U	380	U	440	U
Pyrene	380	U	490	U	350	U	350	U	400	U	400	U	380	U	440	U
Benzo(a)anthracene	380	U	490	U	350	U	350	U	400	U	400	U	380	U	440	U
Chrysene	380	U	490	U	350	U	350	U	400	U	400	U	380	U	440	U
bis(2-Ethylhexyl)phthalate	380	U	490	U	350	U	350	U	400	U	400	U	380	U	440	U
Benzo(b)fluoranthene	380	U	490	U	350	U	350	U	400	U	400	U	380	U	440	U
Benzo(k)fluoranthene	380	U	490	U	350	U	350	U	400	U	400	U	380	U	440	U
Benzo(a)pyrene	380	U	490	U	350	U	350	U	400	U	400	U	380	U	440	U
Indeno(1,2,3-cd)pyrene	380	U	490	U	350	U	350	U	400	U	400	U	380	U	440	U
Benzo(g,h,i)perylene	380	U	490	U	350	U	350	U	400	U	400	U	380	U	440	U

NOTES:
U - Not detected above the Contract Required Quantitation Limit (CRQL).
ug/kg - Microgram per kilogram.

TABLE 4-1 (Continued)
SOIL ANALYTICAL RESULTS
SITE 43 - AGAN STREET DUMP
MCB, CAMP LEJEUNE, NORTH CAROLINA

Sample Number	43SB0100		43SB0103		43SB0200		43SB0200D		43SB0204		43SB0300		43SB0400		43SB0403	
Sample Depth (feet)	0-2		3-5		0-2		0-2		4-6		0-2		0-2		3-5	
Duplicate							Duplicate									
Parameter: Units																
Inorganics: mg/kg																
Aluminum	1630		4710		4020		5640		2590		658	J	2310	J	621	J
Barium	3.5	U	77.6		7.2	U	10.6	U	6.1	U	2.2		4.9		2.3	
Calcium	245	U	510		149	U	218	U	64.4	U	27.7	U	69.8	U	63.7	U
Chromium	2.5		9.7		4.3	J	5.9	J	3.6	J	2.2		4.0		1.2	
Copper	2.9		2.0		0.98		1.1		1.1		1.2		0.91	U	2.3	
Iron	763		1600		3050		4790		738		419		894		263	
Lead	4.6		2.1		3.6		5.3		4.0		1.6		4.5		1.8	
Magnesium	70.6		250		115	U	180	U	71.1	U	29.5		90.6		34.5	
Manganese	3.3	U	23.5		7.1	U	6.3	U	3.0	U	2.0		5.4		2.2	
Nickel	1.0	U	2.7	U	1.9	U	1.9	U	2.2	U	2.2	U	2.1	U	2.4	U
Potassium	126		350		223	U	225	U	264	U	255	U	244	U	286	U
Thallium	0.47	U	0.58	U	0.43	U	0.42	U	0.5	U	0.49	U	0.47	U	0.52	U
Vanadium	2.3		7.3		6.9		9.6		2.9		1.4		3.7		1.2	
Zinc	4.8		8.4		4.0		5.4	U	5.4	U	3.1		3.0		3.1	

NOTES:
U - Not detected above the Contract Required Quantitation Limit (CRQL).
J - Analyte present. Reported value may not be accurate or precise.
mg/kg - Milligram per kilogram.

TABLE 4-1 (Continued)
SOIL ANALYTICAL RESULTS
SITE 43 - AGAN STREET DUMP
MCB, CAMP LEJEUNE, NORTH CAROLINA

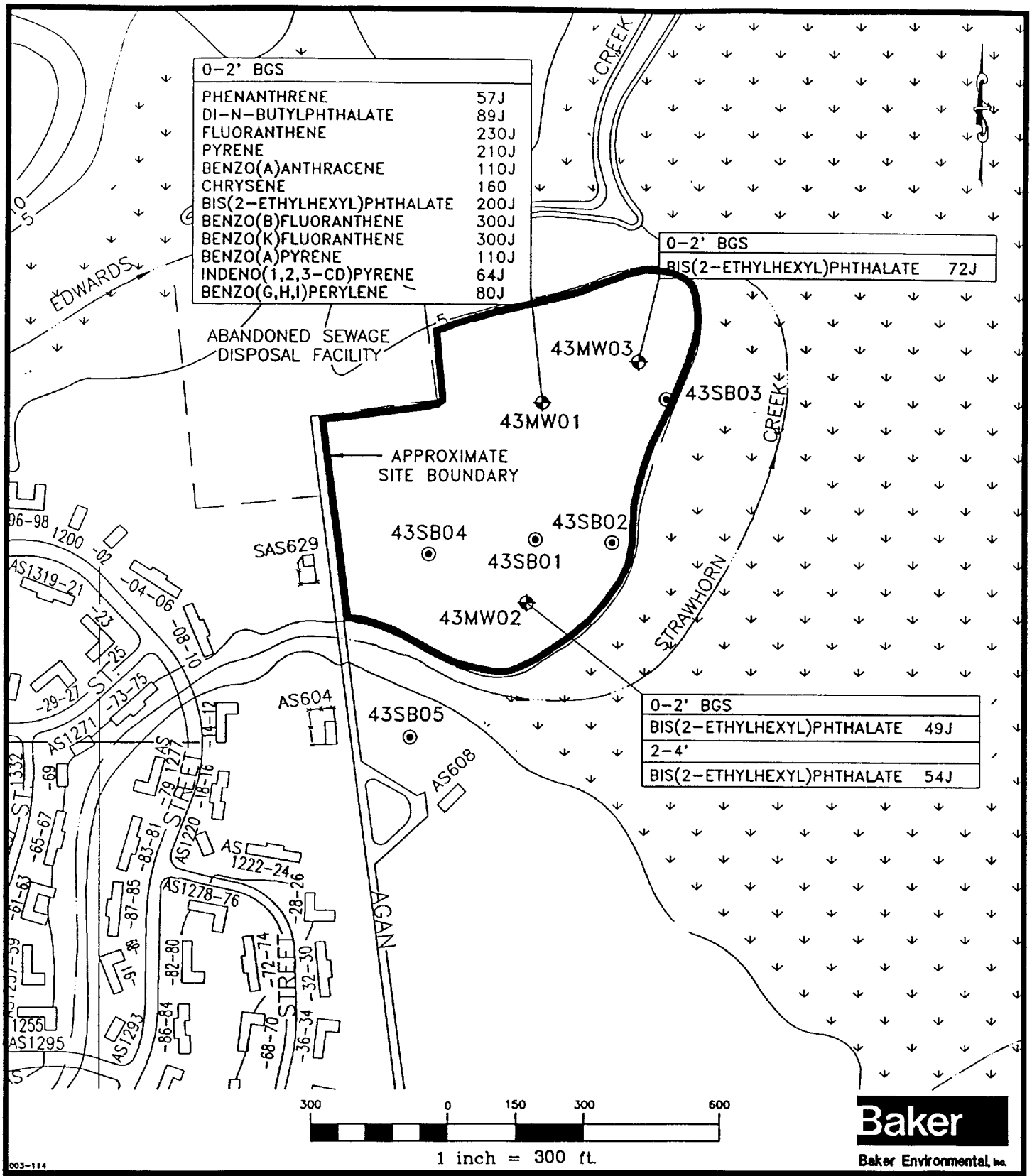
Sample Number Sample Depth (feet) Duplicate	43SB0500 0-2		43SB0506 6-8		43MW0100 0-2		43MW0100D 0-2 Duplicate		43MW0200 0-2		43MW0202 2-4		43MW0300 0-2	
Parameter: Units														
Semi-volatiles: ug/kg														
Phenanthrene	350	U	380	U	57	J	370	U	360	U	410	U	390	U
Di-n-butylphthalate	350	U	380	U	89	J	40	J	360	U	410	U	390	U
Fluoranthene	350	U	380	U	230	J	110	J	360	U	410	U	390	U
Pyrene	350	U	380	U	210	J	94	J	360	U	410	U	390	U
Benzo(a)anthracene	350	U	380	U	110	J	55	J	360	U	410	U	390	U
Chrysene	350	U	380	U	160		73	J	360	U	410	U	390	U
bis(2-Ethylhexyl)phthalate	350	U	380	U	200	J	100	J	49	J	54	J	72	J
Benzo(b)fluoranthene	350	U	380	U	300	J	160	J	360	U	410	U	390	U
Benzo(k)fluoranthene	350	U	380	U	300	J	160	J	360	U	410	U	390	U
Benzo(a)pyrene	350	U	380	U	110	J	56	J	360	U	410	U	390	U
Indeno(1,2,3-cd)pyrene	350	U	380	U	64	J	370	U	360	U	410	U	390	U
Benzo(g,h,i)perylene	350	U	380	U	80	J	42	J	360	U	410	U	390	U

NOTES:
U - Not detected above the Contract Required Quantitation Limit (CRQL).
J - Analyte present. Reported value may not be accurate or precise.
ug/kg - Microgram per kilogram.

TABLE 4-1 (Continued)
SOIL ANALYTICAL RESULTS
SITE 43 - AGAN STREET DUMP
MCB, CAMP LEJEUNE, NORTH CAROLINA

Sample Number	43SB0500		43SB0506		43MW0100		43MW0100D		43MW0200		43MW0202		43MW0300	
Sample Depth (feet)	0-2		6-8		0-2		0-2		0-2		2-4		0-2	
Duplicate							Duplicate							
Parameter: Units														
Inorganics: mg/kg														
Aluminum	5280		489		3810		3720		2880		4550		4460	
Barium	8.4	U	1.7	U	11.8	U	10.2	U	5.7	U	9.0	U	9.5	U
Calcium	61.8	U	20.9	U	6720		5460		93.3		68.6	U	618	
Chromium	5.7		1.9		8.3		6.6		3.6		6.7		6.8	
Copper	5.4		2.2		3.4		1.6		2.5		0.97	U	1.1	
Iron	2400		272		2190		1800		1530		1340		2140	
Lead	2.7		1.3		9.8		12.0		3.7		6.1		7.8	J
Magnesium	142		23.4		270		224		95.0		176		177	
Manganese	17.4		1.8	U	31.2		17.7		7.9		8.2		7.4	
Nickel	2.0	U	2.0	U	7.6		2.1	U	2.2		7.3		3.0	
Potassium	235	U	241	U	242	U	245	U	237	U	258	U	244	U
Thallium	0.44	U	0.45	U	0.45	U	0.46		0.44	U	0.49	U	0.47	U
Vanadium	6.6		0.95		7.2		7.1		4.4		5.8		6.7	
Zinc	8.0		6.5		20.1		8.3		3.6		3.0		3.5	

NOTES:
U - Not detected above the Contract Required Quantitation Limit (CRQL).
J - Analyte present. Reported value may not be accurate or precise.
mg/kg - Milligram per kilogram.



LEGEND

- SOIL BORING LOCATION
- MONITORING WELL LOCATION
- J — ANALYTE PRESENT. VALUE REPORTED MAY NOT BE ACCURATE OR PRECISE
- 0-2' BGS — SAMPLE INTERVAL BELOW GROUND SURFACE
- CREEK LOCATION AND FLOW DIRECTION
- —5— TOPOGRAPHIC CONTOUR (FEET/MSL)

NOTES:
-ALL RESULTS REPORTED IN MICROGRAM PER KILOGRAM
-SOIL BORING AND SURFACE WATER/SEDIMENT LOCATIONS WERE NOT SURVEYED

FIGURE 4-1
DISTRIBUTION OF ORGANIC CONTAMINANTS IN SOILS
AGAN STREET DUMP
SITE 43
MCB, CAMP LEJEUNE
JACKSONVILLE, NORTH CAROLINA

4.2.2 Comparison of Soil Contaminant Concentrations to Background Contaminant Levels and USEPA Guidelines

In order to preliminarily evaluate organic contaminant levels in soil, the contaminant levels were compared against risk-based concentrations since there are no federal or state standards available for soil (with the exception of Toxic Substances Control Act [TSCA] guidelines for PCBs). The risk-based concentrations are based on a risk-level of 1×10^{-6}. The USEPA utilizes these concentrations as a risk-based screen for Superfund sites, and as a desk reference for emergencies and other requests for immediate information. The risk-based concentrations provide a useful benchmark for evaluating preliminary site investigation data and preliminary remediation goals. The risk-based concentrations have no official status as either regulation or guidance, and should be used only as a predictor of generic single-contaminant health risk estimates (Smith, 1992). The risk-based concentrations are specifically not intended as (1) a stand-alone decision making tool, (2) a substitute for USEPA guidance for preparing baseline risk assessments, (3) a source of site-specific cleanup levels, or (4) a rule to determine if a waste is hazardous under RCRA (Smith, 1992). In general, chemical concentrations detected in site soil above the levels in Table 4-2 suggest a need for a closer look by a toxicologist, but should not be used as the sole basis for taking any action.

As shown on Table 4-2, none of the organic soil contaminants exceeded the USEPA Region III risk-based concentrations for residential or industrial scenarios.

Since there are no federal or state standards or guidelines for contaminants detected in soil, the inorganic chemicals found in the soil were compared to average regional soil background concentrations and base-specific background concentrations.

None of the detected chemicals in soil exceeded the regional background concentration. The base-specific background concentrations were exceeded for the following compounds of significant toxicological importance: copper, manganese, nickel and zinc. Two other metals (calcium and magnesium) also exceeded background concentrations, but are considered to be of low toxicological importance. Table 4-3 presents the frequency summaries and comparison to background concentrations for inorganics detected in soil.

4.3 Groundwater

As illustrated on Figure 4-2 and summarized on Table 4-4, only one organic contaminant was detected above the method detection level in the groundwater. The volatile organic, carbon disulfide, was detected at 7 micrograms per liter (µg/L) in well 43MW01.

Inorganic compounds (metals) were detected above the method detected level in the groundwater samples collected from the monitoring wells (Table 4-4). These samples represent the total (unfiltered) inorganic concentration in the groundwater. The elevated concentrations may be due to the presence of suspended sediments (naturally occurring in the soil) entrained in the groundwater samples.

Elevated levels of metals were detected in all three monitoring wells. Aluminum (66,000 to 177,000 µg/L), chromium (161 to 249 µg/L), iron (70,700 to 126,000 µg/L), lead (16.5 to 28.8 µg/L), and manganese (72.6 to 297 µg/L) were detected either above North Carolina Groundwater Regulations and/or National Primary/Secondary Drinking Water Regulations in all three monitoring wells. Beryllium (4.2 µg/L), cadmium (6.9 µg/L), and nickel (143 µg/L) were also detected above the aforementioned limits in 43MW02.

Due to shallow groundwater levels, the top of the well screen for Monitoring Well 43MW03 was located below the level of the groundwater surface at the time that the groundwater

TABLE 4-2

COMPARISON OF ORGANIC CONTAMINANTS IN SOIL TO
USEPA REGION III RISK-BASED CONCENTRATIONS
SITE 43 - AGAN STREET DUMP
MCB, CAMP LEJEUNE, NORTH CAROLINA

Contaminant	Maximum Detected Concentration	Risk-Based Concentrations	
		Residential	Industrial
Semivolatiles (µg/kg)			
Phenanthrene	57J	NA	NA
Fluoranthene	230J	3,100,000	4,100,000
Pyrene	210J	2,300,000	31,000,000
Benzo(a)anthracene	110J	16,000	39,000
Chrysene	160	16,000,000	39,000,000
bis(2-ethylhexyl)phthalate	200J	85,000	200,000
Benzo(b)fluoranthene	300J	16,000	39,000
Benzo(k)fluoranthene	300J	16,000	39,000
Benzo(a)pyrene	110J	1,600	3,900
Di-n-butyl phthalate	89J	7,800,000	100,000,000
Ideno(1,2,3-cd)pyrene	64J	1,600	3,900
Benzo(g,h,i)perylene	80J	NA	NA

Notes: NA denotes not available
J = Analyte Present. Reported value may not be accurate or precise.
µg/kg = micrograms per kilogram

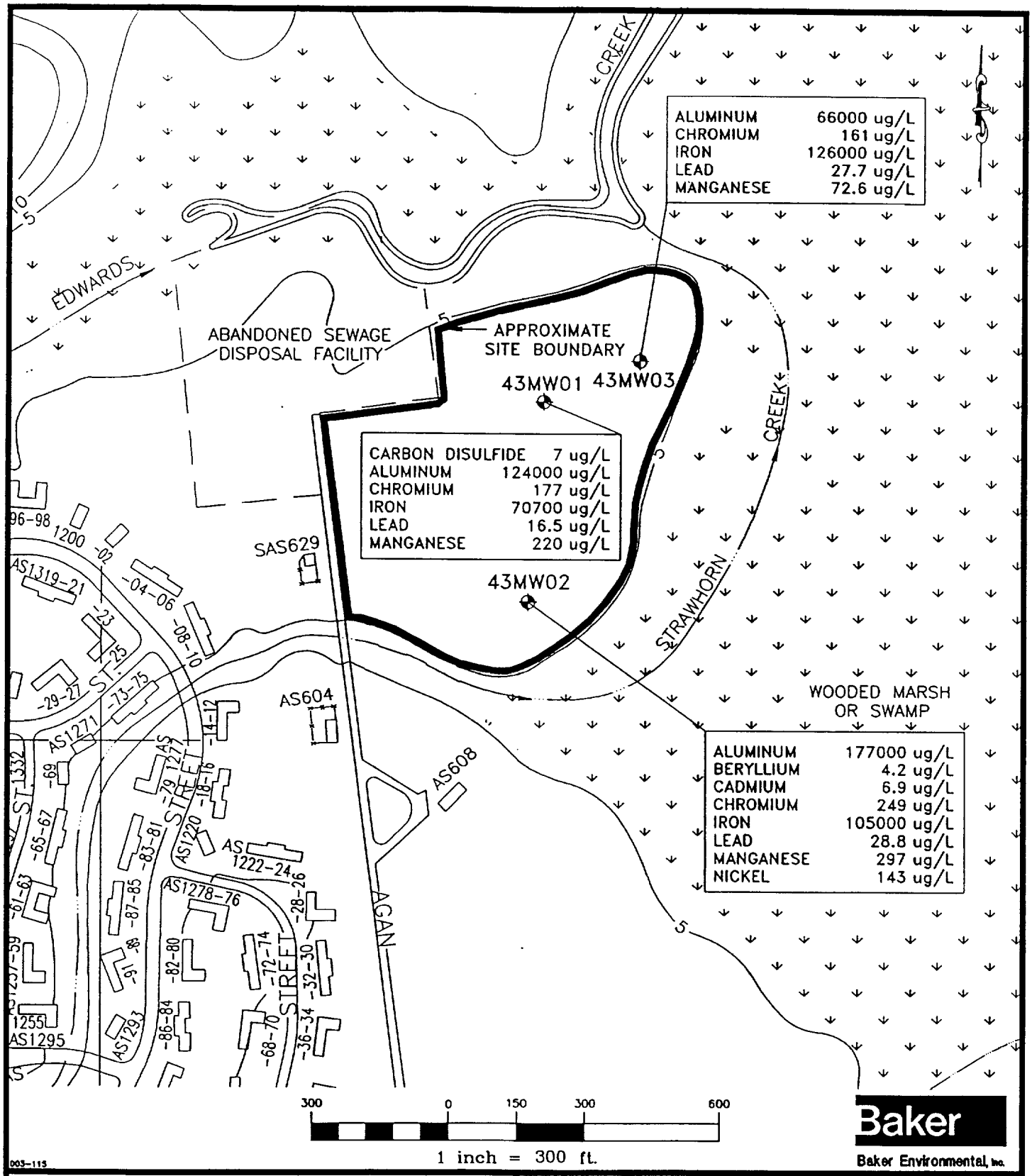
Source: Smith, 1993

TABLE 4-3

SOIL SAMPLE DATA
FREQUENCY SUMMARY AND COMPARISON TO SOIL BACKGROUND CONCENTRATIONS
FOR INORGANIC COMPOUNDS DETECTED AT THE 0-2 FOOT DEPTH INTERVAL
SITE 43 - AGAN STREET DUMP
MCB, CAMP LEJEUNE, NORTH CAROLINA

Analyte	Background(1) (mg/kg)	Background(2) (mg/kg)	Minimum Detected Concentration (mg/kg)	Maximum Detected Concentration (mg/kg)	Frequency of Detected Values	No. of Detects Greater than Background	
						(1)	(2)
Aluminum	66,000	5,390	658J	5,280	8/8	0/8	0/8
Barium	554	14.0	2.2	4.9	2/8	0/2	0/2
Calcium	24,000	317	93.3	6,720	3/8	0/3	2/3
Chromium	53	6.9	2.2	8.3	8/8	0/8	1/8
Copper	25	2.1	0.98	5.4	7/8	0/7	4/7
Iron	25,000	5,070	419	3,050	8/8	0/8	0/8
Lead	20	13.0	1.6	9.8	8/8	0/8	0/8
Magnesium	9,200	226	29.5	270	7/8	0/7	1/7
Manganese	560	5.4	2.0	31.2	6/8	0/6	5/6
Nickel	20	ND	2.2	7.6	3/8	0/3	3/3
Potassium	--	300	ND	126	1/8	--	0/1
Vanadium	--	9.7	1.4	7.2	8/8	--	0/8
Zinc	54	4.4	3.0	20.1	8/8	0/8	3/8

Notes:
J = Estimated value
mg/kg = milligram per kilogram
ND = Not detected at the method detection limit.
-- = Value not given.
(1) These values are the background level averages of the constituents found in the cultivated and uncultivated soils in the eastern U.S. (Shacklette, 1984).
(2) Regional base-specific background, average of three samples (Halliburton/NUS, 1991).



LEGEND

- MONITORING WELL LOCATION
- —5— TOPOGRAPHIC CONTOUR (FEET/MSL)
- CREEK LOCATION AND FLOW DIRECTION
- ug/L MICROGRAM PER LITER

NOTE:
-SOIL BORING AND SURFACE WATER/SEDIMENT LOCATIONS WERE NOT SURVEYED

FIGURE 4-2
DISTRIBUTION OF ORGANIC AND INORGANIC CONTAMINANTS IN GROUNDWATER
AGAN STREET DUMP
SITE 43
MCB, CAMP LEJEUNE
JACKSONVILLE, NORTH CAROLINA

TABLE 4-4
GROUNDWATER ANALYTICAL RESULTS
SITE 43 - AGAN STREET DUMP
MCB, CAMP LEJEUNE, NORTH CAROLINA

Sample Number Location Duplicate	43GW011 MW-1		43GW021 MW-2		43GW031 MW-3		43GW031D MW-3 Duplicate	
Volatiles: ug/L								
Carbon Disulfide	7		5	U	5	U	5	U
Inorganics: ug/L								
Aluminum	124000		177000		66000		78300	
Arsenic	25.0	U	23.4		5.0	U	5.0	U
Barium	689		745		220		233	
Beryllium	3.1		4.2		1.5		1.7	
Cadmium	4.0	U	6.9		4.0	U	4.0	U
Calcium	91900		10300		22300		20800	
Chromium	177		249		161		181	
Cobalt	6.7		27.7		6.0	U	6.0	U
Copper	64.2		67.8		104		94.8	
Iron	70700		105000		126000		134000	
Lead	16.5		28.8		27.7		42.3	
Magnesium	9720		11800		6800		7400	
Manganese	220		297		72.6		74.1	
Mercury	0.20	U	0.20	U	0.24		0.20	U
Nickel	33.8		143		20.5		29.4	
Potassium	8210		10900		5190		6010	
Sodium	9160		14600		22100		17900	
Vanadium	165		233		122		140	
Zinc	192	J	661	J	214	J	300	J

NOTES:
U - Not detected above Contract Required Quantitation Limits.
J - Analyte present. Reported value may not be accurate or precise.
ug/L - Microgram per liter.

samples were collected. As such, contaminants with low specific gravities (i.e., that would tend to float) may not have been intercepted by the well.

Laboratory Form I data sheets are provided in Appendix C.

4.3.1 Groundwater Migration Pathways

Contaminants which come into contact with groundwater can migrate off site under the influence of groundwater flow. Migration through groundwater is dependent on the chemical nature of the contaminant and the chemical and physical nature of the aquifer. Groundwater flow velocity (a function of hydraulic gradient and conductivity), groundwater chemistry, and the chemical make-up of the aquifer are all factors which affect contaminant migration.

Mobility of a contaminant in groundwater is particularly influenced by solubility and the K_{oc}. Compounds that have high solubility and low K_{oc} values tend to be more mobile in groundwater than those with low solubility and high K_{oc} values. For example, the only organic detected in the groundwater was carbon disulfide (CS_2), which has a high solubility and a low K_{oc} value. These characteristics indicate that CS_2 is very mobile in groundwater.

4.3.2 Comparison with Federal and State Standards

For the groundwater exposure pathway, maximum concentrations of all the positively detected inorganics were compared to maximum contaminant levels (MCLs), secondary MCLs (SMCLs), North Carolina Water Quality Standards (NCWQSs) for groundwater and health advisories. Cadmium, chromium, iron and manganese exceeded state standards. Beryllium, cadmium, chromium, lead, and nickel exceeded federal MCLs. Arsenic, beryllium, cadmium, chromium, nickel and vanadium exceeded their respective Health Advisories. Manganese, aluminum, and iron exceeded SMCLs. There are no standards or criteria available for CS_2. The toxicity of the remaining metals were also reviewed. Although the chemicals were detected in the samples, they are considered to be of low toxicological importance. These chemicals include calcium, cobalt, magnesium, potassium and sodium. Table 4-5 presents the frequency summary and comparison to standards for groundwater.

4.4 Surface Water and Sediment

Five surface water samples were collected from the two creeks adjacent to the site and from the swampy area east of the site. A SVOC, benzoic acid, was detected in SW02. Higher levels of iron were detected in all of the surface water samples (603 to 15,700µg/L). Lead was detected in two of the surface water samples, SW02 (7.0J µg/L) and SW03 (21.1 µg/L). Manganese was detected in SW01 at a level of 153 µg/L. No VOCs or pesticides/PCBs were detected in any of the surface water samples.

The surface water contaminants detected above the instrument detection level are summarized on Table 4-6. Figure 4-3 illustrates the distribution of organic and inorganic contaminants. Laboratory Form I data sheets can be found in Appendix D.

SVOCs and pesticide contaminants were detected in the sediments taken from the marsh area, Edwards Creek and Strawhorn Creek. Pesticides were found in three of the five sediment samples. No pesticides were detected in the soil or surface water samples. Elevated levels of inorganics were found in the sediment samples SD01, SD02, and SD04. Lead was in all three samples ranging in concentration from 28.2 to 56 mg/kg. Zinc was detected in SD01 and SD04, and nickel was detected in SD01. A summary of the sediment results is given on Table 4-7 and illustrated on Figure 4-3. Laboratory Form I data sheets are provided in Appendix E.

TABLE 4-5

GROUNDWATER SAMPLE DATA
FREQUENCY SUMMARY AND COMPARISON TO STANDARDS FOR INORGANICS AND ORGANICS
SITE 43 - AGAN STREET DUMP
MCB, CAMP LEJEUNE, NORTH CAROLINA

Contaminant	State Standards(1) (µg/L)	Federal MCLs(2) (µg/L)	Health Advisories(3) (µg/L)	Minimum Detected Concentration (µg/L)	Maximum Detected Concentration (µg/L)	Frequency of Detected Values	No. of Detects Greater than Standards		
							State	Federal	Health Advisories
Organics:									
Carbon Disulfide	--	--	--	ND	7	1/3	--	--	--
Inorganics:									
Aluminum	--	50-200(5)	--	66,000	177,000	3/3	--	3/3(5)	--
Arsenic	50	50	2(3)	ND	23.4	1/3	0/1	0/1	1/1
Barium	1,000	2,000(6)	2,000	220	745	3/3	0/3	0/3	0/3
Beryllium	--	4	0.8(3)	1.5	4.2	3/3	--	1/3	3/3
Cadmium	5	5	5	ND	6.9	1/3	1/1	1/1	1/1
Calcium	--	--	--	10,300	91,900	3/3	--	--	--
Chromium(7)	50	100	100	161	249	3/3	3/3	3/3	3/3
Cobalt	--	--	--	6.7	27.7	2/3	--	--	--
Copper	1,000	1,300(4)	--	64.2	104	3/3	0/3	0/3	--

Notes:
J = Estimated value
µg/L = microgram per liter
ND = Not detected at method detection limit.
-- = Standard or advisory not available.
(1) North Carolina Groundwater Regulations
(2) National Primary Drinking Water Regulations, Primary Maximum Contaminant Levels (MCLs)
(3) Health Advisories (USEPA, 1993), values represent lifetime exposures, except for arsenic and beryllium which represent 10^{-4} lifetime risk.
(4) The standard is an action level (July 17, 1992).
(5) National Secondary Drinking Water Regulation, Secondary Maximum Contaminant Levels (SMCLs)
(6) Proposed MCL; current MCL for barium is 1,000 µg/L.
(7) Total concentration

TABLE 4-5 (Continued)

GROUNDWATER SAMPLE DATA
FREQUENCY SUMMARY AND COMPARISON TO STANDARDS FOR INORGANICS AND ORGANICS
SITE 43 - AGAN STREET DUMP
MCB, CAMP LEJEUNE, NORTH CAROLINA

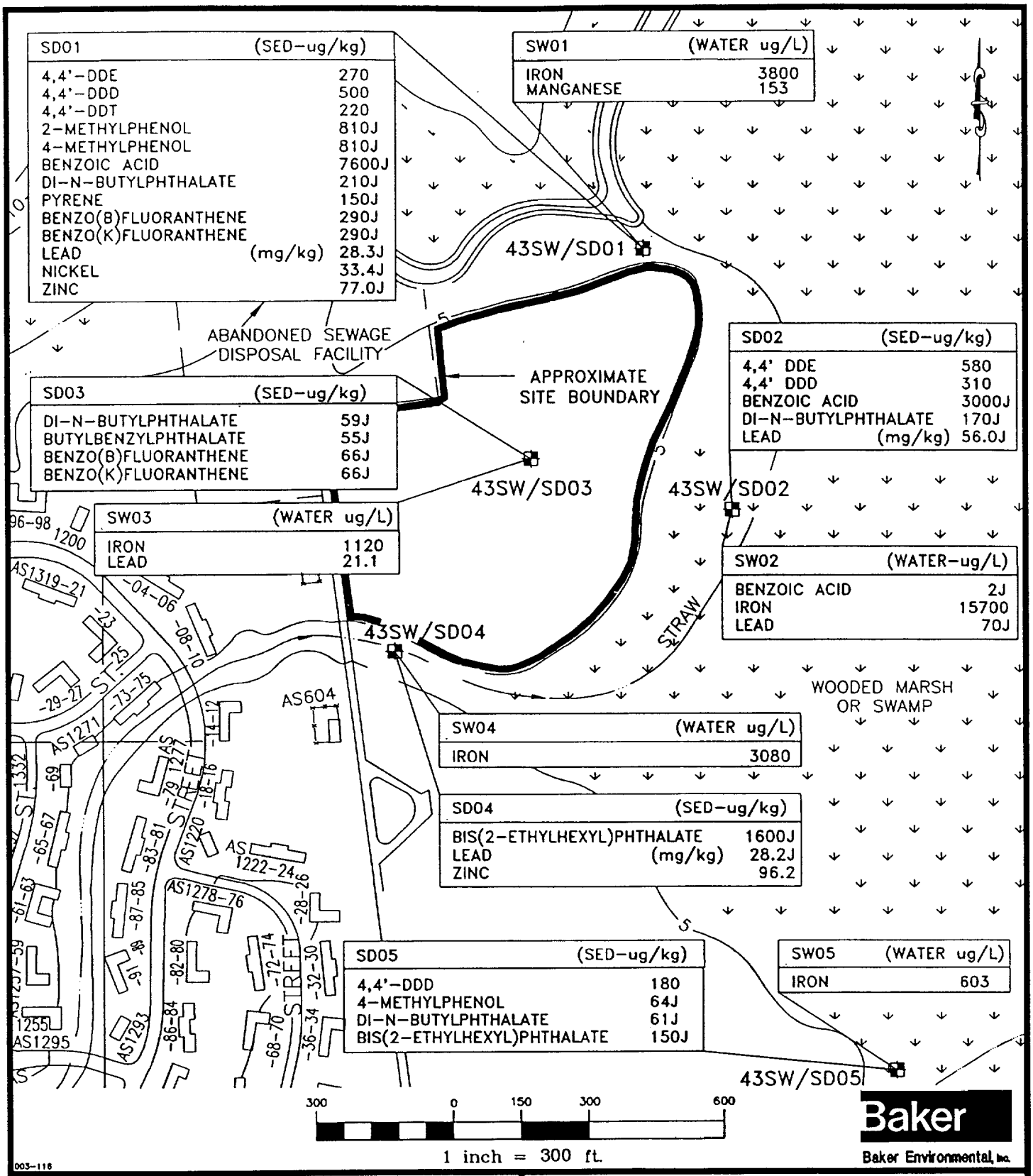
Contaminant	State Standards(1) (µg/L)	Federal MCLs(2) (µg/L)	Health Advisories(3) (µg/L)	Minimum Detected Concentration (µg/L)	Maximum Detected Concentration (µg/L)	Frequency of Detected Values	No. of Detects Greater than Standards		
							State	Federal	Health Advisories
Iron	300	300(5)	--	70,700	126,000	3/3	3/3	3/3(5)	--
Lead	50	15(4)	--	16.5	28.8	3/3	0/3	3/3	--
Magnesium	--	--	--	6,800	11,800	3/3	--	--	--
Manganese	50	50(5)	--	72.6	297	3/3	3/3	3/3(5)	--
Mercury	1.1	2	2	ND	0.24	1/3	0/1	0/1	0/1
Nickel	150	100	100	20.5	143	3/3	0/3	1/3	1/3
Potassium	--	--	--	5,190	10,900	3/3	--	--	--
Sodium	--	--	--	9,160	22,100	3/3	--	--	--
Vanadium	--	--	--	122	233	3/3	--	--	--
Zinc	5,000	5,000(5)	2,100	192J	661J	3/3	0/3	0/3	0/3

Notes:
J = Estimated value
µg/L = microgram per liter
ND = Not detected at method detection limit.
-- = Standard or advisory not available.
(1) North Carolina Groundwater Regulations
(2) National Primary Drinking Water Regulations, Primary Maximum Contaminant Levels (MCLs)
(3) Health Advisories (USEPA, 1993), values represent lifetime exposures, except for arsenic and beryllium which represent 10^{-4} lifetime risk.
(4) The standard is an action level (July 17, 1992).
(5) National Secondary Drinking Water Regulation, Secondary Maximum Contaminant Levels (SMCLs)
(6) Proposed MCL; current MCL for barium is 1,000 µg/L.
(7) Total concentration

TABLE 4-6
SURFACE WATER ANALYTICAL RESULTS
SITE 43 - AGAN STREET DUMP
MCB, CAMP LEJEUNE, NORTH CAROLINA

Sample Number Location	43SW01 SW-1		43SW02 SW-2		43SW03 SW-3		43SW04 SW-4		43SW05 SW-5	
Semi-volatiles: ug/L										
Benzoic Acid	50	U	2	J	50	U	50	U	50	U
Inorganics: ug/L										
Aluminum	769		803		948		435		529	
Barium	14.4		87.6		11.0		24.6		19.5	
Calcium	24700		48000		23100		29900		4410	
Copper	9.8		7.9		11.3		7.0		4	U
Iron	3800		15700		1120		3080		603	
Lead	2.9	J	7.0	J	21.1		2.8	J	2	U
Magnesium	1630		42300		1190		2270		865	
Manganese	153		42.6		45.8		23.8		33.1	
Nickel	9	U	9	U	9	U	9.2		9	U
Potassium	1250		13000	J	1070	U	1650		1070	U
Sodium	7290		401000		2930		14100		2910	
Vanadium	4.7		3.8		4.4		3	U	3	U
Zinc	32.1	U	29.6	U	54.3		53.0		18.7	U

NOTES:
U - Not detected above Contract Required Quantitation Limits.
J - Analyte present. Reported value may not be accurate or precise.
ug/L - Microgram per liter.



LEGEND

- SURFACE WATER/SEDIMENT SAMPLE LOCATION
- J — ANALTYE PRESENT. REPORTED VALUE MAY NOT BE ACCURATE OR PRECISE
- ug/L — MICROGRAM PER LITER
- ug/kg — MICROGRAM PER KILOGRAM
- CREEK LOCATION AND FLOW DIRECTION
- -5- TOPOGRAPHIC CONTOUR (FEET/MSL)

NOTE:
-SOIL BORING AND SURFACE WATER/SEDIMENT LOCATIONS WERE NOT SURVEYED

FIGURE 4-3
DISTRIBUTION OF ORGANIC AND INORGANIC CONTAMINANTS IN SURFACE WATER AND SEDIMENT
AGAN STREET DUMP - SITE 43
MCB, CAMP LEJEUNE
JACKSONVILLE, NORTH CAROLINA

TABLE 4-7
SEDIMENT SAMPLE ANALYTICAL RESULTS
SITE 43 - AGAN STREET DUMP
MCB, CAMP LEJEUNE, NORTH CAROLINA

Sample Number	43SD01		43SD02		43SD03		43SD04		43SD05	
Location	SW-1		SW-2		SW-3		SW-4		SW-5	
Parameter: Units										
Semi-volatiles: ug/kg										
2-Methylphenol	810	J	1300	U	390	U	850	U	560	U
4-Methylphenol	810	J	1300	U	390	U	850	U	64	J
Benzoic Acid	7600	J	3000	J	1900	U	4100	U	2700	U
Di-n-butylphthalate	210	J	170	J	59	J	850	U	61	J
Pyrene	150	J	1300	U	390	U	850	U	560	U
Butylbenzylphthalate	1400	U	1300	U	55	J	850	U	560	U
bis(2-Ethylhexyl)phthalate	1400	U	1300	U	390	U	1600	J	150	J
Benzo(b)fluoranthene	290	J	1300	U	66	J	850	U	560	U
Benzo(k)fluoranthene	290	J	1300	U	66	J	850	U	560	U
Pesticides/PCBs: ug/kg										
4,4'-DDE	270		580		19	U	21	U	140	U
4,4'-DDD	500		310		19	U	21	U	180	
4,4'-DDT	220		63	U	19	U	21	U	140	U
Inorganics: mg/kg										
Aluminum	6720	J	4510	J	1850		1520		1970	
Barium	25.5	J	32.6	J	5.2	U	11.3	U	9.7	U
Calcium	9170	J	3330	J	7550		6880		4400	
Chromium	6.9	J	5.0	J	3.6		4.2		2.9	
Copper	13.2	J	9.2	J	1.9		3.6		2.6	
Iron	6930	J	2850	J	787		1720		1290	
Lead	28.3	J	56.0	J	7.4		28.2		8.5	
Magnesium	831	J	1300	J	185		170		259	
Manganese	92.1	J	8.9	J	6.7		6.5		6.8	
Nickel	33.4	J	6.9	U	3.7		3.5		3.1	U
Sodium	549	U	2930	J	130	U	179	U	345	U
Vanadium	18.6	J	12.9	J	3.6		5.0		4.0	
Zinc	77.0	J	26.9	J	11.6		96.2		10.5	

NOTES:
U - Not detected above Contract Required Quantitation Limits.
J - Analyte present. Reported value may not be accurate or precise.
ug/kg - Microgram per kilogram.
mg/kg - Milligram per kilogram.

4.4.1 Surface Water/Sediment Migration Pathways

Migratory pathways associated with surface water and sediment include the transport of contaminants via surface water movement, adsorption/desorption of contaminants to/from sediments, and discharge to groundwater.

Two streams and the adjacent marsh areas are associated with the site. Edwards Creek and Strawhorn Creek border the site to the north, south, and east. Marshes lie to the east and north of the site. These surface waters are swamp areas that are mosquito-ridden; in addition, the surface waters are shallow and generally stagnant with a substantial amount of suspended particulate matter. However, the streams associated with the site eventually discharge into the New River. Contaminated surface water can enter into groundwater via leaching, in addition to migrating off site due to episodic overland flow.

The adsorption/desorption process, from surface water to sediments, can create contaminant "sinks" in which benthic macroinvertebrates and water column organisms (i.e., fish) may be subject to contaminant exposure via the food chain. Adsorption/desorption mechanisms involve complex chemical and biochemical reactions. As chemicals are desorbed from sediment, they are then available for uptake to organisms in the water column; the higher the solubility of the chemical, the more bioavailable it is to aquatic organisms, but the less it tends to bioaccumulate. Therefore compounds such as CS_2, 2-methylphenol and 4-methylphenol have high solubilities and will not tend to bioaccumulate, while 4,4'-DDT has low solubility characteristics and will tend to bioaccumulate.

4.4.2 Comparison with Federal and State Standards

For the surface water pathway, maximum concentrations of the chemicals positively detected were compared to the NCWQC for surface water, Federal Ambient Water Quality Criteria (AWQC), and the USEPA Region IV Freshwater Water Quality Screening Values (FWSVs). Because the surface water present at the site is (generally) not utilized for recreation or human consumption, only criteria for aquatic organisms were considered. A comparison of the concentrations detected to the aforementioned standards and criteria follows.

Copper, iron, manganese, and zinc exceeded state standards for the protection of aquatic life. Iron and lead exceeded federal AWQC. Aluminum, copper, iron and lead exceeded the USEPA Region IV FWSVs. Table 4-8 presents the frequency of detection summary and comparison to standards for contaminants and surface water criteria. There are no standards for benzoic acid.

4.4.3 Comparison with USEPA Region IV Sediment Screening Values

Table 4-9 presents the frequency summary and comparison to sediment screening values (SSVs) for contaminants detected in the sediment. Lead and nickel exceeded the SSVs. Both of the contaminant concentration values fell between Effects Range-Low (ER-L) and Effects Range Median (ER-M). Chromium, copper, and zinc concentrations fell below their respective ER-L SSVs. There were three chemicals which were detected in the sediment which do not have SSVs, but are of toxicological concern, these include barium, iron and manganese. Several other inorganics were detected in the sediment, but are considered to be of low toxicological concern. These compounds included aluminum, calcium, magnesium, and vanadium.

TABLE 4-8

SURFACE WATER SAMPLE DATA
FREQUENCY SUMMARY AND COMPARISON TO STANDARDS
SITE 43 - AGAN STREET DUMP
MCB, CAMP LEJEUNE, NORTH CAROLINA

Contaminant	State Water Quality Standards(1) (µg/L)	Ambient Water Quality Criteria(2) (µg/L)	Freshwater Water Screening Value(3) (µg/L)	Minimum Detected Concentration (µg/L)	Maximum Detected Concentration (µg/L)	Frequency of Detected Values	No. of Detects Greater than Standards		
							State	Federal	FWSV
Organics:									
Benzoic Acid	--	--	--	ND	2J	1/5	--	---	--
Inorganics:									
Aluminum	--		87	435	948	5/5	--	--	5/5
Barium	1,000	--	--	11.0	87.6	5/5	0/5	--	--
Calcium	--	--	--	4,410	48,000	5/5	--	--	--
Copper	7	12	6.54	7	11.3	4/5	3/4	0/4	4/4
Iron	1,000	1,000	1,000	603	15,700	5/5	4/5	4/5	4/5
Lead	25	3.2	1.32	2.8J	21.1	4/5	0/4	2/4	4/4
Magnesium	--	--	--	865	42,300	5/5	--	--	--
Manganese	50	--	--	23.8	153	5/5	1/5	--	--
Nickel	25	160	87.71	ND	9.2	1/5	0/1	0/1	0/1
Potassium	--	--	--	1,250	13,000J	3/5	--	--	--
Sodium	--	--	--	2,910	401,000	5/5	--	--	--
Vanadium	--	--	--	3.8	4.7	3/5	--	--	--
Zinc	50	110	58.91	53.0	54.3	2/5	2/2	0/2	0/2

Notes:
J = Estimated value
µg/L = microgram per liter
ND = Not detected at method detection limit.
-- = Standard or value not available.
(1) North Carolina Surface Water Regulations for freshwater (NCAC, 1991)
(2) Federal Ambient Water Quality Standards, chronic freshwater (USEPA, 1991)
(3) FWSV - Freshwater Water Quality Screening Value (USEPA Region IV , 1993)

TABLE 4-9

SEDIMENT SAMPLE DATA
FREQUENCY SUMMARY AND COMPARISON TO SEDIMENT SCREENING VALUES
SITE 43 - AGAN STREET DUMP
MCB, CAMP LEJEUNE, NORTH CAROLINA

Analyte	Sediment Screening Values (SSV)(1)		Minimum Detected Concentration (mg/kg)	Maximum Detected Concentration (mg/kg)	Frequency of Detected Values	No. of Detects Greater than SSV	
	ER-L(2) (mg/kg)	ER-M(3) (mg/kg)				ER-L	ER-M
Inorganics							
Aluminum	--	--	1,520	6,720J	5/5	--	--
Barium	--	--	25.5J	32.6J	2/5	--	--
Calcium	--	--	3,330J	9,170J	5/5	--	--
Chromium	80	145	2.9	6.9J	5/5	0/5	0/5
Copper	70	390	1.9	13.2J	5/5	0/5	0/5
Iron	--	--	787	6,930J	5/5	--	--
Lead	35	110	7.4	56J	5/5	1/5	0/5
Magnesium	--	--	170	1,300J	5/5	--	--
Manganese	--	--	6.5	92.1J	5/5	--	--
Nickel	30	50	3.5	33.4J	3/5	1/3	0/3
Vanadium	--	--	3.6	18.6J	5/5	--	--
Zinc	120	270	10.5	96.2	5/5	0/5	0/5

Notes:
J = Estimated value
mg/kg = milligram per kilogram
ND = Not detected at the method detection limit.
-- = Value not given.
(1) NOAA Sediment Screening Values (USEPA Region IV, 1992)
(2) Effects range - low
(3) Effects range - median

TABLE 4-9 (Continued)

SEDIMENT SAMPLE DATA
FREQUENCY SUMMARY AND COMPARISON TO SEDIMENT SCREENING VALUES
SITE 43 - AGAN STREET DUMP
MCB, CAMP LEJEUNE, NORTH CAROLINA

Contaminant	Sediment Screening Values (SSV)(1)		Minimum Detected Concentration (µg/kg)	Maximum Detected Concentration (µg/kg)	Frequency of Detected Values	No. of Detects Greater than SSV	
	ER-L(2) (µg/kg)	ER-M(3) (µg/kg)				ER-L	ER-M
Organics							
4,4'-DDD	2	20	180	500	3/5	3/3	3/3
4,4'-DDE	2	15	270	580	2/5	2/2	2/2
4,4'-DDT	1	7	ND	220	1/5	1/1	1/1
Benzo(b)fluoranthene	4,000(4)	35,000(4)	66	290J	2/5	0/2	0/2
Benzo(k)fluoranthene	4,000(4)	35,000(4)	66	290J	2/5	0/2	0/2
Benzoic Acid	--	--	3,000J	7,600J	2/5	--	--
Bis(2-ethylhexyl)phthalate	--	--	150J	1,600J	2/5	--	--
Butylbenzyl phthalate	--	--	ND	55	1/5	--	--
Di-n-butyl phthalate	--	--	590J	210J	4/5	--	--
2-Methyphenol	--	--	ND	810J	1/5	--	--
4-Methylphenol	--	--	64J	810J	2/5	--	--
Pyrene	350	2,200	ND	150J	1/5	0/1	0/1

Notes:
µg/kg = microgram per kilogram
J = Estimated value
-- = Not available.
ND = Not detected at method detection limit.
(1) NOAA Sediment Screening Values (USEPA Region IV, 1992)
(2) Effects range - low
(3) Effects range - median
(4) SSV is for total polyaromatic hydrocarbons (PAHs)

Of the organic compounds detected in the sediment that had SSVs, 4,4'-DDD, 4,4'-DDE and 4,4'-DDT exceeded the ER-M. Benzo(b)fluoranthene, benzo(k)fluoranthene and pyrene did not exceed their respective ER-L. Benzoic acid, bis(2-ethylhexyl)phthalate, butyl benzyl phthalate, di-n-octy-phthalate, 2-methylphenol and 4-methylphenol do not have SSVs due to insufficient toxicity data on these chemicals.

