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FINAL

SITE INSPECTION REPORT

SITE 44 JONES STREET DUMP
MCB, CAMP LEJEUNE, NORTH CAROLINA

CONTRACT TASK ORDER 0003

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LIST OF ACRONYMS AND ABBREVIATIONS

ASTM	American Society of Testing Materials
AWQC	Federal Ambient Water Quality Criteria
ATV	all terrain vehicle
Baker	Baker Environmental, Inc.
bgs	below ground surface
BTEX	benzene, toluene, ethylbenzene, and xylene
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act of 1980
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.
°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
mg/kg	milligram per kilogram
mg/L	milligrams per liter
mgd	million gallons per day
msl	mean sea level
NC DEHNR	North Carolina Department of Environment, Health and Natural Resources
NCWQS	North Carolina Water Quality Standard
NEESA	Naval Energy and Environmental Support Activity
NPL	National Priorities List
NREA	Natural Resources and Environmental Affairs
NWI	National Wetland Inventory

PAH	polynuclear aromatic hydrocarbon
PCB	polychlorinated biphenyl
PID	photoionization detector
POL	petroleum, oil, and lubricant
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 Levels
SSV	sediment screening value
SVOC	Semivolatile Organic Compound
TAL	Target Analyte List
TCE	Trichloroethylene
TCL	Target Compound List
TCLP	Toxicity Characteristic Leaching Procedure
TSCA	Toxic Substance Control Act
TSDF	treatment, storage, and disposal facility
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 44, Jones Street Dump, at Marine Corps Base (MCB), Camp Lejeune, North Carolina. 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 extent of contamination and volume/type of wastes at the site; and (3) determine if further investigations or removal actions are required.

The Jones Street Dump (Site 44) is located at Marine Corps Air Station (MCAS), New River. The site is situated near a base housing complex. The site is approximately five acres in size and is bordered to the north by Edwards Creek and to the south by Jones Street. Woods are present to the east and west.

The site operated as a disposal area during the 1950s. The dump received mainly construction debris, cloth, boards, and paint cans. It is reported that small quantities of hazardous materials may also have been disposed of on site (Water & Air Research, 1983). However, no other details are available with respect to the types or quantities of hazardous materials.

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 less than 15 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.
- Augering of five soil borings (4 to 11 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.
- Laboratory analysis of all soil samples for Target Compound List (TCL) organics and Target Analyte List (TAL) inorganics.
- Collection of one round of groundwater samples for analysis of TCL organics and TAL inorganics.
- Collection of two surface water/sediment samples along Edwards Creek for analysis of 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).

- Data validation of all sample analyses in accordance with United States Environmental Protection Agency (USEPA) guidelines.

Study Findings

The soil at Site 44 exhibited primarily inorganic contamination. Lead, chromium, manganese, and other heavy metals were detected above base-specific background levels. Only copper exceeded regional background levels. Nonmetallic inorganics such as arsenic and barium were also present above base-specific background levels. The primary organic contaminants detected on site included low levels of polynuclear aromatic hydrocarbons (PAHs) and the pesticide 4,4'-DDD in one subsurface sample and low levels of the pesticide 4,4'-DDE in one surface soil sample. No one group of organics was highly distributed in site soils.

Various inorganic compounds were detected in groundwater above state groundwater protection standards and federal drinking water standards. Shallow groundwater is not utilized as a potable water supply. Water supply wells located within a one-half mile radius of the site obtain water from the deeper portion of the Castle Hayne Aquifer at depths greater than 200 feet. Four of the five supply wells within a one-half mile radius of the site are operational; however, one supply well (MCAS-106) has been shut down due to trichloroethylene (TCE) contamination. The TCE contamination is not believed to be associated with past disposal practices at the site since (1) TCE was not detected at Site 44, (2) the well is located approximately one-quarter mile from the site, and (3) the well is located near Site 86 (Tank Area AS-419-AS421 at MCAS) and Site 54 (Crash Crew Fire Training Burn Area), which have documented solvent usage.

Low levels of PAHs (153 micrograms per kilogram [µg/kg] total PAH) were detected in monitoring well 44MW03. The PAHs could be due to suspended soil particles in the sample. It is uncertain whether "dissolved" PAHs are in groundwater since the duplicate of this sample did not contain PAH constituents. Low levels of toluene and ethylbenzene (below state or federal standards) were detected in monitoring well 44MW01.

Surface water samples collected from Edwards Creek exhibited low levels of inorganic contamination including arsenic, chromium, iron, lead, copper, and zinc. Sediment samples exhibited slightly elevated levels of copper, lead, and zinc. Trace levels of pesticides and semivolatile constituents were also detected in sediments.

Conclusions

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

1. The presence of inorganic contaminants within the soil at Site 44 may be the result of past dumping practices. Inorganic contaminant levels in soil are above base-specific background levels, but below published regional levels.

2. The low concentration of pesticides (4,4'-DDE) detected in one surface soil sample and two sediment samples may be indicative of the historical spraying activities throughout the base.

3. Subsurface soil from one boring is primarily contaminated with low levels of PAHs, which may possibly be attributable to past disposal of petroleum, oil, and lubricants (POLs).

4. None of the organic contaminants detected in soil samples exceeded the USEPA Region III risk-based concentrations.

5. Debris (i.e., metal, cement, brick, wood, plastic) and black soil (with an odor similar to motor oil) encountered during drilling operations confirm that disposal of waste materials occurred at Site 44.

6. Shallow groundwater may be impacted by former disposal activities due to (1) elevated concentrations of metals above state and federal drinking water standards, and (2) the presence of volatile organics and PAHs in groundwater. The vertical and horizontal extent of inorganic groundwater contamination is unknown.

7. Low levels of volatile organic compounds (VOCs) and PAHs (in separate wells) indicate that materials containing organic compounds (i.e., POLs, paints, etc.) may have been disposed of at (or possibly upgradient of) Site 44.

8. Based on existing water quality data, it does not appear that deep water supply wells near Site 44 have been impacted by past disposal activities.

9. VOCs and metals were detected within surface water samples collected from Edwards Creek. Contaminated groundwater may be recharging Edwards Creek.

10. The presence of semivolatile organic compounds (SVOCs), pesticides, and metals within sediment samples collected from Edwards Creek indicates that a source of contamination may exist within Site 44.

11. The background quality of soil, groundwater, surface water, and sediment is unknown. This information is required to better characterize the nature and extent of contamination at the site.

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 better define the area that disposal activities occurred.

3. Background and upgradient shallow groundwater quality should be assessed to determine whether elevated levels of inorganic contaminants detected in 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 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 composition of off-site background soils and sediment should be determined to better evaluate on-site contaminant levels.

1.0 INTRODUCTION

This report presents and evaluates the results of a Site Inspection (SI) completed at the Jones Street Dump (Site 44) 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, an SI was determined to be required at Site 44. The purpose of the SI is to collect environmental data to assess potential environmental contamination at the site. This was accomplished through environmental sampling and chemical analysis of various media.

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.

The objectives of this SI Report are to: (1) describe the SI activities performed on site during July and August 1991; (2) present the findings of the SI; and (3) present conclusions and recommendations based on the types and concentrations of contaminants detected at the site. The report also provides 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 construction records 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 are provided in Appendix F. Data validation reports for this SI as well as the other SIs (i.e., Sites 43, 63, and 65) have been submitted under separate cover.

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

- Agan Street Dump (Site 43)
- 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 44. 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.

The Jones Street Dump site is located at Marine Corps Air Station (MCAS), New River. MCAS is situated west of the New River in the northwestern section of MCB, Camp Lejeune (see Figure 1-1). The site is located behind Jones Street in a base-housing area of MCAS, just to the south of the Camp Geiger Area. The site is located less than one-quarter mile north of the housing area. The Jones Street Dump is approximately five acres in size. The site is a level open field covered by weeds and small trees, and is bordered by base residential housing on the south and east and mature forest (deciduous and coniferous) on the north and west.

MCAS 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 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 uses. 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 (DoN, 1988).

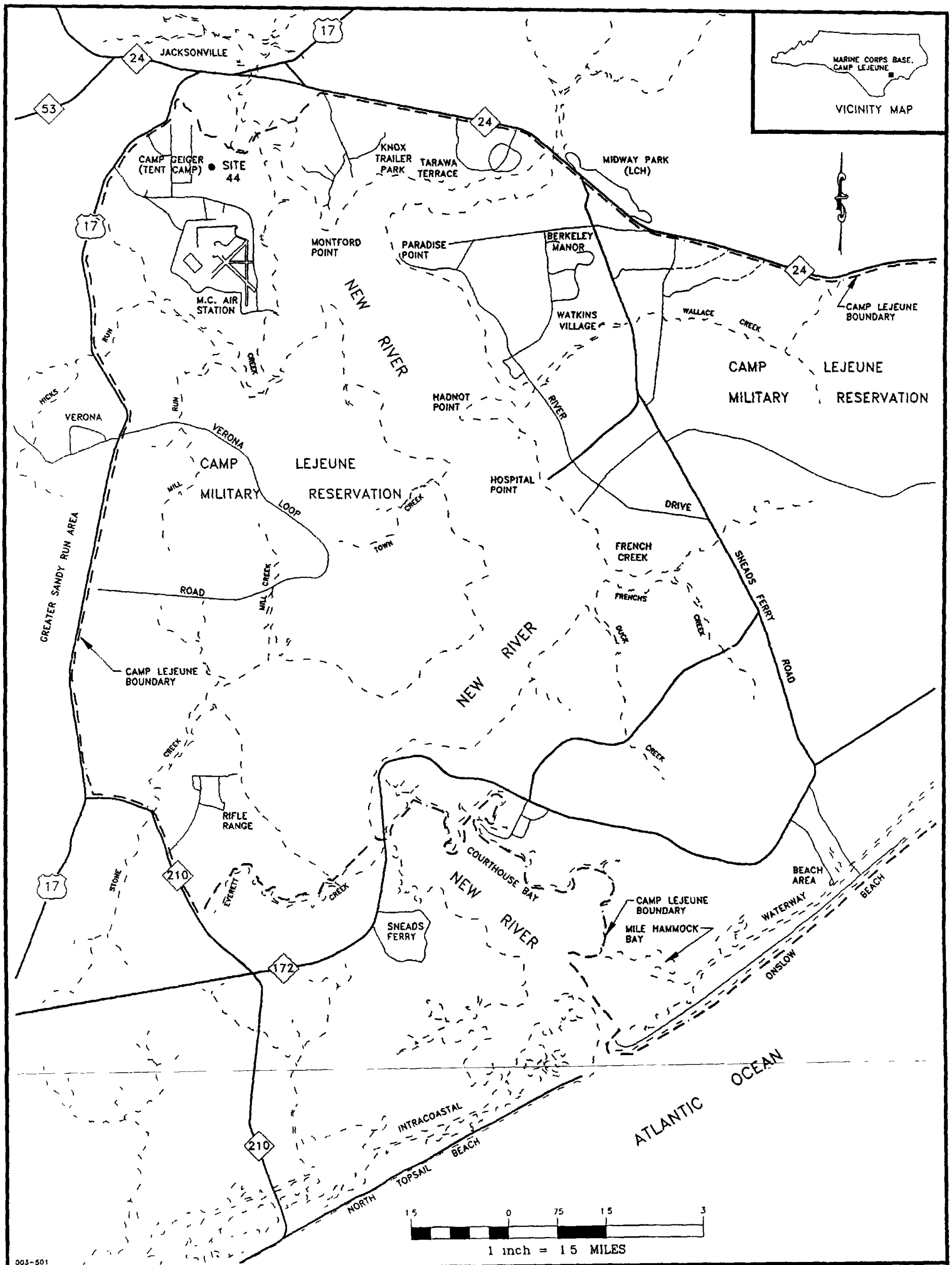

FIGURE 1-1
LOCATION MAP
SITE 44 - JONES STREET DUMP

MCB CAMP LEJEUNE
JACKSONVILLE, NORTH CAROLINA

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1.1.2 Site History

The dump was reportedly in operation in the 1950s, and received mainly debris, cloth, boards, and paint cans. It is reported that minor quantities of potentially hazardous materials (possibly petroleum, oil, and lubricants [POL] wastes) may also have been disposed of 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 Jones Street Dump.

1.1.3 Permit and Regulatory History

The Jones Street Dump, Site 44, has no permit or regulatory history of disposal operations.

1.1.4 Remedial Actions to Date

There have been no remedial actions undertaken at Site 44.

1.2 Summary of Site Investigations

An 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 construction debris and minor quantities of potentially hazardous waste were disposed of at the dump.

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

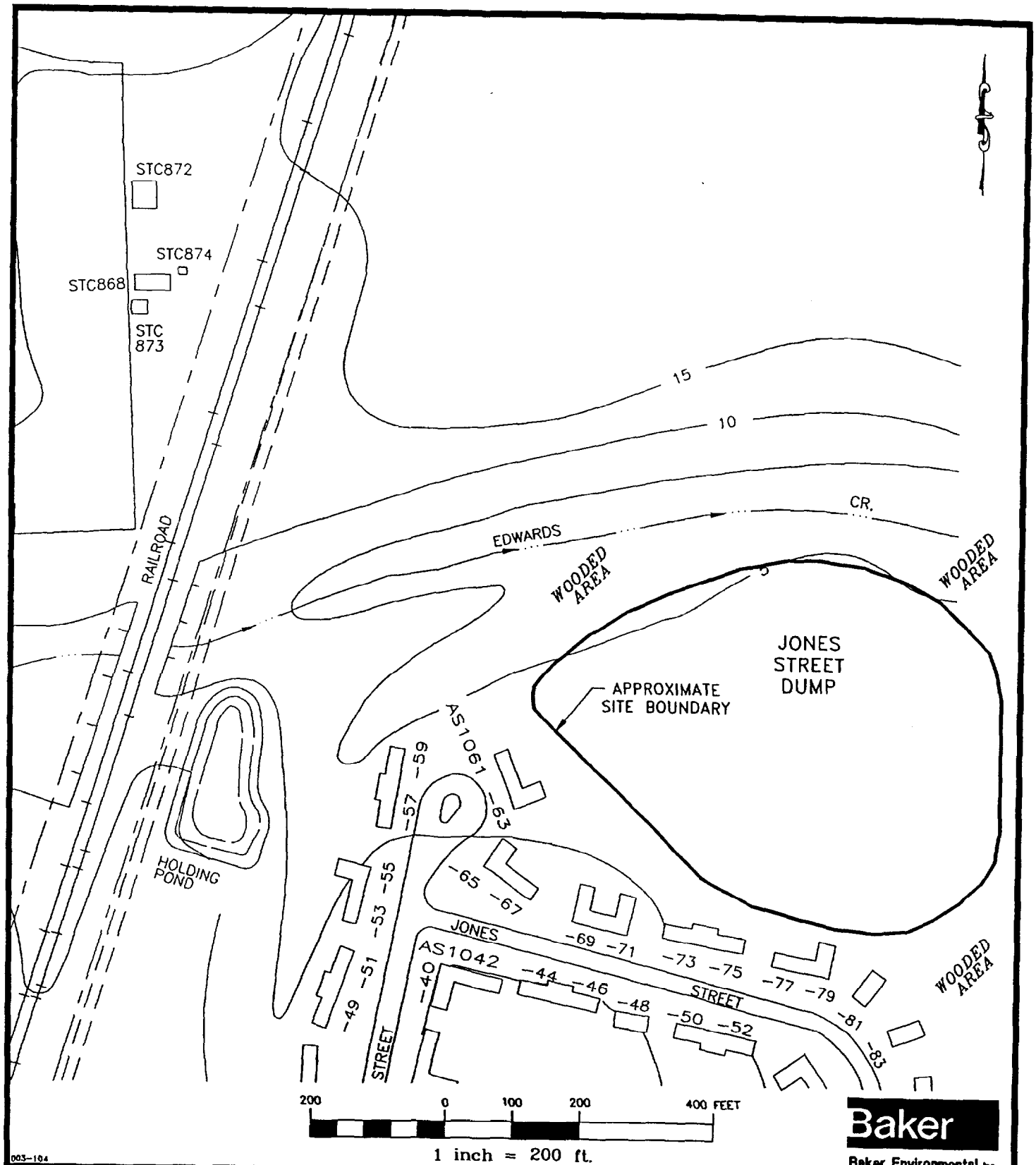
The SI was conducted to preliminarily characterize the site through the collection of environmental data. Environmental sampling and chemical analysis were conducted on soil, groundwater, surface water and sediments. The SI field activities were performed in accordance with the Final Sampling and Analysis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

- Agan Street Dump (Site 43)
- 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

Six (6) test borings were drilled on site to evaluate surface and subsurface soil conditions. The monitoring well and test boring locations, which were placed within the general area that disposal activities allegedly occurred, are shown on Figure 1-3. Soil borings, SB-5 and SB-6, were drilled using a CME-75 drilling rig. Due to the swampy conditions on site, the other soil borings were drilled using an all terrain vehicle (ATV) drilling rig. These borings were advanced to the water table using 3-1/4-inch inside diameter (I.D.) hollow stem augers. Split-spoon samples were generally collected at approximate 3-foot intervals in accordance with American Society of Testing Materials (ASTM) Method D1586.



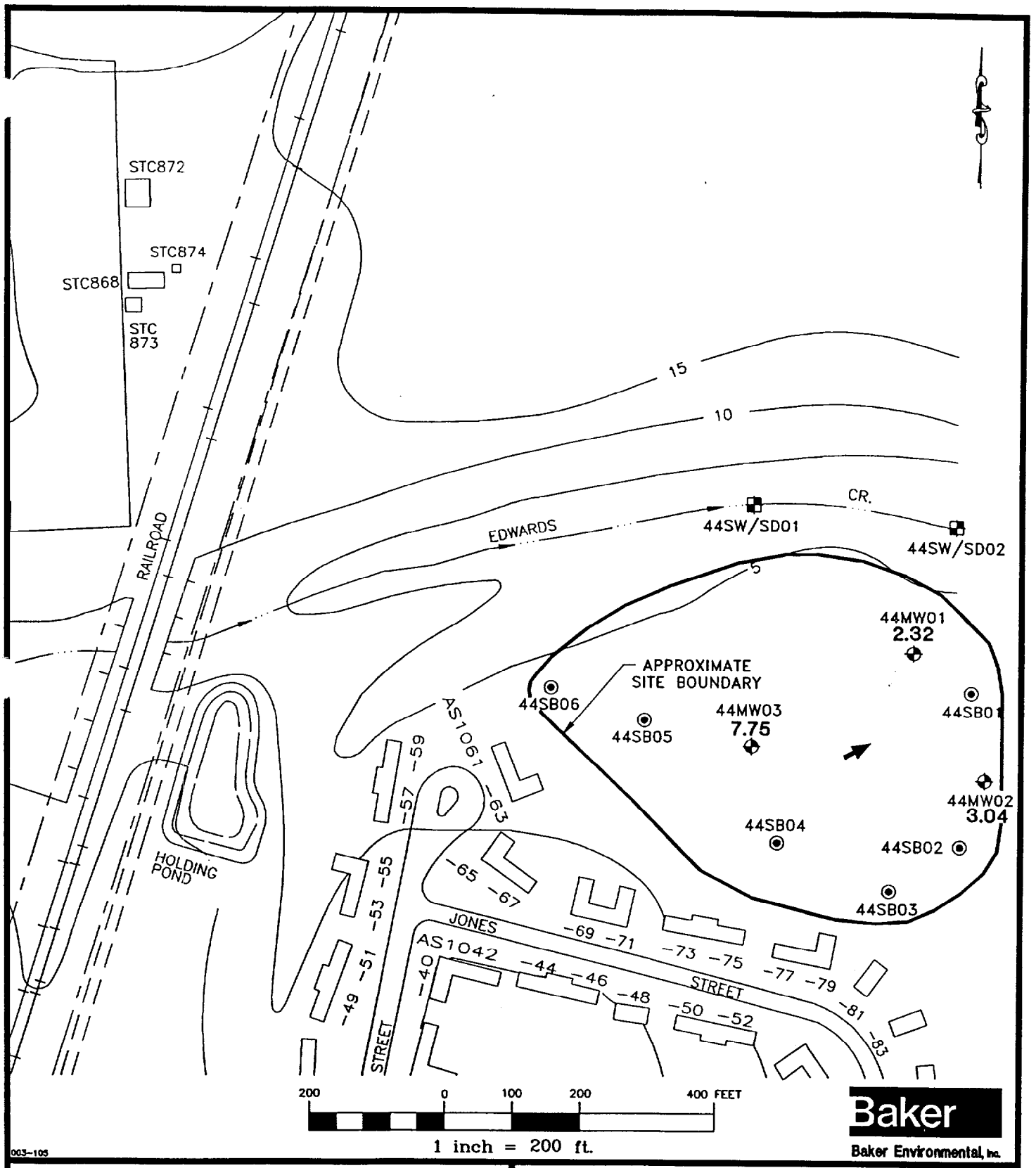
LEGEND

STREAM LOCATION AND FLOW DIRECTION

— 5 — TOPOGRAPHIC CONTOUR (FEET/MSL)

FIGURE 1-2
SITE MAP
JONES STREET DUMP
SITE 44

MCB CAMP LEJEUNE
JACKSONVILLE, NORTH CAROLINA



LEGEND

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

* SOIL BORING AND SURFACE WATER/SEDIMENT LOCATIONS WERE NOT SURVEYED

FIGURE 1-3
SAMPLE LOCATION MAP
JONES STREET DUMP
SITE 44

MCB CAMP LEJEUNE
JACKSONVILLE, NORTH CAROLINA

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 detector (PID).

Soil samples from two depths (0 to 2 feet below ground surface [bgs], and from just above the soil/groundwater interface) were collected from each borehole and 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) shallow groundwater monitoring wells on site (discussed further in Section 1.2.2). Split-spoon samples were collected from these boreholes at 5-foot intervals. Procedures for lithologic description, HNu screening, and submission of soil samples for laboratory analysis from monitoring well boreholes were identical to those for the soil borings described above.

1.2.2 Groundwater Investigation

Three (3) monitoring wells were installed on site to evaluate shallow groundwater quality. Well locations are shown on Figure 1-3. Due to the swampy conditions on site, an ATV drilling rig was used to drill and install the monitoring wells. Monitoring well boreholes were advanced using 4-1/4-inch 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:

- Two-inch I.D. schedule 40 polyvinyl chloride (PVC) screen (0.010-inch slot) and riser
- A clean quartz sand pack
- Bentonite pellets
- Cement-bentonite slurry
- Protective steel casings with hinged locking cap
- Surface cement apron
- 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 to 1.5 feet above top of screen
- Installation of one to two feet of hydrated bentonite pellets above the top of the sand pack
- Installation of cement-bentonite 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

- Surveying top of PVC casing, top of steel casing, and top of concrete apron

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 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. Groundwater samples were analyzed for full TCL organics and TAL inorganics using CLP analytical protocols.

In accordance with the Final Sampling and Analysis Plan (NUS, 1991a) 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 two (2) surface water and two (2) sediment samples were collected from Edwards Creek to assess potential impacts from the site. The samples were collected in accordance with the Final Sampling and Analysis Plan (NUS, 1991a). Surface water samples were collected directly into laboratory-supplied sample containers and sediment samples were collected using a decontaminated stainless steel trowel.

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 (NUS, 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
- 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 of 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. These drums were also 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 setting. A discussion of topography, surface hydrology and drainage, geology, hydrogeology, climate/meteorology, land use, demographics, water supplies, and critical environments is presented for MCB, Camp Lejeune and Site 44.

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. The rest of the New River at MCB, Camp Lejeune falls into the SA classification (Water and Air Research, 1983).

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 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 Soil

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 (Environmental Science and Engineering, Inc. [ESE], 1992). 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 semi-confining 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 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 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 vicinity of MCB, Camp Lejeune 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 is classified as GA. This classification of groundwater is for existing or potential sources of drinking water supplies for humans which are considered to be suitable for drinking in their natural state.

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-southwesterly 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 areas within the MCB are described in this section and listed, per geographic area, on Table 2-1. The areas listed in 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 44 is located in the Camp Geiger area of the base. 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-munit	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 uses 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, which is concentrated along the eastern edge of the developed area and in the central portion, covers about 50 acres of land. Maintenance uses, which cover about 19 acres, are 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 uses. Training tends to be conveniently accessible by foot from troop housing although less accessible from community uses, such as the dining facilities. The 16 acres of recreational uses 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 44 area is no longer used for dumping. The area is currently vegetated with weeds and small trees. The nearest buildings or facilities are a housing area adjacent to and southwest of the site. A holding pond and the Atlantic Coast Line railroad are west of the site.

2.1.7 Water Supply

MCB, Camp Lejeune water is supplied entirely from groundwater. Groundwater is 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.

The nature of the layer that separates the Castle Hayne and surficial aquifers is variable throughout MCB, Camp Lejeune. Although Harned, et al. (1989) describes the Castle Hayne Aquifer as confined, subsequent investigations have shown that the intermediate strata is most likely either not confining or semiconfining (leaking). Additional investigation will be required to determine the hydraulic continuity between the two aquifers in the vicinity of Site 44.

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 including 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 44 - Jones Street Dump

This section describes the environmental setting at the Jones Street Dump, Site 44.

2.2.1 Site Topography

Site 44 is located in the northwest section of MCB, Camp Lejeune. The topography around Site 44 slopes gently from approximately 15 feet above msl north to Edwards Creek with an approximate ground surface elevation of 5 feet above msl. A local high elevation exists approximately 15 feet above msl centrally within the boundaries of Site 44.

2.2.2 Surface Water Hydrology

Stormwater runoff would tend to drain north toward Edwards Creek. Edwards Creek and a holding pond west of the site are the only surface waters near Site 44. Due to the sloping of the local surface contours, stormwater runoff would tend to drain to Edwards Creek and not towards the holding pond. Edwards Creek runs east and north to eventually drain into the New River approximately 6,000 feet from Site 44. The 100-year floodplain boundary is approximately 4 feet msl at Site 44. Therefore, portions of the site near Edwards Creek are within the floodplain. The surface water classification at Site 44 is NC NSW. The NSW designates nutrient sensitive waters.

2.2.3 Geology and Soils

Six (6) soil borings and three (3) shallow monitoring wells were drilled and installed at Site 44. The maximum depth drilled was 15 feet. The subsurface soils encountered consisted primarily of fine sands and clays with the top foot of material being humic matter. For test borings 44MW01, 44MW02, 44MW03, 44SB01, 44SB02, 44SB03, and 44SB04, the split-spoon sampler was advanced (through the sample intervals) by the force exerted by the weight of the hammer (i.e., blows were not required). The soils encountered at these locations are categorized as very loose (for granular soils) or very soft (for cohesive soils).

The consistency of the clay soils encountered in test borings 44SB05 and 44SB06 ranged from medium stiff to stiff. The sand encountered in test borings 44SB05 and 44SB06 ranged from loose to medium dense. Debris was found in some of the samples obtained during drilling including metal, cement, and wood chips (MW03); brick, wood, and plastic chips (SB06); and a black soil that had an odor similar to motor oil (MW01).

