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Remedial Investigation and Human Health Risk Assessment Landfill C (Site 3) and Landfill D (Site 4)

St. Juliens Creek Annex
Chesapeake, Virginia

Contract Task Order 027

February 1998

Prepared for

Department of the Navy
Atlantic Division
Naval Facilities Engineering Command

Under the

LANTDIV CLEAN II Program
Contract N62470-95-D-6007

Prepared by

CDM Federal Programs Corporation
A subsidiary of Camp Dresser & McKee Inc.

Fairfax, Virginia

Submitted by

CH2MHILL

Herndon, Virginia

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Abbreviations and Acronyms

AEDS	American Environmental Drilling Services
AOC	Area Of Concern
AWQC	Ambient Water Quality Criteria
BGS	Below Ground Surface
BOA	Basic Ordering Agreements
BTAG	Biological Technical Assistance Group
BTEX	Benzene, Toluene, Ethybenzene, And Xylene
CERCLA	Comprehensive Environmental Response, Compensation, And Liability Act
COC	Contaminant of Concern
COPC	Chemical of Potential Concern
CT	Central Tendencies
DPT	Direct Push Technology
Eh	Oxidation-Reduction Potential
EM	Electromagnetic
EP	Extraction Procedure
EPA	Environmental Protection Agency
ERT	Earth Resources Technology
FSP	Field Sampling Plan
GPR	Ground-Penetrating Radar
HEAST	Health Effects Assessment Summary Table
HHRA	Human Health Risk Assessment
HQ	Hazard Quotient
HSDB	Hazardous Substances Data Bank
HSP	Health and Safety Plan
IAS	Initial Assessment Study
IEVBK	Integrated Exposure-Uptake Biokinetic
IRP	Installation Restoration Program
LANTDN	U.S. Naval Facilities Engineering Command, Atlantic Division
LOAEL	Lowest Observed Adverse Effect Level
MCL	Maximum Contaminant Level
MG/KG	Milligrams Per Kilogram
MG/L	Milligrams Per Liter
MHz	Megahertz
MW	Monitoring Well

Abbreviations and Acronyms, Continued

NBN	Naval Base, Norfolk
NCEA	National Center for Environmental Assessment
ND	Nondetect
NM	Naval Magazine
NOAA	National Oceanic and Atmospheric Administration
NOAEL	No Observed Adverse Effect Level
OD	Outside Diameter
PA	Preliminary Assessment
PAHs	Polynuclear Aromatic Hydrocarbons
PCB	Polychlorinated BiPhenyls
PPB	Parts Per Billion
PPM	Parts Per Million
PVC	Polyvinyl Chloride
QAPP	Quality Assurance Project Plan
QA/QC	Quality Assurance/Quality Control
RBC	Risk Based Concentration
RCRA	Resource Conservation And Recovery Act
RFA	RCRA Facility Assessment
RI	Remedial Investigation
RI/FS	Remedial Investigation /Feasibility Study
RME	Reasonable Maximum Exposure
RRR	Relative Risk Ranking
SB	Soil Boring
SAP	Sampling and Analysis Plan
SD	Sediment
SDWA	Safe Drinking Water Act
SS	Surface Soil
SSL	Soil Screening Levels
SW	Surface Water
SVOCs	Semivolatile Organic Compounds
TAL	Target Analyte List
TCE	Trichloroethylene
TCL	Target Compound List
TEQ	Toxic Equivalent Quotient
TNT	Trinitrotolune
TOC	Total Organic Carbon
TPH	Total Petroleum Hydrocarbons

Abbreviations and Acronyms, Continued

UCL	Upper Confidential Limit
UG/KG	Micrograms Per Kilogram
UG/L	Micrograms Per Liter
USEPA	United States Environmental Protection Agency
VDEQ	Virginia Department of Environmental Quality
VOC	Volatile Organic Compounds
VSI	Visual Site Inspections
XRF	X-ray fluorescence

Executive Summary

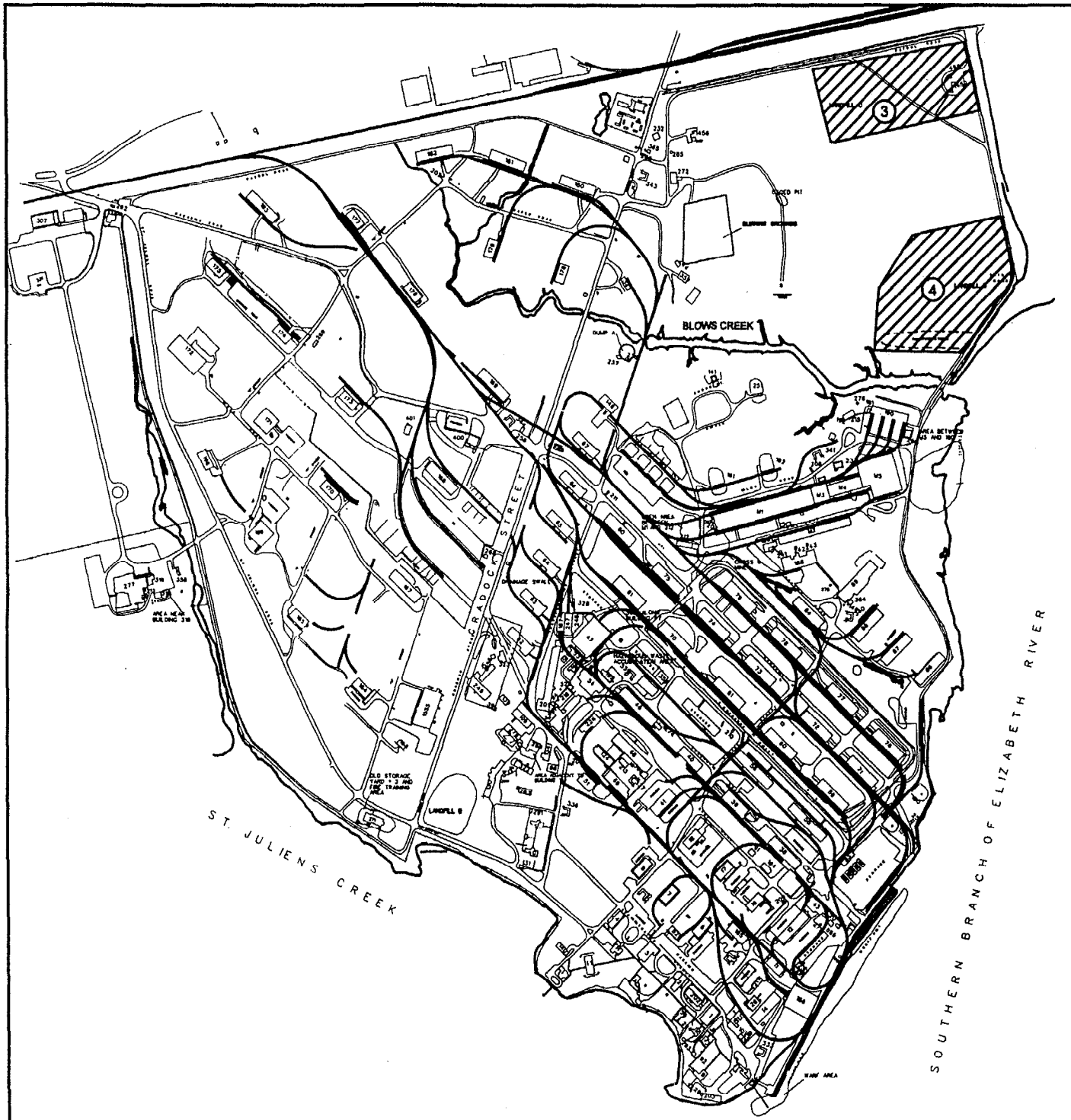
This report represents the procedures and results of the Remedial Investigation (RI) and the Human Health Risk Assessment of Site 3 (Landfill C) and Site 4 (Landfill D) at the St. Juliens Creek Annex of the Norfolk Naval Base, in Chesapeake, Virginia. This investigation was one of two being performed concurrently under Navy Contract No. N62470-95-D-6007 by CDM Federal Programs Corporation (CDM Federal), a subcontractor to CH2M HILL.

The scope of work for this investigation is documented in *Work Plan, Remedial Investigation and Feasibility Study, Landfill C (Site 3) and Landfill D (Site 4), St. Juliens Creek Annex, Chesapeake, Virginia,* dated May 1997 (the Work Plan). The Human Health Risk Assessment (HHRA) is incorporated into this report , and the Baseline Ecological Risk Assessment (BERA) is a separate document. The locations of Site 3 and Site 4 are shown on **Figure ES-1.**

Site 3 (Landfill C) covers 10 acres along the northern edge of the Annex and is accessible by way of a patrol road. There is evidence that the area of Landfill C was used as a hydraulic dredge disposal area prior to use as a Landfill. The area was originally a mudflat where refuse was dumped and allowed to burn; the ash was then used to fill in the area. The landfill is unlined. For 30 years (1940 to 1970) solvents, acids, bases, mixed municipal waste, oil and sludges were disposed at the site. At some time after 1970, the landfill was graded level and covered with grass, but it has not been formally closed.

Site 4 (Landfill D) covers an estimated 5 acres approximately 300 feet south of Site 3. Site 4 was an unlined trench-and-fill landfill that reportedly operated from 1970 to 1981. The total number of trenches dug in the landfill is not known. Refuse disposed at Site 4 included drums of unknown wastes and polychlorinated biphenyls (PCBs). Previous reports indicated that several tanks with undetermined wastes were also once located in the area. Total volumes of disposal are unknown.

The work performed at each site during the RI is summarized in **Table ES-1.** The sampling locations for Site 3 and Site 4 are shown on **Figures ES-2 and ES-3** respectively. The objective of the field and analytical work was to delineate the landfill boundaries, define the



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0 300 600 900

SCALE IN FEET

LOCATION OF SITE 3 (LANDFILL C)
AND SITE 4 (LANDFILL D)
SAINT JULIENS CREEK ANNEX

FIGURE ES-1

LEGEND

NUMBER	SITE NAME/DESCRIPTION
3	LANDFILL C
4	LANDFILL D

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geologic and hydrogeologic features of the site that control migration of some contaminants, and define the nature and extent of the contamination.

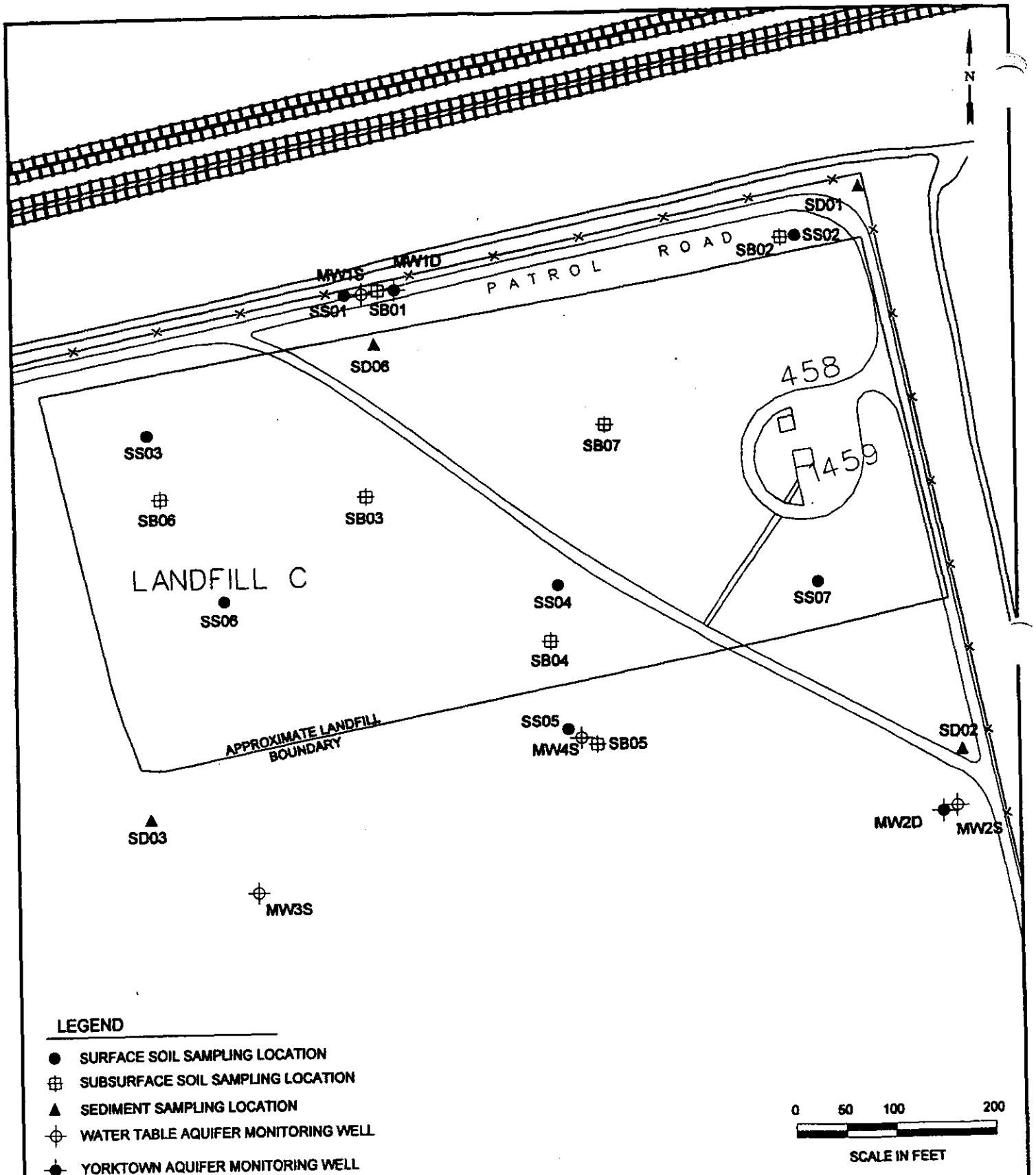
Table ES-1

Summary of RI Field Investigation at Site 3 and Site 4

Investigation Technique	Site 3	Site 4
Geophysical Survey	Electromagnetic (EM) survey on 100 ft grid	EM and magnetometer Survey on 100 ft grid and profile lines. Limited GPR on top of landfill.
Subsurface Soil Boring	Seven DPT samples (2 collected from 0-3 ft) for Ecological Risk Assessment.	Three Geoprobe samples from perimeter of landfill.
Surface Soil Samples	Seven samples	Ten samples
Groundwater Monitoring Well Installation and Sampling	Four shallow wells and two Yorktown Aquifer (deep) wells	Four Water Table Aquifer and two Yorktown Aquifer (deep) wells.
Surface Water Sample	None	One sample
Sediment Sample	Four samples	Four samples
Tidal Study	Conducted at other sites on St. Juliens Creek Annex and results applied to this investigation.	

The primary objective of the Human Health Risk Assessment was to assess the health risks to current and potential future human receptors from contamination present at and migrating from Site 3 and Site 4. The risk assessment is comprised of the following components:

- **Identification of Chemicals of Potential Concern (COPCs)**–identify and characterize the distribution of COPCs found onsite.
- **Exposure Assessment**–identify potential pathways of human exposure, and estimate the magnitude, frequency, and duration of these exposures.
- **Toxicity Assessment**–assess the potential adverse effects of the COPCs.



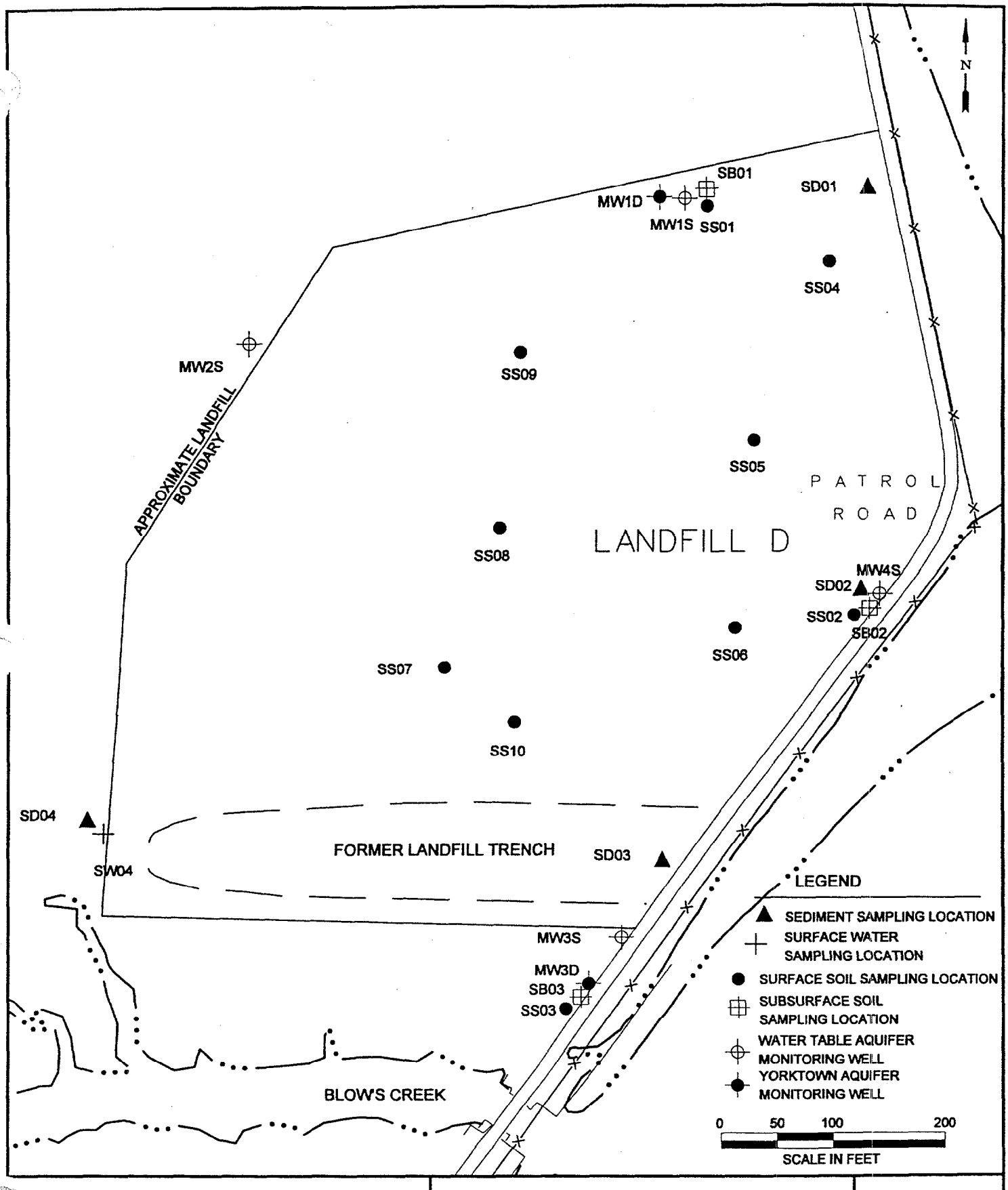
LEGEND

- SURFACE SOIL SAMPLING LOCATION
- SUBSURFACE SOIL SAMPLING LOCATION
- SEDIMENT SAMPLING LOCATION
- WATER TABLE AQUIFER MONITORING WELL
- YORKTOWN AQUIFER MONITORING WELL

0 50 100 200

SCALE IN FEET

CDM Federal Programs Corporation *A Subsidiary of Camp Dresser & McKee Inc.*	SAMPLING LOCATIONS, SITE 3 SAINT JULIENS CREEK ANNEX	FIGURE ES-2



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SAMPLING LOCATIONS, SITE 4
SAINT JULIENS CREEK ANNEX

FIGURE
ES-3

- **Human Health Risk Characterization**–characterize the potential health risks associated with exposure to site related contamination.

- **Human Health Assessment Uncertainty Analysis**–identify sources of uncertainty in the risk assessment.

All of the components were evaluated following EPA risk assessment guidance. In addition to the specified regulations and guidance, the risk assessment was completed following the Consensus Agreement #6A (Parts 1 through 6) prepared and agreed to by the Navy, EPA and the Virginia Department of Environmental Quality.

Geologic and Hydrogeologic Framework

St. Juliens Creek Annex is located within the Atlantic Coastal Plain, and is underlain by approximately 2000 feet of unconsolidated sand, silt and clay. The stratigraphy at the Base was determined through drilling and sampling monitoring wells. The deep monitoring wells were completed at a depth of about 60 ft; however, one boring was extended to 90 ft (at Site 4) to obtain additional stratigraphic data. The Yorktown Formation is present at the Base from elevations of -8 ft msl to approximately -80 ft msl. Although predominately consisting of silt and clay, there is a 1-ft tot 15-ft thick sand zone within the Yorktown Formation. This sand zone, which comprises the Yorktown Aquifer, is encountered at elevations of approximately -30 ft to -35 ft msl. The potentiometric surface of the Yorktown Aquifer is found at an elevation of 1 to 2 ft msl. Although the groundwater flow direction in the Yorktown Aquifer would be expected to be toward the South Branch of the Elizabeth River, the potentiometric surface map indicates that it is to the west and northwest at Site 3, and to the south at Site 4. Additional data points would be required to more accurately determine groundwater flow direction.

A 9- to 25-ft thick, stiff, bluish and greenish clay is the uppermost unit of the Yorktown Formation at the Base. The vertical hydraulic gradient across this confining clay is downward at both Site 3 and at Site 4. Generally, the stratigraphy above the upper Yorktown Formation clay consists of silts, sand and clay of the post-Pliocene sediments. These sediments comprise the Water Table Aquifer. The potentiometric surface in the Water Table Aquifer is at elevations of 7 to 2 ft msl at Sites 3 and 4. At Site 4 the direction of

groundwater flow is to the southeast, toward the South Branch of the Elizabeth River. At Site 3 the direction of groundwater flow could not be determined because two of the monitoring wells are screened in a perched water table. At Site 3, the uppermost stratigraphy also includes hydraulic dredge spoils (presumably from the South Branch of the Elizabeth River).

At Site 4 a 4-ft thick "intermediate water-bearing zone" was encountered between the Water Table Aquifer and the Yorktown Aquifer adjacent to the South Branch of the Elizabeth River. No monitoring wells are screened in the intermediate water-bearing zone at Site 4.

Evaluation of Nature and Extent

The results of the sampling and analysis programs were evaluated with respect to those contaminants determined to be Contaminants of Potential Concern (COPCs) by either the Human Health Risk Assessment (HHRA) or the Ecological Risk Assessment (CDM 1998). COPCs are media-specific contaminants that are present at concentrations that exceed screening levels. In general, COPCs are constituents detected at concentrations above USEPA Region III Risk-Based Screening (RBC) Levels, and Region III USEPA Biological Technical Assistance Group (BTAG) levels for soil; RBC levels and Federal Maximum Contaminant Levels and Virginia Department of Environmental Quality Groundwater criteria for groundwater, BTAG levels for sediment; and BTAG and Federal Ambient Water Quality Criteria for surface water.

Site 3 Summary and Conclusions

The geophysical survey did not identify any anomalies that could be correlated with buried materials. Although no landfilled materials were identified, the presence of organic constituents in subsurface soils (including polynuclear aromatic hydrocarbons (PAHs) at concentrations above 3000 ug/kg) indicates that past site activities have impacted the soil quality. Many of the COPCs developed for the various media at Site 3 are consistent with materials that were reported to have been disposed of in the landfill. However, some are also consistent with the contaminants that would be expected to be found in dredge spoil materials. Metals, polychlorinated biphenyls (PCBs), pesticides, PAHs and other SVOCs

(including phthalates) all would be expected to be found in clay-rich dredge spoils. The source for these constituents in the dredge spoil material would be contaminants deposited in the river sediment (from industry and shipping along the river) prior to these sediments being pumped to Site 3.

Because the source of the metals, SVOC, and pesticide contaminants may not be due to landfilling, solvents are considered to be the best indicator of landfilling activities. Solvents (including TCE which is not a COPC) were detected at low concentrations in subsurface borings on the west side of the site.

There is no distinctive source area for the contaminants in surface soil, and there is ambiguity concerning the source of the COPCs (dredge spoil or landfill). Therefore, the extent of the contamination in surface soils and sediment that is due to landfilling activities has not been defined. The extent of the COPCs in the surface soil at the site has not been determined to the south, west and east.

The COPCs (cholorform and bis-(2-ethylhexyl) phthalate) in the Yorktown Aquifer are not considered to be related to site activities. The groundwater flow direction in the Water Table Aquifer was not defined due to the presence of a perched water table in some areas of the site.

The majority of the COPCs detected in the soils, sediments and groundwater at Site 3 can be classified as persistent, non-volatile and non-degradable metals (arsenic, beryllium, chromium, copper, lead, mercury, nickel, thallium and zinc) and very slowly degradable organics that include PAHs, PCBs and other SVOCs. These chemicals strongly sorb to soils and are relatively immobile. Concentrations in soils will persist into the future with only slow dissolution of metals to groundwater.

The volatile, soluble, degradable VOCs such as methylene chloride and toluene were found only in trace concentrations in the soils. There are no data that indicate these chemicals ever reached the groundwater.

The current and future risks and hazards for Site 3 are within or below EPA's acceptable risk range for all groundwater exposure scenarios. For surface soil, the evaluation for the child trespasser, residential child, residential adult, groundskeeper and the construction worker results in non-carcinogenic risk estimates above EPA's acceptable risk range. For

the child trespasser and groundskeeper, EPA's acceptable risk range is exceeded for the Reasonable Maximum Exposure (RME) evaluation, but not for the Central Tendencies (CT) evaluation. RME estimates of carcinogenic risk exceed EPA's acceptable risk range for the residential child and adult and the groundskeeper. The CT evaluation for these scenarios produced a risk which was within EPA's acceptable risk range. For subsurface soil, the evaluation for the construction worker resulted in non-carcinogenic risk above EPA's acceptable risk range for the construction worker using the RME value and within EPA's acceptable risk range using the CT value. For sediment, lead was the only constituent detected at a concentration above COPC screening levels. The current and future risks and hazards are within EPA's acceptable risk range for all other exposure scenarios.

Based on the results and findings of the RI and HHRA, the following recommendations for Site 3 are presented.

1) At present there is insufficient data on the naturally occurring concentrations of inorganic constituents in all media that were sampled and evaluated. A study should be conducted with a sufficient number of samples, collected in background locations, to statistically determine the background concentrations of inorganic constituents in groundwater, surface water, sediment, surface soil and subsurface soil.

2) Re-evaluate the risk to human health and the extent of contamination using the results of a soil background study conducted at St. Juliens Creek Annex.

3) Determine the direction of groundwater flow, and sample the Water Table Aquifer in the area downgradient of the western part of the site (the only area where solvents were detected in subsurface soil).

4) Collect and analyze surface water samples originally scheduled for the RI.

Site 4 Summary and Conclusions

The boundaries of the landfill were identified with the geophysical survey, however no buried drums could be definitively identified.

Organic and inorganic COPCs were identified for all media at the site. There is evidence that VOCs (acetone), PAHs, PCBs (up to 6300 ug/kg in surface soil on the landfill) and

pesticides (endrin ketone and endrin aldehyde) have been disposed of in the landfill. Analytical data from sediment samples suggests that the site is acting as a source for metals detected in sediment since concentrations of some metals (including arsenic, barium, copper, lead, mercury, vanadium and zinc) in samples (collected from a adjacent drainage ditch) increase downstream of the landfill. However, the concentrations of metals in the surface soil (which would be the source of sediment in the drainage ditch) are not necessarily above typical concentrations in soils of the eastern United States. It can be expected that much of the material in the landfill contains metal and several metallic objects (e.g., heavy metal sheeting and ordnance shipping containers), were visible at the surface of the landfill. The fluorescent light ballast containers reported to have been disposed in the landfill, may the source of mercury in sediment.

The consistent presence of arsenic in the Yorktown Aquifer groundwater samples in the downgradient monitoring well may indicate that the landfill is contributing arsenic to the groundwater. the evidence of migration of arsenic to the Yorktown Aquifer is inconclusive, however, as arsenic is not found consistently in other (shallow) monitoring wells.

Due to the proximity of the landfill to surface water, and the nature of the materials disposed in the landfill, it is likely that the landfill is contributing inorganic (e.g., arsenic, copper, mercury, and zinc) and organic (acetone) COPCs to surface water at Site 4.

The majority of the COPCs detected in the soils, sediments, surface water and groundwater at Site 4 can be classified as persistent, non-volatile and non-degradable metals (arsenic, beryllium, chromium, copper, lead, mercury, nickel, silver, thallium and zinc) and very slowly degradable organics that include PAHs, pesticides, PCBs and other SVOCs. These chemicals strongly sorb to soils and sediments and are relatively immobile. Concentrations in soils and sediment will persist into the future with only slow dissolution of metals and the most soluble SVOCs (acenaphthene, bis(2-ethylhexyl)phthalate and 4-methylphenol) to groundwater and surface water. Transport of contaminants in surface water, whether in the dissolved or particulate form, to Blows Creek is possible.

The volatile, soluble, degradable VOCs such as acetone and carbon disulfide were found only in trace concentrations in the surface soils, surface water and sediments.

Current and future risks and hazards at Site 4 are within EPA's acceptable risk range for all shallow groundwater exposure scenarios. For deep groundwater, non-carcinogenic risk estimates are outside of EPA's acceptable risk range for the adult and child resident. For surface soil, the evaluation for the trespasser (child, adult, adolescent), resident (child, adult) groundskeeper and construction worker results in non-carcinogenic risk estimates outside EPA's acceptable risk range. For the trespasser (child, adult, adolescent), EPA's acceptable risk range was exceeded for the RME evaluation, but not for the CT evaluation. RME estimates of carcinogenic risk exceeded EPA's acceptable risk range for the residential child and adult. The CT evaluation for these scenarios produced a risk which was within EPA's acceptable risk range. For subsurface soil, risk estimates are outside EPA's acceptable risk range for the construction worker. For surface water, non-carcinogenic risk is outside of EPA's acceptable risk range for child and adult residents. For sediment, lead was the only constituent detected at a concentration above COPC screening levels. The current and future risks and hazards are within EPA's risk range for all other exposure scenarios

Based on the findings presented in this report, the following recommendations for Site 4 are presented:

1) At present there is insufficient data on the naturally occurring concentrations of inorganic constituents in all media that were sampled and evaluated. A study should be conducted with a sufficient number of samples, collected in background locations, to statistically determine the background concentrations of inorganic constituents in groundwater, surface water, sediment, surface soil and subsurface soil.

2) Re-evaluate the risk to human health and the extent of contamination using the results of the background study.

3) Collect and analyze surface water samples originally scheduled for the RI.

4) Conduct additional sediment sampling along the south and southwestern perimeter of the landfill, in areas that drain to Blows Creek to further define the extent of contamination in these areas.

1. Introduction

This report represents the activities and results of the Remedial Investigation (RI) of Site 3 (Landfill C) and Site 4 (Landfill D) and the Human Health Risk Assessment at the St. Juliens Creek Annex of the Norfolk Naval Base, in Chesapeake, Virginia. This investigation was one of two being performed concurrently under Navy Contract No. N62470-95-D-6007 by CDM Federal, a subcontractor to CH2M HILL.

The scope of work for this investigation is documented in *Work Plan, Remedial Investigation and Feasibility Study, Landfill C (Site 3) and Landfill D (Site 4), St. Juliens Creek Annex, Chesapeake, Virginia,* dated May 1997 (the Work Plan).

Section 1 of this report outlines the purpose of the report, provides background information on the Sites, and summarizes results from previous investigations conducted at the Sites. Section 2 provides information on the approach, methodology, and practices used during the investigations. Section 3 presents the analytical results, including a characterization of the environmental media contamination. Section 3 also provides information on the physical characteristics (e.g., geology and hydrogeology) of the Sites. Section 4 provides information on the nature of the individual contaminants, and physical features that can be used to estimate contaminant fate and transport. Section 5 is the Human Health Risk Assessment (HHRA) of the sites based on information contained in the RI. Section 6 is a summary of all results. References are listed in Section 7.

1.1 Purpose and Scope

The purpose of this report is to present the results of the Remedial Investigation conducted by CDM Federal at Site 3 and Site 4 at St. Juliens Creek Annex. The report serves to document the contaminants detected in soil, groundwater, surface water and sediment, as well as to present information on the physical characteristics of the site, to facilitate a better understanding of the potential for human and ecological exposure to contaminants associated with the Sites. The Human Health Risk Assessment (HHRA) is incorporated into this report, and the Baseline Ecological Risk Assessment (BERA) will be presented in a separate document.

1.2 Site Description and History

This subsection contains Site-specific information on the history and physical features of Site 3 and Site 4. General information on the history of the Base and Base-wide features is included in the Work Plan.

The available site background information documented in this section was obtained primarily from the St. Juliens Creek Annex Facility, Resource Conservation and Recovery Act (RCRA) facility assessment (RFA) report prepared by A.T. Kearney, Inc., 1989, and the Relative Risk Ranking (RRR) System Data Collection Report prepared by CH2M HILL Federal Group, Ltd., 1996.

1.2.1 Site 3

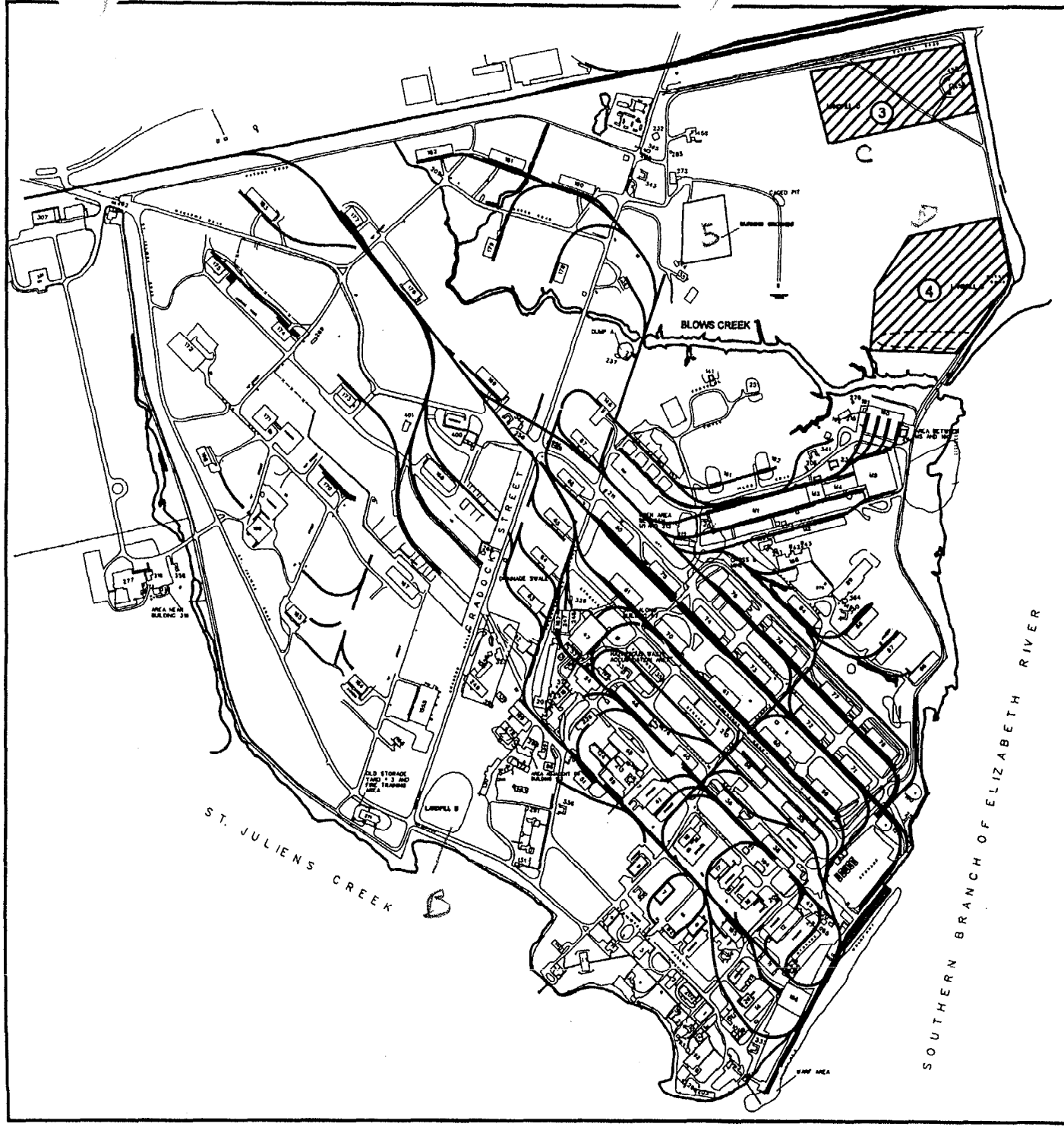
Site 3 (Landfill C) covers 10 acres along the northern edge of the Annex and is accessible by way of Patrol Road (**Figure 1-1**). The area was originally a mudflat where refuse was dumped and allowed to burn; the ash was then used to fill in the area. The landfill is unlined. Operation began in 1940 and continued until 1970. At some time after 1970 the landfill was graded level and covered with grass, but it has not been formally closed.

Refuse disposed of at Landfill C included solvents, acids, bases, and mixed municipal waste. The total volume of trichloroethene (TCE), waste oil, and oil sludges was estimated to be 750,000 cubic feet prior to burning. Two pits reportedly used for disposal of oils and oily sludges, as well as for periodic burning were also located at the Landfill C site. No other information is known about the sludge pits.

1.2.2 Site 4

Landfill D (Site 4) covers an estimated 5 acres approximately 300 feet south of Site 3 (Figure 1-1). Site 4 was an unlined trench and fill landfill that reportedly operated from 1970 to 1981. The first trench was approximately 1,000 feet long and was located parallel to and 500 feet north of Blows Creek. Soil from subsequent trenches were used to cover previous trenches. The total number of trenches dug in the landfill is not known.

Refuse disposed of at Site 4 included drums of unknown wastes and polychlorinated biphenyls (PCBs). According to personnel at the Base public works department, the PCBs probably came from ballast containers for fluorescent light fixtures. The RFA indicated that



N

0 300 600 900

SCALE IN FEET

LOCATION OF SITE 3 (LANDFILL C)
AND SITE 4 (LANDFILL D)
SAINT JULIENS CREEK ANNEX

FIGURE 1-1

LEGEND

NUMBER	SITE NAME/DESCRIPTION
3	LANDFILL C
4	LANDFILL D

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several tanks with undetermined wastes were also once located in the area. Total volumes of disposal are unknown.

1.3 Previous Investigations

Site 3 and Site 4 have been addressed in the reports four previous environmental investigations. The intent, findings, and recommendations of those investigations are summarized below.

1.3.1 Initial Assessment Study

Site 3 and Site 4 were included in the 1981 Initial Assessment Study (IAS) conducted through the Navy's Installation Restoration Program. The purpose of the IAS was to identify and assess sites that posed a potential threat to human health or the environment because of contamination from past handling of and operations involving hazardous materials. Results of this study revealed that low level concentrations of ordnance materials were determined to exist throughout the Annex. However, it was determined that since the concentrations were low, they did not pose a threat to human health or the environment, and that no confirmation study needed to be conducted. No sampling was conducted as part of the study.

1.3.2 Preliminary Assessment

Site 3 and Site 4 were included in the 1983 Preliminary Assessment (PA)conducted by NUS. Ambient air in the areas of the two landfills was monitored for VOCs and radiation with no findings reported. Sampling was not conducted as part of the PA activities.

1.3.3 RCRA Facility Assessment

Site 3 and Site 4 were also part of the 1989 RFA conducted by A.T. Kearney, Inc. and K.W. Brown & Associates, Inc. No sampling was conducted as part of the RFA. Although no visible evidence confirming a release of hazardous waste was noted at either site, both Site 3 and Site 4 were recommended for further investigation and sampling. Reasons given for these recommendations include: high potential for release to soils and groundwater due to the fact that both landfills are unlined and the depth to groundwater at the Annex is less than 5 feet; moderate to high potential for release to surface water via groundwater discharge and via Blows Creek; a high potential for releases to the air from open burning of wastes (during the periods of operation at Site 3, however, the potential for ongoing

releases to the air is low since the landfill is no longer active); and a moderate to high potential for release of subsurface gas based on the volatile nature of wastes disposed of in the unlined landfills.

1.3.4 Relative Risk Ranking (RRR) System Data Collection

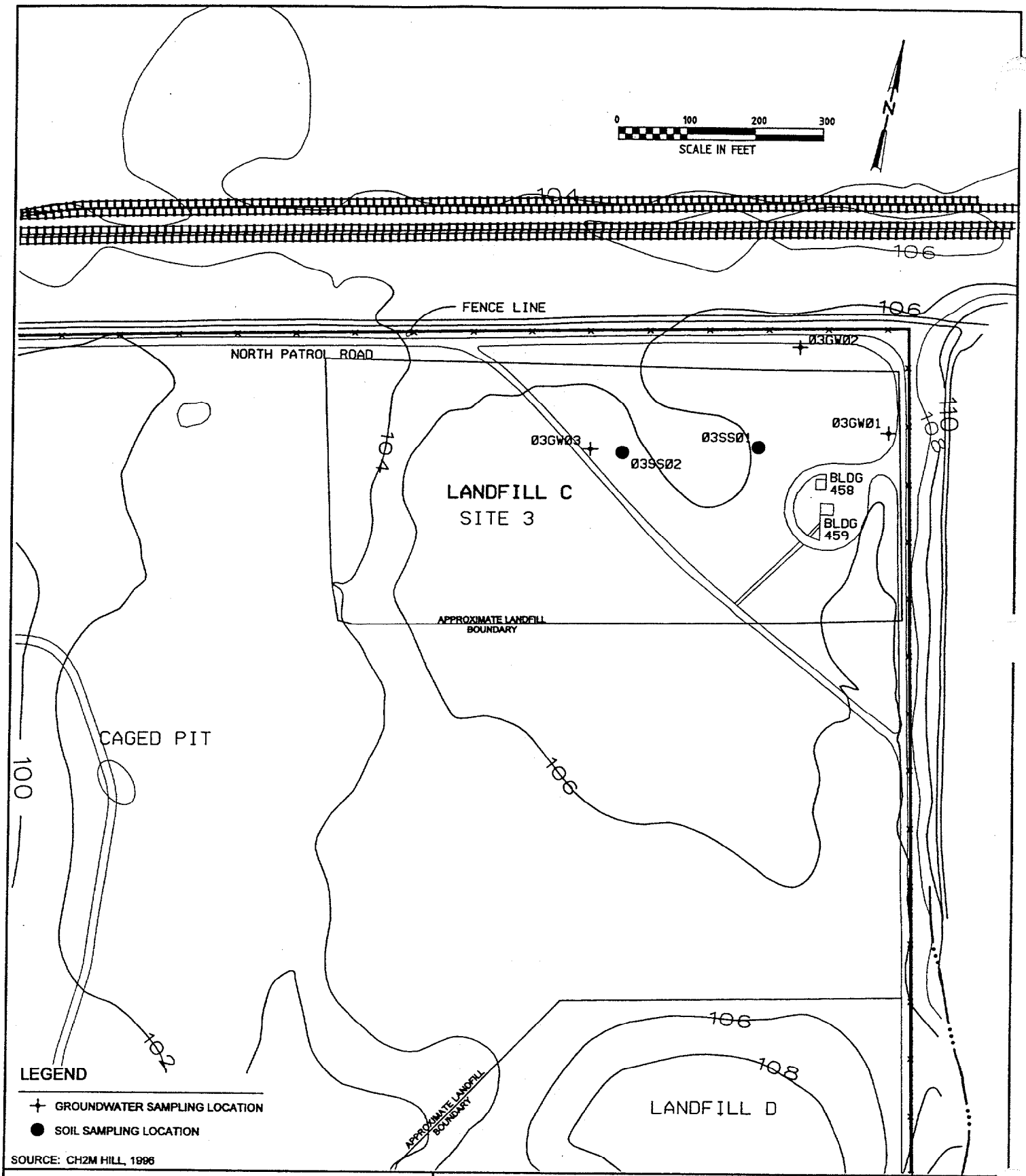
Site 3 and Site 4 were two of the 21 sites sampled as part of the Relative Risk Ranking System Data Collection sampling effort conducted by CH2M HILL in 1986. Two surface soil and three groundwater samples were collected at each of the two landfills and analyzed for Target Compound List (TCL) volatile organic compounds (VOCs), semivolatile organic compounds (SVOCs), pesticides/polychlorinated biphenyls (PCBs), Target Analyte List inorganics, total phosphorus, and nitramines. Groundwater samples were collected using Geoprobe® sampling equipment. Samples were collected to characterize the sites and determine the types of contaminants associated with each site; no background or quality control (QC) samples were collected.

1.3.4.1 Site 3 Results

Two surface soil and three groundwater samples were collected from Site 3 (**Figure 1-2**). The analytical results of the RRR study are shown in **Table 1-1**. The organic compounds, 4,4-DDE (17 parts per billion [ppb]), 4,4-DDT (7.9 ppb), fluoranthene (660 ppb), and pyrene (520 ppb) were detected in surface soil samples collected in the northeastern corner of Site 3. Aroclor-1254 (44 ppb and several inorganic compounds were detected in the surface soil sample collected in the central/northeastern corner of Site 3. Also, 1,3,5-trinitrobenzene was detected at 1.1 ppb in the groundwater sample from the center of the landfill above detection limits; 2,6-dinitrotoluene (2.4 ppb) and 4-nitrotoluene were detected in the sample located north/northeast of the landfill; and 1,3,5-trinitrobenzene (0.7 ppb) was detected in the sample located east/northeast of the landfill above detection limits. Several inorganic compounds also were detected in the groundwater samples.