5.0 CONCLUSIONS AND RECOMMENDATIONS

The objectives of the SI are (1) to determine whether there is a release or potential release of hazardous substances and the nature of the associated threats; (2) preliminarily assess the extent of contamination and volume/type of wastes at the site; and (3) determine if further action or investigations are required. Overall, these objectives have been satisfied. The conclusions of the SI are presented in Section 5.1, and address the first and second objective. Recommendations are presented in Section 5.2, and address the third objective.

5.1 Conclusions

Based on background information regarding the site and the analytical results of the SI, the following conclusions are presented.

1. No conclusive signs of hazardous waste disposal are apparent throughout the site area. Frequent flooding of the site area (during the wet seasons) may have washed away most of the sludges that were previously disposed.

2. PAH constituents were detected in one soil boring at relatively low levels. The source of the PAHs cannot be determined without any knowledge of what the sludges contained.

3. The presence of inorganic contaminants within the soil at Site 43 may be the result of past disposal practices. The concentrations of several inorganic contaminants were above base-specific background levels. However, no inorganic contaminants in soil were present in concentrations above published regional values.

4. No organic contaminants in soil exceeded the USEPA Region III risk-based concentrations.

5. No debris (i.e., visual evidence of disposal) was encountered in any of the test borings.

6. Concentrations of metals within groundwater samples collected from all three monitoring wells exceed state and/or federal drinking water standards. However, studies conducted at many sites throughout MCB, Camp Lejeune also show that levels of metals within shallow groundwater are elevated. Furthermore, total (rather than dissolved) levels were determined for groundwater samples. As such, elevated levels of turbidity or sediment may tend to falsely indicate excessive concentrations of certain contaminants.

7. Surface water and sediments contain inorganics above standards for the protection of aquatic life/biota. Contamination was not widespread and the concentration levels were only slightly above the standards. No conclusion can be made with respect to whether the inorganic levels are a result of the disposal activities or whether the levels are elevated throughout the MCAS, New River marshes and streams.

8. Pesticides in sediment are more likely associated with pest control measures rather than sludge disposal. Many of the streams sampled throughout MCB, Camp Lejeune have exhibited low levels of pesticides in sediments.

9. Low levels of PAHs were detected in sediment samples collected from Edwards Creek and the marsh area. The presence of PAHs in sediments could suggest that these contaminants have migrated from the site. There are no criteria to assess whether the PAH levels adversely impact aquatic life/biota.

10. The database with respect to the background quality of soil, surface water, groundwater, and sediment is limited. As such, it is not possible at this point to accurately assess the nature of contaminants present at Site 43.

11. It is not possible, based upon the limited sample locations, to accurately define the extent of contamination at Site 43.

5.2 Recommendations

1. A remedial investigation/feasibility study (RI/FS) should be conducted to further evaluate the nature and extent of soil, sediment, surface water, and groundwater contamination. As part of the RI, a baseline human health and ecological risk assessment should be performed.

2. Historical aerial photographs should be acquired to identify surrounding areas in which disposal activities may have occurred.

3. Background and upgradient shallow groundwater quality should be assessed to determine whether elevated levels of inorganic contaminants within the shallow aquifer are due to disposal operations or to the "natural" composition of local waters.

4. Additional groundwater information should be collected regarding the shallow aquifer to determine the horizontal extent of inorganic contamination. In addition, the quality of groundwater within the deeper Castle Hayne Aquifer should be assessed (on site and off site) to evaluate the vertical extent of contamination.

5. The influence that contamination from the site has had (or may potentially have) upon local water supply wells should be evaluated.

6. The composition of off-site soils, surface water and sediment should be determined to characterize background contaminant levels, thus allowing for more accurate assessment of on-site conditions.

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APPENDIX A
TEST BORING RECORDS

Baker

Baker Environmental, Inc.

TEST BORING RECORD

PROJECT: Camp Lejeune Site Investigations
S.O. NO.: 19003-50-SRN BORING NO.: 43SB01
COORDINATES: EAST: NORTH:
ELEVATION: SURFACE: TOP OF STEEL CASING:

RIG: CME-75

	SPLIT SPOON	CASING	AUGERS	CORE BARREL	DATE	PROGRESS (FT)	WEATHER	WATER DEPTH (FT)	TIME
SIZE (DIAM.)	1-3/8" ID		3-1/4" ID		7/26/91	0.0 to 7.0	82°, humid	5.0	9:16
LENGTH	2.0'		5.0'					2.0	9:40
TYPE	STD.		H.S.						
HAMMER WT.	140#								
FALL	30"								
STICK UP									

REMARKS:

SAMPLE TYPE
S = Split Spoon A = Auger
T = Shelby Tube W = Wash
R = Air Rotary C = Core
D = Denison P = Piston
N = No Sample

DEFINITIONS
SPT = Standard Penetration Test (ASTM D-1586) (Blows/0.5')
RQD = Rock Quality Designation (%)
Lab Class. = USCS (ASTM D-2487) or AASHTO (ASTM D-3282)
Lab Moist. = Moisture Content (ASTM D-2216) Dry Weight Basis

Depth (Ft.)		Sample Type and No.	Samp. Rec. Ft. & %	SPT or RQD	Lab. Class. or Pen. Rate	HNu con. (ppm)	Visual Description	Elevation
1		S-1	1.5	3 3 6 9		BG	HUMUS; moist, cohesive 1.2'	
2	2.0						SAND; little clay; gray; moist; cohesive	
3	3.0	A-N						
4		S-2	1.2	3 2 3 4		BG		
5	5.0						Hit water @ 5.0' 5.7'	
6		S-3	2.0	3 4 4 5		BG	COARSE SAND; little silt; orange; wet; cohesive 7.0'	
7	8.0							
8							End of Boring at 7.0'	
9								
10								

DRILLING CO.: Graham & Currie BAKER REP.: D. P. Black
DRILLER: R. Morrison BORING NO.: 43SB01 SHEET 1 OF 1

Baker

Baker Environmental, Inc.

TEST BORING RECORD

PROJECT: Camp Lejeune Site Investigations
S.O. NO.: 19003-50-SRN BORING NO.: 43SB02
COORDINATES: EAST: NORTH:
ELEVATION: SURFACE: TOP OF STEEL CASING:

RIG: CME-75	SPLIT SPOON	CASING	AUGERS	CORE BARREL	DATE	PROGRESS (FT)	WEATHER	WATER DEPTH (FT)	TIME
SIZE (DIAM.)	1-3/8" ID		3-1/4" ID		7/26/91	0.0 to 7.0	82°, humid	5.0	9:16
LENGTH	2.0'		5.0'					2.0	9:40
TYPE	STD.		H.S.						
HAMMER WT.	140#								
FALL	30"								
STICK UP									

REMARKS:

SAMPLE TYPE
S = Split Spoon A = Auger
T = Shelby Tube W = Wash
R = Air Rotary C = Core
D = Denison P = Piston
N = No Sample

DEFINITIONS
SPT = Standard Penetration Test (ASTM D-1586) (Blows/0.5')
RQD = Rock Quality Designation (%)
Lab Class. = USCS (ASTM D-2487) or AASHTO (ASTM D-3282)
Lab Moist. = Moisture Content (ASTM D-2216) Dry Weight Basis

Depth (Ft.)	Sample Type and No.	Samp. Rec. Ft. & %	SPT or RQD	Lab. Class. or Pen. Rate	HNu con. (ppm)	Visual Description	Elevation
1	S-1	1.6	2 9 6 12		BG	HUMIC MATTER; dark brown; moist, cohesive 0.8'	
2.0						SAND; fine, some clay; gray to orange; moist; cohesive	
3 3.0	A-N						
4	S-2	1.8	5 6 6 8		BG	Hit water @ 4.0' 4.2'	
5.0						SAND; coarse; gray to orange; wet; cohesive	
6	S-3	1.7	6 6 5 7		BG		
7 7.0						7.0'	
8						End of Boring at 7.0'	
9							
10							

DRILLING CO.: Graham & Currie BAKER REP.: D. P. Black
DRILLER: R. Morrison BORING NO.: 43SB02 SHEET 1 OF 1

Baker

Baker Environmental, Inc.

TEST BORING RECORD

PROJECT: Camp Lejeune Site Investigations
S.O. NO.: 19003-50-SRN BORING NO.: 43SB03
COORDINATES: EAST: NORTH:
ELEVATION: SURFACE: TOP OF STEEL CASING:

RIG: CME-75	SPLIT SPOON	CASING	AUGERS	CORE BARREL	DATE	PROGRESS (FT)	WEATHER	WATER DEPTH (FT)	TIME
SIZE (DIAM.)	1-3/8" ID		3-1/4" ID		7/27/91	0.0 to 4.0	82°, sunny	0.9	
LENGTH	2.0'		5.0'						
TYPE	STD.		H.S.						
HAMMER WT.	140#								
FALL	30"								
STICK UP									

REMARKS:

SAMPLE TYPE
S = Split Spoon A = Auger
T = Shelby Tube W = Wash
R = Air Rotary C = Core
D = Denison P = Piston
N = No Sample

DEFINITIONS
SPT = Standard Penetration Test (ASTM D-1586) (Blows/0.5')
RQD = Rock Quality Designation (%)
Lab Class. = USCS (ASTM D-2487) or AASHTO (ASTM D-3282)
Lab Moist. = Moisture Content (ASTM D-2216) Dry Weight Basis

Depth (Ft.)	Sample Type and No.	Samp. Rec. Ft. & %	SPT or RQD	Lab. Class. or Pen. Rate	HNu con. (ppm)	Visual Description	Elevation
1 – 2.0	S-1	2.0	2 3 1 1		BG	SAND; medium; gray to orange; Hit water at 0.9'; wet; cohesive (2.8')	
3 – 4.0	S-2	1.9	3 6 7 7		BG	SAND; medium, little clay; wet; cohesive (4.0')	
5 – 10						End of Boring at 4.0'	

DRILLING CO.: Graham & Currie BAKER REP.: D. P. Black
DRILLER: R. Morrison BORING NO.: 43SB03 SHEET 1 OF 1

Baker

Baker Environmental, Inc.

TEST BORING RECORD

PROJECT: Camp Lejeune Site Investigations
S.O. NO.: 19003-50-SRN BORING NO.: 43SB04
COORDINATES: EAST: NORTH:
ELEVATION: SURFACE: TOP OF STEEL CASING:

RIG: CME-75	SPLIT SPOON	CASING	AUGERS	CORE BARREL	DATE	PROGRESS (FT)	WEATHER	WATER DEPTH (FT)	TIME
SIZE (DIAM.)	1-3/8" ID		3-1/4" ID		7/27/91	0.0 to 5.0	82°, humid	1.9	
LENGTH	2.0'		5.0'						
TYPE	STD.		H.S.						
HAMMER WT.	140#								
FALL	30"								
STICK UP									

REMARKS:

SAMPLE TYPE
S = Split Spoon A = Auger
T = Shelby Tube W = Wash
R = Air Rotary C = Core
D = Denison P = Piston
N = No Sample

DEFINITIONS
SPT = Standard Penetration Test (ASTM D-1586) (Blows/0.5')
RQD = Rock Quality Designation (%)
Lab Class. = USCS (ASTM D-2487) or AASHTO (ASTM D-3282)
Lab Moist. = Moisture Content (ASTM D-2216) Dry Weight Basis

Depth (Ft.)	Sample Type and No.	Samp. Rec. Ft. & %	SPT or RQD	Lab. Class. or Pen. Rate	HNu con. (ppm)	Visual Description	Elevation
1	S-1	1.8	5 9 11 8		BG	HUMIC MATTER; dark brown 0.2'	
2	2.0					SAND; fine, little silt; gray to brown; moist; cohesive; Hit water @ 1.9'	
3	3.0 A-N						
4	S-2	2.0	3 7 8 6		BG	SAND; fine; little silt; wet; cohesive	
5	5.0					5.0'	
6						End of Boring at 5.0'	
7							
8							
9							
10							

DRILLING CO.: Graham & Currie BAKER REP.: D. P. Black
DRILLER: R. Morrison BORING NO.: 43SB04 SHEET 1 OF 1

Baker

Baker Environmental, Inc.

TEST BORING RECORD

PROJECT: Camp Lejeune Site Investigations
S.O. NO.: 19003-50-SRN BORING NO.: 43SB05
COORDINATES: EAST: NORTH:
ELEVATION: SURFACE: TOP OF STEEL CASING:

RIG: CME-75	SPLIT SPOON	CASING	AUGERS	CORE BARREL	DATE	PROGRESS (FT)	WEATHER	WATER DEPTH (FT)	TIME
SIZE (DIAM.)	1-3/8" ID		3-1/4" ID		7/27/91	0.0 to 9.0	85°, sunny	6.0	
LENGTH	2.0'		5.0'						
TYPE	STD.		H.S.						
HAMMER WT.	140#								
FALL	30"								
STICK UP									

REMARKS:

SAMPLE TYPE
S = Split Spoon A = Auger
T = Shelby Tube W = Wash
R = Air Rotary C = Core
D = Denison P = Piston
N = No Sample

DEFINITIONS
SPT = Standard Penetration Test (ASTM D-1586) (Blows/0.5')
RQD = Rock Quality Designation (%)
Lab Class. = USCS (ASTM D-2487) or AASHTO (ASTM D-3282)
Lab Moist. = Moisture Content (ASTM D-2216) Dry Weight Basis

Depth (Ft.)	Sample Type and No.	Samp. Rec. Ft. & %	SPT or RQD	Lab. Class. or Pen. Rate	HNu con. (ppm)	Visual Description	Elevation
1	S-1	1.8	2 3 6 7		BG	HUMIC MATTER; dark brown; dry; cohesive 0.6'	
2 2.0						SAND; fine, little silt; tan to gray; dry; cohesive	
3 3.0	A-N						
4	S-2	2.0	5 6 7 6		BG		
5 5.0						5.2'	
6	S-3	1.6	4 6 5 7		BG	SAND; fine, little silt; gray to white; dry; somewhat cohesive; Water @ 6.0'	
7 7.0						7.6'	
8	S-4	1.6	3 3 4 6		BG	SAND; coarse, little silt; gray to white; wet; cohesive	
9 9.0						9.0'	
10						End of Boring at 9.0'	

DRILLING CO.: Graham & Currie BAKER REP.: D. P. Black
DRILLER: R. Morrison BORING NO.: 43SB05 SHEET 1 OF 1

Baker

Baker Environmental, Inc.

TEST BORING AND WELL CONSTRUCTION RECORD

PROJECT: Camp Lejeune
S.O. NO.: 19003-50-SRN
BORING NO.: 43MW01
COORDINATES: EAST:
NORTH:
ELEVATION: SURFACE:
TOP OF STEEL CASING:

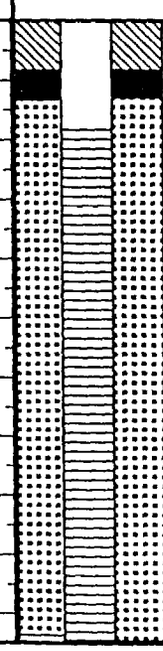
RIG: CME-75	SPLIT SPOON	CASING	AUGERS	CORE BARREL	DATE	PROGRESS (FT)	WEATHER	WATER DEPTH (FT)	TIME
SIZE (DIAM.)	1 3/8"		4 1/4"		8/7/91	0.0 to 12.0	Humid, hot, Cloudy	1.6	
LENGTH	2'		5'						
TYPE	Std.		H.S.						
HAMMER WT.	140#								
FALL	30"								
STICK UP									

REMARKS:

SAMPLE TYPE
S = Split Spoon
A = Auger
T = Shelby Tube
W = Wash
R = Air Rotary
C = Core
D = Denison
P = Piston
N = No Sample

WELL INFORMATION	DIAM	TYPE	TOP DEPTH (FT)	BOTTOM DEPTH (FT)
Well Casing	2"	PVC	+3.5	1.5
Well Screen	2"	PVC	1.5	11.5

Depth (Ft.)	Sample Type and No.	Samp. Rec. Ft. & %	SPT or RQD	Lab. Class. or Pen. Rate	HNu (conc.) (ppm)	Visual Description	Well Installation Detail	Elevation
1	S-1	2.0	Push			SAND, medium; little clay; brown to gray; wet; cohesive Hit water at 1.6 feet.		
2								
3								
4								
5								
6	A-N							
7								
8								
9								
10						Match to Sheet 2		



DRILLING CO.: Graham & Currie
BAKER REP.: D. Black
DRILLER: R. Morrison
BORING NO.: 43MW01
SHEET 1 OF 2

Baker

Baker Environmental, Inc.

TEST BORING AND WELL CONSTRUCTION RECORD

PROJECT: Camp Lejeune

S.O. NO.: 19003-50-SRN BORING NO.: 43MW01

SAMPLE TYPE

S = Split Spoon A = Auger
T = Shelby Tube W = Wash
R = Air Rotary C = Core
D = Denison P = Piston
N = No Sample

DEFINITIONS

SPT = Standard Penetration Test (ASTM D-1586) (Blows/0.5')
RQD = Rock Quality Designation (%)
Lab. Class. = USCS (ASTM D-2487) or AASHTO (ASTM D-3282)
Lab. Moist. = Moisture Content (ASTM D-2216) Dry Weight Basis

Depth (Ft.)	Sample Type and No.	Samp. Rec. (Ft. & %)	SPT or RQD	Lab. Class. or Pen. Rate	HNu (conc.) (ppm)	Visual Description	Well Installation Detail	Elevation
11	A-N					SAND, medium; little clay; brown to gray; wet; cohesive		
12.0								
13								
14								
15								
16								
17								
18								
19								
20								
21								
22								
23								
24								
25								
26								
27								
28								
29								
30								

DRILLING CO.: Graham & Currie BAKER REP.: D. Black

DRILLER: R. Morrison BORING NO.: 43MW01 SHEET 2 OF 2

Baker

Baker Environmental, Inc.

TEST BORING AND WELL CONSTRUCTION RECORD

PROJECT: Camp Lejeune
S.O. NO.: 19003-50-SRN
BORING NO.: 43MW02
COORDINATES: EAST:
NORTH:
ELEVATION: SURFACE:
TOP OF STEEL CASING:

RIG: CME-75	SPLIT SPOON	CASING	AUGERS	CORE BARREL	DATE	PROGRESS (FT)	WEATHER	WATER DEPTH (FT)	TIME
SIZE (DIAM.)	1 3/8"		4 1/4"		8/7/91	0.0 to 12.0	85° Hazy	2.5	
LENGTH	2'		5'						
TYPE	Std.		H.S.						
HAMMER WT.	140#								
FALL	30"								
STICK UP									

REMARKS:

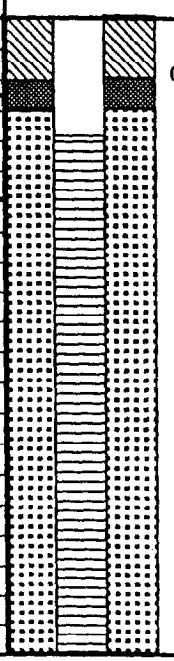
SAMPLE TYPE

S = Split Spoon
T = Shelby Tube
R = Air Rotary
D = Denison
A = Auger
W = Wash
C = Core
P = Piston
N = No Sample

WELL INFORMATION	DIAM	TYPE	TOP DEPTH (FT)	BOTTOM DEPTH (FT)
Well Casing	2"	PVC	+3.2	1.8
Well Screen	2"	PVC	1.8	11.8

Depth (Ft.)	Sample Type and No.	Samp. Rec. Ft. & %	SPT or RQD	Lab. Class. or Pen. Rate	HNu (conc.) (ppm)	Visual Description
1	S-2	2.0	5 6 8 15		BG	SAND, medium; brown; grey; damp; cohesive (1.2')
2 (2.0)						SAND AND CLAY; brown; wet; cohesive; water at 2.5 (2.9')
3	S-2	1.7	4 20 9 11		BG	SAND, medium; brown-gray; wet; cohesive
4 (4.0)						
5						
6						
7						
8						
9						
10						Match to Sheet 2

Well Installation Detail



Elevation

DRILLING CO.: Graham & Currie
BAKER REP.: D. Black
DRILLER: R. Morrison
BORING NO.: 43MW02
SHEET 1 OF 2

Baker

Baker Environmental, Inc.

TEST BORING AND WELL CONSTRUCTION RECORD

PROJECT: Camp Lejeune

S.O. NO.: 19003-50-SRN BORING NO.: 43MW02

SAMPLE TYPE

S = Split Spoon A = Auger
T = Shelby Tube W = Wash
R = Air Rotary C = Core
D = Denison P = Piston
N = No Sample

DEFINITIONS

SPT = Standard Penetration Test (ASTM D-1586) (Blows/0.5')
RQD = Rock Quality Designation (%)
Lab. Class. = USCS (ASTM D-2487) or AASHTO (ASTM D-3282)
Lab. Moist. = Moisture Content (ASTM D-2216) Dry Weight Basis

Depth (Ft.)	Sample Type and No.	Samp. Rec. (Ft. & %)	SPT or RQD	Lab. Class. or Pen. Rate	HNu (conc.) (ppm)	Visual Description	Well Installation Detail	Elevation
11						Continued from Sheet 1		
12.0	A-N					SAND, medium; brown to gray; wet; cohesive 12.0'	11.8'	
12								
13								
14								
15								
16								
17								
18								
19								
20								
21								
22								
23								
24								
25								
26								
27								
28								
29								
30								

DRILLING CO.: Graham & Currie BAKER REP.: D. Black

DRILLER: R. Morrison BORING NO.: 43MW02 SHEET 2 OF 2

Baker

Baker Environmental, Inc.

TEST BORING AND WELL CONSTRUCTION RECORD

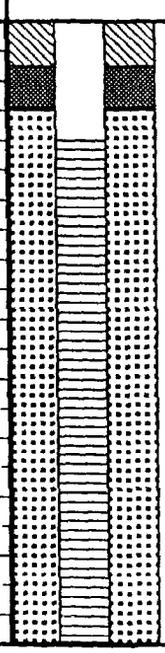
PROJECT: Camp Lejeune
S.O. NO.: 19003-50-SRN — BORING NO.: 43MW03
COORDINATES: EAST: — NORTH:
ELEVATION: SURFACE: — TOP OF STEEL CASING:

RIG: CME-75	SPLIT SPOON	CASING	AUGERS	CORE BARREL	DATE	PROGRESS (FT)	WEATHER	WATER DEPTH (FT)	TIME
SIZE (DIAM.)	1 3/8"		3 1/4"		8-8-91	0.0 to 12.0	85° Sunny	1.7	
LENGTH	2'		5'						
TYPE	Std.		H.S.						
HAMMER WT.	140#								
FALL	30"								
STICK UP									

REMARKS:

SAMPLE TYPE
S = Split Spoon; A = Auger; T = Shelby Tube; W = Wash; R = Air Rotary; C = Core; D = Denison; P = Piston; N = No Sample

WELL INFORMATION	DIAM	TYPE	TOP DEPTH (FT)	BOTTOM DEPTH (FT)
Well Casing	2"	PVC	+3.2	2.0
Well Screen	2"	PVC	2.0	12.0

Depth (Ft.)	Sample Type and No.	Samp. Rec. Ft. & %	SPT or RQD	Lab. Class. or Pen. Rate	HNu (conc.) (ppm)	Visual Description	Well Installation Detail	Elevation
1	S-1	2.0	8 11 9 10			SAND, medium; beige to brown; damp; cohesive Hit water at 1.7'		
2 (2.0)								
3								
4								
5								
6	A-N							
7								
8								
9								
10						Match to Sheet 2		

DRILLING CO.: Graham & Currie — BAKER REP.: D. Black
DRILLER: R. Morrison — BORING NO.: 43MW03 — SHEET 1 OF 2

Baker

Baker Environmental, Inc.

TEST BORING AND WELL CONSTRUCTION RECORD

PROJECT: Camp Lejeune

S.O. NO.: 19003-50-SRN BORING NO.: 43MW03

SAMPLE TYPE

S = Split Spoon A = Auger
T = Shelby Tube W = Wash
R = Air Rotary C = Core
D = Denison P = Piston
N = No Sample

DEFINITIONS

SPT = Standard Penetration Test (ASTM D-1586) (Blows/0.5')
RQD = Rock Quality Designation (%)
Lab. Class. = USCS (ASTM D-2487) or AASHTO (ASTM D-3282)
Lab. Moist. = Moisture Content (ASTM D-2216) Dry Weight Basis

Depth (Ft.)	Sample Type and No.	Samp. Rec. (Ft. & %)	SPT or RQD	Lab. Class. or Pen. Rate	HNu (conc.) (ppm)	Visual Description	Well Installation Detail	Elevation
11	A-N					Continued from Sheet 1 SAND, medium; beige to brown; damp; cohesive		
12								
13								
14								
15								
16								
17								
18								
19								
20								
21								
22								
23								
24								
25								
26								
27								
28								
29								
30								

DRILLING CO.: Graham & Currie BAKER REP.: D. Black

DRILLER: R. Morrison BORING NO.: 43MW03 SHEET 2 OF 2

APPENDIX B
SOIL DATA

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

43SB0100

Lab Name: COMPUCHEM,RTP Contract: (2-88)-REVS

Lab Code: COMPU Case No.: 23664 SAS No.: _____ SDG No.: 41

Matrix: (soil/water) SOIL Lab Sample ID: 434312

Sample wt/vol: 5.0 (g/mL) G Lab File ID: GH034312C54

Level: (low/med) LOW Date Received: 07/30/91

% Moisture: not dec. 15 Date Analyzed: 08/01/91

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	12	U
74-83-9	Bromomethane	12	U
75-01-4	Vinyl Chloride	12	U
75-00-3	Chloroethane	12	U
75-09-2	Methylene Chloride	47	B
67-64-1	Acetone	19	B
75-15-0	Carbon Disulfide	6	U
75-35-4	1,1-Dichloroethene	6	U
75-34-3	1,1-Dichloroethane	6	U
540-59-0	1,2-Dichloroethene (total)	6	U
67-66-3	Chloroform	6	U
107-06-2	1,2-Dichloroethane	6	U
78-93-3	2-Butanone	12	U
71-55-6	1,1,1-Trichloroethane	6	U
56-23-5	Carbon Tetrachloride	6	U
108-05-4	Vinyl Acetate	6	U
75-27-4	Bromodichloromethane	6	U
78-87-5	1,2-Dichloropropane	6	U
10061-01-5	cis-1,3-Dichloropropene	6	U
79-01-6	Trichloroethene	6	U
124-48-1	Dibromochloromethane	6	U
79-00-5	1,1,2-Trichloroethane	6	U
71-43-2	Benzene	6	U
10061-02-6	Trans-1,3-Dichloropropene	6	U
75-25-2	Bromoform	6	U
108-10-1	4-Methyl-2-Pentanone	12	U
591-78-6	2-Hexanone	12	U
127-18-4	Tetrachloroethene	6	U
79-34-5	1,1,2,2-Tetrachloroethane	6	U
108-88-3	Toluene	6	U
108-90-7	Chlorobenzene	6	U
100-41-4	Ethylbenzene	6	U
100-42-5	Styrene	6	U
1330-20-7	Total Xylenes	6	U

FORM I VOA 1/87 Rev.

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

43SB0100

Lab Name: COMPUCHEM,RTP Contract: (2-88)-REVS

Lab Code: COMPU Case No.: 23664 SAS No.: _____ SDG No.: 41

Matrix: (soil/water) SOIL Lab Sample ID: 434312

Sample wt/vol: 30.5 (g/mL) G Lab File ID: GH034312B52

Level: (low/med) LOW Date Received: 07/30/91

% Moisture: not dec. 15 dec. ____ Date Extracted: 08/05/91

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 08/06/91

GPC Cleanup: (Y/N) N pH: 5.4 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	380	U
111-44-4	bis(2-Chloroethyl)Ether	380	U
95-57-8	2-Chlorophenol	380	U
541-73-1	1,3-Dichlorobenzene	380	U
106-46-7	1,4-Dichlorobenzene	380	U
100-51-6	Benzyl Alcohol	380	U
95-50-1	1,2-Dichlorobenzene	380	U
95-48-7	2-Methylphenol	380	U
39638-32-9	Bis(2-Chloroethyl)Ether	380	U
106-44-5	4-Methylphenol	380	U
621-64-7	N-Nitroso-Di-n-Propylamine	380	U
67-72-1	Hexachloroethane	380	U
98-95-3	Nitrobenzene	380	U
78-59-1	Isophorone	380	U
88-75-5	2-Nitrophenol	380	U
105-67-9	2,4-Dimethylphenol	380	U
65-85-0	Benzoic Acid	1900	U
111-91-1	bis(2-Chloroethoxy)Methane	380	U
120-83-2	2,4-Dichlorophenol	380	U
120-82-1	1,2,4-Trichlorobenzene	380	U
91-20-3	Naphthalene	380	U
106-47-8	4-Chloroaniline	380	U
87-68-3	Hexachlorobutadiene	380	U
59-50-7	4-Chloro-3-Methylphenol	380	U
91-57-6	2-Methylnaphthalene	380	U
77-47-4	Hexachlorocyclopentadiene	380	U
88-06-2	2,4,6-Trichlorophenol	380	U
95-95-4	2,4,5-Trichlorophenol	1900	U
91-58-7	2-Chloronaphthalene	380	U
88-74-4	2-Nitroaniline	1900	U
131-11-3	Dimethyl Phthalate	380	U
208-96-8	Acenaphthylene	380	U
606-20-2	2,6-Dinitrotoluene	380	U

FORM I SV-1 1/87 Rev.

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

43SB0100

Lab Name: COMPUCHEM,RTP Contract: (2-88)-REVS

Lab Code: COMPU Case No.: 23664 SAS No.: _____ SDG No.: 41

Matrix: (soil/water) SOIL Lab Sample ID: 434312

Sample wt/vol: 30.5 (g/mL) G Lab File ID: GH034312B52

Level: (low/med) LOW Date Received: 07/30/91

% Moisture: not dec. 15 dec. ____ Date Extracted: 08/05/91

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 08/06/91

GPC Cleanup: (Y/N) N pH: 5.4 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
99-09-2	3-Nitroaniline	1900	U
83-32-9	Acenaphthene	380	U
51-28-5	2,4-Dinitrophenol	1900	U
100-02-7	4-Nitrophenol	1900	U
132-64-9	Dibenzofuran	380	U
121-14-2	2,4-Dinitrotoluene	380	U
84-66-2	Diethylphthalate	380	U
7005-72-3	4-Chlorophenyl-phenylether	380	U
86-73-7	Fluorene	380	U
100-01-6	4-Nitroaniline	1900	U
534-52-1	4,6-Dinitro-2-Methylphenol	1900	U
86-30-6	N-Nitrosodiphenylamine (1)	380	U
101-55-3	4-Bromophenyl-phenylether	380	U
118-74-1	Hexachlorobenzene	380	U
87-86-5	Pentachlorophenol	1900	U
85-01-8	Phenanthrene	380	U
120-12-7	Anthracene	380	U
84-74-2	Di-n-Butylphthalate	380	U
206-44-0	Fluoranthene	380	U
129-00-0	Pyrene	380	U
85-68-7	Butylbenzylphthalate	380	U
91-94-1	3,3'-Dichlorobenzidine	760	U
56-55-3	Benzo(a)Anthracene	380	U
218-01-9	Chrysene	380	U
117-81-7	bis(2-Ethylhexyl)Phthalate	380	U
117-84-0	Di-n-Octyl Phthalate	380	U
205-99-2	Benzo(b)Fluoranthene	380	U
207-08-9	Benzo(k)Fluoranthene	380	U
50-32-8	Benzo(a)Pyrene	380	U
193-39-5	Indeno(1,2,3-cd)Pyrene	380	U
53-70-3	Dibenzo(a,h)Anthracene	380	U
191-24-2	Benzo(g,h,i)Perylene	380	U

(1) - Cannot be separated from Diphenylamine

FORM I SV-2 1/87 Rev.

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

43SB0100

Lab Name: COMPUCHEM LABORATORIES Contract: (2-88)-REVS

Lab Code: COMPU Case No.: 23664 SAS No.: _____ SDG No.: 41

Matrix: (soil/water) SOIL Lab Sample ID: 434312

Sample wt/vol: 30.0 (g/mL) G Lab File ID: _____

Level: (low/med) LOW Date Received: 07/30/91

% Moisture: not dec. 15 dec. ____ Date Extracted: 08/02/91

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 08/07/91

GPC Cleanup: (Y/N) N pH: 5.4 Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	9.4	U
319-85-7	beta-BHC	9.4	U
319-86-8	delta-BHC	9.4	U
58-89-9	gamma-BHC	9.4	U
76-44-8	Heptachlor	9.4	U
309-00-2	Aldrin	9.4	U
1024-57-3	Heptachlor epoxide	9.4	U
959-98-8	Endosulfan I	9.4	U
60-57-1	Dieldrin	19	U
72-55-9	4,4'-DDE	19	U
72-20-8	Endrin	19	U
33213-65-9	Endosulfan II	19	U
72-54-8	4,4'-DDD	19	U
1031-07-8	Endosulfan sulfate	19	U
50-29-3	4,4'-DDT	19	U
72-43-5	p,p'-Methoxychlor	94	U
53494-70-5	Endrin ketone	19	U
5103-71-9	alpha-Chlordane	94	U
5103-74-2	gamma-Chlordane	94	U
8001-35-2	Toxaphene	190	U
12674-11-2	Aroclor-1016	94	U
11104-28-2	Aroclor-1221	94	U
11141-16-5	Aroclor-1232	94	U
53469-21-9	Aroclor-1242	94	U
12672-29-6	Aroclor-1248	94	U
11097-69-1	Aroclor-1254	190	U
11096-82-5	Aroclor-1260	190	U

FORM I PEST 1/87 Rev.

U.S. EPA - CLP

1
INORGANIC ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

43SB0100

Lab Name: COMPUCHEM LABORATORIES Contract: 7/88

Lab Code: COMPU Case No.: 50024 SAS No.: _____ SDG No.: 664164

Matrix (soil/water): SOIL Lab Sample ID: 434348

Level (low/med): LOW Date Received: 07/30/91

% Solids: 85.0

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	1630			P
7440-36-0	Antimony	3.8	U		P
7440-38-2	Arsenic	1.2	U	W	F
7440-39-3	Barium	3.5	B		P
7440-41-7	Beryllium	.12	U		P
7440-43-9	Cadmium	.47	U		P
7440-70-2	Calcium	245	B		P
7440-47-3	Chromium	2.5			P
7440-48-4	Cobalt	.70	U		P
7440-50-8	Copper	2.9	B		P
7439-89-6	Iron	763			P
7439-92-1	Lead	4.6		*	F
7439-95-4	Magnesium	70.6	B		P
7439-96-5	Manganese	3.3			P
7439-97-6	Mercury	.12	U		CV
7440-02-0	Nickel	1.0	U		P
7440-09-7	Potassium	126	B		P
7782-49-2	Selenium	.94	U		F
7440-22-4	Silver	.58	U	N	P
7440-23-5	Sodium	88.7	B		P
7440-28-0	Thallium	.47	U		F
7440-62-2	Vanadium	2.3	B		P
7440-66-6	Zinc	4.8			P
	Cyanide	.59	U		AS

Color Before: BROWN Clarity Before: _____ Texture: MEDIUM

Color After: COLORLESS Clarity After: _____ Artifacts: _____

Comments:
FORM 1.04 - PAGE 2

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

43SB0103

Lab Name: COMPUCHEM.RTP Contract: (2-88)-REVS

Lab Code: COMPU Case No.: 23664 SAS No.: _____ SDG No.: 41

Matrix: (soil/water) SOIL Lab Sample ID: 434313

Sample wt/vol: 5.0 (g/mL) G Lab File ID: GH034313C54

Level: (low/med) LOW Date Received: 07/30/91

% Moisture: not dec. 33 Date Analyzed: 08/01/91

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	15	U
74-83-9	Bromomethane	15	U
75-01-4	Vinyl Chloride	15	U
75-00-3	Chloroethane	15	U
75-09-2	Methylene Chloride	84	B
67-64-1	Acetone	16	B
75-15-0	Carbon Disulfide	7	U
75-35-4	1,1-Dichloroethene	7	U
75-34-3	1,1-Dichloroethane	7	U
540-59-0	1,2-Dichloroethene (total)	7	U
67-66-3	Chloroform	7	U
107-06-2	1,2-Dichloroethane	7	U
78-93-3	2-Butanone	15	U
71-55-6	1,1,1-Trichloroethane	7	U
56-23-5	Carbon Tetrachloride	7	U
108-05-4	Vinyl Acetate	7	U
75-27-4	Bromodichloromethane	7	U
78-87-5	1,2-Dichloropropane	7	U
10061-01-5	cis-1,3-Dichloropropene	7	U
79-01-6	Trichloroethene	7	U
124-48-1	Dibromochloromethane	7	U
79-00-5	1,1,2-Trichloroethane	7	U
71-43-2	Benzene	7	U
10061-02-6	Trans-1,3-Dichloropropene	7	U
75-25-2	Bromoform	7	U
108-10-1	4-Methyl-2-Pentanone	15	U
591-78-6	2-Hexanone	15	U
127-18-4	Tetrachloroethene	7	U
79-34-5	1,1,2,2-Tetrachloroethane	7	U
108-88-3	Toluene	7	U
108-90-7	Chlorobenzene	7	U
100-41-4	Ethylbenzene	7	U
100-42-5	Styrene	7	U
1330-20-7	Total Xylenes	7	U

FORM I VOA 1/87 Rev.

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

43SB0103

Lab Name: COMPUCHEM,RTP Contract: (2-88)-REVS

Lab Code: COMPU Case No.: 23664 SAS No.: _____ SDG No.: 41

Matrix: (soil/water) SOIL Lab Sample ID: 434313

Sample wt/vol: 30.4 (g/mL) G Lab File ID: GH034313A20

Level: (low/med) LOW Date Received: 07/30/91

% Moisture: not dec. 33 dec. ____ Date Extracted: 07/31/91

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 08/04/91

GPC Cleanup: (Y/N) N pH: 4.9 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	490	U
111-44-4	bis(2-Chloroethyl)Ether	490	U
95-57-8	2-Chlorophenol	490	U
541-73-1	1,3-Dichlorobenzene	490	U
106-46-7	1,4-Dichlorobenzene	490	U
100-51-6	Benzyl Alcohol	490	U
95-50-1	1,2-Dichlorobenzene	490	U
95-48-7	2-Methylphenol	490	U
39638-32-9	Bis(2-Chloroethyl)Ether	490	U
106-44-5	4-Methylphenol	490	U
621-64-7	N-Nitroso-Di-n-Propylamine	490	U
67-72-1	Hexachloroethane	490	U
98-95-3	Nitrobenzene	490	U
78-59-1	Isophorone	490	U
88-75-5	2-Nitrophenol	490	U
105-67-9	2,4-Dimethylphenol	490	U
65-85-0	Benzoic Acid	2400	U
111-91-1	bis(2-Chloroethoxy)Methane	490	U
120-83-2	2,4-Dichlorophenol	490	U
120-82-1	1,2,4-Trichlorobenzene	490	U
91-20-3	Naphthalene	490	U
106-47-8	4-Chloroaniline	490	U
87-68-3	Hexachlorobutadiene	490	U
59-50-7	4-Chloro-3-Methylphenol	490	U
91-57-6	2-Methylnaphthalene	490	U
77-47-4	Hexachlorocyclopentadiene	490	U
88-06-2	2,4,6-Trichlorophenol	490	U
95-95-4	2,4,5-Trichlorophenol	2400	U
91-58-7	2-Chloronaphthalene	490	U
88-74-4	2-Nitroaniline	2400	U
131-11-3	Dimethyl Phthalate	490	U
208-96-8	Acenaphthylene	490	U
606-20-2	2,6-Dinitrotoluene	490	U

FORM I SV-1 1/87 Rev.

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

43SB0103

Lab Name: COMPUCHEM,RTP Contract: (2-88)-REVS

Lab Code: COMPU Case No.: 23664 SAS No.: _____ SDG No.: 41

Matrix: (soil/water) SOIL Lab Sample ID: 434313

Sample wt/vol: 30.4 (g/mL) G Lab File ID: GH034313A20

Level: (low/med) LOW Date Received: 07/30/91

% Moisture: not dec. 33 dec. ____ Date Extracted: 07/31/91

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 08/04/91

GPC Cleanup: (Y/N) N pH: 4.9 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
99-09-2	3-Nitroaniline	2400	U
83-32-9	Acenaphthene	490	U
51-28-5	2,4-Dinitrophenol	2400	U
100-02-7	4-Nitrophenol	2400	U
132-64-9	Dibenzofuran	490	U
121-14-2	2,4-Dinitrotoluene	490	U
84-66-2	Diethylphthalate	490	U
7005-72-3	4-Chlorophenyl-phenylether	490	U
86-73-7	Fluorene	490	U
100-01-6	4-Nitroaniline	2400	U
534-52-1	4,6-Dinitro-2-Methylphenol	2400	U
86-30-6	N-Nitrosodiphenylamine (1)	490	U
101-55-3	4-Bromophenyl-phenylether	490	U
118-74-1	Hexachlorobenzene	490	U
87-86-5	Pentachlorophenol	2400	U
85-01-8	Phenanthrene	490	U
120-12-7	Anthracene	490	U
84-74-2	Di-n-Butylphthalate	74	BJ
206-44-0	Fluoranthene	490	U
129-00-0	Pyrene	490	U
85-68-7	Butylbenzylphthalate	490	U
91-94-1	3,3'-Dichlorobenzidine	970	U
56-55-3	Benzo(a)Anthracene	490	U
218-01-9	Chrysene	490	U
117-81-7	bis(2-Ethylhexyl)Phthalate	100	BJ
117-84-0	Di-n-Octyl Phthalate	490	U
205-99-2	Benzo(b)Fluoranthene	490	U
207-08-9	Benzo(k)Fluoranthene	490	U
50-32-8	Benzo(a)Pyrene	490	U
193-39-5	Indeno(1,2,3-cd)Pyrene	490	U
53-70-3	Dibenzo(a,h)Anthracene	490	U
191-24-2	Benzo(g,h,i)Perylene	490	U

(1) - Cannot be separated from Diphenylamine

FORM I SV-2 1/87 Rev.