2.2.4 Groundwater

During the advancement of test borings and monitoring well boreholes, water was encountered at depths (bgs) ranging from approximately 3.3 feet to 8.4 feet. Based upon one round of water level readings, the static water levels within the three monitoring wells that were installed range in depth (bgs) between approximately 6.8 feet and 9.5 feet. The estimated groundwater flow direction beneath the site is to the northeast (based upon the groundwater levels within the monitoring wells). Drilling and groundwater information is presented in Table 2-2.

TABLE 2-2

MONITORING WELL SUMMARY
SITE 44 - JONES STREET DUMP
MCB, CAMP LEJEUNE, NORTH CAROLINA

Well Number	Ground Surface Elevation (feet above msl)	Top of Casing PVC Elevation (feet above msl)	Depth of Well(1) (feet bgs)	Screened Interval(1) (feet)	Depth to Water(2) (feet bgs)	Groundwater Elevation (feet above msl)
44MW01	11.81	14.73	14.7	10	9.49	2.32
44MW02	9.81	12.97	12.0	10	6.77	3.04
44MW03	14.95	17.37	15.0	10	7.2	7.75

msl - mean sea level
bgs - below ground surface
(1) Taken from Well Construction Record (Appendix A).
(2) Measured with a M-scope prior to purging/sampling.

2.2.5 Population

A housing area (Jones Street, Buildings AS1040 through AS1085) is located directly southwest of Site 44. This is the MCAS housing area and it contains 325 housing units for enlisted personnel and their families. Military personnel reside in these units for an average of one year.

2.2.6 Water Supply Wells

The area around Site 44 contains at least five water supply wells as shown on Figure 2-2. Table 2-3 has drilling dates and construction information. All of the wells are screened in the Castle Hayne Aquifer. The wells are within a one-half mile radius of the Site 44. There are many other water supply wells in the area west and south of Site 44.

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] 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 creek.

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.

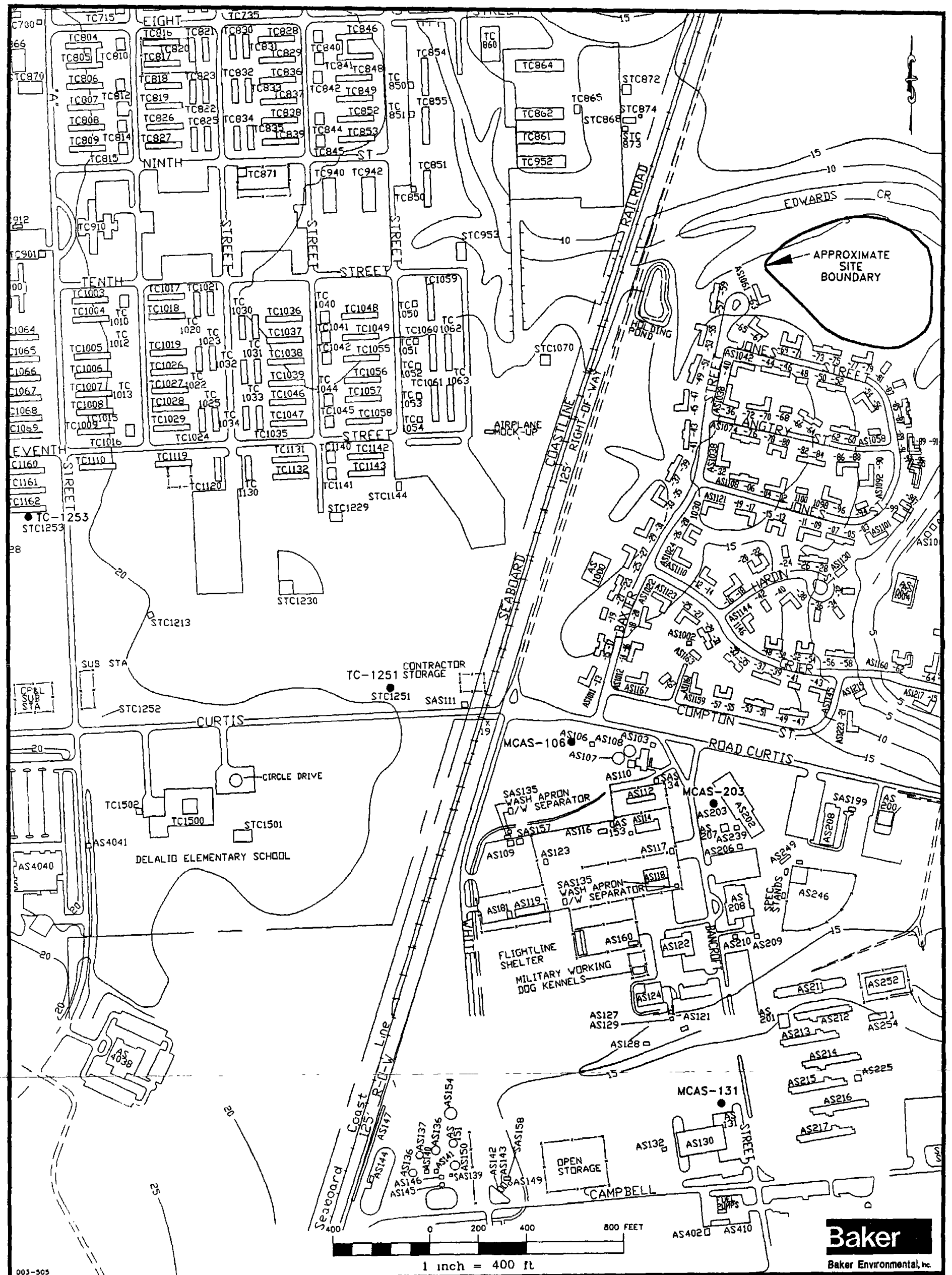
2.2.8 Exposure Pathways

The primary human health exposure pathways are dermal contact with soil, incidental soil ingestion, and inhalation of particulates. Groundwater may also be considered a pathway since the shallow aquifer, which is contaminated, may be 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 Sensitive Environments

Sensitive environments identified at Site 44 include Edwards Creek. The creek, which appeared to be slow moving during the field investigation, discharges into the New River approximately one mile northeast of the site. Contaminated surface water and sediments associated with the creek could potentially migrate to the New River.



LEGEND

MCAS-131 ● – APPROXIMATE SUPPLY WELL LOCATION

-25- – TOPOGRAPHIC CONTOUR (FEET/MSL)

NOTE WATER SUPPLY WELLS WITHIN ONE-HALF MILE OF SITE 44 ARE SHOWN

SOURCE. LANTDIV, FEB. 1992

FIGURE 2-2
WATER SUPPLY WELL LOCATION PLAN
JONES STREET DUMP
SITE 44

MCB CAMP LEJEUNE
JACKSONVILLE, NORTH CAROLINA

023140022

TABLE 2-3

POTABLE WATER SUPPLY WELL SPECIFICATIONS
SITE 44 - JONES 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)	Distance/ Direction from Site 44
TC-1251	1975	240	--	Screen	120-140 160-170	20	27P 27P	4/7/87 10/19/86	882	2,300 feet/ 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	3,200 feet/ West-Southwest
MCAS-106	1954e	--	--	--	--	17*	15.6 26P	4/7/87 10/19/86	500	2,000 feet/ South-Southwest
MCAS-131	--	200	--	--	--	17*	15 17.3	4/7/87 10/19/86	1,213	3,200 feet/ South
MCAS-203	--	173	--	--	--	17*	14.4 33P	4/7/87 10/19/86	537	2,000 feet/ South

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

The creek has been described as being stagnant, and likely tidally influenced, however, these types of environments elicit many types of ecological receptors, such as benthic macroinvertebrates, worms, insects, birds and terrestrial wildlife.

Wetlands have been identified on National Wetland Inventory (NWI) maps along the northern and eastern borders of Site 44.

3.0 OPERATIONAL HISTORY AND WASTE CHARACTERISTICS

The purpose of this section is to describe the wastes reportedly disposed at Site 44. 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 general debris, cloth, boards, old paint cans, and minor quantities of potentially hazardous wastes were disposed within Site 44 (Water and Air Research, 1983). Construction debris was encountered during drilling at locations 44MW03 (cement chips from a depth of 3.5 feet to 6.0 feet, and metal and wood chips from a depth of 8.0 feet to 10.0 feet) and 44SB06 (brick, wood, and plastic from a depth of 5.0 feet to 7.0 feet). In test boring 44MW01, a black clay layer (with some sand) that possessed a slight motor oil odor was encountered from a depth of 5.8 feet to 8.8 feet. No debris was visible on the ground surface.

There are no maps or figures which depict the location of the disposal areas; however, the former dump area is rather well defined as a clearing. The clearing is surrounded by mature woodlands and is overgrown with vegetation. The IAS indicates that the area was used as a general dump and that construction debris and potentially hazardous wastes are present. No information is available with respect to the types or quantities of hazardous waste.

3.2 Estimated Quantity and Form of Wastes

No information is available on the quantity or form of hazardous wastes disposed of at this site. The nature of the potentially hazardous waste may be related to POLs, based on information contained in the IAS.

3.3 Behavior of the Waste Components

Discarded paint that may have been disposed of at the site may contain heavy metals such as lead, cadmium, and chromium. Oil-based paints would contain such compounds as toluene and xylene. All of these constituents are mobile in the environment.

POL wastes may contain such contaminants as benzene, toluene, ethylbenzene, and xylene (BTEX), polynuclear aromatic hydrocarbons (PAHs), lead, and chromium. All of these contaminants are mobile in the environment.

4.0 PRELIMINARY SITE CHARACTERIZATION

This section presents the analytical results of environmental samples collected during the SI at Site 44. The occurrence and distribution of contaminants detected in soil, groundwater, surface water and sediment are summarized below. 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" indicates that the contaminant was not 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 for this site.

QA/QC samples consisted of duplicate samples, equipment rinsate blanks, and field blanks. Because the SI field investigation at Site 44 was conducted in conjunction with three other SI field investigations (Sites 43, 63, and 65), the collection of field QA/QC samples was based on the number of samples collected as in the case of duplicate samples (e.g., 1 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.

QA/QC samples representative of Site 44 include two duplicate samples and two trip blanks. Results of one of the two soil sample field duplicate (44SB0200D) analysis was similar to those of the sample from which it was replicated (44SB0200D). For the second duplicate sample, PAHs were detected in one groundwater sample field duplicate (44GW031D), but were not detected in the sample from which it was replicated (44GW031). This could be due to the duplicate sample being more turbid (suspended solids) than the primary sample. The suspended soil particles may be responsible for the presence of PAHs in the sample analysis.

Trip blanks that were submitted with either soil, groundwater, surface water, or sediment samples (for volatile organic analysis) exhibited low levels of methylene chloride, which are known laboratory contaminants. All QA/QC analytical results are given in Appendix F.

4.2 Soil

The results of the soil samples collected from the test borings and monitoring well boreholes are summarized on Table 4-1. Table 4-1 only lists contaminants that were detected above the

TABLE 4-1
SOIL ANALYTICAL RESULTS
SITE 44 - JONES STREET DUMP
MCB, CAMP LEJEUNE, NORTH CAROLINA

Sample Number	44MW0100		44MW0100D		44MW0106		44MW0200		44MW02035		44MW0300		44MW0306		44SB0100	
Sample Depth (feet)	0-2		0-2		6-8		0-2		3.5-5.5		0-2		6-8		0-2	
Duplicate			Duplicate													
Parameter: Units																
Volatiles: ug/kg																
Chloromethane	11	U	11	U	1600	U	11	U	12	U	12	U	1	J	14	U
Methylene Chloride	21	U	34	U	1100	U	37	U	31	U	34	U	20	U	41	U
Carbon Disulfide	6	U	6	U	800	U	6	U	6	U	6	U	6	U	7	U
Semivolatiles: ug/kg																
Benzoic Acid	1300	U	1800	U	2100	U	1800	U	1900	U	2200	U	2100	U	2200	U
2-Methylnaphthalene	370	U	380	U	420	U	370	U	390	U	440	U	170	J	450	U
Acenaphthylene	370	U	380	U	420	U	370	U	390	U	440	U	120	J	450	U
Acenaphthene	370	U	380	U	420	U	370	U	390	U	440	U	120	J	450	U
Dibenzofuran	370	U	380	U	420	U	370	U	390	U	440	U	100	J	450	U
Fluorene	370	U	380	U	420	U	370	U	390	U	440	U	100	J	450	U
Phenanthrene	370	U	380	U	420	U	370	U	390	U	440	U	320	J	450	U
Fluoranthene	370	U	380	U	420	U	370	U	390	U	440	U	160	J	450	U
Pyrene	370	U	380	U	76	J	370	U	390	U	440	U	100	J	450	U
Naphthalene	370	U	380	U	420	U	370	U	390	U	440	U	1100		450	U
Pesticides/PCBs: ug/kg																
4-4'-DDE	18	U	18	U	20	U	18	U	19	U	20	U	21	U	22	U
4-4'-DDD	18	U	18	U	20	U	18	U	19	U	20	U	48		22	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 44 - JONES STREET DUMP
MCB, CAMP LEJEUNE, NORTH CAROLINA

Sample Number Sample Depth (feet) Duplicate	44MW0100 0-2		44MW0100D 0-2 Duplicate		44MW0106 6-8		44MW0200 0-2		44MW02035 3.5-5.5		44MW0300 0-2		44MW0306 6-8		44SB0100 0-2	
Parameter: Units																
Inorganics: mg/kg																
Aluminum	9480	J	11100	J	7050	J	9570	J	4050	J	11000	J	6610	J	13100	J
Arsenic	2.0		2.3	J	1.7		3.2	J	1.2	U	10.2		3.0		3.9	
Barium	14.8		16.7		17.9		11.9		6.1		18.3		22.9		16.0	
Calcium	7500		11600		4730		87.2		54.1	U	7270		5660		142	
Chromium	13.0	J	13.9	J	10.0	J	15.5	J	5.6	J	17.4	J	12.6	J	26.2	J
Copper	111	J	44.0	J	25.4	J	27.7	J	6.2	J	62.2	J	127	J	27.6	J
Iron	7550	J	7800	J	5570	J	11500	J	1660	J	13700	J	8350	J	20500	J
Lead	7.5		7.0		10.7		7.2		5.5		9.7		44.6		12.0	
Magnesium	461		590		367		371		129		490		454		510	
Manganese	11.2		12.9		20.4		7.3		3.5		8.4		31.3		10.7	
Nickel	13.9		8.2		5.4		3.9		3.1		10.3		8.7		4.8	
Potassium	342		424		362		454		252	U	454		481		757	
Selenium	0.87	U	0.91	U	1	U	0.89		0.94	U	1	U	1	U	1.1	U
Vanadium	18.0		20.5		14.7		22.9		5.0		27.4		16.0		39.2	
Zinc	7.4		8.0		34.9		5.5		3.2		7.0		44.9		10.1	

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 44 - JONES STREET DUMP
MCB, CAMP LEJEUNE, NORTH CAROLINA

Sample Number	44SB0102		44SB0200		44SB0200D		44SB0206		44SB0300		44SB0306		44SB0400		44SB0406	
Sample Depth (feet)	2-4		0-2		0-2		6-8		0-2		6-8		0-2		6-8	
Duplicate					Duplicate											
Parameter: Units																
Volatiles: ug/kg																
Chloromethane	12	U	11	U	12	U	12	U	11	U	11	U	14	U	12	U
Methylene Chloride	39	U	30	U	35	U	32	U	21	U	24	U	45	U	41	U
Carbon Disulfide	6	U	6	U	6	U	6	U	6	U	6	U	2	J	6	U
Semivolatiles: ug/kg																
Benzoic Acid	42	J	39	J	64	J	1900	U	160	J	67	J	2100	U	2000	U
2-Methylnaphthalene	410	U	370	U	400	U	390	U	370	U	370	U	440	U	410	U
Acenaphthylene	410	U	370	U	400	U	390	U	370	U	370	U	440	U	410	U
Acenaphthene	410	U	370	U	400	U	390	U	370	U	370	U	440	U	410	U
Dibenzofuran	410	U	370	U	400	U	390	U	370	U	370	U	440	U	410	U
Fluorene	410	U	370	U	400	U	390	U	370	U	370	U	440	U	410	U
Phenanthrene	410	U	370	U	400	U	390	U	370	U	370	U	440	U	410	U
Fluoranthene	410	U	370	U	400	U	390	U	370	U	370	U	440	U	410	U
Pyrene	410	U	370	U	400	U	390	U	370	U	370	U	440	U	410	U
Naphthalene	410	U	370	U	400	U	390	U	370	U	370	U	440	U	410	U
Pesticides/PCBs: ug/kg																
4-4'-DDE	20	U	30		39		19	U	18	U	18	U	22	U	20	U
4-4'-DDD	20	U	18	U	19	U	19	U	18	U	18	U	22	U	20	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 44 - JONES STREET DUMP
MCB, CAMP LEJEUNE, NORTH CAROLINA

Sample Number	44SB0102		44SB0200		44SB0200D		44SB0206		44SB0300		44SB0306		44SB0400		44SB0406	
Sample Depth (feet)	2-4		0-2		0-2		6-8		0-2		6-8		0-2		6-8	
Duplicate					Duplicate											
Parameter: Units																
Inorganics: mg/kg																
Aluminum	3930	J	8870	J	10800	J	8780	J	7110	J	4070	J	12000	J	5250	
Arsenic	1.2	U	1.7		1.6		1.2	U	4.1		1.1	U	4.9		1.2	U
Barium	7.4		16.1		18.6		14.1		12.8		7.3		13.4		12.8	B
Calcium	36.3	U	12200		3930		77.6		4180		763		1600		56.5	U
Chromium	5.3	J	11.1	J	12.7	J	9.3	J	10	J	4.9	J	19.1	J	7.9	
Copper	2.3	J	2.8	J	2.7	J	1.5	J	2.0	J	1.9	J	2.6	J	1.4	U
Iron	4640	J	8140	J	8160	J	3850	J	7340	J	2090	J	16100	J	2650	
Lead	9.8		13.0		9.4		9.6		7.3		6.3		12.5		6.1	
Magnesium	128		414		384		270		293		129		503		231	J
Manganese	4.0		9.3		8.1		5.2		5.8		4.1		9.2		9.4	
Nickel	2.2	U	2.9		2.5		3.4		2.0		6.1		6.9		2.2	U
Potassium	261	U	313		304		364		267		237	U	536		276	J
Selenium	0.96	U	0.88	U	1.1		0.94	U	1.1		0.88	U	1	U	0.98	U
Vanadium	9.0		22.1		19.1		14.1		14.7		7.0		28.2		8.6	U
Zinc	2.8		7.1		6.3		3.5		4.0		3.4		7.4		4.0	J

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

TABLE 4-1 (Continued)
SOIL ANALYTICAL RESULTS
SITE 44 - JONES STREET DUMP
MCB, CAMP LEJEUNE, NORTH CAROLINA

Sample Number Sample Depth (feet) Duplicate	44SB0500 0-2		44SB0507 7-9		44SB0600 0-2		44SB0608 8-10	
Parameter: Units								
Volatiles: ug/kg								
Chloromethane	11	U	12	U	11	U	12	U
Methylene Chloride	16		14	U	25	U	20	U
Carbon Disulfide	6	U	6	U	6	U	6	U
Semivolatiles: ug/kg								
Benzoic Acid	1800	U	1900	U	1800	R	2000	U
2-Methylnaphthalene	370	U	400	U	370	R	410	U
Acenaphthylene	370	U	400	U	370	R	410	U
Acenaphthene	370	U	400	U	370	R	410	U
Dibenzofuran	370	U	400	U	370	R	410	U
Fluorene	370	U	400	U	370	R	410	U
Phenanthrene	370	U	400	U	370	R	410	U
Fluoranthene	370	U	400	U	370	R	410	U
Pyrene	370	U	400	U	370	R	410	U
Naphthalene	370	U	400	U	370	R	410	U
Pesticides/PCBs: ug/kg								
4-4'-DDE	18	U	19	U	18	U	20	U
4-4'-DDD	18	U	19	U	18	U	20	U

NOTES:
U - Not detected above the Contract Required Quantitation Limit (CRQL)
R - Unreliable result. Analyte may or may not be present in the sample. Supporting data necessary to confirm result.
ug/kg - Microgram per kilogram

TABLE 4-1 (Continued)
SOIL ANALYTICAL RESULTS
SITE 44 - JONES STREET DUMP
MCB, CAMP LEJEUNE, NORTH CAROLINA

Sample Number Sample Depth (feet) Duplicate	44SB0500 0-2		44SB0507 7-9		44SB0600 0-2		44SB0608 8-10	
Parameter: Units								
Inorganics: mg/kg								
Aluminum	13500		2140		13400		1310	
Arsenic	3.9		1.2	U	2.7		1.2	U
Barium	20.2		6.1	U	19.3		3.3	U
Calcium	9080		96.6	U	3550		167	U
Chromium	17.9		4.6		16.8		3.0	
Copper	2.8		4.5		5.1		2.5	
Iron	15500		1300		8750		869	
Lead	8.8		4.5		7.9		1.9	
Magnesium	594		102		576		71.9	
Manganese	12.7		5.1	U	16.8		3.1	U
Nickel	2.2	U	2.1	U	2.1	U	2.2	U
Potassium	493		250	U	617		264	U
Selenium	0.98	U	0.95	U	0.92	U	0.99	U
Vanadium	27.9		4.3		22.5		2.3	
Zinc	10.1		5.6		13.6		5.8	

NOTES:
U - Not detected above the Contract Required Quantitation Limit (CRQL)
mg/kg - Milligram per kilogram

instrument detection level. 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.

Soil samples collected from the surface (0 to 2 feet bgs) exhibited low levels of pesticides at one of the nine sampling locations. The pesticide 4,4'-DDE was detected at location 44SB02 at a concentration of 30 µg/kg. Low levels of benzoic acid (30 µg/kg - 160 µg/kg) were detected in surface soils at two of the nine locations. Carbon disulfide (CS_2)was detected at low concentrations (2 µg/kg) in one surface soil sample. Inorganic levels in surface soils were generally higher than base-specific background levels, but lower than regional levels. The distribution and level of organic contamination in surface soil is illustrated on Figure 4-1.

Subsurface soil contamination was detected sporadically and in low levels in four of the nine soil borings. Most of the subsurface soil contamination was due to low levels of PAHs [less than 2 parts per million (ppm) total PAHs] in monitoring well borehole 44MW03. Inorganic levels exceeded base-specific background valves, but not regional levels. Inorganic levels in subsurface soils were generally lower than in surface soils. Figure 4-1 shows the sample locations and the organic contaminant concentrations for Site 44.

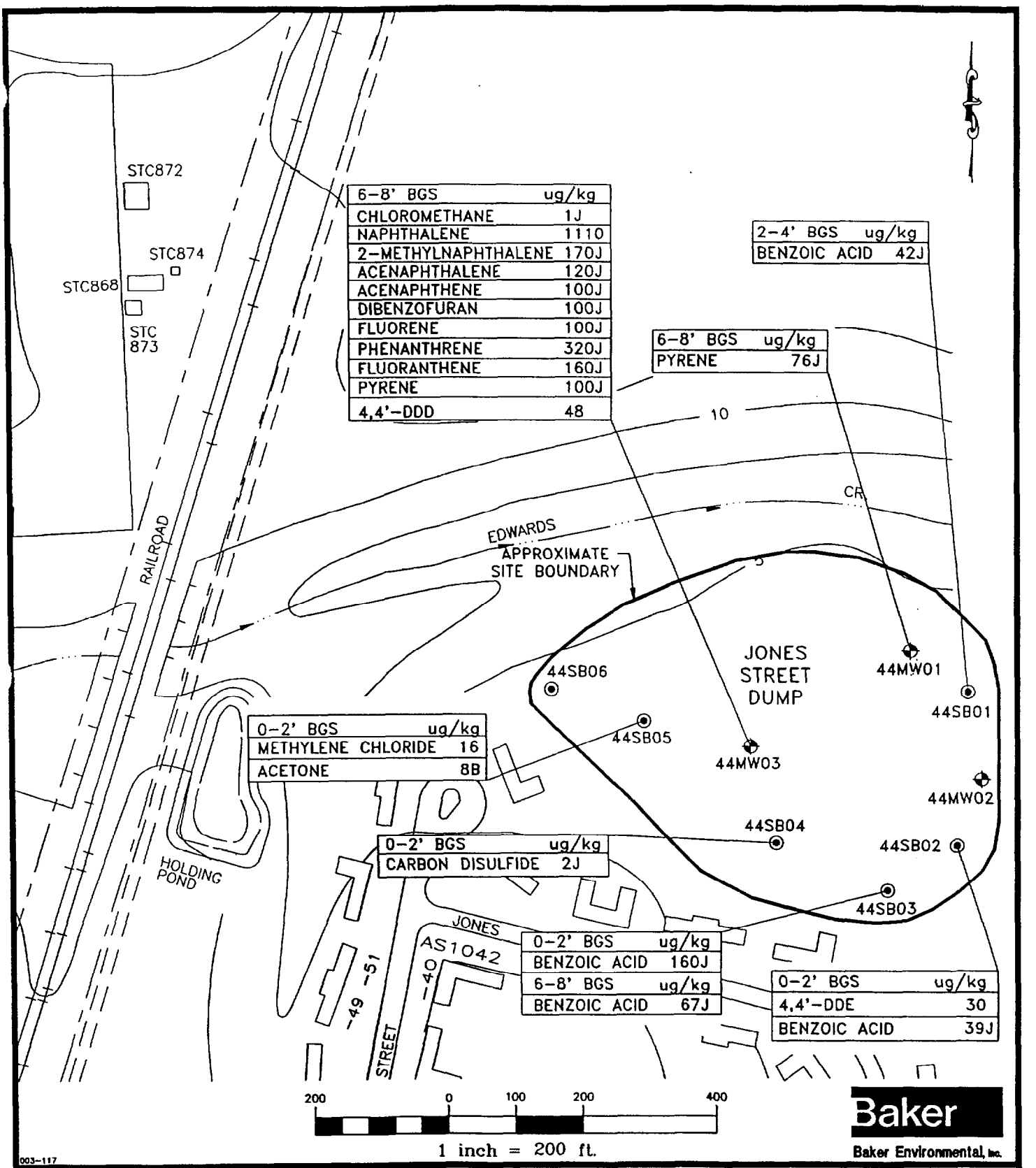
4.2.1 Soil Migration Pathways

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 44 is well vegetated and vehicular access is restricted. 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., pesticides and PAHs), these compounds would tend to adhere to the soil, and not leach into the groundwater. The only organic detected in the soil that was detected in the groundwater at this site was CS_2, which has a low K_{oc} value and would not tend to adhere to the soil.

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 USEPA Region III risk-based concentrations since there are no federal or state standards available for soil (with the exception of Toxic Substance Control Act (TSCA) guidelines for PCBs). The risk-based concentrations are based on a human health risk-level of 1×10^{-6}. USEPA Region III 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



LEGEND

- ⊙ SOIL BORING LOCATION
- ⊕ MONITORING WELL LOCATION
- J ANALYTE PRESENT. VALUE REPORTED MAY NOT BE ACCURATE OR PRECISE
- B DETECTED IN BLANK
- 0-2' BGS SAMPLE INTERVAL BELOW GROUND SURFACE
- —·····→ STREAM LOCATION AND FLOW DIRECTION
- — 5 — TOPOGRAPHIC CONTOUR (FEET/MSL)
- (ug/kg) MICROGRAM PER KILOGRAM

FIGURE 4-1
DISTRIBUTION OF ORGANIC CONTAMINANTS IN SOIL
JONES STREET DUMP
SITE 44

MCB CAMP LEJEUNE
JACKSONVILLE, NORTH CAROLINA

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.