1.3.4.2 Site 4 Results

Two surface soil and three groundwater samples were collected from Site 4 (**Figure 1-3**). The analytical results of the RRR study are shown in Table 1-1. The organic compounds, 4,4-DDD (20 ppb), 4,4-DDE (7.8 ppb), 4,4-DDT (19 P), Aroclor-1254 (190 ppb), alpha-chlordane (34 ppb), gamma-chlordane (45 ppb), and dieldrin (24 ppb) were detected in the northern surface soil sample. Also, 4,4-DDT (64 ppb), 4,4-DDE (18 ppb), Aroclor-1254 (260



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RELATIVE RISK RANKING STUDY, SURFACE SOIL AND GROUNDWATER SAMPLING LOCATIONS, SITE 3 LANDFILL C, SAINT JULIENS CREEK ANNEX

FIGURE 1-2

TABLE 1-1

ANALYTICAL RESULTS OF RRR STUDY AT SITE 3 AND SITE 4

Sample ID	Chemical Name	Result	Qualifier	Units	Detect Limit
SJC03GW01	1,3,5-TRINITROBENZENE	0.7		UG/L	0.5
SJC03GW01	ALUMINUM	2280		UG/L	
SJC03GW01	ARSENIC	7.4	J	UG/L	
SJC03GW01	BARIUM	787		UG/L	
SJC03GW01	CALCIUM	124000		UG/L	
SJC03GW01	COPPER	4.5	J	UG/L	
SJC03GW01	IRON	15700		UG/L	
SJC03GW01	MAGNESIUM	352000		UG/L	
SJC03GW01	MANGANESE	292		UG/L	
SJC03GW01	MERCURY	0.41		UG/L	
SJC03GW01	NICKEL	14.5	J	UG/L	
SJC03GW01	POTASSIUM	80100		UG/L	
SJC03GW01	SODIUM	2250000		UG/L	
SJC03GW01	THALLIUM	17.5		UG/L	
SJC03GW01	VANADIUM	8.6	J	UG/L	
SJC03GW01	ZINC	63.9		UG/L	
SJC03GW01	ACENAPHTHENE	5	L	UG/L	10
SJC03GW01	ANTHRACENE	3	L	UG/L	10
SJC03GW01	BENZO(A)ANTHRACENE	1	L	UG/L	10
SJC03GW01	CARBAZOLE	2	L	UG/L	10
SJC03GW01	CHRYSENE	1	L	UG/L	10
SJC03GW01	DIBENZOFURAN	4	L	UG/L	10
SJC03GW01	FLUORANTHENE	5	L	UG/L	10
SJC03GW01	FLUORENE	4	L	UG/L	10
SJC03GW01	NAPHTHALENE	1	L	UG/L	10
SJC03GW01	PHENANTHRENE	8	L	UG/L	10
SJC03GW01	PYRENE	3	L	UG/L	10
SJC03GW02	2,6-DINITROTOLUENE	2.4		UG/L	0.5
SJC03GW02	4-NITROTOLUENE	1.2		UG/L	0.5
SJC03GW02	ALUMINUM	53.7	B	UG/L	
SJC03GW02	BARIUM	757		UG/L	
SJC03GW02	CALCIUM	142000		UG/L	
SJC03GW02	COPPER	29.8		UG/L	
SJC03GW02	IRON	35500		UG/L	
SJC03GW02	MAGNESIUM	312000		UG/L	
SJC03GW02	MANGANESE	1940		UG/L	
SJC03GW02	NICKEL	24.4	J	UG/L	
SJC03GW02	POTASSIUM	61400		UG/L	
SJC03GW02	SODIUM	2440000		UG/L	
SJC03GW02	THALLIUM	11.4		UG/L	
SJC03GW02	VANADIUM	2.7	J	UG/L	
SJC03GW02	ZINC	98.7		UG/L	
SJC03GW03	ALUMINUM	68.4	B	UG/L	
SJC03GW03	ARSENIC	2.2	J	UG/L	

TABLE 1-1

ANALYTICAL RESULTS OF RRR STUDY AT SITE 3 AND SITE 4

Sample ID	Chemical Name	Result	Qualifier	Units	Detect Limit
SJC03GW03	BARIUM	99	J	UG/L	
SJC03GW03	CALCIUM	176000		UG/L	
SJC03GW03	COPPER	14.4	J	UG/L	
SJC03GW03	IRON	123000		UG/L	
SJC03GW03	MAGNESIUM	224000		UG/L	
SJC03GW03	MANGANESE	3500		UG/L	
SJC03GW03	NICKEL	16.3	J	UG/L	
SJC03GW03	POTASSIUM	25900		UG/L	
SJC03GW03	SODIUM	1430000		UG/L	
SJC03GW03	VANADIUM	2.9	J	UG/L	
SJC03GW03	ZINC	28		UG/L	
SJC03GW03	2-CHLOROPHENOL	1	J	UG/L	10
SJC03GW03	4-CHLORO-3-METHYLPHENOL	1	J	UG/L	10
SJC03GW03	4-NITROPHENOL	2	J	UG/L	10
SJC03GW03	ACENAPHTHENE	1	J	UG/L	10
SJC03GW03	PENTACHLOROPHENOL	1	J	UG/L	10
SJC03SS01	ALUMINUM	3950		MG/KG	
SJC03SS01	ARSENIC	1.6	J	MG/KG	
SJC03SS01	BARIUM	18.2	J	MG/KG	
SJC03SS01	CALCIUM	2470		MG/KG	
SJC03SS01	CHROMIUM	4.3		MG/KG	
SJC03SS01	COBALT	1.1	J	MG/KG	
SJC03SS01	COPPER	10.9		MG/KG	
SJC03SS01	IRON	3620		MG/KG	
SJC03SS01	LEAD	18.9		MG/KG	
SJC03SS01	MAGNESIUM	464	J	MG/KG	
SJC03SS01	MANGANESE	40.2		MG/KG	
SJC03SS01	MERCURY	0.07	J	MG/KG	
SJC03SS01	POTASSIUM	461	J	MG/KG	
SJC03SS01	SODIUM	134	B	MG/KG	
SJC03SS01	VANADIUM	8.1	J	MG/KG	
SJC03SS01	ZINC	39.5		MG/KG	
SJC03SS01	4,4'-DDE	17	J	UG/KG	
SJC03SS01	4,4'-DDT	7.9		UG/KG	
SJC03SS01	ANTHRACENE	89	J	UG/KG	500
SJC03SS01	BENZO(A)ANTHRACENE	280	J	UG/KG	500
SJC03SS01	BENZO(A)PYRENE	380	J	UG/KG	500
SJC03SS01	BENZO(B)FLUORANTHENE	420	J	UG/KG	500
SJC03SS01	BENZO(G,H,I)PERYLENE	260	J	UG/KG	500
SJC03SS01	BENZO(K)FLUORANTHENE	140	J	UG/KG	500
SJC03SS01	BIS(2-ETHYLHEXYL)PHTHALATE	61	J	UG/KG	500
SJC03SS01	CARBAZOLE	60	J	UG/KG	500
SJC03SS01	CHRYSENE	480	J	UG/KG	500
SJC03SS01	FLUORANTHENE	660		UG/KG	500
SJC03SS01	FLUORENE	52	J	UG/KG	500
SJC03SS01	INDENO(1,2,3-CD)PYRENE	230	J	UG/KG	500

TABLE 1-1

ANALYTICAL RESULTS OF RRR STUDY AT SITE 3 AND SITE 4

Sample ID	Chemical Name	Result	Qualifier	Units	Detect Limit
SJC03SS01	NAPHTHALENE	57	J	UG/KG	500
SJC03SS01	PHENANTHRENE	420	J	UG/KG	500
SJC03SS01	PYRENE	520	J	UG/KG	500
SJC03SS02	ALUMINUM	3860		MG/KG	
SJC03SS02	ARSENIC	2.2	J	MG/KG	
SJC03SS02	BARIUM	25.8	J	MG/KG	
SJC03SS02	CALCIUM	1600		MG/KG	
SJC03SS02	CHROMIUM	7.6		MG/KG	
SJC03SS02	COBALT	2.3	J	MG/KG	
SJC03SS02	COPPER	31.9		MG/KG	
SJC03SS02	IRON	5900		MG/KG	
SJC03SS02	LEAD	41		MG/KG	
SJC03SS02	MAGNESIUM	794	J	MG/KG	
SJC03SS02	MANGANESE	39.5		MG/KG	
SJC03SS02	MERCURY	0.18		MG/KG	
SJC03SS02	NICKEL	4.3	J	MG/KG	
SJC03SS02	POTASSIUM	568	J	MG/KG	
SJC03SS02	SODIUM	133	B	MG/KG	
SJC03SS02	VANADIUM	10.1	J	MG/KG	
SJC03SS02	ZINC	54.3		MG/KG	
SJC03SS02	AROCLOR-1254	44	J	UG/KG	
SJC03SS02	BENZO(B)FLUORANTHENE	61	J	UG/KG	490
SJC03SS02	CHRYSENE	60	J	UG/KG	490
SJC03SS02	FLUORANTHENE	74	J	UG/KG	490
SJC03SS02	PYRENE	51	J	UG/KG	490
SJC04GW01	ALUMINUM	98.7	B	UG/L	
SJC04GW01	BARIUM	45.2	J	UG/L	
SJC04GW01	CALCIUM	165000		UG/L	
SJC04GW01	CHROMIUM	15.2		UG/L	
SJC04GW01	IRON	575		UG/L	
SJC04GW01	MAGNESIUM	265000		UG/L	
SJC04GW01	MANGANESE	431		UG/L	
SJC04GW01	POTASSIUM	93900		UG/L	
SJC04GW01	SODIUM	1980000		UG/L	
SJC04GW01	THALLIUM	12.7		UG/L	
SJC04GW01	VANADIUM	5.1	J	UG/L	
SJC04GW01	ZINC	8.4	J	UG/L	
SJC04GW01	ACETONE	25		UG/L	10
SJC04GW02	ALUMINUM	133	J	UG/L	
SJC04GW02	ARSENIC	56.5		UG/L	
SJC04GW02	BARIUM	49.9	J	UG/L	
SJC04GW02	CALCIUM	184000		UG/L	
SJC04GW02	COPPER	6.3	J	UG/L	
SJC04GW02	CYANIDE	11.2		UG/L	

TABLE 1-1

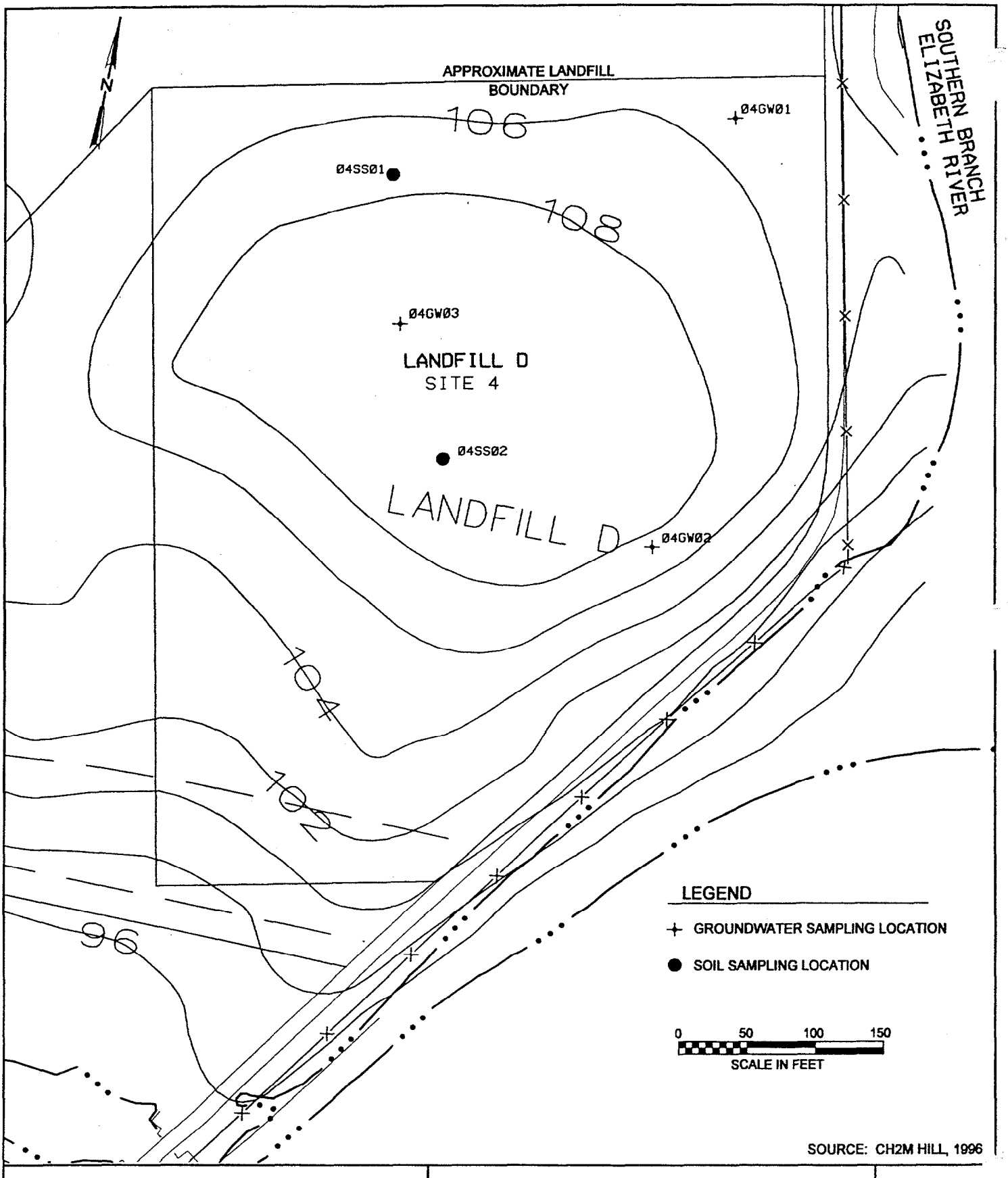
ANALYTICAL RESULTS OF RRR STUDY AT SITE 3 AND SITE 4

Sample ID	Chemical Name	Result	Qualifier	Units	Detect Limit
SJC04GW02	IRON	71.9	B	UG/L	
SJC04GW02	MAGNESIUM	41700		UG/L	
SJC04GW02	MANGANESE	947		UG/L	
SJC04GW02	POTASSIUM	30400		UG/L	
SJC04GW02	SODIUM	97200		UG/L	
SJC04GW02	THALLIUM	4.1	J	UG/L	
SJC04GW02	VANADIUM	4.3	J	UG/L	
SJC04GW02	ZINC	13.1	J	UG/L	
SJC04GW03	ARSENIC	43.7		UG/L	
SJC04GW03	BARIUM	364		UG/L	
SJC04GW03	CALCIUM	78800		UG/L	
SJC04GW03	COBALT	4.4	B	UG/L	
SJC04GW03	IRON	93800		UG/L	
SJC04GW03	MAGNESIUM	58100		UG/L	
SJC04GW03	MANGANESE	711		UG/L	
SJC04GW03	NICKEL	29.9	J	UG/L	
SJC04GW03	POTASSIUM	54000		UG/L	
SJC04GW03	SODIUM	436000		UG/L	
SJC04GW03	VANADIUM	2.5	J	UG/L	
SJC04GW03	ZINC	82.5		UG/L	
SJC04SS01	ALUMINUM	7390		MG/KG	
SJC04SS01	ARSENIC	13.4		MG/KG	
SJC04SS01	BARIUM	57.6		MG/KG	
SJC04SS01	BERYLLIUM	0.31	J	MG/KG	
SJC04SS01	CALCIUM	7830		MG/KG	
SJC04SS01	CHROMIUM	20.4		MG/KG	
SJC04SS01	COBALT	3.3	J	MG/KG	
SJC04SS01	COPPER	158		MG/KG	
SJC04SS01	IRON	9620		MG/KG	
SJC04SS01	LEAD	306		MG/KG	
SJC04SS01	MAGNESIUM	1250		MG/KG	
SJC04SS01	MANGANESE	113		MG/KG	
SJC04SS01	MERCURY	1.5		MG/KG	
SJC04SS01	NICKEL	95.3		MG/KG	
SJC04SS01	POTASSIUM	674	J	MG/KG	
SJC04SS01	SODIUM	207	B	MG/KG	
SJC04SS01	VANADIUM	27.9		MG/KG	
SJC04SS01	ZINC	284		MG/KG	
SJC04SS01	4,4'-DDD	20	J	UG/KG	
SJC04SS01	4,4'-DDE	7.8	J	UG/KG	
SJC04SS01	4,4'-DDT	19	J	UG/KG	
SJC04SS01	AROCLOR-1254	190	J	UG/KG	
SJC04SS01	DIELDRIN	24	J	UG/KG	
SJC04SS01	ACENAPHTHYLENE	410	J	UG/KG	4100
SJC04SS01	ANTHRACENE	1200	J	UG/KG	4100

TABLE 1-1

ANALYTICAL RESULTS OF RRR STUDY AT SITE 3 AND SITE 4

Sample ID	Chemical Name	Result	Qualifier	Units	Detect Limit
SJC04SS01	BENZO(A)ANTHRACENE	2700	J	UG/KG	4100
SJC04SS01	BENZO(A)PYRENE	4000	J	UG/KG	4100
SJC04SS01	BENZO(B)FLUORANTHENE	5200		UG/KG	4100
SJC04SS01	BENZO(G,H,I)PERYLENE	3400	J	UG/KG	4100
SJC04SS01	BENZO(K)FLUORANTHENE	2300	J	UG/KG	4100
SJC04SS01	CHRYSENE	3800	J	UG/KG	4100
SJC04SS01	FLUORANTHENE	4900	J	UG/KG	4100
SJC04SS01	INDENO(1,2,3-CD)PYRENE	3000	J	UG/KG	4100
SJC04SS01	PHENANTHRENE	2000	J	UG/KG	4100
SJC04SS01	PYRENE	3200	J	UG/KG	4100
SJC04SS01DL	ALPHA-CHLORDANE	34	J	UG/KG	
SJC04SS01DL	GAMMA-CHLORDANE	55	J	UG/KG	
SJC04SS02	ALUMINUM	5440		MG/KG	
SJC04SS02	ARSENIC	13.5		MG/KG	
SJC04SS02	BARIUM	107		MG/KG	
SJC04SS02	BERYLLIUM	1.4		MG/KG	
SJC04SS02	CALCIUM	4210		MG/KG	
SJC04SS02	CHROMIUM	256		MG/KG	
SJC04SS02	COBALT	14.7		MG/KG	
SJC04SS02	COPPER	263		MG/KG	
SJC04SS02	IRON	37000		MG/KG	
SJC04SS02	LEAD	366		MG/KG	
SJC04SS02	MAGNESIUM	1070	J	MG/KG	
SJC04SS02	MANGANESE	153		MG/KG	
SJC04SS02	MERCURY	1.6		MG/KG	
SJC04SS02	NICKEL	1400		MG/KG	
SJC04SS02	POTASSIUM	859	J	MG/KG	
SJC04SS02	SODIUM	366	B	MG/KG	
SJC04SS02	VANADIUM	5330		MG/KG	
SJC04SS02	ZINC	615		MG/KG	
SJC04SS02	4,4'-DDE	18		UG/KG	
SJC04SS02	4,4'-DDT	64	J	UG/KG	
SJC04SS02	ALPHA-CHLORDANE	12		UG/KG	
SJC04SS02	AROCLOR-1254	260	J	UG/KG	
SJC04SS02	DIELDRIN	34		UG/KG	
SJC04SS02	ENDOSULFAN II	5.5	J	UG/KG	
SJC04SS02	GAMMA-CHLORDANE	14	J	UG/KG	
SJC04SS02	BENZO(B)FLUORANTHENE	990	J	UG/KG	8000
SJC04SS02	FLUORANTHENE	1700	J	UG/KG	8000
SJC04SS02	PHENANTHRENE	1300	J	UG/KG	8000
SJC04SS02	PYRENE	1200	J	UG/KG	8000
SJC04SS02	METHYLENE CHLORIDE	4	J	UG/KG	11
SJC04SS02	TRICHLOROETHENE	1	J	UG/KG	11



SOURCE: CH2M HILL, 1996

CDM Federal Programs Corporation *A Subsidiary of Camp Dresser & McKee Inc.*	RELATIVE RISK RANKING STUDY, SURFACE SOIL AND GROUNDWATER SAMPLING LOCATIONS, SITE 3 LANDFILL C, SAINT JULIENS CREEK ANNEX	FIGURE 1-3

ppb), alpha-chlordane (34 ppb), gamma-chlordane (14 ppb), dieldrin (34 ppb), and endosulfan II (5.5 ppb) were detected in the southern surface soil sample. Acetone (25 ppb) was detected in the groundwater sample located in the northeastern corner of Site 4. No other organic compounds were detected in groundwater samples. Several inorganic analytes were also detected in both soil and groundwater samples.

2. Site Investigation

This section documents the technical approaches and methods used for the RI. Section 2.1 presents a brief description of the approach and methodologies, although these are generally more thoroughly described in the Work Plan and the Sampling and Analysis Plan (SAP) (May 1997). Section 2.2 summarizes the deviations from the scope presented in the work plan, the reasons for the deviations, and their impacts on the quantity and quality of data obtained during the investigation. The figures in this section denote a "site boundary" that was used to define the area of the investigation. For Site 4, this area is different than the area denoted as a site boundary in earlier studies (Figure 1-3). Note that the "landfill boundary" as determined by the geophysical investigation is presented in Section 3.

2.1 Investigation Technical Approach and Methodology

The field investigations at both sites included sampling of surface and subsurface soil, groundwater, surface water and sediment as well as investigation of site features such as geology and hydrogeology. The following subsections briefly describe the work accomplished and the rationale for performing the individual tasks.

2.1.1 Geophysical Investigations

CDM Federal contracted Earth Resources Technology (ERT) of College Park, Maryland to conduct geophysical investigations at both sites. At each site an electromagnetic (EM-31) survey was performed. At Site 4 a magnetometer and a limited ground penetrating radar (GPR) survey also were performed. The objective of the EM surveys (and the magnetometer survey at Landfill D) was to define the extent of the landfill. The GPR survey at Landfill D was conducted over a limited area in order to determine if GPR could be used to identify buried drums at the site.

The location of the geophysical survey grids for Site 3 and 4 are shown on **Figures 2-1 and 2-2** respectively. The ERT report, including Figures showing the results of the individual surveys, is located in **Appendix A** of this report.

2.1.1.1 Electromagnetic Survey

A Geonics EM-31 instrument was used for conducting the electromagnetic survey. The EM-31 unit permits the measurement of the specific conductivity of the subsurface materials using the principal of mutual inductance, allowing for the measurement of subsurface electrical properties without the use of probes inserted into the ground surface. Changes in conductivity (expressed as in-phase and quaderature phase) can often be correlated to subsurface geologic variation and/or zones of groundwater contamination. The instrument has an effective depth of exploration of about 20 ft.

2.1.1.1.1 Site 3.

At Site 3 the electromagnetic survey was conducted on a 800- by 900-ft grid established parallel to the site Base fencelines. Grid spacing immediately adjacent to the fences was 50 ft, but was generally 100 ft throughout the rest of the site. The southernmost grid line was at a 200 ft spacing.

2.1.1.1.2 Site 4.

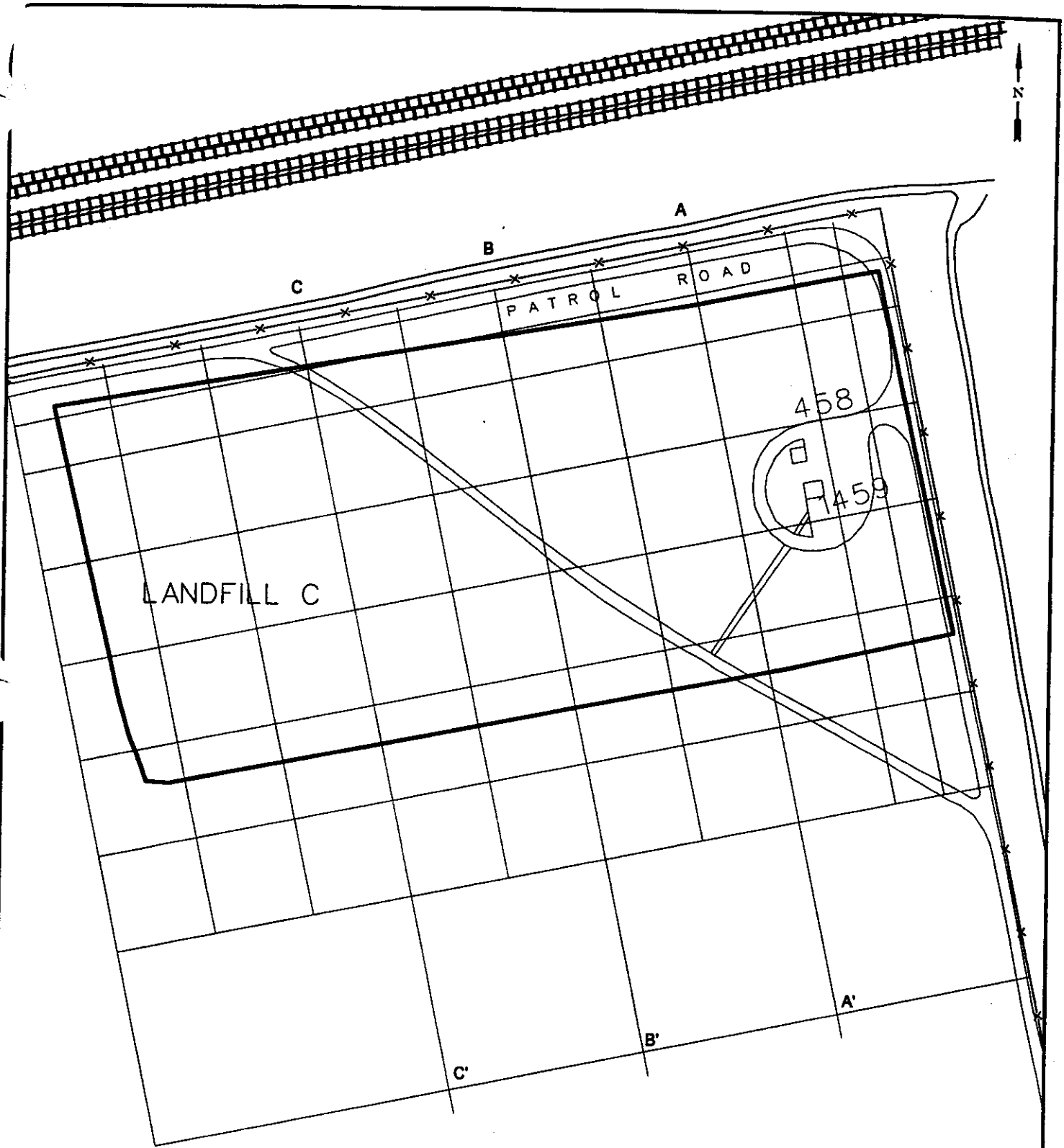
At Site 4, the grid was difficult to establish due to the very heavy brush cover. Over the open area in the northeastern a 250- by 400-ft grid was laid out with grid lines every 50 to 100 ft. In addition, three north-south grid lines, spaced at 200 ft, were established. These grid lines tie into grid lines associated with the Site 3 geophysical survey lines. One 850-ft long, approximately east-west, line was cut to obtain access to the western portion of the landfill.

2.1.1.2 Magnetometer Survey – Site 4

The magnetometer survey was conducted using a Geometrics Portable Cesium Magnetometer, Model G858. This instrument measures the earth's total geomagnetic field at a particular location in units of gamma. The local variations in the field are attributable to near-surface buried metal objects or surface metal (metal objects observed at the surface such as metal sheeting).

2.1.1.3 Ground Penetrating Radar – Site 4

The GPR survey was performed using a Subsurface Interface Radar (SIR) from Geophysical Survey Systems, Inc. This instrument radiates a 500 Mhz electromagnetic pulse from a transmitter antenna into the earth and receives a reflection of the pulse via a receiving antenna. The reflections are caused by interfaces at which changes in the electrical



APPROXIMATE LANDFILL BOUNDARY

A – A' SURVEY PROFILE LINES CONTINUE THROUGH SITE 4

0 50 100 200

SCALE IN FEET

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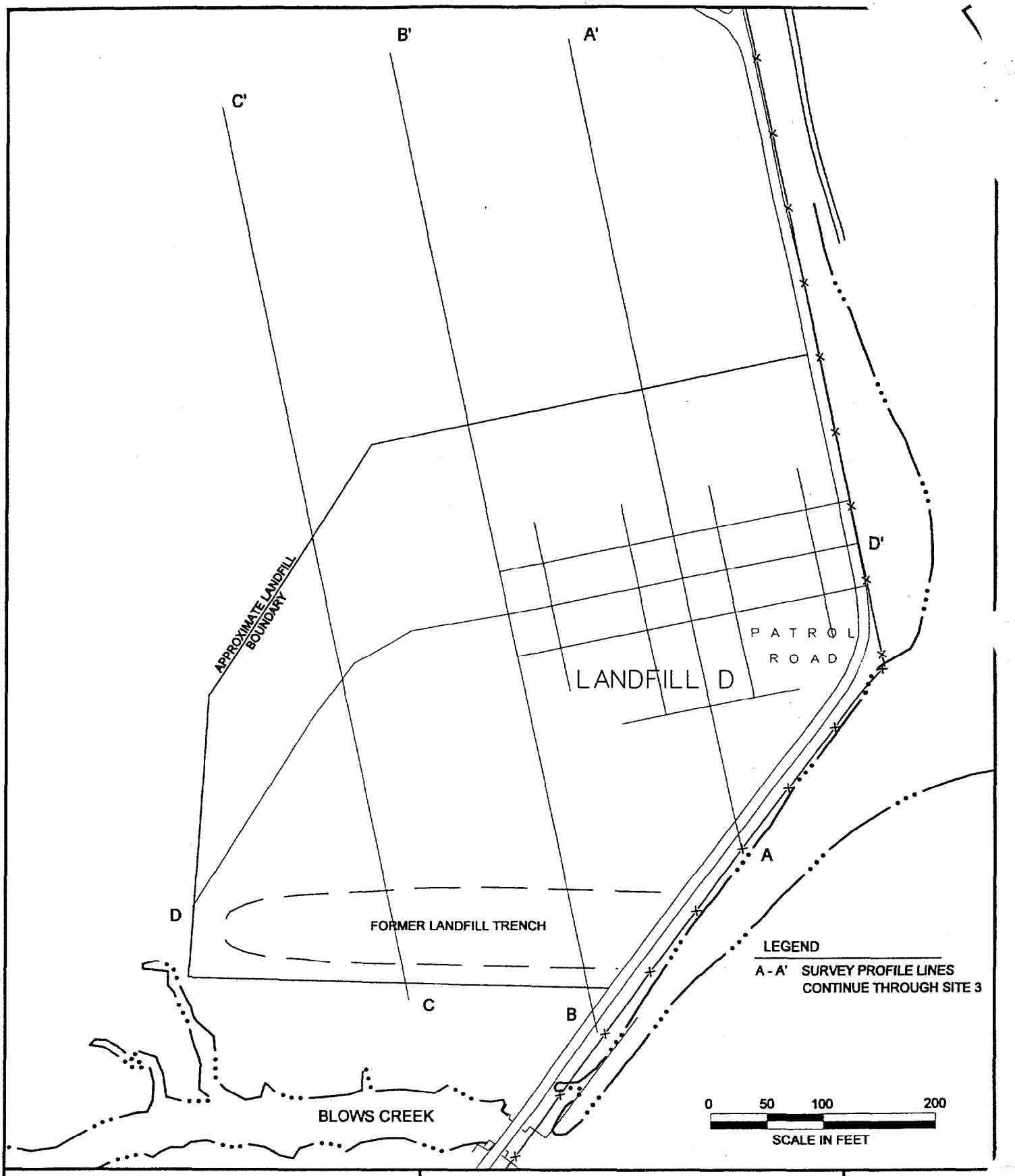
LOCATION OF GEOPHYSICAL SURVEY GRIDS AT SITE 3
SAINT JULIENS CREEK ANNEX

FIGURE 2-1



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LOCATION OF GEOPHYSICAL SURVEY GRIDS AT SITE 4 SAINT JULIENS CREEK ANNEX

FIGURE 2-2

properties occur. The depth of the penetration of the radar signal is inversely proportional to the conductivity of the soil. As a result, electrically resistive earth materials such as coarse-grained, unsaturated, sediments allow deep penetration and finer-grained soils (clays and silts), reinforced concrete and shallow groundwater attenuate the signal. The surveyed area of Landfill D consists of fill (including concrete), therefore, the penetration depth was limited to approximately 10 ft. The GPR survey at Landfill D was conducted along the grid established in the cleared area of the site. Readings were taken approximately every ten feet along each grid line.

2.1.2 Surface Soil Sampling

At both sites surface soil samples were collected using a stainless steel spoon and bowl following protocols described in the work plan. The objective of the surface soil sampling was to obtain analytical data for use in the human health risk assessment. Samples were analyzed for TCL organic constituents, TAL metals, and total phosphorus.

2.1.2.1 Site 3

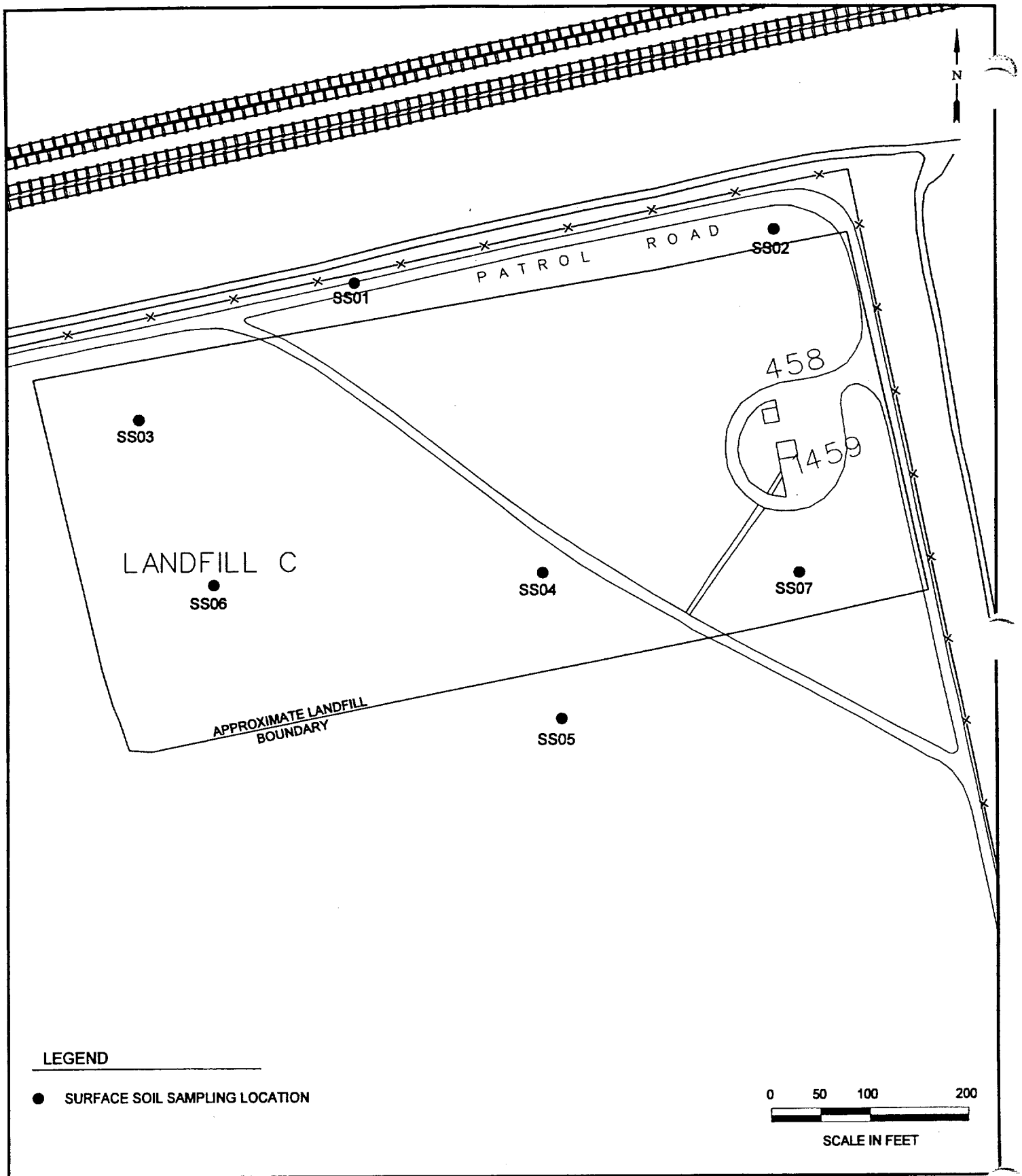
Seven surface soil samples were collected at Site 3 at the locations shown on **Figure 2-3.** With the exception of two samples (SJS03-SS01 and SJS03-SS05), the samples were collected at locations considered to be potentially within the landfill boundary.

2.1.2.2 Site 4

Ten surface soil samples were collected at Site 4 at the locations shown on **Figure 2-4.** One sample, SJS04-SS01, was collected north of the Landfill D in an area considered to outside of the landfill boundary. Another sample, SJS04-SS03, was collected outside of the suspected landfill area, south of the site. The remaining samples were collected within the suspected landfilled area.

2.1.3 Subsurface Soil Sampling

The investigations at both sites included the collection of subsurface soil samples for chemical analysis and for description and soil classification. Samples collected for chemical analysis were obtained using a truck-mounted, hydraulic, direct push technology (DPT) probe. During monitoring well installation (see Section 2.1.3) soil borings were drilled with hollow stem augers and samples were collected using standard split spoon sampling



LEGEND

● SURFACE SOIL SAMPLING LOCATION

0 50 100 200

SCALE IN FEET

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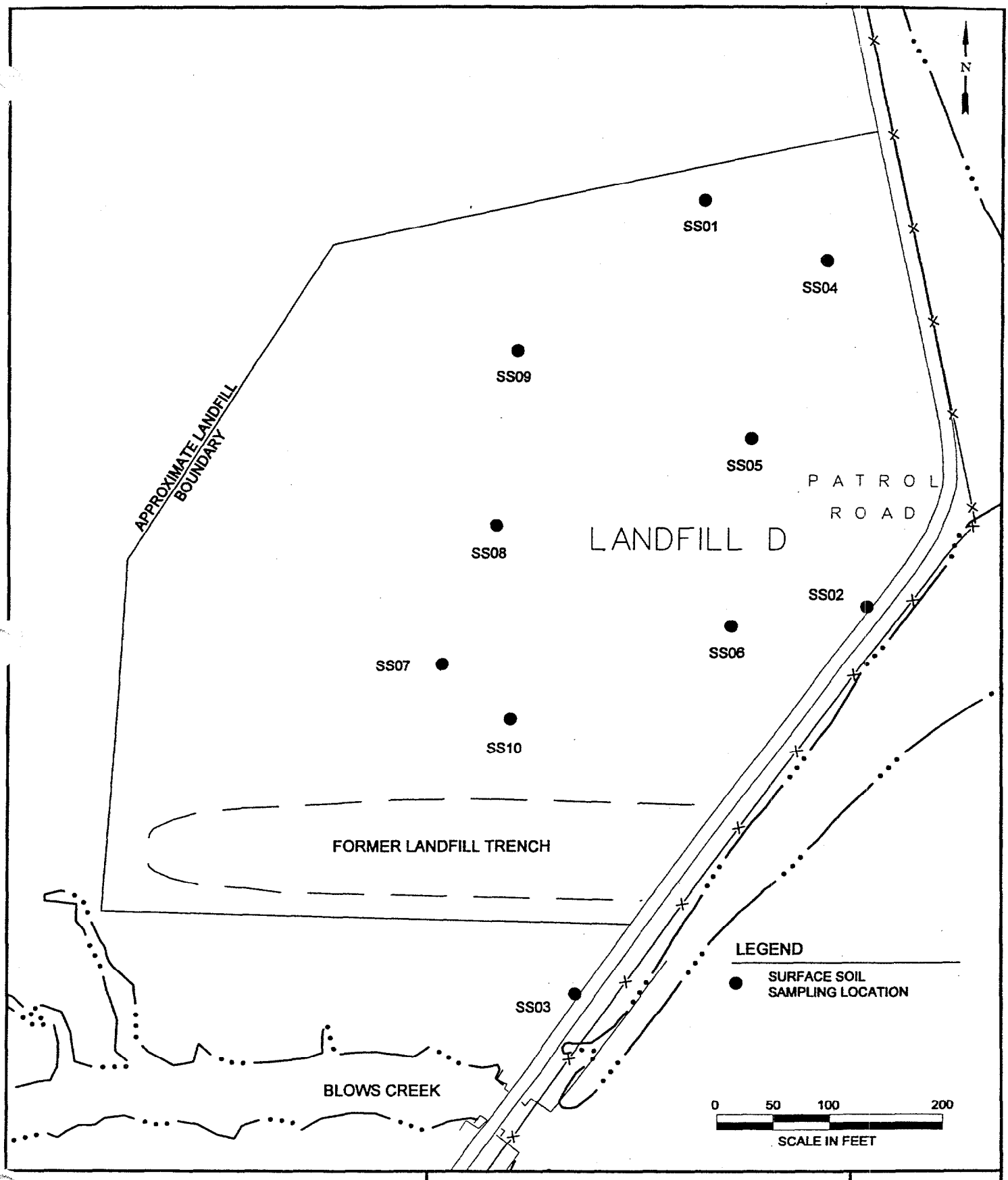
SURFACE SOIL SAMPLING LOCATIONS, SITE 3
SAINT JULIENS CREEK ANNEX

FIGURE 2-3



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SURFACE SOIL SAMPLING LOCATIONS, SITE 4
SAINT JULIENS CREEK ANNEX

FIGURE 2-4

devices for lithologic classification. These subsurface soil sampling events are described below.

2.1.3.1 DPT Soil Sampling

CH2M HILL contracted with Envirosurv Inc., of Fairfax Virginia to conduct subsurface soil sampling using a hydraulic DPT probe at both sites. Soil samples were collected using a 4-ft long by 2-inch outside diameter (O.D.) MacroCore sample barrel equipped with acetate liners. Use of the liners allowed visual inspection of the soil cores. The objective of the soil sampling was to collect soil from just above to the water table. Two samples at Site 3 were collected as composite samples from ground surface to four feet. These samples were collected specifically for ecological risk assessment purposes. If additional volume was needed to meet sampling requirements, a second core was obtained adjacent to the first at the same depth. A description of the materials encountered in each boring is listed in **Appendix B**.

2.1.3.1.1 Site 3

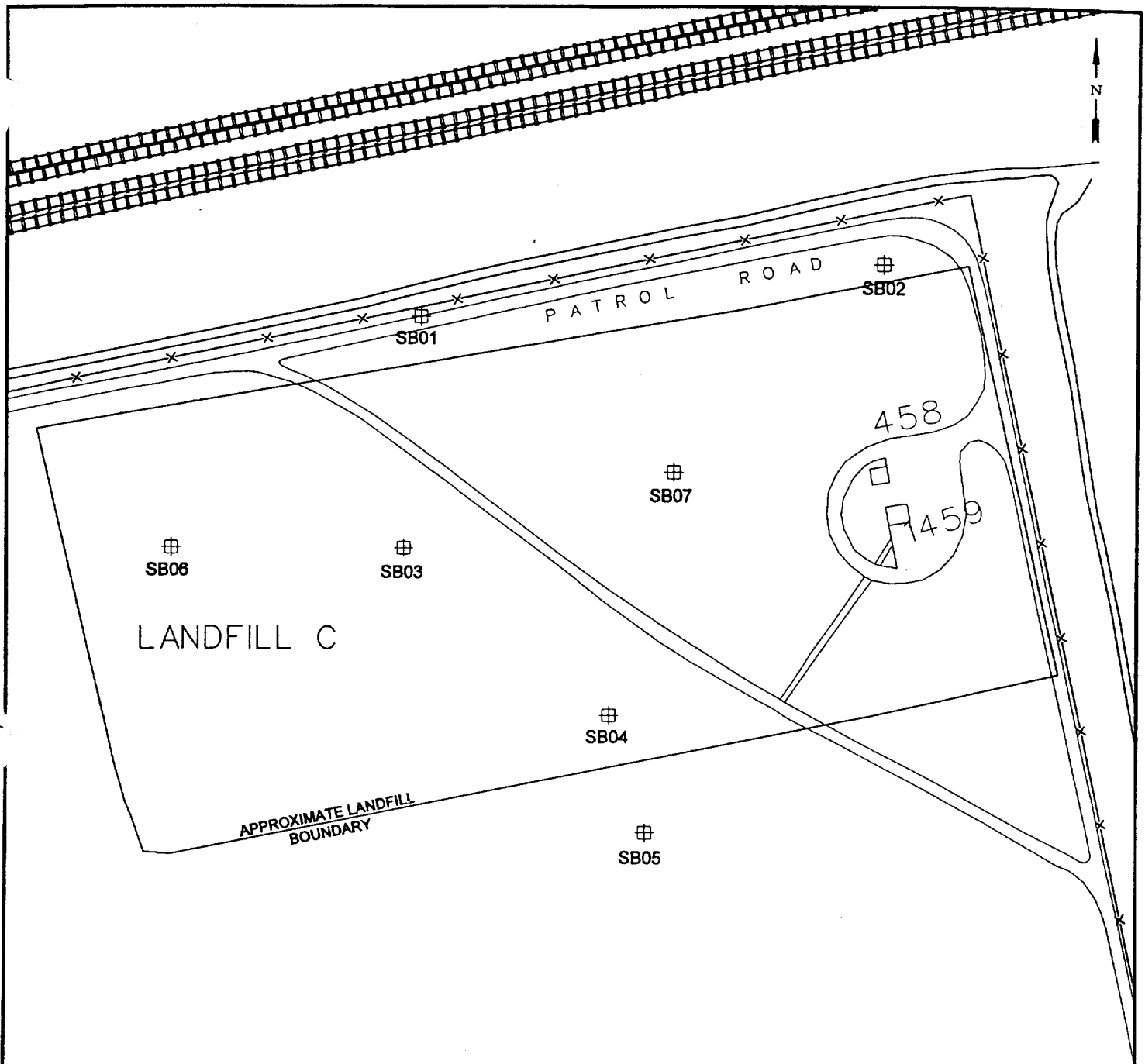
A total of seven subsurface soil samples were collected from the locations shown on **Figure 2-5.** The sampling locations were selected to include one location (SJS03-SB01) considered to be outside of the site boundary, as well as samples throughout the suspected landfilled area. Samples were analyzed for TCL organic constituents, TAL metals, and total phosphorus. The two composite samples collected for use in the Ecologicial Risk Assessment were also analyzed for total organic carbon.

2.1.3.1.2 Site 4

Subsurface soil sampling with the DPT probe was conducted at three locations at Site 4 (**Figure 2-6**). One location was selected to be outside the landfill boundary (SJS04-SB01). The other two samples were collected along the southeastern edge of the landfill adjacent to Patrol Road. The Work Plan identified ten sampling locations for Site 4, however samples could not be collected on the landfill itself due to the density of concrete and other rubble, as well as the suspected presence of unexploded ordnance within the landfill. Samples were analyzed for TCL organic constituents, TAL metals, and total phosphorus.