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

43SB0103

Lab Name: COMPUCHEM LABORATORIES Contract: (2-88)-REVS

Lab Code: COMPU Case No.: 23664 SAS No.: _____ SDG No.: 41

Matrix: (soil/water) SOIL Lab Sample ID: 434313

Sample wt/vol: 30.0 (g/mL) G Lab File ID: _____

Level: (low/med) LOW Date Received: 07/30/91

% Moisture: not dec. 33 dec. ____ Date Extracted: 08/02/91

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 08/07/91

GPC Cleanup: (Y/N) N pH: 4.9 Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	12	U
319-85-7	beta-BHC	12	U
319-86-8	delta-BHC	12	U
58-89-9	gamma-BHC	12	U
76-44-8	Heptachlor	12	U
309-00-2	Aldrin	12	U
1024-57-3	Heptachlor epoxide	12	U
959-98-8	Endosulfan I	12	U
60-57-1	Dieldrin	24	U
72-55-9	4,4'-DDE	24	U
72-20-8	Endrin	24	U
33213-65-9	Endosulfan II	24	U
72-54-8	4,4'-DDD	24	U
1031-07-8	Endosulfan sulfate	24	U
50-29-3	4,4'-DDT	24	U
72-43-5	p,p'-Methoxychlor	120	U
53494-70-5	Endrin ketone	24	U
5103-71-9	alpha-Chlordane	120	U
5103-74-2	gamma-Chlordane	120	U
8001-35-2	Toxaphene	240	U
12674-11-2	Aroclor-1016	120	U
11104-28-2	Aroclor-1221	120	U
11141-16-5	Aroclor-1232	120	U
53469-21-9	Aroclor-1242	120	U
12672-29-6	Aroclor-1248	120	U
11097-69-1	Aroclor-1254	240	U
11096-82-5	Aroclor-1260	240	U

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

43SB0103

Lab Name: COMPUCHEM LABORATORIES Contract: 7/88

Lab Code: COMPU Case No.: 50024 SAS No.: SDG No.: 664164

Matrix (soil/water): SOIL Lab Sample ID: 434349

Level (low/med): LOW Date Received: 07/30/91

% Solids: 67.0

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	4710			P
7440-36-0	Antimony	9.9	U		P
7440-38-2	Arsenic	1.4	U	W	F
7440-39-3	Barium	77.6			P
7440-41-7	Beryllium	.30	U		P
7440-43-9	Cadmium	1.2	U		P
7440-70-2	Calcium	510	B		P
7440-47-3	Chromium	9.7			P
7440-48-4	Cobalt	1.8	U		P
7440-50-8	Copper	2.0	B		P
7439-89-6	Iron	1600			P
7439-92-1	Lead	2.1		*	F
7439-95-4	Magnesium	250	B		P
7439-96-5	Manganese	23.5			P
7439-97-6	Mercury	.15	U		CV
7440-02-0	Nickel	2.7	U		P
7440-09-7	Potassium	350	B		P
7782-49-2	Selenium	1.2	U		F
7440-22-4	Silver	1.5	U	N	P
7440-23-5	Sodium	240	B		P
7440-28-0	Thallium	.58	U		F
7440-62-2	Vanadium	7.3	B		P
7440-66-6	Zinc	8.4			P
	Cyanide	.74	U		AS

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: COLORLESS Clarity After: Artifacts:

Comments:

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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

43SB0200

Lab Name: COMPUCHEM,RTP Contract: (2-88)-REVS

Lab Code: COMPU Case No.: 23664 SAS No.: _____ SDG No.: 21

Matrix: (soil/water) SOIL Lab Sample ID: 434291

Sample wt/vol: 5.0 (g/mL) G Lab File ID: GH034291B54

Level: (low/med) LOW Date Received: 07/30/91

% Moisture: not dec. 7 Date Analyzed: 07/31/91

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	11	U
74-83-9	Bromomethane	11	U
75-01-4	Vinyl Chloride	11	U
75-00-3	Chloroethane	11	U
75-09-2	Methylene Chloride	27	B
67-64-1	Acetone	94	B
75-15-0	Carbon Disulfide	5	U
75-35-4	1,1-Dichloroethene	5	U
75-34-3	1,1-Dichloroethane	5	U
540-59-0	1,2-Dichloroethene (total)	5	U
67-66-3	Chloroform	5	U
107-06-2	1,2-Dichloroethane	5	U
78-93-3	2-Butanone	11	U
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon Tetrachloride	5	U
108-05-4	Vinyl Acetate	5	U
75-27-4	Bromodichloromethane	5	U
78-87-5	1,2-Dichloropropane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
79-01-6	Trichloroethene	5	U
124-48-1	Dibromochloromethane	5	U
79-00-5	1,1,2-Trichloroethane	5	U
71-43-2	Benzene	5	U
10061-02-6	Trans-1,3-Dichloropropene	5	U
75-25-2	Bromoform	5	U
108-10-1	4-Methyl-2-Pentanone	11	U
591-78-6	2-Hexanone	11	U
127-18-4	Tetrachloroethene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-88-3	Toluene	5	U
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
100-42-5	Styrene	5	U
1330-20-7	Total Xylenes	5	U

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1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.: 43SB0200

Lab Name: COMPUCHEM,RTP Contract: (2-88)-REVS

Lab Code: COMPU Case No.: 23664 SAS No.: _____ SDG No.: 21

Matrix: (soil/water) SOIL Lab Sample ID: 434291

Sample wt/vol: 30.5 (g/mL) G Lab File ID: GH034291B52

Level: (low/med) LOW Date Received: 07/30/91

% Moisture: not dec. 7 dec. ____ Date Extracted: 08/02/91

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 08/04/91

GPC Cleanup: (Y/N) N pH: 5.2 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	350	U
111-44-4	bis(2-Chloroethyl)Ether	350	U
95-57-8	2-Chlorophenol	350	U
541-73-1	1,3-Dichlorobenzene	350	U
106-46-7	1,4-Dichlorobenzene	350	U
100-51-6	Benzyl Alcohol	350	U
95-50-1	1,2-Dichlorobenzene	350	U
95-48-7	2-Methylphenol	350	U
39638-32-9	Bis(2-Chloroethyl)Ether	350	U
106-44-5	4-Methylphenol	350	U
621-64-7	N-Nitroso-Di-n-Propylamine	350	U
67-72-1	Hexachloroethane	350	U
98-95-3	Nitrobenzene	350	U
78-59-1	Isophorone	350	U
88-75-5	2-Nitrophenol	350	U
105-67-9	2,4-Dimethylphenol	350	U
65-85-0	Benzoic Acid	1700	U
111-91-1	bis(2-Chloroethoxy)Methane	350	U
120-83-2	2,4-Dichlorophenol	350	U
120-82-1	1,2,4-Trichlorobenzene	350	U
91-20-3	Naphthalene	350	U
106-47-8	4-Chloroaniline	350	U
87-68-3	Hexachlorobutadiene	350	U
59-50-7	4-Chloro-3-Methylphenol	350	U
91-57-6	2-Methylnaphthalene	350	U
77-47-4	Hexachlorocyclopentadiene	350	U
88-06-2	2,4,6-Trichlorophenol	350	U
95-95-4	2,4,5-Trichlorophenol	1700	U
91-58-7	2-Chloronaphthalene	350	U
88-74-4	2-Nitroaniline	1700	U
131-11-3	Dimethyl Phthalate	350	U
208-96-8	Acenaphthylene	350	U
606-20-2	2,6-Dinitrotoluene	350	U

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1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

43SB0200

Lab Name: COMPUCHEM LABORATORIES Contract: (2-88)-REVS

Lab Code: COMPU Case No.: 23664 SAS No.: _____ SDG No.: 21

Matrix: (soil/water) SOIL Lab Sample ID: 434291

Sample wt/vol: 30.7 (g/mL) G Lab File ID: _____

Level: (low/med) LOW Date Received: 07/30/91

% Moisture: not dec. 7 dec. ____ Date Extracted: 08/04/91

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 08/08/91

GPC Cleanup: (Y/N) N pH: 5.2 Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	8.4	U
319-85-7	beta-BHC	8.4	U
319-86-8	delta-BHC	8.4	U
58-89-9	gamma-BHC	8.4	U
76-44-8	Heptachlor	8.4	U
309-00-2	Aldrin	8.4	U
1024-57-3	Heptachlor epoxide	8.4	U
959-98-8	Endosulfan I	8.4	U
60-57-1	Dieldrin	17	U
72-55-9	4,4'-DDE	17	U
72-20-8	Endrin	17	U
33213-65-9	Endosulfan II	17	U
72-54-8	4,4'-DDD	17	U
1031-07-8	Endosulfan sulfate	17	U
50-29-3	4,4'-DDT	17	U
72-43-5	p,p'-Methoxychlor	84	U
53494-70-5	Endrin ketone	17	U
5103-71-9	alpha-Chlordane	84	U
5103-74-2	gamma-Chlordane	84	U
8001-35-2	Toxaphene	170	U
12674-11-2	Aroclor-1016	84	U
11104-28-2	Aroclor-1221	84	U
11141-16-5	Aroclor-1232	84	U
53469-21-9	Aroclor-1242	84	U
12672-29-6	Aroclor-1248	84	U
11097-69-1	Aroclor-1254	170	U
11096-82-5	Aroclor-1260	170	U

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U.S. EPA - CLP

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INORGANIC ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

43SB0200

Lab Name: COMPUCHEM LABORATORIES Contract: 7/88

Lab Code: COMPU Case No.: 50024 SAS No.: _____ SDG No.: 664144

Matrix (soil/water): SOIL Lab Sample ID: 434327

Level (low/med): LOW Date Received: 07/30/91

% Solids: 93.0

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	4020			P
7440-36-0	Antimony	6.9	U	N	P
7440-38-2	Arsenic	1.1	U	W	F
7440-39-3	Barium	7.2	B		P
7440-41-7	Beryllium	.21	U		P
7440-43-9	Cadmium	.84	U		P
7440-70-2	Calcium	149	B	*	P
7440-47-3	Chromium	4.3		*	P
7440-48-4	Cobalt	1.3	U		P
7440-50-8	Copper	.98	B		P
7439-89-6	Iron	3050			P
7439-92-1	Lead	3.6		*	F
7439-95-4	Magnesium	115	B		P
7439-96-5	Manganese	7.1			P
7439-97-6	Mercury	.11	U		CV
7440-02-0	Nickel	1.9	U		P
7440-09-7	Potassium	223	U		P
7782-49-2	Selenium	.86	U		F
7440-22-4	Silver	1.0	U	N	P
7440-23-5	Sodium	73.5	B		P
7440-28-0	Thallium	.43	U		F
7440-62-2	Vanadium	6.9	B		P
7440-66-6	Zinc	4.0	B	*	P
	Cyanide	.54	U		AS

Color Before: BROWN Clarity Before: _____ Texture: FINE

Color After: COLORLESS Clarity After: _____ Artifacts: _____

Comments:
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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

43SB0204

Lab Name: COMPUCHEM.RTP Contract: (2-88)-REVS

Lab Code: COMPU Case No.: 23664 SAS No.: _____ SDG No.: 21

Matrix: (soil/water) SOIL Lab Sample ID: 434292

Sample wt/vol: 5.0 (g/mL) G Lab File ID: GH034292B54

Level: (low/med) LOW Date Received: 07/30/91

% Moisture: not dec. 20 Date Analyzed: 07/31/91

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	12	U
74-83-9	Bromomethane	12	U
75-01-4	Vinyl Chloride	12	U
75-00-3	Chloroethane	12	U
75-09-2	Methylene Chloride	21	B
67-64-1	Acetone	37	B
75-15-0	Carbon Disulfide	6	U
75-35-4	1,1-Dichloroethene	6	U
75-34-3	1,1-Dichloroethane	6	U
540-59-0	1,2-Dichloroethene (total)	6	U
67-66-3	Chloroform	6	U
107-06-2	1,2-Dichloroethane	6	U
78-93-3	2-Butanone	12	U
71-55-6	1,1,1-Trichloroethane	6	U
56-23-5	Carbon Tetrachloride	6	U
108-05-4	Vinyl Acetate	6	U
75-27-4	Bromodichloromethane	6	U
78-87-5	1,2-Dichloropropane	6	U
10061-01-5	cis-1,3-Dichloropropene	6	U
79-01-6	Trichloroethene	6	U
124-48-1	Dibromochloromethane	6	U
79-00-5	1,1,2-Trichloroethane	6	U
71-43-2	Benzene	6	U
10061-02-6	Trans-1,3-Dichloropropene	6	U
75-25-2	Bromoform	6	U
108-10-1	4-Methyl-2-Pentanone	12	U
591-78-6	2-Hexanone	12	U
127-18-4	Tetrachloroethene	6	U
79-34-5	1,1,2,2-Tetrachloroethane	6	U
108-88-3	Toluene	6	U
108-90-7	Chlorobenzene	6	U
100-41-4	Ethylbenzene	6	U
100-42-5	Styrene	6	U
1330-20-7	Total Xylenes	6	U

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1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

43SB0204

Lab Name: COMPUCHEM,RTP Contract: (2-88)-REVS

Lab Code: COMPU Case No.: 23664 SAS No.: _____ SDG No.: 21

Matrix: (soil/water) SOIL Lab Sample ID: 434292

Sample wt/vol: 30.6 (g/mL) G Lab File ID: GH034292B52

Level: (low/med) LOW Date Received: 07/30/91

% Moisture: not dec. 20 dec. ____ Date Extracted: 08/02/91

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 08/04/91

GPC Cleanup: (Y/N) N pH: 4.6 Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	400	U
111-44-4	bis(2-Chloroethyl)Ether	400	U
95-57-8	2-Chlorophenol	400	U
541-73-1	1,3-Dichlorobenzene	400	U
106-46-7	1,4-Dichlorobenzene	400	U
100-51-6	Benzyl Alcohol	400	U
95-50-1	1,2-Dichlorobenzene	400	U
95-48-7	2-Methylphenol	400	U
39638-32-9	Bis(2-Chloroethyl)Ether	400	U
106-44-5	4-Methylphenol	400	U
621-64-7	N-Nitroso-Di-n-Propylamine	400	U
67-72-1	Hexachloroethane	400	U
98-95-3	Nitrobenzene	400	U
78-59-1	Isophorone	400	U
88-75-5	2-Nitrophenol	400	U
105-67-9	2,4-Dimethylphenol	400	U
65-85-0	Benzoic Acid	2000	U
111-91-1	bis(2-Chloroethoxy)Methane	400	U
120-83-2	2,4-Dichlorophenol	400	U
120-82-1	1,2,4-Trichlorobenzene	400	U
91-20-3	Naphthalene	400	U
106-47-8	4-Chloroaniline	400	U
87-68-3	Hexachlorobutadiene	400	U
59-50-7	4-Chloro-3-Methylphenol	400	U
91-57-6	2-Methylnaphthalene	400	U
77-47-4	Hexachlorocyclopentadiene	400	U
88-06-2	2,4,6-Trichlorophenol	400	U
95-95-4	2,4,5-Trichlorophenol	2000	U
91-58-7	2-Chloronaphthalene	400	U
88-74-4	2-Nitroaniline	2000	U
131-11-3	Dimethyl Phthalate	400	U
208-96-8	Acenaphthylene	400	U
606-20-2	2,6-Dinitrotoluene	400	U

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1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

43SB0204

Lab Name: COMPUCHEM,RTP Contract: (2-88)-REVS

Lab Code: COMPU Case No.: 23664 SAS No.: _____ SDG No.: 21

Matrix: (soil/water) SOIL Lab Sample ID: 434292

Sample wt/vol: 30.6 (g/mL) G Lab File ID: GH034292B52

Level: (low/med) LOW Date Received: 07/30/91

% Moisture: not dec. 20 dec. ____ Date Extracted: 08/02/91

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 08/04/91

GPC Cleanup: (Y/N) N pH: 4.6 Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
99-09-2	3-Nitroaniline	2000	U
83-32-9	Acenaphthene	400	U
51-28-5	2,4-Dinitrophenol	2000	U
100-02-7	4-Nitrophenol	2000	U
132-64-9	Dibenzofuran	400	U
121-14-2	2,4-Dinitrotoluene	400	U
84-66-2	Diethylphthalate	400	U
7005-72-3	4-Chlorophenyl-phenylether	400	U
86-73-7	Fluorene	400	U
100-01-6	4-Nitroaniline	2000	U
534-52-1	4,6-Dinitro-2-Methylphenol	2000	U
86-30-6	N-Nitrosodiphenylamine (1)	400	U
101-55-3	4-Bromophenyl-phenylether	400	U
118-74-1	Hexachlorobenzene	400	U
87-86-5	Pentachlorophenol	2000	U
85-01-8	Phenanthrene	400	U
120-12-7	Anthracene	400	U
84-74-2	Di-n-Butylphthalate	400	U
206-44-0	Fluoranthene	400	U
129-00-0	Pyrene	400	U
85-68-7	Butylbenzylphthalate	400	U
91-94-1	3,3'-Dichlorobenzidine	810	U
56-55-3	Benzo(a)Anthracene	400	U
218-01-9	Chrysene	400	U
117-81-7	bis(2-Ethylhexyl)Phthalate	400	U
117-84-0	Di-n-Octyl Phthalate	400	U
205-99-2	Benzo(b)Fluoranthene	400	U
207-08-9	Benzo(k)Fluoranthene	400	U
50-32-8	Benzo(a)Pyrene	400	U
193-39-5	Indeno(1,2,3-cd)Pyrene	400	U
53-70-3	Dibenzo(a,h)Anthracene	400	U
191-24-2	Benzo(g,h,i)Perylene	400	U

(1) - Cannot be separated from Diphenylamine

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

43SB0204

Lab Name: COMPUCHEM LABORATORIES Contract: (2-88)-REVS

Lab Code: COMPU Case No.: 23664 SAS No.: SDG No.: 21

Matrix: (soil/water) SOIL Lab Sample ID: 434292

Sample wt/vol: 30.7 (g/mL) G Lab File ID:

Level: (low/med) LOW Date Received: 07/30/91

% Moisture: not dec. 20 dec. Date Extracted: 08/04/91

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 08/07/91

GPC Cleanup: (Y/N) N pH: 4.6 Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	9.8	U
319-85-7	beta-BHC	9.8	U
319-86-8	delta-BHC	9.8	U
58-89-9	gamma-BHC	9.8	U
76-44-8	Heptachlor	9.8	U
309-00-2	Aldrin	9.8	U
1024-57-3	Heptachlor epoxide	9.8	U
959-98-8	Endosulfan I	9.8	U
60-57-1	Dieldrin	20	U
72-55-9	4,4'-DDE	20	U
72-20-8	Endrin	20	U
33213-65-9	Endosulfan II	20	U
72-54-8	4,4'-DDD	20	U
1031-07-8	Endosulfan sulfate	20	U
50-29-3	4,4'-DDT	20	U
72-43-5	p,p'-Methoxychlor	98	U
53494-70-5	Endrin ketone	20	U
5103-71-9	alpha-Chlordane	98	U
5103-74-2	gamma-Chlordane	98	U
8001-35-2	Toxaphene	200	U
12674-11-2	Aroclor-1016	98	U
11104-28-2	Aroclor-1221	98	U
11141-16-5	Aroclor-1232	98	U
53469-21-9	Aroclor-1242	98	U
12672-29-6	Aroclor-1248	98	U
11097-69-1	Aroclor-1254	200	U
11096-82-5	Aroclor-1260	200	U

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U.S. EPA - CLP

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INORGANIC ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

43SB0204

Lab Name: COMPUCHEM LABORATORIES Contract: 7/88

Lab Code: COMPU Case No.: 50024 SAS No.: _____ SDG No.: 664144

Matrix (soil/water): SOIL Lab Sample ID: 434328

Level (low/med): LOW Date Received: 07/30/91

% Solids: 80.0

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	2590			P
7440-36-0	Antimony	8.2	U	N	P
7440-38-2	Arsenic	1.2	U		F
7440-39-3	Barium	6.1	B		P
7440-41-7	Beryllium	.25	U		P
7440-43-9	Cadmium	.99	U		P
7440-70-2	Calcium	64.4	B	*	P
7440-47-3	Chromium	3.6		*	P
7440-48-4	Cobalt	1.5	U		P
7440-50-8	Copper	1.1	B		P
7439-89-6	Iron	738			P
7439-92-1	Lead	4.0		*	F
7439-95-4	Magnesium	71.1	B		P
7439-96-5	Manganese	3.0	B		P
7439-97-6	Mercury	.12	U		CV
7440-02-0	Nickel	2.2	U		P
7440-09-7	Potassium	264	U		P
7782-49-2	Selenium	.99	U		F
7440-22-4	Silver	1.2	U	N	P
7440-23-5	Sodium	112	B		P
7440-28-0	Thallium	.50	U		F
7440-62-2	Vanadium	2.9	B		P
7440-66-6	Zinc	5.4		*	P
	Cyanide	.62	U		AS

Color Before: BROWN Clarity Before: _____ Texture: FINE

Color After: COLORLESS Clarity After: _____ Artifacts: _____

Comments:
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FORM I - IN 7/88

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

43SB0300

Lab Name: COMPUCHEM,RTP Contract: (2-88)-REVS

Lab Code: COMPU Case No.: 23664 SAS No.: _____ SDG No.: 61

Matrix: (soil/water) SOIL Lab Sample ID: 434325

Sample wt/vol: 5.0 (g/mL) G Lab File ID: GH034325A13

Level: (low/med) LOW Date Received: 07/30/91

% Moisture: not dec. 18 Date Analyzed: 08/04/91

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	12	U
74-83-9	Bromomethane	12	U
75-01-4	Vinyl Chloride	12	U
75-00-3	Chloroethane	12	U
75-09-2	Methylene Chloride	18	B
67-64-1	Acetone	18	B
75-15-0	Carbon Disulfide	6	U
75-35-4	1,1-Dichloroethene	6	U
75-34-3	1,1-Dichloroethane	6	U
540-59-0	1,2-Dichloroethene (total)	6	U
67-66-3	Chloroform	6	U
107-06-2	1,2-Dichloroethane	6	U
78-93-3	2-Butanone	12	U
71-55-6	1,1,1-Trichloroethane	6	U
56-23-5	Carbon Tetrachloride	6	U
108-05-4	Vinyl Acetate	12	U
75-27-4	Bromodichloromethane	6	U
78-87-5	1,2-Dichloropropane	6	U
10061-01-5	cis-1,3-Dichloropropene	6	U
79-01-6	Trichloroethene	6	U
124-48-1	Dibromochloromethane	6	U
79-00-5	1,1,2-Trichloroethane	6	U
71-43-2	Benzene	6	U
10061-02-6	Trans-1,3-Dichloropropene	6	U
75-25-2	Bromoform	6	U
108-10-1	4-Methyl-2-Pentanone	12	U
591-78-6	2-Hexanone	12	U
127-18-4	Tetrachloroethene	6	U
79-34-5	1,1,2,2-Tetrachloroethane	6	U
108-88-3	Toluene	6	U
108-90-7	Chlorobenzene	6	U
100-41-4	Ethylbenzene	6	U
100-42-5	Styrene	6	U
1330-20-7	Total Xylenes	6	U

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1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

43SB0300

Lab Name: COMPUCHEM,RTP Contract: (2-88)-REVS

Lab Code: COMPU Case No.: 23664 SAS No.: _____ SDG No.: 61

Matrix: (soil/water) SOIL Lab Sample ID: 434325

Sample wt/vol: 30.5 (g/mL) G Lab File ID: GH034325B52

Level: (low/med) LOW Date Received: 07/30/91

% Moisture: not dec. 18 dec. ____ Date Extracted: 08/02/91

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 08/04/91

GPC Cleanup: (Y/N) N pH: 5.2 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	400	U
111-44-4	bis(2-Chloroethyl)Ether	400	U
95-57-8	2-Chlorophenol	400	U
541-73-1	1,3-Dichlorobenzene	400	U
106-46-7	1,4-Dichlorobenzene	400	U
95-50-1	1,2-Dichlorobenzene	400	U
95-48-7	2-Methylphenol	400	U
108-60-1	2,2'-Oxybis(1-Chloropropane)	400	U
106-44-5	4-Methylphenol	400	U
621-64-7	N-Nitroso-Di-n-Propylamine	400	U
67-72-1	Hexachloroethane	400	U
98-95-3	Nitrobenzene	400	U
78-59-1	Isophorone	400	U
88-75-5	2-Nitrophenol	400	U
105-67-9	2,4-Dimethylphenol	400	U
111-91-1	bis(2-Chloroethoxy)Methane	400	U
120-83-2	2,4-Dichlorophenol	400	U
120-82-1	1,2,4-Trichlorobenzene	400	U
91-20-3	Naphthalene	400	U
106-47-8	4-Chloroaniline	400	U
87-68-3	Hexachlorobutadiene	400	U
59-50-7	4-Chloro-3-Methylphenol	400	U
91-57-6	2-Methylnaphthalene	400	U
77-47-4	Hexachlorocyclopentadiene	400	U
88-06-2	2,4,6-Trichlorophenol	400	U
95-95-4	2,4,5-Trichlorophenol	960	U
91-58-7	2-Chloronaphthalene	400	U
88-74-4	2-Nitroaniline	960	U
131-11-3	Dimethyl Phthalate	400	U
208-96-8	Acenaphthylene	400	U
606-20-2	2,6-Dinitrotoluene	400	U

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1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

43SB0300

Lab Name: COMPUCHEM,RTP Contract: (2-88)-REVS

Lab Code: COMPU Case No.: 23664 SAS No.: _____ SDG No.: 61

Matrix: (soil/water) SOIL Lab Sample ID: 434325

Sample wt/vol: 30.5 (g/mL) G Lab File ID: GH034325B52

Level: (low/med) LOW Date Received: 07/30/91

% Moisture: not dec. 18 dec. ____ Date Extracted: 08/02/91

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 08/04/91

GPC Cleanup: (Y/N) N pH: 5.2 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
99-09-2	3-Nitroaniline	960	U
83-32-9	Acenaphthene	400	U
51-28-5	2,4-Dinitrophenol	960	U
100-02-7	4-Nitrophenol	960	U
132-64-9	Dibenzofuran	400	U
121-14-2	2,4-Dinitrotoluene	400	U
84-66-2	Diethylphthalate	400	U
7005-72-3	4-Chlorophenyl-phenylether	400	U
86-73-7	Fluorene	400	U
100-01-6	4-Nitroaniline	960	U
534-52-1	4,6-Dinitro-2-Methylphenol	960	U
86-30-6	N-Nitrosodiphenylamine (1)	400	U
101-55-3	4-Bromophenyl-phenylether	400	U
118-74-1	Hexachlorobenzene	400	U
87-86-5	Pentachlorophenol	960	U
85-01-8	Phenanthrene	400	U
120-12-7	Anthracene	400	U
86-74-8	Carbazole	400	U
84-74-2	Di-n-Butylphthalate	400	U
206-44-0	Fluoranthene	400	U
129-00-0	Pyrene	400	U
85-68-7	Butylbenzylphthalate	400	U
91-94-1	3,3'-Dichlorobenzidine	400	U
56-55-3	Benzo(a)Anthracene	400	U
218-01-9	Chrysene	400	U
117-81-7	bis(2-Ethylhexyl)Phthalate	400	U
117-84-0	Di-n-Octyl Phthalate	400	U
205-99-2	Benzo(b)Fluoranthene	400	U
207-08-9	Benzo(k)Fluoranthene	400	U
50-32-8	Benzo(a)Pyrene	400	U
193-39-5	Indeno(1,2,3-cd)Pyrene	400	U
53-70-3	Dibenz(a,h)Anthracene	400	U
191-24-2	Benzo(g,h,i)Perylene	400	U

(1) - Cannot be separated from Diphenylamine

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

43SB0300

Lab Name: COMPUCHEM LABORATORIES Contract: 3/90

Lab Code: COMPU Case No.: 50024 SAS No.: _____ SDG No.: 664184

Matrix (soil/water): SOIL Lab Sample ID: 434368

Level (low/med): LOW Date Received: 07/30/91

% Solids: 82.0

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	658		E*	P
7440-36-0	Antimony	7.9	U	N	P
7440-38-2	Arsenic	1.2	U		F
7440-39-3	Barium	2.2	B		P
7440-41-7	Beryllium	.24	U		P
7440-43-9	Cadmium	.96	U		P
7440-70-2	Calcium	27.7	B		P
7440-47-3	Chromium	2.2	B		P
7440-48-4	Cobalt	1.4	U		P
7440-50-8	Copper	1.2	B		P
7439-89-6	Iron	419		*	P
7439-92-1	Lead	1.6			F
7439-95-4	Magnesium	29.5	B		P
7439-96-5	Manganese	2.0	B		P
7439-97-6	Mercury	.10	U		CV
7440-02-0	Nickel	2.2	U		P
7440-09-7	Potassium	255	U		P
7782-49-2	Selenium	.98	U		F
7440-22-4	Silver	1.2	U	N	P
7440-23-5	Sodium	150	B		P
7440-28-0	Thallium	.49	U		F
7440-62-2	Vanadium	1.4	B		P
7440-66-6	Zinc	3.1	B		P
	Cyanide	.61	U		AS

Color Before: BROWN Clarity Before: _____ Texture: MEDIUM

Color After: COLORLESS Clarity After: _____ Artifacts: _____

Comments:

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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

43SB0400

Lab Name: COMPUCHEM,RTP Contract: (2-88)-REVS

Lab Code: COMPU Case No.: 23664 SAS No.: _____ SDG No.: 61

Matrix: (soil/water) SOIL Lab Sample ID: 434326

Sample wt/vol: 5.0 (g/mL) G Lab File ID: GH034326A13

Level: (low/med) LOW Date Received: 07/30/91

% Moisture: not dec. 15 Date Analyzed: 08/04/91

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	12	U
74-83-9	Bromomethane	12	U
75-01-4	Vinyl Chloride	12	U
75-00-3	Chloroethane	12	U
75-09-2	Methylene Chloride	18	B
67-64-1	Acetone	15	B
75-15-0	Carbon Disulfide	6	U
75-35-4	1,1-Dichloroethene	6	U
75-34-3	1,1-Dichloroethane	6	U
540-59-0	1,2-Dichloroethene (total)	6	U
67-66-3	Chloroform	6	U
107-06-2	1,2-Dichloroethane	6	U
78-93-3	2-Butanone	12	U
71-55-6	1,1,1-Trichloroethane	6	U
56-23-5	Carbon Tetrachloride	6	U
108-05-4	Vinyl Acetate	12	U
75-27-4	Bromodichloromethane	6	U
78-87-5	1,2-Dichloropropane	6	U
10061-01-5	cis-1,3-Dichloropropene	6	U
79-01-6	Trichloroethene	6	U
124-48-1	Dibromochloromethane	6	U
79-00-5	1,1,2-Trichloroethane	6	U
71-43-2	Benzene	6	U
10061-02-6	Trans-1,3-Dichloropropene	6	U
75-25-2	Bromoform	6	U
108-10-1	4-Methyl-2-Pentanone	12	U
591-78-6	2-Hexanone	12	U
127-18-4	Tetrachloroethene	6	U
79-34-5	1,1,2,2-Tetrachloroethane	6	U
108-88-3	Toluene	6	U
108-90-7	Chlorobenzene	6	U
100-41-4	Ethylbenzene	6	U
100-42-5	Styrene	6	U
1330-20-7	Total Xylenes	6	U

FORM I VOA 1/87 Rev.

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

43SB0400

Lab Name: COMPUCHEM,RTP Contract: (2-88)-REVS

Lab Code: COMPU Case No.: 23664 SAS No.: _____ SDG No.: 61

Matrix: (soil/water) SOIL Lab Sample ID: 434326

Sample wt/vol: 30.6 (g/mL) G Lab File ID: GH034326B52

Level: (low/med) LOW Date Received: 07/30/91

% Moisture: not dec. 15 dec. ____ Date Extracted: 08/02/91

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 08/04/91

GPC Cleanup: (Y/N) N pH: 4.9 Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	380	U
111-44-4	bis(2-Chloroethyl)Ether	380	U
95-57-8	2-Chlorophenol	380	U
541-73-1	1,3-Dichlorobenzene	380	U
106-46-7	1,4-Dichlorobenzene	380	U
95-50-1	1,2-Dichlorobenzene	380	U
95-48-7	2-Methylphenol	380	U
108-60-1	2,2'-Oxybis(1-Chloropropane)	380	U
106-44-5	4-Methylphenol	380	U
621-64-7	N-Nitroso-Di-n-Propylamine	380	U
67-72-1	Hexachloroethane	380	U
98-95-3	Nitrobenzene	380	U
78-59-1	Isophorone	380	U
88-75-5	2-Nitrophenol	380	U
105-67-9	2,4-Dimethylphenol	380	U
111-91-1	bis(2-Chloroethoxy)Methane	380	U
120-83-2	2,4-Dichlorophenol	380	U
120-82-1	1,2,4-Trichlorobenzene	380	U
91-20-3	Naphthalene	380	U
106-47-8	4-Chloroaniline	380	U
87-68-3	Hexachlorobutadiene	380	U
59-50-7	4-Chloro-3-Methylphenol	380	U
91-57-6	2-Methylnaphthalene	380	U
77-47-4	Hexachlorocyclopentadiene	380	U
88-06-2	2,4,6-Trichlorophenol	380	U
95-95-4	2,4,5-Trichlorophenol	920	U
91-58-7	2-Chloronaphthalene	380	U
88-74-4	2-Nitroaniline	920	U
131-11-3	Dimethyl Phthalate	380	U
208-96-8	Acenaphthylene	380	U
606-20-2	2,6-Dinitrotoluene	380	U

FORM I SV-1 1/87 Rev.

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

43SB0400

Lab Name: COMPUCHEM,RTP Contract: (2-88)-REVS

Lab Code: COMPU Case No.: 23664 SAS No.: _____ SDG No.: 61

Matrix: (soil/water) SOIL Lab Sample ID: 434326

Sample wt/vol: 30.6 (g/mL) G Lab File ID: GH034326B52

Level: (low/med) LOW Date Received: 07/30/91

% Moisture: not dec. 15 dec. ____ Date Extracted: 08/02/91

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 08/04/91

GPC Cleanup: (Y/N) N pH: 4.9 Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
99-09-2	3-Nitroaniline	920	U
83-32-9	Acenaphthene	380	U
51-28-5	2,4-Dinitrophenol	920	U
100-02-7	4-Nitrophenol	920	U
132-64-9	Dibenzofuran	380	U
121-14-2	2,4-Dinitrotoluene	380	U
84-66-2	Diethylphthalate	380	U
7005-72-3	4-Chlorophenyl-phenylether	380	U
86-73-7	Fluorene	380	U
100-01-6	4-Nitroaniline	920	U
534-52-1	4,6-Dinitro-2-Methylphenol	920	U
86-30-6	N-Nitrosodiphenylamine (1)	380	U
101-55-3	4-Bromophenyl-phenylether	380	U
118-74-1	Hexachlorobenzene	380	U
87-86-5	Pentachlorophenol	920	U
85-01-8	Phenanthrene	380	U
120-12-7	Anthracene	380	U
86-74-8	Carbazole	380	U
84-74-2	Di-n-Butylphthalate	380	U
206-44-0	Fluoranthene	380	U
129-00-0	Pyrene	380	U
85-68-7	Butylbenzylphthalate	380	U
91-94-1	3,3'-Dichlorobenzidine	380	U
56-55-3	Benzo(a)Anthracene	380	U
218-01-9	Chrysene	380	U
117-81-7	bis(2-Ethylhexyl)Phthalate	380	U
117-84-0	Di-n-Octyl Phthalate	380	U
205-99-2	Benzo(b)Fluoranthene	380	U
207-08-9	Benzo(k)Fluoranthene	380	U
50-32-8	Benzo(a)Pyrene	380	U
193-39-5	Indeno(1,2,3-cd)Pyrene	380	U
53-70-3	Dibenz(a,h)Anthracene	380	U
191-24-2	Benzo(g,h,i)Perylene	380	U

(1) - Cannot be separated from Diphenylamine

FORM I SV-2 1/87 Rev.

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

43SB0400

Lab Name: COMPUCHEM LABORATORIES Contract: (2-88)-REVS

Lab Code: COMPU Case No.: 23664 SAS No.: _____ SDG No.: 61

Matrix: (soil/water) SOIL Lab Sample ID: 434326

Sample wt/vol: 30.5 (g/mL) G Lab File ID: _____

Level: (low/med) LOW Date Received: 07/30/91

% Moisture: not dec. 15 dec. ____ Date Extracted: 08/05/91

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 08/07/91

GPC Cleanup: (Y/N) N pH: 4.9 Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	9.2	U
319-85-7	beta-BHC	9.2	U
319-86-8	delta-BHC	9.2	U
58-89-9	gamma-BHC	9.2	U
76-44-8	Heptachlor	9.2	U
309-00-2	Aldrin	9.2	U
1024-57-3	Heptachlor epoxide	9.2	U
959-98-8	Endosulfan I	9.2	U
60-57-1	Dieldrin	18	U
72-55-9	4,4'-DDE	18	U
72-20-8	Endrin	18	U
33213-65-9	Endosulfan II	18	U
72-54-8	4,4'-DDD	18	U
1031-07-8	Endosulfan sulfate	18	U
50-29-3	4,4'-DDT	18	U
72-43-5	p,p'-Methoxychlor	92	U
53494-70-5	Endrin ketone	18	U
5103-71-9	alpha-Chlordane	92	U
5103-74-2	gamma-Chlordane	92	U
8001-35-2	Toxaphene	180	U
12674-11-2	Aroclor-1016	92	U
11104-28-2	Aroclor-1221	92	U
11141-16-5	Aroclor-1232	92	U
53469-21-9	Aroclor-1242	92	U
12672-29-6	Aroclor-1248	92	U
11097-69-1	Aroclor-1254	180	U
11096-82-5	Aroclor-1260	180	U

U.S. EPA - CLP

1
INORGANIC ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

43SB0400

Lab Name: COMPUCHEM LABORATORIES Contract: 3/90

Lab Code: COMPU Case No.: 50024 SAS No.: _____ SDG No.: 664184

Matrix (soil/water): SOIL Lab Sample ID: 434369

Level (low/med): LOW Date Received: 07/30/91

% Solids: 85.0

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	2310		E*	P
7440-36-0	Antimony	7.5	U	N	P
7440-38-2	Arsenic	1.2	U		F
7440-39-3	Barium	4.9	B		P
7440-41-7	Beryllium	.23	U		P
7440-43-9	Cadmium	.91	U		P
7440-70-2	Calcium	69.8	B		P
7440-47-3	Chromium	4.0			P
7440-48-4	Cobalt	1.4	U		P
7440-50-8	Copper	.91	U		P
7439-89-6	Iron	894		*	P
7439-92-1	Lead	4.5			F
7439-95-4	Magnesium	90.6	B		P
7439-96-5	Manganese	5.4			P
7439-97-6	Mercury	.12	U		CV
7440-02-0	Nickel	2.1	U		P
7440-09-7	Potassium	244	U		P
7782-49-2	Selenium	.93	U		F
7440-22-4	Silver	1.1	U	N	P
7440-23-5	Sodium	158	B		P
7440-28-0	Thallium	.47	U		F
7440-62-2	Vanadium	3.7	B		P
7440-66-6	Zinc	3.0	B		P
	Cyanide	.59	U		AS

Color Before: BROWN Clarity Before: _____ Texture: MEDIUM

Color After: COLORLESS Clarity After: _____ Artifacts: _____

Comments:
FORM 1.04 - PAGE 2

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

43SB0403

Lab Name: COMPUCHEM,RTP Contract: (2-88)-REVS

Lab Code: COMPU Case No.: 23664 SAS No.: _____ SDG No.: 61

Matrix: (soil/water) SOIL Lab Sample ID: 434324

Sample wt/vol: 5.0 (g/mL) G Lab File ID: GH034324A13

Level: (low/med) LOW Date Received: 07/30/91

% Moisture: not dec. 26 Date Analyzed: 08/04/91

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	14	U
74-83-9	Bromomethane	14	U
75-01-4	Vinyl Chloride	14	U
75-00-3	Chloroethane	14	U
75-09-2	Methylene Chloride	23	B
67-64-1	Acetone	27	B
75-15-0	Carbon Disulfide	7	U
75-35-4	1,1-Dichloroethene	7	U
75-34-3	1,1-Dichloroethane	7	U
540-59-0	1,2-Dichloroethene (total)	7	U
67-66-3	Chloroform	7	U
107-06-2	1,2-Dichloroethane	7	U
78-93-3	2-Butanone	14	U
71-55-6	1,1,1-Trichloroethane	7	U
56-23-5	Carbon Tetrachloride	7	U
108-05-4	Vinyl Acetate	14	U
75-27-4	Bromodichloromethane	7	U
78-87-5	1,2-Dichloropropane	7	U
10061-01-5	cis-1,3-Dichloropropene	7	U
79-01-6	Trichloroethene	7	U
124-48-1	Dibromochloromethane	7	U
79-00-5	1,1,2-Trichloroethane	7	U
71-43-2	Benzene	7	U
10061-02-6	Trans-1,3-Dichloropropene	7	U
75-25-2	Bromoform	7	U
108-10-1	4-Methyl-2-Pentanone	14	U
591-78-6	2-Hexanone	14	U
127-18-4	Tetrachloroethene	7	U
79-34-5	1,1,2,2-Tetrachloroethane	7	U
108-88-3	Toluene	7	U
108-90-7	Chlorobenzene	7	U
100-41-4	Ethylbenzene	7	U
100-42-5	Styrene	7	U
1330-20-7	Total Xylenes	7	U

FORM I VOA 1/87 Rev.

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

43SB0403

Lab Name: COMPUCHEM,RTP Contract: (2-88)-REVS

Lab Code: COMPU Case No.: 23664 SAS No.: _____ SDG No.: 61

Matrix: (soil/water) SOIL Lab Sample ID: 434324

Sample wt/vol: 30.5 (g/mL) G Lab File ID: GH034324B52

Level: (low/med) LOW Date Received: 07/30/91

% Moisture: not dec. 26 dec. ____ Date Extracted: 08/02/91

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 08/04/91

GPC Cleanup: (Y/N) N pH: 5.5 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	440	U
111-44-4	bis(2-Chloroethyl)Ether	440	U
95-57-8	2-Chlorophenol	440	U
541-73-1	1,3-Dichlorobenzene	440	U
106-46-7	1,4-Dichlorobenzene	440	U
95-50-1	1,2-Dichlorobenzene	440	U
95-48-7	2-Methylphenol	440	U
108-60-1	2,2'-Oxybis(1-Chloropropane)	440	U
106-44-5	4-Methylphenol	440	U
621-64-7	N-Nitroso-Di-n-Propylamine	440	U
67-72-1	Hexachloroethane	440	U
98-95-3	Nitrobenzene	440	U
78-59-1	Isophorone	440	U
88-75-5	2-Nitrophenol	440	U
105-67-9	2,4-Dimethylphenol	440	U
111-91-1	bis(2-Chloroethoxy)Methane	440	U
120-83-2	2,4-Dichlorophenol	440	U
120-82-1	1,2,4-Trichlorobenzene	440	U
91-20-3	Naphthalene	440	U
106-47-8	4-Chloroaniline	440	U
87-68-3	Hexachlorobutadiene	440	U
59-50-7	4-Chloro-3-Methylphenol	440	U
91-57-6	2-Methylnaphthalene	440	U
77-47-4	Hexachlorocyclopentadiene	440	U
88-06-2	2,4,6-Trichlorophenol	440	U
95-95-4	2,4,5-Trichlorophenol	1100	U
91-58-7	2-Chloronaphthalene	440	U
88-74-4	2-Nitroaniline	1100	U
131-11-3	Dimethyl Phthalate	440	U
208-96-8	Acenaphthylene	440	U
606-20-2	2,6-Dinitrotoluene	440	U

FORM I SV-1 1/87 Rev.

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

43SB0403

Lab Name: COMPUCHEM,RTP Contract: (2-88)-REVS

Lab Code: COMPU Case No.: 23664 SAS No.: _____ SDG No.: 61

Matrix: (soil/water) SOIL Lab Sample ID: 434324

Sample wt/vol: 30.5 (g/mL) G Lab File ID: GH034324B52

Level: (low/med) LOW Date Received: 07/30/91

% Moisture: not dec. 26 dec. ____ Date Extracted: 08/02/91

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 08/04/91

GPC Cleanup: (Y/N) N pH: 5.5 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
99-09-2	3-Nitroaniline	1100	U
83-32-9	Acenaphthene	440	U
51-28-5	2,4-Dinitrophenol	1100	U
100-02-7	4-Nitrophenol	1100	U
132-64-9	Dibenzofuran	440	U
121-14-2	2,4-Dinitrotoluene	440	U
84-66-2	Diethylphthalate	440	U
7005-72-3	4-Chlorophenyl-phenylether	440	U
86-73-7	Fluorene	440	U
100-01-6	4-Nitroaniline	1100	U
534-52-1	4,6-Dinitro-2-Methylphenol	1100	U
86-30-6	N-Nitrosodiphenylamine (1)	440	U
101-55-3	4-Bromophenyl-phenylether	440	U
118-74-1	Hexachlorobenzene	440	U
87-86-5	Pentachlorophenol	1100	U
85-01-8	Phenanthrene	440	U
120-12-7	Anthracene	440	U
86-74-8	Carbazole	440	U
84-74-2	Di-n-Butylphthalate	440	U
206-44-0	Fluoranthene	440	U
129-00-0	Pyrene	440	U
85-68-7	Butylbenzylphthalate	440	U
91-94-1	3,3'-Dichlorobenzidine	440	U
56-55-3	Benzo(a)Anthracene	440	U
218-01-9	Chrysene	440	U
117-81-7	bis(2-Ethylhexyl)Phthalate	440	U
117-84-0	Di-n-Octyl Phthalate	440	U
205-99-2	Benzo(b)Fluoranthene	440	U
207-08-9	Benzo(k)Fluoranthene	440	U
50-32-8	Benzo(a)Pyrene	440	U
193-39-5	Indeno(1,2,3-cd)Pyrene	440	U
53-70-3	Dibenz(a,h)Anthracene	440	U
191-24-2	Benzo(g,h,i)Perylene	440	U

(1) - Cannot be separated from Diphenylamine

FORM I SV-2 1/87 Rev.

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

43SB0403

Lab Name: COMPUCHEM LABORATORIES Contract: (2-88)-REVS

Lab Code: COMPU Case No.: 23664 SAS No.: _____ SDG No.: 61

Matrix: (soil/water) SOIL Lab Sample ID: 434324

Sample wt/vol: 30.5 (g/mL) G Lab File ID: _____

Level: (low/med) LOW Date Received: 07/30/91

% Moisture: not dec. 26 dec. ____ Date Extracted: 08/05/91

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 08/07/91

GPC Cleanup: (Y/N) N pH: 5.5 Dilution Factor: 1.00

CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

CAS NO.	COMPOUND		Q
319-84-6	alpha-BHC	11	U
319-85-7	beta-BHC	11	U
319-86-8	delta-BHC	11	U
58-89-9	gamma-BHC	11	U
76-44-8	Heptachlor	11	U
309-00-2	Aldrin	11	U
1024-57-3	Heptachlor epoxide	11	U
959-98-8	Endosulfan I	11	U
60-57-1	Dieldrin	21	U
72-55-9	4,4'-DDE	21	U
72-20-8	Endrin	21	U
33213-65-9	Endosulfan II	21	U
72-54-8	4,4'-DDD	21	U
1031-07-8	Endosulfan sulfate	21	U
50-29-3	4,4'-DDT	21	U
72-43-5	p,p'-Methoxychlor	110	U
53494-70-5	Endrin ketone	21	U
5103-71-9	alpha-Chlordane	110	U
5103-74-2	gamma-Chlordane	110	U
8001-35-2	Toxaphene	210	U
12674-11-2	Aroclor-1016	110	U
11104-28-2	Aroclor-1221	110	U
11141-16-5	Aroclor-1232	110	U
53469-21-9	Aroclor-1242	110	U
12672-29-6	Aroclor-1248	110	U
11097-69-1	Aroclor-1254	210	U
11096-82-5	Aroclor-1260	210	U

FORM I PEST 1/87 Rev.