Since there are no federal or state standards or guidelines for inorganic contaminants in soil, the inorganics detected in the soil were compared to average regional soil background concentrations and base-specific background concentrations. The base-specific background concentrations represent three samples collected during SI activities near (off site) Site 82 by NUS Corporation.

Of the detected chemicals in soil, calcium and copper exceeded the regional background concentration. The base-specific background concentrations were exceeded for the following compounds of significant toxicological importance: arsenic, barium, chromium, copper, manganese, nickel, selenium, vanadium, and zinc. Aluminum, calcium, iron, magnesium, and potassium 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

Monitoring well 44MW01 exhibited low levels of the following VOCs: CS_2 (6 micrograms per liter [µg/L]), toluene (2 µg/L), and ethylbenzene (2 µg/L). Low levels of PAH constituents were detected in monitoring well 44MW03. PAHs were also present in soil samples collected from this borehole. Elevated levels of metals were present in all three monitoring wells. Aluminum (73,000 to 537,000 µg/L), chromium (126 to 895 µg/L), iron (147,000 to 662,000 µg/L), lead (15.8 to 508 µg/L), and manganese (88 to 486 µg/L) were detected in all three monitoring wells. As noted previously in Section 2.2.6, elevated levels of aluminum, iron, and manganese were detected consistently in 75 base water supply wells. Therefore, the presence of these contaminants in shallow groundwater may not be due to disposal activities. Further investigations are needed to better assess inorganic shallow groundwater quality.

The groundwater contaminants detected above the instrument detection level are summarized in Table 4-4. Figure 4-2 illustrates the distribution of organic and selected inorganic contaminants. Laboratory data sheets (Form I) are 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, flow direction 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, CS_2 has a high solubility and a low K_{OC} value. These characteristics indicate that CS_2 is very mobile in groundwater. PAH constituents in groundwater on the other hand are not very mobile

TABLE 4-2

COMPARISON OF ORGANIC CONTAMINANTS IN SOIL TO
RISK-BASED CONCENTRATIONS
SITE 44 - JONES STREET DUMP
MCB, CAMP LEJEUNE, NORTH CAROLINA

Contaminant	Maximum Detected Concentration	Risk-Based Concentrations	
		Residential	Industrial
Volatiles (µg/kg)			
Chloromethane	1J	92,000	220,000
Methylene Chloride	16	160,000	380,000
Carbon Disulfide	2J	7,800,000	100,000,000
Semivolatiles (µg/kg)			
Benzoic Acid	160J	310,000,000	1,000,000,000
2-Methylnaphthalene	170J	NA	NA
Acenaphthylene	120J	NA	NA
Acenaphthene	120J	4,700,000	61,000,000
Dibenzofuran	100J	NA	NA
Fluorene	100J	3,100,000	41,000,000
Phenanthrene	320J	NA	NA
Fluoranthene	160J	3,100,000	41,000,000
Pyrene	100J	2,300,000	31,000,000
Naphthalene	1,100	3,100,000	41,000,000
Pesticides/PCBs (µg/kg)			
4,4'-DDE	39	35,000	84,000
4,4'-DDD	48	5,000	12,000

Notes: NA = Denotes not available.
J = Analyte present. Reported value may not be accurate or precise.

Source: Smith, 1992

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 44 - JONES STREET DUMP
MCB, CAMP LEJEUNE, NORTH CAROLINA

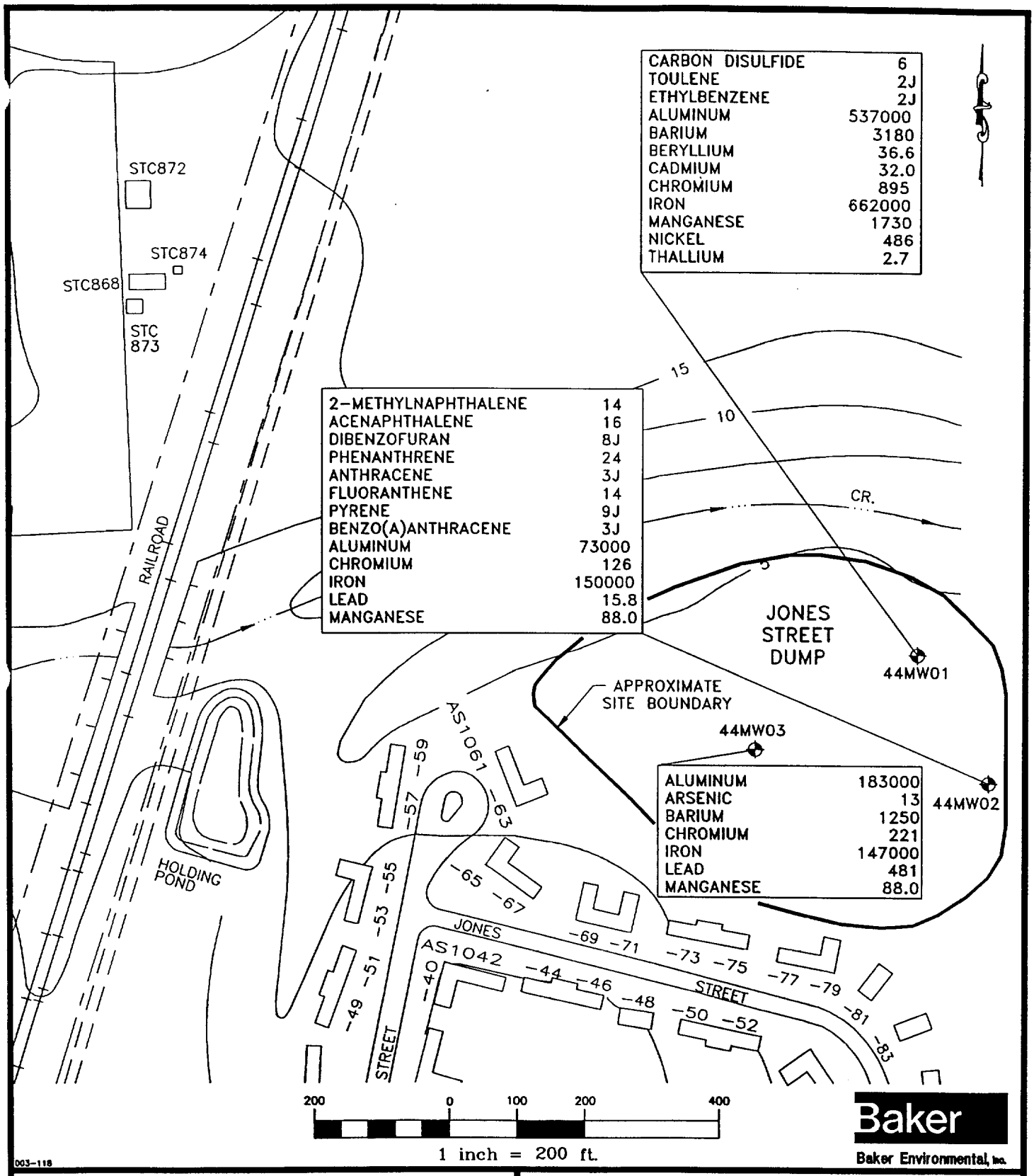
Analyte	Background(1) (mg/kg)	Background(2) (mg/kg)	Minimum Detected Concentration (mg/kg)	Maximum Detected Concentration (mg/kg)	Frequency of Detected Values	No. of Detects Greater than Background	
						(1)	(2)
Aluminum	66,000	5,390	7,100	13,500	9/9	0/9	9/9
Arsenic	--	1.9	1.7	10.2	9/9	--	8/9
Barium	554	14.0	11.9	20.2	9/9	0/9	6/9
Calcium	2,400	317	87.2	12,200	9/9	6/9	7/9
Chromium	53	6.9	10.0	26.2	9/9	0/9	9/9
Copper	25	2.1	2.0	111.0	9/9	4/9	8/9
Iron	25,000	5,070	7,340	20,500	9/9	0/9	9/9
Lead	20	13.0	7.2	13.0	9/9	0/9	0/9
Magnesium	9,200	226	293.0	594.0	9/9	0/9	9/9
Manganese	560	5.4	5.8	16.8	9/9	0/9	9/9
Nickel	20	ND	ND	13.9	7/9	0/7	7/9
Potassium	--	300	267.0	757.0	9/9	--	8/9
Selenium	--	0.52	ND	1.1	2/9	--	2/2
Vanadium	--	9.7	14.7	39.2	9/9	--	9/9
Zinc	54	4.4	4.0	13.6	9/9	0/9	8/9

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 regional soil background level averages of the constituents found in the cultivated and uncultivated soils in the eastern U.S. (Shacklette, 1984).
(2) Base-specific soil background quality, average of three samples (Halliburton/NUS, 1991).

TABLE 4-4
GROUNDWATER ANALYTICAL RESULTS
SITE 44 - JONES STREET DUMP
MCB, CAMP LEJEUNE, NORTH CAROLINA

Sample Number Location Duplicate	44GW011 MW-1		44GW021 MW-2		44GW031 MW-3		44GW031D MW-3 Duplicate	
Volatiles: ug/L								
Carbon Disulfide	6		5	U	5	U	2	J
Toluene	3	J	5	U	5	U	5	U
Ethylbenzene	2	J	5	U	5	U	5	U
Semivolatiles: ug/L								
2-Methylnaphthalene	10	U	10	U	10	U	14	
Acenaphthene	10	U	10	U	10	U	16	
Dibenzofuran	10	U	10	U	10	U	8	J
Phenanthrene	10	U	10	U	10	U	24	
Anthracene	10	U	10	U	10	U	3	J
Fluoroanthene	10	U	10	U	10	U	14	
Pyrene	10	U	10	U	10	U	9	J
Benzo(a)anthracene	10	U	10	U	10	U	3	J
Naphthalene	10	U	10	U	10	U	62	
Inorganics: ug/L								
Aluminum	537000		73000		183000		144000	
Arsenic	570	R	5.0	U	13.0		10.5	J
Barium	3180		315		1250		1210	
Beryllium	36.6		1.4		3.0		2.5	
Cadmium	32.0		4.0	U	4.0	U	5.2	
Calcium	191000		2430		197000		201000	
Chromium	895		126		221		176	
Cobalt	93.2		6.0	U	8.0		7.5	
Copper	313		28.6		86.6		78.6	
Iron	662000		150000		147000		134000	
Lead	508	R	15.8		481		427	
Magnesium	35700		3640		24100		22800	
Manganese	1730		88.0		653		641	
Mercury	1.1		0.20	U	0.20	U	0.20	
Nickel	486		21.9		42.8		45.6	
Potassium	32500		4540		22300		20900	
Sodium	7500		4060		12600		13400	
Thallium	2.7		2.0	U	2.0	U	2.0	U
Vanadium	759		184		311		266	
Zinc	2800	J	87.3	J	1160	J	1110	J

NOTES:
U - Not detected above the Contract Required Quantitation Limit (CRQL).
R - Unreliable result. Analyte may or may not be present in the sample. Supporting data necessary to confirm result.
J - Analyte present. Reported value may not be accurate or precise.
ug/L - Microgram per liter.



LEGEND

- MONITORING WELL LOCATION
- J — ANALYTE PRESENT. REPORTED VALUE MAY NOT BE ACCURATE OR PRECISE
- STREAM LOCATION AND FLOW DIRECTION
- 5 — TOPOGRAPHIC CONTOUR (FEET/MSL)

NOTES: 1. ALL RESULTS ARE REPORTED IN MICROGRAMS PER LITER (ppb)
2. ONLY INORGANIC VALUES ABOVE STATE OR FEDERAL DRINKING WATER STANDARDS ARE PROVIDED

FIGURE 4-2
DISTRIBUTION OF ORGANIC AND INORGANIC CONTAMINANTS IN GROUNDWATER
JONES STREET DUMP
SITE 44

MCB CAMP LEJEUNE
JACKSONVILLE, NORTH CAROLINA

because of high K_{OC} values. Groundwater flow direction in the surficial aquifer is to the northeast. Dissolved contaminants in groundwater potentially migrate toward and enter Edwards Creek via groundwater discharge.

Vertical migration of groundwater contaminants may be influenced by nearby potable supply wells. Supply wells have been reported to have a cone of influence of approximately 1,350 feet (Geophex, 1991). None of the supply wells are within 1,600 feet of the site.

4.3.2 Comparison With Federal and State Standards

The maximum concentrations of all positively detected organic and inorganic contaminants were compared to Maximum Contaminant Levels (MCLs), SMCLs, and North Carolina Water Quality Standards (NCWQSs) for groundwater and Health Advisories. Of the three organic contaminants detected in groundwater, only ethylbenzene and toluene have established criteria to compare with on-site concentrations. Neither contaminant exceed state or federal criteria.

Arsenic, barium, chromium, iron, lead, nickel, and manganese exceeded state drinking water standards. Arsenic, barium, beryllium, cadmium, chromium, lead, nickel, and thallium exceeded federal MCLs. Arsenic, barium, beryllium, cadmium, chromium, nickel, thallium, and zinc exceeded their respective Health Advisories. Manganese, aluminum and iron exceeded SMCLs. 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

Two surface water samples were collected from Edwards Creek north of the site. The VOCs CS_2 (18 µg/L) and 1,1,2-trichloroethane (3J µg/L) were detected in samples 44SW01 and 44SW02, respectively. Metals were also detected in both surface water samples. Iron (8,787 to 24,500 µg/L), lead (44.1 µg/L), chromium (13.3 µg/L), zinc (153 µg/L), and copper (24 µg/L) were detected at levels which exceeded Federal Ambient Water Quality Criteria (AWQC) for the protection of aquatic life.

A summary of surface water results is presented in Table 4-6. The distribution of contaminants is illustrated on Figure 4-3.

Pesticides, SVOCs (primarily phenolic and phthalate constituents), and metals were detected in the two sediment samples. Both sediment samples exhibited the pesticides 4,4'-DDE (660 to 1,000 µg/kg) and 4,4'-DDD (250 to 1,000 µg/kg). A summary of the sediment results is provided in Table 4-7 and illustrated on Figure 4-3.

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 sediments, and discharge to groundwater.

Edwards Creek is shallow and generally stagnant with a substantial amount of suspended particulate matter. However, the creek is tidally influenced and eventually discharges into the New River. Contaminated surface water can enter into groundwater via leaching, in addition to migrating off site due to episodic overland flow.

TABLE 4-5

GROUNDWATER SAMPLE DATA
FREQUENCY SUMMARY AND COMPARISON TO STANDARDS FOR INORGANICS AND ORGANICS
SITE 44 - JONES 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
Carbon Disulfide	--	--	--	ND	6	1/3	--	--	--
Ethylbenzene	29	700	700	ND	2J	1/3	0/1	0/1	0/1
Toluene	1,000	1,000	1,000	ND	3J	1/3	0/1	0/1	0/1
Aluminum	--	50 to 200(5)	--	73,000	537,000	3/3	--	3/3(5)	--
Arsenic	50	50	2(3)	ND	13	1/2	0/1	0/1	1/1
Barium	1,000	2,000(6)	2,000	315	3,180	3/3	2/3	1/3	1/3
Beryllium	--	4	0.8(3)	1.4	36.6	3/3	--	1/3	3/3
Cadmium	5	5	5	ND	32	1/3	0/1	1/1	1/1
Calcium	--	--	--	2,430	197,000	3/3	--	--	--
Chromium(7)	50	100	100	126	895	3/3	3/3	3/3	3/3
Cobalt	--	--	--	ND	93.2	2/3	--	--	--

Notes: µg/L = microgram per liter
ND = Not detected at method detection limit.
-- = Standard or advisory not available.
J = Analyte present, reported value may not be accurate or precise.
(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.
Total concentration

TABLE 4-5 (Continued)

GROUNDWATER SAMPLE DATA
FREQUENCY SUMMARY AND COMPARISON TO STANDARDS FOR INORGANICS AND ORGANICS
SITE 44 - JONES STREET DUMP
MCB, CAMP LEJEUNE, NORTH CAROLINA

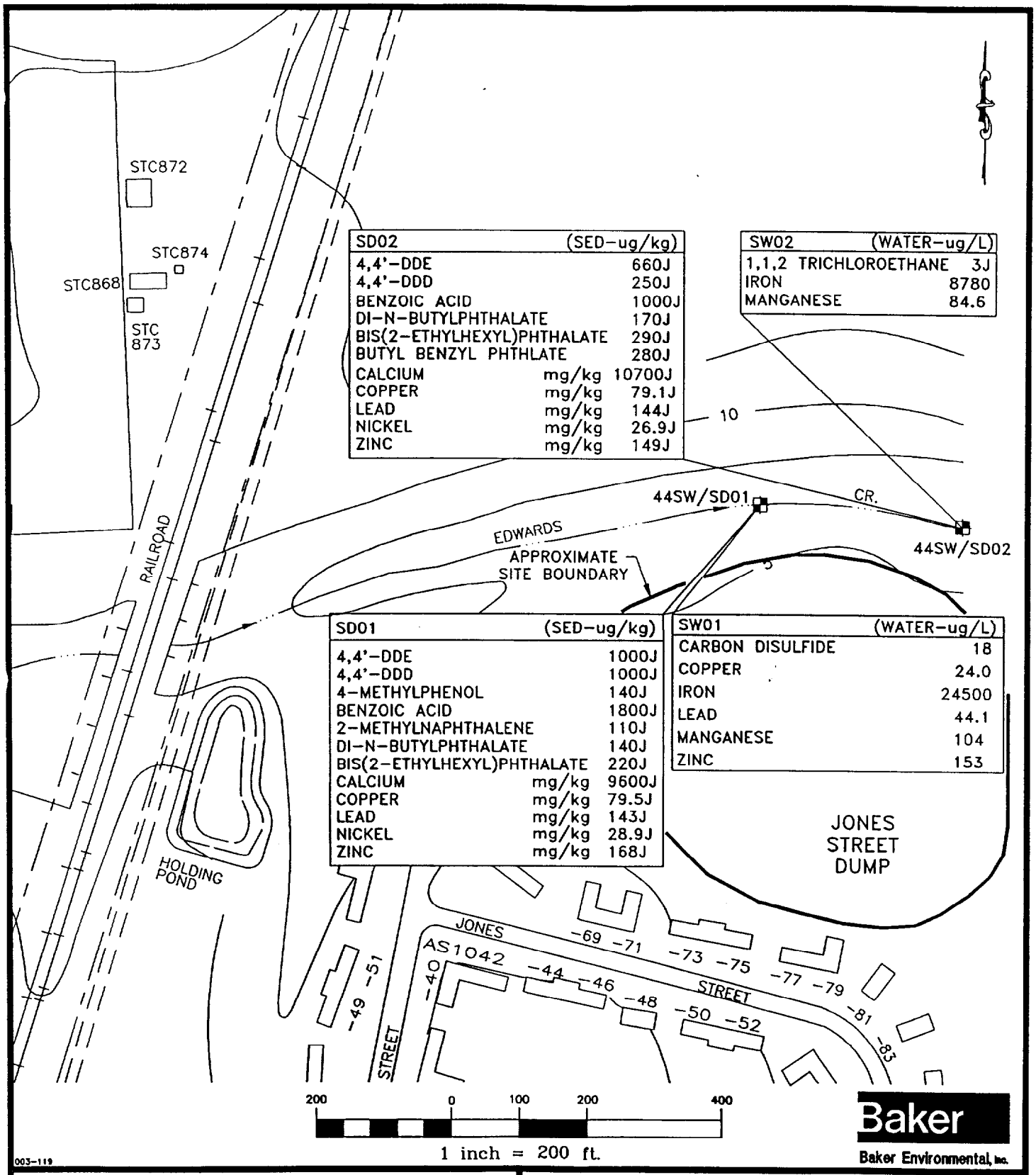
Contaminant	State Standards(1) (µg/L)	Federal MCLs(2) (µg/L)	Health Advisories(3) (µg/L)	Minimum Detected Concentration (µg/L)	Maximum Detected Concentration (µg/L)	Frequency of Detected Values	No. of Detects Greater than Standards		
							State	Federal	Health Advisories
Copper	1,000	1,300(4)	--	28.6	313	3/3	0/3	0/3	--
Iron	300	300(5)	--	147,000	662,000	3/3	3/3	3/3(5)	--
Lead	50	15(4)	--	15.8	481	2/2	1/2	2/2	--
Magnesium	--	--	--	3,640	35,700	3/3	--	--	--
Manganese	50	50(5)	--	88	1,730	3/3	3/3	3/3(5)	--
Mercury	1.1	2	2	ND	1.1	1/3	0/1	0/1	0/1
Nickel	150	100	100	21.9	486	3/3	1/3	1/3	1/3
Potassium	--	--	--	4,540	32,500	3/3	--	--	--
Sodium	--	--	--	4,060	2,600	3/3	--	--	--
Thallium	--	2	0.4	ND	2.7	1/3	--	1/1	1/1
Vanadium	--	--	--	184	759	3/3	--	--	--
Zinc	5,000	5,000(5)	2,000	87.3J	2,800J	3/3	0/3	0/3	1/3

Notes: µg/L = microgram per liter
ND = Not detected at method detection limit.
-- = Standard or advisory not available.
J = Analyte present, reported value may not be accurate or precise.
(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)

TABLE 4-6
SURFACE WATER ANALYTICAL RESULTS
SITE 44 - JONES STREET DUMP
MCB, CAMP LEJEUNE, NORTH CAROLINA

Sample Number Location	44SW01 SW-1		44SW02 SW-2	
Volatiles: ug/L				
Carbon Disulfide	18		5	U
1,1,2-Trichloroethane	5	U	3	J
Inorganics: ug/L				
Aluminum	6930		2860	
Arsenic	9.3		5	U
Barium	75.5		41.7	
Calcium	60100		44500	
Chromium	13.3		4	U
Copper	24.0		11.1	
Iron	24500		8780	
Lead	44.1		17.7	
Magnesium	11000		7870	
Manganese	104		84.6	
Nickel	9.6		9	U
Potassium	3350		2690	
Sodium	85600		60100	
Vanadium	34.1		10.1	
Zinc	153		83.0	

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



SD02	(SED-ug/kg)
4,4'-DDE	660J
4,4'-DDD	250J
BENZOIC ACID	1000J
DI-N-BUTYLPHTHALATE	170J
BIS(2-ETHYLHEXYL)PHTHALATE	290J
BUTYL BENZYL PHTHLATE	280J
CALCIUM mg/kg	10700J
COPPER mg/kg	79.1J
LEAD mg/kg	144J
NICKEL mg/kg	26.9J
ZINC mg/kg	149J

SW02	(WATER-ug/L)
1,1,2 TRICHLOROETHANE	3J
IRON	8780
MANGANESE	84.6

SD01	(SED-ug/kg)
4,4'-DDE	1000J
4,4'-DDD	1000J
4-METHYLPHENOL	140J
BENZOIC ACID	1800J
2-METHYLNAPHTHALENE	110J
DI-N-BUTYLPHTHALATE	140J
BIS(2-ETHYLHEXYL)PHTHALATE	220J
CALCIUM mg/kg	9600J
COPPER mg/kg	79.5J
LEAD mg/kg	143J
NICKEL mg/kg	28.9J
ZINC mg/kg	168J

SW01	(WATER-ug/L)
CARBON DISULFIDE	18
COPPER	24.0
IRON	24500
LEAD	44.1
MANGANESE	104
ZINC	153

LEGEND

■	SURFACE WATER/SEDIMENT SAMPLE LOCATION
J	ANALYTE PRESENT. REPORTED VALUE MAY NOT BE ACCURATE OR PRECISE
mg/kg	MILLIGRAM PER KILOGRAM
ug/L	MICROGRAM PER LITER
ug/kg	MICROGRAM PER KILOGRAM
—·—·→	STREAM LOCATION AND FLOW DIRECTION
— 5 —	TOPOGRAPHIC CONTOUR (FEET/MSL)

FIGURE 4-3
DISTRIBUTION OF ORGANIC AND INORGANIC CONTAMINANTS IN SURFACE WATER AND SEDIMENT JONES STREET DUMP - SITE 44

MCB CAMP LEJEUNE
JACKSONVILLE, NORTH CAROLINA

TABLE 4-7
SEDIMENT SAMPLE ANALYTICAL RESULTS
SITE 44 - JONES STREET DUMP
MCB, CAMP LEJEUNE, NORTH CAROLINA

Sample Number Location	44SD01 SD-1		44SD02 SD-2	
Parameter: Units				
Semivolatiles: ug/kg				
4-Methylphenol	140	J	1500	U
Benzoic Acid	1800	J	1000	J
2-Methylnaphthalene	110	J	1500	U
Di-n-butylphthalate	140	J	170	J
Butyl Benzyl Phthalate	1100	U	280	J
bis(2-Ethylhexyl)phthalate	220	J	290	J
Pesticides/PCBs: ug/kg				
4,4'-DDE	1000	J	660	J
4,4'-DDD	1000	J	250	J
Inorganics: mg/kg				
Aluminum	15700	J	10900	J
Arsenic	5.3	J	4.5	U
Barium	51.7	J	38.6	J
Calcium	9600	J	10700	J
Chromium	26.7	J	23.5	J
Copper	79.5	J	79.1	J
Iron	11300	J	10200	J
Lead	143	J	144	J
Magnesium	1410	J	1880	J
Manganese	37.5	J	78.8	J
Nickel	28.9	J	26.9	J
Potassium	799	J	960	U
Sodium	897.	U	1640	U
Vanadium	49.4	J	42.8	J
Zinc	168	J	149	J

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.
mg/kg - Milligram per kilogram.

4.4.2 Comparison with Federal and State Standards

For the surface water pathway, the maximum concentrations of the chemicals that were detected were compared to the NCWQS, federal AWQC, and the USEPA Region IV Freshwater Water Quality Screening Values (FWSVs). Because the surface water present at the site is 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, lead, manganese and zinc exceeded NCWQS for the protection of aquatic life. Chromium, copper, iron, lead, and zinc exceeded federal AWQC. Aluminum, chromium, copper, iron, lead, and zinc exceeded USEPA Region IV FWSVs. There are no criteria or standards for benzoic acid calcium, magnesium, potassium, sodium, and vanadium. Table 4-8 presents the frequency of detection summary and comparison to standards for surface water contaminants and surface water criteria.

4.4.3 Comparison With USEPA Region IV Sediment Screening Values (SSVs)

Table 4-9 presents the frequency summary and comparison to sediment screening values (SSVs) for inorganic and organic contaminants detected in the sediment. Of the inorganic compounds, copper, lead and zinc exceeded the SSVs. Both of the contaminant concentrations for copper and zinc values fell between Effects Range-Low (ER-L) and Effects Range-Median (ER-M). Lead exceeded ER-M. Arsenic, chromium, and nickel concentrations fell below their respective ER-L SSVs.

Three chemicals detected in the sediment which do not have SSVs, but are of toxicological concern, 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.

All of the organic compounds detected in the sediment that have SSVs, (4,4'-DDD, 4,4'-DDE and 2-methylnaphthalene), exceeded the ER-L. Pesticides 4,4'-DDE and 4,4'-DDD exceed the ER-M. Benzoic acid, bis(2-ethylhexyl)phthalate, butyl benzyl phthalate, di-n-butyl-phthalate, and 4-methylphenol do not have SSVs due to insufficient toxicity data on these chemicals.