2.1.3.2 Split Spoon Soil Sampling

Under the direction of a CDM Federal geologist, American Environmental Drilling Services (AEDS), a subcontractor, drilled and sampled soil borings at each monitoring well location



LEGEND

⊕ SUBSURFACE SOIL SAMPLING LOCATION

0 50 100 200

SCALE IN FEET

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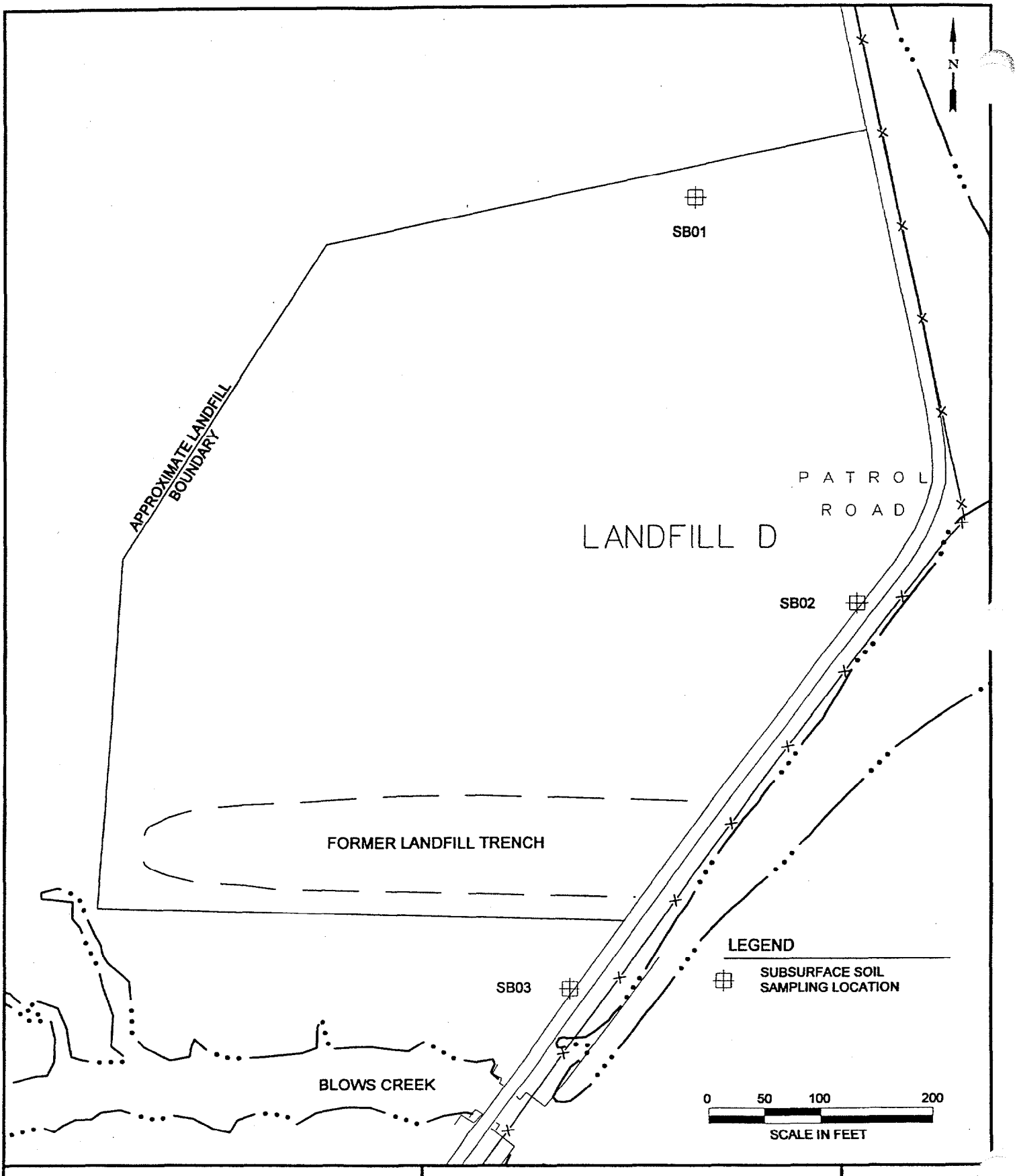
SUBSURFACE SOIL SAMPLING LOCATIONS, SITE 3
SAINT JULIENS CREEK ANNEX

FIGURE 2-5



CDM Federal Programs Corporation *A Subsidiary of Camp Dresser & McKee Inc.*	SUBSURFACE SOIL SAMPLING LOCATIONS, SITE 4 SAINT JULIENS CREEK ANNEX	FIGURE 2-6

at both sites. At each monitoring well location, split spoon samples were collected for description and soil classification. Periodic monitoring for organic vapors with an photoionization detector also was performed. Samples were collected approximately every five feet to a depth of 14 ft during the installation of shallow monitoring wells. During installation of deep (Yorktown Aquifer) monitoring wells, split spoon samples were collected continuously from approximately the depth of the deepest sample collected at the shallow monitoring well location (approximately 14 ft) to the final well depth (approximately 60 ft). At Site 4, one borehole was sampled continuously to a depth of 91 ft in order to better define the stratigraphy at the Base. Data collected during logging of these boreholes was used to design the monitoring wells, i.e., select the depth of well screens and determine where to set isolation casing in deep wells (see Section 2.1.4). Boring logs generated from the lithologic sampling are compiled in **Appendix C.**

2.1.4 Monitoring Well Installation and Sampling

Four shallow and two deep monitoring wells were installed and sampled at each site. Shallow monitoring wells were designed to sample the uppermost saturated zone encountered, while the deep monitoring wells were designed to sample groundwater in the Yorktown Aquifer. Where they are installed, deep monitoring wells are paired with shallow wells in order to provide an indication of the vertical profile of groundwater quality and indication of the vertical gradient.

All monitoring wells are constructed of nominal 2-inch diameter PVC well riser and 10-slot, 10-ft long PVC screen. Details of well construction are provided in the Sampling and Analysis Plan (SAP) included in the Work Plan (CH2M HILL, 1997). Monitoring well construction diagrams are compiled in **Appendix D,** and construction details are shown on **Table 2-1.**

All monitoring wells were developed by surging with a surge block assembly and pumping the wells with a submersible pump. Wells were developed until water quality parameters (pH, specific conductance, temperature and turbidity) had stabilized.

All wells were sampled during two rounds of groundwater sampling. Round 1 was conducted in July 1997 and Round 2 was conducted during November 1997. Sampling was conducted using a decontaminated submersible Grundfos pump, and clean tubing.

TABLE 2-1
MONITORING WELL CONSTRUCTION DETAILS

Monitoring Well	Borehole Depth (feet)	Isolation Casing Depth (feet)	Riser Depth (feet)	Ground Elevation	TOC Elevation	Screened Zone Elevation
Site 3:						
SJS03-MW1S	14.00	-	3.40	12.01	11.91	8.61 - -1.39
SJS03-MW1D	60.00	22.00	48.00	12.04	12.05	-35.96 - -45.96
SJS03-MW2S	14.50	-	3.90	12.84	15.22	8.94 - -1.06
SJS03-MW2D	62.00	29.00	49.00	12.41	14.73	-36.59 - -46.59
SJS03-MW3S	14.00	-	3.90	11.31	13.48	7.41- -2.59
SJS03-MW4S	14.50	-	3.10	12.64	15.09	9.54 - -0.46
Site 4:						
SJS04-MW1S	15.00	-	3.90	10.47	13.02	6.57 - -3.43
SJS04-MW1D	91.00	28.00	41.90	10.7	13.32	-31.2 - -41.2
SJS04-MW2S	14.00	-	3.50	9.36	11.48	5.86 - -4.14
SJS04-MW3S	14.00	-	3.40	4.19	6.67	0.79 - -9.21
SJS04-MW3D	60.00	20.00	46.00	3.60	5.56	-42.4 - -52.4
SJS04-MW4S	15.00	-	3.50	6.34	8.60	2.84 - -7.16

Samples were analyzed for TCL organic constituents, TAL metals (filtered and unfiltered), and total phosphorus.

2.1.4.1 Site 3

The location of the monitoring wells at Site 3 are shown on **Figure 2-7**. One shallow and one deep monitoring well are located north of the landfill (SJS03-MW1S and MW1D) and the remaining monitoring wells are located southeast , south and southwest of the landfill.

2.1.4.2 Site 4

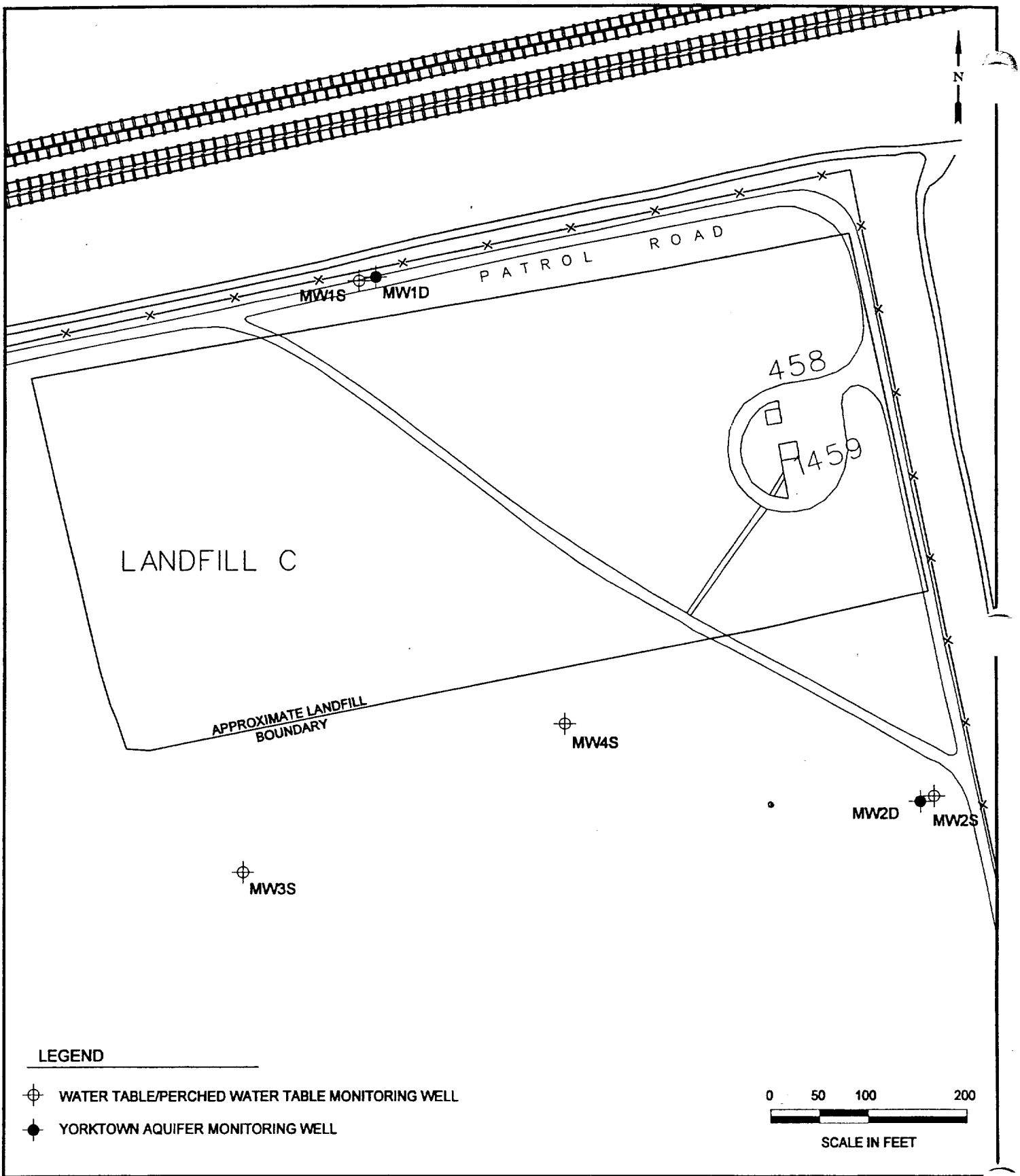
The location of the monitoring wells at Site 4 are shown on **Figure 2-8**. One shallow and one deep monitoring well are located at an upgradient location (SJS04-MW1S and SJS04-MW1D). Monitoring wells SJS04-MW3S and -MW3D are located downgradient of the landfill. One of the other shallow wells is also located downgradient (SJS04-MW2S) and another (SJS03-MW4S) is located in an area thought to be downgradient or cross gradient of the landfill.

2.1.5 Surface Water and Sediment Investigation

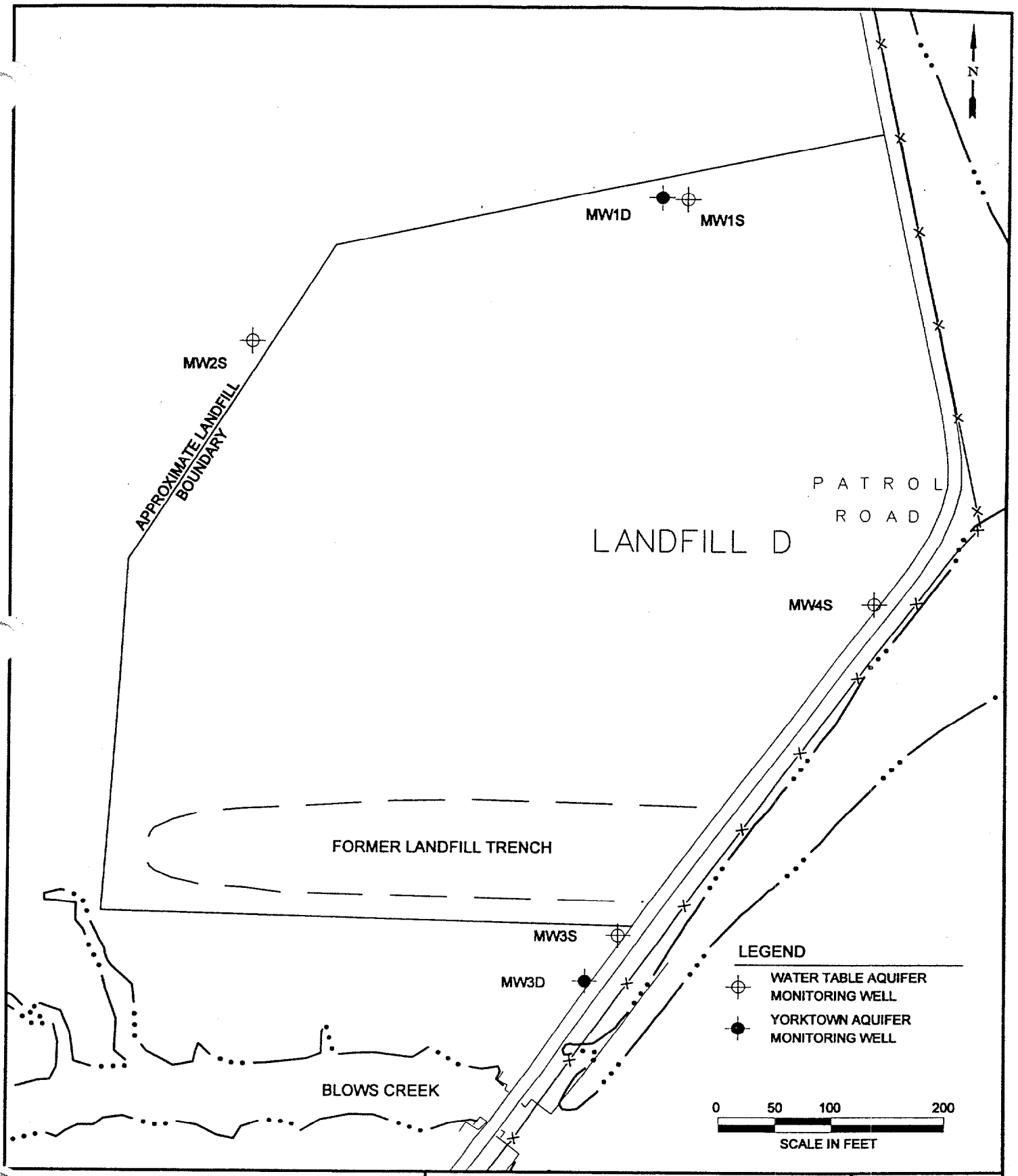
Four sediment samples were proposed for each site. Additionally, four surface water samples were proposed for Site 3 and 3 surface water samples were proposed for Site 4. Due to dry conditions, only one surface water sample, from Site 4, was collected (See Section 2.2, Deviation from the Work Plan). Sediment samples were collected with stainless steel bowls and spoons. The surface water sample was collected directly into the sample jar. Sediment and surface water samples were analyzed for TCL organic constituents, TAL metals, total phosphorus, and total organic carbon.

2.1.5.1 Site 3

Four sediment samples were collected from the locations shown on **Figure 2-9**. These locations include: 1) the north end of the drainage ditch that runs along the east side of Patrol Road, upstream of the site (SJS03-SD01); 2) the same drainage ditch at a location downstream of the site (SJS03-SD02) ; 3) an area where ponding of water occasionally occurs in the north-central part of the landfill area (SJS03-SD06); and 4) a sample from a drainage ditch that runs along the west side of the site(SJS03-SD03).



CDM Federal Programs Corporation *A Subsidiary of Camp Dresser & McKee Inc.*	GROUNDWATER MONITORING WELL LOCATIONS, SITE 3 SAINT JULIENS CREEK ANNEX	FIGURE 2-7



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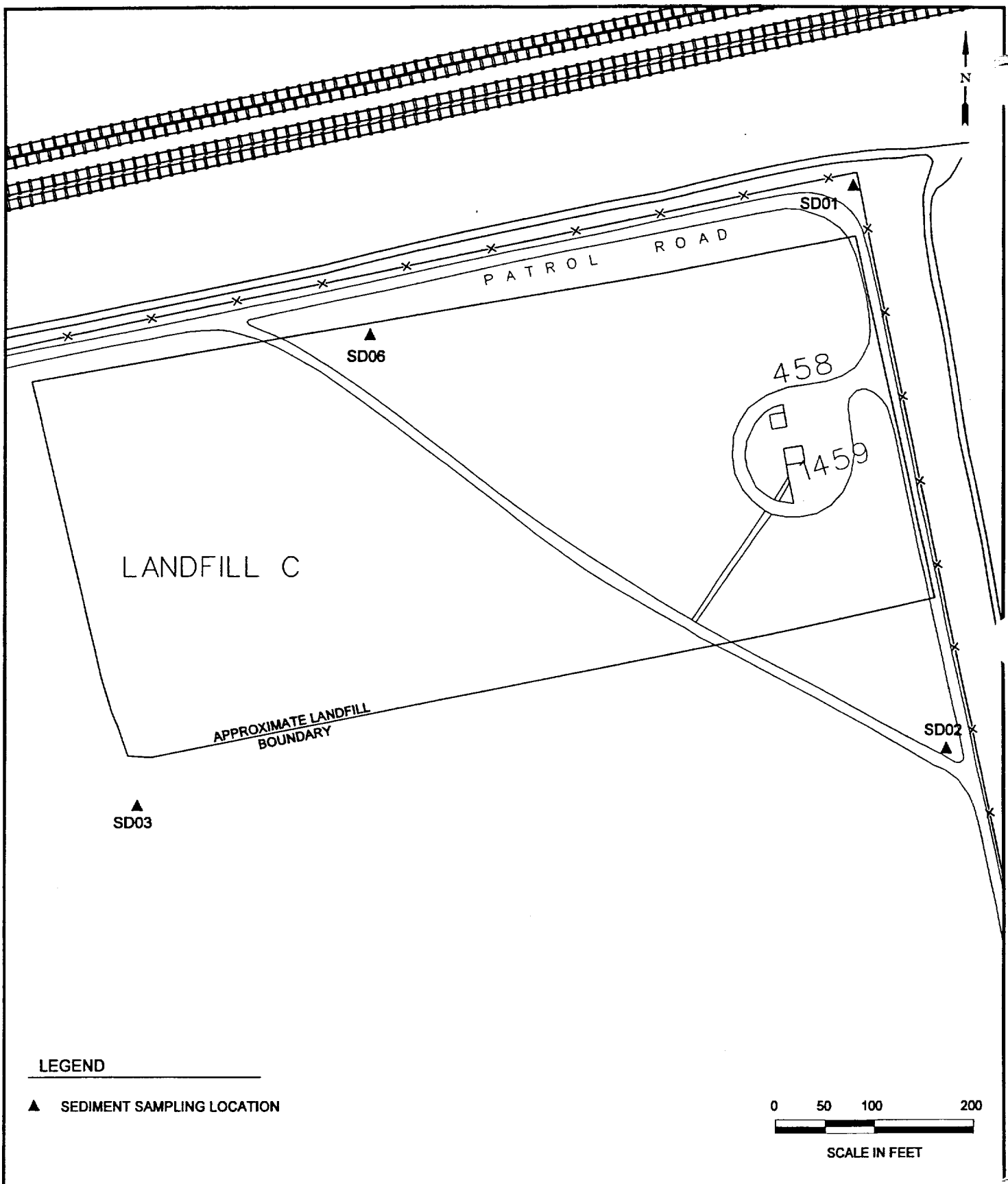
GROUNDWATER MONITORING WELL LOCATIONS, SITE 4
SAINT JULIENS CREEK ANNEX

FIGURE 2-8



LEGEND

▲ SEDIMENT SAMPLING LOCATION

0 50 100 200

SCALE IN FEET

CDM Federal Programs Corporation *A Subsidiary of Camp Dresser & McKee Inc.*	SEDIMENT SAMPLING LOCATIONS, SITE 3 SAINT JULIENS CREEK ANNEX	FIGURE 2-9

2.1.5.2 Site 4

Four sediment samples were collected from the locations shown in **Figure 2-10**. These locations include: the upstream end of the drainage ditch that runs along the east edge of the landfill (SJS04-SD01), two downstream locations along the same drainage ditch (SJS04-SD02 and SJS04-SD03), and an arm of Blows Creek approximately 200 ft from southwest edge of the landfill (SJS04-SD04). A surface water sample was collected at the Blows Creek sampling location before the sediment sample was collected.

2.1.6 Geology and Hydrogeology

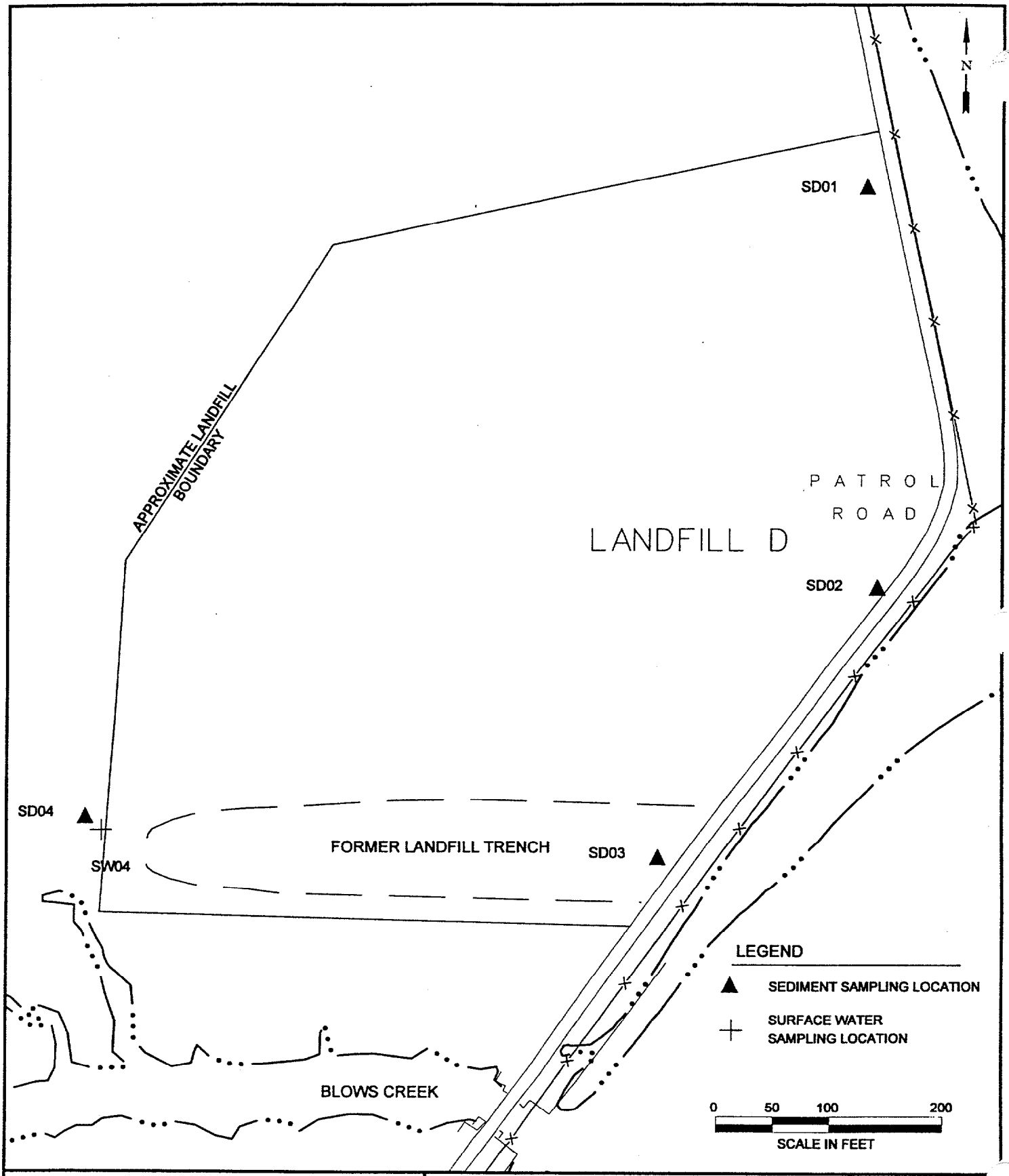
Data were collected during the field investigation to characterize the geology and hydrogeology at both sites. The data collection methods and rationale are described below. The results of the geological and hydrogeological characterization are presented in Section 3.

2.1.6.1 Geology

The nature of subsurface materials was defined from splitspoon samples which were collected during monitoring well installation. At shallow monitoring well locations samples were collected at approximately five-foot intervals to total depth. At deep monitoring well locations samples were collected continuously from just below the depth of the deepest shallow monitoring well sample (about 14 ft) to total depth. A CDM Federal geologist logged the boring and provided lithologic descriptions which are in Appendix C. Data for the deep geology at the site were combined with that from the other study being conducted at the same time (Site 2, Landfill B, and Site 5, Burning Grounds) to provide a more complete picture of the site geology.

2.1.6.2 Groundwater Levels

During the field investigation, depth to groundwater from the top of the PVC casing was measured to the nearest 0.01 ft in each well on site. The top of casing elevations had been surveyed by PHR & Associates of Virginia Beach, Virginia. This information was used to determine the depth to the potentiometric surface in each aquifer, and evaluate the horizontal flow direction and gradient of groundwater. The vertical flow gradient was evaluated with data from shallow/deep monitoring well pairs. Due to the lack of more than two data points in the deep aquifer, it was necessary to combine the data from that



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SEDIMENT AND SURFACE WATER SAMPLING LOCATIONS, SITE 4
SAINT JULIENS CREEK ANNEX

FIGURE 2-10

aquifer with data from the other sites being investigated at the same time (Site 2, Landfill B, and Site 5, Burning Grounds), to characterize the hydrogeology of the Yorktown Aquifer.

2.1.6.3 Tidal Study

As part of the groundwater study at Site 2 (Landfill B) located on the northeast corner of Craddock Street and St. Juliens Avenue (approximately 4000 ft southwest of Sites 3 and 4), water levels in one shallow and one deep (Yorktown Aquifer) monitoring well were measured continuously for 79 hours. The objective of the measurements was to document the tidal influences on both aquifers. Monitoring wells SJS02-MW2S and SJS02-MW2D were selected for the study. Water levels were measured and recorded by an In-Situ Inc. Troll 4000 pressure transducer and data logger.

Additional water level measurements were collected manually at these same two wells approximately hourly during a 10-hour period during the Round 2 groundwater sampling event. Water levels in a shallow and deep monitoring well cluster at Site 5 were also collected hourly for approximately 10 hours. These readings were collected to see how the tides impact water levels at a distance from the Elizabeth River or St. Juliens Creek.

2.1.7 Surveying

Following installation of all ground water monitoring wells, the elevations of the ground surface and the top of the inner casing (toc) were measured to within 0.01 foot by PHR & Associates Virginia Beach, Virginia. The horizontal location of monitoring wells, and other sampling locations (surface soil, borings, sediment and surface water) were also measured relative to the State Planar System.

2.2 Deviations from the Work Plan Scope

During the field investigation, the scope of work occasionally deviated from the scope proposed in the work plan. These deviations, their reasons and their impact on the quality and quantity of data are summarized in **Table 2-2.**

TABLE 2-2
Deviations from Site 3 and Site 4
Field Investigation Work Plan

Deviation from Work Plan	Reason	Impact on Quantity or Quality of Data
Geophysical grid did not extend over the entire Site 4 area.	Very heavy brush covered significant areas of the landfill.	Limited geophysical data along the southern and western portion of the site. Other data (visual inspection and historical aerial photographs) provide data for the unsurveyed areas.
Cesium proton magnetometer was used for the magnetometer survey instead of an EM-61.	Cesium magnetometer detects anomalies over a greater width along the grid line.	Higher quality data obtained.
Did not collected sediment conductivity readings during sampling	Per agreement with VADEQ	Not considered to be a data gap. Sediment conductivity is not considered standard data.
Collected three (not 10) subsurface soil samples at Landfill D	Potential for unexploded ordnance and very high density of concrete and other rubble which would cause DPT refusal.	Less data from within the landfill boundary. In consideration of the potential for buried unexploded ordnance, further intrusive exploration within the landfill boundary is not warranted.
No surface water collected at Landfill 3. Only one surface water sample collected from Landfill D	No surface water available.	No surface water data from Landfill 3. No surface water from drainage ditch on western side of site.
Upgradient monitoring well location and associated soil samples at Site 3 were collected closer to the landfill boundary than proposed in the work plan.	Brought sampling locations within the St. Juliens Creek Annex property. Also moved the locations away from a railroad track. Locations are not within the landfill boundaries.	None. Locations are not within the landfill boundary.
Isolation casing installed in all deep monitoring wells	Confining clay unit found at all locations.	None.

3. Remedial Investigations Results

A description of the geology and hydrogeology, and an evaluation of the analytical results of the surface and subsurface soil, groundwater, sediment and surface water samples for Sites 3 and 4 are presented in this section. For easy reference, the information is presented by site. Some information, including base-wide geology and hydrogeology, and the criteria used to evaluate the analytical data, is common to both sites and is discussed in Section 3.1 and Section 3.2. The site-specific analytical results discussion includes an evaluation of the nature and extent of contamination. The site-specific results of the Site 3 investigation are discussed in Section 3.3 and the results for Site 4 are found in Section 3.4.

Information that pertains to the climate, meteorology, and geology and hydrogeology of the Chesapeake region is described in the Work Plan. This information is not repeated in this RI report.

3.1 Base-wide Geology and Hydrogeology

Concurrent with the Site 3 and Site 4 RIs, two additional sites at St. Juliens Creek, Landfill B (Site 2) and the Burning Grounds (Site 5) were also investigated. Geologic and hydrogeologic data from the four sites can be combined to obtain a broader picture of the geologic and hydrogeologic characteristics at the Base. This is particularly useful for the deeper stratigraphy and Yorktown Aquifer because only two deep borings which were converted to monitoring wells were completed at each site. Additionally, a study of the tidal influence on the groundwater levels was only conducted at Site 2 (approximately 4000 ft southwest of Sites 3 and 4) but is likely to be indicative of the conditions elsewhere on the base.

The location of all the deep borings drilled at the base during the four investigations are shown on **Figure 3-1**.

3.1.1 Geology

St. Juliens Creek Annex is located in the Atlantic Coastal Plain Physiographic Province. The geology consists of a wedge of unconsolidated units that dips and thickens to the east and extends approximately 20 miles east of the Base to the Atlantic Ocean. These

FIGURE 3-1

LOCATION OF YORKTOWN AQUIFER MONITORING WELLS INSTALLED IN 1997

SAINT JULIENS CREEK ANNEX

LEGEND

YORKTOWN AQUIFER MONITORING WELL

0 400 800 1600

SCALE IN FEET

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unconsolidated units overlie basement rocks which consist of Triassic sedimentary rock and Paleozoic igneous and metamorphic rocks. The depth to the basement in the St. Juliens Creek Annex area is approximately 2000 ft. A more detailed description of regional geology and hydrogeology can be found in the RI Work Plan (CH2MHILL, 1997).

The stratigraphy encountered during the RIs at St. Juliens Creek Annex includes (in ascending stratigraphic order) the uppermost part of the Pliocene age Yorktown Formation, the Pleistocene Sand Bridge Formation and Norfolk Formation, and Holocene alluvial deposits. The uppermost part of the Yorktown Formation may, in some places, be lithologically similar to the Norfolk Formation. Additionally, the Norfolk may be absent over highs in the Yorktown Formation (Oaks, 1964). For these reasons, no attempt is made in this report to strictly classify sedimentary units into their respective formations. For purposes of this report, the stratigraphy is divided into two units, the Yorktown Formation, and Post-Pliocene Sediments. It should be noted the Yorktown Formation, as defined in this report, may not correspond strictly to the published definition of the unit. Instead it is defined on the basis of an easily identifiable, laterally continuous upper clay unit. The stratigraphic units used in this report are defined below.

3.1.1.1 Yorktown Formation

Regionally, the Yorktown Formation consists of massively bedded, compact, greenish grey, fossiliferous fine sand and clay (Barker and Bjorken, 1978; Oaks, 1964). The sand is characteristically greenish due to the presence of glauconite. The top of the Yorktown Formation is typically found at depths of 20 to 100 ft.

At the Base, the Yorktown Formation generally consists of a bluish to greenish gray stiff clay with interbedded fine quartz sand. The top of the Yorktown Formation is defined by a laterally continuous clay. This clay is found at depths ranging from 14.5 ft at the upgradient monitoring well location at Site 5 (Burning Grounds) (SJS05-MW1D) to 40 ft at a deep monitoring well, SJS02-MW2D, at Site 2 (Landfill B). Typically, the Yorktown Formation is deeply dissected and modern drainage systems have been superimposed over the older channels (Oaks, 1964). **Figure 3-2** is a contour map of the top of the Yorktown Formation at the Base. The elevation of the top of the unit drops from -8 ft mean sea level (msl) upgradient of Site 5 to -29 ft msl downgradient of Landfill D, adjacent to the South Branch of the Elizabeth River and -35 ft msl along St. Juliens Creek (Site 2).

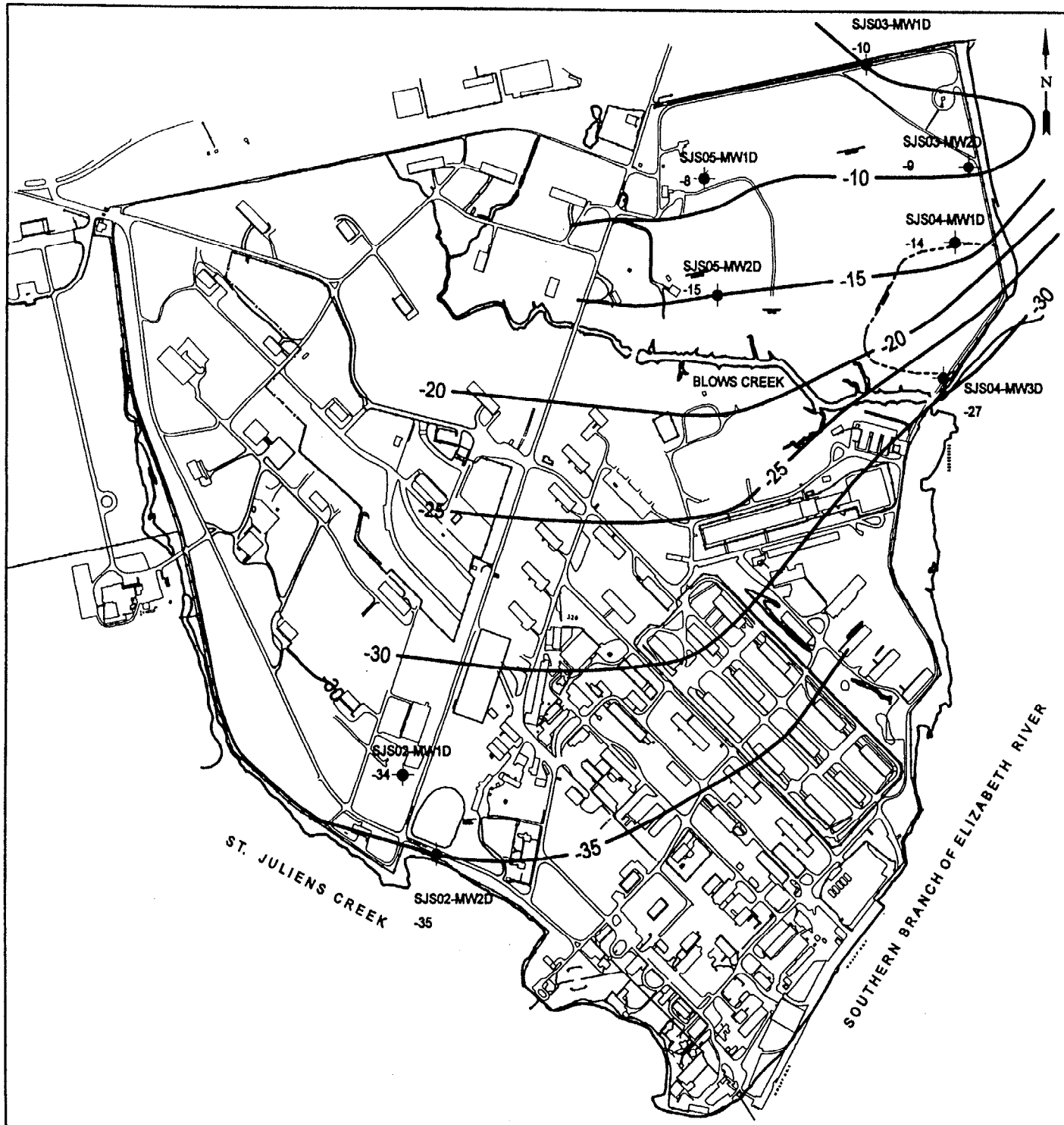

FIGURE 3-2

CONTOUR MAP OF TOP
OF YORKTOWN FORMATION

SAINT JULIENS CREEK ANNEX

LEGEND

-27 YORKTOWN AQUIFER MONITORING WELL

-39 ELEVATION CONTOUR ft msl

0 400 800 1600

SCALE IN FEET

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The locations of three geologic cross sections generated from data collected during the RIs are shown on **Figure 3-3**. As shown on cross-sections A-A', B-B', and C-C' (**Figures 3-4 through 3-6**), the upper Yorktown Formation clay is generally between 9 and 28 feet thick and is generally underlain by a sand, silty or clayey sand, or silt. At one location, the upgradient deep monitoring well at Site 4 (Landfill D), the boring extended to a depth of 90 ft in order to better define the stratigraphy at the Base. At that location, only a relatively thin (1 ft) zone of sand was encountered. As documented at other locations, the sand likely contains some glauconite which would account for the distinct greenish color (Oaks, 1964). At some locations, the sand was completely penetrated and was found to be underlain by clay or gravely clay.

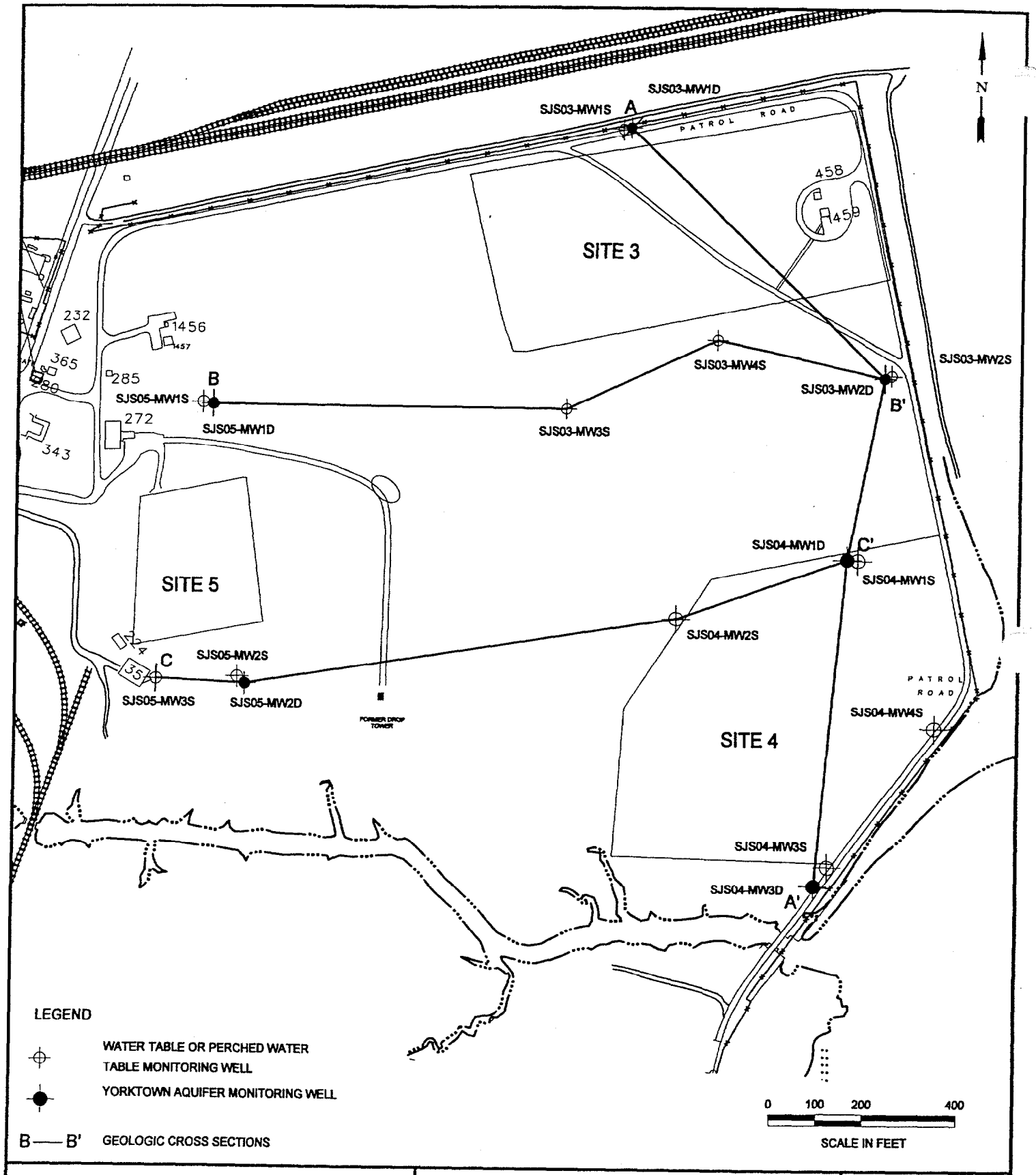
3.1.1.2 Post-Pliocene Sediments

The surficial geology of St. Juliens Creek Annex, as mapped by Barker and Bjorken (1978), consists generally of the Sand Bridge Formation. Additionally, Holocene alluvium is present along the flood plain of Blows Creek. However, examination of historical aerial photographs indicate that significant portions of the Site 3 (Landfill C) area have been filled with hydraulic dredge material from the South Branch of the Elizabeth River. Fill material (including brick, gravel, and glass fragments) was also encountered in shallow borings adjacent to Landfill D.

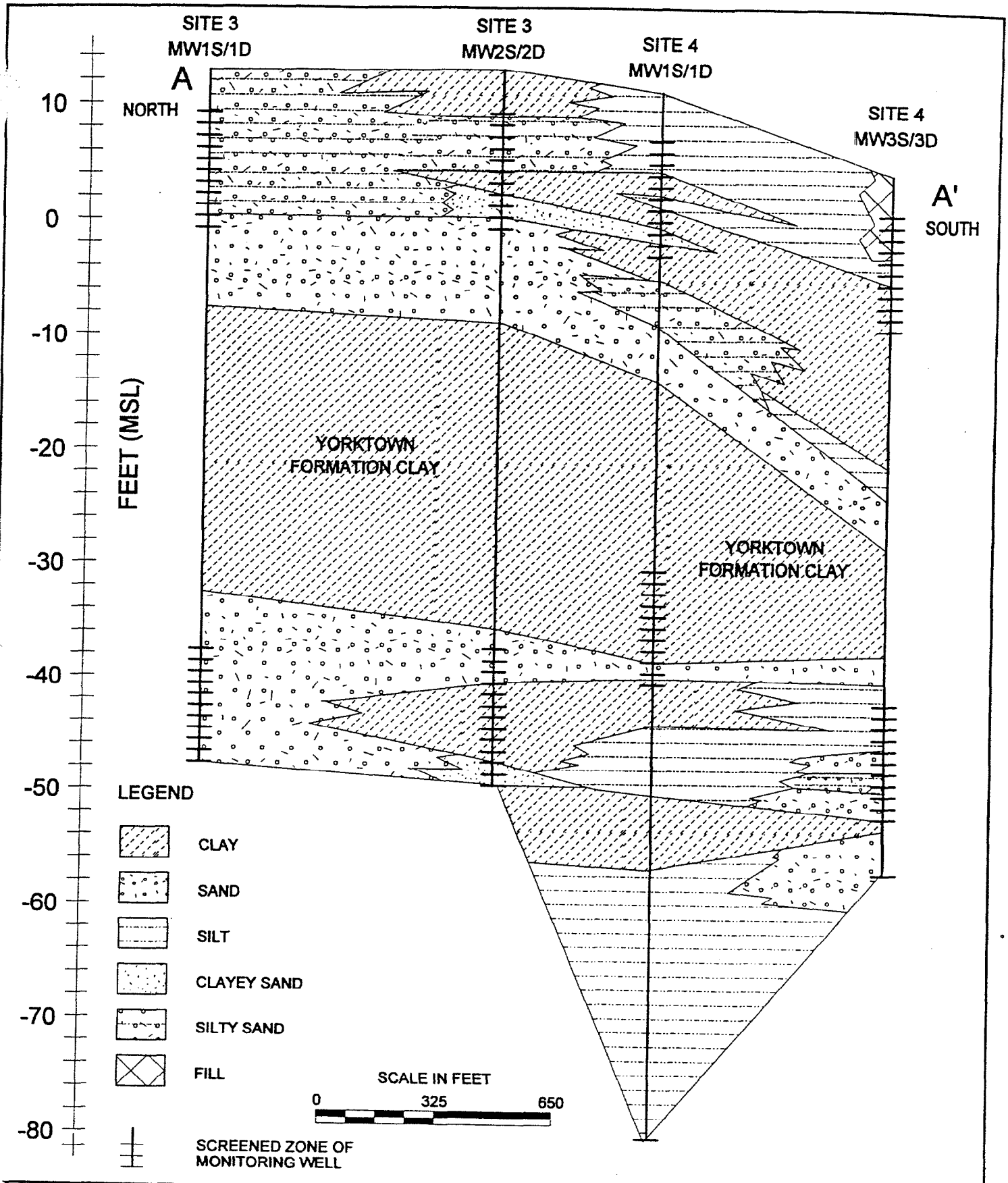
The post-Pliocene sediments (i.e. those overlying the Yorktown Formation clay) generally consist of clay, silty sand, and sand. In some borings, lenses of coarse sand and shell fragments were encountered.