U.S. EPA - CLP

1
INORGANIC ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

43SB0403

Lab Name: COMPUCHEM LABORATORIES Contract: 3/90

Lab Code: COMPU Case No.: 50024 SAS No.: _____ SDG No.: 664184

Matrix (soil/water): SOIL Lab Sample ID: 434367

Level (low/med): LOW Date Received: 07/30/91

% Solids: 74.0

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	621		E*	P
7440-36-0	Antimony	8.8	U	N	P
7440-38-2	Arsenic	1.3	U		F
7440-39-3	Barium	2.3	B		P
7440-41-7	Beryllium	.27	U		P
7440-43-9	Cadmium	1.1	U		P
7440-70-2	Calcium	63.7	B		P
7440-47-3	Chromium	1.2	B		P
7440-48-4	Cobalt	1.6	U		P
7440-50-8	Copper	2.3	B		P
7439-89-6	Iron	263		*	P
7439-92-1	Lead	1.8			F
7439-95-4	Magnesium	34.5	B		P
7439-96-5	Manganese	2.2	B		P
7439-97-6	Mercury	.13	U		CV
7440-02-0	Nickel	2.4	U		P
7440-09-7	Potassium	286	U		P
7782-49-2	Selenium	1.0	U		F
7440-22-4	Silver	1.3	U	N	P
7440-23-5	Sodium	168	B		P
7440-28-0	Thallium	.52	U		F
7440-62-2	Vanadium	1.2	B		P
7440-66-6	Zinc	3.1	B		P
	Cyanide	.67	U		AS

Color Before: BROWN Clarity Before: _____ Texture: MEDIUM

Color After: COLORLESS Clarity After: _____ Artifacts: _____

Comments:
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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

43SB0500

Lab Name: COMPUCHEM,RTP Contract: (2-88)-REVS

Lab Code: COMPU Case No.: 23664 SAS No.: _____ SDG No.: 41

Matrix: (soil/water) SOIL Lab Sample ID: 434298

Sample wt/vol: 5.0 (g/mL) G Lab File ID: GH034298C54

Level: (low/med) LOW Date Received: 07/30/91

% Moisture: not dec. 9 Date Analyzed: 08/01/91

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	11	U
74-83-9	Bromomethane	11	U
75-01-4	Vinyl Chloride	11	U
75-00-3	Chloroethane	11	U
75-09-2	Methylene Chloride	29	B
67-64-1	Acetone	17	B
75-15-0	Carbon Disulfide	5	U
75-35-4	1,1-Dichloroethene	5	U
75-34-3	1,1-Dichloroethane	5	U
540-59-0	1,2-Dichloroethene (total)	5	U
67-66-3	Chloroform	5	U
107-06-2	1,2-Dichloroethane	5	U
78-93-3	2-Butanone	11	U
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon Tetrachloride	5	U
108-05-4	Vinyl Acetate	5	U
75-27-4	Bromodichloromethane	5	U
78-87-5	1,2-Dichloropropane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
79-01-6	Trichloroethene	5	U
124-48-1	Dibromochloromethane	5	U
79-00-5	1,1,2-Trichloroethane	5	U
71-43-2	Benzene	5	U
10061-02-6	Trans-1,3-Dichloropropene	5	U
75-25-2	Bromoform	5	U
108-10-1	4-Methyl-2-Pentanone	11	U
591-78-6	2-Hexanone	11	U
127-18-4	Tetrachloroethene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-88-3	Toluene	5	U
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
100-42-5	Styrene	5	U
1330-20-7	Total Xylenes	5	U

FORM I VOA 1/87 Rev.

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

43SB0500

Lab Name: COMPUCHEM,RTP Contract: (2-88)-REVS

Lab Code: COMPU Case No.: 23664 SAS No.: _____ SDG No.: 41

Matrix: (soil/water) SOIL Lab Sample ID: 434298

Sample wt/vol: 30.9 (g/mL) G Lab File ID: GH034298B52

Level: (low/med) LOW Date Received: 07/30/91

% Moisture: not dec. 9 dec. ____ Date Extracted: 08/05/91

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 08/06/91

GPC Cleanup: (Y/N) N pH: 4.8 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	350	U
111-44-4	bis(2-Chloroethyl)Ether	350	U
95-57-8	2-Chlorophenol	350	U
541-73-1	1,3-Dichlorobenzene	350	U
106-46-7	1,4-Dichlorobenzene	350	U
100-51-6	Benzyl Alcohol	350	U
95-50-1	1,2-Dichlorobenzene	350	U
95-48-7	2-Methylphenol	350	U
39638-32-9	Bis(2-Chloroethyl)Ether	350	U
106-44-5	4-Methylphenol	350	U
621-64-7	N-Nitroso-Di-n-Propylamine	350	U
67-72-1	Hexachloroethane	350	U
98-95-3	Nitrobenzene	350	U
78-59-1	Isophorone	350	U
88-75-5	2-Nitrophenol	350	U
105-67-9	2,4-Dimethylphenol	350	U
65-85-0	Benzoic Acid	1700	U
111-91-1	bis(2-Chloroethoxy)Methane	350	U
120-83-2	2,4-Dichlorophenol	350	U
120-82-1	1,2,4-Trichlorobenzene	350	U
91-20-3	Naphthalene	350	U
106-47-8	4-Chloroaniline	350	U
87-68-3	Hexachlorobutadiene	350	U
59-50-7	4-Chloro-3-Methylphenol	350	U
91-57-6	2-Methylnaphthalene	350	U
77-47-4	Hexachlorocyclopentadiene	350	U
88-06-2	2,4,6-Trichlorophenol	350	U
95-95-4	2,4,5-Trichlorophenol	1700	U
91-58-7	2-Chloronaphthalene	350	U
88-74-4	2-Nitroaniline	1700	U
131-11-3	Dimethyl Phthalate	350	U
208-96-8	Acenaphthylene	350	U
606-20-2	2,6-Dinitrotoluene	350	U

FORM I SV-1 1/87 Rev.

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

43SB0500

Lab Name: COMPUCHEM,RTP Contract: (2-88)-REVS

Lab Code: COMPU Case No.: 23664 SAS No.: _____ SDG No.: 41

Matrix: (soil/water) SOIL Lab Sample ID: 434298

Sample wt/vol: 30.9 (g/mL) G Lab File ID: GH034298B52

Level: (low/med) LOW Date Received: 07/30/91

% Moisture: not dec. 9 dec. ____ Date Extracted: 08/05/91

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 08/06/91

GPC Cleanup: (Y/N) N pH: 4.8 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
99-09-2	3-Nitroaniline	1700	U
83-32-9	Acenaphthene	350	U
51-28-5	2,4-Dinitrophenol	1700	U
100-02-7	4-Nitrophenol	1700	U
132-64-9	Dibenzofuran	350	U
121-14-2	2,4-Dinitrotoluene	350	U
84-66-2	Diethylphthalate	350	U
7005-72-3	4-Chlorophenyl-phenylether	350	U
86-73-7	Fluorene	350	U
100-01-6	4-Nitroaniline	1700	U
534-52-1	4,6-Dinitro-2-Methylphenol	1700	U
86-30-6	N-Nitrosodiphenylamine (1)	350	U
101-55-3	4-Bromophenyl-phenylether	350	U
118-74-1	Hexachlorobenzene	350	U
87-86-5	Pentachlorophenol	1700	U
85-01-8	Phenanthrene	350	U
120-12-7	Anthracene	350	U
84-74-2	Di-n-Butylphthalate	350	U
206-44-0	Fluoranthene	350	U
129-00-0	Pyrene	350	U
85-68-7	Butylbenzylphthalate	350	U
91-94-1	3,3'-Dichlorobenzidine	700	U
56-55-3	Benzo(a)Anthracene	350	U
218-01-9	Chrysene	350	U
117-81-7	bis(2-Ethylhexyl)Phthalate	350	U
117-84-0	Di-n-Octyl Phthalate	350	U
205-99-2	Benzo(b)Fluoranthene	350	U
207-08-9	Benzo(k)Fluoranthene	350	U
50-32-8	Benzo(a)Pyrene	350	U
193-39-5	Indeno(1,2,3-cd)Pyrene	350	U
53-70-3	Dibenzo(a,h)Anthracene	350	U
191-24-2	Benzo(g,h,i)Perylene	350	U

(1) - Cannot be separated from Diphenylamine

FORM I SV-2 1/87 Rev.

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

43SB0500

Lab Name: COMPUCHEM LABORATORIES Contract: (2-88)-REVS

Lab Code: COMPU Case No.: 23664 SAS No.: _____ SDG No.: 41

Matrix: (soil/water) SOIL Lab Sample ID: 434298

Sample wt/vol: 30.0 (g/mL) G Lab File ID: _____

Level: (low/med) LOW Date Received: 07/30/91

% Moisture: not dec. 9 dec. ____ Date Extracted: 08/02/91

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 08/05/91

GPC Cleanup: (Y/N) N pH: 4.8 Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	8.8	U
319-85-7	beta-BHC	8.8	U
319-86-8	delta-BHC	8.8	U
58-89-9	gamma-BHC	8.8	U
76-44-8	Heptachlor	8.8	U
309-00-2	Aldrin	8.8	U
1024-57-3	Heptachlor epoxide	8.8	U
959-98-8	Endosulfan I	8.8	U
60-57-1	Dieldrin	18	U
72-55-9	4,4'-DDE	18	U
72-20-8	Endrin	18	U
33213-65-9	Endosulfan II	18	U
72-54-8	4,4'-DDD	18	U
1031-07-8	Endosulfan sulfate	18	U
50-29-3	4,4'-DDT	18	U
72-43-5	p,p'-Methoxychlor	88	U
53494-70-5	Endrin ketone	18	U
5103-71-9	alpha-Chlordane	88	U
5103-74-2	gamma-Chlordane	88	U
8001-35-2	Toxaphene	180	U
12674-11-2	Aroclor-1016	88	U
11104-28-2	Aroclor-1221	88	U
11141-16-5	Aroclor-1232	88	U
53469-21-9	Aroclor-1242	88	U
12672-29-6	Aroclor-1248	88	U
11097-69-1	Aroclor-1254	180	U
11096-82-5	Aroclor-1260	180	U

U.S. EPA - CLP

1
INORGANIC ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

43SB0500

Lab Name: COMPUCHEM LABORATORIES Contract: 7/88

Lab Code: COMPU Case No.: 50024 SAS No.: _____ SDG No.: 664164

Matrix (soil/water): SOIL Lab Sample ID: 434334

Level (low/med): LOW Date Received: 07/30/91

% Solids: 91.0

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	5280			P
7440-36-0	Antimony	7.3	U		P
7440-38-2	Arsenic	1.1	U	W	F
7440-39-3	Barium	8.4	B		P
7440-41-7	Beryllium	.22	U		P
7440-43-9	Cadmium	.88	U		P
7440-70-2	Calcium	61.8	B		P
7440-47-3	Chromium	5.7			P
7440-48-4	Cobalt	1.3	U		P
7440-50-8	Copper	5.4	B		P
7439-89-6	Iron	2400			P
7439-92-1	Lead	2.7		*	F
7439-95-4	Magnesium	142	B		P
7439-96-5	Manganese	17.4			P
7439-97-6	Mercury	.11	U		CV
7440-02-0	Nickel	2.0	U		P
7440-09-7	Potassium	235	U		P
7782-49-2	Selenium	.88	U		F
7440-22-4	Silver	1.1	U	N	P
7440-23-5	Sodium	154	B		P
7440-28-0	Thallium	.44	U		F
7440-62-2	Vanadium	6.6	B		P
7440-66-6	Zinc	8.0			P
	Cyanide	.55	U		AS

Color Before: BROWN Clarity Before: _____ Texture: MEDIUM

Color After: COLORLESS Clarity After: _____ Artifacts: _____

Comments:
FORM 1.04 - PAGE 4

FORM I - IN 7/88

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

43SB0506

Lab Name: COMPUCHEM,RTP Contract: (2-88)-REVS

Lab Code: COMPU Case No.: 23664 SAS No.: _____ SDG No.: 41

Matrix: (soil/water) SOIL Lab Sample ID: 434297

Sample wt/vol: 5.0 (g/mL) G Lab File ID: GH034297C54

Level: (low/med) LOW Date Received: 07/30/91

% Moisture: not dec. 14 Date Analyzed: 08/01/91

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	12	U
74-83-9	Bromomethane	12	U
75-01-4	Vinyl Chloride	12	U
75-00-3	Chloroethane	12	U
75-09-2	Methylene Chloride	37	B
67-64-1	Acetone	24	B
75-15-0	Carbon Disulfide	6	U
75-35-4	1,1-Dichloroethene	6	U
75-34-3	1,1-Dichloroethane	6	U
540-59-0	1,2-Dichloroethene (total)	6	U
67-66-3	Chloroform	6	U
107-06-2	1,2-Dichloroethane	6	U
78-93-3	2-Butanone	12	U
71-55-6	1,1,1-Trichloroethane	6	U
56-23-5	Carbon Tetrachloride	6	U
108-05-4	Vinyl Acetate	6	U
75-27-4	Bromodichloromethane	6	U
78-87-5	1,2-Dichloropropane	6	U
10061-01-5	cis-1,3-Dichloropropene	6	U
79-01-6	Trichloroethene	6	U
124-48-1	Dibromochloromethane	6	U
79-00-5	1,1,2-Trichloroethane	6	U
71-43-2	Benzene	6	U
10061-02-6	Trans-1,3-Dichloropropene	6	U
75-25-2	Bromoform	6	U
108-10-1	4-Methyl-2-Pentanone	12	U
591-78-6	2-Hexanone	12	U
127-18-4	Tetrachloroethene	6	U
79-34-5	1,1,2,2-Tetrachloroethane	6	U
108-88-3	Toluene	6	U
108-90-7	Chlorobenzene	6	U
100-41-4	Ethylbenzene	6	U
100-42-5	Styrene	6	U
1330-20-7	Total Xylenes	6	U

FORM I VOA 1/87 Rev.

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

43SB0506

Lab Name: COMPUCHEM,RTP Contract: (2-88)-REVS

Lab Code: COMPU Case No.: 23664 SAS No.: _____ SDG No.: 41

Matrix: (soil/water) SOIL Lab Sample ID: 434297

Sample wt/vol: 30.0 (g/mL) G Lab File ID: GH034297B52

Level: (low/med) LOW Date Received: 07/30/91

% Moisture: not dec. 14 dec. ____ Date Extracted: 08/05/91

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 08/06/91

GPC Cleanup: (Y/N) N pH: 5.0 Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	380	U
111-44-4	bis(2-Chloroethyl)Ether	380	U
95-57-8	2-Chlorophenol	380	U
541-73-1	1,3-Dichlorobenzene	380	U
106-46-7	1,4-Dichlorobenzene	380	U
100-51-6	Benzyl Alcohol	380	U
95-50-1	1,2-Dichlorobenzene	380	U
95-48-7	2-Methylphenol	380	U
39638-32-9	Bis(2-Chloroethyl)Ether	380	U
106-44-5	4-Methylphenol	380	U
621-64-7	N-Nitroso-Di-n-Propylamine	380	U
67-72-1	Hexachloroethane	380	U
98-95-3	Nitrobenzene	380	U
78-59-1	Isophorone	380	U
88-75-5	2-Nitrophenol	380	U
105-67-9	2,4-Dimethylphenol	380	U
65-85-0	Benzoic Acid	1900	U
111-91-1	bis(2-Chloroethoxy)Methane	380	U
120-83-2	2,4-Dichlorophenol	380	U
120-82-1	1,2,4-Trichlorobenzene	380	U
91-20-3	Naphthalene	380	U
106-47-8	4-Chloroaniline	380	U
87-68-3	Hexachlorobutadiene	380	U
59-50-7	4-Chloro-3-Methylphenol	380	U
91-57-6	2-Methylnaphthalene	380	U
77-47-4	Hexachlorocyclopentadiene	380	U
88-06-2	2,4,6-Trichlorophenol	380	U
95-95-4	2,4,5-Trichlorophenol	1900	U
91-58-7	2-Chloronaphthalene	380	U
88-74-4	2-Nitroaniline	1900	U
131-11-3	Dimethyl Phthalate	380	U
208-96-8	Acenaphthylene	380	U
606-20-2	2,6-Dinitrotoluene	380	U

FORM I SV-1 1/87 Rev.

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

43SB0506

Lab Name: COMPUCHEM,RTP Contract: (2-88)-REVS

Lab Code: COMPU Case No.: 23664 SAS No.: _____ SDG No.: 41

Matrix: (soil/water) SOIL Lab Sample ID: 434297

Sample wt/vol: 30.0 (g/mL) G Lab File ID: GH034297B52

Level: (low/med) LOW Date Received: 07/30/91

% Moisture: not dec. 14 dec. ____ Date Extracted: 08/05/91

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 08/06/91

GPC Cleanup: (Y/N) N pH: 5.0 Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
99-09-2	3-Nitroaniline	1900	U
83-32-9	Acenaphthene	380	U
51-28-5	2,4-Dinitrophenol	1900	U
100-02-7	4-Nitrophenol	1900	U
132-64-9	Dibenzofuran	380	U
121-14-2	2,4-Dinitrotoluene	380	U
84-66-2	Diethylphthalate	380	U
7005-72-3	4-Chlorophenyl-phenylether	380	U
86-73-7	Fluorene	380	U
100-01-6	4-Nitroaniline	1900	U
534-52-1	4,6-Dinitro-2-Methylphenol	1900	U
86-30-6	N-Nitrosodiphenylamine (1)	380	U
101-55-3	4-Bromophenyl-phenylether	380	U
118-74-1	Hexachlorobenzene	380	U
87-86-5	Pentachlorophenol	1900	U
85-01-8	Phenanthrene	380	U
120-12-7	Anthracene	380	U
84-74-2	Di-n-Butylphthalate	380	U
206-44-0	Fluoranthene	380	U
129-00-0	Pyrene	380	U
85-68-7	Butylbenzylphthalate	380	U
91-94-1	3,3'-Dichlorobenzidine	770	U
56-55-3	Benzo(a)Anthracene	380	U
218-01-9	Chrysene	380	U
117-81-7	bis(2-Ethylhexyl)Phthalate	42	J
117-84-0	Di-n-Octyl Phthalate	380	U
205-99-2	Benzo(b)Fluoranthene	380	U
207-08-9	Benzo(k)Fluoranthene	380	U
50-32-8	Benzo(a)Pyrene	380	U
193-39-5	Indeno(1,2,3-cd)Pyrene	380	U
53-70-3	Dibenzo(a,h)Anthracene	380	U
191-24-2	Benzo(g,h,i)Perylene	380	U

(1) - Cannot be separated from Diphenylamine

FORM I SV-2 1/87 Rev.

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

43SB0506

Lab Name: COMPUCHEM LABORATORIES Contract: (2-88)-REVS

Lab Code: COMPU Case No.: 23664 SAS No.: _____ SDG No.: 41

Matrix: (soil/water) SOIL Lab Sample ID: 434297

Sample wt/vol: 30.0 (g/mL) G Lab File ID: _____

Level: (low/med) LOW Date Received: 07/30/91

% Moisture: not dec. 14 dec. ____ Date Extracted: 08/02/91

Extraction: (SepF/Cont/Sonc) SONC DateAnalyzed: 08/05/91

GPC Cleanup: (Y/N) N pH: 5.0 Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	9.3	U
319-85-7	beta-BHC	9.3	U
319-86-8	delta-BHC	9.3	U
58-89-9	gamma-BHC	9.3	U
76-44-8	Heptachlor	9.3	U
309-00-2	Aldrin	9.3	U
1024-57-3	Heptachlor epoxide	9.3	U
959-98-8	Endosulfan I	9.3	U
60-57-1	Dieldrin	19	U
72-55-9	4,4'-DDE	19	U
72-20-8	Endrin	19	U
33213-65-9	Endosulfan II	19	U
72-54-8	4,4'-DDD	19	U
1031-07-8	Endosulfan sulfate	19	U
50-29-3	4,4'-DDT	19	U
72-43-5	p,p'-Methoxychlor	93	U
53494-70-5	Endrin ketone	19	U
5103-71-9	alpha-Chlordane	93	U
5103-74-2	gamma-Chlordane	93	U
8001-35-2	Toxaphene	190	U
12674-11-2	Aroclor-1016	93	U
11104-28-2	Aroclor-1221	93	U
11141-16-5	Aroclor-1232	93	U
53469-21-9	Aroclor-1242	93	U
12672-29-6	Aroclor-1248	93	U
11097-69-1	Aroclor-1254	190	U
11096-82-5	Aroclor-1260	190	U

FORM I PEST 1/87 Rev.

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

43SB0506

Lab Name: COMPUCHEM LABORATORIES Contract: 7/88

Lab Code: COMPU Case No.: 50024 SAS No.: _____ SDG No.: 664164

Matrix (soil/water): SOIL Lab Sample ID: 434333

Level (low/med): LOW Date Received: 07/30/91

% Solids: 86.0

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	489			P
7440-36-0	Antimony	7.5	U		P
7440-38-2	Arsenic	1.1	U		F
7440-39-3	Barium	1.7	B		P
7440-41-7	Beryllium	.23	U		P
7440-43-9	Cadmium	.90	U		P
7440-70-2	Calcium	20.9	B		P
7440-47-3	Chromium	1.9	B		P
7440-48-4	Cobalt	1.4	U		P
7440-50-8	Copper	2.2	B		P
7439-89-6	Iron	272			P
7439-92-1	Lead	1.3		*	F
7439-95-4	Magnesium	23.4	B		P
7439-96-5	Manganese	1.8	B		P
7439-97-6	Mercury	.12	U		CV
7440-02-0	Nickel	2.0	U		P
7440-09-7	Potassium	241	U		P
7782-49-2	Selenium	.90	U	W	F
7440-22-4	Silver	1.1	U	N	P
7440-23-5	Sodium	145	B		P
7440-28-0	Thallium	.45	U		F
7440-62-2	Vanadium	.95	B		P
7440-66-6	Zinc	6.5			P
	Cyanide	.58	U		AS

Color Before: BROWN Clarity Before: _____ Texture: MEDIUM

Color After: COLORLESS Clarity After: _____ Artifacts: _____

Comments:
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FORM I - IN 7/88

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

43MW0100

Lab Name: COMPUCHEM,RTP Contract: (2-88)-REVS

Lab Code: COMPU Case No.: 23664 SAS No.: _____ SDG No.: 81

Matrix: (soil/water) SOIL Lab Sample ID: 436617

Sample wt/vol: 5.0 (g/mL) G Lab File ID: GH036617A18

Level: (low/med) LOW Date Received: 08/09/91

% Moisture: not dec. 12 Date Analyzed: 08/15/91

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	11	U
74-83-9	Bromomethane	11	U
75-01-4	Vinyl Chloride	11	U
75-00-3	Chloroethane	11	U
75-09-2	Methylene Chloride	22	B
67-64-1	Acetone	31	B
75-15-0	Carbon Disulfide	6	U
75-35-4	1,1-Dichloroethene	6	U
75-34-3	1,1-Dichloroethane	6	U
540-59-0	1,2-Dichloroethene (total)	6	U
67-66-3	Chloroform	6	U
107-06-2	1,2-Dichloroethane	6	U
78-93-3	2-Butanone	11	U
71-55-6	1,1,1-Trichloroethane	6	U
56-23-5	Carbon Tetrachloride	6	U
108-05-4	Vinyl Acetate	6	U
75-27-4	Bromodichloromethane	6	U
78-87-5	1,2-Dichloropropane	6	U
10061-01-5	cis-1,3-Dichloropropene	6	U
79-01-6	Trichloroethene	6	U
124-48-1	Dibromochloromethane	6	U
79-00-5	1,1,2-Trichloroethane	6	U
71-43-2	Benzene	6	U
10061-02-6	Trans-1,3-Dichloropropene	6	U
75-25-2	Bromoform	6	U
108-10-1	4-Methyl-2-Pentanone	11	U
591-78-6	2-Hexanone	11	U
127-18-4	Tetrachloroethene	6	U
79-34-5	1,1,2,2-Tetrachloroethane	6	U
108-88-3	Toluene	6	U
108-90-7	Chlorobenzene	6	U
100-41-4	Ethylbenzene	6	U
100-42-5	Styrene	6	U
1330-20-7	Total Xylenes	6	U

FORM I VOA 1/87 Rev.

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

43MW0100

Lab Name: COMPUCHEM,RTP Contract: (2-88)-REVS

Lab Code: COMPU Case No.: 23664 SAS No.: _____ SDG No.: 81

Matrix: (soil/water) SOIL Lab Sample ID: 436617

Sample wt/vol: 30.9 (g/mL) G Lab File ID: GH036617B20

Level: (low/med) LOW Date Received: 08/09/91

% Moisture: not dec. 12 dec. ____ Date Extracted: 08/13/91

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 08/13/91

GPC Cleanup: (Y/N) N pH: 7.4 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	360	U
111-44-4	bis(2-Chloroethyl)Ether	360	U
95-57-8	2-Chlorophenol	360	U
541-73-1	1,3-Dichlorobenzene	360	U
106-46-7	1,4-Dichlorobenzene	360	U
100-51-6	Benzyl Alcohol	360	U
95-50-1	1,2-Dichlorobenzene	360	U
95-48-7	2-Methylphenol	360	U
39638-32-9	Bis(2-Chloroethyl)Ether	360	U
106-44-5	4-Methylphenol	360	U
621-64-7	N-Nitroso-Di-n-Propylamine	360	U
67-72-1	Hexachloroethane	360	U
98-95-3	Nitrobenzene	360	U
78-59-1	Isophorone	360	U
88-75-5	2-Nitrophenol	360	U
105-67-9	2,4-Dimethylphenol	360	U
65-85-0	Benzoic Acid	1800	U
111-91-1	bis(2-Chloroethoxy)Methane	360	U
120-83-2	2,4-Dichlorophenol	360	U
120-82-1	1,2,4-Trichlorobenzene	360	U
91-20-3	Naphthalene	360	U
106-47-8	4-Chloroaniline	360	U
87-68-3	Hexachlorobutadiene	360	U
59-50-7	4-Chloro-3-Methylphenol	360	U
91-57-6	2-Methylnaphthalene	360	U
77-47-4	Hexachlorocyclopentadiene	360	U
88-06-2	2,4,6-Trichlorophenol	360	U
95-95-4	2,4,5-Trichlorophenol	1800	U
91-58-7	2-Chloronaphthalene	360	U
88-74-4	2-Nitroaniline	1800	U
131-11-3	Dimethyl Phthalate	360	U
208-96-8	Acenaphthylene	360	U
606-20-2	2,6-Dinitrotoluene	360	U

FORM I SV-1 1/87 Rev.

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

43MW0100

Lab Name: COMPUCHEM,RTP Contract: (2-88)-REVS

Lab Code: COMPU Case No.: 23664 SAS No.: _____ SDG No.: 81

Matrix: (soil/water) SOIL Lab Sample ID: 436617

Sample wt/vol: 30.9 (g/mL) G Lab File ID: GH036617B20

Level: (low/med) LOW Date Received: 08/09/91

% Moisture: not dec. 12 dec. ____ Date Extracted: 08/13/91

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 08/13/91

GPC Cleanup: (Y/N) N pH: 7.4 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
99-09-2	3-Nitroaniline	1800	U
83-32-9	Acenaphthene	360	U
51-28-5	2,4-Dinitrophenol	1800	U
100-02-7	4-Nitrophenol	1800	U
132-64-9	Dibenzofuran	360	U
121-14-2	2,4-Dinitrotoluene	360	U
84-66-2	Diethylphthalate	360	U
7005-72-3	4-Chlorophenyl-phenylether	360	U
86-73-7	Fluorene	360	U
100-01-6	4-Nitroaniline	1800	U
534-52-1	4,6-Dinitro-2-Methylphenol	1800	U
86-30-6	N-Nitrosodiphenylamine (1)	360	U
101-55-3	4-Bromophenyl-phenylether	360	U
118-74-1	Hexachlorobenzene	360	U
87-86-5	Pentachlorophenol	1800	U
85-01-8	Phenanthrene	57	J
120-12-7	Anthracene	360	U
84-74-2	Di-n-Butylphthalate	89	J
206-44-0	Fluoranthene	230	J
129-00-0	Pyrene	210	J
85-68-7	Butylbenzylphthalate	360	U
91-94-1	3,3'-Dichlorobenzidine	730	U
56-55-3	Benzo(a)Anthracene	110	J
218-01-9	Chrysene	160	J
117-81-7	bis(2-Ethylhexyl)Phthalate	200	J
117-84-0	Di-n-Octyl Phthalate	360	U
205-99-2	Benzo(b)Fluoranthene	300	JX
207-08-9	Benzo(k)Fluoranthene	300	JX
50-32-8	Benzo(a)Pyrene	110	J
193-39-5	Indeno(1,2,3-cd)Pyrene	64	J
53-70-3	Dibenzo(a,h)Anthracene	360	U
191-24-2	Benzo(g,h,i)Perylene	80	J

(1) - Cannot be separated from Diphenylamine

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

43MW0100

Lab Name: COMPUCHEM LABORATORIES Contract: (2-88)-REVS

Lab Code: COMPU Case No.: 23664 SAS No.: _____ SDG No.: 81

Matrix: (soil/water) SOIL Lab Sample ID: 436617

Sample wt/vol: 30.2 (g/mL) G Lab File ID: _____

Level: (low/med) LOW Date Received: 08/09/91

% Moisture: not dec. 12 dec. ____ Date Extracted: 08/13/91

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 08/15/91

GPC Cleanup: (Y/N) N pH: 7.4 Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	9.0	U
319-85-7	beta-BHC	9.0	U
319-86-8	delta-BHC	9.0	U
58-89-9	gamma-BHC	9.0	U
76-44-8	Heptachlor	9.0	U
309-00-2	Aldrin	9.0	U
1024-57-3	Heptachlor epoxide	9.0	U
959-98-8	Endosulfan I	9.0	U
60-57-1	Dieldrin	18	U
72-55-9	4,4'-DDE	18	U
72-20-8	Endrin	18	U
33213-65-9	Endosulfan II	18	U
72-54-8	4,4'-DDD	18	U
1031-07-8	Endosulfan sulfate	18	U
50-29-3	4,4'-DDT	18	U
72-43-5	p,p'-Methoxychlor	90	U
53494-70-5	Endrin ketone	18	U
5103-71-9	alpha-Chlordane	90	U
5103-74-2	gamma-Chlordane	90	U
8001-35-2	Toxaphene	180	U
12674-11-2	Aroclor-1016	90	U
11104-28-2	Aroclor-1221	90	U
11141-16-5	Aroclor-1232	90	U
53469-21-9	Aroclor-1242	90	U
12672-29-6	Aroclor-1248	90	U
11097-69-1	Aroclor-1254	180	U
11096-82-5	Aroclor-1260	180	U

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U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

43MW0100

Lab Name: COMPUCHEM LABORATORIES Contract: 7/88

Lab Code: COMPU Case No.: 50024 SAS No.: _____ SDG No.: 664204

Matrix (soil/water): SOIL Lab Sample ID: 436635

Level (low/med): LOW Date Received: 08/09/91

% Solids: 88.0

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	3810			P
7440-36-0	Antimony	7.5	U		P
7440-38-2	Arsenic	1.1	U		F
7440-39-3	Barium	11.8	B		P
7440-41-7	Beryllium	.23	U		P
7440-43-9	Cadmium	.91	U		P
7440-70-2	Calcium	6720			P
7440-47-3	Chromium	8.3			P
7440-48-4	Cobalt	1.4	U		P
7440-50-8	Copper	3.4	B		P
7439-89-6	Iron	2190			P
7439-92-1	Lead	9.8			F
7439-95-4	Magnesium	270	B		P
7439-96-5	Manganese	31.2			P
7439-97-6	Mercury	.10	U		CV
7440-02-0	Nickel	7.6	B		P
7440-09-7	Potassium	242	U		P
7782-49-2	Selenium	.90	U	W	F
7440-22-4	Silver	1.1	U	N	P
7440-23-5	Sodium	138	B		P
7440-28-0	Thallium	.45	U		F
7440-62-2	Vanadium	7.2	B		P
7440-66-6	Zinc	20.1			P
	Cyanide	.57	U		AS

Color Before: BROWN Clarity Before: _____ Texture: MEDIUM

Color After: COLORLESS Clarity After: _____ Artifacts: _____

Comments:

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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

43MW0200

Lab Name: COMPUCHEM,RTP Contract: (2-88)-REVS

Lab Code: COMPU Case No.: 23664 SAS No.: _____ SDG No.: 81

Matrix: (soil/water) SOIL Lab Sample ID: 436620

Sample wt/vol: 5.0 (g/mL) G Lab File ID: GH036620A18

Level: (low/med) LOW Date Received: 08/09/91

% Moisture: not dec. 10 Date Analyzed: 08/15/91

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	11	U
74-83-9	Bromomethane	11	U
75-01-4	Vinyl Chloride	11	U
75-00-3	Chloroethane	11	U
75-09-2	Methylene Chloride	22	B
67-64-1	Acetone	37	B
75-15-0	Carbon Disulfide	6	U
75-35-4	1,1-Dichloroethene	6	U
75-34-3	1,1-Dichloroethane	6	U
540-59-0	1,2-Dichloroethene (total)	6	U
67-66-3	Chloroform	6	U
107-06-2	1,2-Dichloroethane	6	U
78-93-3	2-Butanone	11	U
71-55-6	1,1,1-Trichloroethane	6	U
56-23-5	Carbon Tetrachloride	6	U
108-05-4	Vinyl Acetate	6	U
75-27-4	Bromodichloromethane	6	U
78-87-5	1,2-Dichloropropane	6	U
10061-01-5	cis-1,3-Dichloropropene	6	U
79-01-6	Trichloroethene	6	U
124-48-1	Dibromochloromethane	6	U
79-00-5	1,1,2-Trichloroethane	6	U
71-43-2	Benzene	6	U
10061-02-6	Trans-1,3-Dichloropropene	6	U
75-25-2	Bromoform	6	U
108-10-1	4-Methyl-2-Pentanone	11	U
591-78-6	2-Hexanone	11	U
127-18-4	Tetrachloroethene	6	U
79-34-5	1,1,2,2-Tetrachloroethane	6	U
108-88-3	Toluene	6	U
108-90-7	Chlorobenzene	6	U
100-41-4	Ethylbenzene	6	U
100-42-5	Styrene	6	U
1330-20-7	Total Xylenes	6	U

FORM I VOA 1/87 Rev.

23664 81 SAMPLE DATA SUMMARY

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

43MW0200

Lab Name: COMPUCHEM,RTP Contract: (2-88)-REVS

Lab Code: COMPU Case No.: 23664 SAS No.: _____ SDG No.: 81

Matrix: (soil/water) SOIL Lab Sample ID: 436620

Sample wt/vol: 30.3 (g/mL) G Lab File ID: GH036620B20

Level: (low/med) LOW Date Received: 08/09/91

% Moisture: not dec. 10 dec. ____ Date Extracted: 08/13/91

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 08/13/91

GPC Cleanup: (Y/N) N pH: 6.3 Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	360	U
111-44-4	bis(2-Chloroethyl)Ether	360	U
95-57-8	2-Chlorophenol	360	U
541-73-1	1,3-Dichlorobenzene	360	U
106-46-7	1,4-Dichlorobenzene	360	U
100-51-6	Benzyl Alcohol	360	U
95-50-1	1,2-Dichlorobenzene	360	U
95-48-7	2-Methylphenol	360	U
39638-32-9	Bis(2-Chloroethyl)Ether	360	U
106-44-5	4-Methylphenol	360	U
621-64-7	N-Nitroso-Di-n-Propylamine	360	U
67-72-1	Hexachloroethane	360	U
98-95-3	Nitrobenzene	360	U
78-59-1	Isophorone	360	U
88-75-5	2-Nitrophenol	360	U
105-67-9	2,4-Dimethylphenol	360	U
65-85-0	Benzoic Acid	1800	U
111-91-1	bis(2-Chloroethoxy)Methane	360	U
120-83-2	2,4-Dichlorophenol	360	U
120-82-1	1,2,4-Trichlorobenzene	360	U
91-20-3	Naphthalene	360	U
106-47-8	4-Chloroaniline	360	U
87-68-3	Hexachlorobutadiene	360	U
59-50-7	4-Chloro-3-Methylphenol	360	U
91-57-6	2-Methylnaphthalene	360	U
77-47-4	Hexachlorocyclopentadiene	360	U
88-06-2	2,4,6-Trichlorophenol	360	U
95-95-4	2,4,5-Trichlorophenol	1800	U
91-58-7	2-Chloronaphthalene	360	U
88-74-4	2-Nitroaniline	1800	U
131-11-3	Dimethyl Phthalate	360	U
208-96-8	Acenaphthylene	360	U
606-20-2	2,6-Dinitrotoluene	360	U

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1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

43MW0200

Lab Name: COMPUCHEM,RTP Contract: (2-88)-REVS

Lab Code: COMPU Case No.: 23664 SAS No.: _____ SDG No.: 81

Matrix: (soil/water) SOIL Lab Sample ID: 436620

Sample wt/vol: 30.3 (g/mL) G Lab File ID: GH036620B20

Level: (low/med) LOW Date Received: 08/09/91

% Moisture: not dec. 10 dec. ____ Date Extracted: 08/13/91

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 08/13/91

GPC Cleanup: (Y/N) N pH: 6.3 Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
99-09-2	3-Nitroaniline	1800	U
83-32-9	Acenaphthene	360	U
51-28-5	2,4-Dinitrophenol	1800	U
100-02-7	4-Nitrophenol	1800	U
132-64-9	Dibenzofuran	360	U
121-14-2	2,4-Dinitrotoluene	360	U
84-66-2	Diethylphthalate	360	U
7005-72-3	4-Chlorophenyl-phenylether	360	U
86-73-7	Fluorene	360	U
100-01-6	4-Nitroaniline	1800	U
534-52-1	4,6-Dinitro-2-Methylphenol	1800	U
86-30-6	N-Nitrosodiphenylamine (1)	360	U
101-55-3	4-Bromophenyl-phenylether	360	U
118-74-1	Hexachlorobenzene	360	U
87-86-5	Pentachlorophenol	1800	U
85-01-8	Phenanthrene	360	U
120-12-7	Anthracene	360	U
84-74-2	Di-n-Butylphthalate	360	U
206-44-0	Fluoranthene	360	U
129-00-0	Pyrene	360	U
85-68-7	Butylbenzylphthalate	360	U
91-94-1	3,3'-Dichlorobenzidine	730	U
56-55-3	Benzo(a)Anthracene	360	U
218-01-9	Chrysene	360	U
117-81-7	bis(2-Ethylhexyl)Phthalate	49	J
117-84-0	Di-n-Octyl Phthalate	360	U
205-99-2	Benzo(b)Fluoranthene	360	U
207-08-9	Benzo(k)Fluoranthene	360	U
50-32-8	Benzo(a)Pyrene	360	U
193-39-5	Indeno(1,2,3-cd)Pyrene	360	U
53-70-3	Dibenzo(a,h)Anthracene	360	U
191-24-2	Benzo(g,h,i)Perylene	360	U

(1) - Cannot be separated from Diphenylamine

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

43MW0200

Lab Name: COMPUCHEM LABORATORIES Contract: (2-88)-REVS

Lab Code: COMPU Case No.: 23664 SAS No.: SDG No.: 81

Matrix: (soil/water) SOIL Lab Sample ID: 436620

Sample wt/vol: 30.5 (g/mL) G Lab File ID:

Level: (low/med) LOW Date Received: 08/09/91

% Moisture: not dec. 10 dec. Date Extracted: 08/13/91

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 08/15/91

GPC Cleanup: (Y/N) N pH: 6.3 Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	8.7	U
319-85-7	beta-BHC	8.7	U
319-86-8	delta-BHC	8.7	U
58-89-9	gamma-BHC	8.7	U
76-44-8	Heptachlor	8.7	U
309-00-2	Aldrin	8.7	U
1024-57-3	Heptachlor epoxide	8.7	U
959-98-8	Endosulfan I	8.7	U
60-57-1	Dieldrin	17	U
72-55-9	4,4'-DDE	17	U
72-20-8	Endrin	17	U
33213-65-9	Endosulfan II	17	U
72-54-8	4,4'-DDD	17	U
1031-07-8	Endosulfan sulfate	17	U
50-29-3	4,4'-DDT	17	U
72-43-5	p,p'-Methoxychlor	87	U
53494-70-5	Endrin ketone	17	U
5103-71-9	alpha-Chlordane	87	U
5103-74-2	gamma-Chlordane	87	U
8001-35-2	Toxaphene	170	U
12674-11-2	Aroclor-1016	87	U
11104-28-2	Aroclor-1221	87	U
11141-16-5	Aroclor-1232	87	U
53469-21-9	Aroclor-1242	87	U
12672-29-6	Aroclor-1248	87	U
11097-69-1	Aroclor-1254	170	U
11096-82-5	Aroclor-1260	170	U

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U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

43MW0200

Lab Name: COMPUCHEM LABORATORIES Contract: 7/88

Lab Code: COMPU Case No.: 50024 SAS No.: _____ SDG No.: 664204

Matrix (soil/water): SOIL Lab Sample ID: 436638

Level (low/med): LOW Date Received: 08/09/91

% Solids: 90.0

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	2880			P
7440-36-0	Antimony	7.3	U		P
7440-38-2	Arsenic	1.1	U		F
7440-39-3	Barium	5.7	B		P
7440-41-7	Beryllium	.22	U		P
7440-43-9	Cadmium	.89	U		P
7440-70-2	Calcium	93.3	B		P
7440-47-3	Chromium	3.6			P
7440-48-4	Cobalt	1.3	U		P
7440-50-8	Copper	2.5	B		P
7439-89-6	Iron	1530			P
7439-92-1	Lead	3.7			F
7439-95-4	Magnesium	95.0	B		P
7439-96-5	Manganese	7.9			P
7439-97-6	Mercury	.11	U		CV
7440-02-0	Nickel	2.2	B		P
7440-09-7	Potassium	237	U		P
7782-49-2	Selenium	.88	U	W	F
7440-22-4	Silver	1.1	U	N	P
7440-23-5	Sodium	109	B		P
7440-28-0	Thallium	.44	U		F
7440-62-2	Vanadium	4.4	B		P
7440-66-6	Zinc	3.6	B		P
	Cyanide	.56	U		AS

Color Before: BROWN Clarity Before: _____ Texture: MEDIUM

Color After: COLORLESS Clarity After: _____ Artifacts: _____

Comments:

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INORGANIC CASE 664204

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

43MW0202

Lab Name: COMPUCHEM,RTP Contract: (2-88)-REVS

Lab Code: COMPU Case No.: 23664 SAS No.: _____ SDG No.: 81

Matrix: (soil/water) SOIL Lab Sample ID: 436625

Sample wt/vol: 5.0 (g/mL) G Lab File ID: GH036625A18

Level: (low/med) LOW Date Received: 08/09/91

% Moisture: not dec. 19 Date Analyzed: 08/15/91

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	12	U
74-83-9	Bromomethane	12	U
75-01-4	Vinyl Chloride	12	U
75-00-3	Chloroethane	12	U
75-09-2	Methylene Chloride	22	B
67-64-1	Acetone	22	B
75-15-0	Carbon Disulfide	6	U
75-35-4	1,1-Dichloroethene	6	U
75-34-3	1,1-Dichloroethane	6	U
540-59-0	1,2-Dichloroethene (total)	6	U
67-66-3	Chloroform	6	U
107-06-2	1,2-Dichloroethane	6	U
78-93-3	2-Butanone	12	U
71-55-6	1,1,1-Trichloroethane	6	U
56-23-5	Carbon Tetrachloride	6	U
108-05-4	Vinyl Acetate	6	U
75-27-4	Bromodichloromethane	6	U
78-87-5	1,2-Dichloropropane	6	U
10061-01-5	cis-1,3-Dichloropropene	6	U
79-01-6	Trichloroethene	6	U
124-48-1	Dibromochloromethane	6	U
79-00-5	1,1,2-Trichloroethane	6	U
71-43-2	Benzene	6	U
10061-02-6	Trans-1,3-Dichloropropene	6	U
75-25-2	Bromoform	6	U
108-10-1	4-Methyl-2-Pentanone	12	U
591-78-6	2-Hexanone	12	U
127-18-4	Tetrachloroethene	6	U
79-34-5	1,1,2,2-Tetrachloroethane	6	U
108-88-3	Toluene	6	U
108-90-7	Chlorobenzene	6	U
100-41-4	Ethylbenzene	6	U
100-42-5	Styrene	6	U
1330-20-7	Total Xylenes	6	U

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

43MW0202

Lab Name: COMPUCHEM,RTP Contract: (2-88)-REVS

Lab Code: COMPU Case No.: 23664 SAS No.: _____ SDG No.: 81

Matrix: (soil/water) SOIL Lab Sample ID: 436625

Sample wt/vol: 30.1 (g/mL) G Lab File ID: GH036625C20

Level: (low/med) LOW Date Received: 08/09/91

% Moisture: not dec. 19 dec. ____ Date Extracted: 08/13/91

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 08/14/91

GPC Cleanup: (Y/N) N pH: 4.5 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	410	U
111-44-4	bis(2-Chloroethyl)Ether	410	U
95-57-8	2-Chlorophenol	410	U
541-73-1	1,3-Dichlorobenzene	410	U
106-46-7	1,4-Dichlorobenzene	410	U
100-51-6	Benzyl Alcohol	410	U
95-50-1	1,2-Dichlorobenzene	410	U
95-48-7	2-Methylphenol	410	U
39638-32-9	Bis(2-Chloroethyl)Ether	410	U
106-44-5	4-Methylphenol	410	U
621-64-7	N-Nitroso-Di-n-Propylamine	410	U
67-72-1	Hexachloroethane	410	U
98-95-3	Nitrobenzene	410	U
78-59-1	Isophorone	410	U
88-75-5	2-Nitrophenol	410	U
105-67-9	2,4-Dimethylphenol	410	U
65-85-0	Benzoic Acid	2000	U
111-91-1	bis(2-Chloroethoxy)Methane	410	U
120-83-2	2,4-Dichlorophenol	410	U
120-82-1	1,2,4-Trichlorobenzene	410	U
91-20-3	Naphthalene	410	U
106-47-8	4-Chloroaniline	410	U
87-68-3	Hexachlorobutadiene	410	U
59-50-7	4-Chloro-3-Methylphenol	410	U
91-57-6	2-Methylnaphthalene	410	U
77-47-4	Hexachlorocyclopentadiene	410	U
88-06-2	2,4,6-Trichlorophenol	410	U
95-95-4	2,4,5-Trichlorophenol	2000	U
91-58-7	2-Chloronaphthalene	410	U
88-74-4	2-Nitroaniline	2000	U
131-11-3	Dimethyl Phthalate	410	U
208-96-8	Acenaphthylene	410	U
606-20-2	2,6-Dinitrotoluene	410	U

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1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