TABLE

SURFACE WATER SAMPLE DATA
FREQUENCY SUMMARY AND COMPARISON TO STANDARDS
SITE 44 - JONES 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:									
Carbon disulfide	--	--	--	ND	18	1/2	--	--	--
1,1,2-Trichloroethane	--	9,400	940	ND	3J	1/2	--	0/1	0/1
Inorganics:									
Aluminum	--	--	87	2,860	6,930	2/2	--	--	2/2
Arsenic	50	--	190	ND	9.3	1/2	0/1	--	0/1
Barium	1,000	--	--	41.7	75.5	2/2	0/2	--	--
Calcium	--	--	--	44,500	60,100	2/2	--	--	--
Chromium	50(4)	11(4)	11(4)	ND	13.3	1/2	0/1	1/1	1/1
Copper	7	12	6.54	11.1	24	2/2	2/2	1/2	2/2
Iron	1,000	1,000	1,000	8,780	24,500	2/2	2/2	2/2	2/2
Lead	25	3.2	1.32	17.7	44.1	2/2	1/2	2/2	2/2
Magnesium	--	--	--	7,870	11,000	2/2	--	--	--
Manganese	50	--	--	84.6	104	2/2	2/2	--	--
Nickel	25	160	87.71	ND	9.6	1/2	0/1	0/1	0/1
Potassium	--	--	--	2,690	3,350	2/2	--	--	--
Sodium	--	--	--	60,100	85,600	2/2	--	--	--
Vanadium	--	--	--	10.1	34.1	2/2	--	--	--
Zinc	50	110	58.91	83	153	2/2	2/2	1/2	2/2

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 aquatic life or more stringent standard to support additional uses (NCAC, 1991)
(2) Federal Ambient Water Quality Standards, chronic freshwater (USEPA, 1991)
(3) FWSV - Freshwater Water Quality Screening Value (USEPA Region IV , 1993)
(4) State standard is for total chromium, AWQC and FWSV is for Chromium VI.

TABLE 4-9

SEDIMENT SAMPLE DATA
FREQUENCY SUMMARY AND COMPARISON TO SEDIMENT SCREENING VALUES
SITE 44 - JONES STREET DUMP
MCB, CAMP LEJEUNE,NORTH CAROLINA

Contaminant	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	--	--	10,900J	15,700J	2/2	--	--
Arsenic	33	85	ND	5.3J	1/2	0/1	0/1
Barium	--	--	38.6J	51.7J	2/2	--	--
Calcium	--	--	9,600J	10,700J	2/2	--	--
Chromium	80	145	23.5J	26.7J	2/2	0/2	0/2
Copper	70	390	79.1J	79.5J	2/2	2/2	0/2
Iron	--	--	10,200J	11,300J	2/2	--	--
Lead	35	110	143J	144J	2/2	2/2	2/2
Magnesium	--	--	1,410J	1,880J	2/2	--	--
Manganese	--	--	37.5J	78.8J	2/2	--	--
Nickel	30	50	26.9J	28.9J	2/2	0/2	0/2
Potassium	--	--	ND	799J	1/2	--	--
Vanadium	--	--	42.8J	49.4J	2/2	--	--
Zinc	120	270	149J	168J	2/2	2/2	0/2

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 - medium

TABLE 4-9 (Continued)

SEDIMENT SAMPLE DATA
FREQUENCY SUMMARY AND COMPARISONS TO SEDIMENT SCREENING VALUES
SITE 44 - JONES STREET DUMP
MCB, CAMP LEJEUNE, NORTH CAROLINA

Contaminant	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
Organics:							
4-Methylphenol	--	--	ND	0.14J	1/2	--	--
Benzoic Acid	--	--	1J	1.8J	2/2	--	--
2-Methylnaphthalene	0.065	0.670	ND	0.11J	1/2	1/1	0/1
Di-n-butylphthalate	--	--	0.14J	0.17J	2/2	--	--
Butyl Benzyl phthalate	--	--	ND	0.28J	1/2	--	--
Bis(2-ethylhexyl)phthalate	--	--	0.22J	0.29J	2/2	--	--
4,4'-DDE	0.002	0.015	0.66J	1J	2/2	2/2	2/2
4,4'-DDD	0.002	0.020	0.25J	1J	2/2	2/2	2/2

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 - medium

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. The presence of inorganic contaminants within the soil at Site 44 may be the result of past dumping practices. Inorganic contaminant levels in soil are above base-specific background levels, but below published regional levels.

2. The low concentration of pesticides (4,4'-DDE) detected in one surface soil sample and two sediment samples may be indicative of the historical spraying activities throughout the base.

3. Subsurface soil from one boring is primarily contaminated with low levels of PAHs, which may possibly be attributable to past disposal of POLs.

4. None of the organic contaminants detected in soil samples exceeded the USEPA Region III risk-based concentrations.

5. Debris (i.e., metal, cement, brick, wood, plastic) and black soil (with an odor similar to motor oil) encountered during drilling operations confirm that disposal of waste materials occurred at Site 44.

6. Shallow groundwater may be impacted by former disposal activities due to (1) elevated concentrations of metals above state and federal drinking water standards, and (2) the presence of volatile organics and PAHs in groundwater. The vertical and horizontal extent of inorganic groundwater contamination is unknown.

7. Low levels of VOCs and PAHs (i.e., separate wells) indicate that materials containing organic compounds (i.e., POLs, paints, etc.) may have been disposed of at (or possibly upgradient of) Site 44.

8. Based on existing water quality data, it does not appear that deep water supply wells near Site 44 have been impacted by past disposal activities.

9. VOCs and metals were detected within surface water samples collected from Edwards Creek. Contaminated groundwater may be recharging Edwards Creek.

10. The presence of SVOCs, pesticides, and metals within sediment samples collected from Edwards Creek indicates that a source of contamination may exist within Site 44.

11. The background quality of soil, groundwater, surface water, and sediment is unknown. This information is required to better characterize the nature and extent of contamination at the site.

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 better define the area that disposal activities occurred.

3. Background and upgradient shallow groundwater quality should be assessed to determine whether elevated levels of inorganic contaminants detected in 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 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 composition of off-site background soils and sediment should be determined to better evaluate on-site contaminant levels.

6. The composition of off-site background soils should be determined to better evaluate on-site contaminant levels.

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APPENDIX A
TEST BORING RECORDS

Baker

Baker Environmental, Inc.

TEST BORING AND WELL CONSTRUCTION RECORD

PROJECT: Camp Lejeune
S.O. NO.: 19003-50-SRN BORING NO.: 44MW01
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"		8-22-91	0.0 -	85° Sunny	7.0	
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	+3.6	4.7
Well Screen	2"	PVC	4.7	14.7

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						CLAY, little sand; brown - dark brown; damp; cohesive		
2.0	S-1	1.5	push		BG			
2								
3								
4								
5.0	A-N							
5						5.8'		
6						CLAY, some sand; black; damp; cohesive, slight motor oil odor		
6.7	S-2	1.0	push		BG			
7								
7.5						Hit water at 7.0'		
8						8.8'		
	S-3	0.8	push		BG			
9						SAND; brown; wet; cohesive		
10								

DRILLING CO.: Graham & Currie BAKER REP.: D. Black
DRILLER: R. Morrison BORING NO.: 44MW01 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.: 44MW01

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								
13								
14								
15						14.7'		
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.: 44MW01 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.: 44MW02
COORDINATES: EAST: NORTH:
ELEVATION: SURFACE: TOP OF STEEL CASING:

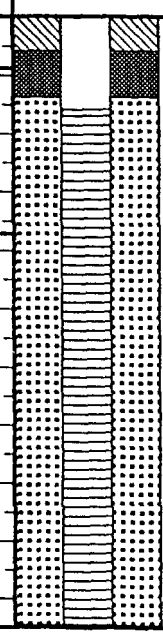
RIG: CME - 75	SPLIT SPOON	CASING	AUGERS	CORE BARREL	DATE	PROGRESS (FT)	WEATHER	WATER DEPTH (FT)	TIME
SIZE (DIAM.)	1 3/8"		4 1/4"		8-21-91	0.0 - 12.0	85° Sunny	3.3	
LENGTH	2'		5'						
TYPE	Std.		H.S.						
HAMMER WT.	140#								
FALL	30"								
STICK UP									

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		BG	CLAY, little sand; red to brown to gray; damp; cohesive 0.8'		
2						CLAY and SAND; brown to gray;		
3	A-N					Hit water at 3.3' 3.6'		
4	S-2	1.7	push		BG	SAND; brown - gray; wet; cohesive		
5								
6								
7	A-N							
8								
9								
10								



DRILLING CO.: Graham & Currie BAKER REP.: D. Black
DRILLER: R. Morrison BORING NO.: 44MW02 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.: 44MW02

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; brown to gray; wet; 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.: 44MW02 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.: 44MW03
COORDINATES: EAST:
NORTH:
ELEVATION: SURFACE:
TOP OF STEEL CASING:

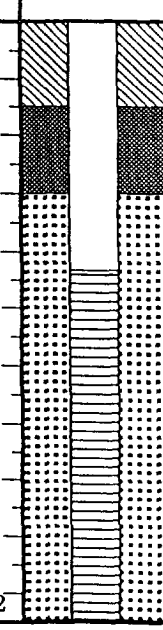
RIG: CME - 75	SPLIT SPOON	CASING	AUGERS	CORE BARREL	DATE	PROGRESS (FT)	WEATHER	WATER DEPTH (FT)	TIME
SIZE (DIAM.)	1 3/8"		4 1/4"		8-22-91	0.0 - 15.0	85° Sunny	7.8	
LENGTH	2'		5'						
TYPE	Std.		H.S.						
HAMMER WT.	140#								
FALL	30"								
STICK UP									

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	+2.7	4.3
Well Screen	2"	PVC	4.3	14.3

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	1.7	push			CLAY and SAND; gray-brown-black; damp; cohesive		
2								
3	A-N					Hit cement chips from 3.5' to 6.0'.		
4								
5								
6						Hit water at 7.8'		
7								
8						Metal and wood chips at 8.0' to 10.0'		
9								
10						Match to Sheet 2		



DRILLING CO.: Graham & Currie
BAKER REP.: D. Black
DRILLER: R. Morrison
BORING NO.: 44MW03
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.: 44MW03

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								
13								
14								
15						15.0		
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.: 44MW03 SHEET 2 OF 2

Baker

Baker Environmental, Inc.

TEST BORING RECORD

PROJECT: Camp Lejeune
S.O. NO.: 19003-50-SRN
BORING NO.: 44SB01
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"		08-21-91	0.0' to 4.0'	86° Sunny	3.8'	
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 (conc.) (ppm)	Visual Description	Elevation
1						CLAY; orange to light brown; damp; cohesive 1.0'	
2	S-1	2.0	push		BG	SAND, some clay; orange to brown; damp; cohesive	
3							
4	S-2	2.0	push		BG	Hit water at 3.8' 4.0'	
5							
6							
7							
8							
9							
10							

DRILLING CO.: Graham & Currie
BAKER REP.: D. Black
DRILLER: R. Morrison
BORING NO.: 44SB01
SHEET 1 OF 1

Baker

Baker Environmental, Inc.

TEST BORING RECORD

PROJECT: Camp Lejeune
S.O. NO.: 19003-50-SRN
BORING NO.: 44SB02
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"		08-21-91	0.0' to 9.0'	83° Sunny	8.4'	
LENGTH	2.0'		5.0'						
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

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	Elevation
1							HUMIC MATTER; dark brown; damp; cohesive 0.7'	
2		S-1	1.7	push		BG	CLAY, little sand; brown; damp; cohesive	
3		A-N						
4								
5								
6	5.7	S-2	1.7	push		BG	5.7'	
7		A-N					CLAY and SAND; brown to gray; wet; cohesive	
8							Hit water at 8.4'	
9		S-3	1.0	push		BG	9.0'	
10								

DRILLING CO.: Graham & Currie
BAKER REP.: D. Black
DRILLER: R. Morrison
BORING NO.: 44SB02
SHEET 1 OF 1

Baker

Baker Environmental, Inc.

TEST BORING RECORD

PROJECT: Camp Lejeune
S.O. NO.: 19003-50-SRN — BORING NO.: 44SB03
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"		08-21-91	0.0' to 7.0'	86° Hot,Sunny	5.7'	
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 (conc.) (ppm)	Visual Description	Elevation
1						HUMIC MATTER; dark brown; damp; cohesive 0.7'	
2	S-1	2.0	push		BG	CLAY, some sand; brown; damp; cohesive	
3	A-N						
4							
5						5.5'	
6						SAND, trace clay; gray white; wet; cohesive Hit water at 5.7'	
7	S-2	1.0	push		BG		
8							
9							
10							

DRILLING CO.: Graham & Currie — BAKER REP.: D. Black
DRILLER: R. Morrison — BORING NO.: 44SB03 — SHEET 1 OF 1

TEST BORING RECORD

PROJECT: Camp Lejeune
S.O. NO.: 19003-50-SRN BORING NO.: 44SB04
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"		08-21-91	0.0' to 8.9'	85° Sunny	8.1'	
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 (conc.) (ppm)	Visual Description	Elevation
1						HUMIC MATTER; dark brown 1.0'	
2	S-1	1.6	push		BG	CLAY, little sand; brown; damp; cohesive	
3	A-N						
4							
5						6.0'	
6						CLAY and SAND; brown to gray; damp; cohesive	
7	S-2	1.1	push		BG		
	A-N					7.8'	
8						SAND, little clay; gray; wet; cohesive Hit water at 8.1' 8.9'	
9	S-3	1.4	push		BG		
10							

DRILLING CO.: Graham & Currie BAKER REP.: D. Black
DRILLER: R. Morrison BORING NO.: 44SB04 SHEET 1 OF 1

Baker

Baker Environmental, Inc.

TEST BORING RECORD

PROJECT: Camp Lejeune Site Investigations
S.O. NO.: 19003-50-SRN
BORING NO.: 44SB05
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 10.0	88°, sunny	7.3	
LENGTH	2.0'		5.0'						
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

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	1.5	1 2 4 8		BG	**CLAY**; little sand, little brick; brown-tan; damp; cohesive	
2 – 3.0	A-N					3.2'	
4 – 5.0	S-2	1.8	3 4 4 7		BG	**SAND**; little silt; gray to brown; dry; cohesive	
5 – 6.0	A-N					5.5'	
7 – 8.0	S-4	1.8	3 3 5 5		BG	**SAND**; some clay; gray; hit water at 7.3'; damp, cohesive	
8 – 9						8.9'	
9 – 10.0	S-3	1.8	3 7 7 2		BG	**SAND**; fine; gray to brown; damp; cohesive	
10						10.0'	
						End of Boring at 10.0'	

DRILLING CO.: Graham & Currie
BAKER REP.: D. P. Black
DRILLER: R. Morrison
BORING NO.: 44SB05
SHEET 1 OF 1

Baker

Baker Environmental, Inc.

TEST BORING RECORD

PROJECT: Camp Lejeune
S.O. NO.: 19003-50-SRN BORING NO.: 44SB06
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"		7/27/91	0.0 to 11.0	88°, sunny	7.6	
LENGTH	2.0'		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

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	Elevation
1 – 2.0	S-1	1.9	1 2 4 4		BG	SAND, fine, little clay; brown to gray; damp; cohesive CLAY; gray to black; damp; cohesive	
2 – 3.0	A-N					3.5'	
4 – 5.0	S-2	1.7	4 9 11 15		BG	SAND, fine to little silt; gray 5.0'	
6 – 6.0	S-2	1.2	2 5 9 10			CLAY AND SAND, brick, wood, plastic; dark gray; dry; cohesive 7.0'	
8 – 9.0	S-4	1.7	6 10 9 12		3.8	SAND, fine, little silt; gray; damp, cohesive Hit water at 7.6 feet	
10	S-5	1.7	1 4 10 13		BG		

DRILLING CO.: Graham & Currie BAKER REP.: D. Black
DRILLER: R. Morrison BORING NO.: 44SB06 SHEET 1 OF 2

Baker

Baker Environmental, Inc.

TEST BORING RECORD

PROJECT: Camp Lejeune
S.O. NO.: 19003-50-SRN BORING NO.: 44SB06

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	Elevation
11 — 11.0	S-5				BG	SAND, fine; little silt; gray; wet, somewhat cohesive	
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							
23							
24							
25							
26							
27							
28							
29							
30							

DRILLING CO.: Graham & Currie
DRILLER: R. Morrison
BAKER REP.: D. Black
BORING NO.: 44SB06
SHEET 2 OF 2

APPENDIX B
SOIL DATA

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

44SB0100

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

Lab Code: COMPU Case No.: 23664 SAS No.: _____ SDG No.: 101

Matrix: (soil/water) SOIL Lab Sample ID: 439571

Sample wt/vol: 5.0 (g/mL) G Lab File ID: GH039571A13

Level: (low/med) LOW Date Received: 08/23/91

% Moisture: not dec. 27 Date Analyzed: 08/29/91

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	41	B
67-64-1	Acetone	37	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

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1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

44SB0100

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

Lab Code: COMPU Case No.: 23664 SAS No.: _____ SDG No.: 101

Matrix: (soil/water) SOIL Lab Sample ID: 439571

Sample wt/vol: 30.4 (g/mL) G Lab File ID: GJ039571A04

Level: (low/med) LOW Date Received: 08/23/91

% Moisture: not dec. 27 dec. ____ Date Extracted: 08/27/91

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 09/18/91

GPC Cleanup: (Y/N) N pH: 5.8 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	450	U
111-44-4	bis(2-Chloroethyl)Ether	450	U
95-57-8	2-Chlorophenol	450	U
541-73-1	1,3-Dichlorobenzene	450	U
106-46-7	1,4-Dichlorobenzene	450	U
100-51-6	Benzyl Alcohol	450	U
95-50-1	1,2-Dichlorobenzene	450	U
95-48-7	2-Methylphenol	450	U
39638-32-9	bis(2-Chloroisopropyl)Ether	450	U
106-44-5	4-Methylphenol	450	U
621-64-7	N-Nitroso-Di-n-Propylamine	450	U
67-72-1	Hexachloroethane	450	U
98-95-3	Nitrobenzene	450	U
78-59-1	Isophorone	450	U
88-75-5	2-Nitrophenol	450	U
105-67-9	2,4-Dimethylphenol	450	U
65-85-0	Benzoic Acid	2200	U
111-91-1	bis(2-Chloroethoxy)Methane	450	U
120-83-2	2,4-Dichlorophenol	450	U
120-82-1	1,2,4-Trichlorobenzene	450	U
91-20-3	Naphthalene	450	U
106-47-8	4-Chloroaniline	450	U
87-68-3	Hexachlorobutadiene	450	U
59-50-7	4-Chloro-3-Methylphenol	450	U
91-57-6	2-Methylnaphthalene	450	U
77-47-4	Hexachlorocyclopentadiene	450	U
88-06-2	2,4,6-Trichlorophenol	450	U
95-95-4	2,4,5-Trichlorophenol	2200	U
91-58-7	2-Chloronaphthalene	450	U
88-74-4	2-Nitroaniline	2200	U
131-11-3	Dimethyl Phthalate	450	U
208-96-8	Acenaphthylene	450	U
606-20-2	2,6-Dinitrotoluene	450	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

44SB0100

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

Lab Code: COMPU Case No.: 23664 SAS No.: _____ SDG No.: 101

Matrix: (soil/water) SOIL Lab Sample ID: 439571

Sample wt/vol: 30.4 (g/mL) G Lab File ID: GJ039571A04

Level: (low/med) LOW Date Received: 08/23/91

% Moisture: not dec. 27 dec. ____ Date Extracted: 08/27/91

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 09/18/91

GPC Cleanup: (Y/N) N pH: 5.8 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
99-09-2	3-Nitroaniline	2200	U
83-32-9	Acenaphthene	450	U
51-28-5	2,4-Dinitrophenol	2200	U
100-02-7	4-Nitrophenol	2200	U
132-64-9	Dibenzofuran	450	U
121-14-2	2,4-Dinitrotoluene	450	U
84-66-2	Diethylphthalate	450	U
7005-72-3	4-Chlorophenyl-phenylether	450	U
86-73-7	Fluorene	450	U
100-01-6	4-Nitroaniline	2200	U
534-52-1	4,6-Dinitro-2-Methylphenol	2200	U
86-30-6	N-Nitrosodiphenylamine (1)	450	U
101-55-3	4-Bromophenyl-phenylether	450	U
118-74-1	Hexachlorobenzene	450	U
87-86-5	Pentachlorophenol	2200	U
85-01-8	Phenanthrene	450	U
120-12-7	Anthracene	450	U
84-74-2	Di-n-Butylphthalate	450	U
206-44-0	Fluoranthene	450	U
129-00-0	Pyrene	450	U
85-68-7	Butylbenzylphthalate	450	U
91-94-1	3,3'-Dichlorobenzidine	890	U
56-55-3	Benzo(a)Anthracene	450	U
218-01-9	Chrysene	450	U
117-81-7	bis(2-Ethylhexyl)Phthalate	450	U
117-84-0	Di-n-Octyl Phthalate	450	U
205-99-2	Benzo(b)Fluoranthene	450	U
207-08-9	Benzo(k)Fluoranthene	450	U
50-32-8	Benzo(a)Pyrene	450	U
193-39-5	Indeno(1,2,3-cd)Pyrene	450	U
53-70-3	Dibenzo(a,h)Anthracene	450	U
191-24-2	Benzo(g,h,i)Perylene	450	U

(1) - Cannot be separated from Diphenylamine

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

44SB0100

Lab Name: COMPUCHEM LABORATORIES Contract: 7/88

Lab Code: COMPU Case No.: 50024 SAS No.: _____ SDG No.: 664224

Matrix (soil/water): SOIL Lab Sample ID: 439599

Level (low/med): LOW Date Received: 08/23/91

% Solids: 73.0

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	13100		*	P
7440-36-0	Antimony	9.0	U	N	P
7440-38-2	Arsenic	3.9			F
7440-39-3	Barium	16.0	B		P
7440-41-7	Beryllium	.27	U		P
7440-43-9	Cadmium	1.1	U		P
7440-70-2	Calcium	142	B		P
7440-47-3	Chromium	26.2		*	P
7440-48-4	Cobalt	1.6	U		P
7440-50-8	Copper	27.6		N*	P
7439-89-6	Iron	20500		*	P
7439-92-1	Lead	12.0			F
7439-95-4	Magnesium	510	B		P
7439-96-5	Manganese	10.7			P
7439-97-6	Mercury	.14	U		CV
7440-02-0	Nickel	4.8	B		P
7440-09-7	Potassium	757	B		P
7782-49-2	Selenium	1.1	U	W	F
7440-22-4	Silver	1.4	U	N	P
7440-23-5	Sodium	220	B		P
7440-28-0	Thallium	.53	U		F
7440-62-2	Vanadium	39.2			P
7440-66-6	Zinc	10.1		*	P
	Cyanide	.68	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.

44SB0102

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

Lab Code: COMPU Case No.: 23664 SAS No.: _____ SDG No.: 101

Matrix: (soil/water) SOIL Lab Sample ID: 439572

Sample wt/vol: 5.0 (g/mL) G Lab File ID: GH039572A13

Level: (low/med) LOW Date Received: 08/23/91

% Moisture: not dec. 19 Date Analyzed: 08/29/91

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	39	B
67-64-1	Acetone	33	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.

44SB0102

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

Lab Code: COMPU Case No.: 23664 SAS No.: _____ SDG No.: 101

Matrix: (soil/water) SOIL Lab Sample ID: 439572

Sample wt/vol: 30.1 (g/mL) G Lab File ID: GH039572A06

Level: (low/med) LOW Date Received: 08/23/91

% Moisture: not dec. 19 dec. ____ Date Extracted: 08/27/91

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 08/30/91

GPC Cleanup: (Y/N) N pH: 5.9 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-Chloroisopropyl)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	42	J
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

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

44SB0102

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

Lab Code: COMPU Case No.: 23664 SAS No.: _____ SDG No.: 101

Matrix: (soil/water) SOIL Lab Sample ID: 439572

Sample wt/vol: 30.1 (g/mL) G Lab File ID: GH039572A06

Level: (low/med) LOW Date Received: 08/23/91

% Moisture: not dec. 19 dec. ____ Date Extracted: 08/27/91

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 08/30/91

GPC Cleanup: (Y/N) N pH: 5.9 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	410	U
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

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

44SB0102

Lab Name: COMPUCHEM LABORATORIES Contract: 7/88

Lab Code: COMPU Case No.: 50024 SAS No.: _____ SDG No.: 664224

Matrix (soil/water): SOIL Lab Sample ID: 439600

Level (low/med): LOW Date Received: 08/23/91

% 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	3930		*	P
7440-36-0	Antimony	8.1	U	N	P
7440-38-2	Arsenic	1.2	U	W	F
7440-39-3	Barium	7.4	B		P
7440-41-7	Beryllium	.24	U		P
7440-43-9	Cadmium	.98	U		P
7440-70-2	Calcium	36.3	B		P
7440-47-3	Chromium	5.3		*	P
7440-48-4	Cobalt	1.5	U		P
7440-50-8	Copper	2.3	B	N*	P
7439-89-6	Iron	4640		*	P
7439-92-1	Lead	9.8			F
7439-95-4	Magnesium	128	B		P
7439-96-5	Manganese	4.0			P
7439-97-6	Mercury	.12	U		CV
7440-02-0	Nickel	2.2	U		P
7440-09-7	Potassium	261	U		P
7782-49-2	Selenium	.96	U		F
7440-22-4	Silver	1.2	U	N	P
7440-23-5	Sodium	162	B		P
7440-28-0	Thallium	.48	U		F
7440-62-2	Vanadium	9.0	B		P
7440-66-6	Zinc	2.8	B	*	P
	Cyanide	.61	U		AS

Color Before: YELLOW Clarity Before: _____ Texture: MEDIUM

Color After: COLORLESS Clarity After: _____ Artifacts: _____

Comments:

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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

44SB0200

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

Lab Code: COMPU Case No.: 23664 SAS No.: _____ SDG No.: 101

Matrix: (soil/water) SOIL Lab Sample ID: 439573

Sample wt/vol: 5.0 (g/mL) G Lab File ID: GH039573A13

Level: (low/med) LOW Date Received: 08/23/91

% Moisture: not dec. 11 Date Analyzed: 08/29/91

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	30	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	11	U
71-55-6	1,1,1-Trichloroethane	6	U
56-23-5	Carbon Tetrachloride	6	U
108-05-4	Vinyl Acetate	11	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.