3.1.2 Hydrogeology

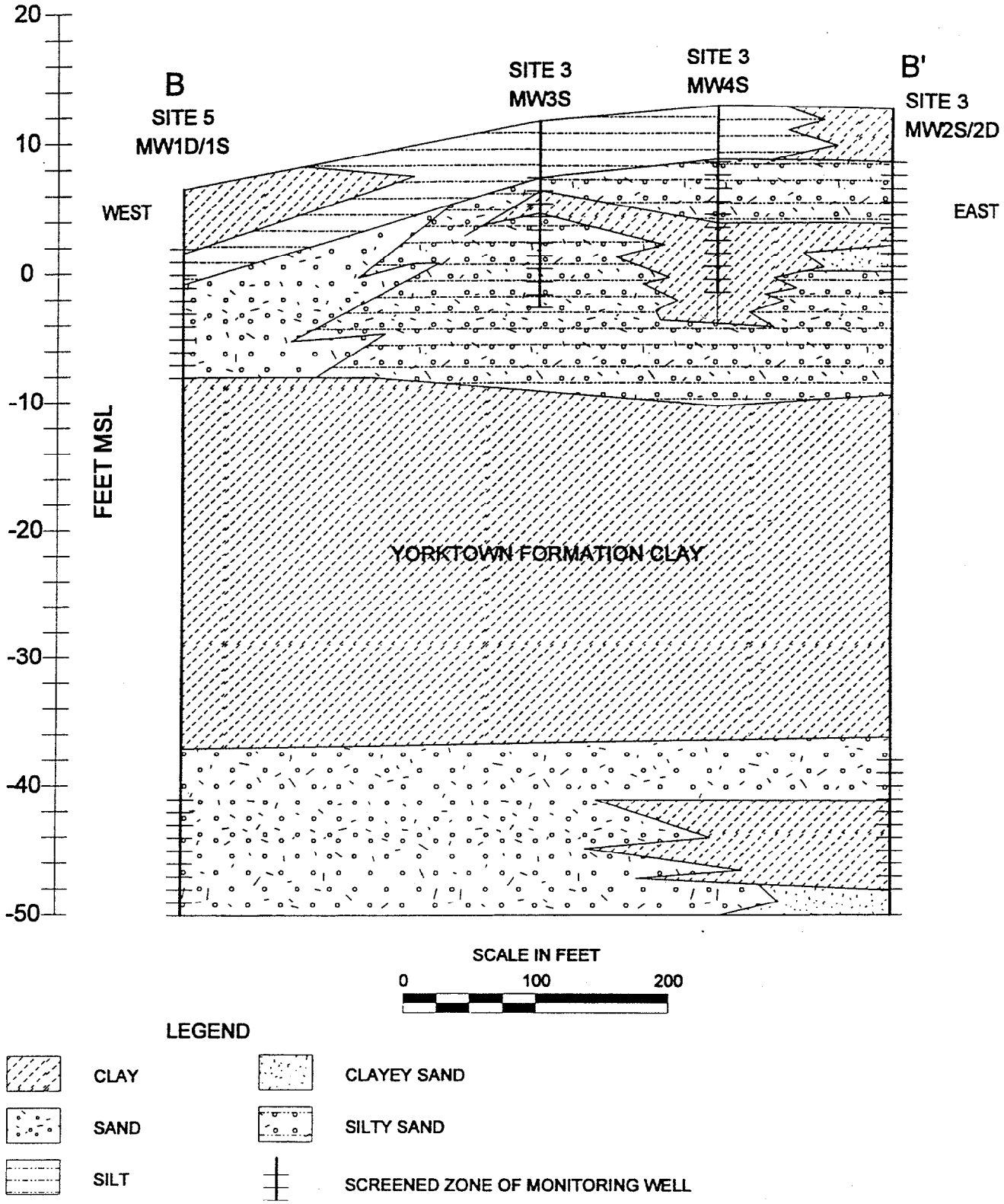
Generally, the hydrogeology at St. Juliens Creek Annex can be characterized as consisting of the Yorktown Aquifer and a Water Table Aquifer. The two aquifers are separated by the upper Yorktown Formation clay unit. The characteristics of each, as determined through this RI, are discussed below. In addition to these two continuous aquifers, there is evidence of perched water-bearing zones at Site 3 and, perhaps, local intermediate semiconfined water bearing zones between the Yorktown and the Water Table Aquifers. These local water bearing zones are discussed in more detail in the site-specific hydrogeologic descriptions (Sections 3.3.2 and 3.4.2 for Site 3 and Site 4 respectively).



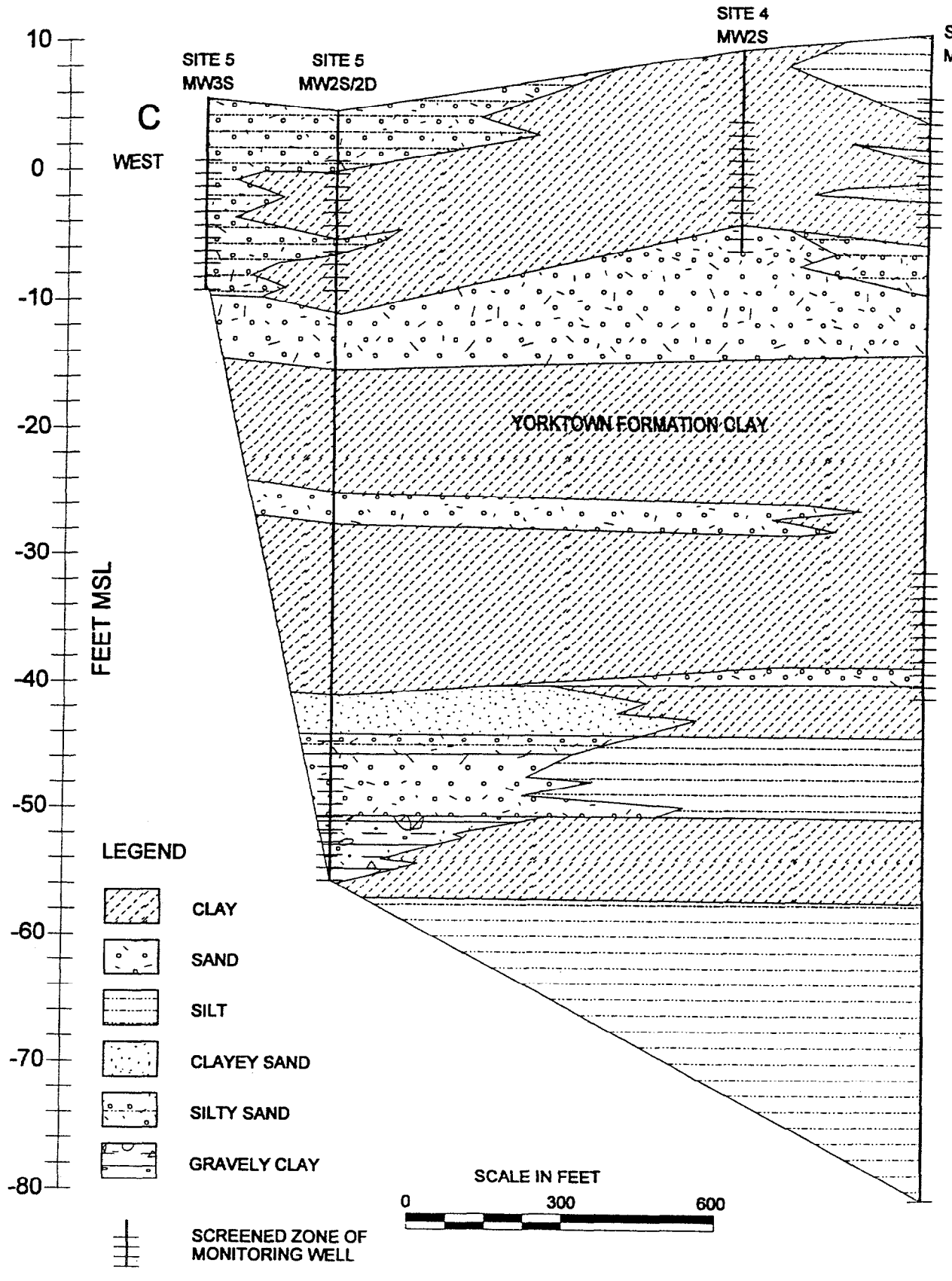
CDM Federal Programs Corporation *A Subsidiary of Camp Dresser & McKee Inc.*	LOCATION OF GEOLOGIC CROSS SECTIONS: A - A', B - B', C - C' SAINT JULIENS CREEK ANNEX	FIGURE 3-3



CDM Federal Programs Corporation A Subsidiary of Camp Dresser & McKee Inc.	GEOLOGIC CROSS SECTION A - A' SAINT JULIENS CREEK ANNEX	FIGURE 3-4



CDM Federal Programs Corporation *A Subsidiary of Camp Dresser & McKee Inc.*	GEOLOGIC CROSS SECTION B - B' SAINT JULIENS CREEK ANNEX	FIGURE 3-5



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GEOLOGIC CROSS SECTION C - C'
SAINT JULIENS CREEK ANNEX

FIGURE
3-6

3.1.2.1 Yorktown Aquifer

Regionally, the Yorktown Aquifer consists of the major water-bearing zones found in the upper 50 to 100 ft of the Yorktown Formation and is separated from the overlying Water Table Aquifer by 20 to 40 ft of silt, clay and sandy clay (Siudyla et al., 1981). This silt and clay unit is present across St. Juliens Creek Annex (see Figures 3-4, 3-5, and 3-6). Also on a regional scale, three water-bearing sand, gravel and shell beds have been defined within the Yorktown Aquifer.

At the Base, the Yorktown aquifer is defined as the uppermost significant water-bearing sand, silty sand or clayey sand unit encountered in Yorktown Formation. This aquifer is considered to be confined or semiconfined by the overlying clay.

Only water level measurements from the July 1997 sampling event are used to evaluate vertical gradients because water levels in the monitoring well clusters were measured at approximately the same time during that sampling event. During the November groundwater sampling event, water levels for all deep wells were measured within one hour and levels in all shallow wells were measured within one hour, however water levels in clustered wells may have been measured as much as two hours apart. Given the tidal influence (see below), that time difference may be significant.

Vertical gradients observed at well clusters across the site are both upward and downward. The gradient is upward or slightly downward at the locations nearest the surface water (South Branch of the Elizabeth River, St. Juliens Creek, and Blows Creek), and downward and or equipotential at locations further from these surface water bodies(upgradient at Site 3, 4, and 5).

A potentiometric surface map for the Yorktown Aquifer at the Base is shown in **Figure 3-7.** In order to minimize the effect of tidal influences, all measurements were taken within a 35-minute period. Groundwater flow within the aquifer at the time of measurement was to the east in the area south of Blows Creek. In the area of Site 3, groundwater flow is to the west, northwest and southwest (toward Site 5) and along the northern edge of Blows Creek the flow direction is to the south and east. Overall, the direction of groundwater flow would be expected to be east or southeast toward the South Branch of the Elizabeth river.

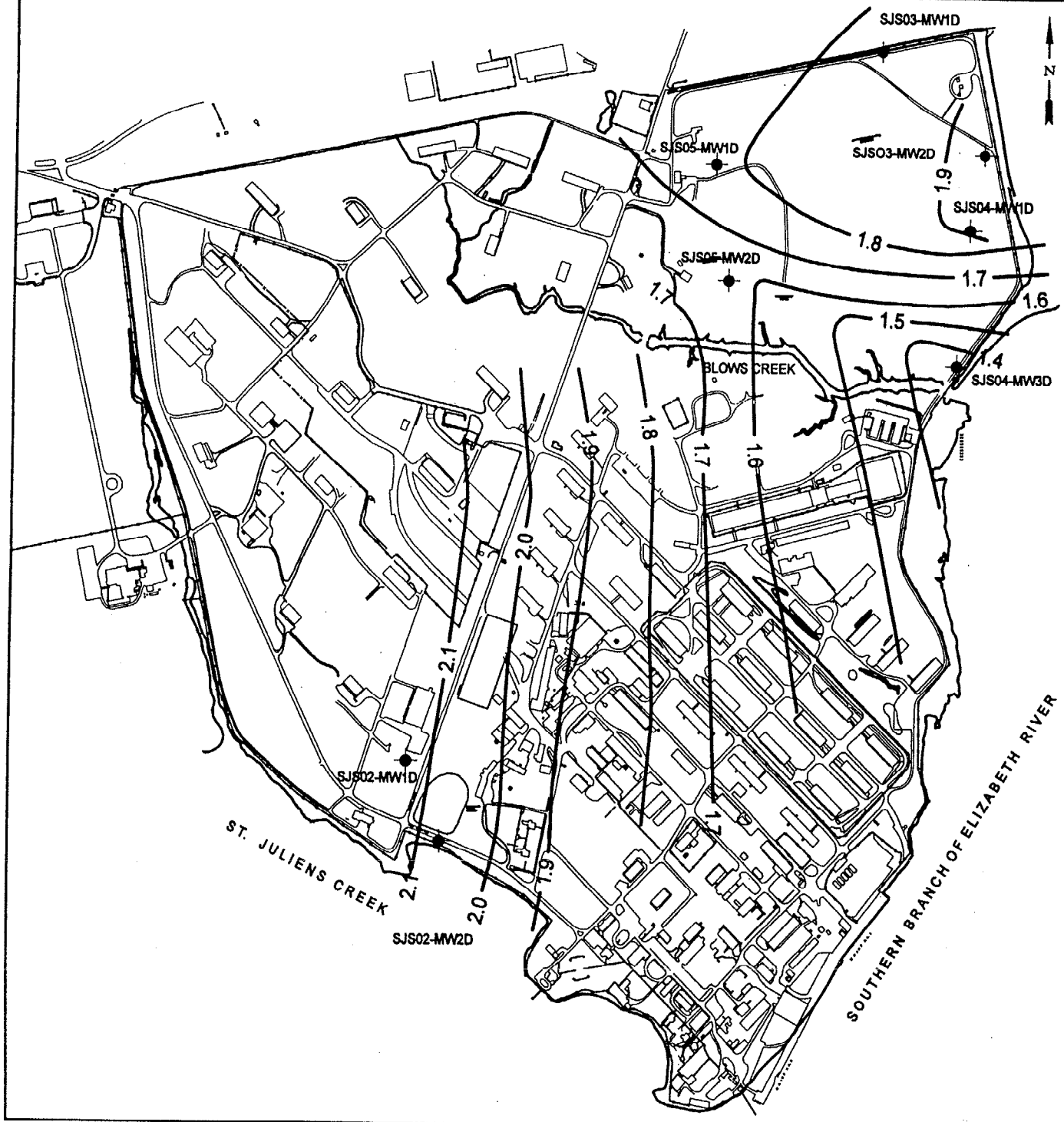

FIGURE 3-7

POTENTIOMETRIC SURFACE
OF THE YORKTOWN AQUIFER
NOVEMBER 4, 1997

SAINT JULIENS CREEK ANNEX

LEGEND

YORKTOWN AQUIFER MONITORING WELL

1.8— ELEVATION CONTOUR ft msl

0 400 800 1600

SCALE IN FEET

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The horizontal flow gradient is approximately 0.0003 ft/ft south of Blows Creek, in the vicinity of Site 2. The gradient in the area of Site 5 varies considerably but is similarly flat. Due to the effects of tides, it can be expected that both the direction of groundwater flow and the gradient will vary over time.

3.1.2.2 Yorktown Aquitard

For purposes of this report, the Yorktown Aquitard is defined as the uppermost clay unit of the Yorktown Formation (see Figures 3-4, 3-5, and 3-6). Across the Base, this unit has a thickness that ranges from approximately 9 to 29 ft. It is thinnest adjacent to the South Branch of the Elizabeth River (9 ft thick at SJS04-MW3D) and St. Juliens Creek (11.5 ft at SJS02-MW2D). At the Base, the vertical gradient across this aquitard ranges from -0.156 ft/ft (downward) at monitoring well cluster SJS03-MW1D/1S to +0.058 ft/ft (upward) at monitoring well cluster SJS05-MW2D/2S, near Blows Creek. The data used to determine the vertical gradients are presented in **Appendix E.**

3.1.2.3 Water Table Aquifer

The Water Table Aquifer as described by Siudyla et al. (1981), consists of beds and lenses of sands, silty sands, clayey sands, gravel, and shells overlying the upper Yorktown Formation clay. The aquifer is very heterogeneous due to the complex marine estuarine environments in which the sediments were deposited.

At the Base, the direction of groundwater flow within the Water Table Aquifer would be expected to be toward surface water discharge points such as the South Branch of the Elizabeth River, St. Juliens Creek , and Blows Creek. The flow directions and gradients determined at the individual sites are discussed in the site-specific RI results sections below.

3.1.2.4 Tidal Study

A study was conducted as part of the RI to determine if water levels in both aquifers are tidally-influenced. In July 1997 water levels were measured every 10 minutes for 79 hours in monitoring wells SJS02-MW2D and SJS02-MW2S, screened in the deep and shallow aquifers respectively, adjacent to St. Juliens Creek, a tidally influenced surface water body. The data from the shallow monitoring well could not be used. The well had been purged dry during well development several days before the tidal study measurement period. The monitoring well is extremely slow to recover and, consequently, the data show only that the well continued to recover during the 79 hour period of measurement. The water level

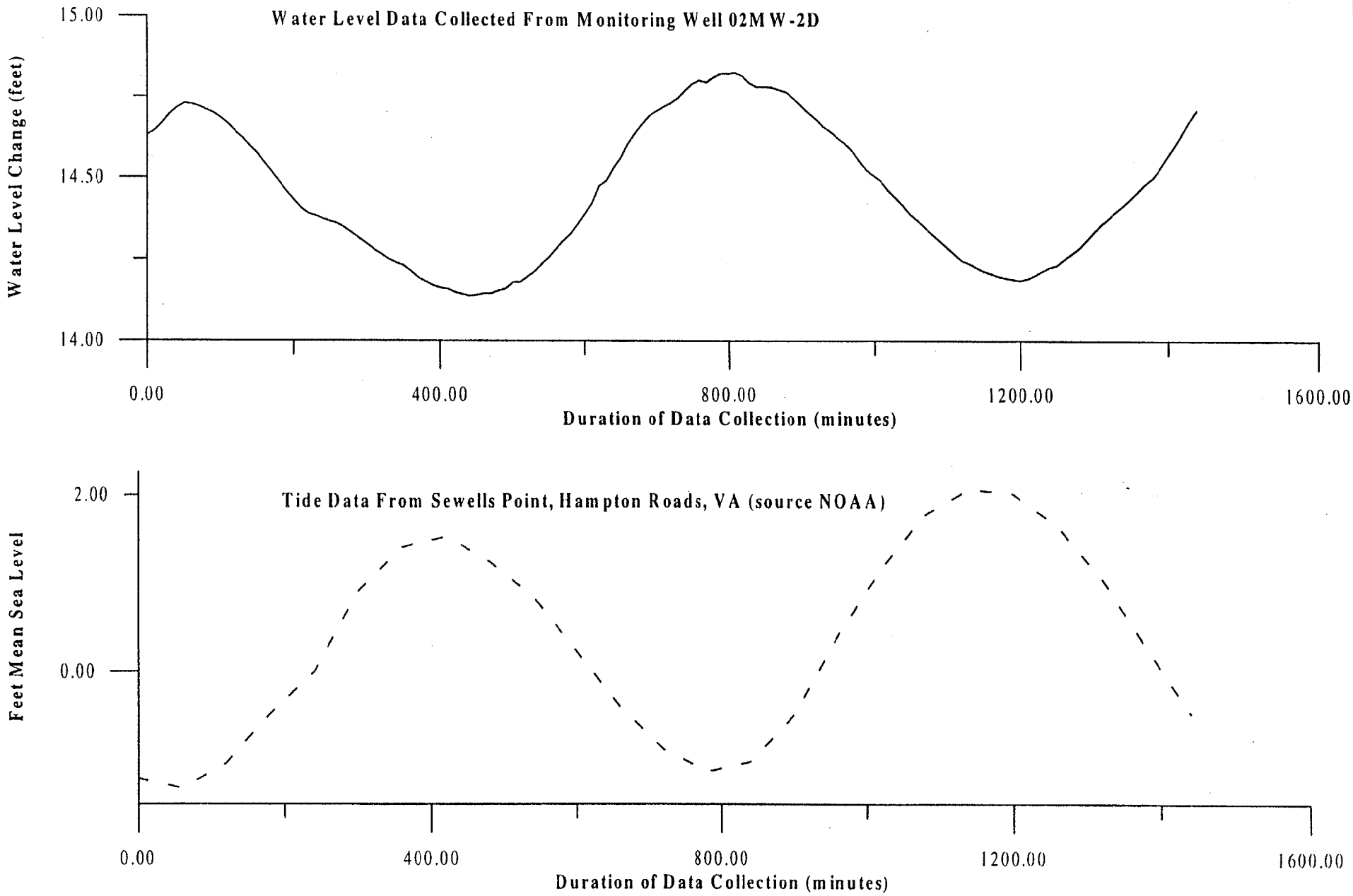
measurements for the deeper well are plotted in **Figure 3-8** along with the tidal data from Sewells Point, Virginia (located approximately 12 miles north of St. Juliens Creek Annex at the point where the Elizabeth River discharges to the James River) provided by the National Oceanic and Atmospheric Administration. The data clearly show a correlation between the tides and the potentiometric surface of the deep aquifer. A change in tides of approximately 1.1 feet results in a change of approximately 0.7 ft in the potentiometric surface in well SJS02-MW2D. Also of interest is the delay in aquifer response of about 6.5 hours.

To evaluate the tidal influence in the shallow aquifer, and the tidal influence in both aquifers at a distance from the surface water bodies, a limited series of water levels were collected manually during the November 1997 sampling event. The monitoring wells selected, and the objective in collecting data from those wells shown in **Table 3-1.**

Table 3-1
Monitoring wells used in Limited Tidal Study, November 1997

Monitoring Well	Objective	Measurement Date
SJS02-MW2S	Check tidal influence in Water Table Aquifer adjacent to St. Juliens Creek.	November 4, 1997
SJS02-MW2D	Check tidal influence in Yorktown Aquifer adjacent to St. Juliens Creek concurrent with Water Table Aquifer.	November 4, 1997
SJS02-MW3S	Check tidal influence in Water Table Aquifer at moderate distance from St. Juliens Creek.	November 5, 1997
SJS05-MW1S	Check tidal influence in Water Table Aquifer at furthest point from surface water bodies.	November 4, 1997
SJS05-MW1D	Check tidal influence in Yorktown Aquifer at furthest point from surface water bodies.	November 4, 1997

The water level measurements collected from these wells in November 1997 are shown in **Table 3-2**, and are plotted in **Figure 3-9** (Site 2) and **Figure 3-10** (Site 5). The water levels were collected over a time period of approximately 10 hours, and some general conclusions can be drawn from the data. In Figure 3-9 it can be seen that both aquifers, immediately adjacent to St. Juliens Creek, are tidally influenced. Although the data from monitoring well SJS02-MW2S are somewhat erratic, the change in water level appears to be approximately the same for the shallow and deep aquifers. However, the impact in the Water Table Aquifer lags behind the impact in the Yorktown Aquifer by about three hours.



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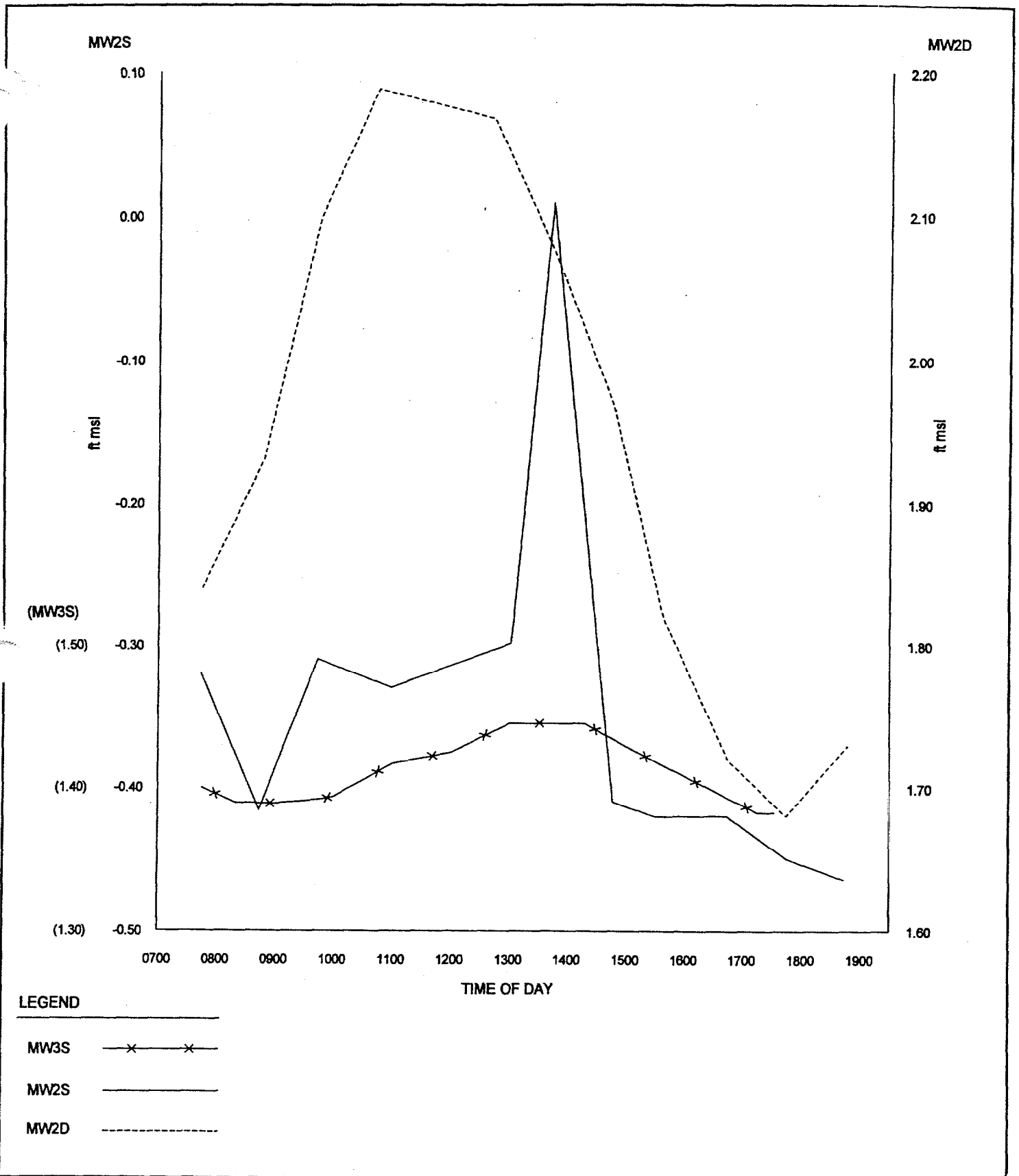
WATER LEVELS IN MONITORING WELL SJS02-MW2D - TIDAL STUDY
SAINT JULIENS CREEK ANNEX

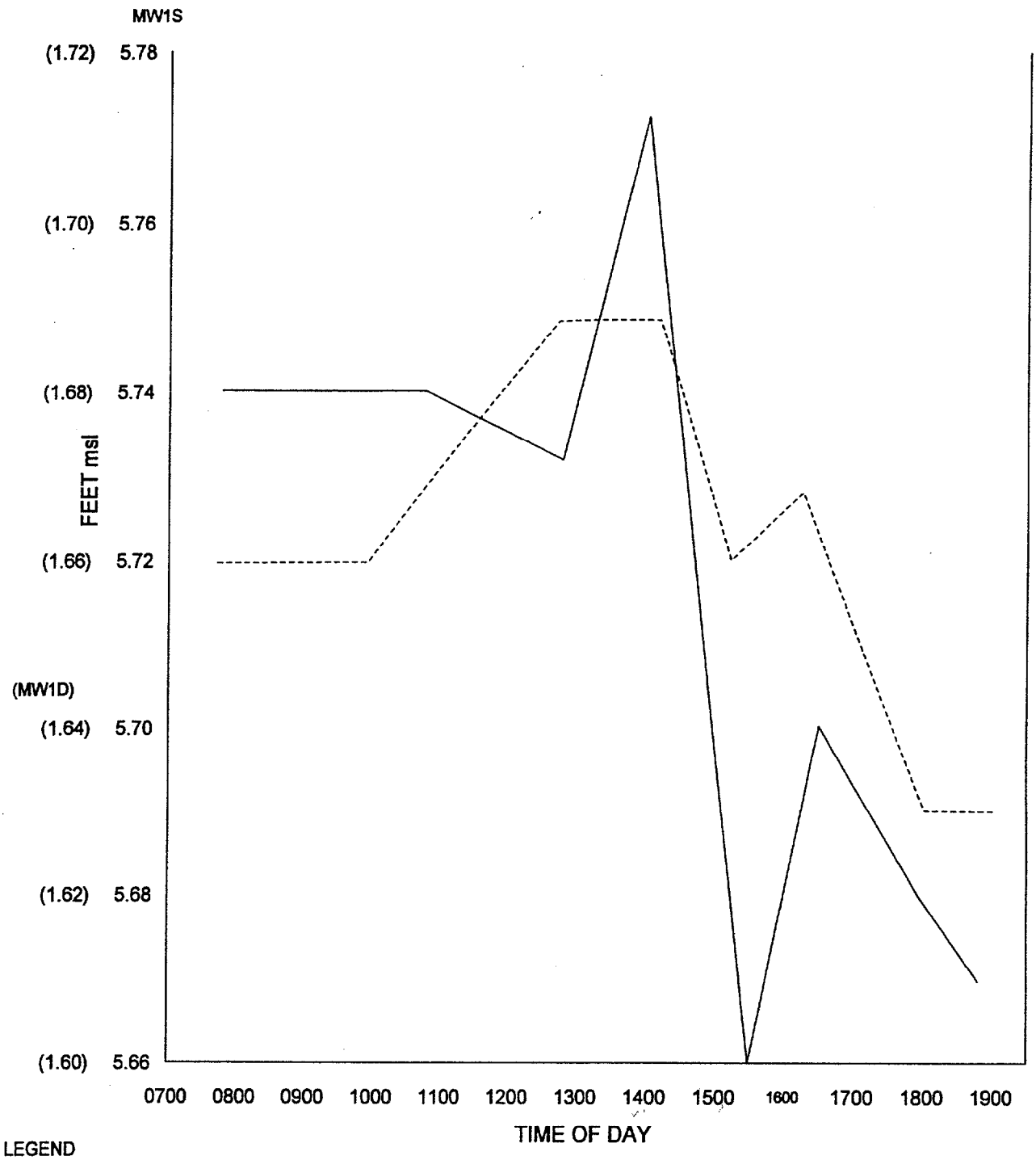
FIGURE 3-8



DM Federal Programs Corporation
A Subsidiary of Camp Dresser & McKee Inc.

TIDAL STUDY WATER LEVEL DATA, SITE 2, NOVEMBER 1997
SAINT JULIENS CREEK ANNEX

FIGURE 3-9



CDM Federal Programs Corporation *A Subsidiary of Camp Dresser & McKee Inc.*	TIDAL STUDY WATER LEVEL DATA, SITE 5, NOVEMBER 4, 1997 SAINT JULIENS CREEK ANNEX	FIGURE 3-10

TABLE 3-2
WATER LEVELS MEASURED DURING TIDAL STUDY
NOVEMBER 4, 1997

MONITORING WELL LOCATIONS							
SJS05-MW1S		SJS05-MW1D		SJS02-MW2S		SJS02-MW2D	
Time	Water Level	Time	Water Level	Time	Water Level	Time	Water Level
	Elevation		Elevation		Elevation		Elevation
0744	5.74	0744	1.66	0737	-0.33	0737	1.84
0844	5.74	0844	1.66	0837	-0.42	0837	1.93
0945	5.74	0945	1.66	0938	-0.31	0938	2.10
1044	5.74	1044	1.67	1037	-0.33	1038	2.19
1240	5.73	1240	1.69	1236	-0.30	1236	2.17
1335	5.75	1335	1.69	1335	-0.30	1335	2.07
1439	5.77	1440	1.69	1434	-0.42	1433	1.97
1528	5.66	1529	1.66	1536	-0.43	1535	1.83
1634	5.70	1635	1.67	1641	-0.43	1640	1.72
1750	5.68	1750	1.63	1745	-0.46	1745	1.68
1851	5.67	1850	1.63	1843	-0.47	1844	1.73

By comparing the data from the two shallow wells, it appears that at a relatively short distance from the creek (approximately 130 ft) the tidal effect in the Water Table Aquifer is significantly dampened. In monitoring well SJS02-MW3S, the observed change in water level was 0.06 ft. as compared with 0.5 ft in SJS02-MW2S.

The water level changes observed in the monitoring well cluster at Site 5 (SJS05-MW1D/S) are plotted on Figure 3-10. The tidal influence in these wells is smaller than that observed at Site 2, adjacent to St. Juliens Creek. The maximum observed changes in the Yorktown and Water Table Aquifers are 0.06 ft and 0.11 ft, respectively. Although the readings are somewhat erratic, the high water level reading in both aquifers appears to lag behind the high reading in the aquifers closer to the creek (Site 2).

The observed changes in the Water Table Aquifer at Site 5 would not be sufficient to cause a reversal in groundwater flow direction at the site.

3.2 Development and Use of Contaminants of Potential Concern (COPCs)

The results of the sampling and analysis programs are presented for those contaminants determined to be Contaminants of Potential Concern (COPCs) by either the Human Health Risk Assessment (HHRA) (**Section 5.0**) or the Ecological Risk Assessment (CDM 1998). COPCs are contaminants that are present in a given medium at concentrations that exceed screening levels. In the risk assessment, COPCs are further screened to determine which, if any, of the COPCs contribute significantly to site risk. COPCs were developed for each medium (i.e., surface soil, subsurface soil, groundwater, sediment, and, if applicable, surface water), at each site. A description of how these COPCs were derived is found in **Section 5.0** of this report and in the Ecological Risk Assessment report (CDM 1998). In general, COPCs are constituents detected at concentrations above USEPA Region III Risk-Based Screening (RBC) Levels, and Region III USEPA Biological Technical Assistance Group (BTAG) levels for soil; RBC levels and Federal Maximum Contaminant Levels (MCLs) and Virginia Department of Environmental Quality Groundwater criteria for groundwater, BTAG levels for sediment; and BTAG and Federal Ambient Water Quality Criteria (AWQC) for surface water. The Human Health screening levels can be found in Appendices H and I of this RI, and the BTAG and AWQC screening levels can be found in the Ecological Risk Assessment.

In the following discussion of analytical data, only COPCs that were detected in the samples are considered. The analytical results for these constituents are presented in tables in each subsection. Some naturally abundant inorganic constituents that are routinely screened out of the COPC lists in the Ecological and Human Health Risk Assessments have not been included in the tables, even though they have been detected. These constituents include calcium, magnesium, sodium, and potassium. The discussion in the text focuses on the presence and distribution of COPCs. Only COPCs are shown on the figures. Generally, COPCs are presented on two figures for each medium: one for organic COPCs and one for inorganic COPCs. In the discussion of some media, the concentrations of the COPCs are compared to typical values for that media. In the case of surface soil, the data are compared to ranges of concentrations of metals found to occur naturally in soils of the eastern United States (Shacklette and Boerngen, USGS 1984). For groundwater, standard water quality parameters (pH, specific conductance, iron and manganese) are compared to published data

for the Water Table and Upper Yorktown Aquifer in the four-cities (Norfolk, Portsmouth, Virginia Beach and Chesapeake) area in which the site is located (Siudyla et al., 1981).

3.3 Site 3 Remedial Investigation Results

The results of the geologic, hydrogeologic, geophysical, and analytical investigations at Site 3 are presented and discussed below.

3.3.1 Site 3 Geology

Previous to the Site 3 RI, no site-specific geologic data were available for the site. The geologic data obtained during this investigation provide important information on the stratigraphy and hydrostratigraphy at the site. The identification of water-bearing and confining units at the site will allow an assessment of the potential for off-site migration of COPCs.

The geology of Site 3 was determined by analyzing the boring logs completed during the drilling and installation of the four shallow and two deep monitoring wells. The geologic units encountered at Site 3 during the RI are listed and described below.

3.3.1.1 Yorktown Formation

The stratigraphy at Site 3 is shown in cross-sections A-A, B-B, and C-C, (Figure 3-4 through 3-6). The top of the Yorktown Formation is defined by a greenish-gray clay encountered between elevations of -8 and -10 ft msl. The Yorktown Formation clay is approximately 25 ft thick at Site 3 and is underlain by fine sand, clay and clayey sand. As shown on Figure 3-4 (cross section A-A'), the sand content of the unit decreases to the south. Although there are no deep borings in the western part of the site, the upgradient deep well at Site 5 also contains a sand-rich unit which may indicate less clay under the western portion of Site 3 (see Figure 3-5 cross section B-B'). The full thickness of the unit was not penetrated during the site investigation, but at Site 3 the Yorktown Formation has a minimum thickness of about 40 ft.

3.3.1.2 Post-Pliocene Sediments

Overlying the Yorktown Formation clay at this site is a 7 to 9 ft-thick interval of fine sand (Figure 3-4, cross-section A-A'). This sand unit appears to be continuous across the site although in the area of SJS03-MW3S and SJS03-MW4S there is an increase in silt content.

The sand is overlain by a 7 to 14 ft of silt, clay, and silty clay, with minor silty sand (SJS03-MW3S). Historical aerial photographs taken in 1949 indicate that the majority of Site 3 is covered with hydraulic dredge material (presumably from the South Branch of the Elizabeth River). The upper silt and clay units encountered at the site may be this material. On the photographs, the northernmost boring location, SJS03-MW1S appears to be outside of the dredge disposal area.

3.3.2 Site 3 Hydrogeology

Shallow and deep monitoring wells installed at Site 3, provide data to interpret hydrostratigraphy and some groundwater flow characteristics. These data can be used for evaluation of the fate and transport of COPCs. The hydrostratigraphic units identified at Site 3 during the RI are listed and described in the following sections.

3.3.2.1 Yorktown Aquifer

The Yorktown Aquifer is encountered at depths of 45 to 48.5 ft at Site 3 and the potentiometric surface of the Yorktown Aquifer is found at an elevation of 1 to 2 ft msl. The Base-wide potentiometric surface map (Figure 3-7) indicates that the direction of groundwater flow in Yorktown Aquifer at Site 3 is west and northwest. In addition, the flow gradient is very low (approximately 0.0002 ft/ft). The tidal study conducted at other sites on the Base indicates that water levels could change throughout the day. The water level change would be expected be greater and occur earlier in the portion of the aquifer closer to the South Branch of the Elizabeth River. For this reason the direction of the flow may change throughout the day in response to the tides.

3.3.2.2 Yorktown Clay Aquitard

The upper clay of the Yorktown Formation serves as a confining unit to the Yorktown Aquifer at this site. At Site 3 the clay is found at an elevation of approximately -8 to -10 ft msl and has an average thickness of about 25 feet. The vertical hydraulic gradient across this clay downward at approximately 0.28 ft/ft at the SJS03-MW1S/MW1D well cluster.

3.3.2.3 Water Table Aquifer

Four shallow monitoring wells were installed at Site 3 with the intent to screen and sample the Water Table Aquifer. Evaluation of the stratigraphic and water level data indicates that two of the shallow wells (SJS03-MW4S and SJS03-MW2S) are likely screened in a perched water zone (see section 3.2.2.3). Because there are only two shallow monitoring wells

screened in the Water Table Aquifer, the potentiometric surface of the aquifer at Site 3 could not be drawn. It is noted, however, that the bottom foot of screen at SJS03-MW2S does appear to have penetrated the bottom clay lens (see Figure 3-5, Cross Section B - B'). If this well is screened in the true Water Table Aquifer, the direction of flow in the aquifer is toward the northwest. Although this direction is away from the South Branch of the Elizabeth River, the assumed discharge point for the shallow aquifer, the direction of groundwater may reverse at the site during some part of the tidal cycle (no data were collected at this site as part of the tidal study). Alternatively, if it is assumed that SJS03-MW2S is perched, the direction of groundwater flow can only be estimated from the data from two wells (SJS03-MW1S and SJS03-MW3S). In that case the upgradient well would be SJS03-MW1S and ground water would flow to the southwest, south or southeast.

3.3.2.4 Perched Water Zone

Water level data from Site 3 indicates the presence of a perched water zone at two of the four shallow well locations. At both SJS03-MW4S and SJS03-MW2S the wells are screened in a sand lens between two clay lenses (see Figure 3-5, cross-section B-B'). Water levels in these wells during the July sampling event were 10.0 and 10.5 ft msl respectively. These water levels are 1 to 2 ft above those found in the other two shallow monitoring wells at the site.

3.3.3 Site 3 Results of the Geophysical Survey

The geophysical survey at Site 3 was performed to determine the landfill boundaries. The EM survey, conducted on a 100 ft grid on Landfill C, did not find any anomalies indicative of typical landfill materials. Increases in EM readings over some areas of the site are probably due to changes in the salt or clay content of the soil or groundwater. These relatively large areas may be due to the hydraulic dredge deposits of relatively higher salt content in these areas. A linear anomaly extending between the radar testing facilities corresponds to a known utility line. Appendix A contains a copy ERT's report on the geophysical survey.

3.3.4 Site 3 Soil Analytical Results

The analytical results for surface and subsurface soil samples collected at Site 3 are discussed below. The discussions refer to COPCs which were derived from the human

health and ecological risk assessments for Site 3. The list of COPCs for subsurface and surface soil differ based on the potential exposures.

3.3.4.1 Site 3 Surface Soil

The nature and extent of the surface soil COPCs at Site 3 (Landfill C) are discussed below.

3.3.4.1.1 Nature and Extent of COPCs at Site 3

The COPCs for surface soil at Site 3 are listed in **Table 3-3** and the distribution of organic and inorganic COPCs at Site 3 are shown in **Figures 3-11 and 3-12** respectively. **Table 3-4** presents the analytical data for all COPCs in the surface soil. Results of analyses for all samples from Site 3 are compiled in **Appendix F.**

The organic COPCs detected in surface soil at Site 3 include 16 SVOCs, two pesticides and one PCB (Aroclor-1254). The inorganic COPCs include 14 metals and total phosphorus.

Of the 16 SVOC COPCs, twelve are PAHs. The PAHs results are presented as a total PAH in Figure 3-11. PAHs were found in all samples, with concentrations of total PAH ranging from 228 J ug/kg (J indicates an estimated value below the instrument quantitation limit) in sample SJS03-SS01 to 5929 J ug/kg in the duplicate of SJS03-SS06. The concentration of total PAH COPCs is markedly lower in SJS03-SS02 (335 J ug/kg) than in any of the other samples except SJS03-SS01. Other SVOC COPCs include carbazole (45 J ug/kg in SJS03-SS04, and 43 J ug/kg and 130 J ug/kg in SJS03-SS06 and its duplicate), dibenzofuran (38 J ug/kg in SJS03-SS03 and 58 J ug/kg in the duplicate of SJS03-SS06), diethylphthalate (detected only in SJS03-SS07 at 79 J ug/kg), and pentachlorophenol (PCP) (detected only in SJS03-SS06 and its duplicate at concentrations of 87 J ug/kg and 160 J ug/kg respectively).

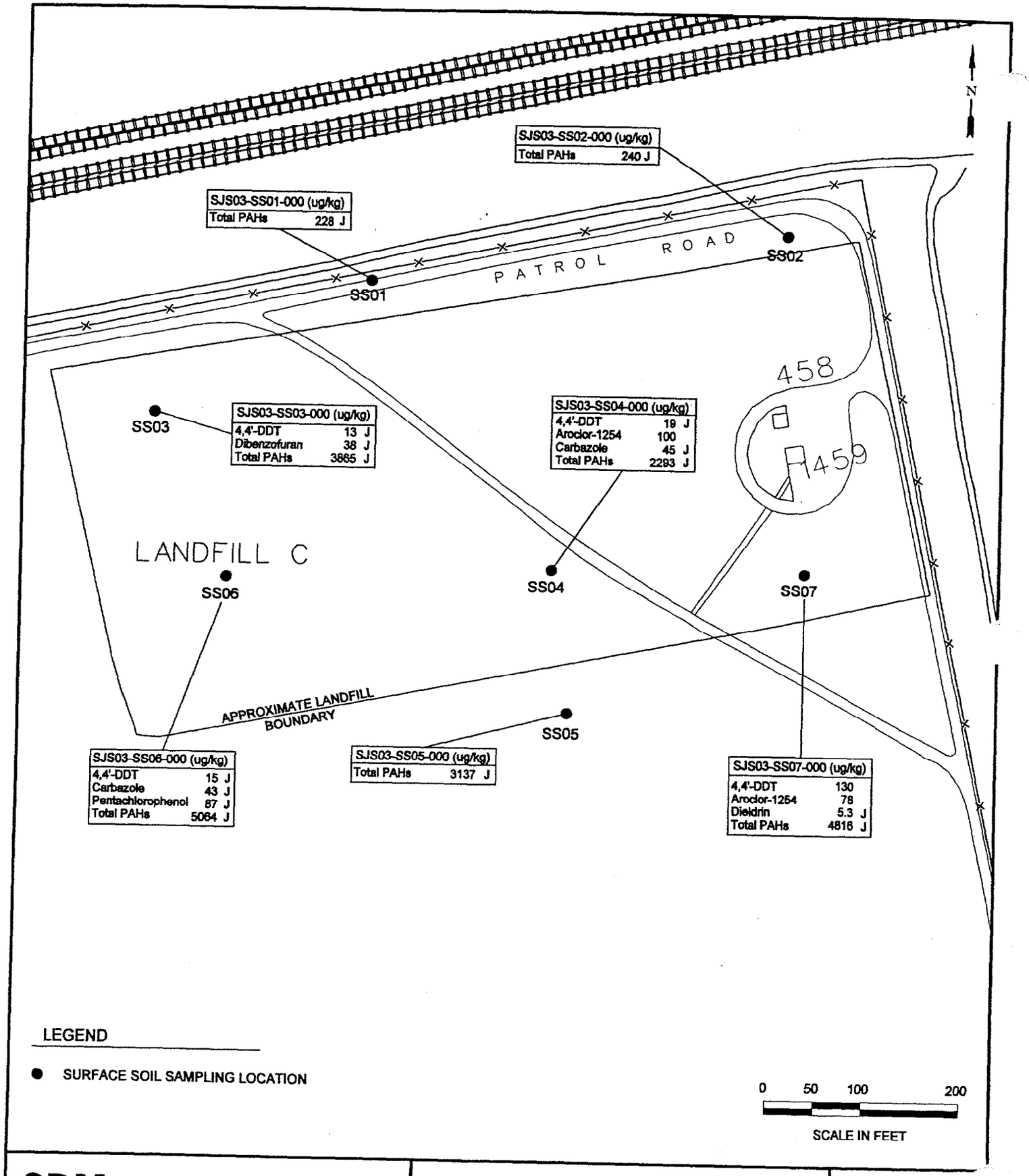
The pesticide, 4,4'-DDT was detected at four of the seven samples including SJS03-SS03 (13 J ug/kg), SJS03-SS04 (19 J ug/kg), SJS03-SS06 and its duplicate (15 J ug/kg and 16 J ug/kg) and SJS03-SS07 (130 ug/kg). Dieldrin was only detected in SJS03-SS07 at a concentration of 5.3 J ug/L. Aroclor 1254, the only PCB identified as a COPC, was found in one sample (SJS03-SS04) at a concentration of 100 ug/kg.