43MW0202

Lab Name: COMPUCHEM,RTP Contract: (2-88)-REVS

Lab Code: COMPU Case No.: 23664 SAS No.: _____ SDG No.: 81

Matrix: (soil/water) SOIL Lab Sample ID: 436625

Sample wt/vol: 30.1 (g/mL) G Lab File ID: GH036625C20

Level: (low/med) LOW Date Received: 08/09/91

% Moisture: not dec. 19 dec. ____ Date Extracted: 08/13/91

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 08/14/91

GPC Cleanup: (Y/N) N pH: 4.5 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
99-09-2	3-Nitroaniline	2000	U
83-32-9	Acenaphthene	410	U
51-28-5	2,4-Dinitrophenol	2000	U
100-02-7	4-Nitrophenol	2000	U
132-64-9	Dibenzofuran	410	U
121-14-2	2,4-Dinitrotoluene	410	U
84-66-2	Diethylphthalate	410	U
7005-72-3	4-Chlorophenyl-phenylether	410	U
86-73-7	Fluorene	410	U
100-01-6	4-Nitroaniline	2000	U
534-52-1	4,6-Dinitro-2-Methylphenol	2000	U
86-30-6	N-Nitrosodiphenylamine (1)	410	U
101-55-3	4-Bromophenyl-phenylether	410	U
118-74-1	Hexachlorobenzene	410	U
87-86-5	Pentachlorophenol	2000	U
85-01-8	Phenanthrene	410	U
120-12-7	Anthracene	410	U
84-74-2	Di-n-Butylphthalate	410	U
206-44-0	Fluoranthene	410	U
129-00-0	Pyrene	410	U
85-68-7	Butylbenzylphthalate	410	U
91-94-1	3,3'-Dichlorobenzidine	810	U
56-55-3	Benzo(a)Anthracene	410	U
218-01-9	Chrysene	410	U
117-81-7	bis(2-Ethylhexyl)Phthalate	54	J
117-84-0	Di-n-Octyl Phthalate	410	U
205-99-2	Benzo(b)Fluoranthene	410	U
207-08-9	Benzo(k)Fluoranthene	410	U
50-32-8	Benzo(a)Pyrene	410	U
193-39-5	Indeno(1,2,3-cd)Pyrene	410	U
53-70-3	Dibenzo(a,h)Anthracene	410	U
191-24-2	Benzo(g,h,i)Perylene	410	U

(1) - Cannot be separated from Diphenylamine

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1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

43MW0202

Lab Name: COMPUCHEM LABORATORIES Contract: (2-88)-REVS

Lab Code: COMPU Case No.: 23664 SAS No.: SDG No.: 81

Matrix: (soil/water) SOIL Lab Sample ID: 436625

Sample wt/vol: 30.0 (g/mL) G Lab File ID:

Level: (low/med) LOW Date Received: 08/09/91

% Moisture: not dec. 19 dec. Date Extracted: 08/13/91

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 08/15/91

GPC Cleanup: (Y/N) N pH: 4.5 Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	9.9	U
319-85-7	beta-BHC	9.9	U
319-86-8	delta-BHC	9.9	U
58-89-9	gamma-BHC	9.9	U
76-44-8	Heptachlor	9.9	U
309-00-2	Aldrin	9.9	U
1024-57-3	Heptachlor epoxide	9.9	U
959-98-8	Endosulfan I	9.9	U
60-57-1	Dieldrin	20	U
72-55-9	4,4'-DDE	20	U
72-20-8	Endrin	20	U
33213-65-9	Endosulfan II	20	U
72-54-8	4,4'-DDD	20	U
1031-07-8	Endosulfan sulfate	20	U
50-29-3	4,4'-DDT	20	U
72-43-5	p,p'-Methoxychlor	99	U
53494-70-5	Endrin ketone	20	U
5103-71-9	alpha-Chlordane	99	U
5103-74-2	gamma-Chlordane	99	U
8001-35-2	Toxaphene	200	U
12674-11-2	Aroclor-1016	99	U
11104-28-2	Aroclor-1221	99	U
11141-16-5	Aroclor-1232	99	U
53469-21-9	Aroclor-1242	99	U
12672-29-6	Aroclor-1248	99	U
11097-69-1	Aroclor-1254	200	U
11096-82-5	Aroclor-1260	200	U

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U.S. EPA - CLP

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INORGANIC ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

43MW0202

Lab Name: COMPUCHEM LABORATORIES Contract: 7/88

Lab Code: COMPU Case No.: 50024 SAS No.: _____ SDG No.: 664204

Matrix (soil/water): SOIL Lab Sample ID: 436642

Level (low/med): LOW Date Received: 08/09/91

% Solids: 81.0

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	4550			P
7440-36-0	Antimony	8.0	U		P
7440-38-2	Arsenic	1.2	U		F
7440-39-3	Barium	9.0	B		P
7440-41-7	Beryllium	.24	U		P
7440-43-9	Cadmium	.97	U		P
7440-70-2	Calcium	68.6	B		P
7440-47-3	Chromium	6.7			P
7440-48-4	Cobalt	1.5	U		P
7440-50-8	Copper	.97	U		P
7439-89-6	Iron	1340			P
7439-92-1	Lead	6.1		S	F
7439-95-4	Magnesium	176	B		P
7439-96-5	Manganese	8.2			P
7439-97-6	Mercury	.12	U		CV
7440-02-0	Nickel	7.3	B		P
7440-09-7	Potassium	258	U		P
7782-49-2	Selenium	.99	U		F
7440-22-4	Silver	1.2	U	N	P
7440-23-5	Sodium	107	B		P
7440-28-0	Thallium	.49	U		F
7440-62-2	Vanadium	5.8	B		P
7440-66-6	Zinc	3.0	B		P
	Cyanide	.62	U		AS

Color Before: BROWN Clarity Before: _____ Texture: MEDIUM

Color After: COLORLESS Clarity After: _____ Artifacts: _____

Comments:

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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

43MW0300

Lab Name: COMPUCHEM,RTP Contract: (2-88)-REVS

Lab Code: COMPU Case No.: 23664 SAS No.: _____ SDG No.: 81

Matrix: (soil/water) SOIL Lab Sample ID: 436626

Sample wt/vol: 5.0 (g/mL) G Lab File ID: GH036626A18

Level: (low/med) LOW Date Received: 08/09/91

% Moisture: not dec. 15 Date Analyzed: 08/15/91

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	12	U
74-83-9	Bromomethane	12	U
75-01-4	Vinyl Chloride	12	U
75-00-3	Chloroethane	12	U
75-09-2	Methylene Chloride	62	B
67-64-1	Acetone	20	B
75-15-0	Carbon Disulfide	6	U
75-35-4	1,1-Dichloroethene	6	U
75-34-3	1,1-Dichloroethane	6	U
540-59-0	1,2-Dichloroethene (total)	6	U
67-66-3	Chloroform	6	U
107-06-2	1,2-Dichloroethane	6	U
78-93-3	2-Butanone	12	U
71-55-6	1,1,1-Trichloroethane	6	U
56-23-5	Carbon Tetrachloride	6	U
108-05-4	Vinyl Acetate	6	U
75-27-4	Bromodichloromethane	6	U
78-87-5	1,2-Dichloropropane	6	U
10061-01-5	cis-1,3-Dichloropropene	6	U
79-01-6	Trichloroethene	6	U
124-48-1	Dibromochloromethane	6	U
79-00-5	1,1,2-Trichloroethane	6	U
71-43-2	Benzene	6	U
10061-02-6	Trans-1,3-Dichloropropene	6	U
75-25-2	Bromoform	6	U
108-10-1	4-Methyl-2-Pentanone	12	U
591-78-6	2-Hexanone	12	U
127-18-4	Tetrachloroethene	6	U
79-34-5	1,1,2,2-Tetrachloroethane	6	U
108-88-3	Toluene	6	U
108-90-7	Chlorobenzene	6	U
100-41-4	Ethylbenzene	6	U
100-42-5	Styrene	6	U
1330-20-7	Total Xylenes	6	U

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1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

43MW0300

Lab Name: COMPUCHEM,RTP Contract: (2-88)-REVS

Lab Code: COMPU Case No.: 23664 SAS No.: _____ SDG No.: 81

Matrix: (soil/water) SOIL Lab Sample ID: 436626

Sample wt/vol: 30.0 (g/mL) G Lab File ID: GH036626C20

Level: (low/med) LOW Date Received: 08/09/91

% Moisture: not dec. 15 dec. ____ Date Extracted: 08/13/91

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 08/14/91

GPC Cleanup: (Y/N) N pH: 5.9 Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	390	U
111-44-4	bis(2-Chloroethyl)Ether	390	U
95-57-8	2-Chlorophenol	390	U
541-73-1	1,3-Dichlorobenzene	390	U
106-46-7	1,4-Dichlorobenzene	390	U
100-51-6	Benzyl Alcohol	390	U
95-50-1	1,2-Dichlorobenzene	390	U
95-48-7	2-Methylphenol	390	U
39638-32-9	Bis(2-Chloroethyl)Ether	390	U
106-44-5	4-Methylphenol	390	U
621-64-7	N-Nitroso-Di-n-Propylamine	390	U
67-72-1	Hexachloroethane	390	U
98-95-3	Nitrobenzene	390	U
78-59-1	Isophorone	390	U
88-75-5	2-Nitrophenol	390	U
105-67-9	2,4-Dimethylphenol	390	U
65-85-0	Benzoic Acid	1900	U
111-91-1	bis(2-Chloroethoxy)Methane	390	U
120-83-2	2,4-Dichlorophenol	390	U
120-82-1	1,2,4-Trichlorobenzene	390	U
91-20-3	Naphthalene	390	U
106-47-8	4-Chloroaniline	390	U
87-68-3	Hexachlorobutadiene	390	U
59-50-7	4-Chloro-3-Methylphenol	390	U
91-57-6	2-Methylnaphthalene	390	U
77-47-4	Hexachlorocyclopentadiene	390	U
88-06-2	2,4,6-Trichlorophenol	390	U
95-95-4	2,4,5-Trichlorophenol	1900	U
91-58-7	2-Chloronaphthalene	390	U
88-74-4	2-Nitroaniline	1900	U
131-11-3	Dimethyl Phthalate	390	U
208-96-8	Acenaphthylene	390	U
606-20-2	2,6-Dinitrotoluene	390	U

FORM I SV-1 1/87 Rev.

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

43MW0300

Lab Name: COMPUCHEM,RTP Contract: (2-88)-REVS

Lab Code: COMPU Case No.: 23664 SAS No.: _____ SDG No.: 81

Matrix: (soil/water) SOIL Lab Sample ID: 436626

Sample wt/vol: 30.0 (g/mL) G Lab File ID: GH036626C20

Level: (low/med) LOW Date Received: 08/09/91

% Moisture: not dec. 15 dec. ____ Date Extracted: 08/13/91

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 08/14/91

GPC Cleanup: (Y/N) N pH: 5.9 Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
99-09-2	3-Nitroaniline	1900	U
83-32-9	Acenaphthene	390	U
51-28-5	2,4-Dinitrophenol	1900	U
100-02-7	4-Nitrophenol	1900	U
132-64-9	Dibenzofuran	390	U
121-14-2	2,4-Dinitrotoluene	390	U
84-66-2	Diethylphthalate	390	U
7005-72-3	4-Chlorophenyl-phenylether	390	U
86-73-7	Fluorene	390	U
100-01-6	4-Nitroaniline	1900	U
534-52-1	4,6-Dinitro-2-Methylphenol	1900	U
86-30-6	N-Nitrosodiphenylamine (1)	390	U
101-55-3	4-Bromophenyl-phenylether	390	U
118-74-1	Hexachlorobenzene	390	U
87-86-5	Pentachlorophenol	1900	U
85-01-8	Phenanthrene	390	U
120-12-7	Anthracene	390	U
84-74-2	Di-n-Butylphthalate	390	U
206-44-0	Fluoranthene	390	U
129-00-0	Pyrene	390	U
85-68-7	Butylbenzylphthalate	390	U
91-94-1	3,3'-Dichlorobenzidine	780	U
56-55-3	Benzo(a)Anthracene	390	U
218-01-9	Chrysene	390	U
117-81-7	bis(2-Ethylhexyl)Phthalate	72	J
117-84-0	Di-n-Octyl Phthalate	390	U
205-99-2	Benzo(b)Fluoranthene	390	U
207-08-9	Benzo(k)Fluoranthene	390	U
50-32-8	Benzo(a)Pyrene	390	U
193-39-5	Indeno(1,2,3-cd)Pyrene	390	U
53-70-3	Dibenzo(a,h)Anthracene	390	U
191-24-2	Benzo(g,h,i)Perylene	390	U

(1) - Cannot be separated from Diphenylamine

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

43MW0300

Lab Name: COMPUCHEM LABORATORIES Contract: (2-88)-REVS

Lab Code: COMPU Case No.: 23664 SAS No.: SDG No.: 81

Matrix: (soil/water) SOIL Lab Sample ID: 436626

Sample wt/vol: 30.4 (g/mL) G Lab File ID:

Level: (low/med) LOW Date Received: 08/09/91

% Moisture: not dec. 15 dec. Date Extracted: 08/13/91

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 08/15/91

GPC Cleanup: (Y/N) N pH: 5.9 Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	9.3	U
319-85-7	beta-BHC	9.3	U
319-86-8	delta-BHC	9.3	U
58-89-9	gamma-BHC	9.3	U
76-44-8	Heptachlor	9.3	U
309-00-2	Aldrin	9.3	U
1024-57-3	Heptachlor epoxide	9.3	U
959-98-8	Endosulfan I	9.3	U
60-57-1	Dieldrin	18	U
72-55-9	4,4'-DDE	18	U
72-20-8	Endrin	18	U
33213-65-9	Endosulfan II	18	U
72-54-8	4,4'-DDD	18	U
1031-07-8	Endosulfan sulfate	18	U
50-29-3	4,4'-DDT	18	U
72-43-5	p,p'-Methoxychlor	93	U
53494-70-5	Endrin ketone	18	U
5103-71-9	alpha-Chlordane	93	U
5103-74-2	gamma-Chlordane	93	U
8001-35-2	Toxaphene	180	U
12674-11-2	Aroclor-1016	93	U
11104-28-2	Aroclor-1221	93	U
11141-16-5	Aroclor-1232	93	U
53469-21-9	Aroclor-1242	93	U
12672-29-6	Aroclor-1248	93	U
11097-69-1	Aroclor-1254	180	U
11096-82-5	Aroclor-1260	180	U

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1

INORGANIC ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

43MW0300

Lab Name: COMPUCHEM LABORATORIES Contract: 7/88

Lab Code: COMPU Case No.: 50024 SAS No.: _____ SDG No.: 664204

Matrix (soil/water): SOIL Lab Sample ID: 436643

Level (low/med): LOW Date Received: 08/09/91

% Solids: 85.0

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	4460			P
7440-36-0	Antimony	7.5	U		P
7440-38-2	Arsenic	1.2	U		F
7440-39-3	Barium	9.5	B		P
7440-41-7	Beryllium	.23	U		P
7440-43-9	Cadmium	.91	U		P
7440-70-2	Calcium	618	B		P
7440-47-3	Chromium	6.8			P
7440-48-4	Cobalt	1.4	U		P
7440-50-8	Copper	1.1	B		P
7439-89-6	Iron	2140			P
7439-92-1	Lead	7.8		+	F
7439-95-4	Magnesium	177	B		P
7439-96-5	Manganese	7.4			P
7439-97-6	Mercury	.10	U		CV
7440-02-0	Nickel	3.0	B		P
7440-09-7	Potassium	244	U		P
7782-49-2	Selenium	.94	U		F
7440-22-4	Silver	1.1	U	N	P
7440-23-5	Sodium	101	B		P
7440-28-0	Thallium	.47	U		F
7440-62-2	Vanadium	6.7	B		P
7440-66-6	Zinc	3.5	B		P
	Cyanide	.59	U		AS
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Color Before: BROWN Clarity Before: _____ Texture: MEDIUM

Color After: COLORLESS Clarity After: _____ Artifacts: _____

Comments:

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APPENDIX C
GROUNDWATER DATA

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

43GW011

Lab Name: COMPUCHEM,RTP Contract: (2-88)-REVS

Lab Code: COMPU Case No.: 23664 SAS No.: _____ SDG No.: 267

Matrix: (soil/water) WATER Lab Sample ID: 439615

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CN039615B53

Level: (low/med) LOW Date Received: 08/23/91

% Moisture: not dec. ____ Date Analyzed: 08/29/91

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	5	U
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	7	
75-35-4	1,1-Dichloroethene	5	U
75-34-3	1,1-Dichloroethane	5	U
540-59-0	1,2-Dichloroethene (total)	5	U
67-66-3	Chloroform	5	U
107-06-2	1,2-Dichloroethane	5	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon Tetrachloride	5	U
108-05-4	Vinyl Acetate	10	U
75-27-4	Bromodichloromethane	5	U
78-87-5	1,2-Dichloropropane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
79-01-6	Trichloroethene	5	U
124-48-1	Dibromochloromethane	5	U
79-00-5	1,1,2-Trichloroethane	5	U
71-43-2	Benzene	5	U
10061-02-6	Trans-1,3-Dichloropropene	5	U
75-25-2	Bromoform	5	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-88-3	Toluene	5	U
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
100-42-5	Styrene	5	U
1330-20-7	Total Xylenes	5	U

FORM I VOA 1/87 Rev.

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

43GW011

Lab Name: COMPUCHEM,RTP Contract: (2-88)-REVS

Lab Code: COMPU Case No.: 23664 SAS No.: _____ SDG No.: 267

Matrix: (soil/water) WATER Lab Sample ID: 439615

Sample wt/vol: 1000 (g/mL) ML Lab File ID: GH039615B52

Level: (low/med) LOW Date Received: 08/23/91

% Moisture: not dec. ____ dec. ____ Date Extracted: 08/26/91

Extraction: (SepF/Cont/Sonc) SEPF Date Analyzed: 08/30/91

GPC Cleanup: (Y/N) N pH: ____ Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2	Phenol	10	U
111-44-4	bis(2-Chloroethyl)Ether	10	U
95-57-8	2-Chlorophenol	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
100-51-6	Benzyl Alcohol	10	U
95-50-1	1,2-Dichlorobenzene	10	U
95-48-7	2-Methylphenol	10	U
39638-32-9	bis(2-Chloroisopropyl)Ether	10	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-Di-n-Propylamine	10	U
67-72-1	Hexachloroethane	10	U
98-95-3	Nitrobenzene	10	U
78-59-1	Isophorone	10	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
65-85-0	Benzoic Acid	50	U
111-91-1	bis(2-Chloroethoxy)Methane	10	U
120-83-2	2,4-Dichlorophenol	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
91-20-3	Naphthalene	10	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	10	U
59-50-7	4-Chloro-3-Methylphenol	10	U
91-57-6	2-Methylnaphthalene	10	U
77-47-4	Hexachlorocyclopentadiene	10	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	50	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	50	U
131-11-3	Dimethyl Phthalate	10	U
208-96-8	Acenaphthylene	10	U
606-20-2	2,6-Dinitrotoluene	10	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

43GW011

Lab Name: COMPUCHEM,RTP Contract: (2-88)-REVS

Lab Code: COMPU Case No.: 23664 SAS No.: _____ SDG No.: 267

Matrix: (soil/water) WATER Lab Sample ID: 439615

Sample wt/vol: 1000 (g/mL) ML Lab File ID: GH039615B52

Level: (low/med) LOW Date Received: 08/23/91

% Moisture: not dec. ____ dec. ____ Date Extracted: 08/26/91

Extraction: (SepF/Cont/Sonc) SEPF Date Analyzed: 08/30/91

GPC Cleanup: (Y/N) N pH: ____ Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
99-09-2	3-Nitroaniline	50	U
83-32-9	Acenaphthene	10	U
51-28-5	2,4-Dinitrophenol	50	U
100-02-7	4-Nitrophenol	50	U
132-64-9	Dibenzofuran	10	U
121-14-2	2,4-Dinitrotoluene	10	U
84-66-2	Diethylphthalate	10	U
7005-72-3	4-Chlorophenyl-phenylether	10	U
86-73-7	Fluorene	10	U
100-01-6	4-Nitroaniline	50	U
534-52-1	4,6-Dinitro-2-Methylphenol	50	U
86-30-6	N-Nitrosodiphenylamine (1)	10	U
101-55-3	4-Bromophenyl-phenylether	10	U
118-74-1	Hexachlorobenzene	10	U
87-86-5	Pentachlorophenol	50	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
84-74-2	Di-n-Butylphthalate	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
85-68-7	Butylbenzylphthalate	10	U
91-94-1	3,3'-Dichlorobenzidine	20	U
56-55-3	Benzo(a)Anthracene	10	U
218-01-9	Chrysene	10	U
117-81-7	bis(2-Ethylhexyl)Phthalate	10	U
117-84-0	Di-n-Octyl Phthalate	10	U
205-99-2	Benzo(b)Fluoranthene	10	U
207-08-9	Benzo(k)Fluoranthene	10	U
50-32-8	Benzo(a)Pyrene	10	U
193-39-5	Indeno(1,2,3-cd)Pyrene	10	U
53-70-3	Dibenzo(a,h)Anthracene	10	U
191-24-2	Benzo(g,h,i)Perylene	10	U

(1) - Cannot be separated from Diphenylamine

436W011

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1

INORGANIC ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

BG5-1

Lab Name: COMPUCHEM LABORATORIES Contract: 3/90

Lab Code: COMPU Case No.: 50024 SAS No.: _____ SDG No.: 664307

Matrix (soil/water): WATER Lab Sample ID: 439634

Level (low/med): LOW Date Received: 08/23/91

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	124000			P
7440-36-0	Antimony	33.0	U		P
7440-38-2	Arsenic	25.0	U		F
7440-39-3	Barium	689			P
7440-41-7	Beryllium	3.1	B		P
7440-43-9	Cadmium	4.0	U		P
7440-70-2	Calcium	91900			P
7440-47-3	Chromium	177			P
7440-48-4	Cobalt	6.7	B		P
7440-50-8	Copper	64.2			P
7439-89-6	Iron	70700			P
7439-92-1	Lead	16.5			F
7439-95-4	Magnesium	9720			P
7439-96-5	Manganese	220			P
7439-97-6	Mercury	.20	U		CV
7440-02-0	Nickel	33.8	B		P
7440-09-7	Potassium	8210			P
7782-49-2	Selenium	20.0	U	W	F
7440-22-4	Silver	5.0	U		P
7440-23-5	Sodium	9160			P
7440-28-0	Thallium	2.0	U		F
7440-62-2	Vanadium	165			P
7440-66-6	Zinc	192		*	P
	Cyanide	10.0	U	N	AS

Color Before: BROWN Clarity Before: CLOUDY Texture: _____

Color After: YELLOW Clarity After: CLEAR Artifacts: _____

Comments:
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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

43GW021

Lab Name: COMPUCHEM,RTP Contract: (2-88)-REVS

Lab Code: COMPU Case No.: 23664 SAS No.: _____ SDG No.: 267

Matrix: (soil/water) WATER Lab Sample ID: 439616

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CN039616B53

Level: (low/med) LOW Date Received: 08/23/91

% Moisture: not dec. ____ Date Analyzed: 08/29/91

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	8	B
67-64-1	Acetone	10	B
75-15-0	Carbon Disulfide	5	U
75-35-4	1,1-Dichloroethene	5	U
75-34-3	1,1-Dichloroethane	5	U
540-59-0	1,2-Dichloroethene (total)	5	U
67-66-3	Chloroform	5	U
107-06-2	1,2-Dichloroethane	5	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon Tetrachloride	5	U
108-05-4	Vinyl Acetate	10	U
75-27-4	Bromodichloromethane	5	U
78-87-5	1,2-Dichloropropane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
79-01-6	Trichloroethene	5	U
124-48-1	Dibromochloromethane	5	U
79-00-5	1,1,2-Trichloroethane	5	U
71-43-2	Benzene	5	U
10061-02-6	Trans-1,3-Dichloropropene	5	U
75-25-2	Bromoform	5	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-88-3	Toluene	5	U
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
100-42-5	Styrene	5	U
1330-20-7	Total Xylenes	5	U

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

43GW021

Lab Name: COMPUCHEM,RTP Contract: (2-88)-REVS

Lab Code: COMPU Case No.: 23664 SAS No.: _____ SDG No.: 267

Matrix: (soil/water) WATER Lab Sample ID: 439616

Sample wt/vol: 1000 (g/mL) ML Lab File ID: GH039616B52

Level: (low/med) LOW Date Received: 08/23/91

% Moisture: not dec. ____ dec. ____ Date Extracted: 08/26/91

Extraction: (SepF/Cont/Sonc) SEPF Date Analyzed: 08/30/91

GPC Cleanup: (Y/N) N pH: ____ Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2	Phenol	10	U
111-44-4	bis(2-Chloroethyl)Ether	10	U
95-57-8	2-Chlorophenol	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
100-51-6	Benzyl Alcohol	10	U
95-50-1	1,2-Dichlorobenzene	10	U
95-48-7	2-Methylphenol	10	U
39638-32-9	bis(2-Chloroisopropyl)Ether	10	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-Di-n-Propylamine	10	U
67-72-1	Hexachloroethane	10	U
98-95-3	Nitrobenzene	10	U
78-59-1	Isophorone	10	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
65-85-0	Benzoic Acid	50	U
111-91-1	bis(2-Chloroethoxy)Methane	10	U
120-83-2	2,4-Dichlorophenol	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
91-20-3	Naphthalene	10	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	10	U
59-50-7	4-Chloro-3-Methylphenol	10	U
91-57-6	2-Methylnaphthalene	10	U
77-47-4	Hexachlorocyclopentadiene	10	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	50	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	50	U
131-11-3	Dimethyl Phthalate	10	U
208-96-8	Acenaphthylene	10	U
606-20-2	2,6-Dinitrotoluene	10	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

43GW021

Lab Name: COMPUCHEM,RTP Contract: (2-88)-REVS

Lab Code: COMPU Case No.: 23664 SAS No.: _____ SDG No.: 267

Matrix: (soil/water) WATER Lab Sample ID: 439616

Sample wt/vol: 1000 (g/mL) ML Lab File ID: GH039616B52

Level: (low/med) LOW Date Received: 08/23/91

% Moisture: not dec. ____ dec. ____ Date Extracted: 08/26/91

Extraction: (SepF/Cont/Sonc) SEPF Date Analyzed: 08/30/91

GPC Cleanup: (Y/N) N pH: ____ Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
99-09-2	3-Nitroaniline	50	U
83-32-9	Acenaphthene	10	U
51-28-5	2,4-Dinitrophenol	50	U
100-02-7	4-Nitrophenol	50	U
132-64-9	Dibenzofuran	10	U
121-14-2	2,4-Dinitrotoluene	10	U
84-66-2	Diethylphthalate	10	U
7005-72-3	4-Chlorophenyl-phenylether	10	U
86-73-7	Fluorene	10	U
100-01-6	4-Nitroaniline	50	U
534-52-1	4,6-Dinitro-2-Methylphenol	50	U
86-30-6	N-Nitrosodiphenylamine (1)	10	U
101-55-3	4-Bromophenyl-phenylether	10	U
118-74-1	Hexachlorobenzene	10	U
87-86-5	Pentachlorophenol	50	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
84-74-2	Di-n-Butylphthalate	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
85-68-7	Butylbenzylphthalate	10	U
91-94-1	3,3'-Dichlorobenzidine	20	U
56-55-3	Benzo(a)Anthracene	10	U
218-01-9	Chrysene	10	U
117-81-7	bis(2-Ethylhexyl)Phthalate	10	U
117-84-0	Di-n-Octyl Phthalate	10	U
205-99-2	Benzo(b)Fluoranthene	10	U
207-08-9	Benzo(k)Fluoranthene	10	U
50-32-8	Benzo(a)Pyrene	10	U
193-39-5	Indeno(1,2,3-cd)Pyrene	10	U
53-70-3	Dibenzo(a,h)Anthracene	10	U
191-24-2	Benzo(g,h,i)Perylene	10	U

(1) - Cannot be separated from Diphenylamine

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

43GW021

Lab Name: COMPUCHEM LABORATORIES Contract: 3/90

Lab Code: COMPU Case No.: 50024 SAS No.: _____ SDG No.: 664307

Matrix (soil/water): WATER Lab Sample ID: 439635

Level (low/med): LOW Date Received: 08/23/91

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	177000			P
7440-36-0	Antimony	33.0	U		P
7440-38-2	Arsenic	23.4		S	F
7440-39-3	Barium	745			P
7440-41-7	Beryllium	4.2	B		P
7440-43-9	Cadmium	6.9			P
7440-70-2	Calcium	10300			P
7440-47-3	Chromium	249			P
7440-48-4	Cobalt	27.7	B		P
7440-50-8	Copper	67.8			P
7439-89-6	Iron	105000			P
7439-92-1	Lead	28.8		S	F
7439-95-4	Magnesium	11800			P
7439-96-5	Manganese	297			P
7439-97-6	Mercury	.20	U		CV
7440-02-0	Nickel	143			P
7440-09-7	Potassium	10900			P
7782-49-2	Selenium	40.0	U	W	F
7440-22-4	Silver	5.0	U		P
7440-23-5	Sodium	14600			P
7440-28-0	Thallium	2.0	U	W	F
7440-62-2	Vanadium	233			P
7440-66-6	Zinc	661		*	P
	Cyanide	10.0	U	N	AS

Color Before: BROWN Clarity Before: CLOUDY Texture: _____

Color After: YELLOW Clarity After: CLEAR Artifacts: _____

Comments:

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FORM I - IN 3/90

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

43GW031

Lab Name: COMPUCHEM,RTP Contract: (2-88)-REVS

Lab Code: COMPU Case No.: 23664 SAS No.: _____ SDG No.: 267

Matrix: (soil/water) WATER Lab Sample ID: 439617

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CN039617B53

Level: (low/med) LOW Date Received: 08/23/91

% Moisture: not dec. ____ Date Analyzed: 08/29/91

Column: (pack/cap) CAP Dilution Factor: 1.0

CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

CAS NO.	COMPOUND		Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	2	BJ
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	5	U
75-35-4	1,1-Dichloroethene	5	U
75-34-3	1,1-Dichloroethane	5	U
540-59-0	1,2-Dichloroethene (total)	5	U
67-66-3	Chloroform	5	U
107-06-2	1,2-Dichloroethane	5	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon Tetrachloride	5	U
108-05-4	Vinyl Acetate	10	U
75-27-4	Bromodichloromethane	5	U
78-87-5	1,2-Dichloropropane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
79-01-6	Trichloroethene	5	U
124-48-1	Dibromochloromethane	5	U
79-00-5	1,1,2-Trichloroethane	5	U
71-43-2	Benzene	5	U
10061-02-6	Trans-1,3-Dichloropropene	5	U
75-25-2	Bromoform	5	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-88-3	Toluene	5	U
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
100-42-5	Styrene	5	U
1330-20-7	Total Xylenes	5	U

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

43GW031

Lab Name: COMPUCHEM LABORATORIES Contract: 3/90

Lab Code: COMPU Case No.: 50024 SAS No.: SDG No.: 664307

Matrix (soil/water): WATER Lab Sample ID: 439636

Level (low/med): LOW Date Received: 08/23/91

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	66000			P
7440-36-0	Antimony	33.0	U		P
7440-38-2	Arsenic	5.0	U	W	F
7440-39-3	Barium	220			P
7440-41-7	Beryllium	1.5	B		P
7440-43-9	Cadmium	4.0	U		P
7440-70-2	Calcium	22300			P
7440-47-3	Chromium	161			P
7440-48-4	Cobalt	6.0	U		P
7440-50-8	Copper	104			P
7439-89-6	Iron	126000			P
7439-92-1	Lead	27.7		S	F
7439-95-4	Magnesium	6800			P
7439-96-5	Manganese	72.6			P
7439-97-6	Mercury	.24			CV
7440-02-0	Nickel	20.5	B		P
7440-09-7	Potassium	5190			P
7782-49-2	Selenium	20.0	U	W	F
7440-22-4	Silver	5.0	U		P
7440-23-5	Sodium	22100			P
7440-28-0	Thallium	2.0	U		F
7440-62-2	Vanadium	122			P
7440-66-6	Zinc	214		*	P
	Cyanide	10.0	U	N	AS

Color Before: ORANGE Clarity Before: CLOUDY Texture:

Color After: YELLOW Clarity After: CLEAR Artifacts:

Comments:
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1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

43GW031

Lab Name: COMPUCHEM,RTP Contract: (2-88)-REVS

Lab Code: COMPU Case No.: 23664 SAS No.: _____ SDG No.: 267

Matrix: (soil/water) WATER Lab Sample ID: 439617

Sample wt/vol: 1000 (g/mL) ML Lab File ID: GH039617B52

Level: (low/med) LOW Date Received: 08/23/91

% Moisture: not dec. ____ dec. ____ Date Extracted: 08/26/91

Extraction: (SepF/Cont/Sonc) SEPF Date Analyzed: 08/30/91

GPC Cleanup: (Y/N) N pH: ____ Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
99-09-2	3-Nitroaniline	50	U
83-32-9	Acenaphthene	10	U
51-28-5	2,4-Dinitrophenol	50	U
100-02-7	4-Nitrophenol	50	U
132-64-9	Dibenzofuran	10	U
121-14-2	2,4-Dinitrotoluene	10	U
84-66-2	Diethylphthalate	10	U
7005-72-3	4-Chlorophenyl-phenylether	10	U
86-73-7	Fluorene	10	U
100-01-6	4-Nitroaniline	50	U
534-52-1	4,6-Dinitro-2-Methylphenol	50	U
86-30-6	N-Nitrosodiphenylamine (1)	10	U
101-55-3	4-Bromophenyl-phenylether	10	U
118-74-1	Hexachlorobenzene	10	U
87-86-5	Pentachlorophenol	50	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
84-74-2	Di-n-Butylphthalate	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
85-68-7	Butylbenzylphthalate	10	U
91-94-1	3,3'-Dichlorobenzidine	20	U
56-55-3	Benzo(a)Anthracene	10	U
218-01-9	Chrysene	10	U
117-81-7	bis(2-Ethylhexyl)Phthalate	10	U
117-84-0	Di-n-Octyl Phthalate	10	U
205-99-2	Benzo(b)Fluoranthene	10	U
207-08-9	Benzo(k)Fluoranthene	10	U
50-32-8	Benzo(a)Pyrene	10	U
193-39-5	Indeno(1,2,3-cd)Pyrene	10	U
53-70-3	Dibenzo(a,h)Anthracene	10	U
191-24-2	Benzo(g,h,i)Perylene	10	U

(1) - Cannot be separated from Diphenylamine

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

43GW031

Lab Name: COMPUCHEM,RTP Contract: (2-88)-REVS

Lab Code: COMPU Case No.: 23664 SAS No.: _____ SDG No.: 267

Matrix: (soil/water) WATER Lab Sample ID: 439617

Sample wt/vol: 1000 (g/mL) ML Lab File ID: GH039617B52

Level: (low/med) LOW Date Received: 08/23/91

% Moisture: not dec. ____ dec. ____ Date Extracted: 08/26/91

Extraction: (SepF/Cont/Sonc) SEPF Date Analyzed: 08/30/91

GPC Cleanup: (Y/N) N pH: ____ Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2	Phenol	10	U
111-44-4	bis(2-Chloroethyl)Ether	10	U
95-57-8	2-Chlorophenol	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
100-51-6	Benzyl Alcohol	10	U
95-50-1	1,2-Dichlorobenzene	10	U
95-48-7	2-Methylphenol	10	U
39638-32-9	bis(2-Chloroisopropyl)Ether	10	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-Di-n-Propylamine	10	U
67-72-1	Hexachloroethane	10	U
98-95-3	Nitrobenzene	10	U
78-59-1	Isophorone	10	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
65-85-0	Benzoic Acid	50	U
111-91-1	bis(2-Chloroethoxy)Methane	10	U
120-83-2	2,4-Dichlorophenol	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
91-20-3	Naphthalene	10	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	10	U
59-50-7	4-Chloro-3-Methylphenol	10	U
91-57-6	2-Methylnaphthalene	10	U
77-47-4	Hexachlorocyclopentadiene	10	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	50	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	50	U
131-11-3	Dimethyl Phthalate	10	U
208-96-8	Acenaphthylene	10	U
606-20-2	2,6-Dinitrotoluene	10	U

APPENDIX D
SURFACE WATER DATA

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

43SW01

Lab Name: COMPUCHEM,RTP Contract: (2-88)-REVS

Lab Code: COMPU Case No.: 23664 SAS No.: _____ SDG No.: 247

Matrix: (soil/water) WATER Lab Sample ID: 436767

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CN036767A51

Level: (low/med) LOW Date Received: 08/10/91

% Moisture: not dec. ____ Date Analyzed: 08/17/91

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	5	U
67-64-1	Acetone	14	B
75-15-0	Carbon Disulfide	5	U
75-35-4	1,1-Dichloroethene	5	U
75-34-3	1,1-Dichloroethane	5	U
540-59-0	1,2-Dichloroethene (total)	5	U
67-66-3	Chloroform	5	U
107-06-2	1,2-Dichloroethane	5	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon Tetrachloride	5	U
108-05-4	Vinyl Acetate	10	U
75-27-4	Bromodichloromethane	5	U
78-87-5	1,2-Dichloropropane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
79-01-6	Trichloroethene	5	U
124-48-1	Dibromochloromethane	5	U
79-00-5	1,1,2-Trichloroethane	5	U
71-43-2	Benzene	5	U
10061-02-6	Trans-1,3-Dichloropropene	5	U
75-25-2	Bromoform	5	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-88-3	Toluene	5	U
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
100-42-5	Styrene	5	U
1330-20-7	Total Xylenes	5	U

FORM I VOA 1/87 Rev.

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

43SW01

Lab Name: COMPUCHEM,RTP Contract: (2-88)-REVS

Lab Code: COMPU Case No.: 23664 SAS No.: _____ SDG No.: 247

Matrix: (soil/water) WATER Lab Sample ID: 436767

Sample wt/vol: 1000 (g/mL) ML Lab File ID: GH036767B52

Level: (low/med) LOW Date Received: 08/10/91

% Moisture: not dec. ____ dec. ____ Date Extracted: 08/13/91

Extraction: (SepF/Cont/Sonc) SEPF Date Analyzed: 08/14/91

GPC Cleanup: (Y/N) N pH: ____ Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2	Phenol	10	U
111-44-4	bis(2-Chloroethyl)Ether	10	U
95-57-8	2-Chlorophenol	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
100-51-6	Benzyl Alcohol	10	U
95-50-1	1,2-Dichlorobenzene	10	U
95-48-7	2-Methylphenol	10	U
39638-32-9	bis(2-Chloroisopropyl)Ether	10	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-Di-n-Propylamine	10	U
67-72-1	Hexachloroethane	10	U
98-95-3	Nitrobenzene	10	U
78-59-1	Isophorone	10	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
65-85-0	Benzoic Acid	50	U
111-91-1	bis(2-Chloroethoxy)Methane	10	U
120-83-2	2,4-Dichlorophenol	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
91-20-3	Naphthalene	10	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	10	U
59-50-7	4-Chloro-3-Methylphenol	10	U
91-57-6	2-Methylnaphthalene	10	U
77-47-4	Hexachlorocyclopentadiene	10	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	50	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	50	U
131-11-3	Dimethyl Phthalate	10	U
208-96-8	Acenaphthylene	10	U
606-20-2	2,6-Dinitrotoluene	10	U

FORM I SV-1 1/87 Rev.

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

43SW01

Lab Name: COMPUCHEM,RTP Contract: (2-88)-REVS

Lab Code: COMPU Case No.: 23664 SAS No.: _____ SDG No.: 247

Matrix: (soil/water) WATER Lab Sample ID: 436767

Sample wt/vol: 1000 (g/mL) ML Lab File ID: GH036767B52

Level: (low/med) LOW Date Received: 08/10/91

% Moisture: not dec. ____ dec. ____ Date Extracted: 08/13/91

Extraction: (SepF/Cont/Sonc) SEPF Date Analyzed: 08/14/91

GPC Cleanup: (Y/N) N pH: ____ Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
99-09-2	3-Nitroaniline	50	U
83-32-9	Acenaphthene	10	U
51-28-5	2,4-Dinitrophenol	50	U
100-02-7	4-Nitrophenol	50	U
132-64-9	Dibenzofuran	10	U
121-14-2	2,4-Dinitrotoluene	10	U
84-66-2	Diethylphthalate	10	U
7005-72-3	4-Chlorophenyl-phenylether	10	U
86-73-7	Fluorene	10	U
100-01-6	4-Nitroaniline	50	U
534-52-1	4,6-Dinitro-2-Methylphenol	50	U
86-30-6	N-Nitrosodiphenylamine (1)	10	U
101-55-3	4-Bromophenyl-phenylether	10	U
118-74-1	Hexachlorobenzene	10	U
87-86-5	Pentachlorophenol	50	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
84-74-2	Di-n-Butylphthalate	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
85-68-7	Butylbenzylphthalate	10	U
91-94-1	3,3'-Dichlorobenzidine	20	U
56-55-3	Benzo(a)Anthracene	10	U
218-01-9	Chrysene	10	U
117-81-7	bis(2-Ethylhexyl)Phthalate	10	U
117-84-0	Di-n-Octyl Phthalate	10	U
205-99-2	Benzo(b)Fluoranthene	10	U
207-08-9	Benzo(k)Fluoranthene	10	U
50-32-8	Benzo(a)Pyrene	10	U
193-39-5	Indeno(1,2,3-cd)Pyrene	10	U
53-70-3	Dibenzo(a,h)Anthracene	10	U
191-24-2	Benzo(g,h,i)Perylene	10	U

(1) - Cannot be separated from Diphenylamine

FORM I SV-2 1/87 Rev.

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

43SW01

Lab Name: COMPUCHEM LABORATORIES Contract: (2-88)-REVS

Lab Code: COMPU Case No.: 23664 SAS No.: SDG No.: 247

Matrix: (soil/water) WATER Lab Sample ID: 436767

Sample wt/vol: 1000 (g/mL) ML Lab File ID:

Level: (low/med) LOW Date Received: 08/10/91

% Moisture: not dec. ____ dec. ____ Date Extracted: 08/14/91

Extraction: (SepF/Cont/Sonc) SEPF Date Analyzed: 08/16/91

GPC Cleanup: (Y/N) N pH: ____ Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.050	U
319-85-7	beta-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC	0.050	U
76-44-8	Heptachlor	0.050	U
309-00-2	Aldrin	0.050	U
1024-57-3	Heptachlor epoxide	0.050	U
959-98-8	Endosulfan I	0.050	U
60-57-1	Dieldrin	0.10	U
72-55-9	4,4'-DDE	0.10	U
72-20-8	Endrin	0.10	U
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
50-29-3	4,4'-DDT	0.10	U
72-43-5	p,p'-Methoxychlor	0.50	U
53494-70-5	Endrin ketone	0.10	U
5103-71-9	alpha-Chlordane	0.50	U
5103-74-2	gamma-Chlordane	0.50	U
8001-35-2	Toxaphene	1.0	U
12674-11-2	Aroclor-1016	0.50	U
11104-28-2	Aroclor-1221	0.50	U
11141-16-5	Aroclor-1232	0.50	U
53469-21-9	Aroclor-1242	0.50	U
12672-29-6	Aroclor-1248	0.50	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U

FORM I PEST 1/87 Rev.

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

43SW01

Lab Name: COMPUCHEM LABORATORIES Contract: 7/88

Lab Code: COMPU Case No.: 50024 SAS No.: _____ SDG No.: 664291

Matrix (soil/water): WATER Lab Sample ID: 436821

Level (low/med): LOW Date Received: 08/10/91

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	769			P
7440-36-0	Antimony	33.0	U		P
7440-38-2	Arsenic	5.0	U		F
7440-39-3	Barium	14.4	B		P
7440-41-7	Beryllium	1.0	U		P
7440-43-9	Cadmium	4.0	U		P
7440-70-2	Calcium	24700			P
7440-47-3	Chromium	4.0	U		P
7440-48-4	Cobalt	6.0	U		P
7440-50-8	Copper	9.8	B		P
7439-89-6	Iron	3800			P
7439-92-1	Lead	2.9	B	W	F
7439-95-4	Magnesium	1630	B		P
7439-96-5	Manganese	153			P
7439-97-6	Mercury	.20	U		CV
7440-02-0	Nickel	9.0	U		P
7440-09-7	Potassium	1250	B		P
7782-49-2	Selenium	4.0	U	N	F
7440-22-4	Silver	5.0	U		P
7440-23-5	Sodium	7290			P
7440-28-0	Thallium	2.0	U	WN	F
7440-62-2	Vanadium	4.7	B		P
7440-66-6	Zinc	32.1			P
	Cyanide	10.0	U	N	AS

Color Before: BROWN Clarity Before: CLOUDY Texture: _____

Color After: YELLOW Clarity After: CLEAR Artifacts: _____

Comments:

FORM 1.04 - PAGE 2

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

43SW02

Lab Name: COMPUCHEM,RTP Contract: (2-88)-REVS

Lab Code: COMPU Case No.: 23664 SAS No.: _____ SDG No.: 247

Matrix: (soil/water) WATER Lab Sample ID: 436768

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CN036768A51

Level: (low/med) LOW Date Received: 08/10/91

% Moisture: not dec. ____ Date Analyzed: 08/17/91

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	2	J
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	2	J
75-35-4	1,1-Dichloroethene	5	U
75-34-3	1,1-Dichloroethane	5	U
540-59-0	1,2-Dichloroethene (total)	5	U
67-66-3	Chloroform	5	U
107-06-2	1,2-Dichloroethane	5	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon Tetrachloride	5	U
108-05-4	Vinyl Acetate	10	U
75-27-4	Bromodichloromethane	5	U
78-87-5	1,2-Dichloropropane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
79-01-6	Trichloroethene	5	U
124-48-1	Dibromochloromethane	5	U
79-00-5	1,1,2-Trichloroethane	5	U
71-43-2	Benzene	5	U
10061-02-6	Trans-1,3-Dichloropropene	5	U
75-25-2	Bromoform	5	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-88-3	Toluene	5	U
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
100-42-5	Styrene	5	U
1330-20-7	Total Xylenes	5	U

FORM I VOA 1/87 Rev.