44SB0200

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

Lab Code: COMPU Case No.: 23664 SAS No.: _____ SDG No.: 101

Matrix: (soil/water) SOIL Lab Sample ID: 439573

Sample wt/vol: 30.1 (g/mL) G Lab File ID: GH039573A06

Level: (low/med) LOW Date Received: 08/23/91

% Moisture: not dec. 11 dec. ____ Date Extracted: 08/27/91

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 08/30/91

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	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-Chloroisopropyl)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	39	J
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

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1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

44SB0200

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

Lab Code: COMPU Case No.: 23664 SAS No.: _____ SDG No.: 101

Matrix: (soil/water) SOIL Lab Sample ID: 439573

Sample wt/vol: 30.1 (g/mL) G Lab File ID: GH039573A06

Level: (low/med) LOW Date Received: 08/23/91

% Moisture: not dec. 11 dec. ____ Date Extracted: 08/27/91

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 08/30/91

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	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	370	U
206-44-0	Fluoranthene	370	U
129-00-0	Pyrene	370	U
85-68-7	Butylbenzylphthalate	370	U
91-94-1	3,3'-Dichlorobenzidine	740	U
56-55-3	Benzo(a)Anthracene	370	U
218-01-9	Chrysene	370	U
117-81-7	bis(2-Ethylhexyl)Phthalate	370	U
117-84-0	Di-n-Octyl Phthalate	370	U
205-99-2	Benzo(b)Fluoranthene	370	U
207-08-9	Benzo(k)Fluoranthene	370	U
50-32-8	Benzo(a)Pyrene	370	U
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	370	U

(1) - Cannot be separated from Diphenylamine

U.S. EPA - CLP

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INORGANIC ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

44SB0200

Lab Name: COMPUCHEM LABORATORIES Contract: 7/88

Lab Code: COMPU Case No.: 50024 SAS No.: _____ SDG No.: 664224

Matrix (soil/water): SOIL Lab Sample ID: 439601

Level (low/med): LOW Date Received: 08/23/91

% Solids: 89.0

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	8870		*	P
7440-36-0	Antimony	7.3	U	N	P
7440-38-2	Arsenic	1.7	B		F
7440-39-3	Barium	16.1	B		P
7440-41-7	Beryllium	.22	U		P
7440-43-9	Cadmium	.88	U		P
7440-70-2	Calcium	12200			P
7440-47-3	Chromium	11.1		*	P
7440-48-4	Cobalt	1.3	U		P
7440-50-8	Copper	2.8	B	N*	P
7439-89-6	Iron	8140		*	P
7439-92-1	Lead	13.0			F
7439-95-4	Magnesium	414	B		P
7439-96-5	Manganese	9.3			P
7439-97-6	Mercury	.11	U		CV
7440-02-0	Nickel	2.9	B		P
7440-09-7	Potassium	313	B		P
7782-49-2	Selenium	.88	U	W	F
7440-22-4	Silver	1.1	U	N	P
7440-23-5	Sodium	191	B		P
7440-28-0	Thallium	.44	U		F
7440-62-2	Vanadium	22.1			P
7440-66-6	Zinc	7.0		*	P
	Cyanide	.56	U		AS

Color Before: BROWN Clarity Before: _____ Texture: MEDIUM

Color After: YELLOW Clarity After: _____ Artifacts: _____

Comments:

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FORM I - IN 7/88

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

44SB0206

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

Lab Code: COMPU Case No.: 23664 SAS No.: _____ SDG No.: 101

Matrix: (soil/water) SOIL Lab Sample ID: 439575

Sample wt/vol: 5.0 (g/mL) G Lab File ID: GH039575A13

Level: (low/med) LOW Date Received: 08/23/91

% Moisture: not dec. 16 Date Analyzed: 08/29/91

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	32	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	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.

44SB0206

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

Lab Code: COMPU Case No.: 23664 SAS No.: _____ SDG No.: 101

Matrix: (soil/water) SOIL Lab Sample ID: 439575

Sample wt/vol: 30.3 (g/mL) G Lab File ID: GH039575B06

Level: (low/med) LOW Date Received: 08/23/91

% Moisture: not dec. 16 dec. ____ Date Extracted: 08/27/91

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 08/30/91

GPC Cleanup: (Y/N) N pH: 5.5 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-Chloroisopropyl)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

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

44SB0206

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

Lab Code: COMPU Case No.: 23664 SAS No.: _____ SDG No.: 101

Matrix: (soil/water) SOIL Lab Sample ID: 439575

Sample wt/vol: 30.3 (g/mL) G Lab File ID: GH039575B06

Level: (low/med) LOW Date Received: 08/23/91

% Moisture: not dec. 16 dec. ____ Date Extracted: 08/27/91

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 08/30/91

GPC Cleanup: (Y/N) N pH: 5.5 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	390	U
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

U.S. EPA - CLP

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INORGANIC ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

44SB0206

Lab Name: COMPUCHEM LABORATORIES Contract: 7/88

Lab Code: COMPU Case No.: 50024 SAS No.: _____ SDG No.: 664224

Matrix (soil/water): SOIL Lab Sample ID: 439603

Level (low/med): LOW Date Received: 08/23/91

% 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	8780		*	P
7440-36-0	Antimony	7.6	U	N	P
7440-38-2	Arsenic	1.2	U	W	F
7440-39-3	Barium	14.1	B		P
7440-41-7	Beryllium	.23	U		P
7440-43-9	Cadmium	.92	U		P
7440-70-2	Calcium	77.6	B		P
7440-47-3	Chromium	9.3		*	P
7440-48-4	Cobalt	1.4	U		P
7440-50-8	Copper	1.5	B	N*	P
7439-89-6	Iron	3850		*	P
7439-92-1	Lead	9.6			F
7439-95-4	Magnesium	270	B		P
7439-96-5	Manganese	5.2			P
7439-97-6	Mercury	.12	U		CV
7440-02-0	Nickel	3.4	B		P
7440-09-7	Potassium	364	B		P
7782-49-2	Selenium	.94	U		F
7440-22-4	Silver	1.2	U	N	P
7440-23-5	Sodium	157	B		P
7440-28-0	Thallium	.47	U		F
7440-62-2	Vanadium	14.1			P
7440-66-6	Zinc	3.5	B	*	P
	Cyanide	.59	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.

44SB0300

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

Lab Code: COMPU Case No.: 23664 SAS No.: _____ SDG No.: 101

Matrix: (soil/water) SOIL Lab Sample ID: 439576

Sample wt/vol: 5.0 (g/mL) G Lab File ID: GH039576A13

Level: (low/med) LOW Date Received: 08/23/91

% Moisture: not dec. 11 Date Analyzed: 08/29/91

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	21	B
67-64-1	Acetone	11	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	11	U
71-55-6	1,1,1-Trichloroethane	6	U
56-23-5	Carbon Tetrachloride	6	U
108-05-4	Vinyl Acetate	11	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.

44SB0300

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

Lab Code: COMPU Case No.: 23664 SAS No.: _____ SDG No.: 101

Matrix: (soil/water) SOIL Lab Sample ID: 439576

Sample wt/vol: 30.4 (g/mL) G Lab File ID: GH039576A06

Level: (low/med) LOW Date Received: 08/23/91

% Moisture: not dec. 11 dec. ____ Date Extracted: 08/27/91

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 08/31/91

GPC Cleanup: (Y/N) N pH: 6.8 Dilution Factor: 1.0

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-Chloroisopropyl)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	160	J
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.

44SB0300

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

Lab Code: COMPU Case No.: 23664 SAS No.: _____ SDG No.: 101

Matrix: (soil/water) SOIL Lab Sample ID: 439576

Sample wt/vol: 30.4 (g/mL) G Lab File ID: GH039576A06

Level: (low/med) LOW Date Received: 08/23/91

% Moisture: not dec. 11 dec. ____ Date Extracted: 08/27/91

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 08/31/91

GPC Cleanup: (Y/N) N pH: 6.8 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	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	370	U
206-44-0	Fluoranthene	370	U
129-00-0	Pyrene	370	U
85-68-7	Butylbenzylphthalate	370	U
91-94-1	3,3'-Dichlorobenzidine	730	U
56-55-3	Benzo(a)Anthracene	370	U
218-01-9	Chrysene	370	U
117-81-7	bis(2-Ethylhexyl)Phthalate	370	U
117-84-0	Di-n-Octyl Phthalate	370	U
205-99-2	Benzo(b)Fluoranthene	370	U
207-08-9	Benzo(k)Fluoranthene	370	U
50-32-8	Benzo(a)Pyrene	370	U
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	370	U

(1) - Cannot be separated from Diphenylamine

FORM I SV-2 1/87 Rev.

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

44SB0300

Lab Name: COMPUCHEM LABORATORIES Contract: 7/88

Lab Code: COMPU Case No.: 50024 SAS No.: _____ SDG No.: 664224

Matrix (soil/water): SOIL Lab Sample ID: 439604

Level (low/med): LOW Date Received: 08/23/91

% Solids: 89.0

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	7110		*	P
7440-36-0	Antimony	7.2	U	N	P
7440-38-2	Arsenic	4.1			F
7440-39-3	Barium	12.8	B		P
7440-41-7	Beryllium	.22	U		P
7440-43-9	Cadmium	.87	U		P
7440-70-2	Calcium	4180			P
7440-47-3	Chromium	10		*	P
7440-48-4	Cobalt	1.3	U		P
7440-50-8	Copper	2.0	B	N*	P
7439-89-6	Iron	7340		*	P
7439-92-1	Lead	7.3			F
7439-95-4	Magnesium	293	B		P
7439-96-5	Manganese	5.8			P
7439-97-6	Mercury	.11	U		CV
7440-02-0	Nickel	2.0	B		P
7440-09-7	Potassium	267	B		P
7782-49-2	Selenium	1.1			F
7440-22-4	Silver	1.1	U	N	P
7440-23-5	Sodium	143	B		P
7440-28-0	Thallium	.44	U		F
7440-62-2	Vanadium	14.7			P
7440-66-6	Zinc	4.0	B	*	P
	Cyanide	.56	U		AS

Color Before: BROWN Clarity Before: _____ Texture: MEDIUM

Color After: YELLOW Clarity After: _____ Artifacts: _____

Comments:

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FORM I - IN 7/88

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

44SB0306

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

Lab Code: COMPU Case No.: 23664 SAS No.: _____ SDG No.: 101

Matrix: (soil/water) SOIL Lab Sample ID: 439578

Sample wt/vol: 5.0 (g/mL) G Lab File ID: GH039578A13

Level: (low/med) LOW Date Received: 08/23/91

% Moisture: not dec. 11 Date Analyzed: 08/29/91

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	24	B
67-64-1	Acetone	13	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	11	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.

44SB0306

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

Lab Code: COMPU Case No.: 23664 SAS No.: _____ SDG No.: 101

Matrix: (soil/water) SOIL Lab Sample ID: 439578

Sample wt/vol: 30.4 (g/mL) G Lab File ID: GH039578A06

Level: (low/med) LOW Date Received: 08/23/91

% Moisture: not dec. 11 dec. ____ Date Extracted: 08/27/91

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 08/31/91

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	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-Chloroisopropyl)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	67	J
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.

44SB0306

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

Lab Code: COMPU Case No.: 23664 SAS No.: _____ SDG No.: 101

Matrix: (soil/water) SOIL Lab Sample ID: 439578

Sample wt/vol: 30.4 (g/mL) G Lab File ID: GH039578A06

Level: (low/med) LOW Date Received: 08/23/91

% Moisture: not dec. 11 dec. ____ Date Extracted: 08/27/91

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 08/31/91

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	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	370	U
206-44-0	Fluoranthene	370	U
129-00-0	Pyrene	370	U
85-68-7	Butylbenzylphthalate	370	U
91-94-1	3,3'-Dichlorobenzidine	730	U
56-55-3	Benzo(a)Anthracene	370	U
218-01-9	Chrysene	370	U
117-81-7	bis(2-Ethylhexyl)Phthalate	370	U
117-84-0	Di-n-Octyl Phthalate	370	U
205-99-2	Benzo(b)Fluoranthene	370	U
207-08-9	Benzo(k)Fluoranthene	370	U
50-32-8	Benzo(a)Pyrene	370	U
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	370	U

(1) - Cannot be separated from Diphenylamine

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

44SB0306

Lab Name: COMPUCHEM LABORATORIES Contract: 7/88

Lab Code: COMPU Case No.: 50024 SAS No.: _____ SDG No.: 664224

Matrix (soil/water): SOIL Lab Sample ID: 439605

Level (low/med): LOW Date Received: 08/23/91

% Solids: 89.0

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	4070		*	P
7440-36-0	Antimony	7.3	U	N	P
7440-38-2	Arsenic	1.1	U		F
7440-39-3	Barium	7.3	B		P
7440-41-7	Beryllium	.22	U		P
7440-43-9	Cadmium	.89	U		P
7440-70-2	Calcium	763	B		P
7440-47-3	Chromium	4.9		*	P
7440-48-4	Cobalt	1.3	U		P
7440-50-8	Copper	1.9	B	N*	P
7439-89-6	Iron	2090		*	P
7439-92-1	Lead	6.3		S	F
7439-95-4	Magnesium	129	B		P
7439-96-5	Manganese	4.1			P
7439-97-6	Mercury	.11	U		CV
7440-02-0	Nickel	6.1	B		P
7440-09-7	Potassium	237	U		P
7782-49-2	Selenium	.88	U		F
7440-22-4	Silver	1.1	U	N	P
7440-23-5	Sodium	155	B		P
7440-28-0	Thallium	.44	U		F
7440-62-2	Vanadium	7.0	B		P
7440-66-6	Zinc	3.4	B	*	P
	Cyanide	.56	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.

44SB0400

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

Lab Code: COMPU Case No.: 23664 SAS No.: _____ SDG No.: 101

Matrix: (soil/water) SOIL Lab Sample ID: 439580

Sample wt/vol: 5.0 (g/mL) G Lab File ID: GH039580A13

Level: (low/med) LOW Date Received: 08/23/91

% Moisture: not dec. 26 Date Analyzed: 08/29/91

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	45	B
67-64-1	Acetone	68	B
75-15-0	Carbon Disulfide	2	J
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.

44SB0400

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

Lab Code: COMPU Case No.: 23664 SAS No.: _____ SDG No.: 101

Matrix: (soil/water) SOIL Lab Sample ID: 439580

Sample wt/vol: 30.4 (g/mL) G Lab File ID: GH039580A06

Level: (low/med) LOW Date Received: 08/23/91

% Moisture: not dec. 26 dec. ____ Date Extracted: 08/27/91

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 08/31/91

GPC Cleanup: (Y/N) N pH: 5.9 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
100-51-6	Benzyl Alcohol	440	U
95-50-1	1,2-Dichlorobenzene	440	U
95-48-7	2-Methylphenol	440	U
39638-32-9	bis(2-Chloroisopropyl)Ether	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
65-85-0	Benzoic Acid	2100	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	2100	U
91-58-7	2-Chloronaphthalene	440	U
88-74-4	2-Nitroaniline	2100	U
131-11-3	Dimethyl Phthalate	440	U
208-96-8	Acenaphthylene	440	U
606-20-2	2,6-Dinitrotoluene	440	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

44SB0400

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

Lab Code: COMPU Case No.: 23664 SAS No.: _____ SDG No.: 101

Matrix: (soil/water) SOIL Lab Sample ID: 439580

Sample wt/vol: 30.4 (g/mL) G Lab File ID: GH039580A06

Level: (low/med) LOW Date Received: 08/23/91

% Moisture: not dec. 26 dec. ____ Date Extracted: 08/27/91

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 08/31/91

GPC Cleanup: (Y/N) N pH: 5.9 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
99-09-2	3-Nitroaniline	2100	U
83-32-9	Acenaphthene	440	U
51-28-5	2,4-Dinitrophenol	2100	U
100-02-7	4-Nitrophenol	2100	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	2100	U
534-52-1	4,6-Dinitro-2-Methylphenol	2100	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	2100	U
85-01-8	Phenanthrene	440	U
120-12-7	Anthracene	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	880	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	Dibenzo(a,h)Anthracene	440	U
191-24-2	Benzo(g,h,i)Perylene	440	U

(1) - Cannot be separated from Diphenylamine

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

44SB0400

Lab Name: COMPUCHEM LABORATORIES Contract: 7/88

Lab Code: COMPU Case No.: 50024 SAS No.: _____ SDG No.: 664224

Matrix (soil/water): SOIL Lab Sample ID: 439606

Level (low/med): LOW Date Received: 08/23/91

% 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	12000		*	P
7440-36-0	Antimony	8.7	U	N	P
7440-38-2	Arsenic	4.9			F
7440-39-3	Barium	13.4	B		P
7440-41-7	Beryllium	.26	U		P
7440-43-9	Cadmium	1.0	U		P
7440-70-2	Calcium	1600			P
7440-47-3	Chromium	19.1		*	P
7440-48-4	Cobalt	1.6	U		P
7440-50-8	Copper	2.6	B	N*	P
7439-89-6	Iron	16100		*	P
7439-92-1	Lead	12.5			F
7439-95-4	Magnesium	503	B		P
7439-96-5	Manganese	9.2			P
7439-97-6	Mercury	.14	U		CV
7440-02-0	Nickel	6.9	B		P
7440-09-7	Potassium	536	B		P
7782-49-2	Selenium	1.0	U	W	F
7440-22-4	Silver	1.3	U	N	P
7440-23-5	Sodium	180	B		P
7440-28-0	Thallium	.52	U		F
7440-62-2	Vanadium	28.2			P
7440-66-6	Zinc	7.4		*	P
	Cyanide	.67	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.

44SB0406

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

Lab Code: COMPU Case No.: 23664 SAS No.: _____ SDG No.: 121

Matrix: (soil/water) SOIL Lab Sample ID: 439581

Sample wt/vol: 5.0 (g/mL) G Lab File ID: GH039581A13

Level: (low/med) LOW Date Received: 08/23/91

% Moisture: not dec. 19 Date Analyzed: 08/29/91

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	41	B
67-64-1	Acetone	53	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.

44SB0406

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

Lab Code: COMPU Case No.: 23664 SAS No.: _____ SDG No.: 121

Matrix: (soil/water) SOIL Lab Sample ID: 439581

Sample wt/vol: 30.0 (g/mL) G Lab File ID: GJ039581B04

Level: (low/med) LOW Date Received: 08/23/91

% Moisture: not dec. 19 dec. ____ Date Extracted: 08/27/91

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 08/30/91

GPC Cleanup: (Y/N) N pH: 5.6 Dilution Factor: 1.00

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-Chloroisopropyl)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

FORM I SV-1 1/87 Rev.

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

44SB0406

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

Lab Code: COMPU Case No.: 23664 SAS No.: _____ SDG No.: 121

Matrix: (soil/water) SOIL Lab Sample ID: 439581

Sample wt/vol: 30.0 (g/mL) G Lab File ID: GJ039581B04

Level: (low/med) LOW Date Received: 08/23/91

% Moisture: not dec. 19 dec. ____ Date Extracted: 08/27/91

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 08/30/91

GPC Cleanup: (Y/N) N pH: 5.6 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	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	820	U
56-55-3	Benzo(a)Anthracene	410	U
218-01-9	Chrysene	410	U
117-81-7	bis(2-Ethylhexyl)Phthalate	62	BJ
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

FORM I SV-2 1/87 Rev.

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

44SB0406

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

Lab Code: COMPU Case No.: 23664 SAS No.: SDG No.: 121

Matrix: (soil/water) SOIL Lab Sample ID: 439581

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

Level: (low/med) LOW Date Received: 08/23/91

% Moisture: not dec. 19 dec. Date Extracted: 08/27/91

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 08/28/91

GPC Cleanup: (Y/N) N pH: 5.6 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

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

44SB0406

Lab Name: COMPUCHEM LABORATORIES Contract: 3/90

Lab Code: COMPU Case No.: 50024 SAS No.: _____ SDG No.: 664244

Matrix (soil/water): SOIL Lab Sample ID: 439607

Level (low/med): LOW Date Received: 08/23/91

% 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	5250			P
7440-36-0	Antimony	8.1	U	N	P
7440-38-2	Arsenic	1.2	U		F
7440-39-3	Barium	12.8	B		P
7440-41-7	Beryllium	.25	U		P
7440-43-9	Cadmium	.99	U		P
7440-70-2	Calcium	56.5	B		P
7440-47-3	Chromium	7.9			P
7440-48-4	Cobalt	1.5	U		P
7440-50-8	Copper	1.4	B		P
7439-89-6	Iron	2650			P
7439-92-1	Lead	6.1		N	F
7439-95-4	Magnesium	231	B		P
7439-96-5	Manganese	9.4		*	P
7439-97-6	Mercury	.11	U		CV
7440-02-0	Nickel	2.2	U		P
7440-09-7	Potassium	276	B		P
7782-49-2	Selenium	.98	U	WN	F
7440-22-4	Silver	1.2	U	N	P
7440-23-5	Sodium	133	B		P
7440-28-0	Thallium	.49	U		F
7440-62-2	Vanadium	8.6	B		P
7440-66-6	Zinc	4.0	B		P
	Cyanide	.61	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.

44SB0500

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: 434316

Sample wt/vol: 5.0 (g/mL) G Lab File ID: GH034316A53

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

% Moisture: not dec. 12 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	16	
67-64-1	Acetone	8	BJ
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.

44SB0500

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: 434316

Sample wt/vol: 30.4 (g/mL) G Lab File ID: GH034316B20

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

% Moisture: not dec. 12 dec. ____ Date Extracted: 07/31/91

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

GPC Cleanup: (Y/N) N pH: 6.4 Dilution Factor: 1.0

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

FORM I SV-1 1/87 Rev.

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

44SB0500

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: 434316

Sample wt/vol: 30.4 (g/mL) G Lab File ID: GH034316B20

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

% Moisture: not dec. 12 dec. ____ Date Extracted: 07/31/91

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

GPC Cleanup: (Y/N) N pH: 6.4 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	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	370	U
206-44-0	Fluoranthene	370	U
129-00-0	Pyrene	370	U
85-68-7	Butylbenzylphthalate	370	U
91-94-1	3,3'-Dichlorobenzidine	740	U
56-55-3	Benzo(a)Anthracene	370	U
218-01-9	Chrysene	370	U
117-81-7	bis(2-Ethylhexyl)Phthalate	59	BJ
117-84-0	Di-n-Octyl Phthalate	370	U
205-99-2	Benzo(b)Fluoranthene	370	U
207-08-9	Benzo(k)Fluoranthene	370	U
50-32-8	Benzo(a)Pyrene	370	U
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	370	U

(1) - Cannot be separated from Diphenylamine

FORM I SV-2 1/87 Rev.

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

44SB0500

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: 434316

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

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

% Moisture: not dec. 12 dec. ____ Date Extracted: 08/06/91

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

GPC Cleanup: (Y/N) N pH: 6.4 Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	8.9	U
319-85-7	beta-BHC	8.9	U
319-86-8	delta-BHC	8.9	U
58-89-9	gamma-BHC	8.9	U
76-44-8	Heptachlor	8.9	U
309-00-2	Aldrin	8.9	U
1024-57-3	Heptachlor epoxide	8.9	U
959-98-8	Endosulfan I	8.9	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	89	U
53494-70-5	Endrin ketone	18	U
5103-71-9	alpha-Chlordane	89	U
5103-74-2	gamma-Chlordane	89	U
8001-35-2	Toxaphene	180	U
12674-11-2	Aroclor-1016	89	U
11104-28-2	Aroclor-1221	89	U
11141-16-5	Aroclor-1232	89	U
53469-21-9	Aroclor-1242	89	U
12672-29-6	Aroclor-1248	89	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.

44SB0500

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: 434352

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	13500			P
7440-36-0	Antimony	8.2	U		P
7440-38-2	Arsenic	3.9			F
7440-39-3	Barium	20.2	B		P
7440-41-7	Beryllium	.25	U		P
7440-43-9	Cadmium	.99	U		P
7440-70-2	Calcium	9080			P
7440-47-3	Chromium	17.9			P
7440-48-4	Cobalt	1.5	U		P
7440-50-8	Copper	2.8	B		P
7439-89-6	Iron	15500			P
7439-92-1	Lead	8.8		*	F
7439-95-4	Magnesium	594	B		P
7439-96-5	Manganese	12.7			P
7439-97-6	Mercury	.12	U		CV
7440-02-0	Nickel	2.2	U		P
7440-09-7	Potassium	493	B		P
7782-49-2	Selenium	.98	U		F
7440-22-4	Silver	1.2	U	N	P
7440-23-5	Sodium	199	B		P
7440-28-0	Thallium	.49	U		F
7440-62-2	Vanadium	27.9			P
7440-66-6	Zinc	10.1			P
	Cyanide	.62	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.

44MW0100

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

Lab Code: COMPU Case No.: 23664 SAS No.: _____ SDG No.: 101

Matrix: (soil/water) SOIL Lab Sample ID: 439564

Sample wt/vol: 5.0 (g/mL) G Lab File ID: GH039564C13

Level: (low/med) LOW Date Received: 08/23/91

% Moisture: not dec. 12 Date Analyzed: 08/29/91

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	21	B
67-64-1	Acetone	16	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	11	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.

44MW0100

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

Lab Code: COMPU Case No.: 23664 SAS No.: _____ SDG No.: 101

Matrix: (soil/water) SOIL Lab Sample ID: 439564

Sample wt/vol: 30.0 (g/mL) G Lab File ID: GH039564B04

Level: (low/med) LOW Date Received: 08/23/91

% Moisture: not dec. 12 dec. ____ Date Extracted: 08/27/91

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 08/31/91

GPC Cleanup: (Y/N) N pH: 7.9 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-Chloroisopropyl)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.