In addition to the organic COPCs, other organic compounds were detected in some of the samples. Two VOCs, toluene (detected only in SJS03-SS05 at a concentration of 2 J ug/kg) and tetrachloroethene (detected at a concentration of 2 J ug/kg in both SJS03-SS01 and SJS03-SS02) were detected. Non-COPC pesticides detected in the samples include the

Table 3-3
Site 3 Surface Soil COPCs

Organic Contaminants	Basis for inclusion as a COPC
4,4' - DDT	BTAG
Aroclor-1254	BTAG
Anthracene	BTAG
Benzo(a)Anthracene	BTAG, RBC
Benzo(a)Pyrene	BTAG, RBC
Benzo(b)Fluoranthene	BTAG, RBC
Benzo(k)Fluoranthene	BTAG
Benzo(g,h,i)Perylene	BTAG
Carbazole	BTAG
Chrysene	BTAG
Dibenzofuran	BTAG
Dieldrin	SSL
Diethylphthalate	BTAG
Fluoranthene	BTAG
Indeno(1,2,3-cd)Pyrene	BTAG
Naphthalene	BTAG
Pentachlorophenol	BTAG
Phenanthrene	BTAG
Pyrene	BTAG
Inorganic Contaminants	
Total Phosphorous	BTAG
Aluminum	BTAG, RBC
Arsenic	RBC
Barium	SSL
Beryllium	BTAG, RBC
Chromium	BTAG
Copper	BTAG, RBC
Iron	BTAG
Lead	BTAG
Manganese	BTAG, RBC
Mercury	BTAG
Nickel	BTAG, SSL
Thallium	BTAG
Vanadium	BTAG, RBC
Zinc	BTAG

BTAG= Region III BTAG Screening Levels (August 9, 1995 Revision).
RBC = EPA. 1997. Region III Updated Risk-Based Concentration Table. October, 1997.
SSL= EPA, 1997. Soil Screening Levels as presented in Region III Updated Risk-Based Concentration Table. March, 1997.



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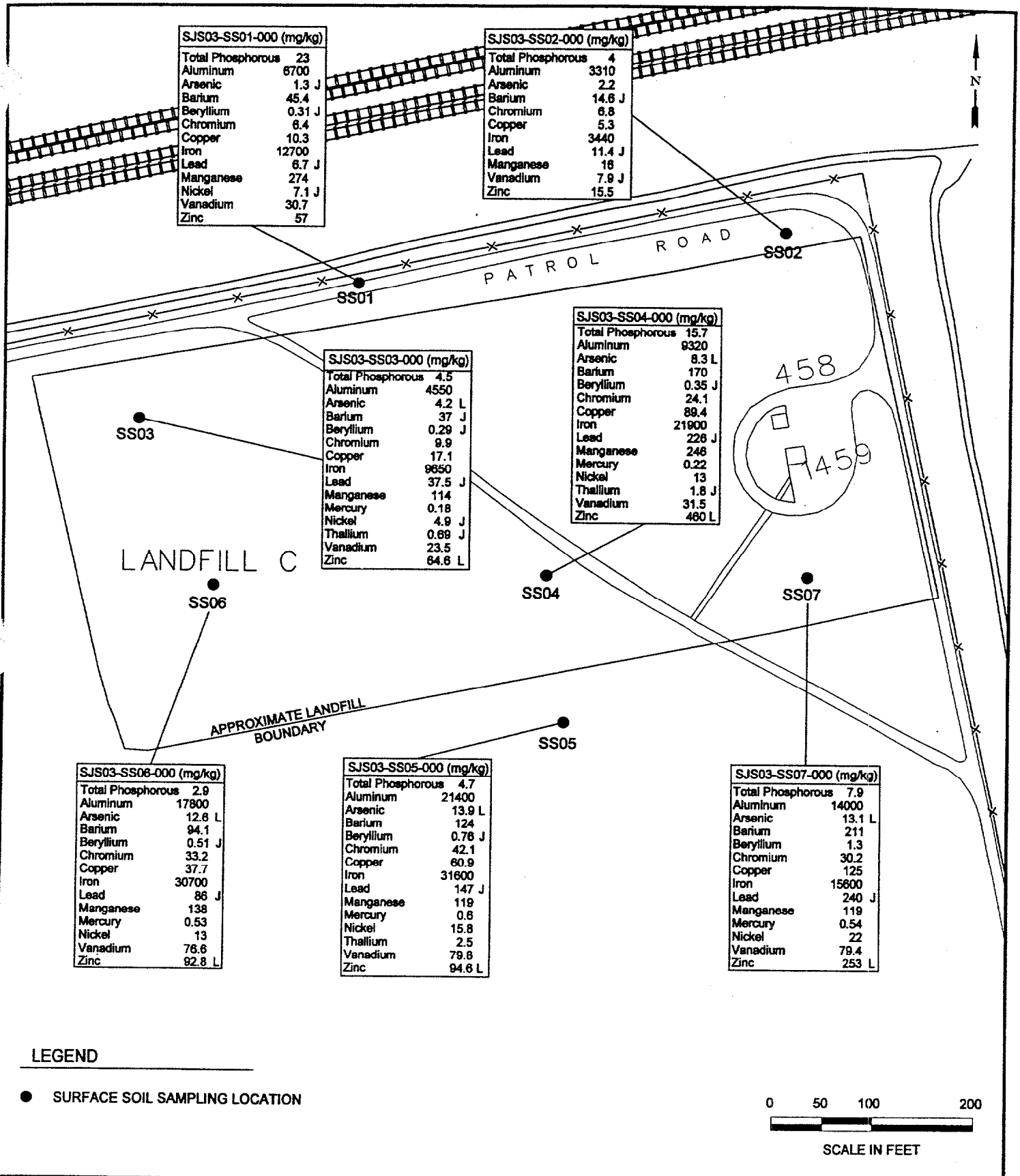
DISTRIBUTION OF ORGANIC COPCs, SURFACE SOIL, SITE 3
SAINT JULIENS CREEK ANNEX

FIGURE 3-11



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DISTRIBUTION OF INORGANIC COPCs, SURFACE SOIL, SITE 3
SAINT JULIENS CREEK ANNEX

FIGURE
3-12

TABLE 3-4

ST. JULIENS CREK ANNEX, SITE 3
SURFACE SOIL COPC ANALYTICAL DATA

Analyte Name	SJS03-SS01-000		SJS03-SS02-000		SJS03-SS03-000		SJS03-SS04-000		SJS03-SS05-000		SJS03-SS06-000		SJS03-SS06-000P		SJS03-SS07-000	
Inorganic (mg/kg)																
Total Phosphorous	23		4		4.5		15.7		4.7		2.9		114		7.9	
Aluminum	6700		3310		4550		9320		21400		17800		17500		14000	
Arsenic	1.3	J	2.2		4.2	L	8.3	L	13.9	L	12.6	L	13.3	L	13.1	L
Barium	45.4		14.6	J	37	J	170		124		94.1		87.2		211	
Beryllium	0.31	J			0.29	J	0.35	J	0.76	J	0.51	J	0.53	J	1.3	
Chromium	6.4		6.8		9.9		24.1		42.1		33.2		33.9		30.2	
Copper	10.3		5.3		17.1		89.4		60.9		37.7		35.8		125	
Iron	12700		3440		9650		21900		31600		30700		34000		15600	
Lead	6.7	J	11.4	J	37.5	J	226	J	147	J	86	J	107	J	240	J
Manganese	274		16		114		246		119		138		143		119	
Mercury					0.18		0.22		0.6		0.53		0.35		0.54	
Nickel	7.1	J			4.9	J	13		15.8		13		11.4		22	
Thallium					0.69	J	1.8	J	2.5							
Vanadium	30.7		7.9	J	23.5		31.5		79.8		76.6		60.1		79.4	
Zinc	57		15.5		64.6	L	460	L	94.6	L	92.8	L	94.5	L	253	L
Organic (ug/kg)																
4,4'-DDT					13	J	19	J			15	J	16	J	130	
Aroclor-1254							100								78	
Dieldrin															5.3	J
Anthracene					65	J	43	J	57	J	79	J	120	J	83	J
Benzo(a)Anthracene			36	J	370		120	J	200	J	300	J	390	J	350	J
Benzo(a)Pyrene			38	J	320	J	180	J	200	J	340	J	350	J	350	J
Benzo(b)Fluoranthene	50	J	62	J	670		550		850		1500		1500		1200	

TABLE 3-4

ST. JULIENS CREK ANNEX, SITE 3
SURFACE SOIL COPC ANALYTICAL DATA

Analyte Name	SJS03-SS01-000		SJS03-SS02-000		SJS03-SS03-000		SJS03-SS04-000		SJS03-SS05-000		SJS03-SS06-000		SJS03-SS06-000P		SJS03-SS07-000	
Organic (ug/kg)																
Benzo(g,h,i)Perylene					130	J	170	J	190	J	340	J	330	J	220	J
Benzo(k)Fluoranthene					270	J	170	J	350	J	400	J	420		460	
Carbazole							45	J			43	J	130	J		
Chrysene	68	J	41	J	460		280	J	420	J	690		690		730	
Dibenzofuran					38	J							58	J		
Diethylphthalate															79	J
Fluoranthene			63	J	610		270	J	310	J	460		640		550	
Indeno(1,2,3-cd)Pyrene					180	J	180	J	260	J	390	J	440		250	J
Naphthalene					130	J					55	J	69	J	53	J
Pentachlorophenol											87	J	160	J		
Phenanthrene					220	J	130	J	100	J	160	J	420	J	200	J
Pyrene	110	J	54	J	440	J	200	J	200	J	350	J	560	J	370	J

Inorganic:

J = Analyte present. Reported value is estimated; concentration is outside the range for accurate quantitation.

L = Analyte present. Reported value may be biased low. Actual value is expected to be higher.

Organic:

J = Analyte present. Reported value may not be accurate or precise.

transformation products of 4,4'-DDT (4,4'-DDD and 4,4'-DDE) which were detected in the same samples as 4,4'-DDT. The highest concentrations of these pesticides were found in SJS03-SS07.

Nine of the metals that are COPCs for the surface soils are priority pollutant metals: arsenic, beryllium, chromium, copper, lead, mercury, nickel, thallium and zinc. The list also includes several metals that are not priority pollutants, including: aluminum, barium, iron, manganese, and vanadium. All of the metal COPCs are present at concentrations that are within ranges expected in surface soils of the eastern United States. These naturally occurring concentrations of metals are documented by Shacklette and Boerngen (1984) and are listed in **Table 3-5**. The metal COPCs that were detected in Site 3 soils at concentrations

TABLE 3-5
TYPICAL CONCENTRATIONS OF METALS IN SURFACE SOIL EASTERN UNITED STATES

Metal	Observed Range in Eastern United States (mg/kg)	Mean (mg/kg)
Aluminum	7000 - >100,000	33,000
Antimony	<1 – 8.8	0.52
Arsenic	<0.1 – 73	4.8
Barium	10 – 1,500	31
Beryllium	<1 – 7	0.55
Chromium	1 – 1,000	33
Cobalt	<0.3 – 70	5.9
Copper	<1 – 700	13
Iron	100 - >100,000	14,000
Lead	<10 – 300	14
Manganese	<2 – 7,000	260
Mercury	0.01 – 2.52	0.081
Nickel	<5 – 700	11
Phosphorus	<20 – 6,800	200
Thallium	2.2 – 23	7.7
Vanadium	<7 – 300	43
Zinc	<5 – 2,900	40

From: Shacklette and Boerngen, 1984

which fall within the observed ranges listed in Table 3-5 include: aluminum (detected in all the samples at concentrations ranging from 3310 mg/kg (SJS03-SS02) to 21,400 mg/kg (SJS03-SS05)), arsenic (detected in all samples at concentrations ranging from 1.3 J mg/kg in SJS03-SS01 to 13.9 L mg/kg in SJS03-SS05), barium (at concentration ranging from 14.6 mg/kg in SJS03-SS02 to 211 mg/kg in SJS03-SS07), beryllium (ranging from 0.29 J mg/kg

in SJS03-SS03 to 1.3 mg/kg in SJS03-SS07), chromium (detected in all samples at concentrations ranging from 6.4 mg/kg in SJS03-SS01 to 33.9 mg/kg in the duplicate sample of SJS03-SS06), copper (detected in all samples at concentrations ranging from 5.3 mg/kg in SJS03-SS02 to 125 mg/kg in SJS03-SS07), iron (detected at concentrations ranging from 3440 mg/kg in SJS03-SS02 to 34000 mg/kg in the duplicate of SJS03-SS06), lead (detected in all samples at concentrations ranging from 6.7 J mg/kg in SJS03-SS01 to 240 J in SJS03-SS07), mercury (detected in all samples except SJS03-SS01 and -SS02 at concentrations ranging from 0.18 mg/kg in SJS03-SS03 to 0.60 mg/kg in SJS03-SS05), manganese (detected in all samples at concentrations ranging from 16 mg/kg in SJS03-SS02 to 246 in SJS03-SS04), nickel (found in all samples except SJS03-SS02 at concentrations ranging from 4.9 J mg/kg in SJS03-SS03 to 22.0 mg/kg in SJS03-SS07), total phosphorus (detected in all samples at concentrations ranging from 2.9 mg/kg at SJS03-SS06 to 114 mg/kg in the duplicate of that sample), thallium (found in only three samples at concentrations ranging from of 0.69 mg/kg in SJS03-SS03 to 2.5 mg/kg in SJS03-SS05), vanadium (detected in all samples at concentrations ranging from 7.9 mg/kg in SJS03-SS02 to 79.8 mg/kg in SJS03-SS05), and zinc (detected in all samples at concentrations ranging from 15.5 mg/kg at SJS03-SS02 to 460 L mg/kg at SJS03-SS04).

3.3.4.1.2 Discussion of COPCs in Surface Soil

The distribution of organic and inorganic COPCs is consistent with the use of the area as a former dredge disposal area. The COPCs for soil are those that adhere to soil (clay) particles. Typically in dredge disposal areas, clay rich areas are found to contain higher concentrations of these contaminants. Although PAHs are found in all samples, the concentration of PAHs in SJS03-SS01 and -SS02 are an order of magnitude lower than the other samples. Examination of historical aerial photographs indicates that location SJS03-SS01, on the north side of Patrol Road and to the north of Landfill C, probably was outside of the dredge disposal area. Similarly sample SJS03-SS02, was located near the edge of the dredge disposal area. Additionally, the lower concentrations of contaminants in SJS03-SS02 may be due to a higher sand content in that area.

The distribution of pesticides is similar to that of PAHs, although no pesticides were found in samples SJS03-SS01, -SS02, and -SS05. The highest concentration and greatest number of different pesticides were found in the sample closest to the radar testing building (SJS03-

SS07) and may indicate that pesticides were applied to the ground in that location as part of a grounds maintenance program.

Aroclor-1254 was detected in one sample, located in the northeast corner of the site. Some materials disposed in the landfill (e.g., waste oils) may have been contaminated with PCBs. PCB contamination does not appear to be widespread, as it was only identified in one sample.

Although all the inorganic COPCs detected in surface soil could potentially be present as a result of disposition in a landfill (particularly in waste oils) or contaminants of dredge material, all would also be expected to be present in natural soils. The distribution of the inorganic COPCs is similar to that of the organic COPCs: the lowest concentrations are generally found in samples SJS03-SS01 and -SS02 and the highest concentrations are found in SJS03-SS07. Sample SJS03-SS04 contained a concentration of zinc (460 mg/kg) that is an order of magnitude above the other zinc concentrations at the site. Metals, like PAHs, often adhere to clay particles.

The analytical results confirm the results of the Relative Risk Ranking Study performed by CH2M HILL (1996). The only organic constituents detected in surface soil in that study were pesticides (low levels of 4,4'-DDD and 4,4'-DDT) several PAHs and Aroclor -1254 in one sample located along the road that crosses the site. Concentrations of metals in surface soil samples of that study were also within the observed range of concentrations in soils of the Eastern United States.

3.3.4.2 Site 3 Subsurface Soil

Seven subsurface soil samples were collected from Site 3. All samples were collected at depths shallower than 4 ft, determined in the field to be just above the water table. Two samples were composite samples collected from depths of 0 to 3 ft specifically to provide information for the ecological risk assessment. Because the samples were all collected within essentially the same zone, there is no discussion concerning the variation of analytical data with depth.

The nature and extent of COPCs in subsurface soil is described and discussed below.

3.3.4.2.1 Nature and Extent of COPCs in Subsurface Soil

The COPCs for subsurface soil at Site 3 are listed in **Table 3-6**, and the distribution and concentration of organic and inorganic subsurface soil COPCs at Site 3 are shown in **Figures 3-13 and 3-14** respectively. The analytical results for the subsurface soil COPCs are shown in **Table 3-7.** Analytical results for all samples and analyses are compiled in Appendix F.

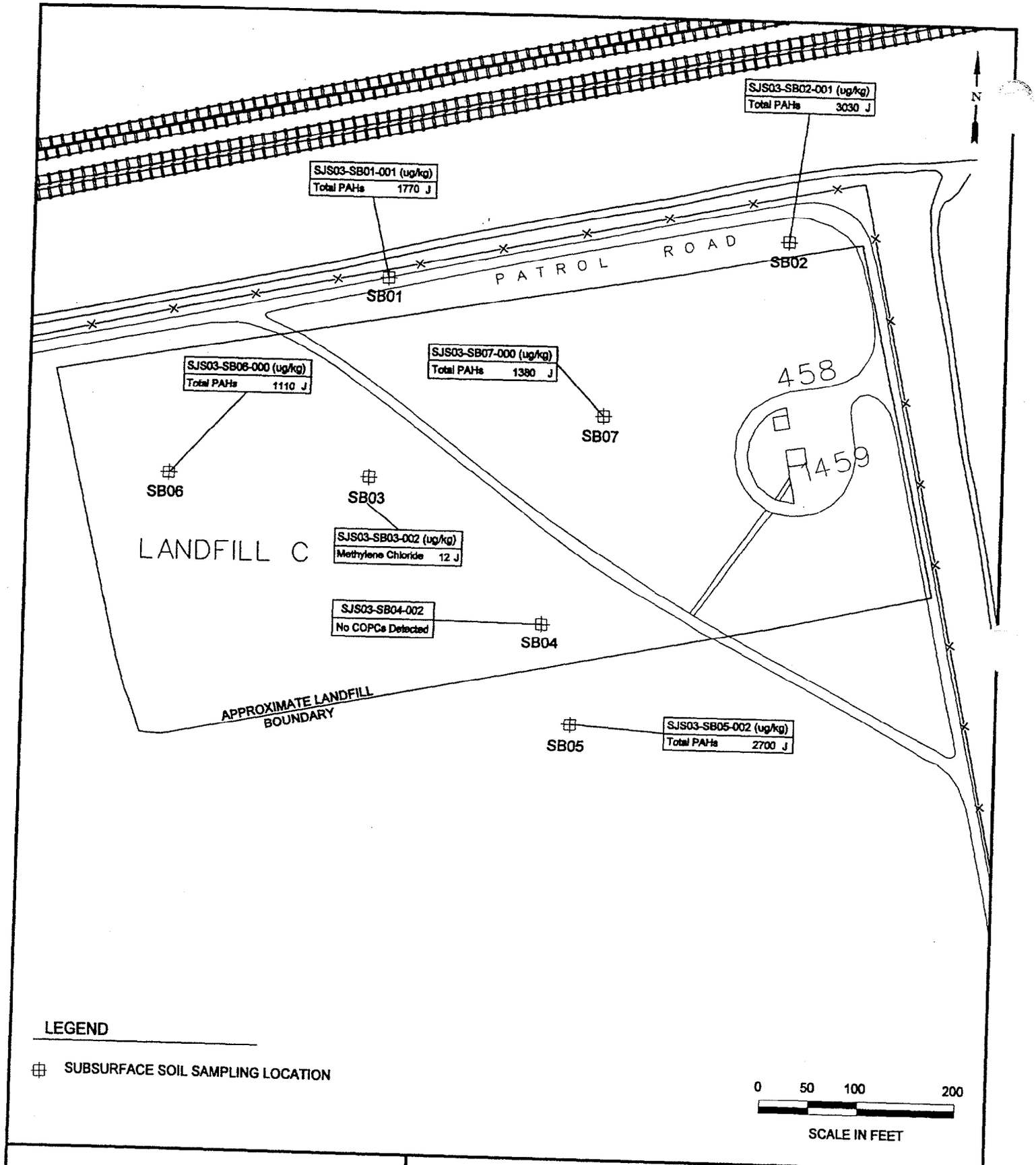
Table 3-6
Site 3 Subsurface Soil COPCs

Organic Contaminants	Basis for inclusion as a COPC
Benzo(a)Pyrene	RBC
Benzo(b)Fluoranthene	RBC
Chrysene	SSL
Methylene Chloride	SSL
Inorganic Contaminants	RBC
Aluminum	RBC
Arsenic	RBC
Barium	SSL
Beryllium	RBC
Iron	RBC

RBC = EPA. 1997. Region III Updated Risk-Based Concentration Table. October, 1997.
SSL= EPA, 1997. Soil Screening Levels as presented in Region III Updated Risk-Based Concentration Table. March, 1997.

There are only four organic COPCs for the subsurface soil in Landfill C: methylene chloride, a VOC, and three PAHs: benzo(a)pyrene, benzo(b)fluoranthene, and chrysene. Methylene chloride was only detected in one subsurface soil sample, SJS03-SB03, at a concentration of 12 J ug/kg. No COPC PAHs were detected in SJS03-SB03 or -SB04, located along the dirt road that passes diagonally through the center of the site. In the other samples, total PAH concentrations ranged from 1110 J ug/kg in SJS03-SB06 to 3030 J ug/kg SJS03-SB02 (located in the northeast corner of the site).

Several other non-COPC organic constituents were detected in the subsurface soil from the Landfill C. These include carbon disulfide at 8 J ug/kg at SJS03-SB01, tetrachloroethene at 5 J ug/kg at SJS03-SB01 and 3 J ug/kg in SJS03-SB06, and toluene in SJS03-SB01 (2 J ug/kg), the duplicate of SJS03-SB05 (2 J ug/kg) and in SJS03-SB06 (3 J ug/kg). All samples except SJS03-SB03 contained two or more PAHs. Total PAH concentrations ranged from 191 J



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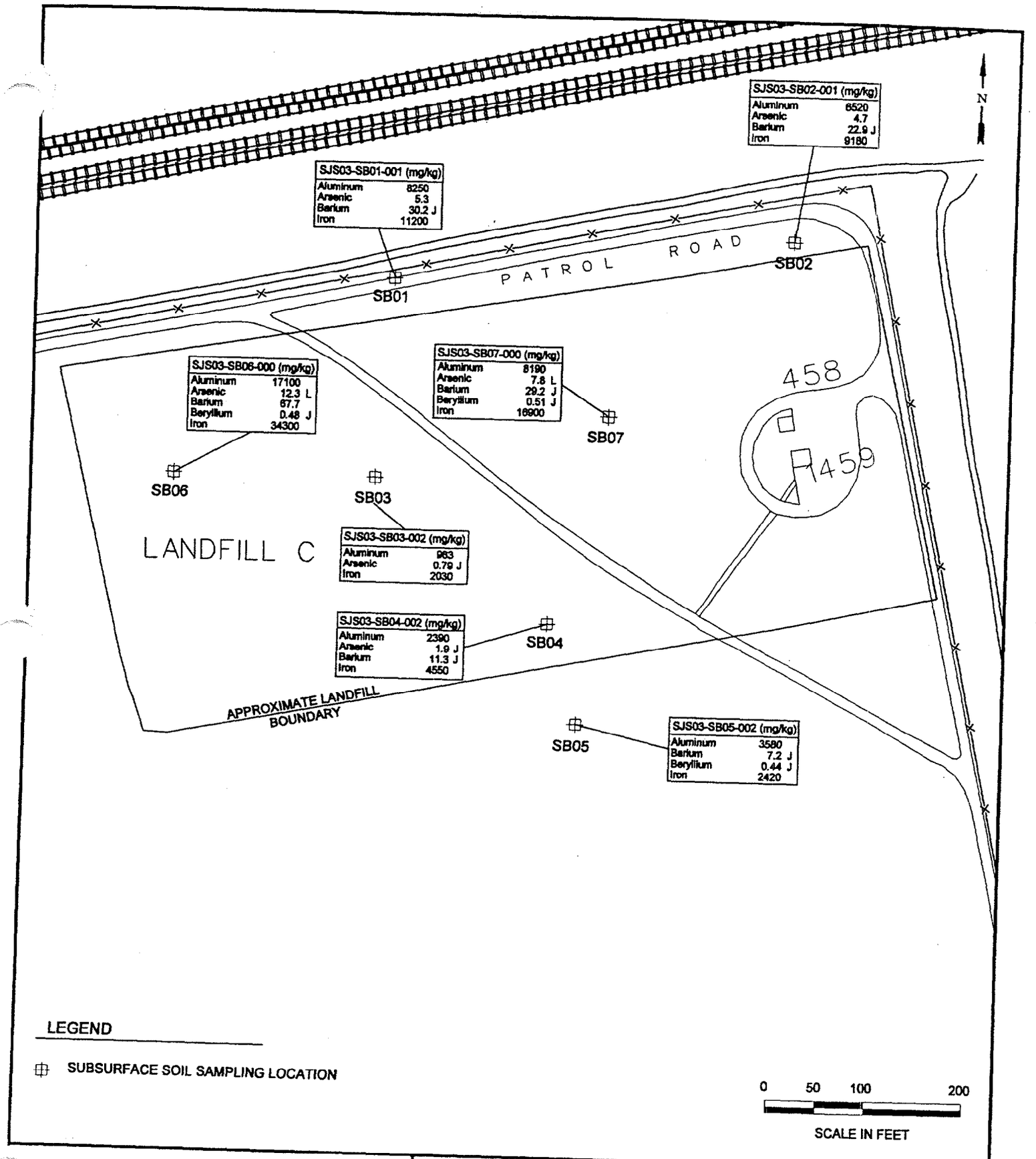
DISTRIBUTION OF ORGANIC COPCs SUBSURFACE SOIL, SITE 3
SAINT JULIENS CREEK ANNEX

FIGURE 3-13



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DISTRIBUTION OF INORGANIC COPCs, SUBSURFACE SOIL, SITE 3
SAINT JULIEN'S CREEK ANNEX

FIGURE 3-14

TABLE 3-7

ST. JULIENS CREEK ANNEX, SITE 3
SUBSURFACE SOIL COPC ANALYTICAL DATA

Analyte Name	SJS03-SB01-001		SJS03-SB02-001		SJS03-SB03-002		SJS03-SB04-002		SJS03-SB05-002		SJS03-SB05-002P		SJS03-SB06-000		SJS03-SB07-000	
Inorganic (mg/kg)																
Aluminum	8250		6520		963		2390		3580		5370		17100		8190	
Arsenic	5.3		4.7		0.79	J	1.9	J			1.6	L	12.3	L	7.8	L
Barium	30.2	J	22.9	J			11.3	J	7.2	J	13.3	J	67.7		29.2	J
Beryllium									0.44	J			0.48	J	0.51	J
Iron	11200		9180		2030		4550		2420		4140		34300		16900	
Organic (ug/kg)																
Benzo(a)Pyrene	370	J	330	J					440	J	560		200	J	140	J
Benzo(b)Fluoranthene	820		1500						1300		1200		540		840	
Chrysene	580		1200						960		660		370	J	400	J
Methylene Chloride					12	J										

Inorganic:

J = Analyte present. Reported value is estimated; concentration is outside the range for accurate quantitation.

L = Analyte present. Reported value may be biased low. Actual value is expected to be higher.

Organic:

J = Analyte present. Reported value may not be accurate or precise.

ug/kg in SJS03-SB04 to 7180 J ug/kg in the duplicate of SJS03-SB05. One non-COPC SVOC, dibenzofuran, was detected in the subsurface soil at Site 3. This compound was only detected in the duplicate sample of SJS03-SB05 at a concentration of 51 J ug/kg.

Metal COPCs detected in subsurface soil from the Site 3 include two priority pollutant metals (arsenic and beryllium) and three non-priority pollutant metals (aluminum, barium, and iron). Arsenic was detected in all samples except SJS03-SB05 at concentrations ranging from 0.79 J mg/kg (SJS03-SB03) to 12.3 L mg/kg (SJS03-SB06). Beryllium was detected in SJS03-SB05,-SB06, and -SB07 at concentrations of 0.44 mg/kg, 0.48 mg/kg and 0.51 mg/kg respectively. Aluminum was detected at concentrations ranging from 963 mg/kg in SJS03-SB03 to 17100 mg/kg in SJS03-SB06. Iron was detected in all samples at concentrations ranging from 2030 mg/kg in SJS03-SB03 to 34300 mg/kg in SJS03-SB06. Barium was detected in all samples, except SJS03-SB03, at concentrations ranging from 7.2 J mg/kg in SJS03-SB05 to 67.7 mg/kg in SJS03-SB06. Non-COPC metals detected in the subsurface soil include antimony, cadmium, chromium, cobalt, copper, lead, mercury, nickel, silver, thallium, vanadium and zinc. Total phosphorus was also detected in subsurface soil samples.

3.3.4.2.2 Discussion of COPCs in Subsurface Soil

The presence of methylene chloride (as well as other solvents not identified as COPCs) in the subsurface soil is consistent with the materials reported to have been disposed in Landfill C. The solvents were detected in borings located in the western half of the site (SJS03-SB03 and -SB06). An alternative explanation for the presence of methylene chloride in the sample is laboratory contamination. Methylene chloride is a common laboratory contaminant and was found at a relatively low concentration in the subsurface. In addition, methylene chloride was detected in laboratory blanks associated with other subsurface soil samples from Site 3.

The presence of the PAH below ground surface is an indication that soil quality has been impacted by site activities. In the case of Site 3, source of PAHs could be either the dredge material placed in this area or landfilling activities (particularly the disposal of waste oils and sludges).

All the inorganic COPCs detected in surface soil could potentially be present as a result of disposition in a landfill (particularly in waste oils) or as adsorbed onto the clay fraction of

dredge spoil material. However, all would also be expected to be present in natural soils. The distribution of COPC metals in the subsurface soil does not indicate a clear pattern of metals contamination that would be associated with landfilling activities.

3.3.5 Site 3 Groundwater Analytical Results

The four shallow (Water Table Aquifer and perched groundwater) and two deep (Yorktown Aquifer) monitoring wells were all sampled during two sampling events: Round 1 (July 1997) and Round 2 (November 1997). During each sampling round, metals analyses were performed on both filtered and unfiltered samples. The nature and extent of the groundwater COPCs at Site 3 are discussed below.

3.3.5.1 Nature and Extent of COPCs at Site 3

Water quality parameters were measured in samples from all wells during Round 1 and Round 2 of groundwater sampling. The results are shown in **Table 3-8.**

TABLE 3-8
WATER QUALITY PARAMETERS
SITE 3 MONITORING WELLS

Monitoring Well	Temperature (°C)		pH		Specific Conductance (umhos/cm²)		Dissolved Oxygen (% saturation)		Turbidity (NTU)	
Date:	7/97	11/97	7/97	11/97	7/97	11/97	7/97	11/97	7/97	11/97
MW1S	21.6	19.4	6.97	5.21	NR	1360	8.1	7.94	1	34
MW1D	19.2	14.6	9.21	8.7	640	545	6.6	3.81	7	10
MW2S	20.3	19.0	7.28	6.39	NR	4300	6.9	2.23	782	10
MW2D	18.4	17.1	8.67	7.41	910	1090	10	10.07	46	10
MW3S	18.4	18.3	6.38	6.14	2400	2000	5.3	8.66	69	10
MW4S	19.9	18.2	7.15	6.86	NR	1840	9.8	2.08	160	10

NR = Not Recorded
Note: Round 1 data are dated July 1997 and Round 2 data are dated November 97

The COPCs for groundwater at Site 3 are listed in **Table 3-9.** The distribution of organic and inorganic groundwater COPCs at Site 3 during Round 1 are shown in **Figures 3-15 and 3-16** and during Round 2 in **Figures 3-17 and 3-18. Table 3-10** presents the analytical data from the Round 1 and Round 2 sampling events for all COPCs . Results of analyses for all samples from Site 3 are compiled in Appendix F.

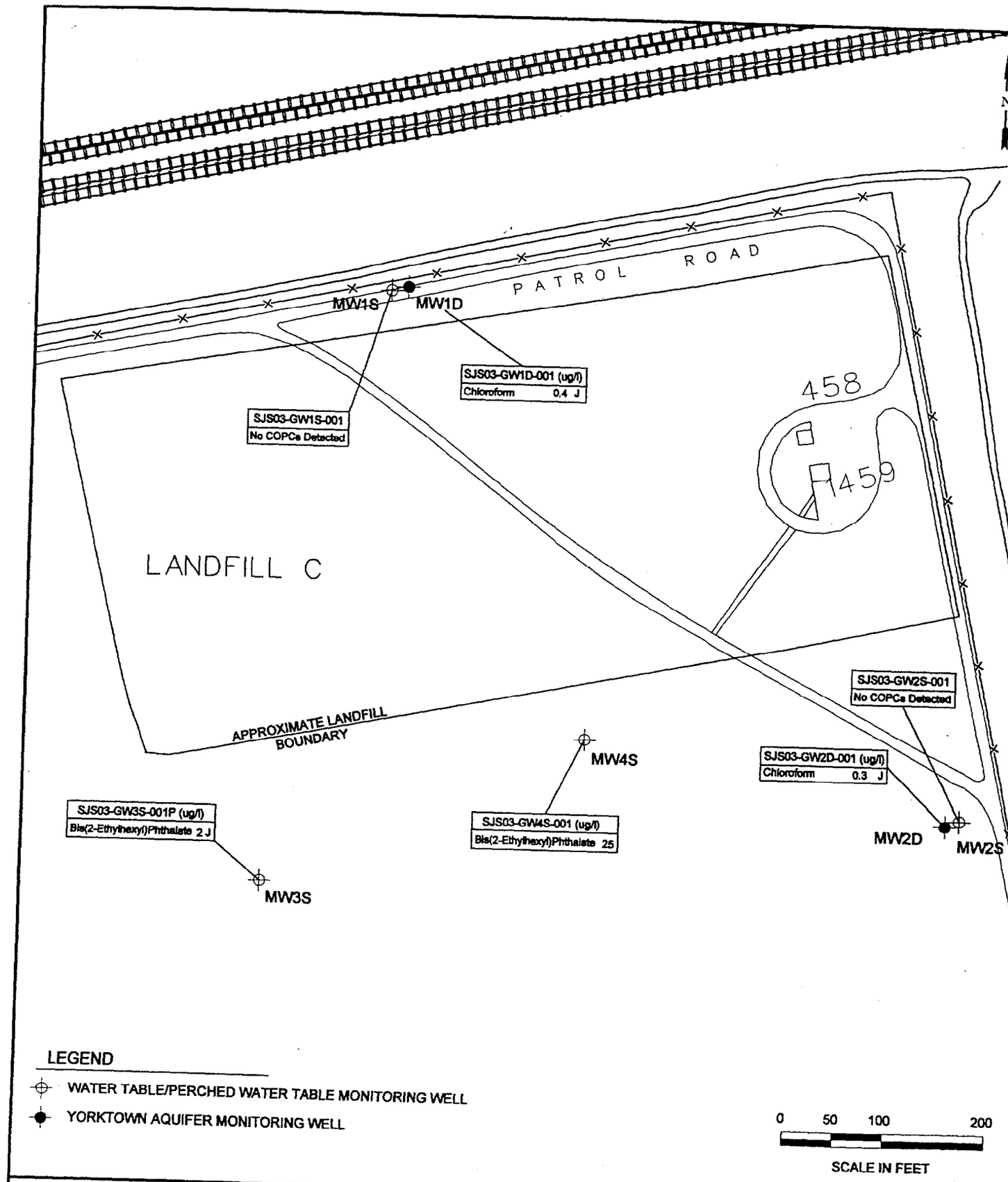
Table 3-9
Site 3 Groundwater COPCs

Organic Contaminants	Basis for inclusion as a COPC
Chloroform	RBC
Bis(2ethylhexyl)phthalate	RBC
Inorganic Contaminants	
Aluminum	RBC
Arsenic	RBC
Beryllium	RBC
Chromium	RBC
Cobalt	RBC
Iron	RBC
Manganese	RBC
Nickel	RBC
Vanadium	RBC

RBC = EPA. 1997. Region III Updated Risk-Based Concentration Table. October, 1997

Only one organic COPC, bis(2-ethylhexyl)phthalate, was identified in the shallow groundwater. This compound was detected in the duplicate of SJS03-GW3S, at a concentration of 2 J ug/L, and in SJS03-GW4S (during Round 1) at a concentration of 25 ug/L. Several non-COPC organic constituents were detected in groundwater samples from Site 3. Most of these were detected in sample SJS03-GW1S during Round 1 sampling and include: acetone (24 ug/L), ethylbenzene (0.6 J ug/L), toluene (0.2 J ug/L), total xylenes (0.2 J ug/L), 2 methylnapthalene (1 J ug/L), four PAHs (total PAH concentration of 48 J ug/L), carbazole (2 J ug/L), and dibenzofuran (8 J ug/L). Acetone was also detected in SJS03-GW2S (8.0 ug/L) and SJS03-GW3S (5 J ug/L). Acenaphthene (one of the PAHs in SJS03-GW1S) was detected in both SJS03-GW3S and its duplicate at a concentration of 2 J ug/L). During Round 2 the only non-COPC organic compounds detected were: acenaphthene (SJS03-GW1S at 4 J ug/L), and acetone (in SJS03-GW2S at a concentration of 8 ug/L, and in SJS03-MW3S at a concentration of 10 ug/L).

Nine inorganic COPCs were identified for the groundwater: aluminum, arsenic, beryllium, chromium, cobalt, iron, manganese, nickel, and vanadium. Four of these metals are Priority Pollutants: arsenic, beryllium, chromium, and nickel. Arsenic was detected only in unfiltered samples including SJS04-GW1S at a concentration of 4.4 J in Round 1 and in



CDM Federal Programs Corporation
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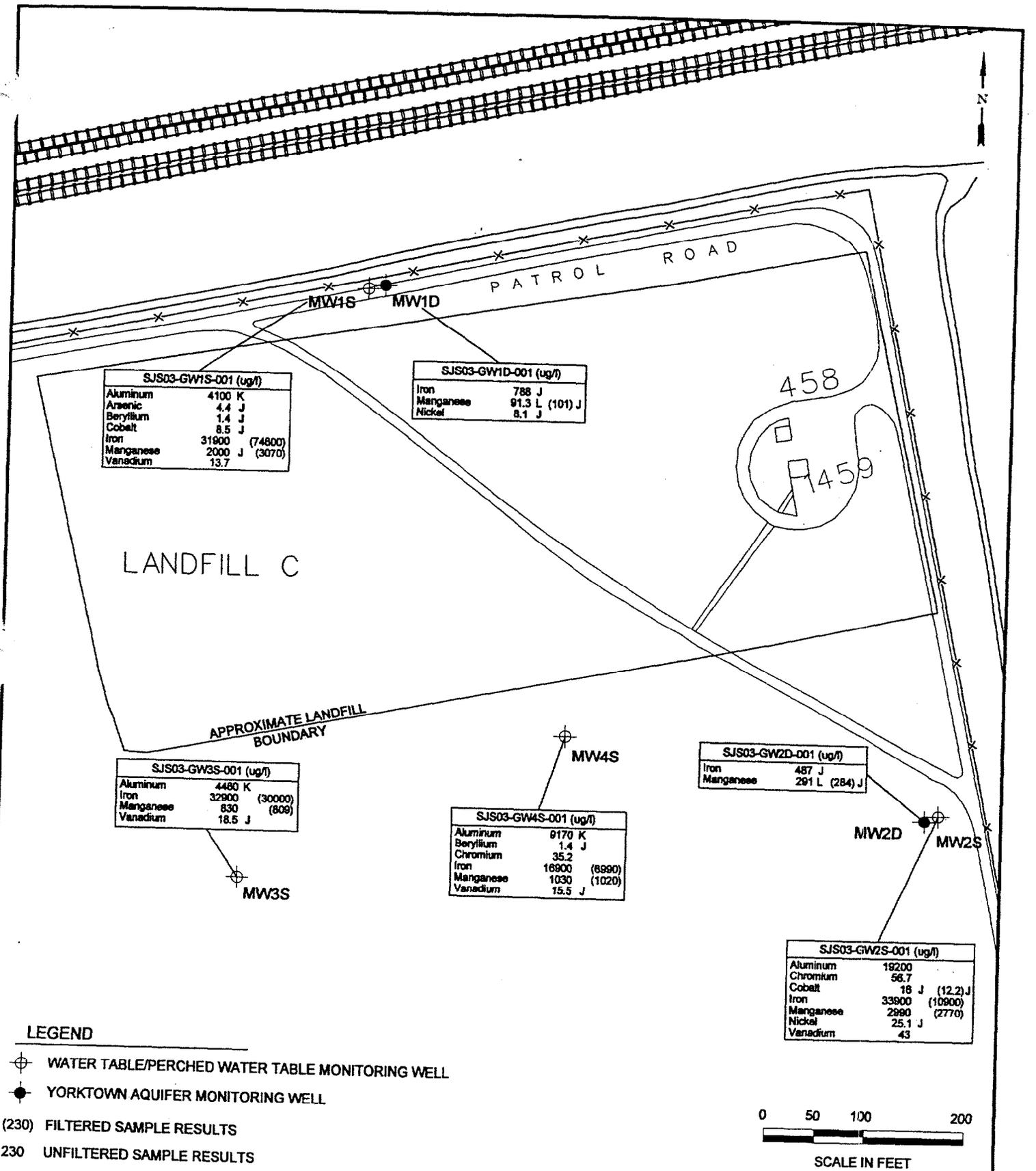
DISTRIBUTION OF ORGANIC COPCs
GROUNDWATER, SITE 3, JULY 1997
SAINT JULIENS CREEK ANNEX

FIGURE
3-15



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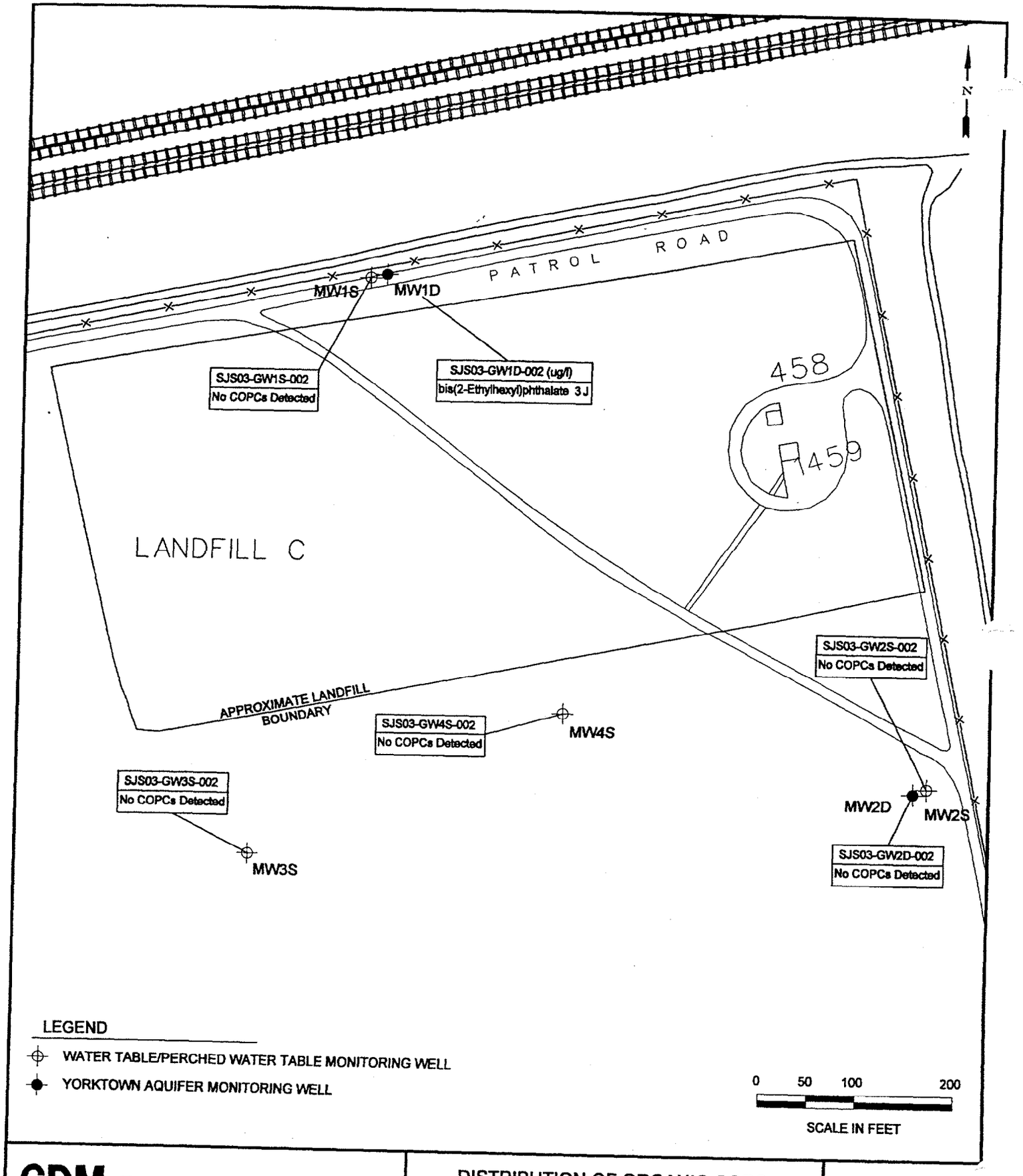
DISTRIBUTION OF INORGANIC COPCs
GROUNDWATER, SITE 3, JULY 1997
SAINT JULIENS CREEK ANNEX

FIGURE
3-16



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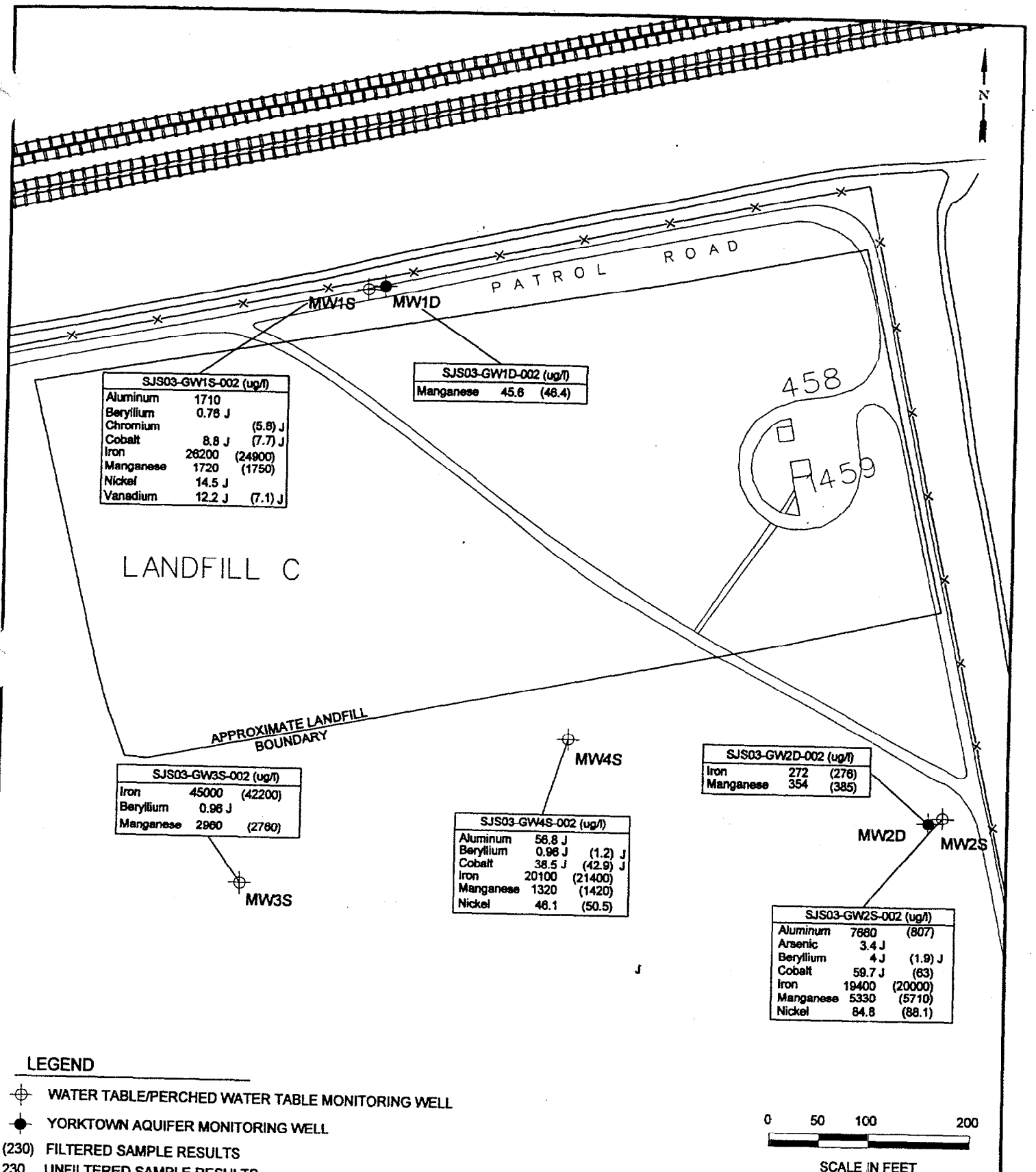
DISTRIBUTION OF ORGANIC COPCs
GROUNDWATER, SITE 3, NOVEMBER 1997
SAINT JULIENS CREEK ANNEX

FIGURE
3-17



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DISTRIBUTION OF INORGANIC COPCs
GROUNDWATER, SITE 3, NOVEMBER 1997
SAINT JULIENS CREEK ANNEX

FIGURE
3-18

TABLE 3-10

ST. JULIENS CREEK ANNEX, SITE 3
GROUNDWATER COPC ANALYTICAL DATA

Analyte Name	SJS03-GW1D-001		SJS03-GW1D-002		SJS03-GW1D-001F		SJS03-GW1D-002F		SJS03-GW1S-001		SJS03-GW1S-002		SJS03-GW1S-001F		SJS03-GW1S-002F		SJS03-GW2D-001		SJS03-GW2D-002	
Inorganic (ug/L)																				
Aluminum									4100	K	1710									
Arsenic									4.4	J										
Beryllium									1.4	J	0.76	J								
Chromium																				
Cobalt									8.5	J	8.8	J								
Iron	788	J							31900		26200						487	J	272	
Nickel	8.1	J									14.5	J								
Manganese	91.3	L	45.6						2000		1720						291	L	354	
Vanadium									13.7	J	12.2	J								
Filtered Samples																				
Aluminum																				
Arsenic																				
Beryllium																				
Chromium															5.8	J				
Cobalt															7.7	J				
Iron													74800		24900					
Manganese					101	J	46.4						3070		1750					
Nickel																				
Vanadium															7.1	J				
Organic (ug/L)																				
bis(2-			3	J																
Chloroform	0.4	J															0.3	J		

TABLE 3-10

ST. JULIENS CREEK ANNEX, SITE 3
GROUNDWATER COPC ANALYTICAL DATA

Analyte Name	SJS03-GW2D-001F		SJS03-GW2D-002F		SJS03-GW2S-001		SJS03-GW2S-002		SJS03-GW2S-001F		SJS03-GW2S-002F		SJS03-GW3S-001		SJS03-GW3S-001P		SJS03-GW3S-002		SJS03-GW3S-001F	
Inorganic (ug/L)																				
Aluminum					19200		7660	K					4460	K	8270	K				
Arsenic							3.4	J												
Beryllium							4	J									0.96	J		
Chromium					56.7															
Cobalt					16	J	59.7	J												
Iron					33900		19400						32900		35000		45000			
Manganese					2990		5330						830		890		2960			
Nickel					25.1	J	84.8													
Vanadium					43								18.5	J	22.7	J				
Filtered Samples																				
Aluminum											807									
Arsenic																				
Beryllium											1.9	J								
Chromium																				
Cobalt									12.2	J	63									
Iron			276						10900		20000								30000	
Manganese	284	J	385						2770		5710								809	
Nickel											88.1									
Vanadium																				
Organic (ug/L)																				
bis(2-															2	J				
Chloroform																				

TABLE 3-10

ST. JULIENS CREEK ANNEX, SITE 3
GROUNDWATER COPC ANALYTICAL DATA

Analyte Name	SJS03-GW3S-001FP		SJS03-GW3S-002F		SJS03-GW4S-001		SJS03-GW4S-002		SJS03-GW4S-002P		SJS03-GW4S-001F		SJS03-GW4S-002F		SJS03-GW4S-002FP	
Inorganic (ug/L)																
Aluminum					9170	K	56.8	J								
Arsenic																
Beryllium					1.4	J	0.96	J	1.2	J						
Chromium					35.2											
Cobalt							38.5	J	36.8	J						
Iron					16900		20100		20000							
Manganese					1030		1320		1320							
Nickel							46.1		43.1							
Vanadium					15.5	J										
Filtered Samples																
Aluminum																
Arsenic																
Beryllium													1.2	J	1.2	J
Chromium																
Cobalt													42.9	J	41.8	J
Iron	33600		42200								6990		21400		20700	
Manganese	911		2760								1020		1420		1370	
Nickel													50.5		45.7	
Vanadium																
Organic (ug/L)																
bis(2-Ethylhexyl)phthalate					25											
Chloroform																

Inorganic:

J = Analyte present. Reported value is estimated; concentration is outside the range for accurate quantitation.