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

43SW02

Lab Name: COMPUCHEM,RTP Contract: (2-88)-REVS

Lab Code: COMPU Case No.: 23664 SAS No.: _____ SDG No.: 247

Matrix: (soil/water) WATER Lab Sample ID: 436768

Sample wt/vol: 1000 (g/mL) ML Lab File ID: GH036768B52

Level: (low/med) LOW Date Received: 08/10/91

% Moisture: not dec. ____ dec. ____ Date Extracted: 08/13/91

Extraction: (SepF/Cont/Sonc) SEPF Date Analyzed: 08/14/91

GPC Cleanup: (Y/N) N pH: ____ Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2	Phenol	10	U
111-44-4	bis(2-Chloroethyl)Ether	10	U
95-57-8	2-Chlorophenol	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
100-51-6	Benzyl Alcohol	10	U
95-50-1	1,2-Dichlorobenzene	10	U
95-48-7	2-Methylphenol	10	U
39638-32-9	bis(2-Chloroisopropyl)Ether	10	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-Di-n-Propylamine	10	U
67-72-1	Hexachloroethane	10	U
98-95-3	Nitrobenzene	10	U
78-59-1	Isophorone	10	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
65-85-0	Benzoic Acid	2	J
111-91-1	bis(2-Chloroethoxy)Methane	10	U
120-83-2	2,4-Dichlorophenol	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
91-20-3	Naphthalene	10	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	10	U
59-50-7	4-Chloro-3-Methylphenol	10	U
91-57-6	2-Methylnaphthalene	10	U
77-47-4	Hexachlorocyclopentadiene	10	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	50	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	50	U
131-11-3	Dimethyl Phthalate	10	U
208-96-8	Acenaphthylene	10	U
606-20-2	2,6-Dinitrotoluene	10	U

FORM I SV-1 1/87 Rev.

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

43SW02

Lab Name: COMPUCHEM,RTP Contract: (2-88)-REVS

Lab Code: COMPU Case No.: 23664 SAS No.: _____ SDG No.: 247

Matrix: (soil/water) WATER Lab Sample ID: 436768

Sample wt/vol: 1000 (g/mL) ML Lab File ID: GH036768B52

Level: (low/med) LOW Date Received: 08/10/91

% Moisture: not dec. ____ dec. ____ Date Extracted: 08/13/91

Extraction: (SepF/Cont/Sonc) SEPF Date Analyzed: 08/14/91

GPC Cleanup: (Y/N) N pH: ____ Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
99-09-2	3-Nitroaniline	50	U
83-32-9	Acenaphthene	10	U
51-28-5	2,4-Dinitrophenol	50	U
100-02-7	4-Nitrophenol	50	U
132-64-9	Dibenzofuran	10	U
121-14-2	2,4-Dinitrotoluene	10	U
84-66-2	Diethylphthalate	10	U
7005-72-3	4-Chlorophenyl-phenylether	10	U
86-73-7	Fluorene	10	U
100-01-6	4-Nitroaniline	50	U
534-52-1	4,6-Dinitro-2-Methylphenol	50	U
86-30-6	N-Nitrosodiphenylamine (1)	10	U
101-55-3	4-Bromophenyl-phenylether	10	U
118-74-1	Hexachlorobenzene	10	U
87-86-5	Pentachlorophenol	50	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
84-74-2	Di-n-Butylphthalate	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
85-68-7	Butylbenzylphthalate	10	U
91-94-1	3,3'-Dichlorobenzidine	20	U
56-55-3	Benzo(a)Anthracene	10	U
218-01-9	Chrysene	10	U
117-81-7	bis(2-Ethylhexyl)Phthalate	10	U
117-84-0	Di-n-Octyl Phthalate	10	U
205-99-2	Benzo(b)Fluoranthene	10	U
207-08-9	Benzo(k)Fluoranthene	10	U
50-32-8	Benzo(a)Pyrene	10	U
193-39-5	Indeno(1,2,3-cd)Pyrene	10	U
53-70-3	Dibenzo(a,h)Anthracene	10	U
191-24-2	Benzo(g,h,i)Perylene	10	U

(1) - Cannot be separated from Diphenylamine

FORM I SV-2 1/87 Rev.

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

43SW02

Lab Name: COMPUCHEM LABORATORIES Contract: (2-88)-REVS

Lab Code: COMPU Case No.: 23664 SAS No.: SDG No.: 247

Matrix: (soil/water) WATER Lab Sample ID: 436768

Sample wt/vol: 1000 (g/mL) ML Lab File ID:

Level: (low/med) LOW Date Received: 08/10/91

% Moisture: not dec. dec. Date Extracted: 08/14/91

Extraction: (SepF/Cont/Sonc) SEPF Date Analyzed: 08/16/91

GPC Cleanup: (Y/N) N pH: Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.050	U
319-85-7	beta-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC	0.050	U
76-44-8	Heptachlor	0.050	U
309-00-2	Aldrin	0.050	U
1024-57-3	Heptachlor epoxide	0.050	U
959-98-8	Endosulfan I	0.050	U
60-57-1	Dieldrin	0.10	U
72-55-9	4,4'-DDE	0.10	U
72-20-8	Endrin	0.10	U
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
50-29-3	4,4'-DDT	0.10	U
72-43-5	p,p'-Methoxychlor	0.50	U
53494-70-5	Endrin ketone	0.10	U
5103-71-9	alpha-Chlordane	0.50	U
5103-74-2	gamma-Chlordane	0.50	U
8001-35-2	Toxaphene	1.0	U
12674-11-2	Aroclor-1016	0.50	U
11104-28-2	Aroclor-1221	0.50	U
11141-16-5	Aroclor-1232	0.50	U
53469-21-9	Aroclor-1242	0.50	U
12672-29-6	Aroclor-1248	0.50	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U

FORM I PEST 1/87 Rev.

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

43SW02

Lab Name: COMPUCHEM LABORATORIES Contract: 7/88

Lab Code: COMPU Case No.: 50024 SAS No.: _____ SDG No.: 664291

Matrix (soil/water): WATER Lab Sample ID: 436822

Level (low/med): LOW Date Received: 08/10/91

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	803			P
7440-36-0	Antimony	33.0	U		P
7440-38-2	Arsenic	5.0	U	W	F
7440-39-3	Barium	87.6	B		P
7440-41-7	Beryllium	1.0	U		P
7440-43-9	Cadmium	4.0	U		P
7440-70-2	Calcium	48000			P
7440-47-3	Chromium	4.0	U		P
7440-48-4	Cobalt	6.0	U		P
7440-50-8	Copper	7.9	B		P
7439-89-6	Iron	15700			P
7439-92-1	Lead	7.0		W	F
7439-95-4	Magnesium	42300			P
7439-96-5	Manganese	42.6			P
7439-97-6	Mercury	.20	U		CV
7440-02-0	Nickel	9.0	U		P
7440-09-7	Potassium	13000			P
7782-49-2	Selenium	4.0	U	N	F
7440-22-4	Silver	5.0	U		P
7440-23-5	Sodium	401000			P
7440-28-0	Thallium	20.0	U	WN	F
7440-62-2	Vanadium	3.8	B		P
7440-66-6	Zinc	29.6			P
	Cyanide	10.0	U	N	AS

Color Before: BROWN Clarity Before: CLOUDY Texture: _____

Color After: YELLOW Clarity After: CLEAR Artifacts: _____

Comments:

FORM 1.04 - PAGE 3

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

43SW03

Lab Name: COMPUCHEM,RTP Contract: (2-88)-REVS

Lab Code: COMPU Case No.: 23664 SAS No.: _____ SDG No.: 267

Matrix: (soil/water) WATER Lab Sample ID: 436784

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CN036784A51

Level: (low/med) LOW Date Received: 08/10/91

% Moisture: not dec. ____ Date Analyzed: 08/17/91

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	5	U
67-64-1	Acetone	45	
75-15-0	Carbon Disulfide	5	U
75-35-4	1,1-Dichloroethene	5	U
75-34-3	1,1-Dichloroethane	5	U
540-59-0	1,2-Dichloroethene (total)	5	U
67-66-3	Chloroform	5	U
107-06-2	1,2-Dichloroethane	5	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon Tetrachloride	5	U
108-05-4	Vinyl Acetate	10	U
75-27-4	Bromodichloromethane	5	U
78-87-5	1,2-Dichloropropane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
79-01-6	Trichloroethene	5	U
124-48-1	Dibromochloromethane	5	U
79-00-5	1,1,2-Trichloroethane	5	U
71-43-2	Benzene	5	U
10061-02-6	Trans-1,3-Dichloropropene	5	U
75-25-2	Bromoform	5	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-88-3	Toluene	5	U
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
100-42-5	Styrene	5	U
1330-20-7	Total Xylenes	5	U

FORM I VOA 1/87 Rev.

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

43SW03

Lab Name: COMPUCHEM,RTP Contract: (2-88)-REVS

Lab Code: COMPU Case No.: 23664 SAS No.: _____ SDG No.: 267

Matrix: (soil/water) WATER Lab Sample ID: 436784

Sample wt/vol: 1000 (g/mL) ML Lab File ID: GH036784B52

Level: (low/med) LOW Date Received: 08/10/91

% Moisture: not dec. ____ dec. ____ Date Extracted: 08/12/91

Extraction: (SepF/Cont/Sonc) SEPF Date Analyzed: 08/14/91

GPC Cleanup: (Y/N) N pH: ____ Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2	Phenol	10	U
111-44-4	bis(2-Chloroethyl)Ether	10	U
95-57-8	2-Chlorophenol	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
100-51-6	Benzyl Alcohol	10	U
95-50-1	1,2-Dichlorobenzene	10	U
95-48-7	2-Methylphenol	10	U
39638-32-9	bis(2-Chloroisopropyl)Ether	10	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-Di-n-Propylamine	10	U
67-72-1	Hexachloroethane	10	U
98-95-3	Nitrobenzene	10	U
78-59-1	Isophorone	10	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
65-85-0	Benzoic Acid	50	U
111-91-1	bis(2-Chloroethoxy)Methane	10	U
120-83-2	2,4-Dichlorophenol	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
91-20-3	Naphthalene	10	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	10	U
59-50-7	4-Chloro-3-Methylphenol	10	U
91-57-6	2-Methylnaphthalene	10	U
77-47-4	Hexachlorocyclopentadiene	10	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	50	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	50	U
131-11-3	Dimethyl Phthalate	10	U
208-96-8	Acenaphthylene	10	U
606-20-2	2,6-Dinitrotoluene	10	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

43SW03

Lab Name: COMPUCHEM,RTP Contract: (2-88)-REVS

Lab Code: COMPU Case No.: 23664 SAS No.: _____ SDG No.: 267

Matrix: (soil/water) WATER Lab Sample ID: 436784

Sample wt/vol: 1000 (g/mL) ML Lab File ID: GH036784B52

Level: (low/med) LOW Date Received: 08/10/91

% Moisture: not dec. ____ dec. ____ Date Extracted: 08/12/91

Extraction: (SepF/Cont/Sonc) SEPF Date Analyzed: 08/14/91

GPC Cleanup: (Y/N) N pH: ____ Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
99-09-2	3-Nitroaniline	50	U
83-32-9	Acenaphthene	10	U
51-28-5	2,4-Dinitrophenol	50	U
100-02-7	4-Nitrophenol	50	U
132-64-9	Dibenzofuran	10	U
121-14-2	2,4-Dinitrotoluene	10	U
84-66-2	Diethylphthalate	10	U
7005-72-3	4-Chlorophenyl-phenylether	10	U
86-73-7	Fluorene	10	U
100-01-6	4-Nitroaniline	50	U
534-52-1	4,6-Dinitro-2-Methylphenol	50	U
86-30-6	N-Nitrosodiphenylamine (1)	10	U
101-55-3	4-Bromophenyl-phenylether	10	U
118-74-1	Hexachlorobenzene	10	U
87-86-5	Pentachlorophenol	50	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
84-74-2	Di-n-Butylphthalate	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
85-68-7	Butylbenzylphthalate	10	U
91-94-1	3,3'-Dichlorobenzidine	20	U
56-55-3	Benzo(a)Anthracene	10	U
218-01-9	Chrysene	10	U
117-81-7	bis(2-Ethylhexyl)Phthalate	10	U
117-84-0	Di-n-Octyl Phthalate	10	U
205-99-2	Benzo(b)Fluoranthene	10	U
207-08-9	Benzo(k)Fluoranthene	10	U
50-32-8	Benzo(a)Pyrene	10	U
193-39-5	Indeno(1,2,3-cd)Pyrene	10	U
53-70-3	Dibenzo(a,h)Anthracene	10	U
191-24-2	Benzo(g,h,i)Perylene	10	U

(1) - Cannot be separated from Diphenylamine

U.S. EPA - CLP

1
INORGANIC ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

43SW03

Lab Name: COMPUCHEM LABORATORIES Contract: 7/88

Lab Code: COMPU Case No.: 50024 SAS No.: _____ SDG No.: 664291

Matrix (soil/water): WATER Lab Sample ID: 436827

Level (low/med): LOW Date Received: 08/10/91

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	948			P
7440-36-0	Antimony	33.0	U		P
7440-38-2	Arsenic	5.0	U		F
7440-39-3	Barium	11.0	B		P
7440-41-7	Beryllium	1.0	U		P
7440-43-9	Cadmium	4.0	U		P
7440-70-2	Calcium	23100			P
7440-47-3	Chromium	4.0	U		P
7440-48-4	Cobalt	6.0	U		P
7440-50-8	Copper	11.3	B		P
7439-89-6	Iron	1120			P
7439-92-1	Lead	21.1		S	F
7439-95-4	Magnesium	1190	B		P
7439-96-5	Manganese	45.8			P
7439-97-6	Mercury	.20	U		CV
7440-02-0	Nickel	9.0	U		P
7440-09-7	Potassium	1070	U		P
7782-49-2	Selenium	4.0	U	N	F
7440-22-4	Silver	5.0	U		P
7440-23-5	Sodium	2930	B		P
7440-28-0	Thallium	2.0	U	WN	F
7440-62-2	Vanadium	4.4	B		P
7440-66-6	Zinc	54.3			P
	Cyanide	10.0	U	N	AS

Color Before: BROWN Clarity Before: CLOUDY Texture: _____

Color After: YELLOW Clarity After: CLEAR Artifacts: _____

Comments:
FORM 1.04 - PAGE 4

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

43SW04

Lab Name: COMPUCHEM,RTP Contract: (2-88)-REVS

Lab Code: COMPU Case No.: 23664 SAS No.: _____ SDG No.: 247

Matrix: (soil/water) WATER Lab Sample ID: 436770

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CN036770A51

Level: (low/med) LOW Date Received: 08/10/91

% Moisture: not dec. ____ Date Analyzed: 08/17/91

Column: (pack/cap) CAP Dilution Factor: 1.0

CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

CAS NO.	COMPOUND		Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	5	
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	3	J
75-35-4	1,1-Dichloroethene	5	U
75-34-3	1,1-Dichloroethane	5	U
540-59-0	1,2-Dichloroethene (total)	5	U
67-66-3	Chloroform	5	U
107-06-2	1,2-Dichloroethane	5	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon Tetrachloride	5	U
108-05-4	Vinyl Acetate	10	U
75-27-4	Bromodichloromethane	5	U
78-87-5	1,2-Dichloropropane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
79-01-6	Trichloroethene	5	U
124-48-1	Dibromochloromethane	5	U
79-00-5	1,1,2-Trichloroethane	5	U
71-43-2	Benzene	5	U
10061-02-6	Trans-1,3-Dichloropropene	5	U
75-25-2	Bromoform	5	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-88-3	Toluene	5	U
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
100-42-5	Styrene	5	U
1330-20-7	Total Xylenes	5	U

FORM I VOA 1/87 Rev.

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

43SW04

Lab Name: COMPUCHEM,RTP Contract: (2-88)-REVS

Lab Code: COMPU Case No.: 23664 SAS No.: _____ SDG No.: 247

Matrix: (soil/water) WATER Lab Sample ID: 436770

Sample wt/vol: 1000 (g/mL) ML Lab File ID: GH036770B52

Level: (low/med) LOW Date Received: 08/10/91

% Moisture: not dec. ____ dec. ____ Date Extracted: 08/13/91

Extraction: (SepF/Cont/Sonc) SEPF Date Analyzed: 08/14/91

GPC Cleanup: (Y/N) N pH: ____ Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2	Phenol	10	U
111-44-4	bis(2-Chloroethyl)Ether	10	U
95-57-8	2-Chlorophenol	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
100-51-6	Benzyl Alcohol	10	U
95-50-1	1,2-Dichlorobenzene	10	U
95-48-7	2-Methylphenol	10	U
39638-32-9	bis(2-Chloroisopropyl)Ether	10	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-Di-n-Propylamine	10	U
67-72-1	Hexachloroethane	10	U
98-95-3	Nitrobenzene	10	U
78-59-1	Isophorone	10	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
65-85-0	Benzoic Acid	50	U
111-91-1	bis(2-Chloroethoxy)Methane	10	U
120-83-2	2,4-Dichlorophenol	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
91-20-3	Naphthalene	10	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	10	U
59-50-7	4-Chloro-3-Methylphenol	10	U
91-57-6	2-Methylnaphthalene	10	U
77-47-4	Hexachlorocyclopentadiene	10	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	50	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	50	U
131-11-3	Dimethyl Phthalate	10	U
208-96-8	Acenaphthylene	10	U
606-20-2	2,6-Dinitrotoluene	10	U

FORM I SV-1 1/87 Rev.

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

43SW04

Lab Name: COMPUCHEM,RTP Contract: (2-88)-REVS

Lab Code: COMPU Case No.: 23664 SAS No.: _____ SDG No.: 247

Matrix: (soil/water) WATER Lab Sample ID: 436770

Sample wt/vol: 1000 (g/mL) ML Lab File ID: GH036770B52

Level: (low/med) LOW Date Received: 08/10/91

% Moisture: not dec. ____ dec. ____ Date Extracted: 08/13/91

Extraction: (SepF/Cont/Sonc) SEPF Date Analyzed: 08/14/91

GPC Cleanup: (Y/N) N pH: ____ Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
99-09-2	3-Nitroaniline	50	U
83-32-9	Acenaphthene	10	U
51-28-5	2,4-Dinitrophenol	50	U
100-02-7	4-Nitrophenol	50	U
132-64-9	Dibenzofuran	10	U
121-14-2	2,4-Dinitrotoluene	10	U
84-66-2	Diethylphthalate	10	U
7005-72-3	4-Chlorophenyl-phenylether	10	U
86-73-7	Fluorene	10	U
100-01-6	4-Nitroaniline	50	U
534-52-1	4,6-Dinitro-2-Methylphenol	50	U
86-30-6	N-Nitrosodiphenylamine (1)	10	U
101-55-3	4-Bromophenyl-phenylether	10	U
118-74-1	Hexachlorobenzene	10	U
87-86-5	Pentachlorophenol	50	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
84-74-2	Di-n-Butylphthalate	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
85-68-7	Butylbenzylphthalate	10	U
91-94-1	3,3'-Dichlorobenzidine	20	U
56-55-3	Benzo(a)Anthracene	10	U
218-01-9	Chrysene	10	U
117-81-7	bis(2-Ethylhexyl)Phthalate	10	U
117-84-0	Di-n-Octyl Phthalate	10	U
205-99-2	Benzo(b)Fluoranthene	10	U
207-08-9	Benzo(k)Fluoranthene	10	U
50-32-8	Benzo(a)Pyrene	10	U
193-39-5	Indeno(1,2,3-cd)Pyrene	10	U
53-70-3	Dibenzo(a,h)Anthracene	10	U
191-24-2	Benzo(g,h,i)Perylene	10	U

(1) - Cannot be separated from Diphenylamine

FORM I SV-2 1/87 Rev.

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

43SW04

Lab Name: COMPUCHEM LABORATORIES Contract: (2-88)-REVS

Lab Code: COMPU Case No.: 23664 SAS No.: SDG No.: 247

Matrix: (soil/water) WATER Lab Sample ID: 436770

Sample wt/vol: 1000 (g/mL) ML Lab File ID:

Level: (low/med) LOW Date Received: 08/10/91

% Moisture: not dec. ____ dec. ____ Date Extracted: 08/14/91

Extraction: (SepF/Cont/Sonc) SEPF Date Analyzed: 08/15/91

GPC Cleanup: (Y/N) N pH: ____ Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.050	U
319-85-7	beta-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC	0.050	U
76-44-8	Heptachlor	0.050	U
309-00-2	Aldrin	0.050	U
1024-57-3	Heptachlor epoxide	0.050	U
959-98-8	Endosulfan I	0.050	U
60-57-1	Dieldrin	0.10	U
72-55-9	4,4'-DDE	0.10	U
72-20-8	Endrin	0.10	U
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
50-29-3	4,4'-DDT	0.10	U
72-43-5	p,p'-Methoxychlor	0.50	U
53494-70-5	Endrin ketone	0.10	U
5103-71-9	alpha-Chlordane	0.50	U
5103-74-2	gamma-Chlordane	0.50	U
8001-35-2	Toxaphene	1.0	U
12674-11-2	Aroclor-1016	0.50	U
11104-28-2	Aroclor-1221	0.50	U
11141-16-5	Aroclor-1232	0.50	U
53469-21-9	Aroclor-1242	0.50	U
12672-29-6	Aroclor-1248	0.50	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U

FORM I PEST 1/87 Rev.

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

43SW04

Lab Name: COMPUCHEM LABORATORIES Contract: 7/88

Lab Code: COMPU Case No.: 50024 SAS No.: _____ SDG No.: 664291

Matrix (soil/water): WATER Lab Sample ID: 436823

Level (low/med): LOW Date Received: 08/10/91

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	435			P
7440-36-0	Antimony	33.0	U		P
7440-38-2	Arsenic	5.0	U	W	F
7440-39-3	Barium	24.6	B		P
7440-41-7	Beryllium	1.0	U		P
7440-43-9	Cadmium	4.0	U		P
7440-70-2	Calcium	29900			P
7440-47-3	Chromium	4.0	U		P
7440-48-4	Cobalt	6.0	U		P
7440-50-8	Copper	7.0	B		P
7439-89-6	Iron	3080			P
7439-92-1	Lead	2.8	B	W	F
7439-95-4	Magnesium	2270	B		P
7439-96-5	Manganese	23.8			P
7439-97-6	Mercury	.20	U		CV
7440-02-0	Nickel	9.2	B		P
7440-09-7	Potassium	1650	B		P
7782-49-2	Selenium	4.0	U	N	F
7440-22-4	Silver	5.0	U		P
7440-23-5	Sodium	14100			P
7440-28-0	Thallium	2.0	U	WN	F
7440-62-2	Vanadium	3.0	U		P
7440-66-6	Zinc	53.0			P
	Cyanide	10.0	U	N	AS

Color Before: BROWN Clarity Before: CLOUDY Texture: _____

Color After: YELLOW Clarity After: CLEAR Artifacts: _____

Comments:
FORM 1.04 - PAGE 5

FORM I - IN 7/88

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

43SW05

Lab Name: COMPUCHEM,RTP Contract: (2-88)-REVS

Lab Code: COMPU Case No.: 23664 SAS No.: _____ SDG No.: 247

Matrix: (soil/water) WATER Lab Sample ID: 436772

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CN036772A51

Level: (low/med) LOW Date Received: 08/10/91

% Moisture: not dec. ____ Date Analyzed: 08/17/91

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	1	J
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	1	J
75-35-4	1,1-Dichloroethene	5	U
75-34-3	1,1-Dichloroethane	5	U
540-59-0	1,2-Dichloroethene (total)	5	U
67-66-3	Chloroform	5	U
107-06-2	1,2-Dichloroethane	5	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon Tetrachloride	5	U
108-05-4	Vinyl Acetate	10	U
75-27-4	Bromodichloromethane	5	U
78-87-5	1,2-Dichloropropane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
79-01-6	Trichloroethene	5	U
124-48-1	Dibromochloromethane	5	U
79-00-5	1,1,2-Trichloroethane	5	U
71-43-2	Benzene	5	U
10061-02-6	Trans-1,3-Dichloropropene	5	U
75-25-2	Bromoform	5	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-88-3	Toluene	5	U
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
100-42-5	Styrene	5	U
1330-20-7	Total Xylenes	5	U

FORM I VOA 1/87 Rev.

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO:

43SW05

Lab Name: COMPUCHEM,RTP Contract: (2-88)-REVS

Lab Code: COMPU Case No.: 23664 SAS No.: _____ SDG No.: 247

Matrix: (soil/water) WATER Lab Sample ID: 436772

Sample wt/vol: 1000 (g/mL) ML Lab File ID: GH036772B52

Level: (low/med) LOW Date Received: 08/10/91

% Moisture: not dec. ____ dec. ____ Date Extracted: 08/13/91

Extraction: (SepF/Cont/Sonc) SEPF Date Analyzed: 08/14/91

GPC Cleanup: (Y/N) N pH: ____ Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2	Phenol	10	U
111-44-4	bis(2-Chloroethyl)Ether	10	U
95-57-8	2-Chlorophenol	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
100-51-6	Benzyl Alcohol	10	U
95-50-1	1,2-Dichlorobenzene	10	U
95-48-7	2-Methylphenol	10	U
39638-32-9	bis(2-Chloroisopropyl)Ether	10	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-Di-n-Propylamine	10	U
67-72-1	Hexachloroethane	10	U
98-95-3	Nitrobenzene	10	U
78-59-1	Isophorone	10	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
65-85-0	Benzoic Acid	50	U
111-91-1	bis(2-Chloroethoxy)Methane	10	U
120-83-2	2,4-Dichlorophenol	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
91-20-3	Naphthalene	10	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	10	U
59-50-7	4-Chloro-3-Methylphenol	10	U
91-57-6	2-Methylnaphthalene	10	U
77-47-4	Hexachlorocyclopentadiene	10	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	50	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	50	U
131-11-3	Dimethyl Phthalate	10	U
208-96-8	Acenaphthylene	10	U
606-20-2	2,6-Dinitrotoluene	10	U

FORM I SV-1 1/87 Rev.

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

43SW05

Lab Name: COMPUCHEM,RTP Contract: (2-88)-REVS

Lab Code: COMPU Case No.: 23664 SAS No.: _____ SDG No.: 247

Matrix: (soil/water) WATER Lab Sample ID: 436772

Sample wt/vol: 1000 (g/mL) ML Lab File ID: GH036772B52

Level: (low/med) LOW Date Received: 08/10/91

% Moisture: not dec. ____ dec. ____ Date Extracted: 08/13/91

Extraction: (SepF/Cont/Sonc) SEPF Date Analyzed: 08/14/91

GPC Cleanup: (Y/N) N pH: ____ Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
99-09-2	3-Nitroaniline	50	U
83-32-9	Acenaphthene	10	U
51-28-5	2,4-Dinitrophenol	50	U
100-02-7	4-Nitrophenol	50	U
132-64-9	Dibenzofuran	10	U
121-14-2	2,4-Dinitrotoluene	10	U
84-66-2	Diethylphthalate	10	U
7005-72-3	4-Chlorophenyl-phenylether	10	U
86-73-7	Fluorene	10	U
100-01-6	4-Nitroaniline	50	U
534-52-1	4,6-Dinitro-2-Methylphenol	50	U
86-30-6	N-Nitrosodiphenylamine (1)	10	U
101-55-3	4-Bromophenyl-phenylether	10	U
118-74-1	Hexachlorobenzene	10	U
87-86-5	Pentachlorophenol	50	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
84-74-2	Di-n-Butylphthalate	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
85-68-7	Butylbenzylphthalate	10	U
91-94-1	3,3'-Dichlorobenzidine	20	U
56-55-3	Benzo(a)Anthracene	10	U
218-01-9	Chrysene	10	U
117-81-7	bis(2-Ethylhexyl)Phthalate	10	U
117-84-0	Di-n-Octyl Phthalate	10	U
205-99-2	Benzo(b)Fluoranthene	10	U
207-08-9	Benzo(k)Fluoranthene	10	U
50-32-8	Benzo(a)Pyrene	10	U
193-39-5	Indeno(1,2,3-cd)Pyrene	10	U
53-70-3	Dibenzo(a,h)Anthracene	10	U
191-24-2	Benzo(g,h,i)Perylene	10	U

(1) - Cannot be separated from Diphenylamine

FORM I SV-2 1/87 Rev.

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

43SW05

Lab Name: COMPUCHEM LABORATORIES Contract: (2-88)-REVS

Lab Code: COMPU Case No.: 23664 SAS No.: SDG No.: 247

Matrix: (soil/water) WATER Lab Sample ID: 436772

Sample wt/vol: 1000 (g/mL) ML Lab File ID:

Level: (low/med) LOW Date Received: 08/10/91

% Moisture: not dec. ____ dec. ____ Date Extracted: 08/14/91

Extraction: (SepF/Cont/Sonc) SEPF Date Analyzed: 08/16/91

GPC Cleanup: (Y/N) N pH: ____ Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.050	U
319-85-7	beta-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC	0.050	U
76-44-8	Heptachlor	0.050	U
309-00-2	Aldrin	0.050	U
1024-57-3	Heptachlor epoxide	0.050	U
959-98-8	Endosulfan I	0.050	U
60-57-1	Dieldrin	0.10	U
72-55-9	4,4'-DDE	0.10	U
72-20-8	Endrin	0.10	U
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
50-29-3	4,4'-DDT	0.10	U
72-43-5	p,p'-Methoxychlor	0.50	U
53494-70-5	Endrin ketone	0.10	U
5103-71-9	alpha-Chlordane	0.50	U
5103-74-2	gamma-Chlordane	0.50	U
8001-35-2	Toxaphene	1.0	U
12674-11-2	Aroclor-1016	0.50	U
11104-28-2	Aroclor-1221	0.50	U
11141-16-5	Aroclor-1232	0.50	U
53469-21-9	Aroclor-1242	0.50	U
12672-29-6	Aroclor-1248	0.50	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U

FORM I PEST 1/87 Rev.

U.S. EPA - CLP

1
INORGANIC ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

43SW05

Lab Name: COMPUCHEM LABORATORIES Contract: 7/88

Lab Code: COMPU Case No.: 50024 SAS No.: _____ SDG No.: 664291

Matrix (soil/water): WATER Lab Sample ID: 436824

Level (low/med): LOW Date Received: 08/10/91

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	529			P
7440-36-0	Antimony	33.0	U		P
7440-38-2	Arsenic	5.0	U		F
7440-39-3	Barium	19.5	B		P
7440-41-7	Beryllium	1.0	U		P
7440-43-9	Cadmium	4.0	U		P
7440-70-2	Calcium	4410	B		P
7440-47-3	Chromium	4.0	U		P
7440-48-4	Cobalt	6.0	U		P
7440-50-8	Copper	4.0	U		P
7439-89-6	Iron	603			P
7439-92-1	Lead	2.0	U	W	F
7439-95-4	Magnesium	865	B		P
7439-96-5	Manganese	33.1			P
7439-97-6	Mercury	.20	U		CV
7440-02-0	Nickel	9.0	U		P
7440-09-7	Potassium	1070	U		P
7782-49-2	Selenium	4.0	U	N	F
7440-22-4	Silver	5.0	U		P
7440-23-5	Sodium	2910	B		P
7440-28-0	Thallium	2.0	U	WN	F
7440-62-2	Vanadium	3.0	U		P
7440-66-6	Zinc	18.7	B		P
	Cyanide	10.0	U	N	AS

Color Before: BROWN Clarity Before: CLOUDY Texture: _____

Color After: YELLOW Clarity After: CLEAR Artifacts: _____

Comments:
FORM 1.04 - PAGE 6

APPENDIX E
SEDIMENT DATA

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

43SD01

Lab Name: COMPUCHEM,RTP Contract: (2-88)-REVS

Lab Code: COMPU Case No.: 23664 SAS No.: _____ SDG No.: 81

Matrix: (soil/water) SOIL Lab Sample ID: 436832

Sample wt/vol: 5.0 (g/mL) G Lab File ID: GR036832A18

Level: (low/med) LOW Date Received: 08/10/91

% Moisture: not dec. 77 Date Analyzed: 08/17/91

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	43	U
74-83-9	Bromomethane	43	U
75-01-4	Vinyl Chloride	43	U
75-00-3	Chloroethane	43	U
75-09-2	Methylene Chloride	65	B
67-64-1	Acetone	43	U
75-15-0	Carbon Disulfide	22	U
75-35-4	1,1-Dichloroethene	22	U
75-34-3	1,1-Dichloroethane	22	U
540-59-0	1,2-Dichloroethene (total)	22	U
67-66-3	Chloroform	22	U
107-06-2	1,2-Dichloroethane	22	U
78-93-3	2-Butanone	43	U
71-55-6	1,1,1-Trichloroethane	22	U
56-23-5	Carbon Tetrachloride	22	U
108-05-4	Vinyl Acetate	22	U
75-27-4	Bromodichloromethane	22	U
78-87-5	1,2-Dichloropropane	22	U
10061-01-5	cis-1,3-Dichloropropene	22	U
79-01-6	Trichloroethene	22	U
124-48-1	Dibromochloromethane	22	U
79-00-5	1,1,2-Trichloroethane	22	U
71-43-2	Benzene	22	U
10061-02-6	Trans-1,3-Dichloropropene	22	U
75-25-2	Bromoform	22	U
108-10-1	4-Methyl-2-Pentanone	43	U
591-78-6	2-Hexanone	43	U
127-18-4	Tetrachloroethene	22	U
79-34-5	1,1,2,2-Tetrachloroethane	22	U
108-88-3	Toluene	22	U
108-90-7	Chlorobenzene	22	U
100-41-4	Ethylbenzene	22	U
100-42-5	Styrene	22	U
1330-20-7	Total Xylenes	22	U

FORM I VOA 1/87 Rev.

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

43SD01

Lab Name: COMPUCHEM,RTP Contract: (2-88)-REVS

Lab Code: COMPU Case No.: 23664 SAS No.: _____ SDG No.: 81

Matrix: (soil/water) SOIL Lab Sample ID: 436832

Sample wt/vol: 30.2 (g/mL) G Lab File ID: GH036832B20

Level: (low/med) LOW Date Received: 08/10/91

% Moisture: not dec. 77 dec. 76 Date Extracted: 08/13/91

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 08/14/91

GPC Cleanup: (Y/N) N pH: 5.9 Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	1400	U
111-44-4	bis(2-Chloroethyl)Ether	1400	U
95-57-8	2-Chlorophenol	1400	U
541-73-1	1,3-Dichlorobenzene	1400	U
106-46-7	1,4-Dichlorobenzene	1400	U
100-51-6	Benzyl Alcohol	1400	U
95-50-1	1,2-Dichlorobenzene	1400	U
95-48-7	2-Methylphenol	1400	U
39638-32-9	Bis(2-Chloroethyl)Ether	1400	U
106-44-5	4-Methylphenol	810	J
621-64-7	N-Nitroso-Di-n-Propylamine	1400	U
67-72-1	Hexachloroethane	1400	U
98-95-3	Nitrobenzene	1400	U
78-59-1	Isophorone	1400	U
88-75-5	2-Nitrophenol	1400	U
105-67-9	2,4-Dimethylphenol	1400	U
65-85-0	Benzoic Acid	7600	
111-91-1	bis(2-Chloroethoxy)Methane	1400	U
120-83-2	2,4-Dichlorophenol	1400	U
120-82-1	1,2,4-Trichlorobenzene	1400	U
91-20-3	Naphthalene	1400	U
106-47-8	4-Chloroaniline	1400	U
87-68-3	Hexachlorobutadiene	1400	U
59-50-7	4-Chloro-3-Methylphenol	1400	U
91-57-6	2-Methylnaphthalene	1400	U
77-47-4	Hexachlorocyclopentadiene	1400	U
88-06-2	2,4,6-Trichlorophenol	1400	U
95-95-4	2,4,5-Trichlorophenol	6600	U
91-58-7	2-Chloronaphthalene	1400	U
88-74-4	2-Nitroaniline	6600	U
131-11-3	Dimethyl Phthalate	1400	U
208-96-8	Acenaphthylene	1400	U
606-20-2	2,6-Dinitrotoluene	1400	U

FORM I SV-1 1/87 Rev.

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

43SD01

Lab Name: COMPUCHEM,RTP Contract: (2-88)-REVS

Lab Code: COMPU Case No.: 23664 SAS No.: _____ SDG No.: 81

Matrix: (soil/water) SOIL Lab Sample ID: 436832

Sample wt/vol: 30.2 (g/mL) G Lab File ID: GH036832B20

Level: (low/med) LOW Date Received: 08/10/91

% Moisture: not dec. 77 dec. 76 Date Extracted: 08/13/91

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 08/14/91

GPC Cleanup: (Y/N) N pH: 5.9 Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
99-09-2	3-Nitroaniline	6600	U
83-32-9	Acenaphthene	1400	U
51-28-5	2,4-Dinitrophenol	6600	U
100-02-7	4-Nitrophenol	6600	U
132-64-9	Dibenzofuran	1400	U
121-14-2	2,4-Dinitrotoluene	1400	U
84-66-2	Diethylphthalate	1400	U
7005-72-3	4-Chlorophenyl-phenylether	1400	U
86-73-7	Fluorene	1400	U
100-01-6	4-Nitroaniline	6600	U
534-52-1	4,6-Dinitro-2-Methylphenol	6600	U
86-30-6	N-Nitrosodiphenylamine (1)	1400	U
101-55-3	4-Bromophenyl-phenylether	1400	U
118-74-1	Hexachlorobenzene	1400	U
87-86-5	Pentachlorophenol	6600	U
85-01-8	Phenanthrene	1400	U
120-12-7	Anthracene	1400	U
84-74-2	Di-n-Butylphthalate	210	J
206-44-0	Fluoranthene	1400	U
129-00-0	Pyrene	150	J
85-68-7	Butylbenzylphthalate	1400	U
91-94-1	3,3'-Dichlorobenzidine	2700	U
56-55-3	Benzo(a)Anthracene	1400	U
218-01-9	Chrysene	1400	U
117-81-7	bis(2-Ethylhexyl)Phthalate	1400	U
117-84-0	Di-n-Octyl Phthalate	1400	U
205-99-2	Benzo(b)Fluoranthene	290	JX
207-08-9	Benzo(k)Fluoranthene	290	JX
50-32-8	Benzo(a)Pyrene	1400	U
193-39-5	Indeno(1,2,3-cd)Pyrene	1400	U
53-70-3	Dibenzo(a,h)Anthracene	1400	U
191-24-2	Benzo(g,h,i)Perylene	1400	U

(1) - Cannot be separated from Diphenylamine

FORM I SV-2 1/87 Rev.

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

43SD01

Lab Name: COMPUCHEM LABORATORIES Contract: (2-88)-REVS

Lab Code: COMPU Case No.: 23664 SAS No.: SDG No.: 81

Matrix: (soil/water) SOIL Lab Sample ID: 436832

Sample wt/vol: 30.2 (g/mL) G Lab File ID:

Level: (low/med) LOW Date Received: 08/10/91

% Moisture: not dec. 77 dec. 76 Date Extracted: 08/14/91

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 08/15/91

GPC Cleanup: (Y/N) N pH: 5.9 Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	33	U
319-85-7	beta-BHC	33	U
319-86-8	delta-BHC	33	U
58-89-9	gamma-BHC	33	U
76-44-8	Heptachlor	33	U
309-00-2	Aldrin	33	U
1024-57-3	Heptachlor epoxide	33	U
959-98-8	Endosulfan I	33	U
60-57-1	Dieldrin	66	U
72-55-9	4,4'-DDE	270	
72-20-8	Endrin	66	U
33213-65-9	Endosulfan II	66	U
72-54-8	4,4'-DDD	500	
1031-07-8	Endosulfan sulfate	66	U
50-29-3	4,4'-DDT	220	
72-43-5	p,p'-Methoxychlor	330	U
53494-70-5	Endrin ketone	66	U
5103-71-9	alpha-Chlordane	330	U
5103-74-2	gamma-Chlordane	330	U
8001-35-2	Toxaphene	660	U
12674-11-2	Aroclor-1016	330	U
11104-28-2	Aroclor-1221	330	U
11141-16-5	Aroclor-1232	330	U
53469-21-9	Aroclor-1242	330	U
12672-29-6	Aroclor-1248	330	U
11097-69-1	Aroclor-1254	660	U
11096-82-5	Aroclor-1260	660	U

FORM I PEST 1/87 Rev.

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

43SD01

Lab Name: COMPUCHEM LABORATORIES Contract: 7/88

Lab Code: COMPU Case No.: 50024 SAS No.: _____ SDG No.: 664204

Matrix (soil/water): SOIL Lab Sample ID: 436850

Level (low/med): LOW Date Received: 08/10/91

% Solids: 23.0

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	6720			P
7440-36-0	Antimony	28.7	U		P
7440-38-2	Arsenic	4.3	U	W	F
7440-39-3	Barium	25.5	B		P
7440-41-7	Beryllium	.87	U		P
7440-43-9	Cadmium	3.5	U		P
7440-70-2	Calcium	9170			P
7440-47-3	Chromium	6.9	B		P
7440-48-4	Cobalt	5.2	U		P
7440-50-8	Copper	13.2	B		P
7439-89-6	Iron	6930			P
7439-92-1	Lead	28.3			F
7439-95-4	Magnesium	831	B		P
7439-96-5	Manganese	92.1			P
7439-97-6	Mercury	.41	U		CV
7440-02-0	Nickel	33.4	B		P
7440-09-7	Potassium	928	U		P
7782-49-2	Selenium	3.4	U	W	F
7440-22-4	Silver	4.3	U	N	P
7440-23-5	Sodium	549	B		P
7440-28-0	Thallium	1.7	U	W	F
7440-62-2	Vanadium	18.6	B		P
7440-66-6	Zinc	77.0			P
	Cyanide	2.2	U		AS

Color Before: BROWN Clarity Before: _____ Texture: MEDIUM

Color After: COLORLESS Clarity After: _____ Artifacts: _____

Comments:

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FORM I - IN 7/88

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

43SD02

Lab Name: COMPUCHEM,RTP Contract: (2-88)-REVS

Lab Code: COMPU Case No.: 23664 SAS No.: _____ SDG No.: 81

Matrix: (soil/water) SOIL Lab Sample ID: 436833

Sample wt/vol: 5.0 (g/mL) G Lab File ID: GH036833C18

Level: (low/med) LOW Date Received: 08/10/91

% Moisture: not dec. 75 Date Analyzed: 08/16/91

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	40	U
74-83-9	Bromomethane	40	U
75-01-4	Vinyl Chloride	40	U
75-00-3	Chloroethane	40	U
75-09-2	Methylene Chloride	68	B
67-64-1	Acetone	40	U
75-15-0	Carbon Disulfide	20	U
75-35-4	1,1-Dichloroethene	20	U
75-34-3	1,1-Dichloroethane	20	U
540-59-0	1,2-Dichloroethene (total)	20	U
67-66-3	Chloroform	20	U
107-06-2	1,2-Dichloroethane	20	U
78-93-3	2-Butanone	40	U
71-55-6	1,1,1-Trichloroethane	20	U
56-23-5	Carbon Tetrachloride	20	U
108-05-4	Vinyl Acetate	20	U
75-27-4	Bromodichloromethane	20	U
78-87-5	1,2-Dichloropropane	20	U
10061-01-5	cis-1,3-Dichloropropene	20	U
79-01-6	Trichloroethene	20	U
124-48-1	Dibromochloromethane	20	U
79-00-5	1,1,2-Trichloroethane	20	U
71-43-2	Benzene	20	U
10061-02-6	Trans-1,3-Dichloropropene	20	U
75-25-2	Bromoform	20	U
108-10-1	4-Methyl-2-Pentanone	40	U
591-78-6	2-Hexanone	40	U
127-18-4	Tetrachloroethene	20	U
79-34-5	1,1,2,2-Tetrachloroethane	20	U
108-88-3	Toluene	20	U
108-90-7	Chlorobenzene	20	U
100-41-4	Ethylbenzene	20	U
100-42-5	Styrene	20	U
1330-20-7	Total Xylenes	20	U

FORM I VOA 1/87 Rev.

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

43SD02

Lab Name: COMPUCHEM.RTP Contract: (2-88)-REVS

Lab Code: COMPU Case No.: 23664 SAS No.: _____ SDG No.: 81

Matrix: (soil/water) SOIL Lab Sample ID: 436833

Sample wt/vol: 30.0 (g/mL) G Lab File ID: GH036833B20

Level: (low/med) LOW Date Received: 08/10/91

% Moisture: not dec. 75 dec. ____ Date Extracted: 08/13/91

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 08/14/91

GPC Cleanup: (Y/N) N pH: 5.7 Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	1300	U
111-44-4	bis(2-Chloroethyl)Ether	1300	U
95-57-8	2-Chlorophenol	1300	U
541-73-1	1,3-Dichlorobenzene	1300	U
106-46-7	1,4-Dichlorobenzene	1300	U
100-51-6	Benzyl Alcohol	1300	U
95-50-1	1,2-Dichlorobenzene	1300	U
95-48-7	2-Methylphenol	1300	U
39638-32-9	Bis(2-Chloroethyl)Ether	1300	U
106-44-5	4-Methylphenol	1300	U
621-64-7	N-Nitroso-Di-n-Propylamine	1300	U
67-72-1	Hexachloroethane	1300	U
98-95-3	Nitrobenzene	1300	U
78-59-1	Isophorone	1300	U
88-75-5	2-Nitrophenol	1300	U
105-67-9	2,4-Dimethylphenol	1300	U
65-85-0	Benzoic Acid	3000	J
111-91-1	bis(2-Chloroethoxy)Methane	1300	U
120-83-2	2,4-Dichlorophenol	1300	U
120-82-1	1,2,4-Trichlorobenzene	1300	U
91-20-3	Naphthalene	1300	U
106-47-8	4-Chloroaniline	1300	U
87-68-3	Hexachlorobutadiene	1300	U
59-50-7	4-Chloro-3-Methylphenol	1300	U
91-57-6	2-Methylnaphthalene	1300	U
77-47-4	Hexachlorocyclopentadiene	1300	U
88-06-2	2,4,6-Trichlorophenol	1300	U
95-95-4	2,4,5-Trichlorophenol	6400	U
91-58-7	2-Chloronaphthalene	1300	U
88-74-4	2-Nitroaniline	6400	U
131-11-3	Dimethyl Phthalate	1300	U
208-96-8	Acenaphthylene	1300	U
606-20-2	2,6-Dinitrotoluene	1300	U

FORM I SV-1 1/87 Rev.