44MW0100

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

Lab Code: COMPU Case No.: 23664 SAS No.: _____ SDG No.: 101

Matrix: (soil/water) SOIL Lab Sample ID: 439564

Sample wt/vol: 30.0 (g/mL) G Lab File ID: GH039564B04

Level: (low/med) LOW Date Received: 08/23/91

% Moisture: not dec. 12 dec. ____ Date Extracted: 08/27/91

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 08/31/91

GPC Cleanup: (Y/N) N pH: 7.9 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	370	U
206-44-0	Fluoranthene	370	U
129-00-0	Pyrene	370	U
85-68-7	Butylbenzylphthalate	370	U
91-94-1	3,3'-Dichlorobenzidine	750	U
56-55-3	Benzo(a)Anthracene	370	U
218-01-9	Chrysene	370	U
117-81-7	bis(2-Ethylhexyl)Phthalate	370	U
117-84-0	Di-n-Octyl Phthalate	370	U
205-99-2	Benzo(b)Fluoranthene	370	U
207-08-9	Benzo(k)Fluoranthene	370	U
50-32-8	Benzo(a)Pyrene	370	U
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	370	U

(1) - Cannot be separated from Diphenylamine

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

44MW0100

Lab Name: COMPUCHEM LABORATORIES Contract: 7/88

Lab Code: COMPU Case No.: 50024 SAS No.: _____ SDG No.: 664224

Matrix (soil/water): SOIL Lab Sample ID: 439591

Level (low/med): LOW Date Received: 08/23/91

% 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	9480		*	P
7440-36-0	Antimony	7.4	U	N	P
7440-38-2	Arsenic	2.0	B		F
7440-39-3	Barium	14.8	B		P
7440-41-7	Beryllium	.23	U		P
7440-43-9	Cadmium	.90	U		P
7440-70-2	Calcium	7500			P
7440-47-3	Chromium	13.0		*	P
7440-48-4	Cobalt	1.4	U		P
7440-50-8	Copper	111		N*	P
7439-89-6	Iron	7550		*	P
7439-92-1	Lead	7.5			F
7439-95-4	Magnesium	461	B		P
7439-96-5	Manganese	11.2			P
7439-97-6	Mercury	.11	U		CV
7440-02-0	Nickel	13.9			P
7440-09-7	Potassium	342	B		P
7782-49-2	Selenium	.87	U	W	F
7440-22-4	Silver	1.1	U	N	P
7440-23-5	Sodium	169	B		P
7440-28-0	Thallium	.44	U		F
7440-62-2	Vanadium	18.0			P
7440-66-6	Zinc	7.4		*	P
	Cyanide	.57	U		AS

Color Before: BROWN Clarity Before: _____ Texture: MEDIUM

Color After: YELLOW Clarity After: _____ Artifacts: _____

Comments:

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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

44MW0106

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

Lab Code: COMPU Case No.: 23664 SAS No.: _____ SDG No.: 101

Matrix: (soil/water) SOIL Lab Sample ID: 439566

Sample wt/vol: 4.0 (g/mL) G Lab File ID: C3R39566B03

Level: (low/med) MED Date Received: 08/23/91

% Moisture: not dec. 22 Date Analyzed: 08/30/91

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	1600	U
74-83-9	Bromomethane	1600	U
75-01-4	Vinyl Chloride	1600	U
75-00-3	Chloroethane	1600	U
75-09-2	Methylene Chloride	1100	B
67-64-1	Acetone	1500	BJ
75-15-0	Carbon Disulfide	800	U
75-35-4	1,1-Dichloroethene	800	U
75-34-3	1,1-Dichloroethane	800	U
540-59-0	1,2-Dichloroethene (total)	800	U
67-66-3	Chloroform	800	U
107-06-2	1,2-Dichloroethane	800	U
78-93-3	2-Butanone	1600	U
71-55-6	1,1,1-Trichloroethane	800	U
56-23-5	Carbon Tetrachloride	800	U
108-05-4	Vinyl Acetate	1600	U
75-27-4	Bromodichloromethane	800	U
78-87-5	1,2-Dichloropropane	800	U
10061-01-5	cis-1,3-Dichloropropene	800	U
79-01-6	Trichloroethene	800	U
124-48-1	Dibromochloromethane	800	U
79-00-5	1,1,2-Trichloroethane	800	U
71-43-2	Benzene	800	U
10061-02-6	Trans-1,3-Dichloropropene	800	U
75-25-2	Bromoform	800	U
108-10-1	4-Methyl-2-Pentanone	1600	U
591-78-6	2-Hexanone	1600	U
127-18-4	Tetrachloroethene	800	U
79-34-5	1,1,2,2-Tetrachloroethane	800	U
108-88-3	Toluene	800	U
108-90-7	Chlorobenzene	800	U
100-41-4	Ethylbenzene	800	U
100-42-5	Styrene	800	U
1330-20-7	Total Xylenes	800	U

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

44MW0106

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

Lab Code: COMPU Case No.: 23664 SAS No.: _____ SDG No.: 101

Matrix: (soil/water) SOIL Lab Sample ID: 439566

Sample wt/vol: 30.0 (g/mL) G Lab File ID: GH039566C04

Level: (low/med) LOW Date Received: 08/23/91

% Moisture: not dec. 22 dec. ____ Date Extracted: 08/27/91

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 08/31/91

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	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-Chloroisopropyl)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	64	BJ
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	2100	U
91-58-7	2-Chloronaphthalene	420	U
88-74-4	2-Nitroaniline	2100	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.

44MW0106

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

Lab Code: COMPU Case No.: 23664 SAS No.: _____ SDG No.: 101

Matrix: (soil/water) SOIL Lab Sample ID: 439566

Sample wt/vol: 30.0 (g/mL) G Lab File ID: GH039566C04

Level: (low/med) LOW Date Received: 08/23/91

% Moisture: not dec. 22 dec. ____ Date Extracted: 08/27/91

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 08/31/91

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	2100	U
83-32-9	Acenaphthene	420	U
51-28-5	2,4-Dinitrophenol	2100	U
100-02-7	4-Nitrophenol	2100	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	2100	U
534-52-1	4,6-Dinitro-2-Methylphenol	2100	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	2100	U
85-01-8	Phenanthrene	420	U
120-12-7	Anthracene	420	U
84-74-2	Di-n-Butylphthalate	420	U
206-44-0	Fluoranthene	420	U
129-00-0	Pyrene	76	J
85-68-7	Butylbenzylphthalate	420	U
91-94-1	3,3'-Dichlorobenzidine	850	U
56-55-3	Benzo(a)Anthracene	420	U
218-01-9	Chrysene	420	U
117-81-7	bis(2-Ethylhexyl)Phthalate	97	BJ
117-84-0	Di-n-Octyl Phthalate	420	U
205-99-2	Benzo(b)Fluoranthene	420	U
207-08-9	Benzo(k)Fluoranthene	420	U
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

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

44MW0106

Lab Name: COMPUCHEM LABORATORIES Contract: 7/88

Lab Code: COMPU Case No.: 50024 SAS No.: _____ SDG No.: 664224

Matrix (soil/water): SOIL Lab Sample ID: 439594

Level (low/med): LOW Date Received: 08/23/91

% Solids: 78.0

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	7050		*	P
7440-36-0	Antimony	8.5	U	N	P
7440-38-2	Arsenic	1.7	B		F
7440-39-3	Barium	17.9	B		P
7440-41-7	Beryllium	.26	U		P
7440-43-9	Cadmium	1.0	U		P
7440-70-2	Calcium	4730			P
7440-47-3	Chromium	10.0		*	P
7440-48-4	Cobalt	1.5	U		P
7440-50-8	Copper	25.4		N*	P
7439-89-6	Iron	5570		*	P
7439-92-1	Lead	10.7		S	F
7439-95-4	Magnesium	367	B		P
7439-96-5	Manganese	20.4			P
7439-97-6	Mercury	.13	U		CV
7440-02-0	Nickel	5.4	B		P
7440-09-7	Potassium	362	B		P
7782-49-2	Selenium	1.0	U	W	F
7440-22-4	Silver	1.3	U	N	P
7440-23-5	Sodium	176	B		P
7440-28-0	Thallium	.51	U		F
7440-62-2	Vanadium	14.7			P
7440-66-6	Zinc	34.9		*	P
	Cyanide	.63	U		AS

Color Before: BLACK Clarity Before: _____ Texture: MEDIUM

Color After: YELLOW Clarity After: _____ Artifacts: _____

Comments:

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FORM I - IN 7/88

INORGANIC CASE 664224

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

44MW0200

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

Lab Code: COMPU Case No.: 23664 SAS No.: _____ SDG No.: 101

Matrix: (soil/water) SOIL Lab Sample ID: 439567

Sample wt/vol: 5.0 (g/mL) G Lab File ID: GH039567A13

Level: (low/med) LOW Date Received: 08/23/91

% Moisture: not dec. 12 Date Analyzed: 08/29/91

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	37	B
67-64-1	Acetone	50	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	11	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.

44MW0200

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

Lab Code: COMPU Case No.: 23664 SAS No.: _____ SDG No.: 101

Matrix: (soil/water) SOIL Lab Sample ID: 439567

Sample wt/vol: 30.0 (g/mL) G Lab File ID: GH039567B04

Level: (low/med) LOW Date Received: 08/23/91

% Moisture: not dec. 12 dec. ____ Date Extracted: 08/27/91

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 09/03/91

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	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-Chloroisopropyl)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

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1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

44MW0200

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

Lab Code: COMPU Case No.: 23664 SAS No.: _____ SDG No.: 101

Matrix: (soil/water) SOIL Lab Sample ID: 439567

Sample wt/vol: 30.0 (g/mL) G Lab File ID: GH039567B04

Level: (low/med) LOW Date Received: 08/23/91

% Moisture: not dec. 12 dec. ____ Date Extracted: 08/27/91

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 09/03/91

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	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	370	U
206-44-0	Fluoranthene	370	U
129-00-0	Pyrene	370	U
85-68-7	Butylbenzylphthalate	370	U
91-94-1	3,3'-Dichlorobenzidine	750	U
56-55-3	Benzo(a)Anthracene	370	U
218-01-9	Chrysene	370	U
117-81-7	bis(2-Ethylhexyl)Phthalate	72	BJ
117-84-0	Di-n-Octyl Phthalate	370	U
205-99-2	Benzo(b)Fluoranthene	370	U
207-08-9	Benzo(k)Fluoranthene	370	U
50-32-8	Benzo(a)Pyrene	370	U
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	370	U

(1) - Cannot be separated from Diphenylamine

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

44MW0200

Lab Name: COMPUCHEM LABORATORIES Contract: 7/88

Lab Code: COMPU Case No.: 50024 SAS No.: _____ SDG No.: 664224

Matrix (soil/water): SOIL Lab Sample ID: 439595

Level (low/med): LOW Date Received: 08/23/91

% 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	9570		*	P
7440-36-0	Antimony	7.3	U	N	P
7440-38-2	Arsenic	3.2			F
7440-39-3	Barium	11.9	B		P
7440-41-7	Beryllium	.22	U		P
7440-43-9	Cadmium	.88	U		P
7440-70-2	Calcium	87.2	B		P
7440-47-3	Chromium	15.5		*	P
7440-48-4	Cobalt	1.3	U		P
7440-50-8	Copper	27.7		N*	P
7439-89-6	Iron	11500		*	P
7439-92-1	Lead	7.2			F
7439-95-4	Magnesium	371	B		P
7439-96-5	Manganese	7.3			P
7439-97-6	Mercury	.10	U		CV
7440-02-0	Nickel	3.9	B		P
7440-09-7	Potassium	454	B		P
7782-49-2	Selenium	.89	B		F
7440-22-4	Silver	1.1	U	N	P
7440-23-5	Sodium	165	B		P
7440-28-0	Thallium	.44	U		F
7440-62-2	Vanadium	22.9			P
7440-66-6	Zinc	5.5		*	P
	Cyanide	.57	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.

44MW02035

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

Lab Code: COMPU Case No.: 23664 SAS No.: _____ SDG No.: 101

Matrix: (soil/water) SOIL Lab Sample ID: 439568

Sample wt/vol: 5.0 (g/mL) G Lab File ID: GH039568A13

Level: (low/med) LOW Date Received: 08/23/91

% Moisture: not dec. 16 Date Analyzed: 08/29/91

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	31	B
67-64-1	Acetone	59	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

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

44MW02035

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

Lab Code: COMPU Case No.: 23664 SAS No.: _____ SDG No.: 101

Matrix: (soil/water) SOIL Lab Sample ID: 439568

Sample wt/vol: 30.1 (g/mL) G Lab File ID: GH039568A06

Level: (low/med) LOW Date Received: 08/23/91

% Moisture: not dec. 16 dec. ____ Date Extracted: 08/27/91

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 08/30/91

GPC Cleanup: (Y/N) N pH: 6.0 Dilution Factor: 1.0

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-Chloroisopropyl)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

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1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

44MW02035

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

Lab Code: COMPU Case No.: 23664 SAS No.: _____ SDG No.: 101

Matrix: (soil/water) SOIL Lab Sample ID: 439568

Sample wt/vol: 30.1 (g/mL) G Lab File ID: GH039568A06

Level: (low/med) LOW Date Received: 08/23/91

% Moisture: not dec. 16 dec. ____ Date Extracted: 08/27/91

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 08/30/91

GPC Cleanup: (Y/N) N pH: 6.0 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	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	390	U
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

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

44MW02035

Lab Name: COMPUCHEM LABORATORIES Contract: 7/88

Lab Code: COMPU Case No.: 50024 SAS No.: _____ SDG No.: 664224

Matrix (soil/water): SOIL Lab Sample ID: 439596

Level (low/med): LOW Date Received: 08/23/91

% 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	4050		*	P
7440-36-0	Antimony	7.8	U	N	P
7440-38-2	Arsenic	1.2	U		F
7440-39-3	Barium	6.1	B		P
7440-41-7	Beryllium	.24	U		P
7440-43-9	Cadmium	.94	U		P
7440-70-2	Calcium	54.1	B		P
7440-47-3	Chromium	5.6		*	P
7440-48-4	Cobalt	1.4	U		P
7440-50-8	Copper	6.2		N*	P
7439-89-6	Iron	1660		*	P
7439-92-1	Lead	5.5			F
7439-95-4	Magnesium	129	B		P
7439-96-5	Manganese	3.5			P
7439-97-6	Mercury	.12	U		CV
7440-02-0	Nickel	3.1	B		P
7440-09-7	Potassium	252	U		P
7782-49-2	Selenium	.94	U		F
7440-22-4	Silver	1.2	U	N	P
7440-23-5	Sodium	145	B		P
7440-28-0	Thallium	.47	U		F
7440-62-2	Vanadium	5.0	B		P
7440-66-6	Zinc	3.2	B	*	P
	Cyanide	.59	U		AS

Color Before: YELLOW Clarity Before: _____ Texture: MEDIUM

Color After: COLORLESS Clarity After: _____ Artifacts: _____

Comments:

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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

44MW0300

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

Lab Code: COMPU Case No.: 23664 SAS No.: _____ SDG No.: 101

Matrix: (soil/water) SOIL Lab Sample ID: 439569

Sample wt/vol: 5.0 (g/mL) G Lab File ID: GH039569A13

Level: (low/med) LOW Date Received: 08/23/91

% Moisture: not dec. 20 Date Analyzed: 08/29/91

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	34	B
67-64-1	Acetone	86	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.

44MW0300

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

Lab Code: COMPU Case No.: 23664 SAS No.: _____ SDG No.: 101

Matrix: (soil/water) SOIL Lab Sample ID: 439569

Sample wt/vol: 30.1 (g/mL) G Lab File ID: GJ039569A04

Level: (low/med) LOW Date Received: 08/23/91

% Moisture: not dec. 26 dec. ____ Date Extracted: 08/27/91

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 09/18/91

GPC Cleanup: (Y/N) N pH: 7.5 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
100-51-6	Benzyl Alcohol	440	U
95-50-1	1,2-Dichlorobenzene	440	U
95-48-7	2-Methylphenol	440	U
39638-32-9	bis(2-Chloroisopropyl)Ether	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
65-85-0	Benzoic Acid	2200	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	2200	U
91-58-7	2-Chloronaphthalene	440	U
88-74-4	2-Nitroaniline	2200	U
131-11-3	Dimethyl Phthalate	440	U
208-96-8	Acenaphthylene	440	U
606-20-2	2,6-Dinitrotoluene	440	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

44MW0300

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

Lab Code: COMPU Case No.: 23664 SAS No.: _____ SDG No.: 101

Matrix: (soil/water) SOIL Lab Sample ID: 439569

Sample wt/vol: 30.1 (g/mL) G Lab File ID: GJ039569A04

Level: (low/med) LOW Date Received: 08/23/91

% Moisture: not dec. 26 dec. ____ Date Extracted: 08/27/91

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 09/18/91

GPC Cleanup: (Y/N) N pH: 7.5 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
99-09-2	3-Nitroaniline	2200	U
83-32-9	Acenaphthene	440	U
51-28-5	2,4-Dinitrophenol	2200	U
100-02-7	4-Nitrophenol	2200	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	2200	U
534-52-1	4,6-Dinitro-2-Methylphenol	2200	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	2200	U
85-01-8	Phenanthrene	440	U
120-12-7	Anthracene	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	890	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	Dibenzo(a,h)Anthracene	440	U
191-24-2	Benzo(g,h,i)Perylene	440	U

(1) - Cannot be separated from Diphenylamine

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

44MW0300

Lab Name: COMPUCHEM LABORATORIES Contract: 7/88

Lab Code: COMPU Case No.: 50024 SAS No.: _____ SDG No.: 664224

Matrix (soil/water): SOIL Lab Sample ID: 439597

Level (low/med): LOW Date Received: 08/23/91

% 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	11000		*	P
7440-36-0	Antimony	8.2	U	N	P
7440-38-2	Arsenic	10.2			F
7440-39-3	Barium	18.3	B		P
7440-41-7	Beryllium	.25	U		P
7440-43-9	Cadmium	.99	U		P
7440-70-2	Calcium	7270			P
7440-47-3	Chromium	17.4		*	P
7440-48-4	Cobalt	1.5	U		P
7440-50-8	Copper	62.2		N*	P
7439-89-6	Iron	13700		*	P
7439-92-1	Lead	9.7			F
7439-95-4	Magnesium	490	B		P
7439-96-5	Manganese	8.4			P
7439-97-6	Mercury	.12	U		CV
7440-02-0	Nickel	10.3			P
7440-09-7	Potassium	454	B		P
7782-49-2	Selenium	1.0	U	W	F
7440-22-4	Silver	1.2	U	N	P
7440-23-5	Sodium	206	B		P
7440-28-0	Thallium	.50	U		F
7440-62-2	Vanadium	27.4			P
7440-66-6	Zinc	7.0		*	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.

44MW0306

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

Lab Code: COMPU Case No.: 23664 SAS No.: _____ SDG No.: 101

Matrix: (soil/water) SOIL Lab Sample ID: 439570

Sample wt/vol: 5.0 (g/mL) G Lab File ID: GH039570A13

Level: (low/med) LOW Date Received: 08/23/91

% Moisture: not dec. 23 Date Analyzed: 08/29/91

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	1	J
74-83-9	Bromomethane	13	U
75-01-4	Vinyl Chloride	13	U
75-00-3	Chloroethane	13	U
75-09-2	Methylene Chloride	20	B
67-64-1	Acetone	65	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	13	U
71-55-6	1,1,1-Trichloroethane	6	U
56-23-5	Carbon Tetrachloride	6	U
108-05-4	Vinyl Acetate	13	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

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1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

44MW0306

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

Lab Code: COMPU Case No.: 23664 SAS No.: _____ SDG No.: 101

Matrix: (soil/water) SOIL Lab Sample ID: 439570

Sample wt/vol: 30.1 (g/mL) G Lab File ID: GJ039570A04

Level: (low/med) LOW Date Received: 08/23/91

% Moisture: not dec. 23 dec. ____ Date Extracted: 08/27/91

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 09/18/91

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	430	U
111-44-4	bis(2-Chloroethyl)Ether	430	U
95-57-8	2-Chlorophenol	430	U
541-73-1	1,3-Dichlorobenzene	430	U
106-46-7	1,4-Dichlorobenzene	430	U
100-51-6	Benzyl Alcohol	430	U
95-50-1	1,2-Dichlorobenzene	430	U
95-48-7	2-Methylphenol	430	U
39638-32-9	bis(2-Chloroisopropyl)Ether	430	U
106-44-5	4-Methylphenol	430	U
621-64-7	N-Nitroso-Di-n-Propylamine	430	U
67-72-1	Hexachloroethane	430	U
98-95-3	Nitrobenzene	430	U
78-59-1	Isophorone	430	U
88-75-5	2-Nitrophenol	430	U
105-67-9	2,4-Dimethylphenol	430	U
65-85-0	Benzoic Acid	2100	U
111-91-1	bis(2-Chloroethoxy)Methane	430	U
120-83-2	2,4-Dichlorophenol	430	U
120-82-1	1,2,4-Trichlorobenzene	430	U
91-20-3	Naphthalene	1100	
106-47-8	4-Chloroaniline	430	U
87-68-3	Hexachlorobutadiene	430	U
59-50-7	4-Chloro-3-Methylphenol	430	U
91-57-6	2-Methylnaphthalene	170	J
77-47-4	Hexachlorocyclopentadiene	430	U
88-06-2	2,4,6-Trichlorophenol	430	U
95-95-4	2,4,5-Trichlorophenol	2100	U
91-58-7	2-Chloronaphthalene	430	U
88-74-4	2-Nitroaniline	2100	U
131-11-3	Dimethyl Phthalate	430	U
208-96-8	Acenaphthylene	430	U
606-20-2	2,6-Dinitrotoluene	430	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

44MW0306

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

Lab Code: COMPU Case No.: 23664 SAS No.: _____ SDG No.: 101

Matrix: (soil/water) SOIL Lab Sample ID: 439570

Sample wt/vol: 30.1 (g/mL) G Lab File ID: GJ039570A04

Level: (low/med) LOW Date Received: 08/23/91

% Moisture: not dec. 23 dec. ____ Date Extracted: 08/27/91

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 09/18/91

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	2100	U
83-32-9	Acenaphthene	120	J
51-28-5	2,4-Dinitrophenol	2100	U
100-02-7	4-Nitrophenol	2100	U
132-64-9	Dibenzofuran	100	J
121-14-2	2,4-Dinitrotoluene	430	U
84-66-2	Diethylphthalate	430	U
7005-72-3	4-Chlorophenyl-phenylether	430	U
86-73-7	Fluorene	100	J
100-01-6	4-Nitroaniline	2100	U
534-52-1	4,6-Dinitro-2-Methylphenol	2100	U
86-30-6	N-Nitrosodiphenylamine (1)	430	U
101-55-3	4-Bromophenyl-phenylether	430	U
118-74-1	Hexachlorobenzene	430	U
87-86-5	Pentachlorophenol	2100	U
85-01-8	Phenanthrene	320	J
120-12-7	Anthracene	430	U
84-74-2	Di-n-Butylphthalate	430	U
206-44-0	Fluoranthene	160	J
129-00-0	Pyrene	100	J
85-68-7	Butylbenzylphthalate	430	U
91-94-1	3,3'-Dichlorobenzidine	850	U
56-55-3	Benzo(a)Anthracene	430	U
218-01-9	Chrysene	430	U
117-81-7	bis(2-Ethylhexyl)Phthalate	430	U
117-84-0	Di-n-Octyl Phthalate	430	U
205-99-2	Benzo(b)Fluoranthene	430	U
207-08-9	Benzo(k)Fluoranthene	430	U
50-32-8	Benzo(a)Pyrene	430	U
193-39-5	Indeno(1,2,3-cd)Pyrene	430	U
53-70-3	Dibenzo(a,h)Anthracene	430	U
191-24-2	Benzo(g,h,i)Perylene	430	U

(1) - Cannot be separated from Diphenylamine

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

44MW0306

Lab Name: COMPUCHEM LABORATORIES Contract: 7/88

Lab Code: COMPU Case No.: 50024 SAS No.: _____ SDG No.: 664224

Matrix (soil/water): SOIL Lab Sample ID: 439598

Level (low/med): LOW Date Received: 08/23/91

% 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	6610		*	P
7440-36-0	Antimony	8.2	U	N	P
7440-38-2	Arsenic	3.0			F
7440-39-3	Barium	22.9	B		P
7440-41-7	Beryllium	.25	U		P
7440-43-9	Cadmium	1.0	U		P
7440-70-2	Calcium	5660			P
7440-47-3	Chromium	12.6		*	P
7440-48-4	Cobalt	1.5	U		P
7440-50-8	Copper	127		N*	P
7439-89-6	Iron	8350		*	P
7439-92-1	Lead	44.6		S	F
7439-95-4	Magnesium	454	B		P
7439-96-5	Manganese	31.3			P
7439-97-6	Mercury	.13	U		CV
7440-02-0	Nickel	8.7	B		P
7440-09-7	Potassium	481	B		P
7782-49-2	Selenium	1.0	U	W	F
7440-22-4	Silver	1.2	U	N	P
7440-23-5	Sodium	185	B		P
7440-28-0	Thallium	.50	U		F
7440-62-2	Vanadium	16.0			P
7440-66-6	Zinc	44.9		*	P
	Cyanide	.64	U		AS

Color Before: BLACK Clarity Before: _____ Texture: MEDIUM

Color After: YELLOW Clarity After: _____ Artifacts: _____

Comments:

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APPENDIX C
GROUNDWATER DATA

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

44-GW-011

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: 439983

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CN039983A03

Level: (low/med) LOW Date Received: 08/26/91

% Moisture: not dec. ____ Date Analyzed: 09/03/91

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	U
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	6	
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	3	J
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	2	J
100-42-5	Styrene	5	U
1330-20-7	Total Xylenes	5	U

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23664 277 SAMPLE DATA SUMMARY

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

44-GW-011

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: 439983

Sample wt/vol: 1000 (g/mL) ML Lab File ID: GH039983B57

Level: (low/med) LOW Date Received: 08/26/91

% Moisture: not dec. ____ dec. ____ Date Extracted: 08/28/91

Extraction: (SepF/Cont/Sonc) CONT Date Analyzed: 09/10/91

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
95-50-1	1,2-Dichlorobenzene	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-Oxybis(1-Chloropropane)	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
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.

44-GW-011

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: 439983

Sample wt/vol: 1000 (g/mL) ML Lab File ID: GH039983B57

Level: (low/med) LOW Date Received: 08/26/91

% Moisture: not dec. ____ dec. ____ Date Extracted: 08/28/91

Extraction: (SepF/Cont/Sonc) CONT Date Analyzed: 09/10/91

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
86-74-8	Carbazole	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

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1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

44-GW-011

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: 439983

Sample wt/vol: 1000 (g/mL) ML Lab File ID:

Level: (low/med) LOW Date Received: 08/26/91

% Moisture: not dec. ____ dec. ____ Date Extracted: 08/28/91

Extraction: (SepF/Cont/Sonc) SEPF Date Analyzed: 08/28/91

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

U.S. EPA - CLP

1
INORGANIC ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

44GW-011

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: 439991

Level (low/med): LOW Date Received: 08/26/91

% 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	537000			P
7440-36-0	Antimony	33.0	U		P
7440-38-2	Arsenic	570			P
7440-39-3	Barium	3180			P
7440-41-7	Beryllium	36.6			P
7440-43-9	Cadmium	32.0			P
7440-70-2	Calcium	191000			P
7440-47-3	Chromium	895			P
7440-48-4	Cobalt	93.2			P
7440-50-8	Copper	313			P
7439-89-6	Iron	662000			P
7439-92-1	Lead	508			P
7439-95-4	Magnesium	35700			P
7439-96-5	Manganese	1730			P
7439-97-6	Mercury	1.1			CV
7440-02-0	Nickel	486			P
7440-09-7	Potassium	32500			P
7782-49-2	Selenium	8.4	B	W	F
7440-22-4	Silver	5.0	U		P
7440-23-5	Sodium	7500			P
7440-28-0	Thallium	2.7	B		F
7440-62-2	Vanadium	759			P
7440-66-6	Zinc	2800		*	P
	Cyanide	10.0	U	N	AS

Color Before: BROWNL 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.

44GW-021

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: 439986

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CN039986A03

Level: (low/med) LOW Date Received: 08/26/91

% Moisture: not dec. ____ Date Analyzed: 09/03/91

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	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.

44GW-021

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: 439986

Sample wt/vol: 1000 (g/mL) ML Lab File ID: GH039986B57

Level: (low/med) LOW Date Received: 08/26/91

% Moisture: not dec. ____ dec. ____ Date Extracted: 08/28/91

Extraction: (SepF/Cont/Sonc) SEPF Date Analyzed: 09/06/91

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.

44GW-021

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: 439986

Sample wt/vol: 1000 (g/mL) ML Lab File ID: GH039986B57

Level: (low/med) LOW Date Received: 08/26/91

% Moisture: not dec. ____ dec. ____ Date Extracted: 08/28/91

Extraction: (SepF/Cont/Sonc) SEPF Date Analyzed: 09/06/91

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.