K = Analyte present. Reported value may be biased high. Actual value is expected to be lower.

L = Analyte present. Reported value may be biased low. Actual value is expected to be higher.

Organic:

SJS04-GW2S at a concentration of 3.4 J in Round 2. Beryllium was detected in unfiltered samples from all shallow wells during at least one round of sampling. Concentrations of beryllium in unfiltered samples range from 0.76 J ug/L in SJS03-GW1S (Round 2) to 4 J ug/L in SJS03-GW2S (Round 2). Beryllium was also detected in filtered samples from Round 2 samples from SJS03-GW2S (1.9 J ug/L) and SJS03-GW4S (1.2 J ug/L). Chromium was detected in two unfiltered samples during Round 1 sampling: SJS03-GW2S (56.7 ug/L) and SJS03-GW4S (35.2 ug/L). Chromium was not detected in the Round 2 samples from either of these two wells, and may have be present in the samples due to high turbidity. Chromium was also detected in one filtered sample, SJS03-GW1S during Round 2 at a concentration of 5.8 ug/L. Chromium was not detected in unfiltered samples from that well during either round of sampling. Nickel was detected in at least one unfiltered sample from each shallow monitoring well except SJS03-GW3S at concentrations ranging from 14.5 J ug/L in SJS03-GW1S (Round 2) to 84.8 J ug/L in SJS03-GW2S (Round 2). Nickel was also detected in one filtered sample, SJS03-GW2S (Round 2) at a concentration of 88.1 ug/L.

The non-Priority Pollutant inorganic COPCs include aluminum, cobalt, iron, manganese, and vandium. Aluminum was found in only one filtered water sample (SJS03-GW2S) at a concentration of 807 ug/L, but was found in all unfiltered samples at concentrations ranging from 56.8 K ug/L in SJS03-GW4S (Round 2) to 9170 ug/L in SJS03-GW4S (Round 1). The correlation between aluminum detections and unfiltered samples suggests that aluminum is present on suspended clay particles in the sample and may be transported colloidally. Cobalt was detected in unfiltered groundwater samples from all shallow wells except SJS03-GW3S, at concentrations ranging from 8.5 ug/L in SJS03-GW1S (Round1) to 59.7 ug/L in SJS03-GW2S (Round 2). The Round 2 filtered sample from SJS03-GW2S also contained cobalt at a concentration of 12.2 J ug/L. Iron and manganese were found in every filtered and unfiltered sample from the shallow groundwater. In filtered samples the concentrations of iron ranged from 6990 ug/L in SJS03-GW4S (Round 1) to 74,800 ug/L in SJS03-GW1S (Round 1), and concentrations of manganese ranged from 809 ug/L in SJS03-GW3S (Round 1) to 5710 ug/L in SJS03-GW2S (Round 2). Vanadium was detected in one filtered sample (SJS03-GW1S, at a concentration of 7.1 ug/L in Round 2), and in unfiltered samples from all monitoring wells at concentrations ranging from 12.2 ug/L in SJS03-GW1S (Round 2) to 43 ug/L in SJS03-GW2S (Round 1).

Samples from both of the Yorktown Aquifer monitoring wells contained chloroform. Chlorofrom was detected at a concentration of 0.4 ug/L in SJS03-GW1D and at 0.3 J ug/L SJS03-GW2D during Round 1 but was not detected in either Round 2 samples. Bis(2-ethylhexyl)phthalate, the only other organic COPC for ground water at the site was detected in SJS03-GW1D at a concentration of 3 J ug/L during Round 2.

The only inorganic COPCs detected in the filtered samples from the Yorktown Aquifer monitoring wells are manganese (detected at 101 J ug/L and 46.4 ug/L in SJS03-GW1D and 284 J ug/L and 385 ug/L in SJS03-GW2D) and iron (found in SJS03-GW2D at 276 ug/L in Round 2).

Inorganic COPCs detected in unfiltered samples from the Yorktown Aquifer monitoring wells include iron, manganese and nickel. Iron and manganese were both detected in at least one unfiltered samples from each of the Yorktown Aquifer monitoring wells. The concentration of iron in the Round 1 sample from SJS03-GW1D (788 J ug/L) is highest, but iron was not detected in the unfiltered sample from that well during Round 2. During both sampling events manganese was detected at higher concentrations in SJS03-GW2D than in SJS03-GW1D. The highest concentration was 354 ug/L in Round 1. Nickel was detected in one unfiltered sample, SJS03-GW1D (Round 1), at a concentration of 8.1 J ug/L.

3.3.5.2 Discussion of Results of COPCs in Groundwater

As discussed in Section 3.3.2.2, it was not possible to draw the potentiometric surface map of the Water Table Aquifer at Site 3. However the water level data indicates that ground water in the Water Table Aquifer flows to the south, southwest or southeast. Therefore monitoring well SJS03-MW1S would be upgradient of the site and well SJS03-MW3S would be downgradient.

The only organic COPC found in the shallow wells was bis(2-ethylhexyl)phthalate, detected at highest concentrations in the well screened in the perched water table (SJS03-MW4S). The only other detection of this constituent was in the duplicate sample of SJS03-MW3S at a relatively low concentration. Phthalates are common plasticizers, and the presence of this compound in the groundwater may be due to the disposal of phthalate in the landfill. Although, bis(2-ethylhexyl)phthalate is a common laboratory contaminant, the concentration of bis(2-ethylhexyl)phthalate in SJS03-GW4S (25 ug/L) is higher than would

be expected from laboratory contamination. Other phthalates (including diethylphthalate) were detected in surface soils from the site.

The shallow groundwater contained four Priority Pollutant metals. These four metals (arsenic, beryllium, chromium and nickel) were generally detected most often and at highest concentrations in unfiltered samples from the two wells screened in the perched water table (SJS03-GW2S and -GW4S). Three of the non-Priority Pollutant COPCs are very common constituents: iron, manganese and aluminum (most likely part of the clay particles in unfiltered samples and may be transported colloidally). Although found in all the unfiltered samples, vanadium was not detected in filtered samples, suggesting that it was also present on suspended clay particles in unfiltered samples.

The average, maximum and minimum concentrations of iron and manganese, as well as pH and specific conductance for the Water Table Aquifer in the four-cities area, as derived from data published in Siudyla et al. (1981) are shown in **Table 3-11**. The concentrations of

TABLE 3-11
RANGE OF WATER QUALITY PARAMETERS
WATER TABLE AQUIFER AND UPPER YORKTOWN AQUIFER
FOUR CITIES AREA

	Water Table Aquifer		Upper Yorktown Aquifer	
Parameter	Average	Range of Reported Concentrations	Average	Range of Reported Concentrations
PH	6.56	4.8 – 7.8	7.27	5.8 – 8.1
Specific Conductance (umhos/cm)	497	121 – 1,569	830	97 – 6,660
Iron (ug/L)	6,269	60 – 18,600	2,932	100 – 17,700
Manganese (ug/L)	1,306	20 – 22,000	145	0 - 570

Data from Siudyla et al., 1981.

manganese (830 ug/L to 5330 ug/L) are all within the range of published values, while the measured iron concentrations (16,900 ug/L to 35,000ug/L) are considerably higher than the published values. The concentrations of iron, however appear to be relatively consistent across the site, and do not indicate that the site is a source of iron in the ground water. The range of pH measured in the shallow groundwater at the site (5.21 to 7.28) is within the range of published values (4.8 to 7.8). The measured specific conductance at all wells except SJS03-MW1S were above the maximum published value for the Water Table Aquifer

(note that specific conductance was not measured during sampling at SJS03-MW1S, -MW2S, and -MW4S during the first round of sampling). The elevated readings may be due to naturally elevated salt contents or high total dissolved solids or the presence of contamination from landfilling activities.

The potentiometric surface map of the Yorktown Aquifer (Figure 3-7) indicates that in the area of Site 3, flow in that aquifer is to the west-northwest. The shallow gradient and tidal influence on the water levels raise the possibility that the flow direction may reverse at times. However, based on the available data, it appears monitoring well SJS03-MW2D is upgradient of the site and monitoring well SJS03-MW1D is downgradient of the site.

There are no clear patterns or distinctive COPCs (i.e. Priority Pollutant metals) in the Yorktown Aquifer samples. The organic COPCs detected (chloroform and bis(2-ethylhexyl)phthalate) were found at low concentrations, in different wells, and during different sampling events.

In order to further evaluate the impact, if any, that site activities have had on Yorktown Aquifer groundwater quality, the concentrations of iron and manganese, as well as pH and specific conductance, were compared to average, maximum and minimum concentrations of these metals derived from published concentrations of analyses from the Upper Yorktown Aquifer four cities area (Siudyla et al., 1981). The values of these parameters are listed on Table 3-11.

The concentrations of iron and manganese are well within the range of concentrations for these constituents, and the concentrations of iron are below the average concentrations for the upper Yorktown Aquifer.

The pH measured in the two Yorktown Aquifer monitoring wells ranged from 9.21 (downgradient well, first sampling event) to 7.41 (SJS03--MW2D, second sampling event). All of the readings are at or above the average of the published values (7.2). The maximum published pH value is 8.1, while both of the readings in the downgradient well and one reading in the upgradient well are above this maximum. Readings from deep monitoring wells (during development and sampling) at some of the other sites at the Annex (Site 5 and Site 2) have high readings similar to those found at site 3. This may indicate that the pH of the groundwater in the Yorktown Aquifer in the Annex area is naturally elevated.

The specific conductance measured in deep monitoring wells ranged from 545 umhos/cm (in the downgradient well, SJS03-MW1D) to 1090 umhos/cm (in SJS03-MW2D, the upgradient well). These readings are well below the maximum published value (6660 umhos/cm), and both readings from the downgradient well are below the average published values (830 umhos/cm).

In summary, the presence of phthalates in the perched water table at Site 3 may indicate that landfilling activities are impacting water quality. Although there is no specific reference to phthalates being disposed of at Landfill 3, they may have been present in the municipal waste reported to have been disposed there. Elevated specific conductance readings at the site may be an indication of contamination from mixed municipal waste leachate.

The data indicate that the site activities have not impacted groundwater quality in the Yorktown Aquifer at Site 3.

The analytical results of the groundwater samples from the RI are not directly comparable to the samples collected during the Relative Risk Ranking (CH2M HILL, 1996) because of the very different sampling methods. However it is worth noting that a number of organic constituents were detected in one RRR groundwater sample, collected northeast of Building 458. In contrast to samples collected for the RI, that sample contained several PAHs. PAHs may have been present in that sample due to high turbidity, or may be present due to the presence of a former septic field located just to the west of the sample. Another RRR groundwater sample contained low levels (1 J ug/L) of several phenols. This sample is located in adjacent to the road that crosses the site. These constituents were not detected in any groundwater samples analyzed for the RI.

3.3.6 Site 3 Sediment Analytical Results

The four sediment samples collected at Site 3 were collected from a drainage ditch along the west side of the site(SJS03-SD03), a drainage ditch along the east side of the site (SJS03-SD02), a low area that frequently has standing water in the northeast corner of the site (SJS03-SD01), and another one of frequent standing water along the north side of the site (SJS03-SD06). The all locations except the location of sample SJS03-SD06 are outside of the suspected landfill boundary. The nature and extent of the sediment COPCs at Site 3 are discussed below.

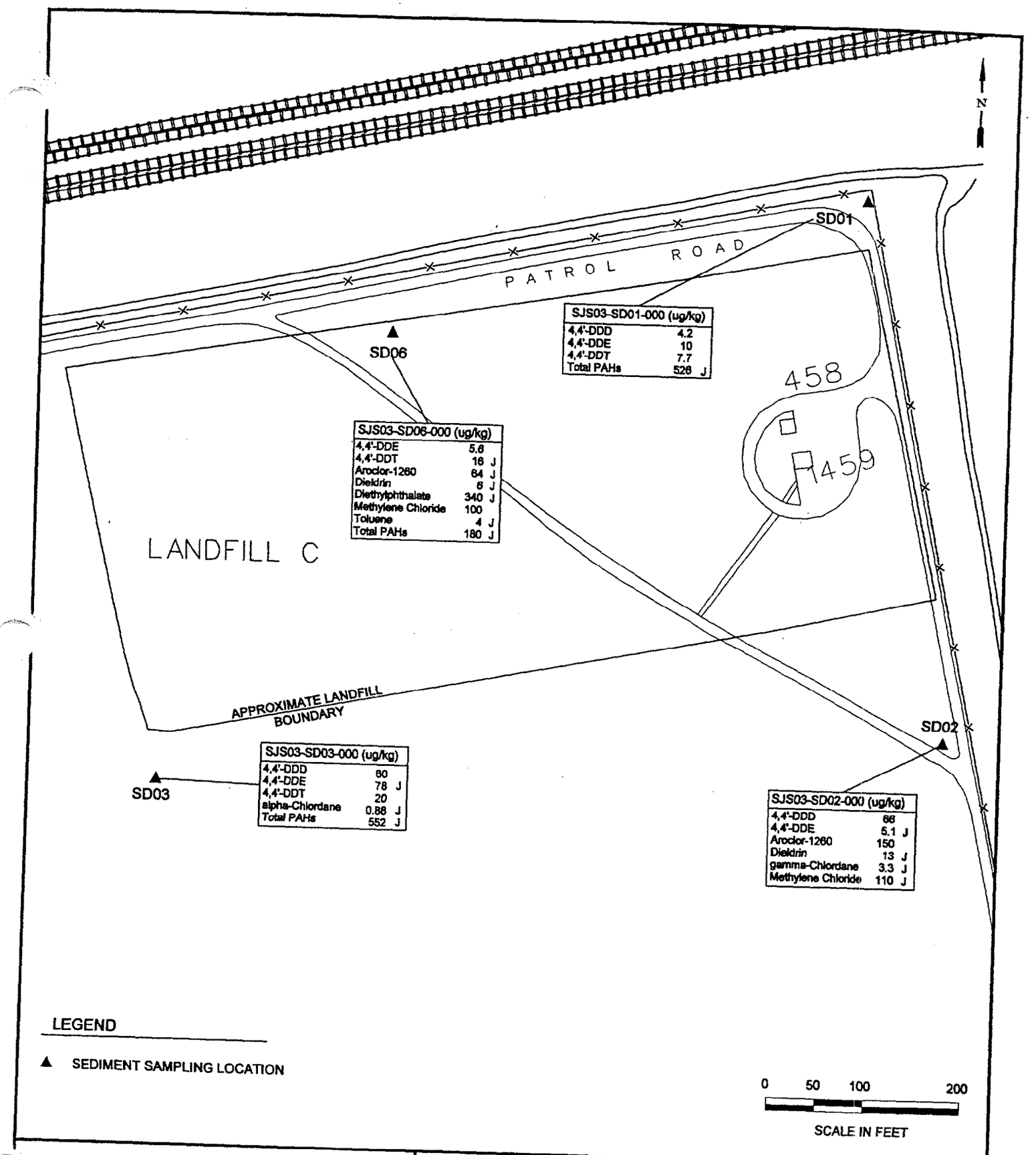
3.3.6.1 Nature and Extent of COPCs in Sediment

The COPCs for sediment at Site 3 are listed in **Table 3-12**, and the distribution of organic and inorganic subsurface soil COPCs at Site 3 are shown in **Figures 3-19 and 3-20** respectively. **Table 3-13** presents the analytical data for all COPCs. Results of analyses for all samples from at Site 3 are compiled in Appendix F.

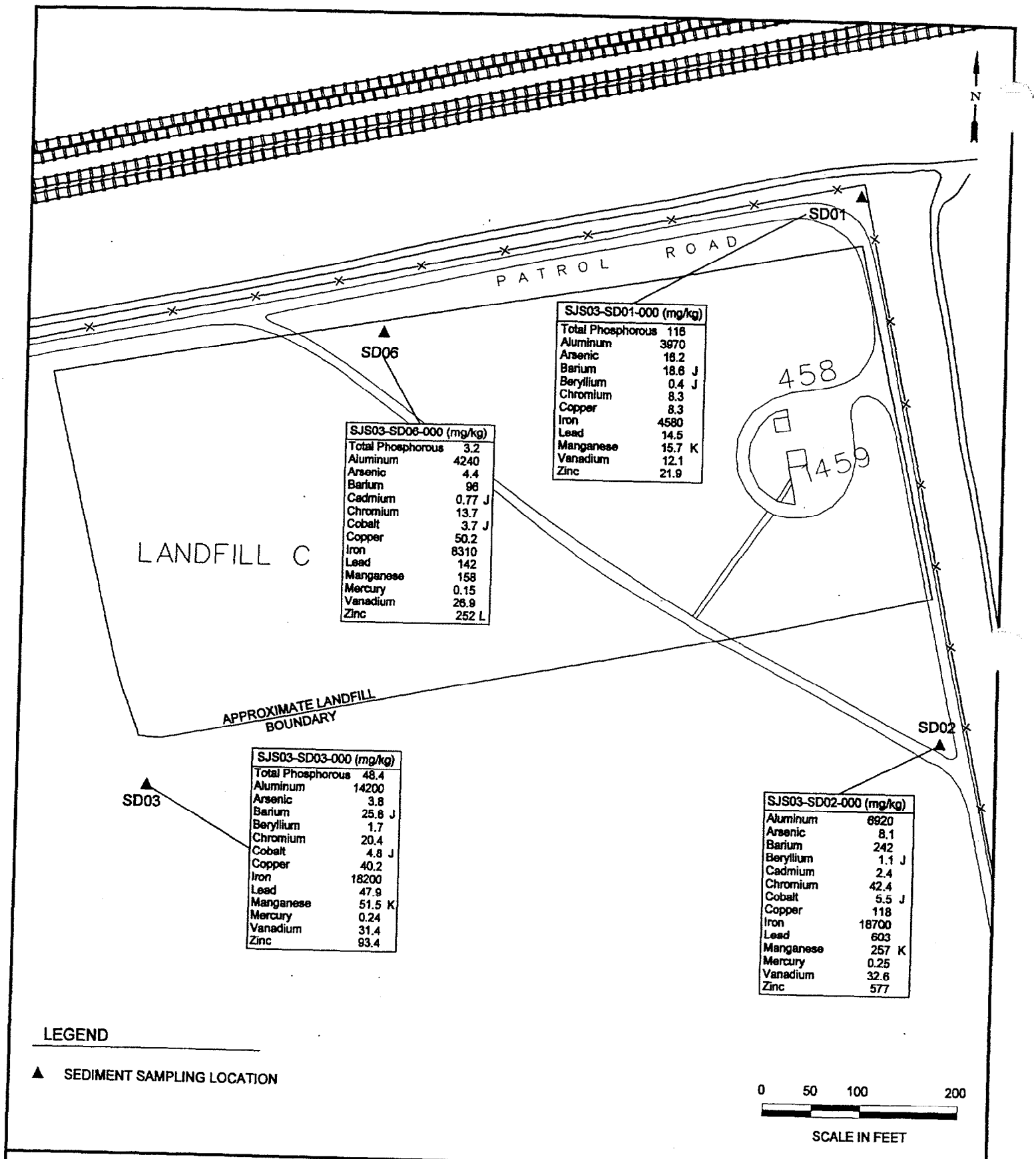
Table 3-12
Site 3 Sediment COPCs

Organic Contaminants	Basis for inclusion as a COPC
4,4' - DDD	BTAG
4,4' - DDE	BTAG
4,4' - DDT	BTAG
alpha-Chlordane	BTAG
gamma-Chlordane	BTAG
Aroclor-1260	BTAG
Dieldrin	BTAG
Acenaphthylene	BTAG
Benzo(a)Anthracene	RBC
Benzo(k)Fluoranthene	BTAG
Dibenz(a,h)anthracene	BTAG
Diethylphthalate	BTAG
Methylene Chloride	BTAG
Toluene	BTAG
Inorganic Contaminants	
Total Phosphorous	BTAG
Aluminum	BTAG
Arsenic	BTAG
Barium	BTAG
Beryllium	BTAG
Cadmium	BTAG
Chromium	BTAG
Cobalt	BTAG
Copper	BTAG
Iron	BTAG
Lead	BTAG, NAVY
Manganese	BTAG
Mercury	BTAG
Vanadium	BTAG
Zinc	BTAG

BTAG= Region III BTAG Screening Levels (August 9, 1995 Revision).
RBC = EPA. 1997. Region III Updated Risk-Based Concentration Table. October, 1997.
NAVY= United States Navy, 1997. Naval Base Norfolk Partnership Human Health Risk Assessment Consensus Agreements #6.A.1 through 6.A.6 and #6.B.



CDM Federal Programs Corporation *A Subsidiary of Camp Dresser & McKee Inc.*	DISTRIBUTION OF ORGANIC COPCs, SEDIMENT, SITE 3 SAINT JULIENS CREEK ANNEX	FIGURE 3-19



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DISTRIBUTION OF INORGANIC COPCs, SEDIMENT, SITE 3
SAINT JULIENS CREEK ANNEX

FIGURE 3-20

TABLE 3-13

ST. JULIENS CREEK ANNEX, SITE 3
SEDIMENT COPC ANALYTICAL DATA

Analyte Name	SJS03-SD01-000		SJS03-SD02-000		SJS03-SD02-000P		SJS03-SD03-000		SJS03-SD06-000	
Inorganic (mg/kg)										
Total Phosphorous (as	116				11		48.4		3.2	
Aluminum	3970		6920		7130		14200		4240	
Arsenic	16.2		8.1		9.1		3.8		4.4	
Barium	18.6	J	242		300		25.8	J	96	
Beryllium	0.4	J	1.1	J	1.2		1.7			
Cadmium			2.4		2.5				0.77	J
Chromium	8.3		42.4		63.3		20.4		13.7	
Cobalt			5.5	J	5.6	J	4.8	J	3.7	J
Copper	8.3		118		126		40.2		50.2	
Iron	4580		18700		17700		18200		8310	
Lead	14.5		603		734		47.9		142	
Manganese	15.7	K	257	K	248	K	51.5	K	158	
Mercury			0.25		0.27		0.24		0.15	
Vanadium	12.1		32.6		32.4		31.4		26.9	
Zinc	21.9		577		577		93.4		252	L
Organic (ug/kg)										
4,4'-DDD	4.2		66		27	J	60			
4,4'-DDE	10		5.1	J	6.2	J	78	J	5.6	
4,4'-DDT	7.7						20		16	J
alpha-Chlordane							0.88	J		
Aroclor-1260			150		100				64	J
Dieldrin			13	J	9.2	J			6	J
gamma-Chlordane			3.3	J	2.8	J				
Acenaphthylene	55	J					66	J		

TABLE 3-13

ST. JULIENS CREEK ANNEX, SITE 3
SEDIMENT COPC ANALYTICAL DATA

Analyte Name	SJS03-SD01-000		SJS03-SD02-000		SJS03-SD02-000P		SJS03-SD03-000		SJS03-SD06-000	
Benzo(a)Anthracene	260	J					250	J	180	J
Benzo(k)fluoranthene	210	J			470	J	170	J		
Dibenz(a,h)Anthracene							66	J		
Diethylphthalate									340	J
Methylene Chloride			110	J					100	
Toluene									4	J

Inorganic:

J = Analyte present. Reported value is estimated; concentration is outside the range for accurate quantitation.

K = Analyte present. Reported value may be biased high. Actual value is expected to be lower.

L = Analyte present. Reported value may be biased low. Actual value is expected to be higher.

Organic:

J = Analyte present. Reported value may not be accurate or precise.

The organic COPCs detected in sediments at Site 3 include two VOCs, five SVOCs (including four PAHs), six pesticides, and one PCB (Aroclor-1260). The inorganic COPCs includes 14 metals and total phosphorus. The VOCs that are considered COPCs include methylene chloride (detected in SJS03-SD02 at 110 J ug/kg and SJS03-SD06 at 100 ug/kg) and toluene (detected only in SJS03-SD06 a concentration of 4 J ug/kg). Figure 3-19

The SVOCs include diethylphthalate (detected in SJS03-SD06 at 340 J ug/kg) and the following PAHs: acenaphthylene, benzo(k)fluoranthene, dibenz(a,h)anthracene, and fluoranthene. On Figure 3-19 the concentrations of PAHs are presented as a total. No COPC PAHs were detected in sample SJS03-SD02 although benzo(k)fluoranthene was detected at a concentration of 470 J ug/kg in the duplicate sample. The total concentration in the other samples ranged from 180 J ug/kg in SJS03-SD06 to 552 J ug/kg in SJS03-SD03.

The pesticides detected in sediment samples include 4, 4'-DDT, 4,4'-DDD, 4,4-DDE, alpha chlordane, gamma chlordane, and dieldrin. No samples contained all of the pesticides.

Alpha chlordane was found in one sample, SJS03-SD03, at a concentration of 0.88 J ug/kg and gamma-chlordane was only detected in SJS03-SD02 and its duplicate sample (3.3 J ug/kg and 2.8 J ug/kg respectively). All samples contained 4,4'-DDD with the highest concentration (66 ug/kg) found in SJS03-SD02). The duplicate of that sample contained a concentration of 28 J ug/kg. The highest concentration of 4,4,-DDE(78 J ug/kg) and 4,4'-DDT (20 ug/kg) were detected in SJS03-SD03. Dieldrin was detected in SJS03-SD02 and its duplicate at concentrations of 3.3 J ug/kg and 2.8 J ug/kg, respectively.

The PCB, Aroclor-1260, was detected in samples from two locations. The concentration of Aroclor-1260 in SJS03-SD02 is 150 ug/kg (100 ug/kg in the duplicate) and the concentration in SJS03-SD06 is 64 J ug/kg.

One non-COPC organic constituent, benzo(a) anthracene, also was detected in the sediment samples.

The inorganic COPCs detected in sediments at Site 3 include: aluminum, arsenic, barium, beryllium, cadmium, chromium, cobalt, copper, iron, lead, manganese, mercury, vanadium, zinc and total phosphorus (as P). Phosphorus was detected in all samples except SJS03-SD02, with the range of concentrations from 3.2 mg/kg in SJS03-SD06, to 116 mg/kg in SJS03-SD01. The metal COPCs include eight Priority Pollutant metals. All eight were

found in sample of SJS03-SD02 and its duplicate. These samples had the highest concentrations of cadmium (2.4 mg/kg and 2.5 mg/kg), chromium (42.2 mg/kg and 63.3 mg/kg), copper (118 mg/kg and 126 mg/kg), lead (603 mg/kg and 734 mg/kg), mercury (0.25 mg/kg and 0.27 mg/kg), and zinc (577 mg/kg in both samples). The highest concentration of arsenic was detected in SJS03-SD01.

3.3.6.2 Discussion of COPCs in Sediment

The distribution of COPCs in sediments at Site 3 do not define a pattern of deposition from a particular area within the landfill. The COPCs identified for sediment, however, are consistent with materials that were reported to have been disposed in the landfill. The highest concentrations of various groups of COPCs were found in very different areas of the site. The greatest concentrations of organic constituents, particularly PAHs, were generally found in samples SJS03-SD01 located in a low area at the northeast corner of the site and SJS03-SD03, located along a drainage ditch that runs along the west side of the site. With the exception of arsenic, the highest concentrations of Priority Pollutant metal COPCs were found in SJS03-SD02 and its duplicate. This sample was collected in the drainage ditch that runs along Patrol Road on the east side of the site.

3.4 Site 4 Remedial Investigation Results

The results of geologic, hydrogeologic, geophysical, and analytical investigations at Site 4 are presented and discussed below.

3.4.1 Site 4 Geology

Previous to the Site 4 RI, no site-specific geologic data were available for the site. The geologic data obtained during this investigation provide important information on the stratigraphy, and hydrostratigraphy at the site. The identification of water-bearing and confining units at the site will allow an assessment of the potential for off-site migration of COPCs.

The geology of Site 4 was determined by analyzing the boring logs completed during the drilling and installation of the four shallow and two deep monitoring wells. The geologic units encountered at Site 4 during the RI are listed and described below.

3.4.1.1 Yorktown Formation

The stratigraphy at Site 4 is shown in cross-section A-A' (Figure 3-3 and 3-4). The top of the Yorktown Formation is encountered at a depths ranging from 25 ft at the northern deep monitoring well (SJS04-MW1D) to 32 feet at the southern deep monitoring well (SJS04-MW3D). The Yorktown Formation clay thins from about 24 feet north of Landfill D to approximately 9 feet adjacent to the South Branch of the Elizabeth River.

On the northern side of the site (SJS04-MW1D), a relatively thin (1 ft thick) sand unit was encountered at a depth of approximately 49 ft. This sand bed is underlain by a 1 ft thick sandy clay then approximately 38 ft of clay, silt and clayey silt. Toward the river, the content of sand beneath the Yorktown Formation clay is greater. During drilling of SJS04-MW3D sand from the Yorktown Formation was first encountered at a depth of approximately 41 ft (the same elevation as encountered in the northern boring), and is underlain by 6 ft of silt. Beneath the silt, to a depth of 60 ft, the formation consists of sand and silty sand.

3.4.1.2 Post-Pliocene Sediments

Overlying the Yorktown Formation clay at Site 4 is 25 to 32 ft of silt, clay, silty sand and sand (cross-section A-A'). Just above the Yorktown Formation clay is an olive-gray, fine to medium grained, 4 ft thick, sand unit that appears to be continuous across Site 4. This sand is also continuous across the base to the east (see Figure 3-6, Cross Section C-C'). At Site 4 this sand is overlain predominantly by gray and brown clay and silt.

Shallow monitoring wells installed along Patrol Road (SJS04-MW4S and SJS04-MW3S) encountered fill material to a depth of 7 or 8 ft. This fill consisted of brick, wood, glass, gravel, and sand. A strong petroleum odor was noted during drilling of this material and readings as high as 5.2 ppm were noted on the photoionization detector. Additionally, the material disposed of in Landfill D appears to have a thickness of approximately 5 ft based on site reconnaissance along the southwest edge of the landfill.

3.4.2 Site 4 Hydrogeology

Shallow and deep monitoring wells installed at Site 4, provide the data to interpret hydrostratigraphy and some groundwater flow characteristics. These data can be used for evaluation of the fate and transport of COPCs. The hydrostratigraphic units identified at Site 4 during the RI are listed and described in the following sections.

3.4.2.1 Yorktown Aquifer

The potentiometric surface of the Yorktown Aquifer in the area of the Landfill D is found at an elevation of approximately 1.0 to 2.0 ft msl. As shown on the Base-wide potentiometric surface map (Figure 3-7), the direction of groundwater flow in the Yorktown Aquifer at Site 4 is south, toward the South Branch of the Elizabeth River. The horizontal flow gradient across Site 4 is approximately 0.001 ft/ft.

The tidal study conducted at other sites on the Base indicates that water levels could change throughout the day. The water level change would be expected be felt greater and occur earlier in that part of the aquifer that is closer to the South Branch of the Elizabeth River. For this reason the direction of the flow may change throughout the day in response to the tides.

3.4.2.2 Yorktown Clay Aquitard

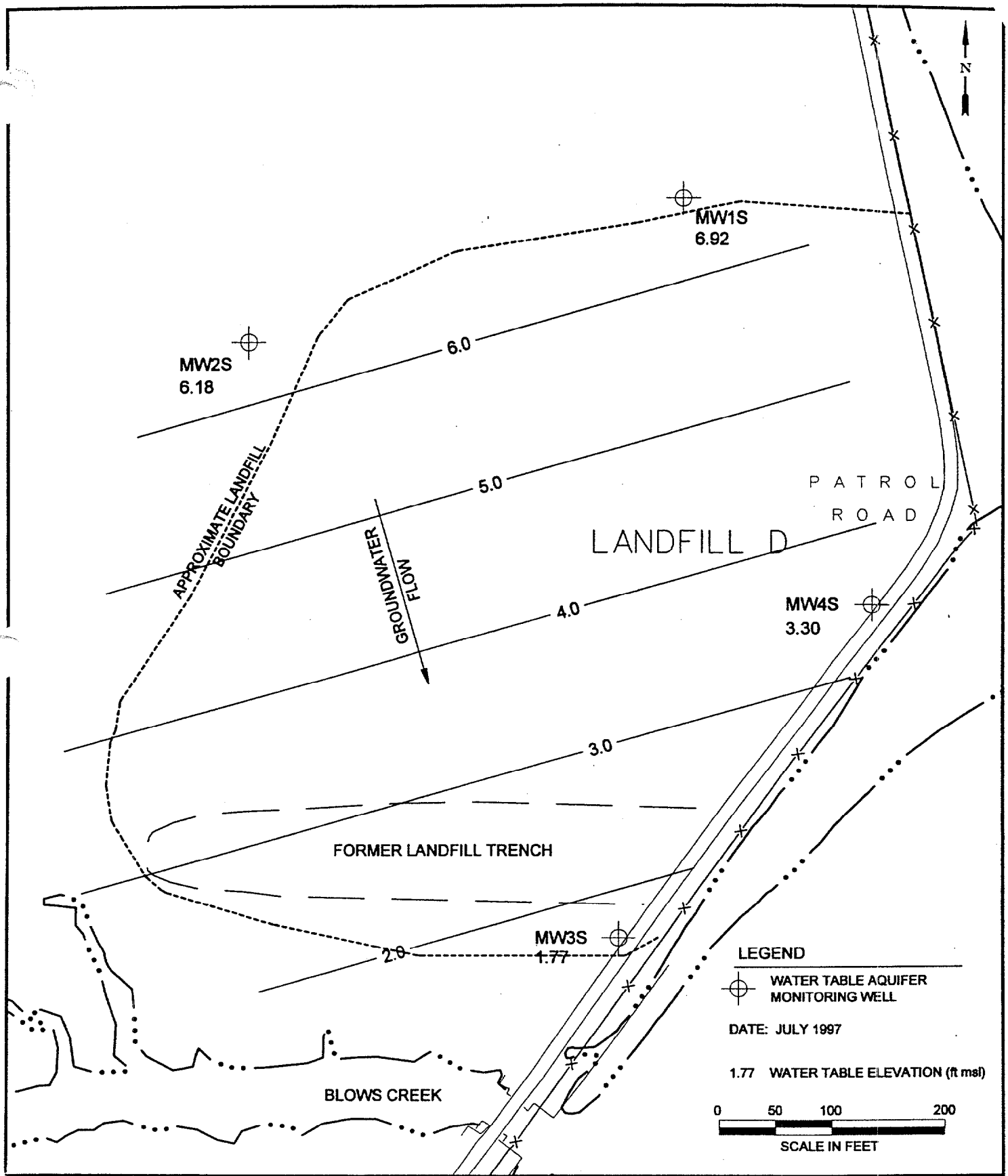
The upper clay of the Yorktown Formation serves as a confining unit to the Yorktown Aquifer at this site. At Site 4 the top of the clay is found at a depths ranging from 25 to 32 feet bgs and has an average thickness of about 27 feet. The vertical hydraulic gradient across the clay is 0.22 ft/ft downward at the upgradient location, and 0.016 ft/ft downward at the downgradient location.

3.4.2.3 Water Table Aquifer

The potentiometric surface of the Water Table Aquifer is shown in **Figure 3-21** based on water level reading collected on July 30, 1997. The potentiometric surface of the Water Table Aquifer is at elevations ranging from 7 to 2 ft msl. As indicated on the map, the direction of groundwater flow in the aquifer is toward the south-southeast and the horizontal flow gradient is approximately 0.008 ft/ft.

3.4.2.4 Intermediate Waterbearing Zone

An intermediate waterbearing zone, located between the Water Table Aquifer and the Yorktown aquitard is present at Site 4. The intermediate water-bearing zone is separated from the Water Table Aquifer by an 18-ft thick clay and silt unit noted in the boring for monitoring well SJS04-MW3D (the downgradient location). The waterbearing unit is a 4-ft thick gray fine sand. This sand unit is found continuously over the site, and may be hydraulically connected to the Water Table Aquifer at other sites. However, at the downgradient location at Site 4 it appears to be hydraulically isolated from the Water Table



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POTENTIOMETRIC SURFACE, WATER TABLE AQUIFER, SITE 4
SAINT JULIENS CREEK ANNEX

FIGURE 3-21

Aquifer by the overlying silt and clay. During drilling and sampling of borehole SJS04-MW3D the bottom 2 ft of overlying silt was noted to be dry. No monitoring wells were screened in this zone during this investigation.

3.4.3 Site 4 Geophysical Survey Results

The objective of the EM and magnetometer surveys conducted at Site 4 was to delineate the landfill boundaries and to identify areas where drums may be buried. The results of all geophysical surveys conducted at this site indicate typical landfilled materials (buried metal). The boundaries of the landfilled, as defined by the survey, are shown on **Figure 3-22**. The limited GPR survey, conducted in the northeast portion of the landfill, identified numerous buried objects (reflectors). None of these objects could be definitively be identified as buried drums. It is unlikely, given the nature of the material in the landfill, that buried drums can be definitively identified using GPR technology. ERT's report of the geophysical investigation is presented in Appendix A.

3.4.4 Site 4 Soil Analytical Results

The analytical results for surface and subsurface soil are discussed below. The discussions refer to COPCs which are derived from the human health and ecological risk assessments. The list of COPCs for subsurface and surface soil differ based on the potential exposures.

3.4.4.1 Site 4 Surface Soil

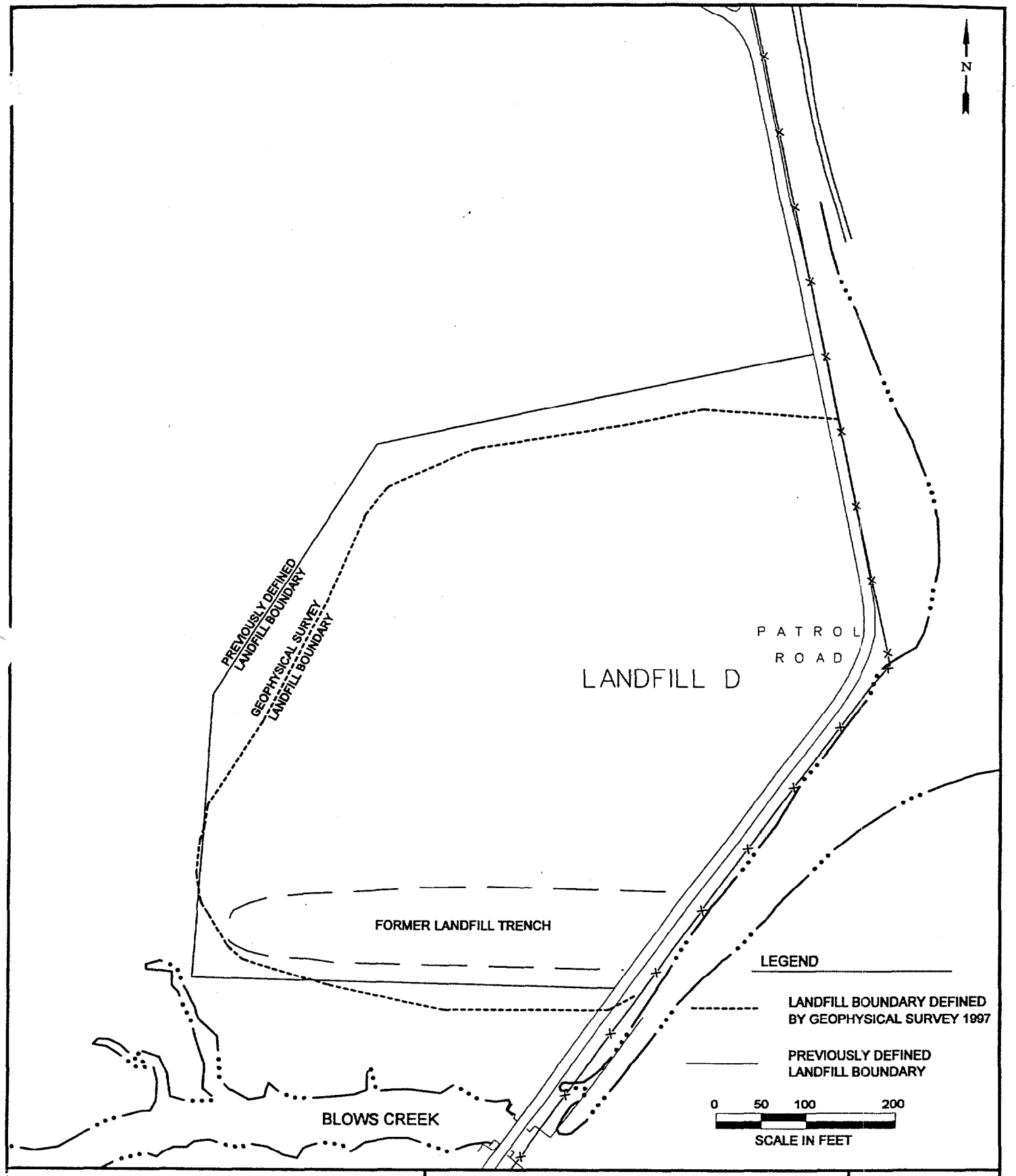
The nature and extent of the surface soil COPCs at Site 4 (Landfill D) are discussed below.

3.4.4.1.1 Nature and Extent of COPCs at Site 4

The COPCs for surface soil at Site 4 are listed in **Table 3-14** and the distribution of organic and inorganic COPCs at Site 4 are shown in **Figures 3-23 and 3-24** respectively. **Table 3-15** presents the analytical data for all COPCs in the surface soil. Results of analyses for all samples from Site 4 are compiled in Appendix F.