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

43SD02

Lab Name: COMPUCHEM.RTP Contract: (2-88)-REVS

Lab Code: COMPU Case No.: 23664 SAS No.: _____ SDG No.: 81

Matrix: (soil/water) SOIL Lab Sample ID: 436833

Sample wt/vol: 30.0 (g/mL) G Lab File ID: GH036833B20

Level: (low/med) LOW Date Received: 08/10/91

% Moisture: not dec. 75 dec. ____ Date Extracted: 08/13/91

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 08/14/91

GPC Cleanup: (Y/N) N pH: 5.7 Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
99-09-2	3-Nitroaniline	6400	U
83-32-9	Acenaphthene	1300	U
51-28-5	2,4-Dinitrophenol	6400	U
100-02-7	4-Nitrophenol	6400	U
132-64-9	Dibenzofuran	1300	U
121-14-2	2,4-Dinitrotoluene	1300	U
84-66-2	Diethylphthalate	1300	U
7005-72-3	4-Chlorophenyl-phenylether	1300	U
86-73-7	Fluorene	1300	U
100-01-6	4-Nitroaniline	6400	U
534-52-1	4,6-Dinitro-2-Methylphenol	6400	U
86-30-6	N-Nitrosodiphenylamine (1)	1300	U
101-55-3	4-Bromophenyl-phenylether	1300	U
118-74-1	Hexachlorobenzene	1300	U
87-86-5	Pentachlorophenol	6400	U
85-01-8	Phenanthrene	1300	U
120-12-7	Anthracene	1300	U
84-74-2	Di-n-Butylphthalate	170	J
206-44-0	Fluoranthene	1300	U
129-00-0	Pyrene	1300	U
85-68-7	Butylbenzylphthalate	1300	U
91-94-1	3,3'-Dichlorobenzidine	2600	U
56-55-3	Benzo(a)Anthracene	1300	U
218-01-9	Chrysene	1300	U
117-81-7	bis(2-Ethylhexyl)Phthalate	1300	U
117-84-0	Di-n-Octyl Phthalate	1300	U
205-99-2	Benzo(b)Fluoranthene	1300	U
207-08-9	Benzo(k)Fluoranthene	1300	U
50-32-8	Benzo(a)Pyrene	1300	U
193-39-5	Indeno(1,2,3-cd)Pyrene	1300	U
53-70-3	Dibenzo(a,h)Anthracene	1300	U
191-24-2	Benzo(g,h,i)Perylene	1300	U

(1) - Cannot be separated from Diphenylamine

FORM I SV-2 1/87 Rev.

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

43SD02

Lab Name: COMPUCHEM LABORATORIES Contract: (2-88)-REVS

Lab Code: COMPU Case No.: 23664 SAS No.: SDG No.: 81

Matrix: (soil/water) SOIL Lab Sample ID: 436833

Sample wt/vol: 30.3 (g/mL) G Lab File ID:

Level: (low/med) LOW Date Received: 08/10/91

% Moisture: not dec. 75 dec. Date Extracted: 08/14/91

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 08/15/91

GPC Cleanup: (Y/N) N pH: 5.7 Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	32	U
319-85-7	beta-BHC	32	U
319-86-8	delta-BHC	32	U
58-89-9	gamma-BHC	32	U
76-44-8	Heptachlor	32	U
309-00-2	Aldrin	32	U
1024-57-3	Heptachlor epoxide	32	U
959-98-8	Endosulfan I	32	U
60-57-1	Dieldrin	63	U
72-55-9	4,4'-DDE	580	
72-20-8	Endrin	63	U
33213-65-9	Endosulfan II	63	U
72-54-8	4,4'-DDD	310	
1031-07-8	Endosulfan sulfate	63	U
50-29-3	4,4'-DDT	63	U
72-43-5	p,p'-Methoxychlor	320	U
53494-70-5	Endrin ketone	63	U
5103-71-9	alpha-Chlordane	320	U
5103-74-2	gamma-Chlordane	320	U
8001-35-2	Toxaphene	630	U
12674-11-2	Aroclor-1016	320	U
11104-28-2	Aroclor-1221	320	U
11141-16-5	Aroclor-1232	320	U
53469-21-9	Aroclor-1242	320	U
12672-29-6	Aroclor-1248	320	U
11097-69-1	Aroclor-1254	630	U
11096-82-5	Aroclor-1260	630	U

U.S. EPA - CLP

1
INORGANIC ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

43SD02

Lab Name: COMPUCHEM LABORATORIES Contract: 7/88

Lab Code: COMPU Case No.: 50024 SAS No.: _____ SDG No.: 664204

Matrix (soil/water): SOIL Lab Sample ID: 436851

Level (low/med): LOW Date Received: 08/10/91

% Solids: 25.0

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	4510			P
7440-36-0	Antimony	25.4	U		P
7440-38-2	Arsenic	3.9	U	W	F
7440-39-3	Barium	32.6	B		P
7440-41-7	Beryllium	.77	U		P
7440-43-9	Cadmium	3.1	U		P
7440-70-2	Calcium	3330	B		P
7440-47-3	Chromium	5.0	B		P
7440-48-4	Cobalt	4.6	U		P
7440-50-8	Copper	9.2	B		P
7439-89-6	Iron	2850			P
7439-92-1	Lead	56.0			F
7439-95-4	Magnesium	1300	B		P
7439-96-5	Manganese	8.9	B		P
7439-97-6	Mercury	.38	U		CV
7440-02-0	Nickel	6.9	U		P
7440-09-7	Potassium	821	U		P
7782-49-2	Selenium	3.1	U	W	F
7440-22-4	Silver	3.8	U	N	P
7440-23-5	Sodium	2930	B		P
7440-28-0	Thallium	1.6	U	W	F
7440-62-2	Vanadium	12.9	B		P
7440-66-6	Zinc	26.9			P
	Cyanide	2.0	U		AS

Color Before: BROWN Clarity Before: _____ Texture: MEDIUM

Color After: COLORLESS Clarity After: _____ Artifacts: _____

Comments:
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FORM I - IN 7/88

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

43SD03

Lab Name: COMPUCHEM.RTP Contract: (2-88)-REVS

Lab Code: COMPU Case No.: 23664 SAS No.: _____ SDG No.: 81

Matrix: (soil/water) SOIL Lab Sample ID: 436834

Sample wt/vol: 5.0 (g/mL) G Lab File ID: GH036834A18

Level: (low/med) LOW Date Received: 08/10/91

% Moisture: not dec. 16 Date Analyzed: 08/16/91

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	12	U
74-83-9	Bromomethane	12	U
75-01-4	Vinyl Chloride	12	U
75-00-3	Chloroethane	12	U
75-09-2	Methylene Chloride	25	B
67-64-1	Acetone	21	B
75-15-0	Carbon Disulfide	6	U
75-35-4	1,1-Dichloroethene	6	U
75-34-3	1,1-Dichloroethane	6	U
540-59-0	1,2-Dichloroethene (total)	6	U
67-66-3	Chloroform	6	U
107-06-2	1,2-Dichloroethane	6	U
78-93-3	2-Butanone	12	U
71-55-6	1,1,1-Trichloroethane	6	U
56-23-5	Carbon Tetrachloride	6	U
108-05-4	Vinyl Acetate	6	U
75-27-4	Bromodichloromethane	6	U
78-87-5	1,2-Dichloropropane	6	U
10061-01-5	cis-1,3-Dichloropropene	6	U
79-01-6	Trichloroethene	6	U
124-48-1	Dibromochloromethane	6	U
79-00-5	1,1,2-Trichloroethane	6	U
71-43-2	Benzene	6	U
10061-02-6	Trans-1,3-Dichloropropene	6	U
75-25-2	Bromoform	6	U
108-10-1	4-Methyl-2-Pentanone	12	U
591-78-6	2-Hexanone	12	U
127-18-4	Tetrachloroethene	6	U
79-34-5	1,1,2,2-Tetrachloroethane	6	U
108-88-3	Toluene	6	U
108-90-7	Chlorobenzene	6	U
100-41-4	Ethylbenzene	6	U
100-42-5	Styrene	6	U
1330-20-7	Total Xylenes	6	U

FORM I VOA 1/87 Rev.

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

43SD03

Lab Name: COMPUCHEM.RTP Contract: (2-88)-REVS

Lab Code: COMPU Case No.: 23664 SAS No.: _____ SDG No.: 81

Matrix: (soil/water) SOIL Lab Sample ID: 436834

Sample wt/vol: 30.0 (g/mL) G Lab File ID: GH036834B20

Level: (low/med) LOW Date Received: 08/10/91

% Moisture: not dec. 16 dec. ____ Date Extracted: 08/13/91

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 08/14/91

GPC Cleanup: (Y/N) N pH: 6.9 Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	390	U
111-44-4	bis(2-Chloroethyl)Ether	390	U
95-57-8	2-Chlorophenol	390	U
541-73-1	1,3-Dichlorobenzene	390	U
106-46-7	1,4-Dichlorobenzene	390	U
100-51-6	Benzyl Alcohol	390	U
95-50-1	1,2-Dichlorobenzene	390	U
95-48-7	2-Methylphenol	390	U
39638-32-9	Bis(2-Chloroethyl)Ether	390	U
106-44-5	4-Methylphenol	390	U
621-64-7	N-Nitroso-Di-n-Propylamine	390	U
67-72-1	Hexachloroethane	390	U
98-95-3	Nitrobenzene	390	U
78-59-1	Isophorone	390	U
88-75-5	2-Nitrophenol	390	U
105-67-9	2,4-Dimethylphenol	390	U
65-85-0	Benzoic Acid	1900	U
111-91-1	bis(2-Chloroethoxy)Methane	390	U
120-83-2	2,4-Dichlorophenol	390	U
120-82-1	1,2,4-Trichlorobenzene	390	U
91-20-3	Naphthalene	390	U
106-47-8	4-Chloroaniline	390	U
87-68-3	Hexachlorobutadiene	390	U
59-50-7	4-Chloro-3-Methylphenol	390	U
91-57-6	2-Methylnaphthalene	390	U
77-47-4	Hexachlorocyclopentadiene	390	U
88-06-2	2,4,6-Trichlorophenol	390	U
95-95-4	2,4,5-Trichlorophenol	1900	U
91-58-7	2-Chloronaphthalene	390	U
88-74-4	2-Nitroaniline	1900	U
131-11-3	Dimethyl Phthalate	390	U
208-96-8	Acenaphthylene	390	U
606-20-2	2,6-Dinitrotoluene	390	U

FORM I SV-1 1/87 Rev.

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

43SD03

Lab Name: COMPUCHEM,RTP Contract: (2-88)-REVS

Lab Code: COMPU Case No.: 23664 SAS No.: _____ SDG No.: 81

Matrix: (soil/water) SOIL Lab Sample ID: 436834

Sample wt/vol: 30.0 (g/mL) G Lab File ID: GH036834B20

Level: (low/med) LOW Date Received: 08/10/91

% Moisture: not dec. 16 dec. ____ Date Extracted: 08/13/91

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 08/14/91

GPC Cleanup: (Y/N) N pH: 6.9 Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
99-09-2	3-Nitroaniline	1900	U
83-32-9	Acenaphthene	390	U
51-28-5	2,4-Dinitrophenol	1900	U
100-02-7	4-Nitrophenol	1900	U
132-64-9	Dibenzofuran	390	U
121-14-2	2,4-Dinitrotoluene	390	U
84-66-2	Diethylphthalate	390	U
7005-72-3	4-Chlorophenyl-phenylether	390	U
86-73-7	Fluorene	390	U
100-01-6	4-Nitroaniline	1900	U
534-52-1	4,6-Dinitro-2-Methylphenol	1900	U
86-30-6	N-Nitrosodiphenylamine (1)	390	U
101-55-3	4-Bromophenyl-phenylether	390	U
118-74-1	Hexachlorobenzene	390	U
87-86-5	Pentachlorophenol	1900	U
85-01-8	Phenanthrene	390	U
120-12-7	Anthracene	390	U
84-74-2	Di-n-Butylphthalate	59	J
206-44-0	Fluoranthene	390	U
129-00-0	Pyrene	390	U
85-68-7	Butylbenzylphthalate	55	J
91-94-1	3,3'-Dichlorobenzidine	790	U
56-55-3	Benzo(a)Anthracene	390	U
218-01-9	Chrysene	390	U
117-81-7	bis(2-Ethylhexyl)Phthalate	390	U
117-84-0	Di-n-Octyl Phthalate	390	U
205-99-2	Benzo(b)Fluoranthene	66	JX
207-08-9	Benzo(k)Fluoranthene	66	JX
50-32-8	Benzo(a)Pyrene	390	U
193-39-5	Indeno(1,2,3-cd)Pyrene	390	U
53-70-3	Dibenzo(a,h)Anthracene	390	U
191-24-2	Benzo(g,h,i)Perylene	390	U

(1) - Cannot be separated from Diphenylamine

FORM I SV-2 1/87 Rev.

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

43SD03

Lab Name: COMPUCHEM LABORATORIES Contract: (2-88)-REVS

Lab Code: COMPU Case No.: 23664 SAS No.: SDG No.: 81

Matrix: (soil/water) SOIL Lab Sample ID: 436834

Sample wt/vol: 30.4 (g/mL) G Lab File ID:

Level: (low/med) LOW Date Received: 08/10/91

% Moisture: not dec. 16 dec. Date Extracted: 08/14/91

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 08/15/91

GPC Cleanup: (Y/N) N pH: 6.9 Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	9.4	U
319-85-7	beta-BHC	9.4	U
319-86-8	delta-BHC	9.4	U
58-89-9	gamma-BHC	9.4	U
76-44-8	Heptachlor	9.4	U
309-00-2	Aldrin	9.4	U
1024-57-3	Heptachlor epoxide	9.4	U
959-98-8	Endosulfan I	9.4	U
60-57-1	Dieldrin	19	U
72-55-9	4,4'-DDE	19	U
72-20-8	Endrin	19	U
33213-65-9	Endosulfan II	19	U
72-54-8	4,4'-DDD	19	U
1031-07-8	Endosulfan sulfate	19	U
50-29-3	4,4'-DDT	19	U
72-43-5	p,p'-Methoxychlor	94	U
53494-70-5	Endrin ketone	19	U
5103-71-9	alpha-Chlordane	94	U
5103-74-2	gamma-Chlordane	94	U
8001-35-2	Toxaphene	190	U
12674-11-2	Aroclor-1016	94	U
11104-28-2	Aroclor-1221	94	U
11141-16-5	Aroclor-1232	94	U
53469-21-9	Aroclor-1242	94	U
12672-29-6	Aroclor-1248	94	U
11097-69-1	Aroclor-1254	190	U
11096-82-5	Aroclor-1260	190	U

FORM I PEST 1/87 Rev.

U.S. EPA - CLP

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INORGANIC ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

43SD03

Lab Name: COMPUCHEM LABORATORIES Contract: 7/88

Lab Code: COMPU Case No.: 50024 SAS No.: _____ SDG No.: 664204

Matrix (soil/water): SOIL Lab Sample ID: 436852

Level (low/med): LOW Date Received: 08/10/91

% Solids: 84.0

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	1850			P
7440-36-0	Antimony	7.6	U		P
7440-38-2	Arsenic	1.2	U	W	F
7440-39-3	Barium	5.2	B		P
7440-41-7	Beryllium	.23	U		P
7440-43-9	Cadmium	.92	U		P
7440-70-2	Calcium	7550			P
7440-47-3	Chromium	3.6			P
7440-48-4	Cobalt	1.4	U		P
7440-50-8	Copper	1.9	B		P
7439-89-6	Iron	787			P
7439-92-1	Lead	7.4			F
7439-95-4	Magnesium	185	B		P
7439-96-5	Manganese	6.7			P
7439-97-6	Mercury	.12	U		CV
7440-02-0	Nickel	3.7	B		P
7440-09-7	Potassium	247	U		P
7782-49-2	Selenium	.93	U		F
7440-22-4	Silver	1.2	U	N	P
7440-23-5	Sodium	130	B		P
7440-28-0	Thallium	.47	U	W	F
7440-62-2	Vanadium	3.6	B		P
7440-66-6	Zinc	11.6			P
	Cyanide	.59	U		AS
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Color Before: BROWN Clarity Before: _____ Texture: MEDIUM

Color After: COLORLESS Clarity After: _____ Artifacts: _____

Comments:

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FORM I - IN 7/88

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

43SD04

Lab Name: COMPUCHEM,RTP Contract: (2-88)-REVS

Lab Code: COMPU Case No.: 23664 SAS No.: _____ SDG No.: 81

Matrix: (soil/water) SOIL Lab Sample ID: 436835

Sample wt/vol: 5.0 (g/mL) G Lab File ID: GH036835A18

Level: (low/med) LOW Date Received: 08/10/91

% Moisture: not dec. 23 Date Analyzed: 08/16/91

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	13	U
74-83-9	Bromomethane	13	U
75-01-4	Vinyl Chloride	13	U
75-00-3	Chloroethane	13	U
75-09-2	Methylene Chloride	19	B
67-64-1	Acetone	13	U
75-15-0	Carbon Disulfide	6	U
75-35-4	1,1-Dichloroethene	6	U
75-34-3	1,1-Dichloroethane	6	U
540-59-0	1,2-Dichloroethene (total)	6	U
67-66-3	Chloroform	6	U
107-06-2	1,2-Dichloroethane	6	U
78-93-3	2-Butanone	13	U
71-55-6	1,1,1-Trichloroethane	6	U
56-23-5	Carbon Tetrachloride	6	U
108-05-4	Vinyl Acetate	6	U
75-27-4	Bromodichloromethane	6	U
78-87-5	1,2-Dichloropropane	6	U
10061-01-5	cis-1,3-Dichloropropene	6	U
79-01-6	Trichloroethene	6	U
124-48-1	Dibromochloromethane	6	U
79-00-5	1,1,2-Trichloroethane	6	U
71-43-2	Benzene	6	U
10061-02-6	Trans-1,3-Dichloropropene	6	U
75-25-2	Bromoform	6	U
108-10-1	4-Methyl-2-Pentanone	13	U
591-78-6	2-Hexanone	13	U
127-18-4	Tetrachloroethene	6	U
79-34-5	1,1,2,2-Tetrachloroethane	6	U
108-88-3	Toluene	6	U
108-90-7	Chlorobenzene	6	U
100-41-4	Ethylbenzene	6	U
100-42-5	Styrene	6	U
1330-20-7	Total Xylenes	6	U

FORM I VOA 1/87 Rev.

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

43SD04

Lab Name: COMPUCHEM,RTP Contract: (2-88)-REVS

Lab Code: COMPU Case No.: 23664 SAS No.: _____ SDG No.: 81

Matrix: (soil/water) SOIL Lab Sample ID: 436835

Sample wt/vol: 30.3 (g/mL) G Lab File ID: GD036835C20

Level: (low/med) LOW Date Received: 08/10/91

% Moisture: not dec. 23 dec. ____ Date Extracted: 08/13/91

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 08/15/91

GPC Cleanup: (Y/N) N pH: 7.0 Dilution Factor: 2.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	850	U
111-44-4	bis(2-Chloroethyl)Ether	850	U
95-57-8	2-Chlorophenol	850	U
541-73-1	1,3-Dichlorobenzene	850	U
106-46-7	1,4-Dichlorobenzene	850	U
100-51-6	Benzyl Alcohol	850	U
95-50-1	1,2-Dichlorobenzene	850	U
95-48-7	2-Methylphenol	850	U
39638-32-9	Bis(2-Chloroethyl)Ether	850	U
106-44-5	4-Methylphenol	850	U
621-64-7	N-Nitroso-Di-n-Propylamine	850	U
67-72-1	Hexachloroethane	850	U
98-95-3	Nitrobenzene	850	U
78-59-1	Isophorone	850	U
88-75-5	2-Nitrophenol	850	U
105-67-9	2,4-Dimethylphenol	850	U
65-85-0	Benzoic Acid	4100	U
111-91-1	bis(2-Chloroethoxy)Methane	850	U
120-83-2	2,4-Dichlorophenol	850	U
120-82-1	1,2,4-Trichlorobenzene	850	U
91-20-3	Naphthalene	850	U
106-47-8	4-Chloroaniline	850	U
87-68-3	Hexachlorobutadiene	850	U
59-50-7	4-Chloro-3-Methylphenol	850	U
91-57-6	2-Methylnaphthalene	850	U
77-47-4	Hexachlorocyclopentadiene	850	U
88-06-2	2,4,6-Trichlorophenol	850	U
95-95-4	2,4,5-Trichlorophenol	4100	U
91-58-7	2-Chloronaphthalene	850	U
88-74-4	2-Nitroaniline	4100	U
131-11-3	Dimethyl Phthalate	850	U
208-96-8	Acenaphthylene	850	U
606-20-2	2,6-Dinitrotoluene	850	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

43SD04

Lab Name: COMPUCHEM,RTP Contract: (2-88)-REVS

Lab Code: COMPU Case No.: 23664 SAS No.: _____ SDG No.: 81

Matrix: (soil/water) SOIL Lab Sample ID: 436835

Sample wt/vol: 30.3 (g/mL) G Lab File ID: GD036835C20

Level: (low/med) LOW Date Received: 08/10/91

% Moisture: not dec. 23 dec. ____ Date Extracted: 08/13/91

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 08/15/91

GPC Cleanup: (Y/N) N pH: 7.0 Dilution Factor: 2.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
99-09-2	3-Nitroaniline	4100	U
83-32-9	Acenaphthene	850	U
51-28-5	2,4-Dinitrophenol	4100	U
100-02-7	4-Nitrophenol	4100	U
132-64-9	Dibenzofuran	850	U
121-14-2	2,4-Dinitrotoluene	850	U
84-66-2	Diethylphthalate	850	U
7005-72-3	4-Chlorophenyl-phenylether	850	U
86-73-7	Fluorene	850	U
100-01-6	4-Nitroaniline	4100	U
534-52-1	4,6-Dinitro-2-Methylphenol	4100	U
86-30-6	N-Nitrosodiphenylamine (1)	850	U
101-55-3	4-Bromophenyl-phenylether	850	U
118-74-1	Hexachlorobenzene	850	U
87-86-5	Pentachlorophenol	4100	U
85-01-8	Phenanthrene	850	U
120-12-7	Anthracene	850	U
84-74-2	Di-n-Butylphthalate	850	U
206-44-0	Fluoranthene	850	U
129-00-0	Pyrene	850	U
85-68-7	Butylbenzylphthalate	850	U
91-94-1	3,3'-Dichlorobenzidine	1700	U
56-55-3	Benzo(a)Anthracene	850	U
218-01-9	Chrysene	850	U
117-81-7	bis(2-Ethylhexyl)Phthalate	1600	
117-84-0	Di-n-Octyl Phthalate	850	U
205-99-2	Benzo(b)Fluoranthene	850	U
207-08-9	Benzo(k)Fluoranthene	850	U
50-32-8	Benzo(a)Pyrene	850	U
193-39-5	Indeno(1,2,3-cd)Pyrene	850	U
53-70-3	Dibenzo(a,h)Anthracene	850	U
191-24-2	Benzo(g,h,i)Perylene	850	U

(1) - Cannot be separated from Diphenylamine

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

43SD04

Lab Name: COMPUCHEM LABORATORIES Contract: (2-88)-REVS

Lab Code: COMPU Case No.: 23664 SAS No.: SDG No.: 81

Matrix: (soil/water) SOIL Lab Sample ID: 436835

Sample wt/vol: 30.1 (g/mL) G Lab File ID:

Level: (low/med) LOW Date Received: 08/10/91

% Moisture: not dec. 23 dec. Date Extracted: 08/14/91

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 08/15/91

GPC Cleanup: (Y/N) N pH: 7.0 Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	10	U
319-85-7	beta-BHC	10	U
319-86-8	delta-BHC	10	U
58-89-9	gamma-BHC	10	U
76-44-8	Heptachlor	10	U
309-00-2	Aldrin	10	U
1024-57-3	Heptachlor epoxide	10	U
959-98-8	Endosulfan I	10	U
60-57-1	Dieldrin	21	U
72-55-9	4,4'-DDE	21	U
72-20-8	Endrin	21	U
33213-65-9	Endosulfan II	21	U
72-54-8	4,4'-DDD	21	U
1031-07-8	Endosulfan sulfate	21	U
50-29-3	4,4'-DDT	21	U
72-43-5	p,p'-Methoxychlor	100	U
53494-70-5	Endrin ketone	21	U
5103-71-9	alpha-Chlordane	100	U
5103-74-2	gamma-Chlordane	100	U
8001-35-2	Toxaphene	210	U
12674-11-2	Aroclor-1016	100	U
11104-28-2	Aroclor-1221	100	U
11141-16-5	Aroclor-1232	100	U
53469-21-9	Aroclor-1242	100	U
12672-29-6	Aroclor-1248	100	U
11097-69-1	Aroclor-1254	210	U
11096-82-5	Aroclor-1260	210	U

FORM I PEST 1/87 Rev.

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

43SD04

Lab Name: COMPUCHEM LABORATORIES Contract: 7/88

Lab Code: COMPU Case No.: 50024 SAS No.: _____ SDG No.: 664204

Matrix (soil/water): SOIL Lab Sample ID: 436853

Level (low/med): LOW Date Received: 08/10/91

% Solids: 77.0

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	1520			P
7440-36-0	Antimony	8.3	U		P
7440-38-2	Arsenic	1.3	U	W	F
7440-39-3	Barium	11.3	B		P
7440-41-7	Beryllium	.25	U		P
7440-43-9	Cadmium	1.0	U		P
7440-70-2	Calcium	6880			P
7440-47-3	Chromium	4.2			P
7440-48-4	Cobalt	1.5	U		P
7440-50-8	Copper	3.6	B		P
7439-89-6	Iron	1720			P
7439-92-1	Lead	28.2			F
7439-95-4	Magnesium	170	B		P
7439-96-5	Manganese	6.5			P
7439-97-6	Mercury	.12	U		CV
7440-02-0	Nickel	3.5	B		P
7440-09-7	Potassium	269	U		P
7782-49-2	Selenium	1.0	U	W	F
7440-22-4	Silver	1.3	U	N	P
7440-23-5	Sodium	179	B		P
7440-28-0	Thallium	2.5	U		F
7440-62-2	Vanadium	5.0	B		P
7440-66-6	Zinc	96.2			P
	Cyanide	.65	U		AS

Color Before: BROWN Clarity Before: _____ Texture: MEDIUM

Color After: COLORLESS Clarity After: _____ Artifacts: _____

Comments:
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FORM I - IN 7/88

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

43SD05

Lab Name: COMPUCHEM,RTP Contract: (2-88)-REVS

Lab Code: COMPU Case No.: 23664 SAS No.: _____ SDG No.: 81

Matrix: (soil/water) SOIL Lab Sample ID: 436628

Sample wt/vol: 5.0 (g/mL) G Lab File ID: GR036628B18

Level: (low/med) LOW Date Received: 08/09/91

% Moisture: not dec. 42 Date Analyzed: 08/16/91

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	17	U
74-83-9	Bromomethane	17	U
75-01-4	Vinyl Chloride	17	U
75-00-3	Chloroethane	17	U
75-09-2	Methylene Chloride	28	B
67-64-1	Acetone	17	U
75-15-0	Carbon Disulfide	9	U
75-35-4	1,1-Dichloroethene	9	U
75-34-3	1,1-Dichloroethane	9	U
540-59-0	1,2-Dichloroethene (total)	9	U
67-66-3	Chloroform	9	U
107-06-2	1,2-Dichloroethane	9	U
78-93-3	2-Butanone	17	U
71-55-6	1,1,1-Trichloroethane	9	U
56-23-5	Carbon Tetrachloride	9	U
108-05-4	Vinyl Acetate	9	U
75-27-4	Bromodichloromethane	9	U
78-87-5	1,2-Dichloropropane	9	U
10061-01-5	cis-1,3-Dichloropropene	9	U
79-01-6	Trichloroethene	9	U
124-48-1	Dibromochloromethane	9	U
79-00-5	1,1,2-Trichloroethane	9	U
71-43-2	Benzene	9	U
10061-02-6	Trans-1,3-Dichloropropene	9	U
75-25-2	Bromoform	9	U
108-10-1	4-Methyl-2-Pentanone	17	U
591-78-6	2-Hexanone	17	U
127-18-4	Tetrachloroethene	9	U
79-34-5	1,1,2,2-Tetrachloroethane	9	U
108-88-3	Toluene	9	U
108-90-7	Chlorobenzene	9	U
100-41-4	Ethylbenzene	9	U
100-42-5	Styrene	9	U
1330-20-7	Total Xylenes	9	U

FORM I VOA 1/87 Rev.

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

43SD05

Lab Name: COMPUCHEM,RTP Contract: (2-88)-REVS

Lab Code: COMPU Case No.: 23664 SAS No.: _____ SDG No.: 81

Matrix: (soil/water) SOIL Lab Sample ID: 436628

Sample wt/vol: 30.4 (g/mL) G Lab File ID: GH036628C20

Level: (low/med) LOW Date Received: 08/09/91

% Moisture: not dec. 42 dec. ____ Date Extracted: 08/13/91

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 08/14/91

GPC Cleanup: (Y/N) N pH: 6.6 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	560	U
111-44-4	bis(2-Chloroethyl)Ether	560	U
95-57-8	2-Chlorophenol	560	U
541-73-1	1,3-Dichlorobenzene	560	U
106-46-7	1,4-Dichlorobenzene	560	U
100-51-6	Benzyl Alcohol	560	U
95-50-1	1,2-Dichlorobenzene	560	U
95-48-7	2-Methylphenol	560	U
39638-32-9	Bis(2-Chloroethyl)Ether	560	U
106-44-5	4-Methylphenol	64	J
621-64-7	N-Nitroso-Di-n-Propylamine	560	U
67-72-1	Hexachloroethane	560	U
98-95-3	Nitrobenzene	560	U
78-59-1	Isophorone	560	U
88-75-5	2-Nitrophenol	560	U
105-67-9	2,4-Dimethylphenol	560	U
65-85-0	Benzoic Acid	2700	U
111-91-1	bis(2-Chloroethoxy)Methane	560	U
120-83-2	2,4-Dichlorophenol	560	U
120-82-1	1,2,4-Trichlorobenzene	560	U
91-20-3	Naphthalene	560	U
106-47-8	4-Chloroaniline	560	U
87-68-3	Hexachlorobutadiene	560	U
59-50-7	4-Chloro-3-Methylphenol	560	U
91-57-6	2-Methylnaphthalene	560	U
77-47-4	Hexachlorocyclopentadiene	560	U
88-06-2	2,4,6-Trichlorophenol	560	U
95-95-4	2,4,5-Trichlorophenol	2700	U
91-58-7	2-Chloronaphthalene	560	U
88-74-4	2-Nitroaniline	2700	U
131-11-3	Dimethyl Phthalate	560	U
208-96-8	Acenaphthylene	560	U
606-20-2	2,6-Dinitrotoluene	560	U

FORM I SV-1 1/87 Rev.

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

43SD05

Lab Name: COMPUCHEM,RTP Contract: (2-88)-REVS

Lab Code: COMPU Case No.: 23664 SAS No.: _____ SDG No.: 81

Matrix: (soil/water) SOIL Lab Sample ID: 436628

Sample wt/vol: 30.4 (g/mL) G Lab File ID: GH036628C20

Level: (low/med) LOW Date Received: 08/09/91

% Moisture: not dec. 42 dec. ____ Date Extracted: 08/13/91

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 08/14/91

GPC Cleanup: (Y/N) N pH: 6.6 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
99-09-2	3-Nitroaniline	2700	U
83-32-9	Acenaphthene	560	U
51-28-5	2,4-Dinitrophenol	2700	U
100-02-7	4-Nitrophenol	2700	U
132-64-9	Dibenzofuran	560	U
121-14-2	2,4-Dinitrotoluene	560	U
84-66-2	Diethylphthalate	560	U
7005-72-3	4-Chlorophenyl-phenylether	560	U
86-73-7	Fluorene	560	U
100-01-6	4-Nitroaniline	2700	U
534-52-1	4,6-Dinitro-2-Methylphenol	2700	U
86-30-6	N-Nitrosodiphenylamine (1)	560	U
101-55-3	4-Bromophenyl-phenylether	560	U
118-74-1	Hexachlorobenzene	560	U
87-86-5	Pentachlorophenol	2700	U
85-01-8	Phenanthrene	560	U
120-12-7	Anthracene	560	U
84-74-2	Di-n-Butylphthalate	61	J
206-44-0	Fluoranthene	560	U
129-00-0	Pyrene	560	U
85-68-7	Butylbenzylphthalate	560	U
91-94-1	3,3'-Dichlorobenzidine	1100	U
56-55-3	Benzo(a)Anthracene	560	U
218-01-9	Chrysene	560	U
117-81-7	bis(2-Ethylhexyl)Phthalate	150	J
117-84-0	Di-n-Octyl Phthalate	560	U
205-99-2	Benzo(b)Fluoranthene	560	U
207-08-9	Benzo(k)Fluoranthene	560	U
50-32-8	Benzo(a)Pyrene	560	U
193-39-5	Indeno(1,2,3-cd)Pyrene	560	U
53-70-3	Dibenzo(a,h)Anthracene	560	U
191-24-2	Benzo(g,h,i)Perylene	560	U

(1) - Cannot be separated from Diphenylamine

FORM I SV-2 1/87 Rev.

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

43SD05

Lab Name: COMPUCHEM LABORATORIES Contract: (2-88)-REVS

Lab Code: COMPU Case No.: 23664 SAS No.: SDG No.: 81

Matrix: (soil/water) SOIL Lab Sample ID: 436628

Sample wt/vol: 30.4 (g/mL) G Lab File ID:

Level: (low/med) LOW Date Received: 08/09/91

% Moisture: not dec. 42 dec. Date Extracted: 08/13/91

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 08/15/91

GPC Cleanup: (Y/N) N pH: 6.6 Dilution Factor: 5.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	68	U
319-85-7	beta-BHC	68	U
319-86-8	delta-BHC	68	U
58-89-9	gamma-BHC	68	U
76-44-8	Heptachlor	68	U
309-00-2	Aldrin	68	U
1024-57-3	Heptachlor epoxide	68	U
959-98-8	Endosulfan I	68	U
60-57-1	Dieldrin	140	U
72-55-9	4,4'-DDE	140	U
72-20-8	Endrin	140	U
33213-65-9	Endosulfan II	140	U
72-54-8	4,4'-DDD	180	
1031-07-8	Endosulfan sulfate	140	U
50-29-3	4,4'-DDT	140	U
72-43-5	p,p'-Methoxychlor	680	U
53494-70-5	Endrin ketone	140	U
5103-71-9	alpha-Chlordane	680	U
5103-74-2	gamma-Chlordane	680	U
8001-35-2	Toxaphene	1400	U
12674-11-2	Aroclor-1016	680	U
11104-28-2	Aroclor-1221	680	U
11141-16-5	Aroclor-1232	680	U
53469-21-9	Aroclor-1242	680	U
12672-29-6	Aroclor-1248	680	U
11097-69-1	Aroclor-1254	1400	U
11096-82-5	Aroclor-1260	1400	U

FORM I PEST 1/87 Rev.

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

43SD05

Lab Name: COMPUCHEM LABORATORIES Contract: 7/88

Lab Code: COMPU Case No.: 50024 SAS No.: _____ SDG No.: 664204

Matrix (soil/water): SOIL Lab Sample ID: 436645

Level (low/med): LOW Date Received: 08/09/91

% Solids: 58.0

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	1970			P
7440-36-0	Antimony	11.4	U		P
7440-38-2	Arsenic	1.7	U		F
7440-39-3	Barium	9.7	B		P
7440-41-7	Beryllium	.34	U		P
7440-43-9	Cadmium	1.4	U		P
7440-70-2	Calcium	4400			P
7440-47-3	Chromium	2.9	B		P
7440-48-4	Cobalt	2.1	U		P
7440-50-8	Copper	2.6	B		P
7439-89-6	Iron	1290			P
7439-92-1	Lead	8.5			F
7439-95-4	Magnesium	259	B		P
7439-96-5	Manganese	6.8			P
7439-97-6	Mercury	.16	U		CV
7440-02-0	Nickel	3.1	U		P
7440-09-7	Potassium	368	U		P
7782-49-2	Selenium	1.3	U	W	F
7440-22-4	Silver	1.7	U	N	P
7440-23-5	Sodium	345	B		P
7440-28-0	Thallium	.67	U		F
7440-62-2	Vanadium	4.0	B		P
7440-66-6	Zinc	10.5			P
	Cyanide	.86	U		AS

Color Before: BROWN Clarity Before: _____ Texture: MEDIUM

Color After: COLORLESS Clarity After: _____ Artifacts: _____

Comments:
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APPENDIX F
QA/QC DATA

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

43SB0200D

Lab Name: COMPUCHEM,RTP Contract: (2-88)-REVS

Lab Code: COMPU Case No.: 23664 SAS No.: _____ SDG No.: 21

Matrix: (soil/water) SOIL Lab Sample ID: 434293

Sample wt/vol: 5.0 (g/mL) G Lab File ID: GH034293B54

Level: (low/med) LOW Date Received: 07/30/91

% Moisture: not dec. 7 Date Analyzed: 07/31/91

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	11	U
74-83-9	Bromomethane	11	U
75-01-4	Vinyl Chloride	11	U
75-00-3	Chloroethane	11	U
75-09-2	Methylene Chloride	22	B
67-64-1	Acetone	23	B
75-15-0	Carbon Disulfide	5	U
75-35-4	1,1-Dichloroethene	5	U
75-34-3	1,1-Dichloroethane	5	U
540-59-0	1,2-Dichloroethene (total)	5	U
67-66-3	Chloroform	5	U
107-06-2	1,2-Dichloroethane	5	U
78-93-3	2-Butanone	11	U
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon Tetrachloride	5	U
108-05-4	Vinyl Acetate	5	U
75-27-4	Bromodichloromethane	5	U
78-87-5	1,2-Dichloropropane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
79-01-6	Trichloroethene	5	U
124-48-1	Dibromochloromethane	5	U
79-00-5	1,1,2-Trichloroethane	5	U
71-43-2	Benzene	5	U
10061-02-6	Trans-1,3-Dichloropropene	5	U
75-25-2	Bromoform	5	U
108-10-1	4-Methyl-2-Pentanone	11	U
591-78-6	2-Hexanone	11	U
127-18-4	Tetrachloroethene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-88-3	Toluene	5	U
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
100-42-5	Styrene	5	U
1330-20-7	Total Xylenes	5	U

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1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

43SB0200D

Lab Name: COMPUCHEM,RTP Contract: (2-88)-REVS

Lab Code: COMPU Case No.: 23664 SAS No.: _____ SDG No.: 21

Matrix: (soil/water) SOIL Lab Sample ID: 434293

Sample wt/vol: 30.7 (g/mL) G Lab File ID: GH034293B52

Level: (low/med) LOW Date Received: 07/30/91

% Moisture: not dec. 7 dec. ____ Date Extracted: 08/02/91

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 08/04/91

GPC Cleanup: (Y/N) N pH: 5.4 Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	350	U
111-44-4	bis(2-Chloroethyl)Ether	350	U
95-57-8	2-Chlorophenol	350	U
541-73-1	1,3-Dichlorobenzene	350	U
106-46-7	1,4-Dichlorobenzene	350	U
100-51-6	Benzyl Alcohol	350	U
95-50-1	1,2-Dichlorobenzene	350	U
95-48-7	2-Methylphenol	350	U
39638-32-9	Bis(2-Chloroethyl)Ether	350	U
106-44-5	4-Methylphenol	350	U
621-64-7	N-Nitroso-Di-n-Propylamine	350	U
67-72-1	Hexachloroethane	350	U
98-95-3	Nitrobenzene	350	U
78-59-1	Isophorone	350	U
88-75-5	2-Nitrophenol	350	U
105-67-9	2,4-Dimethylphenol	350	U
65-85-0	Benzoic Acid	1700	U
111-91-1	bis(2-Chloroethoxy)Methane	350	U
120-83-2	2,4-Dichlorophenol	350	U
120-82-1	1,2,4-Trichlorobenzene	350	U
91-20-3	Naphthalene	350	U
106-47-8	4-Chloroaniline	350	U
87-68-3	Hexachlorobutadiene	350	U
59-50-7	4-Chloro-3-Methylphenol	350	U
91-57-6	2-Methylnaphthalene	350	U
77-47-4	Hexachlorocyclopentadiene	350	U
88-06-2	2,4,6-Trichlorophenol	350	U
95-95-4	2,4,5-Trichlorophenol	1700	U
91-58-7	2-Chloronaphthalene	350	U
88-74-4	2-Nitroaniline	1700	U
131-11-3	Dimethyl Phthalate	350	U
208-96-8	Acenaphthylene	350	U
606-20-2	2,6-Dinitrotoluene	350	U

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1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

43SB0200D

Lab Name: COMPUCHEM.RTP Contract: (2-88)-REVS

Lab Code: COMPU Case No.: 23664 SAS No.: _____ SDG No.: 21

Matrix: (soil/water) SOIL Lab Sample ID: 434293

Sample wt/vol: 30.7 (g/mL) G Lab File ID: GH034293B52

Level: (low/med) LOW Date Received: 07/30/91

% Moisture: not dec. 7 dec. ____ Date Extracted: 08/02/91

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 08/04/91

GPC Cleanup: (Y/N) N pH: 5.4 Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
99-09-2	3-Nitroaniline	1700	U
83-32-9	Acenaphthene	350	U
51-28-5	2,4-Dinitrophenol	1700	U
100-02-7	4-Nitrophenol	1700	U
132-64-9	Dibenzofuran	350	U
121-14-2	2,4-Dinitrotoluene	350	U
84-66-2	Diethylphthalate	350	U
7005-72-3	4-Chlorophenyl-phenylether	350	U
86-73-7	Fluorene	350	U
100-01-6	4-Nitroaniline	1700	U
534-52-1	4,6-Dinitro-2-Methylphenol	1700	U
86-30-6	N-Nitrosodiphenylamine (1)	350	U
101-55-3	4-Bromophenyl-phenylether	350	U
118-74-1	Hexachlorobenzene	350	U
87-86-5	Pentachlorophenol	1700	U
85-01-8	Phenanthrene	350	U
120-12-7	Anthracene	350	U
84-74-2	Di-n-Butylphthalate	350	U
206-44-0	Fluoranthene	350	U
129-00-0	Pyrene	350	U
85-68-7	Butylbenzylphthalate	350	U
91-94-1	3,3'-Dichlorobenzidine	690	U
56-55-3	Benzo(a)Anthracene	350	U
218-01-9	Chrysene	350	U
117-81-7	bis(2-Ethylhexyl)Phthalate	350	U
117-84-0	Di-n-Octyl Phthalate	350	U
205-99-2	Benzo(b)Fluoranthene	350	U
207-08-9	Benzo(k)Fluoranthene	350	U
50-32-8	Benzo(a)Pyrene	350	U
193-39-5	Indeno(1,2,3-cd)Pyrene	350	U
53-70-3	Dibenzo(a,h)Anthracene	350	U
191-24-2	Benzo(g,h,i)Perylene	350	U

(1) - Cannot be separated from Diphenylamine

FORM I SV-2 1/87 Rev.