44GW-021

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: 439986

Sample wt/vol: 1000 (g/mL) ML Lab File ID:

Level: (low/med) LOW Date Received: 08/26/91

% Moisture: not dec. ____ dec. ____ Date Extracted: 08/28/91

Extraction: (SepF/Cont/Sonc) SEPF Date Analyzed: 08/29/91

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

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U.S. EPA - CLP

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INORGANIC ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

44GW-021

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: 439994

Level (low/med): LOW Date Received: 08/26/91

% 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	73000			P
7440-36-0	Antimony	33.0	U		P
7440-38-2	Arsenic	5.0	U	W	F
7440-39-3	Barium	315			P
7440-41-7	Beryllium	1.4	B		P
7440-43-9	Cadmium	4.0	U		P
7440-70-2	Calcium	2430	B		P
7440-47-3	Chromium	126			P
7440-48-4	Cobalt	6.0	U		P
7440-50-8	Copper	28.6			P
7439-89-6	Iron	150000			P
7439-92-1	Lead	15.8			F
7439-95-4	Magnesium	3640	B		P
7439-96-5	Manganese	88.0			P
7439-97-6	Mercury	.20	U		CV
7440-02-0	Nickel	21.9	B		P
7440-09-7	Potassium	4540	B		P
7782-49-2	Selenium	4.0	U	W	F
7440-22-4	Silver	5.0	U		P
7440-23-5	Sodium	4060	B		P
7440-28-0	Thallium	2.0	U		F
7440-62-2	Vanadium	184			P
7440-66-6	Zinc	87.3		*	P
	Cyanide	10.0	U	N	AS

Color Before: BROWN Clarity Before: CLOUDY Texture: _____

Color After: YELLOW Clarity After: CLOUDY Artifacts: _____

Comments:

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FORM I - IN 3/90

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

44GW-031

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: 439981

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CN039981A03

Level: (low/med) LOW Date Received: 08/26/91

% Moisture: not dec. ____ Date Analyzed: 09/03/91

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	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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1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

44GW-031

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: 439981

Sample wt/vol: 1000 (g/mL) ML Lab File ID: GH039981B57

Level: (low/med) LOW Date Received: 08/26/91

% Moisture: not dec. ____ dec. ____ Date Extracted: 08/28/91

Extraction: (SepF/Cont/Sonc) CONT Date Analyzed: 09/10/91

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.

44GW-031

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: 439981

Sample wt/vol: 1000 (g/mL) ML Lab File ID: GH039981B57

Level: (low/med) LOW Date Received: 08/26/91

% Moisture: not dec. ____ dec. ____ Date Extracted: 08/28/91

Extraction: (SepF/Cont/Sonc) CONT Date Analyzed: 09/10/91

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.

44GW-031

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: 439981

Sample wt/vol: 1000 (g/mL) ML Lab File ID:

Level: (low/med) LOW Date Received: 08/26/91

% Moisture: not dec. dec. Date Extracted: 08/28/91

Extraction: (SepF/Cont/Sonc) SEPF Date Analyzed: 08/28/91

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

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U.S. EPA - CLP

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INORGANIC ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

44GW-031

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: 439989

Level (low/med): LOW Date Received: 08/26/91

% 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	183000			P
7440-36-0	Antimony	33.0	U		P
7440-38-2	Arsenic	13.0			F
7440-39-3	Barium	1250			P
7440-41-7	Beryllium	3.0	B		P
7440-43-9	Cadmium	4.0	U		P
7440-70-2	Calcium	197000			P
7440-47-3	Chromium	221			P
7440-48-4	Cobalt	8.0	B		P
7440-50-8	Copper	86.6			P
7439-89-6	Iron	147000			P
7439-92-1	Lead	481			P
7439-95-4	Magnesium	24100			P
7439-96-5	Manganese	653			P
7439-97-6	Mercury	.20	U		CV
7440-02-0	Nickel	42.8			P
7440-09-7	Potassium	22300			P
7782-49-2	Selenium	40.0	U	W	F
7440-22-4	Silver	5.0	U		P
7440-23-5	Sodium	12600			P
7440-28-0	Thallium	2.0	U		F
7440-62-2	Vanadium	311			P
7440-66-6	Zinc	1160		*	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

APPENDIX D
SURFACE WATER DATA

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

44SW01

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: 436775

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CN036775A51

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	4	J
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	18	
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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1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

44SW01

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: 436775

Sample wt/vol: 1000 (g/mL) ML Lab File ID: GH036775B52

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.

44SW01

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: 436775

Sample wt/vol: 1000 (g/mL) ML Lab File ID: GH036775B52

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

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

44SW01

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: 436775

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

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1

INORGANIC ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

44SW01

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: 436825

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	6930			P
7440-36-0	Antimony	33.0	U		P
7440-38-2	Arsenic	9.3	B		F
7440-39-3	Barium	75.5	B		P
7440-41-7	Beryllium	1.0	U		P
7440-43-9	Cadmium	4.0	U		P
7440-70-2	Calcium	60100			P
7440-47-3	Chromium	13.3			P
7440-48-4	Cobalt	6.0	U		P
7440-50-8	Copper	24.0	B		P
7439-89-6	Iron	24500			P
7439-92-1	Lead	44.1		S	F
7439-95-4	Magnesium	11000			P
7439-96-5	Manganese	104			P
7439-97-6	Mercury	.20	U		CV
7440-02-0	Nickel	9.6	B		P
7440-09-7	Potassium	3350	B		P
7782-49-2	Selenium	4.0	U	WN	F
7440-22-4	Silver	5.0	U		P
7440-23-5	Sodium	85600			P
7440-28-0	Thallium	20.0	U	WN	F
7440-62-2	Vanadium	34.1	B		P
7440-66-6	Zinc	153			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.

44SW02

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: 436776

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CN036776A51

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	16	
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	3	J
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.

44SW02

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: 436776

Sample wt/vol: 1000 (g/mL) ML Lab File ID: GH036776B52

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: 08/15/91

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.

44SW02

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: 436776

Sample wt/vol: 1000 (g/mL) ML Lab File ID: GH036776B52

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: 08/15/91

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

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1
INORGANIC ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

44SW02

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: 436826

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	2860			P
7440-36-0	Antimony	33.0	U		P
7440-38-2	Arsenic	5.0	U	W	F
7440-39-3	Barium	41.7	B		P
7440-41-7	Beryllium	1.0	U		P
7440-43-9	Cadmium	4.0	U		P
7440-70-2	Calcium	44500			P
7440-47-3	Chromium	4.0	U		P
7440-48-4	Cobalt	6.0	U		P
7440-50-8	Copper	11.1	B		P
7439-89-6	Iron	8780			P
7439-92-1	Lead	17.7		S	F
7439-95-4	Magnesium	7870			P
7439-96-5	Manganese	84.6			P
7439-97-6	Mercury	.20	U		CV
7440-02-0	Nickel	9.0	U		P
7440-09-7	Potassium	2690	B		P
7782-49-2	Selenium	4.0	U	WN	F
7440-22-4	Silver	5.0	U		P
7440-23-5	Sodium	60100			P
7440-28-0	Thallium	20.0	U	WN	F
7440-62-2	Vanadium	10.1	B		P
7440-66-6	Zinc	83.0			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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APPENDIX E
SEDIMENT DATA

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

44SD01

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

Lab Code: COMPU Case No.: 23664 SAS No.: _____ SDG No.: 101

Matrix: (soil/water) SOIL Lab Sample ID: 436836

Sample wt/vol: 5.0 (g/mL) G Lab File ID: GH036836A13

Level: (low/med) LOW Date Received: 08/10/91

% Moisture: not dec. 71 Date Analyzed: 08/18/91

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	34	U
74-83-9	Bromomethane	34	U
75-01-4	Vinyl Chloride	34	U
75-00-3	Chloroethane	34	U
75-09-2	Methylene Chloride	34	B
67-64-1	Acetone	34	U
75-15-0	Carbon Disulfide	17	U
75-35-4	1,1-Dichloroethene	17	U
75-34-3	1,1-Dichloroethane	17	U
540-59-0	1,2-Dichloroethene (total)	17	U
67-66-3	Chloroform	17	U
107-06-2	1,2-Dichloroethane	17	U
78-93-3	2-Butanone	34	U
71-55-6	1,1,1-Trichloroethane	17	U
56-23-5	Carbon Tetrachloride	17	U
108-05-4	Vinyl Acetate	34	U
75-27-4	Bromodichloromethane	17	U
78-87-5	1,2-Dichloropropane	17	U
10061-01-5	cis-1,3-Dichloropropene	17	U
79-01-6	Trichloroethene	17	U
124-48-1	Dibromochloromethane	17	U
79-00-5	1,1,2-Trichloroethane	17	U
71-43-2	Benzene	17	U
10061-02-6	Trans-1,3-Dichloropropene	17	U
75-25-2	Bromoform	17	U
108-10-1	4-Methyl-2-Pentanone	34	U
591-78-6	2-Hexanone	34	U
127-18-4	Tetrachloroethene	17	U
79-34-5	1,1,2,2-Tetrachloroethane	17	U
108-88-3	Toluene	17	U
108-90-7	Chlorobenzene	17	U
100-41-4	Ethylbenzene	17	U
100-42-5	Styrene	17	U
1330-20-7	Total Xylenes	17	U

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

44SD01

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

Lab Code: COMPU Case No.: 23664 SAS No.: _____ SDG No.: 101

Matrix: (soil/water) SOIL Lab Sample ID: 436836

Sample wt/vol: 30.2 (g/mL) G Lab File ID: GJ036836B52

Level: (low/med) LOW Date Received: 08/10/91

% Moisture: not dec. 71 dec. ____ Date Extracted: 08/13/91

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 08/17/91

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	1100	U
111-44-4	bis(2-Chloroethyl)Ether	1100	U
95-57-8	2-Chlorophenol	1100	U
541-73-1	1,3-Dichlorobenzene	1100	U
106-46-7	1,4-Dichlorobenzene	1100	U
100-51-6	Benzyl Alcohol	1100	U
95-50-1	1,2-Dichlorobenzene	1100	U
95-48-7	2-Methylphenol	1100	U
39638-32-9	bis(2-Chloroisopropyl)Ether	1100	U
106-44-5	4-Methylphenol	140	J
621-64-7	N-Nitroso-Di-n-Propylamine	1100	U
67-72-1	Hexachloroethane	1100	U
98-95-3	Nitrobenzene	1100	U
78-59-1	Isophorone	1100	U
88-75-5	2-Nitrophenol	1100	U
105-67-9	2,4-Dimethylphenol	1100	U
65-85-0	Benzoic Acid	1800	J
111-91-1	bis(2-Chloroethoxy)Methane	1100	U
120-83-2	2,4-Dichlorophenol	1100	U
120-82-1	1,2,4-Trichlorobenzene	1100	U
91-20-3	Naphthalene	1100	U
106-47-8	4-Chloroaniline	1100	U
87-68-3	Hexachlorobutadiene	1100	U
59-50-7	4-Chloro-3-Methylphenol	1100	U
91-57-6	2-Methylnaphthalene	110	J
77-47-4	Hexachlorocyclopentadiene	1100	U
88-06-2	2,4,6-Trichlorophenol	1100	U
95-95-4	2,4,5-Trichlorophenol	5500	U
91-58-7	2-Chloronaphthalene	1100	U
88-74-4	2-Nitroaniline	5500	U
131-11-3	Dimethyl Phthalate	1100	U
208-96-8	Acenaphthylene	1100	U
606-20-2	2,6-Dinitrotoluene	1100	U

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

44SD01

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

Lab Code: COMPU Case No.: 23664 SAS No.: _____ SDG No.: 101

Matrix: (soil/water) SOIL Lab Sample ID: 436836

Sample wt/vol: 30.2 (g/mL) G Lab File ID: GJ036836B52

Level: (low/med) LOW Date Received: 08/10/91

% Moisture: not dec. 71 dec. ____ Date Extracted: 08/13/91

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 08/17/91

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	5500	U
83-32-9	Acenaphthene	1100	U
51-28-5	2,4-Dinitrophenol	5500	U
100-02-7	4-Nitrophenol	5500	U
132-64-9	Dibenzofuran	1100	U
121-14-2	2,4-Dinitrotoluene	1100	U
84-66-2	Diethylphthalate	1100	U
7005-72-3	4-Chlorophenyl-phenylether	1100	U
86-73-7	Fluorene	1100	U
100-01-6	4-Nitroaniline	5500	U
534-52-1	4,6-Dinitro-2-Methylphenol	5500	U
86-30-6	N-Nitrosodiphenylamine (1)	1100	U
101-55-3	4-Bromophenyl-phenylether	1100	U
118-74-1	Hexachlorobenzene	1100	U
87-86-5	Pentachlorophenol	5500	U
85-01-8	Phenanthrene	1100	U
120-12-7	Anthracene	1100	U
84-74-2	Di-n-Butylphthalate	140	J
206-44-0	Fluoranthene	1100	U
129-00-0	Pyrene	1100	U
85-68-7	Butylbenzylphthalate	1100	U
91-94-1	3,3'-Dichlorobenzidine	2300	U
56-55-3	Benzo(a)Anthracene	1100	U
218-01-9	Chrysene	1100	U
117-81-7	bis(2-Ethylhexyl)Phthalate	220	J
117-84-0	Di-n-Octyl Phthalate	1100	U
205-99-2	Benzo(b)Fluoranthene	1100	U
207-08-9	Benzo(k)Fluoranthene	1100	U
50-32-8	Benzo(a)Pyrene	1100	U
193-39-5	Indeno(1,2,3-cd)Pyrene	1100	U
53-70-3	Dibenzo(a,h)Anthracene	1100	U
191-24-2	Benzo(g,h,i)Perylene	1100	U

(1) - Cannot be separated from Diphenylamine

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

44SD01

Lab Name: COMPUCHEM LABORATORIES Contract: 7/88

Lab Code: COMPU Case No.: 50024 SAS No.: _____ SDG No.: 664224

Matrix (soil/water): SOIL Lab Sample ID: 436854

Level (low/med): LOW Date Received: 08/10/91

% Solids: 29.0

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	15700		*	P
7440-36-0	Antimony	22.1	U	N	P
7440-38-2	Arsenic	5.3	B		F
7440-39-3	Barium	51.7	B		P
7440-41-7	Beryllium	.67	U		P
7440-43-9	Cadmium	2.7	U		P
7440-70-2	Calcium	9600			P
7440-47-3	Chromium	26.7		*	P
7440-48-4	Cobalt	4.0	U		P
7440-50-8	Copper	79.5		N*	P
7439-89-6	Iron	11300		*	P
7439-92-1	Lead	143			F
7439-95-4	Magnesium	1410	B		P
7439-96-5	Manganese	37.5			P
7439-97-6	Mercury	.34	U		CV
7440-02-0	Nickel	28.9			P
7440-09-7	Potassium	799	B		P
7782-49-2	Selenium	2.7	U	W	F
7440-22-4	Silver	3.3	U	N	P
7440-23-5	Sodium	897	B		P
7440-28-0	Thallium	1.4	U		F
7440-62-2	Vanadium	49.4			P
7440-66-6	Zinc	168		*	P
	Cyanide	1.7	U		AS

Color Before: BROWN Clarity Before: _____ Texture: MEDIUM

Color After: YELLOW Clarity After: _____ Artifacts: _____

Comments:

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FORM I - IN 7/88

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

44SD02

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

Lab Code: COMPU Case No.: 23664 SAS No.: _____ SDG No.: 101

Matrix: (soil/water) SOIL Lab Sample ID: 436838

Sample wt/vol: 5.0 (g/mL) G Lab File ID: GH036838A13

Level: (low/med) LOW Date Received: 08/10/91

% Moisture: not dec. 78 Date Analyzed: 08/18/91

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	45	U
74-83-9	Bromomethane	45	U
75-01-4	Vinyl Chloride	45	U
75-00-3	Chloroethane	45	U
75-09-2	Methylene Chloride	53	B
67-64-1	Acetone	31	BJ
75-15-0	Carbon Disulfide	23	U
75-35-4	1,1-Dichloroethene	23	U
75-34-3	1,1-Dichloroethane	23	U
540-59-0	1,2-Dichloroethene (total)	23	U
67-66-3	Chloroform	23	U
107-06-2	1,2-Dichloroethane	23	U
78-93-3	2-Butanone	45	U
71-55-6	1,1,1-Trichloroethane	23	U
56-23-5	Carbon Tetrachloride	23	U
108-05-4	Vinyl Acetate	45	U
75-27-4	Bromodichloromethane	23	U
78-87-5	1,2-Dichloropropane	23	U
10061-01-5	cis-1,3-Dichloropropene	23	U
79-01-6	Trichloroethene	23	U
124-48-1	Dibromochloromethane	23	U
79-00-5	1,1,2-Trichloroethane	23	U
71-43-2	Benzene	23	U
10061-02-6	Trans-1,3-Dichloropropene	23	U
75-25-2	Bromoform	23	U
108-10-1	4-Methyl-2-Pentanone	45	U
591-78-6	2-Hexanone	45	U
127-18-4	Tetrachloroethene	23	U
79-34-5	1,1,2,2-Tetrachloroethane	23	U
108-88-3	Toluene	23	U
108-90-7	Chlorobenzene	23	U
100-41-4	Ethylbenzene	23	U
100-42-5	Styrene	23	U
1330-20-7	Total Xylenes	23	U

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

44SD02

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

Lab Code: COMPU Case No.: 23664 SAS No.: _____ SDG No.: 101

Matrix: (soil/water) SOIL Lab Sample ID: 436838

Sample wt/vol: 30.0 (g/mL) G Lab File ID: G2J36838B52

Level: (low/med) LOW Date Received: 08/10/91

% Moisture: not dec. 78 dec. ____ Date Extracted: 08/13/91

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 08/17/91

GPC Cleanup: (Y/N) N pH: 6.7 Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	1500	U
111-44-4	bis(2-Chloroethyl)Ether	1500	U
95-57-8	2-Chlorophenol	1500	U
541-73-1	1,3-Dichlorobenzene	1500	U
106-46-7	1,4-Dichlorobenzene	1500	U
100-51-6	Benzyl Alcohol	1500	U
95-50-1	1,2-Dichlorobenzene	1500	U
95-48-7	2-Methylphenol	1500	U
39638-32-9	bis(2-Chloroisopropyl)Ether	1500	U
106-44-5	4-Methylphenol	1500	U
621-64-7	N-Nitroso-Di-n-Propylamine	1500	U
67-72-1	Hexachloroethane	1500	U
98-95-3	Nitrobenzene	1500	U
78-59-1	Isophorone	1500	U
88-75-5	2-Nitrophenol	1500	U
105-67-9	2,4-Dimethylphenol	1500	U
65-85-0	Benzoic Acid	1000	J
111-91-1	bis(2-Chloroethoxy)Methane	1500	U
120-83-2	2,4-Dichlorophenol	1500	U
120-82-1	1,2,4-Trichlorobenzene	1500	U
91-20-3	Naphthalene	1500	U
106-47-8	4-Chloroaniline	1500	U
87-68-3	Hexachlorobutadiene	1500	U
59-50-7	4-Chloro-3-Methylphenol	1500	U
91-57-6	2-Methylnaphthalene	1500	U
77-47-4	Hexachlorocyclopentadiene	1500	U
88-06-2	2,4,6-Trichlorophenol	1500	U
95-95-4	2,4,5-Trichlorophenol	7300	U
91-58-7	2-Chloronaphthalene	1500	U
88-74-4	2-Nitroaniline	7300	U
131-11-3	Dimethyl Phthalate	1500	U
208-96-8	Acenaphthylene	1500	U
606-20-2	2,6-Dinitrotoluene	1500	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

44SD02

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

Lab Code: COMPU Case No.: 23664 SAS No.: _____ SDG No.: 101

Matrix: (soil/water) SOIL Lab Sample ID: 436838

Sample wt/vol: 30.0 (g/mL) G Lab File ID: G2J36838B52

Level: (low/med) LOW Date Received: 08/10/91

% Moisture: not dec. 78 dec. ____ Date Extracted: 08/13/91

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 08/17/91

GPC Cleanup: (Y/N) N pH: 6.7 Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
99-09-2	3-Nitroaniline	7300	U
83-32-9	Acenaphthene	1500	U
51-28-5	2,4-Dinitrophenol	7300	U
100-02-7	4-Nitrophenol	7300	U
132-64-9	Dibenzofuran	1500	U
121-14-2	2,4-Dinitrotoluene	1500	U
84-66-2	Diethylphthalate	1500	U
7005-72-3	4-Chlorophenyl-phenylether	1500	U
86-73-7	Fluorene	1500	U
100-01-6	4-Nitroaniline	7300	U
534-52-1	4,6-Dinitro-2-Methylphenol	7300	U
86-30-6	N-Nitrosodiphenylamine (1)	1500	U
101-55-3	4-Bromophenyl-phenylether	1500	U
118-74-1	Hexachlorobenzene	1500	U
87-86-5	Pentachlorophenol	7300	U
85-01-8	Phenanthrene	1500	U
120-12-7	Anthracene	1500	U
84-74-2	Di-n-Butylphthalate	170	J
206-44-0	Fluoranthene	1500	U
129-00-0	Pyrene	1500	U
85-68-7	Butylbenzylphthalate	280	J
91-94-1	3,3'-Dichlorobenzidine	3000	U
56-55-3	Benzo(a)Anthracene	1500	U
218-01-9	Chrysene	1500	U
117-81-7	bis(2-Ethylhexyl)Phthalate	290	J
117-84-0	Di-n-Octyl Phthalate	1500	U
205-99-2	Benzo(b)Fluoranthene	1500	U
207-08-9	Benzo(k)Fluoranthene	1500	U
50-32-8	Benzo(a)Pyrene	1500	U
193-39-5	Indeno(1,2,3-cd)Pyrene	1500	U
53-70-3	Dibenzo(a,h)Anthracene	1500	U
191-24-2	Benzo(g,h,i)Perylene	1500	U

(1) - Cannot be separated from Diphenylamine

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

44SD02

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: 436414

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

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

% Moisture: not dec. 78 dec. Date Extracted: 08/12/91

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

GPC Cleanup: (Y/N) N pH: 6.6 Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	36	U
319-85-7	beta-BHC	36	U
319-86-8	delta-BHC	36	U
58-89-9	gamma-BHC	36	U
76-44-8	Heptachlor	36	U
309-00-2	Aldrin	36	U
1024-57-3	Heptachlor epoxide	36	U
959-98-8	Endosulfan I	36	U
60-57-1	Dieldrin	73	U
72-55-9	4,4'-DDE	140	
72-20-8	Endrin	73	U
33213-65-9	Endosulfan II	73	U
72-54-8	4,4'-DDD	180	
1031-07-8	Endosulfan sulfate	73	U
50-29-3	4,4'-DDT	73	U
72-43-5	p,p'-Methoxychlor	360	U
53494-70-5	Endrin ketone	73	U
5103-71-9	alpha-Chlordane	360	U
5103-74-2	gamma-Chlordane	360	U
8001-35-2	Toxaphene	730	U
12674-11-2	Aroclor-1016	360	U
11104-28-2	Aroclor-1221	360	U
11141-16-5	Aroclor-1232	360	U
53469-21-9	Aroclor-1242	360	U
12672-29-6	Aroclor-1248	360	U
11097-69-1	Aroclor-1254	730	U
11096-82-5	Aroclor-1260	730	U

FORM I PEST 1/87 Rev.

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INORGANIC ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

44SD02

Lab Name: COMPUCHEM LABORATORIES Contract: 7/88

Lab Code: COMPU Case No.: 50024 SAS No.: _____ SDG No.: 664224

Matrix (soil/water): SOIL Lab Sample ID: 436862

Level (low/med): LOW Date Received: 08/10/91

% Solids: 22.0

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	10900		*	P
7440-36-0	Antimony	29.7	U	N	P
7440-38-2	Arsenic	4.5	U	W	F
7440-39-3	Barium	38.6	B		P
7440-41-7	Beryllium	.90	U		P
7440-43-9	Cadmium	3.6	U		P
7440-70-2	Calcium	10700			P
7440-47-3	Chromium	23.5		*	P
7440-48-4	Cobalt	5.4	U		P
7440-50-8	Copper	79.1		N*	P
7439-89-6	Iron	10200		*	P
7439-92-1	Lead	144			F
7439-95-4	Magnesium	1880	B		P
7439-96-5	Manganese	78.8			P
7439-97-6	Mercury	.45	U		CV
7440-02-0	Nickel	26.9	B		P
7440-09-7	Potassium	960	U		P
7782-49-2	Selenium	3.6	U		F
7440-22-4	Silver	4.5	U	N	P
7440-23-5	Sodium	1640	B		P
7440-28-0	Thallium	1.8	U	W	F
7440-62-2	Vanadium	42.8	B		P
7440-66-6	Zinc	149		*	P
	Cyanide	2.3	U		AS

Color Before: BLACK Clarity Before: _____ Texture: MEDIUM

Color After: YELLOW Clarity After: _____ Artifacts: _____

Comments:

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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

44SD01

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

Lab Code: COMPU Case No.: 23664 SAS No.: _____ SDG No.: 101

Matrix: (soil/water) SOIL Lab Sample ID: 436836

Sample wt/vol: 5.0 (g/mL) G Lab File ID: GH036836A13

Level: (low/med) LOW Date Received: 08/10/91

% Moisture: not dec. 71 Date Analyzed: 08/18/91

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	34	U
74-83-9	Bromomethane	34	U
75-01-4	Vinyl Chloride	34	U
75-00-3	Chloroethane	34	U
75-09-2	Methylene Chloride	34	B
67-64-1	Acetone	34	U
75-15-0	Carbon Disulfide	17	U
75-35-4	1,1-Dichloroethene	17	U
75-34-3	1,1-Dichloroethane	17	U
540-59-0	1,2-Dichloroethene (total)	17	U
67-66-3	Chloroform	17	U
107-06-2	1,2-Dichloroethane	17	U
78-93-3	2-Butanone	34	U
71-55-6	1,1,1-Trichloroethane	17	U
56-23-5	Carbon Tetrachloride	17	U
108-05-4	Vinyl Acetate	34	U
75-27-4	Bromodichloromethane	17	U
78-87-5	1,2-Dichloropropane	17	U
10061-01-5	cis-1,3-Dichloropropene	17	U
79-01-6	Trichloroethene	17	U
124-48-1	Dibromochloromethane	17	U
79-00-5	1,1,2-Trichloroethane	17	U
71-43-2	Benzene	17	U
10061-02-6	Trans-1,3-Dichloropropene	17	U
75-25-2	Bromoform	17	U
108-10-1	4-Methyl-2-Pentanone	34	U
591-78-6	2-Hexanone	34	U
127-18-4	Tetrachloroethene	17	U
79-34-5	1,1,2,2-Tetrachloroethane	17	U
108-88-3	Toluene	17	U
108-90-7	Chlorobenzene	17	U
100-41-4	Ethylbenzene	17	U
100-42-5	Styrene	17	U
1330-20-7	Total Xylenes	17	U