The organic COPCs identified for surface soil at Site 4 include two VOCs (acetone, and 2-butanone), 13 SVOCs, three pesticides and one PCB. The inorganic COPCs include 16 metals and total phosphorus.

Acetone was detected six of the ten surface soil samples (SJS04-SS03, -SS04, -SS05, -SS06, -SS07, and -SS08) at concentrations ranging from 8 J ug/kg (in both SJS04-SS03 and -SS04) to



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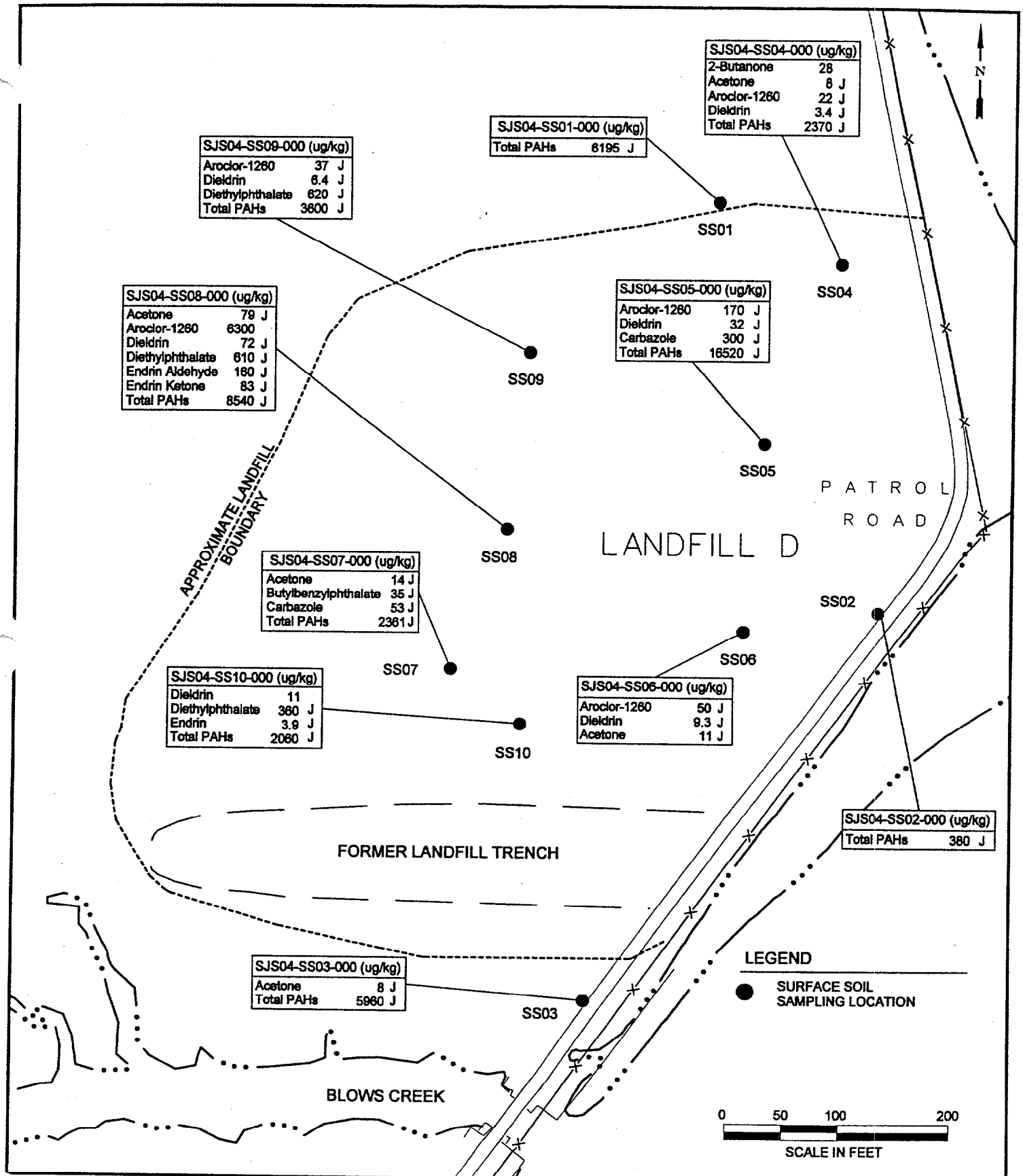
LANDFILL BOUNDARIES AS DETERMINED BY GEOPHYSICAL SURVEYS, SITE 4
SAINT JULIENS CREEK ANNEX

FIGURE 3-22

Table 3-14
Site 4 Surface Soil COPCs

Organic Contaminants	Basis for inclusion as a COPC
Aroclor-1260	BTAG
Endrin Aldehyde	BTAG
Endrin Ketone	BTAG
Dieldrin	RBC, SSL
Anthracene	BTAG
Benzo(a)Anthracene	BTAG, RBC, SSL
Benzo(a)Pyrene	BTAG, RBC
Benzo(b)Fluoranthene	RBC
Benzo(k)Fluoranthene	BTAG
Butylbenzylphthalate	BTAG
Carbazole	BTAG
Chrysene	BTAG, SSL
Diethylphthalate	BTAG
Fluoranthene	BTAG
Indeno(1,2,3-cd)Pyrene	BTAG
Phenanthrene	BTAG
Pyrene	BTAG
Acetone	BTAG
2-Butanone	BTAG
Inorganic Contaminants	
Total Phosphorous	BTAG
Aluminum	BTAG
Arsenic	RBC
Antimony	BTAG, RBC
Barium	SSL
Beryllium	BTAG, RBC
Chromium	BTAG
Copper	BTAG, RBC
Iron	BTAG, RBC
Lead	BTAG
Manganese	BTAG, RBC
Mercury	BTAG
Nickel	BTAG, RBC, SSL
Silver	BTAG
Thallium	BTAG
Vanadium	BTAG, RBC
Zinc	BTAG

BTAG= Region III BTAG Screening Levels (August 9, 1995 Revision).
RBC = EPA. 1997. Region III Updated Risk-Based Concentration Table. October, 1997.
EPA, 1997. Soil Screening Levels as presented in Region III Updated Risk-Based Concentration Table. March, 1997.



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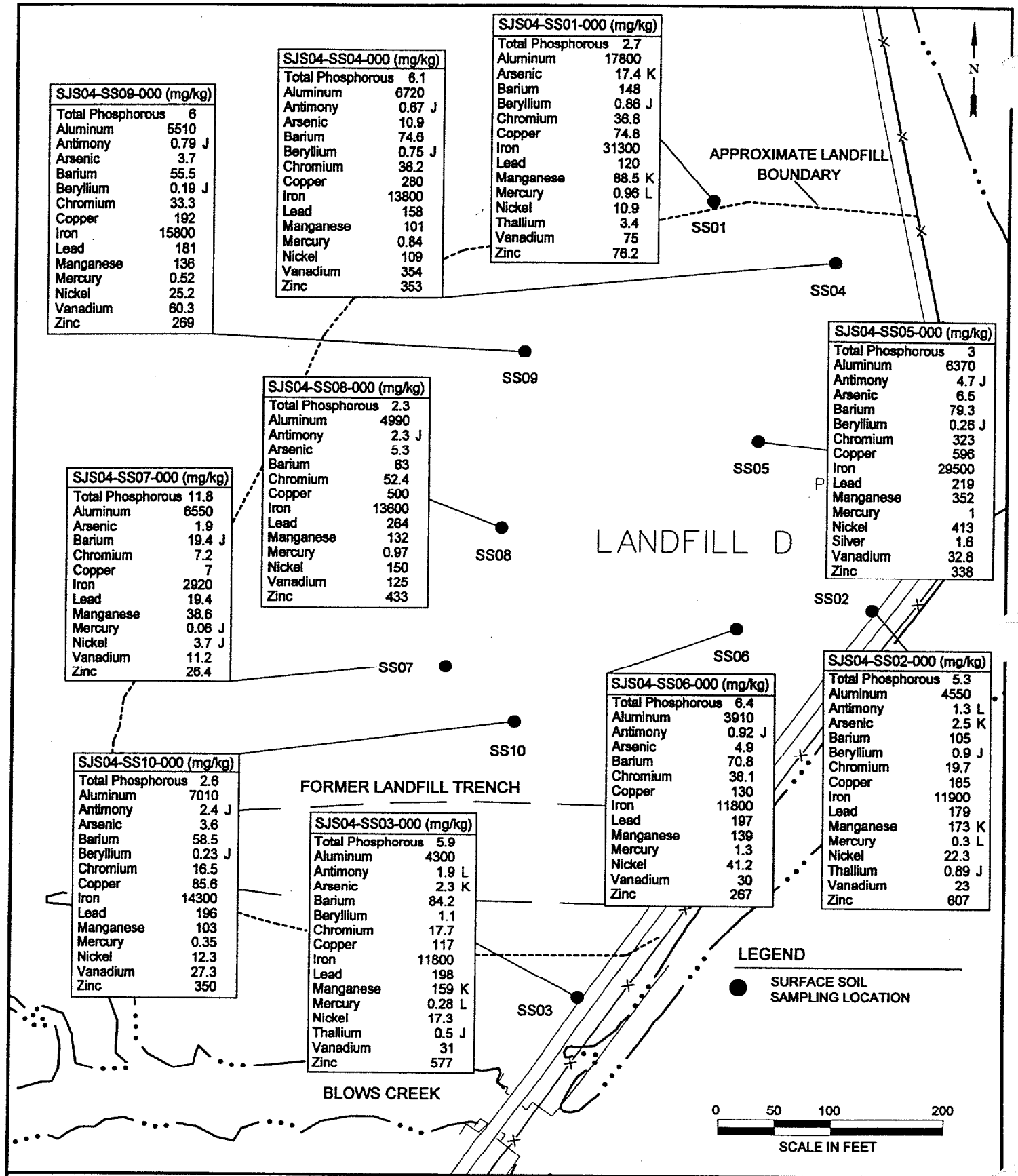
DISTRIBUTION OF ORGANIC COPCs, SURFACE SOIL, SITE 4
SAINT JULIENS CREEK ANNEX

FIGURE 3-23



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DISTRIBUTION OF INORGANIC COPCs, SURFACE SOIL, SITE 4
SAINT JULIENS CREEK ANNEX

FIGURE 3-24

TABLE 3-15

ST. JULIENS CREEK ANNEX, SITE 4
SURFACE SOIL COPC ANALYTICAL DATA

Analyte Name	SJS04-SS01-000		SJS04-SS02-000		SJS04-SS03-000		SJS04-SS04-000		SJS04-SS05-000		SJS04-SS05-000P		SJS04-SS06-000		SJS04-SS07-000		SJS04-SS08-000		SJS04-SS09-000		SJS04-SS10-000	
Inorganic (mg/kg)																						
Total Phosphorous	2.7		5.3		5.9		6.1		3		1.4		6.4		11.8		2.3		6		2.6	
Aluminum	17800		4550		4300		6720		6370		4640		3910		6550		4990		5510		7010	
Antimony			1.3	L	1.9	L	0.67	J	4.7	J	9.1	J	0.92	J			2.3	J	0.79	J	2.4	J
Arsenic	17.4	K	2.5	K	2.3	K	10.9		6.5		7.1		4.9		1.9		5.3		3.7		3.6	
Barium	148		105		84.2		74.6		79.3		91.7		70.8		19.4	J	63		55.5		58.5	
Beryllium	0.86	J	0.9	J	1.1		0.75	J	0.26	J	0.28	J							0.19	J	0.23	J
Chromium	36.8		19.7		17.7		36.2		323		680		36.1		7.2		52.4		33.3		16.5	
Copper	74.8		165		117		280		596		324		130		7		500		192		85.6	
Iron	31300		11900		11800		13800		29500		24700		11800		2920		13600		15800		14300	
Lead	120		179		198		158		219		243		197		19.4		264		181		196	
Manganese	88.5	K	173	K	159	K	101		352		349		139		38.6		132		136		103	
Mercury	0.96	L	0.3	L	0.28	L	0.84		1		1.1		1.3		0.06	J	0.97		0.52		0.35	
Nickel	10.9		22.3		17.3		109		413		546		41.2		3.7	J	150		25.2		12.3	
Silver									1.6													
Thallium	3.4		0.89	J	0.5	J																
Vanadium	75		23		31		354		32.8		31.7		30		11.2		125		60.3		27.3	
Zinc	76.2		607		577		353		338		336		267		26.4		433		269		350	
Organic (ug/kg)																						
Aroclor-1260							22	J	170	J	200	J	50	J			6300		37	J		
Dieldrin							3.4	J	32	J	29	J	9.3	J			72	J	6.4	J	11	
Endrin Aldehyde																	160	J				
Endrin Ketone																	83	J				
Anthracene	95	J													74	J	200	J				
Benzo(a)Anthracene	460		39	J	450	J	260	J	1400	J	790	J			180	J	1100	J	380	J	220	J
Benzo(a)Pyrene	310	J	35	J	390	J	250	J	1300	J	780	J			170	J	870	J	270	J	240	J
Benzo(b)Fluoranthene	1700		79	J	430	J	390	J	1900	J	1100	J			350		1100	J	380	J	330	J
Benzo(k)Fluoranthene	820		37	J	460	J			770	J	500	J			120	J	390	J	230	J		
Butylbenzylphthalate															35	J						
Carbazole									300	J					53	J						

TABLE 3-15

ST. JULIENS CREEK ANNEX, SITE 4
SURFACE SOIL COPC ANALYTICAL DATA

Analyte Name	SJS04-SS01-000		SJS04-SS02-000		SJS04-SS03-000		SJS04-SS04-000		SJS04-SS05-000		SJS04-SS05-000P		SJS04-SS06-000		SJS04-SS07-000		SJS04-SS08-000		SJS04-SS09-000		SJS04-SS10-000	
Organic (ug/kg)																						
Chrysene	1000		39	J	510	J	230	J	1800	J	940	J			170	J	1200	J	440	J	260	J
Diethylphthalate																	610	J	620	J	360	J
Fluoranthene	500		49	J	1000	J	470	J	3300		1300	J			420		2000		620	J	400	J
Fluorene															47	J						
Indeno(1,2,3-cd)Pyrene	560		46	J	280	J			750	J	510	J			100	J	480	J	190	J		
Phenanthrene	160	J			870	J	280	J	2200		870	J			390		1200	J	340	J	210	J
Pyrene	590		56	J	1300	J	490	J	3100		1400	J			340				750	J	400	J
2-Butanone							28				11											
Acetone					8	J	8	J			9	J	11	J	14	J	79	J				

Inorgaic:

J = Analyte present. Reported value is estimated; concentration is outside the range for accurate quantitation.

K = Analyte present. Reported value may be biased high. Actual value is expected to be lower.

L = Analyte present. Reported value may be biased low. Actual value is expected to be higher.

Organic:

J = Analyte present. Reported value may not be accurate or precise.

79 J ug/kg (SJS04-SS08). 2-Butanone was detected in SJS04-SS04 (28 ug/kg) and SJS04-SS05 (duplicate) (11 ug/kg).

Of the 13 SVOC COPCs, ten are PAHs. The data for the PAHs are presented as a total PAH in Figure 3-23. PAHs were found in all samples, except SJS04-SS06, at concentrations of total PAH ranging from 380 J ug/kg (SJS04-SS02) to 16,520 J ug/kg (SJS04-SS05). In addition to PAHs, 3 other SVOCs were identified as COPCs. Butylbenzylphthalate was detected in SJS04-SS07 (35 J ug/kg), carbazole was detected in SJS04-SS05 (300 J ug/kg) and SJS04-SS07 (53 J ug/kg), and diethylphthalate was detected in SJS04-SS08, -SS09 and -SS10 (610 J ug/kg, 620 J ug/kg, and 360 J ug/kg respectively).

Three pesticides are included as COPCs: dieldrin, endrin aldehyde, and endrin ketone. Dieldrin, detected in samples from six locations, is the most frequently detected pesticide.

The concentrations of dieldrin ranged from 3.4 J ug/kg in SJS04-SS04 to 72 J ug/kg in SJS04-SS08. The other pesticides were detected in only one sample. Endrin aldehyde and endrin ketone were both found in SJS04-SS08 at concentrations of 160 J ug/kg and 83 J ug/kg respectively.

Aroclor-1260 was detected in five samples at concentrations ranging from 22 J ug/kg (SJS04-SS04) to 6300 ug/kg (SJS04-SS08).

In addition to the organic COPCs, other organic compounds were detected in some of the samples. These include trace amounts (2 Jug/kg or less) of toluene in two samples (SJS04-SS06 and -SS10), and 4-methyl-2-pentanone in SJS04-SS04 (2 J ug/kg). Several other pesticides were also detected, although not identified as COPCs. These include 4,4'-DDD, 4,4'-DDE, 4,4'-DDT, endrin, alpha chlordane and gamma chlordane. Only SJS04-SS02 and -SS07 contained no pesticides.

The metals that are COPCs for the surface soils include all of the priority pollutant metals except cadmium and selenium. The list also includes several metals that are not priority pollutants: aluminum, barium, iron, manganese, vanadium, and total phosphorus. Several of the metal COPCs were present at concentrations that are within ranges expected in surface soils of the eastern United States. These naturally occurring concentrations of metals are documented by Shacklette and Boerngen (1984) and are listed in Table 3-5. The metal COPCs that were detected in Site 4 soils at concentrations that fall within the typical

ranges listed in Table 3-5 include: aluminum (detected in all the samples at concentrations ranging from 3910 mg/kg (SJS03-SS06) to 17800 mg/kg (SJS04-SS01)), arsenic (ranging in concentrations from 1.9 mg/kg in SJS04-SS07 to 17.4 in SJS04-SS01), barium (detected at concentrations ranging from 19.4 J mg/kg in SJS04-SS07 to 148 mg/kg in SJS04-SS01), beryllium (ranging from 0.19 J mg/kg in SJS04-SS09 to 1.1 mg/kg in SJS04-SS03), chromium (detected in all samples at concentrations ranging from 7.2 mg/kg in SJS04-SS07 to 680 mg/kg in the duplicate sample of SJS04-SS05), copper (ranging in concentrations from 7.0 on SJS04-SS07 to 596 mg/kg in SJS04-SS05), iron (ranging from 2920 mg/kg in SJS04-SS07 to 31300 mg/kg in SJS04-SS01), lead (found at concentrations ranging from 19.4 mg/kg in SJS04-SS07 to 264 mg/kg in SJS04-SS08), mercury (detected in all samples at concentrations ranging from 0.06 J mg/kg in SJS04-SS07 to 1.3 mg/kg in SJS04-SS06), manganese (detected in all samples at concentrations ranging from 38.6 mg/kg in SJS04-SS07 to 352 in SJS04-SS05), nickel (found in all samples at concentrations ranging from 3.7 J mg/kg in SJS04-SS07 to 546 mg/kg in the duplicate sample of SJS04-SS05), lead (detected in all samples ranging in concentration from 19.4 mg/kg in SJS04-SS07 to 264 mg/kg in SJS04-SS08), thallium (detected in only three samples at concentrations ranging from 0.5 J mg/kg in SJS04-SS03 to 3.4 mg/kg in SJS04-SS01), total phosphorus (detected in all at concentrations ranging from 1.4 mg/kg in the duplicate of SJS04-SS05 to 11.8 mg/kg in sample SJS04-SS07), and zinc (detected in all samples at concentrations ranging form 26.4 mg/kg in SJS04-SS07 to 607 mg/kg in SJS04-SS02).

One metal COPC, vanadium, was detected at a concentration exceeding the typical range for eastern United States soils. Vanadium was detected in all samples at concentrations which range from 11.2 mg/kg in SJS04-SS07 to 354 mg/kg in SJS04-SS04 mg/kg. The published maximum observed concentration of vanadium is 300 mg/kg (Shacklette and Boerngen, 1984). One metal COPC, silver, is not listed in Shacklett and Boerngen's list of metals concentrations. Silver was detected only in SJS04-SS05 at a concentration of 1.6 mg/kg.

3.4.4.1.2 Discussion of COPCs in Surface Soil

The concentrations and distribution of VOC COPCs in surface soil at Site 4 is not indicative of a widespread VOC contamination. 2-Butanone was found in two locations. At one of those locations, SJS04-SS05, it was only detected in the duplicate sample. Acetone was found in several samples. With one exception, however, acetone was detected at relatively

low concentrations. The highest concentration of acetone was detected in SJS04-SS08, located on top of the landfill. No specific information is available that shows acetone or 2-butanone were disposed of at the landfill. Waste drums were reportedly buried at the site that may have contained these or other solvents.

The presence of SVOCs at the site is widespread, and includes some samples that are not on the landfill (SJS04-SS01 and -SS02). The presence of PAHs in surface soil of industrialized areas, particularly in areas that have a long history of industry, as St. Juliens Creek Annex does, is not uncommon. However, the concentration of total PAH in SJS04-SS05 (16,520 mg/kg) is particularly high. As with VOCs, one of the highest concentrations of PAHs was found at SJS04-SS08 (9130 mg/kg). It is likely that materials containing PAHs were disposed of in the landfill.

Aroclor-1260 was detected in several samples across the northern portion of the top of the landfill including SJS04-SS04, -SS05, -SS06, -SS08, and -SS09. The highest concentration was detected at SJS04-SS08 (6300 ug/kg). PCBs were reported to have been disposed in the landfill as part of ballast containers for fluorescent light fixtures.

With only one exception (SJS04-SS10) pesticides were also found in only the same samples as the PCB. The highest concentrations of pesticides was found at SJS04-SS08. Pesticides would not be expected to have been applied to the landfill as part of a grounds maintenance program, and therefore are likely to be present due to disposition in the landfill.

The concentrations and distribution of metals detected in surface soil at Site 4 do not indicate metals contamination in the surface soil. The highest concentrations of several metals were found in SJS04-SS01, collected north of the landfill boundary, in material that is most likely disposed dredge material (similar to the material found over most of Site 3).

The constituents detected in surface soil from Site 4 during the RI are very similar to those found in the RRR Study (CH2M HILL, 1996). In the earlier study, a variety of pesticides, including DDT and its metaboloites, alpha and gamma chlordane, dieldrin and endosulfan II were detected. With the exception of Endosulfan II, these same pesticides were detected in the RI, although not all have been identified as COPCs. Aroclor-1254 was found during the RRR, but in the RI the only PCB detected is Aroclor-1260. PAHs were found in both samples collected in the RRR at elevated concentrations. The only VOC detected in the RRR, methylene chloride, was detected at low concentrations and may have been present as

a laboratory contaminant. As with the RI, one sample collected during the RRR contained vanadium at a concentration (5330 mg/kg) exceeding the range of typical concentrations in the Eastern United States. That sample also contained nickel at a concentration (1400 mg/kg) which exceeds the typical range.

3.4.4.2 Site 4 Subsurface Soil

The nature and extent of subsurface soil is described and discussed below. Only three of the borings originally planned for Site 4 were drilled due the nature of material in the landfill (see Section 2). One sample (SJS04-SB01) was collected north of the landfill and most likely consists of hydraulic dredge material. The other two samples (SJS04-SB02, and -SB03) were collected along Patrol Road on the southeast side of the landfill.

All three soil samples were collected from a depth of 2 to 4 ft, a depth determined to be just above the water table. Both borings located along the road encountered fill material to at least the depth of ground water, and therefore the samples consisted of fill material. In both of these samples, a petroleum odor was noted and photoionization detector readings of up to 5.2 ppm were recorded. Because this depth is essentially the same zone in all three samples, the depth of the samples will not be discussed further.

3.4.4.2.1 Nature and Extent of COPCs in Subsurface Soil

The COPCs for subsurface soil at Site 4 are listed in **Table 3-16,** and the distribution and concentration of organic and inorganic subsurface soil COPCs at Site 4 are shown in **Figures 3-25 and 3-26** respectively. The analytical results for the subsurface soil analyses are shown in **Table 3-17.** Results of analyses for all samples from Site 4 are compiled in Appendix F.

Only one organic COPC, benzo(a)pyrene, was identified for subsurface soil at Site 4. This COPC was detected in both SJS04-SB01 (120 J ug/kg) and SJS04-SB03 (100 ug/kg).

Several other non-COPC organic constituents were detected in the subsurface soil from Site 4. Of particular note are several PAHs in SJS04-SB01 and -SB03 (and a lack of PAHs in SJS04-SB02), Aroclor -1254 in SJS04-SB02 (42 ug/kg) and at least one of the 4,4,'-DDT metabolites in each sample.

Metal COPCs detected in subsurface soil at Site 4 include three priority pollutant metals: arsenic, beryllium, and nickel. Arsenic was detected in all three samples at concentrations ranging from 7.9 L mg/kg (SJS04-SB03) to 23.5 mg/kg (SJS04-SB03). Beryllium was detected

Table 3-16
Site 4 Subsurface Soil COPCs

Organic Contaminants	Basis for inclusion as a COPC
Benzo(a)Pyrene	RBC
Inorganic Contaminants	
Aluminum	RBC
Arsenic	RBC, SSL
Barium	SSL
Beryllium	RBC
Iron	RBC
Manganese	RBC
Nickel	SSL

RBC = EPA. 1997. Region III Updated Risk-Based Concentration Table. October, 1997.
EPA, 1997. Soil Screening Levels as presented in Region III Updated Risk-Based Concentration Table. March, 1997.

in both samples collected along Patrol Road, at concentrations of 1.3 mg/kg (SJS04-SB02) and 1.7 mg/kg (SJS04-SB03). Nickel was only found in SJS04-SB03 at a concentration of 22.3 mg/kg.

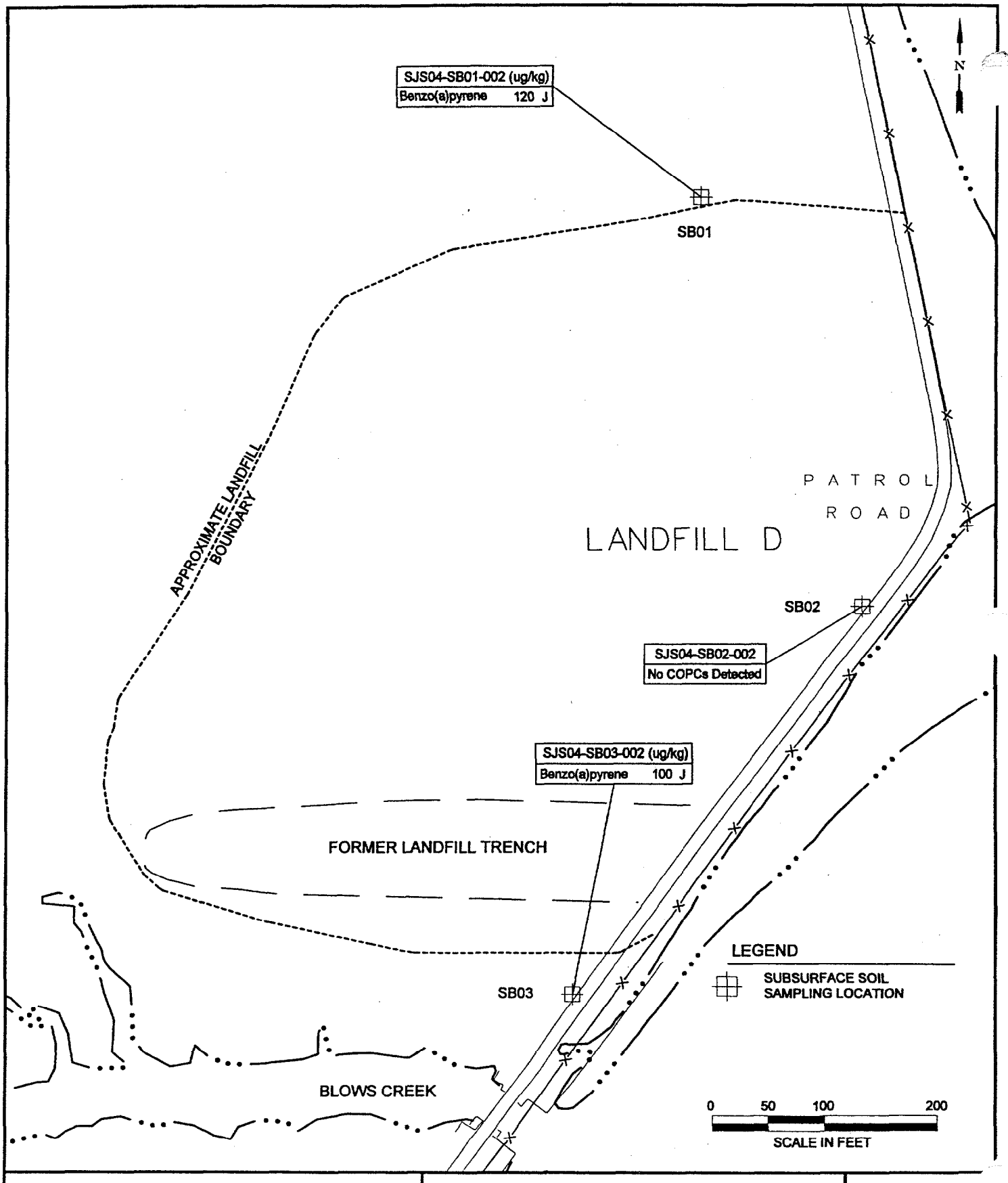
Non-Priority Pollutant metal COPCs include aluminum, barium, iron, and manganese.

3.4.4.2.2 Discussion of COPCs in Subsurface Soil

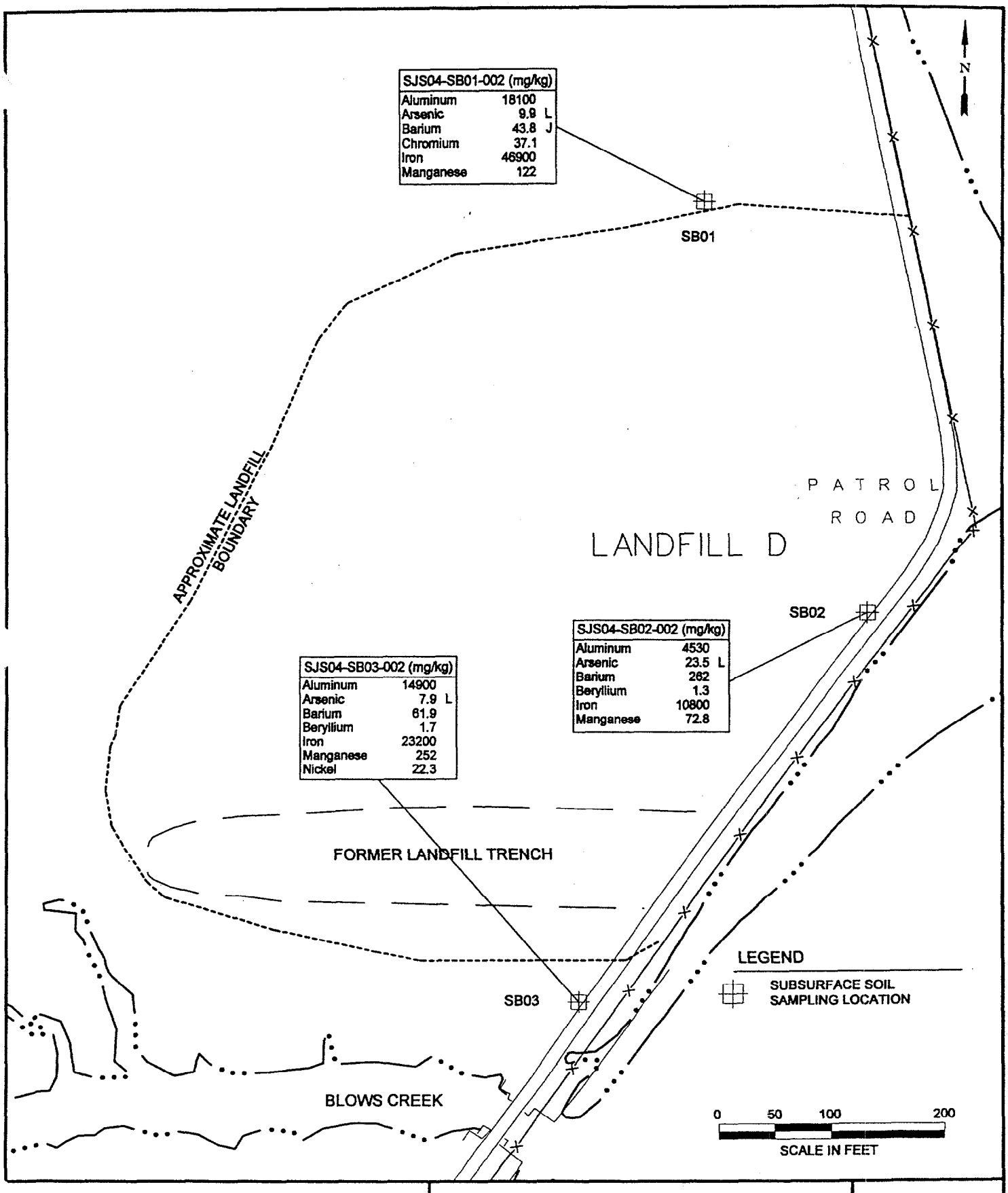
The distribution of organic and inorganic COPCs does not indicate that the landfill is a source of subsurface soil contamination in the areas that were sampled. However, it is clear from the material encountered in the two borings along Patrol Road, that the road was built on fill. This fill may or may not be related to landfilling activities at Site 4, because soil boring SJS04-SB03 is located outside of the landfill boundaries as determined by the geophysical survey.

Sample SJS04-SB01, while containing the organic COPC and other organic constituents (SVOCs, and pesticides) is located outside of the fill area, and is most likely a sample of the hydraulic dredge material disposed in the area before operation of the landfill.

The distribution of COPC metals in the subsurface soil does not indicate a clear pattern of metals contamination that would be associated with site activities.



CDM Federal Programs Corporation *A Subsidiary of Camp Dresser & McKee Inc.*	DISTRIBUTION OF ORGANIC COPCs, SUBSURFACE SOIL, SITE 4 SAINT JULIENS CREEK ANNEX	FIGURE 3-25



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DISTRIBUTION OF INORGANIC COPCs, SUBSURFACE SOIL, SITE 4
SAINT JULIENS CREEK ANNEX

FIGURE 3-26

TABLE 3-17

ST. JULIENS CREEK ANNEX, SITE 4
SUBSURFACE SOIL COPC ANALYTICAL DATA

Analyte Name	SJS04-SB01-002		SJS04-SB02-002		SJS04-SB03-002	
Inorganic (mg/kg)						
Aluminum	18100		4530		14900	
Arsenic	9.9	L	23.5	L	7.9	L
Barium	43.8	J	262		61.9	
Beryllium			1.3		1.7	
Iron	46900		10800		23200	
Manganese	122		72.8		252	
Nickel					22.3	
Organic (ug/kg)						
Benzo(a)Pyrene	120	J			100	J

Inorganic:

J = Analyte present. Reported value is estimated; concentration is outside the range for accurate quantitation.

K = Analyte present. Reported value may be biased high. Actual value is expected to be lower.

L = Analyte present. Reported value may be biased low. Actual value is expected to be higher.

Organic:

J = Analyte present. Reported value may not be accurate or precise.

3.4.5 Site 4 Groundwater Analytical Results

The four shallow (Water Table Aquifer) and two deep (Yorktown Aquifer) monitoring wells were all sampled during two sampling events: Round 1 (July 1997) and Round 2 (November 1997). During each sampling round metals analyses were performed on both filtered and unfiltered samples. The nature and extent of the groundwater COPCs at Site 4 are discussed below.

3.4.5.1 Nature and Extent of COPCs at Site 4

Water quality parameters were measured in samples from all wells during Round 1 and Round 2 of groundwater sampling. The results are shown in **Table 3-18.**

TABLE 3-18
WATER QUALITY PARAMETERS
SITE 4 MONITORING WELLS

Monitor Well	Temperature (°C)		Ph		Specific Conductance (umhos/cm²)		Dissolved Oxygen (%saturation)		Turbidity (NTU)	
Date:	7/97	11/97	7/97	11/97	7/97	11/97	7/97	11/97	7/97	11/97
MW1S	19.7	18.6	7.12	6.3	9900	2630	4.6	8.18	114	8
MW1D	21.0	18.0	7.35	6.49	300	4520	2.0	10.65	76	0
MW2S*	16.8	17.7	7.36	5.55	1190	2260	51.0	8.95	909	33
MW3S	22.2	18.7	6.69	7.11	10500	1770	14.2	10.72	35	2
MW3D	18.9	17.3	7.61	7.02	1120	1310	7.5	7.8	30	10
MW4S	20.4	21.0	6.87	6.7	7000	3380	4.2	9.47	42	30

*During 7/97 sampling event well went dry during purging. Readings may not be indicative of aquifer conditions. Round 1 data are from July 1997 and Round 2 data are from November 1997

The COPCs for groundwater at Site 4 are listed in **Table 3-19.** The distribution of organic and inorganic groundwater COPCs at Site 4 during Round 1 are shown **in Figures 3-27 and 3-28** and during Round 2 in **Figures 3-29 and 3-30. Table 3-20** presents the analytical data from the Round 1 and Round 2 sampling events for all COPCs . Results of analyses for all samples from the site are compiled in Appendix F.

No organic COPCs were detected in the Water Table Aquifer samples; however, several non-COPC organic compounds were detected in the samples. These include acenapthene in both rounds of samples from SJS04-GW1S (2 J ug/L and 5 J ug/L), and bis(2-ethylhexyl)phthalate in SJS04-GW3S at 13 ug/L. Acetone and carbon disulfide were found in SJS04-GW1S during Round 1 at a concentrations of 8 ug/L and 0.4 J ug/L respectively. Dibenzofuran (2 J ug/L) was detected in that same well during Round 2. Acetone was also

Table 3-19
Site 4 Groundwater COPCs

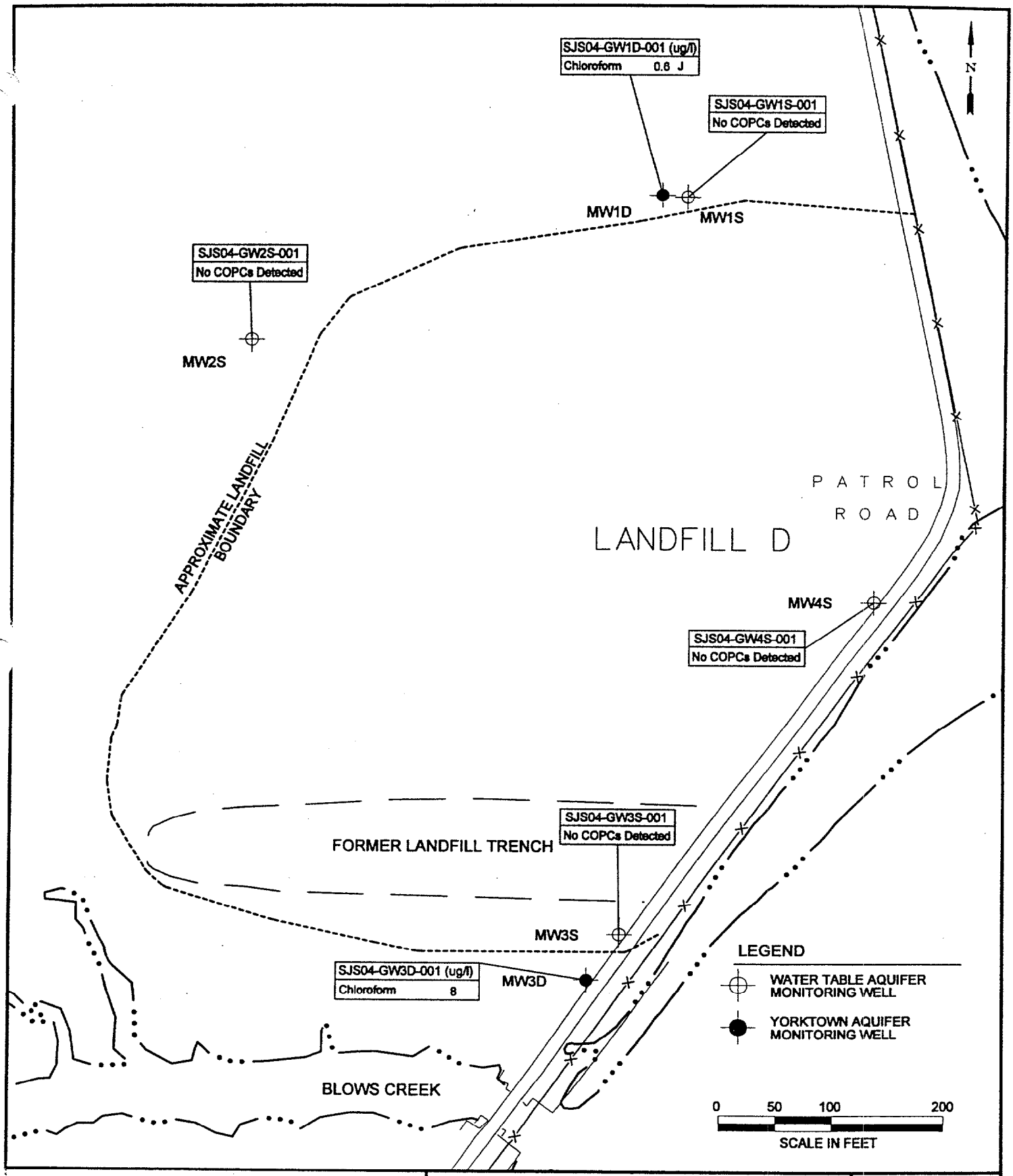
Organic Contaminants	Basis for inclusion as a COPC
Chloroform	RBC
Inorganic Contaminants	
Aluminum	RBC
Arsenic	RBC
Barium	RBC
Chromium	RBC
Iron	RBC
Lead	MCL
Manganese	RBC
Silver	RBC
Thallium	MCL
Vanadium	RBC

RBC = EPA. 1997. Region III Updated Risk-Based Concentration Table. October, 1997.
MCL= EPA Maximum Contaminant Levels

detected in SJS04-GW3S at 12 ug/L and SJS04-GW4S at 6 ug/L during Round 1 sampling. Methylene chloride was detected in SJS04-GW2S at a concentration of 3 ug/L in Round 2.

Ten inorganic constituents were identified as COPCs in the groundwater at Site 4. These include: aluminum, arsenic, barium, chromium, iron, lead, manganese, silver, thallium and vanadium. Five of these (arsenic, chromium, lead, silver and thallium) are Priority Pollutant metals. In general the filtered samples contained fewer Priority Pollutant COPC metals, and the concentrations were lower than the unfiltered samples.