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

43SB0200D

Lab Name: COMPUCHEM LABORATORIES Contract: (2-88)-REVS

Lab Code: COMPU Case No.: 23664 SAS No.: SDG No.: 21

Matrix: (soil/water) SOIL Lab Sample ID: 434293

Sample wt/vol: 30.3 (g/mL) G Lab File ID:

Level: (low/med) LOW Date Received: 07/30/91

% Moisture: not dec. 7 dec. Date Extracted: 08/04/91

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 08/07/91

GPC Cleanup: (Y/N) N pH: 5.4 Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	8.5	U
319-85-7	beta-BHC	8.5	U
319-86-8	delta-BHC	8.5	U
58-89-9	gamma-BHC	8.5	U
76-44-8	Heptachlor	8.5	U
309-00-2	Aldrin	8.5	U
1024-57-3	Heptachlor epoxide	8.5	U
959-98-8	Endosulfan I	8.5	U
60-57-1	Dieldrin	17	U
72-55-9	4,4'-DDE	17	U
72-20-8	Endrin	17	U
33213-65-9	Endosulfan II	17	U
72-54-8	4,4'-DDD	17	U
1031-07-8	Endosulfan sulfate	17	U
50-29-3	4,4'-DDT	17	U
72-43-5	p,p'-Methoxychlor	85	U
53494-70-5	Endrin ketone	17	U
5103-71-9	alpha-Chlordane	85	U
5103-74-2	gamma-Chlordane	85	U
8001-35-2	Toxaphene	170	U
12674-11-2	Aroclor-1016	85	U
11104-28-2	Aroclor-1221	85	U
11141-16-5	Aroclor-1232	85	U
53469-21-9	Aroclor-1242	85	U
12672-29-6	Aroclor-1248	85	U
11097-69-1	Aroclor-1254	170	U
11096-82-5	Aroclor-1260	170	U

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U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

43SB0200D

Lab Name: COMPUCHEM LABORATORIES Contract: 7/88

Lab Code: COMPU Case No.: 50024 SAS No.: _____ SDG No.: 664144

Matrix (soil/water): SOIL Lab Sample ID: 434329

Level (low/med): LOW Date Received: 07/30/91

% Solids: 93.0

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	5640			P
7440-36-0	Antimony	7.0	U	N	P
7440-38-2	Arsenic	1.1	U		F
7440-39-3	Barium	10.6	B		P
7440-41-7	Beryllium	.21	U		P
7440-43-9	Cadmium	.84	U		P
7440-70-2	Calcium	218	B	*	P
7440-47-3	Chromium	5.9		*	P
7440-48-4	Cobalt	1.3	U		P
7440-50-8	Copper	1.1	B		P
7439-89-6	Iron	4790			P
7439-92-1	Lead	5.3		*	F
7439-95-4	Magnesium	180	B		P
7439-96-5	Manganese	6.3			P
7439-97-6	Mercury	.11	U		CV
7440-02-0	Nickel	1.9	U		P
7440-09-7	Potassium	225	U		P
7782-49-2	Selenium	.84	U	W	F
7440-22-4	Silver	1.1	U	N	P
7440-23-5	Sodium	93.9	B		P
7440-28-0	Thallium	.42	U		F
7440-62-2	Vanadium	9.6	B		P
7440-66-6	Zinc	5.4		*	P
	Cyanide	.54	U		AS

Color Before: BROWN Clarity Before: _____ Texture: FINE

Color After: COLORLESS Clarity After: _____ Artifacts: _____

Comments:
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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

43SB0300MS

Lab Name: COMPUCHEM,RTP Contract: (2-88)-REVS

Lab Code: COMPU Case No.: 23664 SAS No.: _____ SDG No.: 61

Matrix: (soil/water) SOIL Lab Sample ID: 434336

Sample wt/vol: 5.0 (g/mL) G Lab File ID: GR034336C13

Level: (low/med) LOW Date Received: 07/30/91

% Moisture: not dec. 18 Date Analyzed: 08/06/91

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	12	U
74-83-9	Bromomethane	12	U
75-01-4	Vinyl Chloride	12	U
75-00-3	Chloroethane	12	U
75-09-2	Methylene Chloride	30	B
67-64-1	Acetone	22	B
75-15-0	Carbon Disulfide	6	U
75-35-4	1,1-Dichloroethene	6	U
75-34-3	1,1-Dichloroethane	6	U
540-59-0	1,2-Dichloroethene (total)	6	U
67-66-3	Chloroform	6	U
107-06-2	1,2-Dichloroethane	6	U
78-93-3	2-Butanone	12	U
71-55-6	1,1,1-Trichloroethane	6	U
56-23-5	Carbon Tetrachloride	6	U
108-05-4	Vinyl Acetate	12	U
75-27-4	Bromodichloromethane	6	U
78-87-5	1,2-Dichloropropane	6	U
10061-01-5	cis-1,3-Dichloropropene	6	U
79-01-6	Trichloroethene	6	U
124-48-1	Dibromochloromethane	6	U
79-00-5	1,1,2-Trichloroethane	6	U
71-43-2	Benzene	6	U
10061-02-6	Trans-1,3-Dichloropropene	6	U
75-25-2	Bromoform	6	U
108-10-1	4-Methyl-2-Pentanone	12	U
591-78-6	2-Hexanone	12	U
127-18-4	Tetrachloroethene	6	U
79-34-5	1,1,2,2-Tetrachloroethane	6	U
108-88-3	Toluene	6	U
108-90-7	Chlorobenzene	6	U
100-41-4	Ethylbenzene	6	U
100-42-5	Styrene	6	U
1330-20-7	Total Xylenes	6	U

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1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

43SB0400MS

Lab Name: COMPUCHEM,RTP Contract: (2-88)-REVS

Lab Code: COMPU Case No.: 23664 SAS No.: _____ SDG No.: 61

Matrix: (soil/water) SOIL Lab Sample ID: 434340

Sample wt/vol: 30.5 (g/mL) G Lab File ID: GH034340B52

Level: (low/med) LOW Date Received: 07/30/91

% Moisture: not dec. 15 dec. ____ Date Extracted: 08/02/91

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 08/04/91

GPC Cleanup: (Y/N) N pH: 4.9 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	380	U
111-44-4	bis(2-Chloroethyl)Ether	380	U
95-57-8	2-Chlorophenol	380	U
541-73-1	1,3-Dichlorobenzene	380	U
106-46-7	1,4-Dichlorobenzene	380	U
100-51-6	Benzyl Alcohol	380	U
95-50-1	1,2-Dichlorobenzene	380	U
95-48-7	2-Methylphenol	380	U
39638-32-9	bis(2-Chloroisopropyl)Ether	380	U
106-44-5	4-Methylphenol	380	U
621-64-7	N-Nitroso-Di-n-Propylamine	380	U
67-72-1	Hexachloroethane	380	U
98-95-3	Nitrobenzene	380	U
78-59-1	Isophorone	380	U
88-75-5	2-Nitrophenol	380	U
105-67-9	2,4-Dimethylphenol	380	U
65-85-0	Benzoic Acid	1900	U
111-91-1	bis(2-Chloroethoxy)Methane	380	U
120-83-2	2,4-Dichlorophenol	380	U
120-82-1	1,2,4-Trichlorobenzene	380	U
91-20-3	Naphthalene	380	U
106-47-8	4-Chloroaniline	380	U
87-68-3	Hexachlorobutadiene	380	U
59-50-7	4-Chloro-3-Methylphenol	380	U
91-57-6	2-Methylnaphthalene	380	U
77-47-4	Hexachlorocyclopentadiene	380	U
88-06-2	2,4,6-Trichlorophenol	380	U
95-95-4	2,4,5-Trichlorophenol	1900	U
91-58-7	2-Chloronaphthalene	380	U
88-74-4	2-Nitroaniline	1900	U
131-11-3	Dimethyl Phthalate	380	U
208-96-8	Acenaphthylene	380	U
606-20-2	2,6-Dinitrotoluene	380	U

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1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

43SB0400MS

Lab Name: COMPUCHEM,RTP Contract: (2-88)-REVS

Lab Code: COMPU Case No.: 23664 SAS No.: _____ SDG No.: 61

Matrix: (soil/water) SOIL Lab Sample ID: 434340

Sample wt/vol: 30.5 (g/mL) G Lab File ID: GH034340B52

Level: (low/med) LOW Date Received: 07/30/91

% Moisture: not dec. 15 dec. ____ Date Extracted: 08/02/91

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 08/04/91

GPC Cleanup: (Y/N) N pH: 4.9 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
99-09-2	3-Nitroaniline	1900	U
83-32-9	Acenaphthene	380	U
51-28-5	2,4-Dinitrophenol	1900	U
100-02-7	4-Nitrophenol	1900	U
132-64-9	Dibenzofuran	380	U
121-14-2	2,4-Dinitrotoluene	380	U
84-66-2	Diethylphthalate	380	U
7005-72-3	4-Chlorophenyl-phenylether	380	U
86-73-7	Fluorene	380	U
100-01-6	4-Nitroaniline	1900	U
534-52-1	4,6-Dinitro-2-Methylphenol	1900	U
86-30-6	N-Nitrosodiphenylamine (1)	380	U
101-55-3	4-Bromophenyl-phenylether	380	U
118-74-1	Hexachlorobenzene	380	U
87-86-5	Pentachlorophenol	1900	U
85-01-8	Phenanthrene	380	U
120-12-7	Anthracene	380	U
84-74-2	Di-n-Butylphthalate	380	U
206-44-0	Fluoranthene	380	U
129-00-0	Pyrene	380	U
85-68-7	Butylbenzylphthalate	380	U
91-94-1	3,3'-Dichlorobenzidine	760	U
56-55-3	Benzo(a)Anthracene	380	U
218-01-9	Chrysene	380	U
117-81-7	bis(2-Ethylhexyl)Phthalate	380	U
117-84-0	Di-n-Octyl Phthalate	380	U
205-99-2	Benzo(b)Fluoranthene	380	U
207-08-9	Benzo(k)Fluoranthene	380	U
50-32-8	Benzo(a)Pyrene	380	U
193-39-5	Indeno(1,2,3-cd)Pyrene	380	U
53-70-3	Dibenzo(a,h)Anthracene	380	U
191-24-2	Benzo(g,h,i)Perylene	380	U

(1) - Cannot be separated from Diphenylamine

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1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

43SB0500MS

Lab Name: COMPUCHEM,RTP Contract: (2-88)-REVS

Lab Code: COMPU Case No.: 23664 SAS No.: _____ SDG No.: 41

Matrix: (soil/water) SOIL Lab Sample ID: 434304

Sample wt/vol: 30.9 (g/mL) G Lab File ID: GH034304B52

Level: (low/med) LOW Date Received: 07/30/91

% Moisture: not dec. 9 dec. ____ Date Extracted: 08/05/91

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 08/06/91

GPC Cleanup: (Y/N) N pH: 4.8 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	350	U
111-44-4	bis(2-Chloroethyl)Ether	350	U
95-57-8	2-Chlorophenol	350	U
541-73-1	1,3-Dichlorobenzene	350	U
106-46-7	1,4-Dichlorobenzene	350	U
100-51-6	Benzyl Alcohol	350	U
95-50-1	1,2-Dichlorobenzene	350	U
95-48-7	2-Methylphenol	350	U
39638-32-9	Bis(2-Chloroethyl)Ether	350	U
106-44-5	4-Methylphenol	350	U
621-64-7	N-Nitroso-Di-n-Propylamine	350	U
67-72-1	Hexachloroethane	350	U
98-95-3	Nitrobenzene	350	U
78-59-1	Isophorone	350	U
88-75-5	2-Nitrophenol	350	U
105-67-9	2,4-Dimethylphenol	350	U
65-85-0	Benzoic Acid	1700	U
111-91-1	bis(2-Chloroethoxy)Methane	350	U
120-83-2	2,4-Dichlorophenol	350	U
120-82-1	1,2,4-Trichlorobenzene	350	U
91-20-3	Naphthalene	350	U
106-47-8	4-Chloroaniline	350	U
87-68-3	Hexachlorobutadiene	350	U
59-50-7	4-Chloro-3-Methylphenol	350	U
91-57-6	2-Methylnaphthalene	350	U
77-47-4	Hexachlorocyclopentadiene	350	U
88-06-2	2,4,6-Trichlorophenol	350	U
95-95-4	2,4,5-Trichlorophenol	1700	U
91-58-7	2-Chloronaphthalene	350	U
88-74-4	2-Nitroaniline	1700	U
131-11-3	Dimethyl Phthalate	350	U
208-96-8	Acenaphthylene	350	U
606-20-2	2,6-Dinitrotoluene	350	U

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1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

43SB0500MS

Lab Name: COMPUCHEM,RTP Contract: (2-88)-REVS

Lab Code: COMPU Case No.: 23664 SAS No.: _____ SDG No.: 41

Matrix: (soil/water) SOIL Lab Sample ID: 434304

Sample wt/vol: 30.9 (g/mL) G Lab File ID: GH034304B52

Level: (low/med) LOW Date Received: 07/30/91

% Moisture: not dec. 9 dec. ____ Date Extracted: 08/05/91

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 08/06/91

GPC Cleanup: (Y/N) N pH: 4.8 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
99-09-2	3-Nitroaniline	1700	U
83-32-9	Acenaphthene	350	U
51-28-5	2,4-Dinitrophenol	1700	U
100-02-7	4-Nitrophenol	1700	U
132-64-9	Dibenzofuran	350	U
121-14-2	2,4-Dinitrotoluene	350	U
84-66-2	Diethylphthalate	350	U
7005-72-3	4-Chlorophenyl-phenylether	350	U
86-73-7	Fluorene	350	U
100-01-6	4-Nitroaniline	1700	U
534-52-1	4,6-Dinitro-2-Methylphenol	1700	U
86-30-6	N-Nitrosodiphenylamine (1)	350	U
101-55-3	4-Bromophenyl-phenylether	350	U
118-74-1	Hexachlorobenzene	350	U
87-86-5	Pentachlorophenol	1700	U
85-01-8	Phenanthrene	350	U
120-12-7	Anthracene	350	U
84-74-2	Di-n-Butylphthalate	350	U
206-44-0	Fluoranthene	350	U
129-00-0	Pyrene	350	U
85-68-7	Butylbenzylphthalate	350	U
91-94-1	3,3'-Dichlorobenzidine	700	U
56-55-3	Benzo(a)Anthracene	350	U
218-01-9	Chrysene	350	U
117-81-7	bis(2-Ethylhexyl)Phthalate	350	U
117-84-0	Di-n-Octyl Phthalate	350	U
205-99-2	Benzo(b)Fluoranthene	350	U
207-08-9	Benzo(k)Fluoranthene	350	U
50-32-8	Benzo(a)Pyrene	350	U
193-39-5	Indeno(1,2,3-cd)Pyrene	350	U
53-70-3	Dibenzo(a,h)Anthracene	350	U
191-24-2	Benzo(g,h,i)Perylene	350	U

(1) - Cannot be separated from Diphenylamine

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

43SB0506MS

Lab Name: COMPUCHEM,RTP Contract: (2-88)-REVS

Lab Code: COMPU Case No.: 23664 SAS No.: _____ SDG No.: 41

Matrix: (soil/water) SOIL Lab Sample ID: 434301

Sample wt/vol: 5.0 (g/mL) G Lab File ID: GH034301C54

Level: (low/med) LOW Date Received: 07/30/91

% Moisture: not dec. 14 Date Analyzed: 08/01/91

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	12	U
74-83-9	Bromomethane	12	U
75-01-4	Vinyl Chloride	12	U
75-00-3	Chloroethane	12	U
75-09-2	Methylene Chloride	40	B
67-64-1	Acetone	49	B
75-15-0	Carbon Disulfide	6	U
75-35-4	1,1-Dichloroethene	6	U
75-34-3	1,1-Dichloroethane	6	U
540-59-0	1,2-Dichloroethene (total)	6	U
67-66-3	Chloroform	6	U
107-06-2	1,2-Dichloroethane	6	U
78-93-3	2-Butanone	12	U
71-55-6	1,1,1-Trichloroethane	6	U
56-23-5	Carbon Tetrachloride	6	U
108-05-4	Vinyl Acetate	6	U
75-27-4	Bromodichloromethane	6	U
78-87-5	1,2-Dichloropropane	6	U
10061-01-5	cis-1,3-Dichloropropene	6	U
79-01-6	Trichloroethene	6	U
124-48-1	Dibromochloromethane	6	U
79-00-5	1,1,2-Trichloroethane	6	U
71-43-2	Benzene	6	U
10061-02-6	Trans-1,3-Dichloropropene	6	U
75-25-2	Bromoform	6	U
108-10-1	4-Methyl-2-Pentanone	12	U
591-78-6	2-Hexanone	12	U
127-18-4	Tetrachloroethene	6	U
79-34-5	1,1,2,2-Tetrachloroethane	6	U
108-88-3	Toluene	6	U
108-90-7	Chlorobenzene	6	U
100-41-4	Ethylbenzene	6	U
100-42-5	Styrene	6	U
1330-20-7	Total Xylenes	6	U

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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

43MW0100D

Lab Name: COMPUCHEM,RTP Contract: (2-88)-REVS

Lab Code: COMPU Case No.: 23664 SAS No.: _____ SDG No.: 81

Matrix: (soil/water) SOIL Lab Sample ID: 436619

Sample wt/vol: 5.0 (g/mL) G Lab File ID: GH036619A18

Level: (low/med) LOW Date Received: 08/09/91

% Moisture: not dec. 13 Date Analyzed: 08/15/91

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	11	U
74-83-9	Bromomethane	11	U
75-01-4	Vinyl Chloride	11	U
75-00-3	Chloroethane	11	U
75-09-2	Methylene Chloride	33	B
67-64-1	Acetone	67	B
75-15-0	Carbon Disulfide	6	U
75-35-4	1,1-Dichloroethene	6	U
75-34-3	1,1-Dichloroethane	6	U
540-59-0	1,2-Dichloroethene (total)	6	U
67-66-3	Chloroform	6	U
107-06-2	1,2-Dichloroethane	6	U
78-93-3	2-Butanone	11	U
71-55-6	1,1,1-Trichloroethane	6	U
56-23-5	Carbon Tetrachloride	6	U
108-05-4	Vinyl Acetate	6	U
75-27-4	Bromodichloromethane	6	U
78-87-5	1,2-Dichloropropane	6	U
10061-01-5	cis-1,3-Dichloropropene	6	U
79-01-6	Trichloroethene	6	U
124-48-1	Dibromochloromethane	6	U
79-00-5	1,1,2-Trichloroethane	6	U
71-43-2	Benzene	6	U
10061-02-6	Trans-1,3-Dichloropropene	6	U
75-25-2	Bromoform	6	U
108-10-1	4-Methyl-2-Pentanone	11	U
591-78-6	2-Hexanone	11	U
127-18-4	Tetrachloroethene	6	U
79-34-5	1,1,2,2-Tetrachloroethane	6	U
108-88-3	Toluene	6	U
108-90-7	Chlorobenzene	6	U
100-41-4	Ethylbenzene	6	U
100-42-5	Styrene	6	U
1330-20-7	Total Xylenes	6	U

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1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

43MW0100D

Lab Name: COMPUCHEM,RTP Contract: (2-88)-REVS

Lab Code: COMPU Case No.: 23664 SAS No.: _____ SDG No.: 81

Matrix: (soil/water) SOIL Lab Sample ID: 436619

Sample wt/vol: 30.8 (g/mL) G Lab File ID: GH036619B20

Level: (low/med) LOW Date Received: 08/09/91

% Moisture: not dec. 13 dec. ____ Date Extracted: 08/13/91

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 08/13/91

GPC Cleanup: (Y/N) N pH: 7.8 Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	370	U
111-44-4	bis(2-Chloroethyl)Ether	370	U
95-57-8	2-Chlorophenol	370	U
541-73-1	1,3-Dichlorobenzene	370	U
106-46-7	1,4-Dichlorobenzene	370	U
100-51-6	Benzyl Alcohol	370	U
95-50-1	1,2-Dichlorobenzene	370	U
95-48-7	2-Methylphenol	370	U
39638-32-9	Bis(2-Chloroethyl)Ether	370	U
106-44-5	4-Methylphenol	370	U
621-64-7	N-Nitroso-Di-n-Propylamine	370	U
67-72-1	Hexachloroethane	370	U
98-95-3	Nitrobenzene	370	U
78-59-1	Isophorone	370	U
88-75-5	2-Nitrophenol	370	U
105-67-9	2,4-Dimethylphenol	370	U
65-85-0	Benzoic Acid	1800	U
111-91-1	bis(2-Chloroethoxy)Methane	370	U
120-83-2	2,4-Dichlorophenol	370	U
120-82-1	1,2,4-Trichlorobenzene	370	U
91-20-3	Naphthalene	370	U
106-47-8	4-Chloroaniline	370	U
87-68-3	Hexachlorobutadiene	370	U
59-50-7	4-Chloro-3-Methylphenol	370	U
91-57-6	2-Methylnaphthalene	370	U
77-47-4	Hexachlorocyclopentadiene	370	U
88-06-2	2,4,6-Trichlorophenol	370	U
95-95-4	2,4,5-Trichlorophenol	1800	U
91-58-7	2-Chloronaphthalene	370	U
88-74-4	2-Nitroaniline	1800	U
131-11-3	Dimethyl Phthalate	370	U
208-96-8	Acenaphthylene	370	U
606-20-2	2,6-Dinitrotoluene	370	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

43MW0100D

Lab Name: COMPUCHEM,RTP Contract: (2-88)-REVS

Lab Code: COMPU Case No.: 23664 SAS No.: _____ SDG No.: 81

Matrix: (soil/water) SOIL Lab Sample ID: 436619

Sample wt/vol: 30.8 (g/mL) G Lab File ID: GH036619B20

Level: (low/med) LOW Date Received: 08/09/91

% Moisture: not dec. 13 dec. ____ Date Extracted: 08/13/91

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 08/13/91

GPC Cleanup: (Y/N) N pH: 7.8 Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
99-09-2	3-Nitroaniline	1800	U
83-32-9	Acenaphthene	370	U
51-28-5	2,4-Dinitrophenol	1800	U
100-02-7	4-Nitrophenol	1800	U
132-64-9	Dibenzofuran	370	U
121-14-2	2,4-Dinitrotoluene	370	U
84-66-2	Diethylphthalate	370	U
7005-72-3	4-Chlorophenyl-phenylether	370	U
86-73-7	Fluorene	370	U
100-01-6	4-Nitroaniline	1800	U
534-52-1	4,6-Dinitro-2-Methylphenol	1800	U
86-30-6	N-Nitrosodiphenylamine (1)	370	U
101-55-3	4-Bromophenyl-phenylether	370	U
118-74-1	Hexachlorobenzene	370	U
87-86-5	Pentachlorophenol	1800	U
85-01-8	Phenanthrene	370	U
120-12-7	Anthracene	370	U
84-74-2	Di-n-Butylphthalate	40	J
206-44-0	Fluoranthene	110	J
129-00-0	Pyrene	94	J
85-68-7	Butylbenzylphthalate	370	U
91-94-1	3,3'-Dichlorobenzidine	740	U
56-55-3	Benzo(a)Anthracene	55	J
218-01-9	Chrysene	73	J
117-81-7	bis(2-Ethylhexyl)Phthalate	100	J
117-84-0	Di-n-Octyl Phthalate	370	U
205-99-2	Benzo(b)Fluoranthene	160	JX
207-08-9	Benzo(k)Fluoranthene	160	JX
50-32-8	Benzo(a)Pyrene	56	J
193-39-5	Indeno(1,2,3-cd)Pyrene	370	U
53-70-3	Dibenzo(a,h)Anthracene	370	U
191-24-2	Benzo(g,h,i)Perylene	42	J

(1) - Cannot be separated from Diphenylamine

FORM I SV-2 1/87 Rev.

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

43MW0100D

Lab Name: COMPUCHEM LABORATORIES Contract: (2-88)-REVS

Lab Code: COMPU Case No.: 23664 SAS No.: SDG No.: 81

Matrix: (soil/water) SOIL Lab Sample ID: 436619

Sample wt/vol: 30.1 (g/mL) G Lab File ID:

Level: (low/med) LOW Date Received: 08/09/91

% Moisture: not dec. 13 dec. Date Extracted: 08/13/91

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 08/15/91

GPC Cleanup: (Y/N) N pH: 7.8 Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	9.2	U
319-85-7	beta-BHC	9.2	U
319-86-8	delta-BHC	9.2	U
58-89-9	gamma-BHC	9.2	U
76-44-8	Heptachlor	9.2	U
309-00-2	Aldrin	9.2	U
1024-57-3	Heptachlor epoxide	9.2	U
959-98-8	Endosulfan I	9.2	U
60-57-1	Dieldrin	18	U
72-55-9	4,4'-DDE	18	U
72-20-8	Endrin	18	U
33213-65-9	Endosulfan II	18	U
72-54-8	4,4'-DDD	18	U
1031-07-8	Endosulfan sulfate	18	U
50-29-3	4,4'-DDT	18	U
72-43-5	p,p'-Methoxychlor	92	U
53494-70-5	Endrin ketone	18	U
5103-71-9	alpha-Chlordane	92	U
5103-74-2	gamma-Chlordane	92	U
8001-35-2	Toxaphene	180	U
12674-11-2	Aroclor-1016	92	U
11104-28-2	Aroclor-1221	92	U
11141-16-5	Aroclor-1232	92	U
53469-21-9	Aroclor-1242	92	U
12672-29-6	Aroclor-1248	92	U
11097-69-1	Aroclor-1254	180	U
11096-82-5	Aroclor-1260	180	U

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

43MW0100D

Lab Name: COMPUCHEM LABORATORIES Contract: 7/88

Lab Code: COMPU Case No.: 50024 SAS No.: _____ SDG No.: 664204

Matrix (soil/water): SOIL Lab Sample ID: 436636

Level (low/med): LOW Date Received: 08/09/91

% Solids: 87.0

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	3720			P
7440-36-0	Antimony	7.6	U		P
7440-38-2	Arsenic	1.1	U		F
7440-39-3	Barium	10.2	B		P
7440-41-7	Beryllium	.23	U		P
7440-43-9	Cadmium	.92	U		P
7440-70-2	Calcium	5460			P
7440-47-3	Chromium	6.6			P
7440-48-4	Cobalt	1.4	U		P
7440-50-8	Copper	1.6	B		P
7439-89-6	Iron	1800			P
7439-92-1	Lead	12.0			F
7439-95-4	Magnesium	224	B		P
7439-96-5	Manganese	17.7			P
7439-97-6	Mercury	.10	U		CV
7440-02-0	Nickel	2.1	U		P
7440-09-7	Potassium	245	U		P
7782-49-2	Selenium	.91	U	W	F
7440-22-4	Silver	1.1	U	N	P
7440-23-5	Sodium	98.8	B		P
7440-28-0	Thallium	.46	U		F
7440-62-2	Vanadium	7.1	B		P
7440-66-6	Zinc	8.3			P
	Cyanide	.57	U		AS

Color Before: BROWN Clarity Before: _____ Texture: MEDIUM

Color After: COLORLESS Clarity After: _____ Artifacts: _____

Comments:

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1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

43SD04MS

Lab Name: COMPUCHEM,RTP Contract: (2-88)-REVS

Lab Code: COMPU Case No.: 23664 SAS No.: _____ SDG No.: 81

Matrix: (soil/water) SOIL Lab Sample ID: 436408

Sample wt/vol: 30.5 (g/mL) G Lab File ID: GR036408B52

Level: (low/med) LOW Date Received: 08/10/91

% Moisture: not dec. 23 dec. ____ Date Extracted: 08/21/91

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 08/25/91

GPC Cleanup: (Y/N) N pH: 7.0 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	420	U
111-44-4	bis(2-Chloroethyl)Ether	420	U
95-57-8	2-Chlorophenol	420	U
541-73-1	1,3-Dichlorobenzene	420	U
106-46-7	1,4-Dichlorobenzene	420	U
100-51-6	Benzyl Alcohol	420	U
95-50-1	1,2-Dichlorobenzene	420	U
95-48-7	2-Methylphenol	420	U
39638-32-9	Bis(2-Chloroethyl)Ether	420	U
106-44-5	4-Methylphenol	420	U
621-64-7	N-Nitroso-Di-n-Propylamine	420	U
67-72-1	Hexachloroethane	420	U
98-95-3	Nitrobenzene	420	U
78-59-1	Isophorone	420	U
88-75-5	2-Nitrophenol	420	U
105-67-9	2,4-Dimethylphenol	420	U
65-85-0	Benzoic Acid	2000	U
111-91-1	bis(2-Chloroethoxy)Methane	420	U
120-83-2	2,4-Dichlorophenol	420	U
120-82-1	1,2,4-Trichlorobenzene	420	U
91-20-3	Naphthalene	420	U
106-47-8	4-Chloroaniline	420	U
87-68-3	Hexachlorobutadiene	420	U
59-50-7	4-Chloro-3-Methylphenol	420	U
91-57-6	2-Methylnaphthalene	420	U
77-47-4	Hexachlorocyclopentadiene	420	U
88-06-2	2,4,6-Trichlorophenol	420	U
95-95-4	2,4,5-Trichlorophenol	2000	U
91-58-7	2-Chloronaphthalene	420	U
88-74-4	2-Nitroaniline	2000	U
131-11-3	Dimethyl Phthalate	420	U
208-96-8	Acenaphthylene	420	U
606-20-2	2,6-Dinitrotoluene	420	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

43SD04MS

Lab Name: COMPUCHEM,RTP Contract: (2-88)-REVS

Lab Code: COMPU Case No.: 23664 SAS No.: _____ SDG No.: 81

Matrix: (soil/water) SOIL Lab Sample ID: 436408

Sample wt/vol: 30.5 (g/mL) G Lab File ID: GR036408B52

Level: (low/med) LOW Date Received: 08/10/91

% Moisture: not dec. 23 dec. ____ Date Extracted: 08/21/91

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 08/25/91

GPC Cleanup: (Y/N) N pH: 7.0 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
99-09-2	3-Nitroaniline	2000	U
83-32-9	Acenaphthene	420	U
51-28-5	2,4-Dinitrophenol	2000	U
100-02-7	4-Nitrophenol	2000	U
132-64-9	Dibenzofuran	420	U
121-14-2	2,4-Dinitrotoluene	420	U
84-66-2	Diethylphthalate	420	U
7005-72-3	4-Chlorophenyl-phenylether	420	U
86-73-7	Fluorene	420	U
100-01-6	4-Nitroaniline	2000	U
534-52-1	4,6-Dinitro-2-Methylphenol	2000	U
86-30-6	N-Nitrosodiphenylamine (1)	420	U
101-55-3	4-Bromophenyl-phenylether	420	U
118-74-1	Hexachlorobenzene	420	U
87-86-5	Pentachlorophenol	2000	U
85-01-8	Phenanthrene	50	J
120-12-7	Anthracene	420	U
84-74-2	Di-n-Butylphthalate	420	U
206-44-0	Fluoranthene	86	J
129-00-0	Pyrene	420	U
85-68-7	Butylbenzylphthalate	83	J
91-94-1	3,3'-Dichlorobenzidine	840	U
56-55-3	Benzo(a)Anthracene	420	U
218-01-9	Chrysene	77	J
117-81-7	bis(2-Ethylhexyl)Phthalate	210	J
117-84-0	Di-n-Octyl Phthalate	420	U
205-99-2	Benzo(b)Fluoranthene	120	JX
207-08-9	Benzo(k)Fluoranthene	120	JX
50-32-8	Benzo(a)Pyrene	420	U
193-39-5	Indeno(1,2,3-cd)Pyrene	420	U
53-70-3	Dibenzo(a,h)Anthracene	420	U
191-24-2	Benzo(g,h,i)Perylene	420	U

(1) - Cannot be separated from Diphenylamine

FORM I SV-2 1/87 Rev.

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

43GW031D

Lab Name: COMPUCHEM,RTP Contract: (2-88)-REVS

Lab Code: COMPU Case No.: 23664 SAS No.: _____ SDG No.: 277

Matrix: (soil/water) WATER Lab Sample ID: 439621

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CN039621A53

Level: (low/med) LOW Date Received: 08/23/91

% Moisture: not dec. ____ Date Analyzed: 08/29/91

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	8	B
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	5	U
75-35-4	1,1-Dichloroethene	5	U
75-34-3	1,1-Dichloroethane	5	U
540-59-0	1,2-Dichloroethene (total)	5	U
67-66-3	Chloroform	5	U
107-06-2	1,2-Dichloroethane	5	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon Tetrachloride	5	U
108-05-4	Vinyl Acetate	10	U
75-27-4	Bromodichloromethane	5	U
78-87-5	1,2-Dichloropropane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
79-01-6	Trichloroethene	5	U
124-48-1	Dibromochloromethane	5	U
79-00-5	1,1,2-Trichloroethane	5	U
71-43-2	Benzene	5	U
10061-02-6	Trans-1,3-Dichloropropene	5	U
75-25-2	Bromoform	5	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-88-3	Toluene	5	U
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
100-42-5	Styrene	5	U
1330-20-7	Total Xylenes	5	U

FORM I VOA 1/87 Rev.

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

43GW031D

Lab Name: COMPUCHEM,RTP Contract: (2-88)-REVS

Lab Code: COMPU Case No.: 23664 SAS No.: _____ SDG No.: 277

Matrix: (soil/water) WATER Lab Sample ID: 439621

Sample wt/vol: 1000 (g/mL) ML Lab File ID: GH039621B52

Level: (low/med) LOW Date Received: 08/23/91

% Moisture: not dec. ____ dec. ____ Date Extracted: 08/28/91

Extraction: (SepF/Cont/Sonc) SEPF Date Analyzed: 08/30/91

GPC Cleanup: (Y/N) N pH: ____ Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2	Phenol	10	U
111-44-4	bis(2-Chloroethyl)Ether	10	U
95-57-8	2-Chlorophenol	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
100-51-6	Benzyl Alcohol	10	U
95-50-1	1,2-Dichlorobenzene	10	U
95-48-7	2-Methylphenol	10	U
39638-32-9	bis(2-Chloroisopropyl)Ether	10	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-Di-n-Propylamine	10	U
67-72-1	Hexachloroethane	10	U
98-95-3	Nitrobenzene	10	U
78-59-1	Isophorone	10	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
65-85-0	Benzoic Acid	50	U
111-91-1	bis(2-Chloroethoxy)Methane	10	U
120-83-2	2,4-Dichlorophenol	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
91-20-3	Naphthalene	10	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	10	U
59-50-7	4-Chloro-3-Methylphenol	10	U
91-57-6	2-Methylnaphthalene	10	U
77-47-4	Hexachlorocyclopentadiene	10	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	50	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	50	U
131-11-3	Dimethyl Phthalate	10	U
208-96-8	Acenaphthylene	10	U
606-20-2	2,6-Dinitrotoluene	10	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

43GW031D

Lab Name: COMPUCHEM,RTP Contract: (2-88)-REVS

Lab Code: COMPU Case No.: 23664 SAS No.: _____ SDG No.: 277

Matrix: (soil/water) WATER Lab Sample ID: 439621

Sample wt/vol: 1000 (g/mL) ML Lab File ID: GH039621B52

Level: (low/med) LOW Date Received: 08/23/91

% Moisture: not dec. ____ dec. ____ Date Extracted: 08/28/91

Extraction: (SepF/Cont/Sonc) SEPF Date Analyzed: 08/30/91

GPC Cleanup: (Y/N) N pH: ____ Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
99-09-2	3-Nitroaniline	50	U
83-32-9	Acenaphthene	10	U
51-28-5	2,4-Dinitrophenol	50	U
100-02-7	4-Nitrophenol	50	U
132-64-9	Dibenzofuran	10	U
121-14-2	2,4-Dinitrotoluene	10	U
84-66-2	Diethylphthalate	10	U
7005-72-3	4-Chlorophenyl-phenylether	10	U
86-73-7	Fluorene	10	U
100-01-6	4-Nitroaniline	50	U
534-52-1	4,6-Dinitro-2-Methylphenol	50	U
86-30-6	N-Nitrosodiphenylamine (1)	10	U
101-55-3	4-Bromophenyl-phenylether	10	U
118-74-1	Hexachlorobenzene	10	U
87-86-5	Pentachlorophenol	50	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
84-74-2	Di-n-Butylphthalate	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
85-68-7	Butylbenzylphthalate	10	U
91-94-1	3,3'-Dichlorobenzidine	20	U
56-55-3	Benzo(a)Anthracene	10	U
218-01-9	Chrysene	10	U
117-81-7	bis(2-Ethylhexyl)Phthalate	10	U
117-84-0	Di-n-Octyl Phthalate	10	U
205-99-2	Benzo(b)Fluoranthene	10	U
207-08-9	Benzo(k)Fluoranthene	10	U
50-32-8	Benzo(a)Pyrene	10	U
193-39-5	Indeno(1,2,3-cd)Pyrene	10	U
53-70-3	Dibenzo(a,h)Anthracene	10	U
191-24-2	Benzo(g,h,i)Perylene	10	U

(1) - Cannot be separated from Diphenylamine

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

43GW031D

Lab Name: COMPUCHEM LABORATORIES Contract: (2-88)-REVS

Lab Code: COMPU Case No.: 23664 SAS No.: SDG No.: 277

Matrix: (soil/water) WATER Lab Sample ID: 439621

Sample wt/vol: 1000 (g/mL) ML Lab File ID:

Level: (low/med) LOW Date Received: 08/23/91

% Moisture: not dec. dec. Date Extracted: 08/26/91

Extraction: (SepF/Cont/Sonc) SEPF Date Analyzed: 08/27/91

GPC Cleanup: (Y/N) N pH: Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.050	U
319-85-7	beta-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC	0.050	U
76-44-8	Heptachlor	0.050	U
309-00-2	Aldrin	0.050	U
1024-57-3	Heptachlor epoxide	0.050	U
959-98-8	Endosulfan I	0.050	U
60-57-1	Dieldrin	0.050	U
72-55-9	4,4'-DDE	0.10	U
72-20-8	Endrin	0.10	U
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
50-29-3	4,4'-DDT	0.10	U
72-43-5	p,p'-Methoxychlor	0.10	U
53494-70-5	Endrin ketone	0.50	U
5103-71-9	alpha-Chlordane	0.10	U
5103-74-2	gamma-Chlordane	0.50	U
8001-35-2	Toxaphene	0.50	U
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor-1221	0.50	U
11141-16-5	Aroclor-1232	0.50	U
53469-21-9	Aroclor-1242	0.50	U
12672-29-6	Aroclor-1248	0.50	U
11097-69-1	Aroclor-1254	0.50	U
11096-82-5	Aroclor-1260	1.0	U
		1.0	U

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23664 277 SAMPLE DATA SUMMARY

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

43GW031D

Lab Name: COMPUCHEM LABORATORIES Contract: 3/90

Lab Code: COMPU Case No.: 50024 SAS No.: _____ SDG No.: 664307

Matrix (soil/water): WATER Lab Sample ID: 439637

Level (low/med): LOW Date Received: 08/23/91

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	78300			P
7440-36-0	Antimony	33.0	U		P
7440-38-2	Arsenic	5.0	U	W	F
7440-39-3	Barium	233			P
7440-41-7	Beryllium	1.7	B		P
7440-43-9	Cadmium	4.0	U		P
7440-70-2	Calcium	20800			P
7440-47-3	Chromium	181			P
7440-48-4	Cobalt	6.0	U		P
7440-50-8	Copper	94.8			P
7439-89-6	Iron	134000			P
7439-92-1	Lead	42.3			F
7439-95-4	Magnesium	7400			P
7439-96-5	Manganese	74.1			P
7439-97-6	Mercury	.20	U		CV
7440-02-0	Nickel	29.4	B		P
7440-09-7	Potassium	6010			P
7782-49-2	Selenium	20.0	U	W	F
7440-22-4	Silver	5.0	U		P
7440-23-5	Sodium	17900			P
7440-28-0	Thallium	2.0	U		F
7440-62-2	Vanadium	140			P
7440-66-6	Zinc	300		*	P
	Cyanide	10.0	U	N	AS

Color Before: ORANGE Clarity Before: CLOUDY Texture: _____

Color After: YELLOW Clarity After: CLEAR Artifacts: _____

Comments:
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FORM I - IN 3/90

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

TB4301

Lab Name: COMPUCHEM,RTP Contract: (2-88)-REVS

Lab Code: COMPU Case No.: 23664 SAS No.: _____ SDG No.: 247

Matrix: (soil/water) WATER Lab Sample ID: 436798

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CN036798B51

Level: (low/med) LOW Date Received: 08/10/91

% Moisture: not dec. ____ Date Analyzed: 08/16/91

Column: (pack/cap) CAP Dilution Factor: 1.0

CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

CAS NO.	COMPOUND		Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	18	B
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	5	U
75-35-4	1,1-Dichloroethene	5	U
75-34-3	1,1-Dichloroethane	5	U
540-59-0	1,2-Dichloroethene (total)	5	U
67-66-3	Chloroform	5	U
107-06-2	1,2-Dichloroethane	5	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon Tetrachloride	5	U
108-05-4	Vinyl Acetate	10	U
75-27-4	Bromodichloromethane	5	U
78-87-5	1,2-Dichloropropane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
79-01-6	Trichloroethene	5	U
124-48-1	Dibromochloromethane	5	U
79-00-5	1,1,2-Trichloroethane	5	U
71-43-2	Benzene	5	U
10061-02-6	Trans-1,3-Dichloropropene	5	U
75-25-2	Bromoform	5	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-88-3	Toluene	5	U
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
100-42-5	Styrene	5	U
1330-20-7	Total Xylenes	5	U

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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

TB4303

Lab Name: COMPUCHEM,RTP Contract: (2-88)-REVS

Lab Code: COMPU Case No.: 23664 SAS No.: _____ SDG No.: 267

Matrix: (soil/water) WATER Lab Sample ID: 436813

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CN036813A51

Level: (low/med) LOW Date Received: 08/10/91

% Moisture: not dec. ____ Date Analyzed: 08/17/91

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	6	
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	5	U
75-35-4	1,1-Dichloroethene	5	U
75-34-3	1,1-Dichloroethane	5	U
540-59-0	1,2-Dichloroethene (total)	5	U
67-66-3	Chloroform	5	U
107-06-2	1,2-Dichloroethane	5	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon Tetrachloride	5	U
108-05-4	Vinyl Acetate	10	U
75-27-4	Bromodichloromethane	5	U
78-87-5	1,2-Dichloropropane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
79-01-6	Trichloroethene	5	U
124-48-1	Dibromochloromethane	5	U
79-00-5	1,1,2-Trichloroethane	5	U
71-43-2	Benzene	5	U
10061-02-6	Trans-1,3-Dichloropropene	5	U
75-25-2	Bromoform	5	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-88-3	Toluene	5	U
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
100-42-5	Styrene	5	U
1330-20-7	Total Xylenes	5	U

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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

TB4304

Lab Name: COMPUCHEM,RTP Contract: (2-88)-REVS

Lab Code: COMPU Case No.: 23664 SAS No.: _____ SDG No.: 247

Matrix: (soil/water) WATER Lab Sample ID: 436806

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CR036806C53

Level: (low/med) LOW Date Received: 08/10/91

% Moisture: not dec. ____ Date Analyzed: 08/19/91

Column: (pack/cap) CAP Dilution Factor: 1.0

CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

CAS NO.	COMPOUND		Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	21	
67-64-1	Acetone	5	BJ
75-15-0	Carbon Disulfide	5	U
75-35-4	1,1-Dichloroethene	5	U
75-34-3	1,1-Dichloroethane	5	U
540-59-0	1,2-Dichloroethene (total)	5	U
67-66-3	Chloroform	5	U
107-06-2	1,2-Dichloroethane	5	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon Tetrachloride	5	U
108-05-4	Vinyl Acetate	10	U
75-27-4	Bromodichloromethane	5	U
78-87-5	1,2-Dichloropropane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
79-01-6	Trichloroethene	5	U
124-48-1	Dibromochloromethane	5	U
79-00-5	1,1,2-Trichloroethane	5	U
71-43-2	Benzene	5	U
10061-02-6	Trans-1,3-Dichloropropene	5	U
75-25-2	Bromoform	5	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-88-3	Toluene	5	U
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
100-42-5	Styrene	5	U
1330-20-7	Total Xylenes	5	U

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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

TB4305

Lab Name: COMPUCHEM.RTP Contract: (2-88)-REVS

Lab Code: COMPU Case No.: 23664 SAS No.: _____ SDG No.: 247

Matrix: (soil/water) WATER Lab Sample ID: 436807

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CN036807B51

Level: (low/med) LOW Date Received: 08/10/91

% Moisture: not dec. ____ Date Analyzed: 08/16/91

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	9	B
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	5	U
75-35-4	1,1-Dichloroethene	5	U
75-34-3	1,1-Dichloroethane	5	U
540-59-0	1,2-Dichloroethene (total)	5	U
67-66-3	Chloroform	5	U
107-06-2	1,2-Dichloroethane	5	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon Tetrachloride	5	U
108-05-4	Vinyl Acetate	10	U
75-27-4	Bromodichloromethane	5	U
78-87-5	1,2-Dichloropropane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
79-01-6	Trichloroethene	5	U
124-48-1	Dibromochloromethane	5	U
79-00-5	1,1,2-Trichloroethane	5	U
71-43-2	Benzene	5	U
10061-02-6	Trans-1,3-Dichloropropene	5	U
75-25-2	Bromoform	5	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-88-3	Toluene	5	U
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
100-42-5	Styrene	5	U
1330-20-7	Total Xylenes	5	U

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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LABPURE11

Lab Name: COMPUCHEM,RTP Contract: (2-88)-REVS

Lab Code: COMPU Case No.: 23664 SAS No.: _____ SDG No.: 267

Matrix: (soil/water) WATER Lab Sample ID: 439618

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CN039618B53

Level: (low/med) LOW Date Received: 08/23/91

% Moisture: not dec. ____ Date Analyzed: 08/28/91

Column: (pack/cap) CAP Dilution Factor: 1.0

CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

CAS NO.	COMPOUND		Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	15	B
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	5	U
75-35-4	1,1-Dichloroethene	5	U
75-34-3	1,1-Dichloroethane	5	U
540-59-0	1,2-Dichloroethene (total)	5	U
67-66-3	Chloroform	5	U
107-06-2	1,2-Dichloroethane	5	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon Tetrachloride	5	U
108-05-4	Vinyl Acetate	10	U
75-27-4	Bromodichloromethane	5	U
78-87-5	1,2-Dichloropropane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
79-01-6	Trichloroethene	5	U
124-48-1	Dibromochloromethane	5	U
79-00-5	1,1,2-Trichloroethane	5	U
71-43-2	Benzene	5	U
10061-02-6	Trans-1,3-Dichloropropene	5	U
75-25-2	Bromoform	5	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-88-3	Toluene	5	U
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
100-42-5	Styrene	5	U
1330-20-7	Total Xylenes	5	U

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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LABPURE21

Lab Name: COMPUCHEM,RTP Contract: (2-88)-REVS

Lab Code: COMPU Case No.: 23664 SAS No.: _____ SDG No.: 267

Matrix: (soil/water) WATER Lab Sample ID: 439619

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CN039619B53

Level: (low/med) LOW Date Received: 08/23/91

% Moisture: not dec. ____ Date Analyzed: 08/28/91

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	9	B
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	5	U
75-35-4	1,1-Dichloroethene	5	U
75-34-3	1,1-Dichloroethane	5	U
540-59-0	1,2-Dichloroethene (total)	5	U
67-66-3	Chloroform	5	U
107-06-2	1,2-Dichloroethane	5	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon Tetrachloride	5	U
108-05-4	Vinyl Acetate	10	U
75-27-4	Bromodichloromethane	5	U
78-87-5	1,2-Dichloropropane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
79-01-6	Trichloroethene	5	U
124-48-1	Dibromochloromethane	5	U
79-00-5	1,1,2-Trichloroethane	5	U
71-43-2	Benzene	5	U
10061-02-6	Trans-1,3-Dichloropropene	5	U
75-25-2	Bromoform	5	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-88-3	Toluene	5	U
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
100-42-5	Styrene	5	U
1330-20-7	Total Xylenes	5	U

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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LABPUR31D

Lab Name: COMPUCHEM,RTP Contract: (2-88)-REVS

Lab Code: COMPU Case No.: 23664 SAS No.: _____ SDG No.: 277

Matrix: (soil/water) WATER Lab Sample ID: 439631

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CN039631A53

Level: (low/med) LOW Date Received: 08/23/91

% Moisture: not dec. ____ Date Analyzed: 08/29/91

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	5	B
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	5	U
75-35-4	1,1-Dichloroethene	5	U
75-34-3	1,1-Dichloroethane	5	U
540-59-0	1,2-Dichloroethene (total)	5	U
67-66-3	Chloroform	5	U
107-06-2	1,2-Dichloroethane	5	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon Tetrachloride	5	U
108-05-4	Vinyl Acetate	10	U
75-27-4	Bromodichloromethane	5	U
78-87-5	1,2-Dichloropropane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
79-01-6	Trichloroethene	5	U
124-48-1	Dibromochloromethane	5	U
79-00-5	1,1,2-Trichloroethane	5	U
71-43-2	Benzene	5	U
10061-02-6	Trans-1,3-Dichloropropene	5	U
75-25-2	Bromoform	5	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-88-3	Toluene	5	U
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
100-42-5	Styrene	5	U
1330-20-7	Total Xylenes	5	U

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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

TRIPBL

Lab Name: COMPUCHEM,RTP Contract: (2-88)-REVS

Lab Code: COMPU Case No.: 23664 SAS No.: _____ SDG No.: 247

Matrix: (soil/water) WATER Lab Sample ID: 436804

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CN036804A51

Level: (low/med) LOW Date Received: 08/10/91

% Moisture: not dec. ____ Date Analyzed: 08/18/91

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	14	B
67-64-1	Acetone	16	
75-15-0	Carbon Disulfide	5	U
75-35-4	1,1-Dichloroethene	5	U
75-34-3	1,1-Dichloroethane	5	U
540-59-0	1,2-Dichloroethene (total)	5	U
67-66-3	Chloroform	5	U
107-06-2	1,2-Dichloroethane	5	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon Tetrachloride	5	U
108-05-4	Vinyl Acetate	10	U
75-27-4	Bromodichloromethane	5	U
78-87-5	1,2-Dichloropropane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
79-01-6	Trichloroethene	5	U
124-48-1	Dibromochloromethane	5	U
79-00-5	1,1,2-Trichloroethane	5	U
71-43-2	Benzene	5	U
10061-02-6	Trans-1,3-Dichloropropene	5	U
75-25-2	Bromoform	5	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-88-3	Toluene	5	U
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
100-42-5	Styrene	5	U
1330-20-7	Total Xylenes	5	U

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