23664.101 SAMPLE DATA SUMMARY

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

44SD01

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

Lab Code: COMPU Case No.: 23664 SAS No.: _____ SDG No.: 101

Matrix: (soil/water) SOIL Lab Sample ID: 436836

Sample wt/vol: 30.2 (g/mL) G Lab File ID: GJ036836B52

Level: (low/med) LOW Date Received: 08/10/91

% Moisture: not dec. 71 dec. ____ Date Extracted: 08/13/91

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 08/17/91

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	1100	U
111-44-4	bis(2-Chloroethyl)Ether	1100	U
95-57-8	2-Chlorophenol	1100	U
541-73-1	1,3-Dichlorobenzene	1100	U
106-46-7	1,4-Dichlorobenzene	1100	U
100-51-6	Benzyl Alcohol	1100	U
95-50-1	1,2-Dichlorobenzene	1100	U
95-48-7	2-Methylphenol	1100	U
39638-32-9	bis(2-Chloroisopropyl)Ether	1100	U
106-44-5	4-Methylphenol	140	J
621-64-7	N-Nitroso-Di-n-Propylamine	1100	U
67-72-1	Hexachloroethane	1100	U
98-95-3	Nitrobenzene	1100	U
78-59-1	Isophorone	1100	U
88-75-5	2-Nitrophenol	1100	U
105-67-9	2,4-Dimethylphenol	1100	U
65-85-0	Benzoic Acid	1800	J
111-91-1	bis(2-Chloroethoxy)Methane	1100	U
120-83-2	2,4-Dichlorophenol	1100	U
120-82-1	1,2,4-Trichlorobenzene	1100	U
91-20-3	Naphthalene	1100	U
106-47-8	4-Chloroaniline	1100	U
87-68-3	Hexachlorobutadiene	1100	U
59-50-7	4-Chloro-3-Methylphenol	1100	U
91-57-6	2-Methylnaphthalene	110	J
77-47-4	Hexachlorocyclopentadiene	1100	U
88-06-2	2,4,6-Trichlorophenol	1100	U
95-95-4	2,4,5-Trichlorophenol	5500	U
91-58-7	2-Chloronaphthalene	1100	U
88-74-4	2-Nitroaniline	5500	U
131-11-3	Dimethyl Phthalate	1100	U
208-96-8	Acenaphthylene	1100	U
606-20-2	2,6-Dinitrotoluene	1100	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

44SD01

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

Lab Code: COMPU Case No.: 23664 SAS No.: _____ SDG No.: 101

Matrix: (soil/water) SOIL Lab Sample ID: 436836

Sample wt/vol: 30.2 (g/mL) G Lab File ID: GJ036836B52

Level: (low/med) LOW Date Received: 08/10/91

% Moisture: not dec. 71 dec. ____ Date Extracted: 08/13/91

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 08/17/91

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	5500	U
83-32-9	Acenaphthene	1100	U
51-28-5	2,4-Dinitrophenol	5500	U
100-02-7	4-Nitrophenol	5500	U
132-64-9	Dibenzofuran	1100	U
121-14-2	2,4-Dinitrotoluene	1100	U
84-66-2	Diethylphthalate	1100	U
7005-72-3	4-Chlorophenyl-phenylether	1100	U
86-73-7	Fluorene	1100	U
100-01-6	4-Nitroaniline	5500	U
534-52-1	4,6-Dinitro-2-Methylphenol	5500	U
86-30-6	N-Nitrosodiphenylamine (1)	1100	U
101-55-3	4-Bromophenyl-phenylether	1100	U
118-74-1	Hexachlorobenzene	1100	U
87-86-5	Pentachlorophenol	5500	U
85-01-8	Phenanthrene	1100	U
120-12-7	Anthracene	1100	U
84-74-2	Di-n-Butylphthalate	140	J
206-44-0	Fluoranthene	1100	U
129-00-0	Pyrene	1100	U
85-68-7	Butylbenzylphthalate	1100	U
91-94-1	3,3'-Dichlorobenzidine	2300	U
56-55-3	Benzo(a)Anthracene	1100	U
218-01-9	Chrysene	1100	U
117-81-7	bis(2-Ethylhexyl)Phthalate	220	J
117-84-0	Di-n-Octyl Phthalate	1100	U
205-99-2	Benzo(b)Fluoranthene	1100	U
207-08-9	Benzo(k)Fluoranthene	1100	U
50-32-8	Benzo(a)Pyrene	1100	U
193-39-5	Indeno(1,2,3-cd)Pyrene	1100	U
53-70-3	Dibenzo(a,h)Anthracene	1100	U
191-24-2	Benzo(g,h,i)Perylene	1100	U

(1) - Cannot be separated from Diphenylamine

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

44SD01

Lab Name: COMPUCHEM LABORATORIES Contract: 7/88

Lab Code: COMPU Case No.: 50024 SAS No.: _____ SDG No.: 664224

Matrix (soil/water): SOIL Lab Sample ID: 436854

Level (low/med): LOW Date Received: 08/10/91

% Solids: 29.0

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	15700		*	P
7440-36-0	Antimony	22.1	U	N	P
7440-38-2	Arsenic	5.3	B		F
7440-39-3	Barium	51.7	B		P
7440-41-7	Beryllium	.67	U		P
7440-43-9	Cadmium	2.7	U		P
7440-70-2	Calcium	9600			P
7440-47-3	Chromium	26.7		*	P
7440-48-4	Cobalt	4.0	U		P
7440-50-8	Copper	79.5		N*	P
7439-89-6	Iron	11300		*	P
7439-92-1	Lead	143			F
7439-95-4	Magnesium	1410	B		P
7439-96-5	Manganese	37.5			P
7439-97-6	Mercury	.34	U		CV
7440-02-0	Nickel	28.9			P
7440-09-7	Potassium	799	B		P
7782-49-2	Selenium	2.7	U	W	F
7440-22-4	Silver	3.3	U	N	P
7440-23-5	Sodium	897	B		P
7440-28-0	Thallium	1.4	U		F
7440-62-2	Vanadium	49.4			P
7440-66-6	Zinc	168		*	P
	Cyanide	1.7	U		AS

Color Before: BROWN Clarity Before: _____ Texture: MEDIUM

Color After: YELLOW Clarity After: _____ Artifacts: _____

Comments:

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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

44SD02

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

Lab Code: COMPU Case No.: 23664 SAS No.: _____ SDG No.: 101

Matrix: (soil/water) SOIL Lab Sample ID: 436838

Sample wt/vol: 5.0 (g/mL) G Lab File ID: GH036838A13

Level: (low/med) LOW Date Received: 08/10/91

% Moisture: not dec. 78 Date Analyzed: 08/18/91

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	45	U
74-83-9	Bromomethane	45	U
75-01-4	Vinyl Chloride	45	U
75-00-3	Chloroethane	45	U
75-09-2	Methylene Chloride	53	B
67-64-1	Acetone	31	BJ
75-15-0	Carbon Disulfide	23	U
75-35-4	1,1-Dichloroethene	23	U
75-34-3	1,1-Dichloroethane	23	U
540-59-0	1,2-Dichloroethene (total)	23	U
67-66-3	Chloroform	23	U
107-06-2	1,2-Dichloroethane	23	U
78-93-3	2-Butanone	45	U
71-55-6	1,1,1-Trichloroethane	23	U
56-23-5	Carbon Tetrachloride	23	U
108-05-4	Vinyl Acetate	45	U
75-27-4	Bromodichloromethane	23	U
78-87-5	1,2-Dichloropropane	23	U
10061-01-5	cis-1,3-Dichloropropene	23	U
79-01-6	Trichloroethene	23	U
124-48-1	Dibromochloromethane	23	U
79-00-5	1,1,2-Trichloroethane	23	U
71-43-2	Benzene	23	U
10061-02-6	Trans-1,3-Dichloropropene	23	U
75-25-2	Bromoform	23	U
108-10-1	4-Methyl-2-Pentanone	45	U
591-78-6	2-Hexanone	45	U
127-18-4	Tetrachloroethene	23	U
79-34-5	1,1,2,2-Tetrachloroethane	23	U
108-88-3	Toluene	23	U
108-90-7	Chlorobenzene	23	U
100-41-4	Ethylbenzene	23	U
100-42-5	Styrene	23	U
1330-20-7	Total Xylenes	23	U

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

44SD02

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

Lab Code: COMPU Case No.: 23664 SAS No.: _____ SDG No.: 101

Matrix: (soil/water) SOIL Lab Sample ID: 436838

Sample wt/vol: 30.0 (g/mL) G Lab File ID: G2J36838B52

Level: (low/med) LOW Date Received: 08/10/91

% Moisture: not dec. 78 dec. ____ Date Extracted: 08/13/91

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 08/17/91

GPC Cleanup: (Y/N) N pH: 6.7 Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	1500	U
111-44-4	bis(2-Chloroethyl)Ether	1500	U
95-57-8	2-Chlorophenol	1500	U
541-73-1	1,3-Dichlorobenzene	1500	U
106-46-7	1,4-Dichlorobenzene	1500	U
100-51-6	Benzyl Alcohol	1500	U
95-50-1	1,2-Dichlorobenzene	1500	U
95-48-7	2-Methylphenol	1500	U
39638-32-9	bis(2-Chloroisopropyl)Ether	1500	U
106-44-5	4-Methylphenol	1500	U
621-64-7	N-Nitroso-Di-n-Propylamine	1500	U
67-72-1	Hexachloroethane	1500	U
98-95-3	Nitrobenzene	1500	U
78-59-1	Isophorone	1500	U
88-75-5	2-Nitrophenol	1500	U
105-67-9	2,4-Dimethylphenol	1500	U
65-85-0	Benzoic Acid	1000	J
111-91-1	bis(2-Chloroethoxy)Methane	1500	U
120-83-2	2,4-Dichlorophenol	1500	U
120-82-1	1,2,4-Trichlorobenzene	1500	U
91-20-3	Naphthalene	1500	U
106-47-8	4-Chloroaniline	1500	U
87-68-3	Hexachlorobutadiene	1500	U
59-50-7	4-Chloro-3-Methylphenol	1500	U
91-57-6	2-Methylnaphthalene	1500	U
77-47-4	Hexachlorocyclopentadiene	1500	U
88-06-2	2,4,6-Trichlorophenol	1500	U
95-95-4	2,4,5-Trichlorophenol	7300	U
91-58-7	2-Chloronaphthalene	1500	U
88-74-4	2-Nitroaniline	7300	U
131-11-3	Dimethyl Phthalate	1500	U
208-96-8	Acenaphthylene	1500	U
606-20-2	2,6-Dinitrotoluene	1500	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

44SD02

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

Lab Code: COMPU Case No.: 23664 SAS No.: _____ SDG No.: 101

Matrix: (soil/water) SOIL Lab Sample ID: 436838

Sample wt/vol: 30.0 (g/mL) G Lab File ID: G2J36838B52

Level: (low/med) LOW Date Received: 08/10/91

% Moisture: not dec. 78 dec. ____ Date Extracted: 08/13/91

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 08/17/91

GPC Cleanup: (Y/N) N pH: 6.7 Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
99-09-2	3-Nitroaniline	7300	U
83-32-9	Acenaphthene	1500	U
51-28-5	2,4-Dinitrophenol	7300	U
100-02-7	4-Nitrophenol	7300	U
132-64-9	Dibenzofuran	1500	U
121-14-2	2,4-Dinitrotoluene	1500	U
84-66-2	Diethylphthalate	1500	U
7005-72-3	4-Chlorophenyl-phenylether	1500	U
86-73-7	Fluorene	1500	U
100-01-6	4-Nitroaniline	7300	U
534-52-1	4,6-Dinitro-2-Methylphenol	7300	U
86-30-6	N-Nitrosodiphenylamine (1)	1500	U
101-55-3	4-Bromophenyl-phenylether	1500	U
118-74-1	Hexachlorobenzene	1500	U
87-86-5	Pentachlorophenol	7300	U
85-01-8	Phenanthrene	1500	U
120-12-7	Anthracene	1500	U
84-74-2	Di-n-Butylphthalate	170	J
206-44-0	Fluoranthene	1500	U
129-00-0	Pyrene	1500	U
85-68-7	Butylbenzylphthalate	280	J
91-94-1	3,3'-Dichlorobenzidine	3000	U
56-55-3	Benzo(a)Anthracene	1500	U
218-01-9	Chrysene	1500	U
117-81-7	bis(2-Ethylhexyl)Phthalate	290	J
117-84-0	Di-n-Octyl Phthalate	1500	U
205-99-2	Benzo(b)Fluoranthene	1500	U
207-08-9	Benzo(k)Fluoranthene	1500	U
50-32-8	Benzo(a)Pyrene	1500	U
193-39-5	Indeno(1,2,3-cd)Pyrene	1500	U
53-70-3	Dibenzo(a,h)Anthracene	1500	U
191-24-2	Benzo(g,h,i)Perylene	1500	U

(1) - Cannot be separated from Diphenylamine

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

44SD02

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: 436414

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

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

% Moisture: not dec. 78 dec. Date Extracted: 08/12/91

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

GPC Cleanup: (Y/N) N pH: 6.6 Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	36	U
319-85-7	beta-BHC	36	U
319-86-8	delta-BHC	36	U
58-89-9	gamma-BHC	36	U
76-44-8	Heptachlor	36	U
309-00-2	Aldrin	36	U
1024-57-3	Heptachlor epoxide	36	U
959-98-8	Endosulfan I	36	U
60-57-1	Dieldrin	73	U
72-55-9	4,4'-DDE	140	
72-20-8	Endrin	73	U
33213-65-9	Endosulfan II	73	U
72-54-8	4,4'-DDD	180	
1031-07-8	Endosulfan sulfate	73	U
50-29-3	4,4'-DDT	73	U
72-43-5	p,p'-Methoxychlor	360	U
53494-70-5	Endrin ketone	73	U
5103-71-9	alpha-Chlordane	360	U
5103-74-2	gamma-Chlordane	360	U
8001-35-2	Toxaphene	730	U
12674-11-2	Aroclor-1016	360	U
11104-28-2	Aroclor-1221	360	U
11141-16-5	Aroclor-1232	360	U
53469-21-9	Aroclor-1242	360	U
12672-29-6	Aroclor-1248	360	U
11097-69-1	Aroclor-1254	730	U
11096-82-5	Aroclor-1260	730	U

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1

INORGANIC ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

44SD02

Lab Name: COMPUCHEM LABORATORIES Contract: 7/88

Lab Code: COMPU Case No.: 50024 SAS No.: _____ SDG No.: 664224

Matrix (soil/water): SOIL Lab Sample ID: 436862

Level (low/med): LOW Date Received: 08/10/91

% Solids: 22.0

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	10900		*	P
7440-36-0	Antimony	29.7	U	N	P
7440-38-2	Arsenic	4.5	U	W	F
7440-39-3	Barium	38.6	B		P
7440-41-7	Beryllium	.90	U		P
7440-43-9	Cadmium	3.6	U		P
7440-70-2	Calcium	10700			P
7440-47-3	Chromium	23.5		*	P
7440-48-4	Cobalt	5.4	U		P
7440-50-8	Copper	79.1		N*	P
7439-89-6	Iron	10200		*	P
7439-92-1	Lead	144			F
7439-95-4	Magnesium	1880	B		P
7439-96-5	Manganese	78.8			P
7439-97-6	Mercury	.45	U		CV
7440-02-0	Nickel	26.9	B		P
7440-09-7	Potassium	960	U		P
7782-49-2	Selenium	3.6	U		F
7440-22-4	Silver	4.5	U	N	P
7440-23-5	Sodium	1640	B		P
7440-28-0	Thallium	1.8	U	W	F
7440-62-2	Vanadium	42.8	B		P
7440-66-6	Zinc	149		*	P
	Cyanide	2.3	U		AS

Color Before: BLACK Clarity Before: _____ Texture: MEDIUM

Color After: YELLOW Clarity After: _____ Artifacts: _____

Comments:

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APPENDIX F
QA/QC DATA

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

44SB0200D

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

Lab Code: COMPU Case No.: 23664 SAS No.: _____ SDG No.: 101

Matrix: (soil/water) SOIL Lab Sample ID: 439574

Sample wt/vol: 5.0 (g/mL) G Lab File ID: GH039574A13

Level: (low/med) LOW Date Received: 08/23/91

% Moisture: not dec. 18 Date Analyzed: 08/29/91

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	35	B
67-64-1	Acetone	14	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

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

44SB0200D

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

Lab Code: COMPU Case No.: 23664 SAS No.: _____ SDG No.: 101

Matrix: (soil/water) SOIL Lab Sample ID: 439574

Sample wt/vol: 30.3 (g/mL) G Lab File ID: GH039574A06

Level: (low/med) LOW Date Received: 08/23/91

% Moisture: not dec. 18 dec. ____ Date Extracted: 08/27/91

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 08/30/91

GPC Cleanup: (Y/N) N pH: 7.2 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-Chloroisopropyl)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	64	J
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	1900	U
91-58-7	2-Chloronaphthalene	400	U
88-74-4	2-Nitroaniline	1900	U
131-11-3	Dimethyl Phthalate	400	U
208-96-8	Acenaphthylene	400	U
606-20-2	2,6-Dinitrotoluene	400	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

44SB0200D

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

Lab Code: COMPU Case No.: 23664 SAS No.: _____ SDG No.: 101

Matrix: (soil/water) SOIL Lab Sample ID: 439574

Sample wt/vol: 30.3 (g/mL) G Lab File ID: GH039574A06

Level: (low/med) LOW Date Received: 08/23/91

% Moisture: not dec. 18 dec. ____ Date Extracted: 08/27/91

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 08/30/91

GPC Cleanup: (Y/N) N pH: 7.2 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	400	U
51-28-5	2,4-Dinitrophenol	1900	U
100-02-7	4-Nitrophenol	1900	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	1900	U
534-52-1	4,6-Dinitro-2-Methylphenol	1900	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	1900	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	800	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

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

44SB0200D

Lab Name: COMPUCHEM LABORATORIES Contract: 7/88

Lab Code: COMPU Case No.: 50024 SAS No.: _____ SDG No.: 664224

Matrix (soil/water): SOIL Lab Sample ID: 439602

Level (low/med): LOW Date Received: 08/23/91

% 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	10800		*	P
7440-36-0	Antimony	7.8	U	N	P
7440-38-2	Arsenic	1.6	B		F
7440-39-3	Barium	18.6	B		P
7440-41-7	Beryllium	.24	U		P
7440-43-9	Cadmium	.95	U		P
7440-70-2	Calcium	3930			P
7440-47-3	Chromium	12.7		*	P
7440-48-4	Cobalt	1.4	U		P
7440-50-8	Copper	2.7	B	N*	P
7439-89-6	Iron	8160		*	P
7439-92-1	Lead	9.4			F
7439-95-4	Magnesium	384	B		P
7439-96-5	Manganese	8.1			P
7439-97-6	Mercury	.12	U		CV
7440-02-0	Nickel	2.5	B		P
7440-09-7	Potassium	304	B		P
7782-49-2	Selenium	1.1	B		F
7440-22-4	Silver	1.2	U	N	P
7440-23-5	Sodium	167	B		P
7440-28-0	Thallium	.47	U		F
7440-62-2	Vanadium	19.1			P
7440-66-6	Zinc	6.3		*	P
	Cyanide	.60	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.

44SB0406MS

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

Lab Code: COMPU Case No.: 23664 SAS No.: _____ SDG No.: 121

Matrix: (soil/water) SOIL Lab Sample ID: 439582

Sample wt/vol: 5.0 (g/mL) G Lab File ID: GH039582A13

Level: (low/med) LOW Date Received: 08/23/91

% Moisture: not dec. 19 Date Analyzed: 08/29/91

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	36	B
67-64-1	Acetone	41	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

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

44SB0406MS

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

Lab Code: COMPU Case No.: 23664 SAS No.: _____ SDG No.: 121

Matrix: (soil/water) SOIL Lab Sample ID: 439585

Sample wt/vol: 30.0 (g/mL) G Lab File ID: GH039585B04

Level: (low/med) LOW Date Received: 08/23/91

% Moisture: not dec. 19 dec. ____ Date Extracted: 08/27/91

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 08/30/91

GPC Cleanup: (Y/N) N pH: 5.6 Dilution Factor: 1.00

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-Chloroisopropyl)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.

44SB0406MS

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

Lab Code: COMPU Case No.: 23664 SAS No.: _____ SDG No.: 121

Matrix: (soil/water) SOIL Lab Sample ID: 439585

Sample wt/vol: 30.0 (g/mL) G Lab File ID: GH039585B04

Level: (low/med) LOW Date Received: 08/23/91

% Moisture: not dec. 19 dec. ____ Date Extracted: 08/27/91

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 08/30/91

GPC Cleanup: (Y/N) N pH: 5.6 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	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	820	U
56-55-3	Benzo(a)Anthracene	410	U
218-01-9	Chrysene	410	U
117-81-7	bis(2-Ethylhexyl)Phthalate	44	BJ
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

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

44MW0100D

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

Lab Code: COMPU Case No.: 23664 SAS No.: _____ SDG No.: 101

Matrix: (soil/water) SOIL Lab Sample ID: 439565

Sample wt/vol: 5.0 (g/mL) G Lab File ID: GH039565A13

Level: (low/med) LOW Date Received: 08/23/91

% Moisture: not dec. 13 Date Analyzed: 08/29/91

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	34	B
67-64-1	Acetone	61	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	11	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

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

44MW0100D

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

Lab Code: COMPU Case No.: 23664 SAS No.: _____ SDG No.: 101

Matrix: (soil/water) SOIL Lab Sample ID: 439565

Sample wt/vol: 30.0 (g/mL) G Lab File ID: GH039565C04

Level: (low/med) LOW Date Received: 08/23/91

% Moisture: not dec. 13 dec. ____ Date Extracted: 08/27/91

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 08/31/91

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
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	1800	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	1800	U
91-58-7	2-Chloronaphthalene	380	U
88-74-4	2-Nitroaniline	1800	U
131-11-3	Dimethyl Phthalate	380	U
208-96-8	Acenaphthylene	380	U
606-20-2	2,6-Dinitrotoluene	380	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

44MW0100D

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

Lab Code: COMPU Case No.: 23664 SAS No.: _____ SDG No.: 101

Matrix: (soil/water) SOIL Lab Sample ID: 439565

Sample wt/vol: 30.0 (g/mL) G Lab File ID: GH039565C04

Level: (low/med) LOW Date Received: 08/23/91

% Moisture: not dec. 13 dec. ____ Date Extracted: 08/27/91

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 08/31/91

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
99-09-2	3-Nitroaniline	1800	U
83-32-9	Acenaphthene	380	U
51-28-5	2,4-Dinitrophenol	1800	U
100-02-7	4-Nitrophenol	1800	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	1800	U
534-52-1	4,6-Dinitro-2-Methylphenol	1800	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	1800	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	69	BJ
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

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

44MW0100D

Lab Name: COMPUCHEM LABORATORIES Contract: 7/88

Lab Code: COMPU Case No.: 50024 SAS No.: _____ SDG No.: 664224

Matrix (soil/water): SOIL Lab Sample ID: 439593

Level (low/med): LOW Date Received: 08/23/91

% 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	11100		*	P
7440-36-0	Antimony	7.6	U	N	P
7440-38-2	Arsenic	2.3	B	W	F
7440-39-3	Barium	16.7	B		P
7440-41-7	Beryllium	.23	U		P
7440-43-9	Cadmium	.92	U		P
7440-70-2	Calcium	11600			P
7440-47-3	Chromium	13.9		*	P
7440-48-4	Cobalt	1.4	U		P
7440-50-8	Copper	44.0		N*	P
7439-89-6	Iron	7800		*	P
7439-92-1	Lead	7.0			F
7439-95-4	Magnesium	590	B		P
7439-96-5	Manganese	12.9			P
7439-97-6	Mercury	.11	U		CV
7440-02-0	Nickel	8.2	B		P
7440-09-7	Potassium	424	B		P
7782-49-2	Selenium	.91	U	W	F
7440-22-4	Silver	1.1	U	N	P
7440-23-5	Sodium	169	B		P
7440-28-0	Thallium	.46	U		F
7440-62-2	Vanadium	20.5			P
7440-66-6	Zinc	8.0		*	P
	Cyanide	.57	U		AS

Color Before: BROWN Clarity Before: _____ Texture: MEDIUM

Color After: YELLOW Clarity After: _____ Artifacts: _____

Comments:

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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

44GW03-1D

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: 439984

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CN039984A03

Level: (low/med) LOW Date Received: 08/26/91

% Moisture: not dec. ____ Date Analyzed: 09/03/91

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	BJ
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

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

44GW03-1D

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: 439984

Sample wt/vol: 1000 (g/mL) ML Lab File ID: GH039984B57

Level: (low/med) LOW Date Received: 08/26/91

% Moisture: not dec. ____ dec. ____ Date Extracted: 08/28/91

Extraction: (SepF/Cont/Sonc) CONT Date Analyzed: 09/06/91

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
95-50-1	1,2-Dichlorobenzene	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-Oxybis(1-Chloropropane)	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
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	62	
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	14	
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

23664 277 SAMPLE DATA SUMMARY

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

44GW03-1D

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: 439984

Sample wt/vol: 1000 (g/mL) ML Lab File ID: GH039984B57

Level: (low/med) LOW Date Received: 08/26/91

% Moisture: not dec. ____ dec. ____ Date Extracted: 08/28/91

Extraction: (SepF/Cont/Sonc) CONT Date Analyzed: 09/06/91

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	16	
51-28-5	2,4-Dinitrophenol	50	U
100-02-7	4-Nitrophenol	50	U
132-64-9	Dibenzofuran	8	J
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	
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	24	
120-12-7	Anthracene	3	J
86-74-8	Carbazole	10	U
84-74-2	Di-n-Butylphthalate	10	U
206-44-0	Fluoranthene	14	
129-00-0	Pyrene	9	J
85-68-7	Butylbenzylphthalate	10	U
91-94-1	3,3'-Dichlorobenzidine	20	U
56-55-3	Benzo(a)Anthracene	3	J
218-01-9	Chrysene	10	U
117-81-7	bis(2-Ethylhexyl)Phthalate	3	J
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.

44GW03-1D

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: 439984

Sample wt/vol: 1000 (g/mL) ML Lab File ID:

Level: (low/med) LOW Date Received: 08/26/91

% Moisture: not dec. dec. Date Extracted: 08/28/91

Extraction: (SepF/Cont/Sonc) SEPF Date Analyzed: 08/28/91

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

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U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

44GW03-1D

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: 439992

Level (low/med): LOW Date Received: 08/26/91

% 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	144000			P
7440-36-0	Antimony	33.0	U		P
7440-38-2	Arsenic	10.5		W	F
7440-39-3	Barium	1210			P
7440-41-7	Beryllium	2.5	B		P
7440-43-9	Cadmium	5.2			P
7440-70-2	Calcium	201000			P
7440-47-3	Chromium	176			P
7440-48-4	Cobalt	7.5	B		P
7440-50-8	Copper	78.6			P
7439-89-6	Iron	134000			P
7439-92-1	Lead	427			P
7439-95-4	Magnesium	22800			P
7439-96-5	Manganese	641			P
7439-97-6	Mercury	.20			CV
7440-02-0	Nickel	45.6			P
7440-09-7	Potassium	20900			P
7782-49-2	Selenium	20.0	U	W	F
7440-22-4	Silver	5.0	U		P
7440-23-5	Sodium	13400			P
7440-28-0	Thallium	2.0	U	W	F
7440-62-2	Vanadium	266			P
7440-66-6	Zinc	1110		*	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.

TB4401

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: 436808

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CN036808B51

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	12	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.

TRIPBLANK

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: 436811

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CN036811A51

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	13	
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

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LABPURE1

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: 439632

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CN039632A53

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	4	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

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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LABPURE2

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: 439633

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CN039633A53

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	13	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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