Arsenic was detected, in at least one round of samples, in both the filtered and unfiltered samples from two monitoring wells: SJS04-GW2S (4.2 L ug/L in the filtered sample, 14.4 ug/L in the unfiltered sample) and SJS04-GW4S (7 J ug/L in the filtered sample and 11 ug/L (9.2 ug/L in Round 1) in the unfiltered sample. Chromium was detected during one round of samples from three wells: SJS04-GW2S (Round 1) at 46 ug/L, SJS04-GW3S (Round 2) at 6.1 L ug/L, and SJS04-GW4S (Round 1) at 47.8 ug/L). Chromium was not detected in filtered samples from either round of sampling. Lead is the most frequently detected Priority Pollutant COPC. It was found in at least one round of sampling in all unfiltered samples with concentrations ranging from 2.3 J ug/L in SJS04-GW3S to 23.7 ug/L in SJS04-



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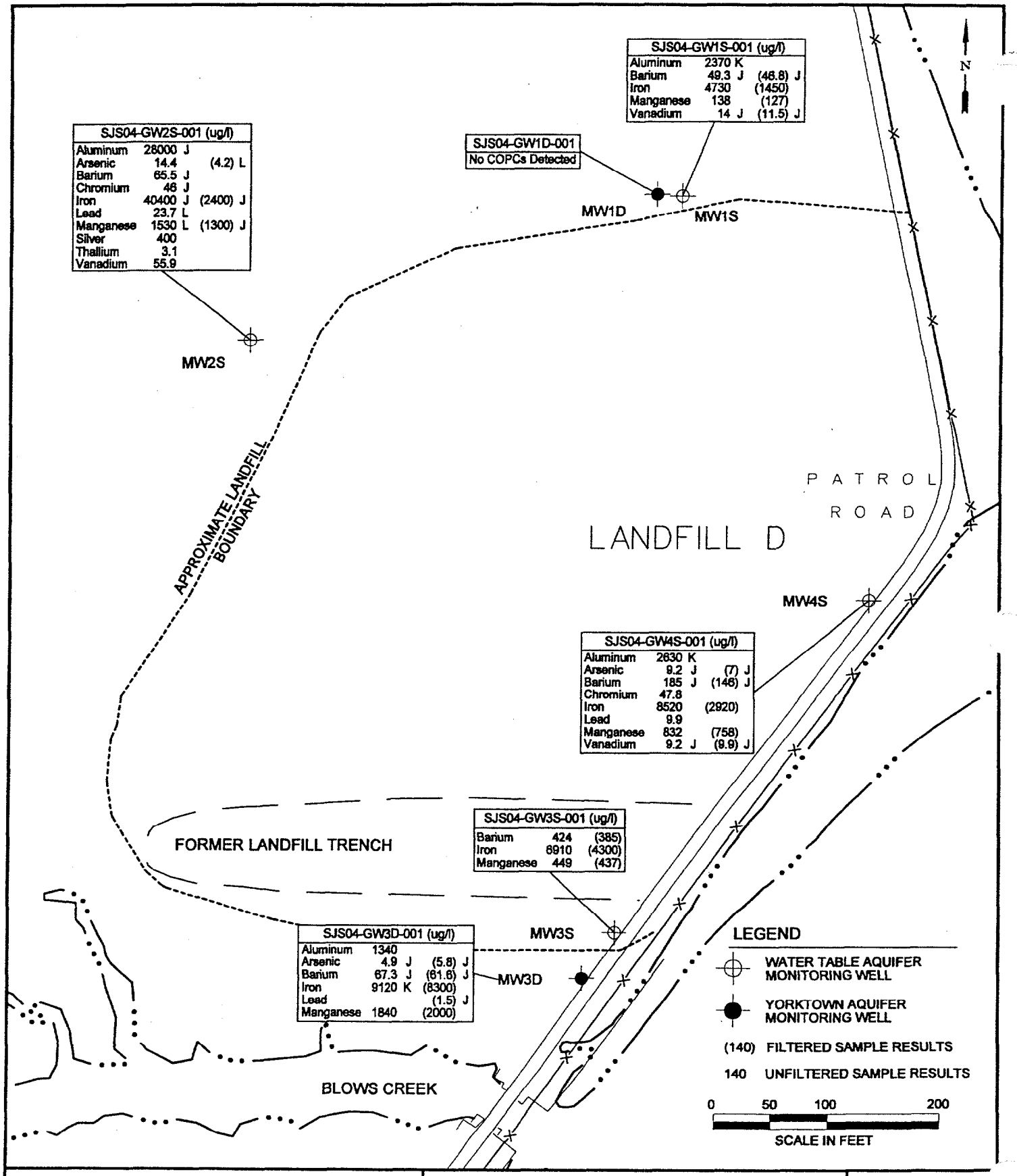
DISTRIBUTION OF ORGANIC COPCs
GROUNDWATER, SITE 4, JULY 1997,
SAINT JULIENS CREEK ANNEX

FIGURE
3-27



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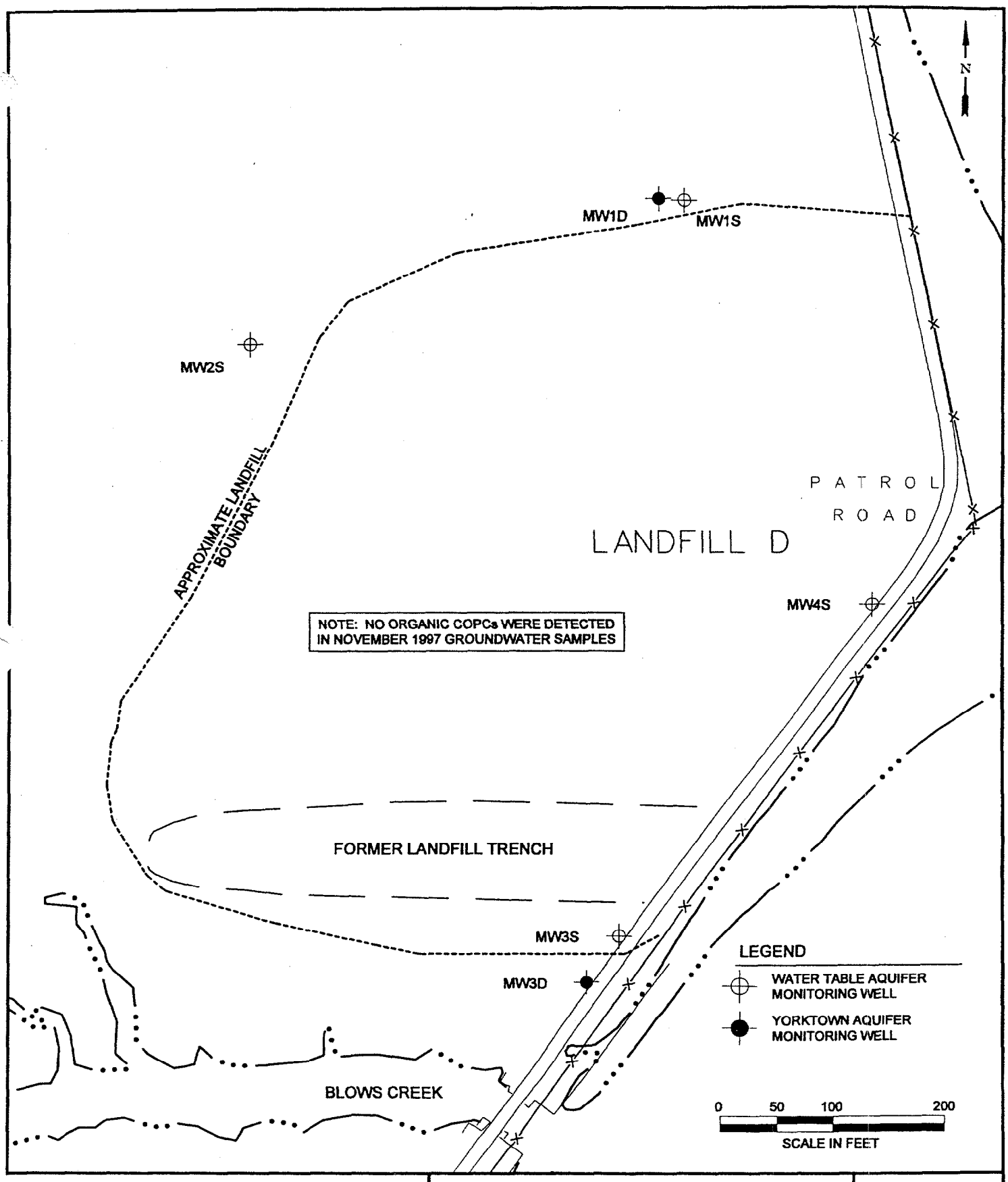
DISTRIBUTION OF INORGANIC COPCs
GROUNDWATER, SITE 4, JULY 1997,
SAINT JULIENS CREEK ANNEX

FIGURE
3-28



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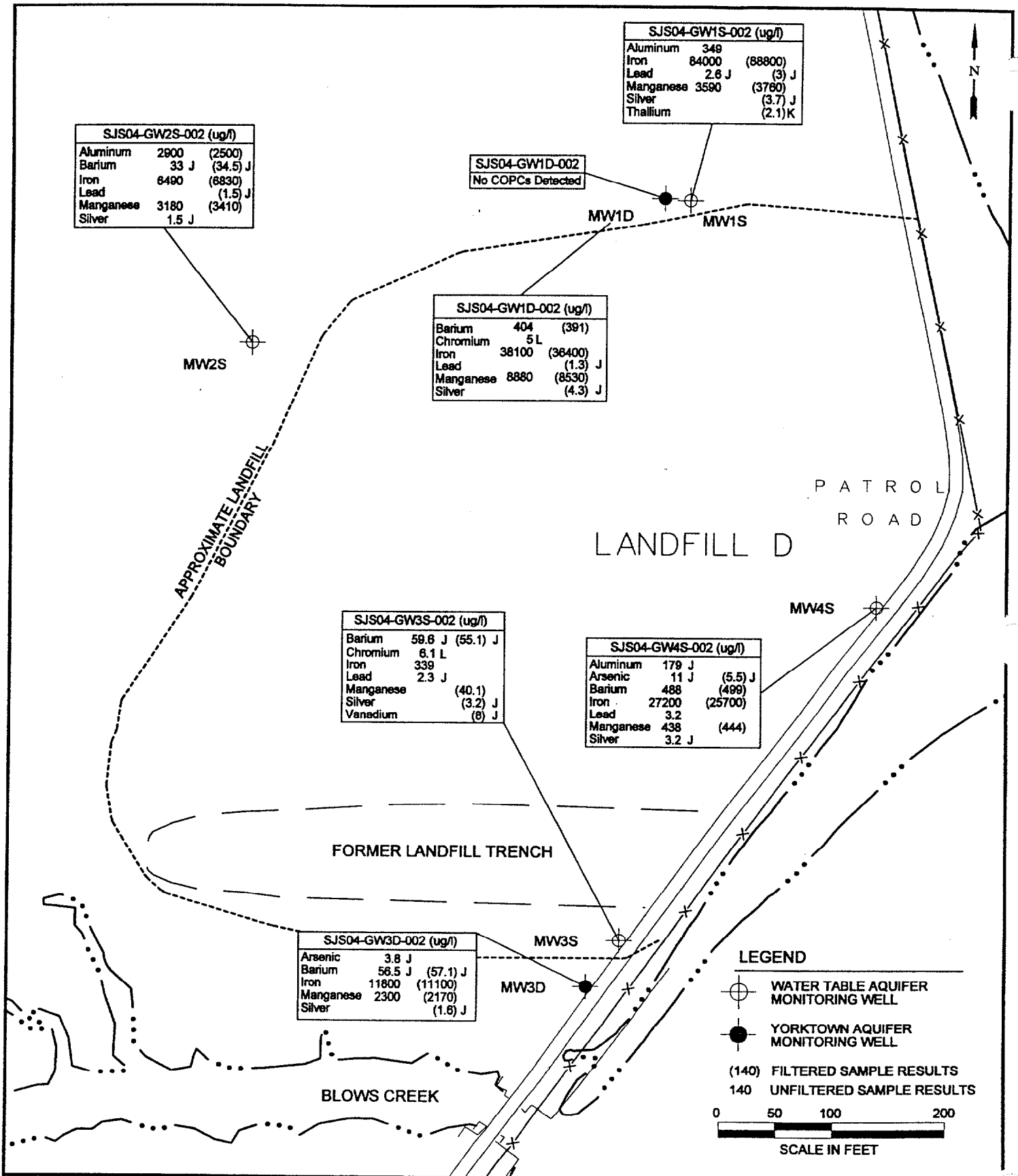
DISTRIBUTION OF ORGANIC COPCs
GROUNDWATER, SITE 4, NOVEMBER 1997,
SAINT JULIENS CREEK ANNEX

FIGURE
3-29



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DISTRIBUTION OF INORGANIC COPCs
GROUNDWATER, SITE 4, NOVEMBER 1997,
SAINT JULIENS CREEK ANNEX

FIGURE
3-30

ST. JULIENS CREEK ANNEX, SITE 4
GROUNDWATER COPC ANALYTICAL DATA

Analyte Name	SJS04-GW1D-001	SJS04-GW1D-002	SJS04-GW1D-002F	SJS04-GW1S-001	SJS04-GW1S-002	SJS04-GW1S-001F	SJS04-GW1S-002F	SJS04-GW2S-001	SJS04-GW2S-002	SJS04-GW2S-001F	SJS04-GW2S-002F	SJS04-GW3D-001	SJS04-GW3D-001P	SJS04-GW3D-002
Inorganic (ug/L)														
Aluminum				2370 K	349			28000 J	2900			1340	435	
Arsenic								14.4				4.9 J	4.7 J	3.8
Barium		404		49.3 J				65.5 J	33 J			67.3 J	61.2 J	56.5
Chromium		5 L						46 J						
Iron		38100		4730	84000			40400 J	6490			9120 K	8500 K	11800
Lead					2.6 J			23.7 L					1.5 J	
Manganese		8880		138	3590			1530 L	3180			1840	1900	2300
Silver								400	1.5 J					
Thallium								3.1 J						
Vanadium				14 J				55.9						
Filtered Samples														
Aluminum											2500			
Arsenic										4.2 L				
Barium			391			46.8 J					34.5 J			
Iron			36400			1450	88800			2400 J	6830			
Lead			1.3 J				3				1.5 J			
Manganese			8530			127	3760			1300 J	3410			
Silver			4.3 J				3.7 J							
Thallium							2.1 K							
Vanadium						11.5 J								
Organic (ug/L)														
Chloroform	0.6 J											8	9	

TABLE 3-20

ST. JULIENS CREEK ANNEX, SITE 4
GROUNDWATER COPC ANALYTICAL DATA

Analyte Name	SJS04-GW3D-001F	SJS04-GW3D-001FP	SJS04-GW3D-002F	SJS04-GW3D-002FP	SJS04-GW3D-002P	SJS04-GW3S-001	SJS04-GW3S-002	SJS04-GW3S-001F	SJS04-GW3S-002F	SJS04-GW4S-001	SJS04-GW4S-001F	SJS04-GW4S-002	SJS04-GW4S-002F
Inorganic (ug/L)													
Aluminum										2630 K		179 J	
Arsenic										9.2 J		11	
Barium					65 J	424	59.6 J			185 J		488	
Chromium							6.1 L			47.8			
Iron					12700	6910	339			8520		27200	
Lead							2.3 J			9.9		3.2	
Manganese					2490	449				832		438	
Silver												3.2 J	
Thallium													
Vanadium										9.2 J			
Filtered Samples													
Aluminum													
Arsenic	5.8 J	4.1 J		3.4 J							7 J		5.5 J
Barium	61.6 J	56.4 J	57.1 J	55.1 J				385	55.1 J		146 J		499
Iron	8300	7490	11100	11600				4300			2920		25700
Lead	1.5 J												
Manganese	2000	1800	2170	2280				437	40.1		758		444
Silver			1.6 J	2.3 J					3.2 J				
Thallium													
Vanadium									8 J		9.9 J		

GW2S. Lead was also detected in the filtered samples of SJS04-GW1S (3 ug/L) and SJS04-GW2S (1.5 J ug/L).

Chloroform was detected in both Yorktown Aquifer samples during Round 1: SJS04-GW1D, at a concentrations of in 0.6 J ug/L and SJS04-GW3D at 8 J ug/L (9 ug/L in the duplicate). No chloroform was found in either of the two samples during Round 2.

Non-COPC organic compounds detected in Yorktown Aquifer monitoring wells include carbon disulfide (SJS04-GW1D detected at a concentration of 0.3 J ug/L , during Round 2), and toluene (detected in SJS04-GW3D at a concentration of 0.2 J ug/L in the Round 1 duplicate sample). Bis(2-ethylhexyl)phthalate was detected in SJS04-GW3D at a concentration of 5 J ug/L during Round 2 sampling.

The only Priority Pollutant metal COPCs detected in samples from the Yorktown Aquifer are arsenic, chromium and lead. Arsenic was found in both rounds of filtered and unfiltered samples from SJS04-GW3D. The maximum concentration detected in filtered samples was 5.8 J ug/L (Round 1). The maximum concentration in the unfiltered samples was 4.9 J ug/L (Round 1). Chromium was only detected in one unfiltered sample, SJS04-GW1D (Round 2), at a concentration of 5 L ug/L. Lead was detected in the Round 2 sample from SJS04-GW1D (1.3 J ug/L), in the duplicate of the unfiltered Round 1 sample from SJS04-GW3D (1.5 J ug/L), and at that same concentration in the Round 1 filtered sample from that well.

3.4.5.2 Discussion of Results of Groundwater COPCs

The potentiometric surface map of the Water Table Aquifer at Site 4 (Figure 3-21) indicates that the direction of ground water flow in the Water Table Aquifer is to the southeast. Based on this map, two monitoring wells, SJS04-MW1S and -MW2S are located upgradient of the landfill. The other monitoring wells, SJS04-MW3S and -MW4S are downgradient.

There is no indication of contamination of groundwater by organic COPCs. Low concentrations of non-COPC organic constituents were detected in both upgradient and downgradient samples. It is possible that there is some flushing of contaminants from the shallow ground water beneath the landfill to the upgradient wells due to tidal influence.

The greatest number, and in some cases, highest concentrations of Priority Pollutant metals were detected in SJS04-GW2S, an upgradient well. Similarly, the highest concentrations of

iron in both rounds of sampling and of manganese in Round 2 were found in one of the upgradient wells.

The average, maximum and minimum concentrations of iron and manganese, as well as pH and specific conductance for the Water Table Aquifer in the four-cities area, as derived from data published in Siudyla et al. (1981) are shown in Table 3-11. The measured concentrations of manganese are all with in the range of published concentrations. The concentrations of iron measured in at least one round of sampling in three of the four wells (SJS04-GW1S, -GW2S, and -GW4S) exceeded the maximum concentration in Siudyla et al. (1981). Because metallic objects were noted at the surface of the landfill, and the geophysical survey indicates buried metallic objects, the presence of excessive iron in the shallow groundwater may be an indication that the landfill is impacting the water quality. However, two of the measurements that exceeded the maximum published value are from upgradient wells.

The range of pH measured in the Water Table Aquifer at the site (5.55 to 7.36) is within the range of published values (4.8 to 7.8). The measured specific conductance of all the Water Table Aquifer monitoring well samples is above the range of published values (121 to 1569 umhos/cm) (note that lowest measured value, 1190 umhos/cm, is not reliable as the well was purged dry). Due to the proximity of the site to the South Branch of the Elizabeth River, it is likely that the elevated readings are due to naturally elevated salt content. There is no indication that the specific conductance is higher in upgradient monitoring wells than in downgradient monitoring wells.

The analytical data from samples collected from the Water Table Aquifer at Site 4 do not suggest that the landfill is acting as a source of contamination.

The potentiometric surface map of the Yorktown Aquifer (Figure 3-7) indicates that in the area of Site 4, flow in that aquifer is to the south. The gentle gradient and the proximity of the site to the South Branch of the Elizabeth River indicate that tidal influence on the water levels may change the flow direction and gradient throughout the day. The data suggests, however, that SJS04-MW1D is upgradient of the landfill and SJS04-MW3D is downgradient of the site.

As with the Water Table Aquifer, the distribution of COPC and non-COPC organic constituents does not suggest that the landfill is a significant source of contamination. The

chloroform detected during Round 1 was not detected during round 2 and was found in both the upgradient and downgradient samples.

The consistent presence of arsenic in filtered and unfiltered samples from the downgradient Yorktown Aquifer monitoring well may indicate that the landfill is contributing arsenic to the deep groundwater. The presence of the Yorktown Formation clay would be expected to prohibit the migration of metals which adhere to clay particles, however, the clay thins to about 9 ft in the area of this well cluster. The evidence for migration of arsenic to the Yorktown Aquifer is inconclusive, however, because arsenic is not found consistently in other (shallow) monitoring wells.

In order to further evaluate the impact, if any, that site activities have had on groundwater quality, the concentrations of iron and manganese, as well as pH and specific conductance, were compared to average, maximum and minimum concentrations of these metals derived from published concentrations of analyses from the Upper Yorktown Aquifer in the Norfolk, Portsmouth, Virginia Beach and Chesapeake area (Siudyla et al., 1981). The values of these parameters are listed on Table 3-11.

The concentrations of iron in the Yorktown Aquifer monitoring wells, in all but one sample (upgradient SJS04-GW1D, Round 2) are well within the range of concentrations from Siudyla et al (1981). The concentrations of manganese are about an order of magnitude above the published concentrations, even for the filtered samples. Although the source of the manganese in Landfill D is not known, manganese is a common indicator of landfill leachate from municipal landfills. The presence of manganese in the downgradient Yorktown Aquider well may indicate that the landfill is impacting Yorktown Aquifer water quality.

The pH measured in the two Yorktown Aquifer monitoring wells is within the range of published values for the upper Yorktown Aquifer. Similarly, the specific conductance measured in deep monitoring wells ranged from 300 umhos/cm to 4520 umhos/cm. These readings are well within the range of the published values (97 umhos/cm to 6660 umhos/cm).

During the RRR (CH2M HILL, 1996) groundwater samples were collected from the Water Table Aquifer using a DPT. Although the samples from the RRR and the RI were collected with very different sampling methods, some comparisons of the analytical data can be

made. In general, more constituents were detected in the Water Table Aquifer during the RI than during the RRR. During the earlier study, the only organic compound detected was acetone (25 ug/L). During the RI, acetone was detected in the Water Table Aquifer (although not identified as a COPC) and in the surface soil. More inorganic constituents were detected in the Water Table Aquifer during the RRR. This may be due to higher turbidity in those samples, although data on the turbidity of the samples were not available. Of particular interest is a concentration of arsenic (56.5 ug/L) in the downgradient sample. Arsenic was detected in filtered and unfiltered samples from the RI.

3.4.6 Site 4 Surface Water Analytical Results

One surface water sample was collected from an arm of Blows Creek that is adjacent to the southwest side of the landfill. This site is coincident with the location of sediment sample SJS04-SD04. The sample was collected as the tide was going out so that water moving from the landfill toward the river would be collected. Dry site conditions during the field investigation prevented the collection of additional samples form the other sediment locations. The nature and extent of the surface water COPCs at Site 4 are discussed below.

3.4.6.1 Nature and Extent of COPCs in Surface Water

The COPCs for surface water at Site 4 are listed in **Table 3-21,** and the distribution of inorganic surface water COPCs at Site 4 are shown in **Figures 3-31 and 3-32. Table 3-22** presents the analytical data for all COPCs. Results of analyses for all samples from Site 4 are compiled in Appendix F.

4-Methylphenol (13 ug/L) and acetone (8 J ug/L) are the only organic COPCs identified for the sample. One additional organic compound, phenol, was also detected.

Twelve metals and total phosphorus were identified as inorganic COPCs. The metals include aluminum (49300 ug/L), arsenic (25.3 ug/L), beryllium (6 ug/L), chromium (66.6 ug/L), cobalt (34.5 J ug/L), copper (165 ug/L), iron (88800 ug/L), lead (746 ug/L), manganese (1910 ug/L), mercury (1 ug/L), nickel (54.9 ug/L), and zinc (1120 ug/L).

3.4.6.2 Discussion of COPCs in Surface Water

Due to the proximity of the landfill to the surface water it is likely that the landfill is contributing to the COPCs in surface water at Site 4. A debris pile in the reeds adjacent to the sample location was noted. The sample contained nine Priority Pollutant metals.

Table 3-21
Site 4 Surface Water COPCs

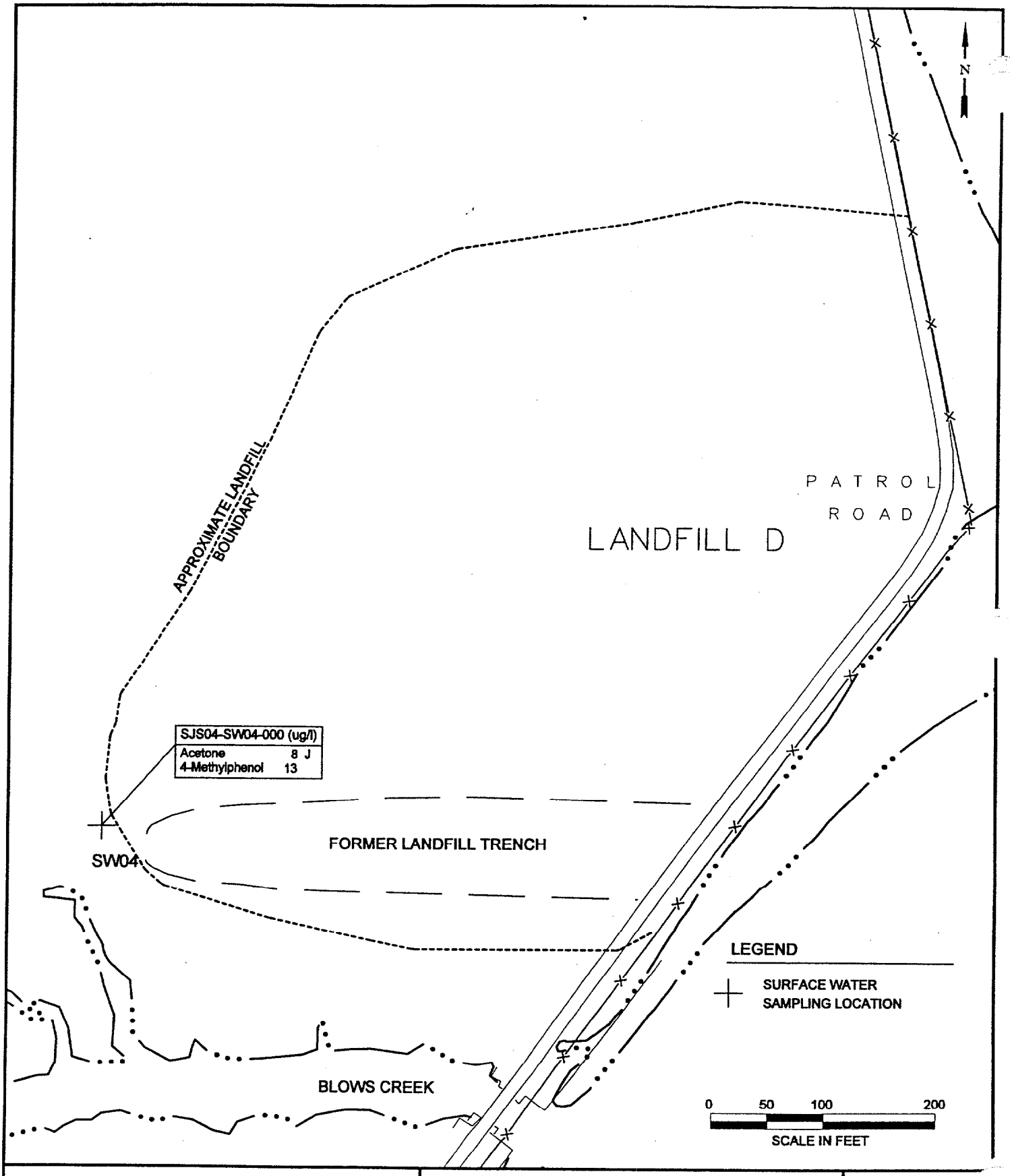
Organic Contaminants	Basis for inclusion as a COPC
4-Methylphenol	BTAG
Acetone	BTAG
Inorganic Contaminants	
Total Phosphorus	BTAG
Aluminum	BTAG
Arsenic	BTAG
Beryllium	AWQC
Chromium	AWQC, BTAG
Cobalt	BTAG
Copper	AWQC, BTAG
Iron	AWQC, BTAG
Lead	AWQC, BTAG
Manganese	BTAG
Mercury	AWQC, BTAG
Nickel	BTAG
Zinc	AWQC, BTAG

BTAG= Region III BTAG Screening Levels (August 9, 1995 Revision).
AWQC= Ambient Water Quality Criteria

Although the surface water sample was collected before the sediment sample at the same location, suspended sediment in the water could increase the concentration of metals in the surface water sample by colloidal transport.

3.4.7 Site 4 Sediment Analytical Results

Four sediment samples were collected at Site 4. Three were collected from the drainage ditch along the west side of Patrol Road(SJS04-SD01, -SD-02, and SD-03), and the fourth (SJS04-SD04) was collect from an arm of Blows Creek that borders the landfill on the southwest. Sample SJS04-SD01 was located in the ditch "upstream" of Site 4, SJS04-SD02 is located midway along the ditch (adjacent to the landfill), and SJS04-SD03 is located adjacent to the southernmost part of the landfill. During sediment sampling these three locations were dry. The nature and extent of the sediment COPCs at Site 4 are discussed below.



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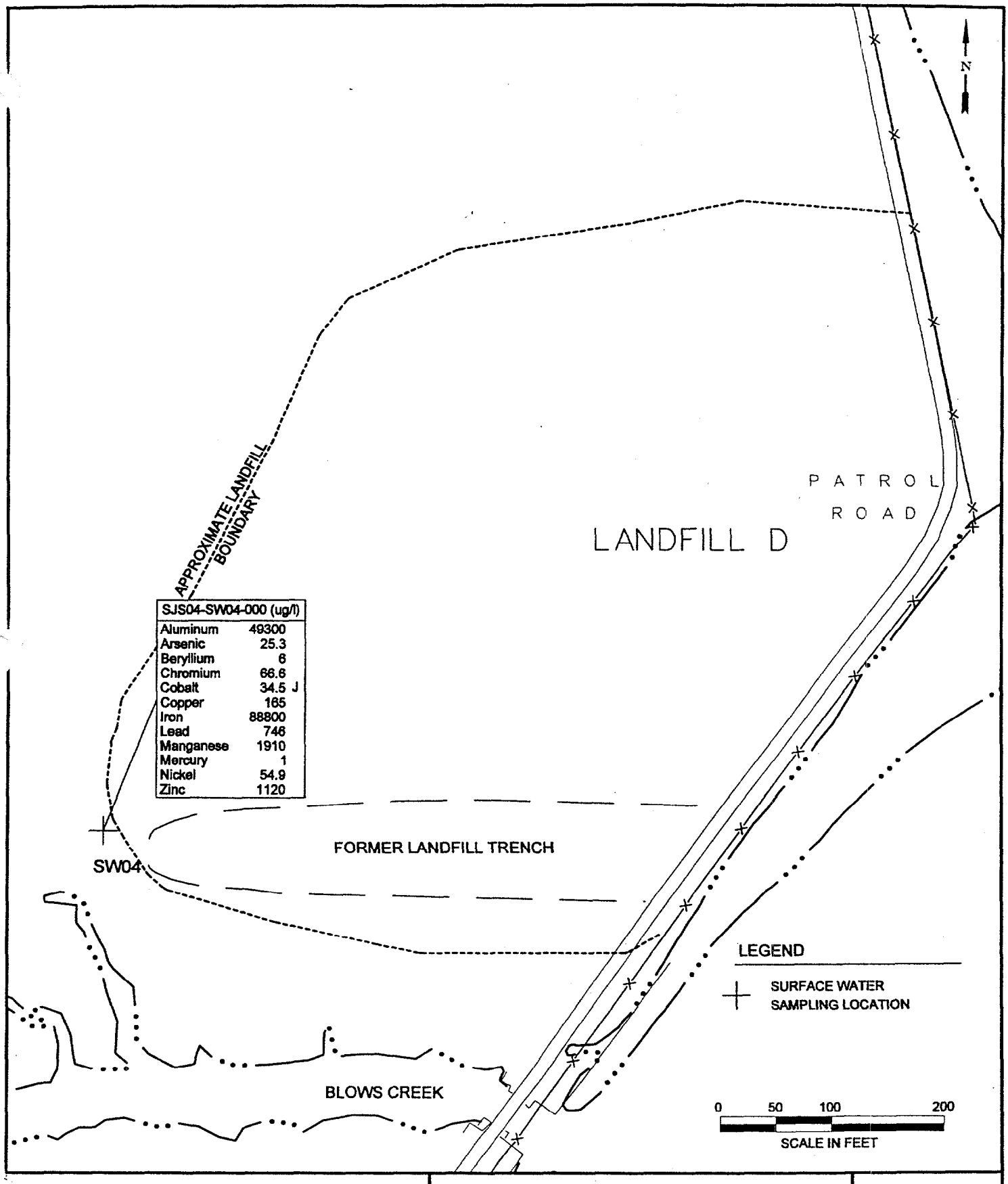
DISTRIBUTION OF ORGANIC COPCs, SURFACE WATER, SITE 4
SAINT JULIENS CREEK ANNEX

FIGURE 3-31



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DISTRIBUTION OF INORGANIC COPCs, SURFACE WATER, SITE 4
SAINT JULIENS CREEK ANNEX

FIGURE 3-32

TABLE 3-22

ST. JULIENS CREEK ANNEX, SITE 4
SURFACE WATER COPC ANALYTICAL DATA

Analyte Name	SJS04-SW04-000		SJS04-SW04-000P	
Inorganic (ug/L)				
Total Phosphorous			0.21	
Aluminum	49300		50000	
Antimony	3.2	J	3.7	J
Arsenic	25.3		26.6	
Beryllium	6		6.8	
Chromium	66.6		63.1	
Cobalt	34.5	J	43.9	J
Copper	165		179	
Iron	88800		93100	
Lead	746		822	
Manganese	1910		1870	
Mercury	1		1.2	
Nickel	54.9		64	
Zinc	1120		1160	
Organic (ug/L)				
4-Methylphenol	13			
Acetone	8	J		

Inorganic:

J = Analyte present. Reported value is estimated; concentration is outside the range for accurate quantitation.

Organic:

J = Analyte present. Reported value may not be accurate or precise.

3.4.7.1 Nature and Extent Sediment COPCs

The COPCs for sediment at Site 4 are listed in **Table 3-23**, and the distribution of organic and inorganic subsurface soil COPCs at Site 4 are shown in **Figures 3-33 and 3-34** respectively. **Table 3-24** presents the analytical data for all COPCs. Results of analyses for all samples from Site 4 are compiled in Appendix F.

The organic COPCs detected in sediments at Site 4 include two VOCs, 13 SVOCs (including eleven PAHs), three pesticides, and Aroclor-1260. The inorganic COPCs includes 16 metals and total phosphorus.

The highest concentrations of both VOCs COPCs were both detected in one sample, SJS04-SD04. Acetone was detected at a concentration of 140 ug/kg in that samples and 7 J ug/kg in SJS04-SD02. Carbon disulfide was only detected in SJS04-SD04, at a concentration of 19 J ug/kg.

The SVOCs include diethylphthalate (detected only in SJS04-SD02 at 300 J ug/kg), 2-methylnapthalene (detected the upstream sample SJS04-SD01 at a concentration of 48 J ug/kg and in SJS04-SD03 at 140 J ug/kg) and the following PAHs: acenaphthene, anthracene, benzo(a)anthracene, benzo(a)pyrene, benzo(k)fluoranthene, chrysene, dibenz(a,h)anthracene, fluoranthene, phenanthrene and pyrene. On Figure 3-40 the concentrations of PAHs are presented as a total. Total COPC PAH concentrations ranged from 2000 J ug/kg at SJS04-SD03 to 10,980 J ug/kg at SJS04-SD04.

The pesticides detected in sediment samples included 4,4'-DDT, 4,4'-DDE, and dieldrin. Dieldrin was only detected in the two downstream drainage ditch samples, SJS04-SD02 (23 ug/kg) and SJS04-SD03 (6 J ug/kg). All samples contained some concentration of 4,4'-DDT or its transformation products. The highest concentrations were always found in the upstream sample, SJS04-SD01 (4,4'-DDE at 31 ug/kg and 4,4'-DDT at 38 J ug/kg).

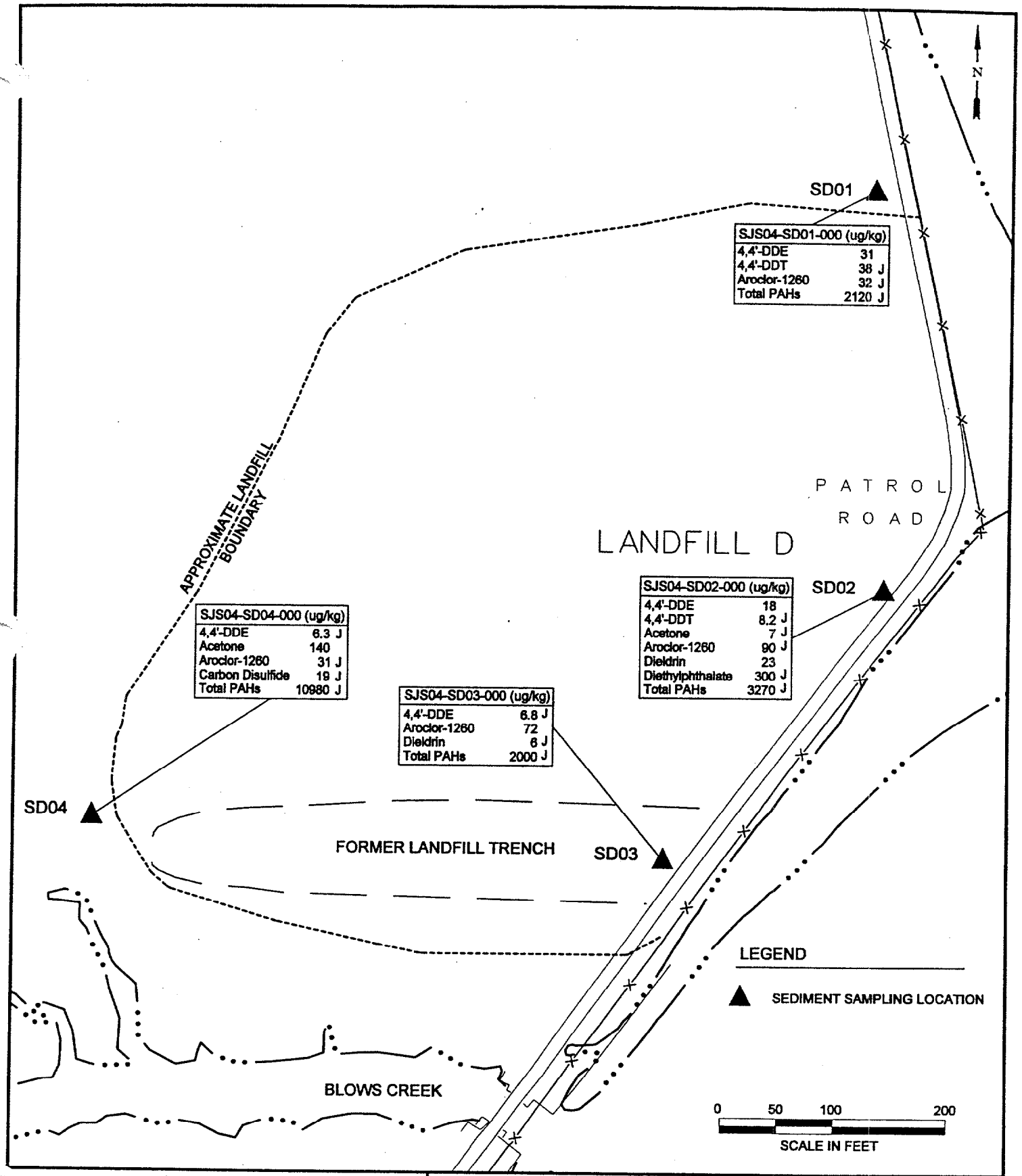
Aroclor-1260 was found in all samples ranging in concentration from 31 J ug/kg in SJS04-SD04 to 90 J ug/kg in SJS04-SD02.

Other, non-COPC, organic constituents detected in sediment samples include 4,4'-DDD, Butylbenzylphthalate, di-n-butylphthalate, benzo(g,h,i,)perylene, dibenzofuran and naphthalene.

Table 3-23
Site 4 Sediment COPCs

Organic Contaminants	Basis for inclusion as a COPC
4,4' - DDE	BTAG
4,4' - DDT	BTAG
Aroclor-1260	BTAG
Dieldrin	BTAG
Anthracene	BTAG
2-Methylnaphthalene	BTAG
Acenaphthylene	BTAG
Anthracene	BTAG
Benzo(a)Anthracene	BTAG
Benzo(a)Pyrene	BTAG
Benzo(k)Fluoranthene	BTAG
Chrysene	BTAG
Dibenz(a,h,)Anthracene	BTAG
Diethylphthalate	BTAG
Fluoranthene	BTAG
Phenanthrene	BTAG
Pyrene	BTAG
Acetone	BTAG
Carbon Disulfide	BTAG
Inorganic Contaminants	
Total Phosphorous	BTAG
Aluminum	BTAG
Arsenic	BTAG
Barium	BTAG
Beryllium	BTAG
Chromium	BTAG
Cobalt	BTAG
Copper	BTAG
Iron	BTAG
Lead	BTAG, NAVY
Manganese	BTAG
Mercury	BTAG
Nickel	BTAG
Silver	BTAG
Thallium	BTAG
Vanadium	BTAG
Zinc	BTAG

BTAG= Region III BTAG Screening Levels (August 9, 1995 Revision).
RBC = EPA. 1997. Region III Updated Risk-Based Concentration Table. October, 1997.
NAVY= United States Navy, 1997. Naval Base Norfolk Partnership Human Health Risk Assessment Consensus Agreements #6.A.1 through 6.A.6 and #6.B.



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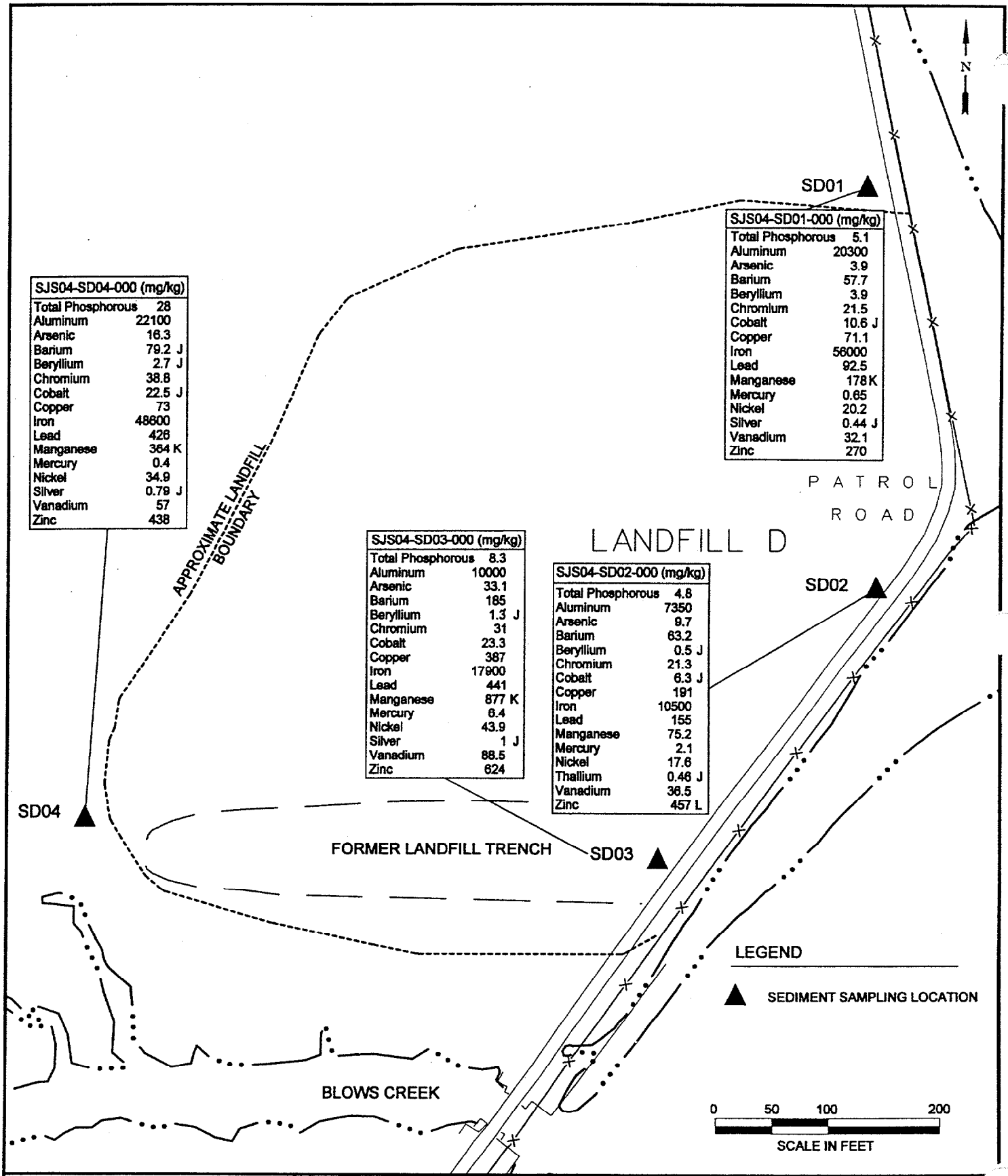
DISTRIBUTION OF ORGANIC COPCs, SEDIMENT, SITE 4
SAINT JULIENS CREEK ANNEX

FIGURE 3-33



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DISTRIBUTION OF INORGANIC COPCs, SEDIMENT, SITE 4
SAINT JULIENS CREEK ANNEX

FIGURE 3-34

TABLE 3-24

ST. JULIENS CREEK ANNEX, SITE 4
SEDIMENT COPC ANALYTICAL DATA

Analyte Name	SJS04-SD01-000		SJS04-SD02-000		SJS04-SD03-000		SJS04-SD04-000	
Inorganic (mg/kg)								
Total Phosphorous (as	5.1		4.8		8.3		28	
Aluminum	20300		7350		10000		22100	
Arsenic	3.9		9.7		33.1		16.3	
Barium	57.7		63.2		185		79.2	J
Beryllium	3.9		0.5	J	1.3	J	2.7	J
Chromium	21.5		21.3		31		38.8	
Cobalt	10.6	J	6.3	J	23.3		22.5	J
Copper	71.1		191		387		73	
Iron	56000		10500		17900		48600	
Lead	92.5		155		441		426	
Manganese	178	K	75.2		877	K	364	K
Mercury	0.65		2.1		6.4		0.4	
Nickel	20.2		17.6		43.9		34.9	
Silver	0.44	J			1	J	0.79	J
Thallium			0.46	J				
Vanadium	32.1		36.5		88.5		57	
Zinc	270		457	L	624		438	
Organic (ug/kg)								
4,4'-DDE	31		18		6.8	J	6.3	J
4,4'-DDT	38	J	8.2	J				
Aroclor-1260	32	J	90	J	72		31	J
Dieldrin			23		6	J		
2-Methylnaphthalene	48	J			140	J		
Acenaphthylene	53	J					70	J
Anthracene	57	J					200	J
Benzo(a)Anthracene	270	J	370	J	200	J	1300	
Benzo(a)Pyrene	250	J	360	J	210	J	1200	
Benzo(k)fluoranthene	320	J	200	J	290	J	1100	
Organic (ug/kg)								

TABLE 3-24

ST. JULIENS CREEK ANNEX, SITE 4
SEDIMENT COPC ANALYTICAL DATA

Analyte Name	SJS04-SD01-000		SJS04-SD02-000		SJS04-SD03-000		SJS04-SD04-000	
Chrysene	440		440	J	290	J	1200	
Dibenz(a,h)Anthracen							150	J
Diethylphthalate			300	J				
Fluoranthene	320	J	710	J	370	J	2800	
Phenanthrene	140	J	400	J	270	J	160	J
Pyrene	270	J	790	J	370	J	2800	
Acetone			7	J			140	
Carbon Disulfide							19	J

Inorganic:

J = Analyte present. Reported value is estimated; concentration is outside the range for accurate quantitation.

K = Analyte present. Reported value may be biased high. Actual value is expected to be lower.

L = Analyte present. Reported value may be biased low. Actual value is expected to be higher.

Organic:

J = Analyte present. Reported value may not be accurate or precise.

The inorganic COPCs detected in sediments at Site 4 include: aluminum, arsenic, barium, beryllium, chromium, cobalt, copper, iron, lead, manganese, mercury, nickel, silver, thallium, vanadium, zinc, and total phosphorus (as P). Phosphorus was detected in all samples with the range of concentration from 4.8 mg/kg in the SJS04-SD02 to 28 mg/kg in SJS04-SD04.

The metal COPCs include ten Priority Pollutant metals. All except thallium were detected in the upstream sample SJS04-SD01. The highest concentration of seven of the ten Priority Pollutant metals were found in sample SJS04-SD03. These concentrations of Priority Pollutant metals: arsenic (33.1 mg/kg), copper (387 mg/kg), lead (441 mg/kg), mercury (6.4 mg/kg), nickel (43.9 mg/kg), and zinc (624 mg/kg). The highest concentration of beryllium was detected in SJS04-SD01 (3.9 mg/kg). Chromium was detected at highest concentrations in SJS04-SD04 (38.8 mg/kg), and thallium was detected only in SJS04-SD02 at 0.46 J mg/kg.

3.4.7.2 Discussion of COPCs in Sediment

There are some general trends and patterns to the distribution of organic and inorganic COPCs in sediment at Site 4. The highest concentration of VOC and SVOC contamination was found in the sample from Blows Creek (SJS04-SD04). The widespread (though generally low concentration) presence of acteone in surface soil, coupled, with the higher concentration in the sediment sample, indicates that the landfill is a potential source for acetone. That same sample (SJS04-SD04) contained a significant concentration of PAHs which are likely due to a source at the landfill. An alternative possibility is that the PAHs have accumulated from water and sediment washed in from the South Branch of the Elizabeth River with the tides.

The landfill does not appear to be a source of 4,4'-DDT or its metabolites in sediment because the concentrations of these pesticides are highest in the "upstream" ditch sample. Dieldrin was detected in a sample collected adjacent to the landfill, but only in that sample. It is interesting to note that the COPC pesticides that were found in landfill surface soil, (endrin ketone and endrin aldehyde) were not found in the sediments. Therefore it does not appear that surface soil from those locations (SJS04-SS08 and -SS10) are impacting the sediments.

Several of the metals that appear at highest concentrations in the downstream ditch sample (SJS04-SD03) increase in concentrations along the ditch. These metals include: arsenic,

barium, copper, lead, mercury, vanadium and zinc. The data indicate that the landfill is contributing to the concentration of these metals in sediment. The concentration of mercury in these samples is particularly high (6.4 mg/kg in SJS04-SD03). The florescent light containers reported to have been disposed in this landfill, are a likely source for the mercury found in the sediment.

4. Contaminant Fate and Transport

This section discusses the primary processes that control the behavior of contaminants in the surface and subsurface environments at Sites 3 and 4.

4.1 Chemical and Physical Processes Influencing Contaminant Fate and Transport

When released into the environment organic and inorganic chemicals undergo a variety of reactions or processes that affect their transport and final fate. The process may include:

- dissolution/precipitation
- sorption
- volatilization
- photolysis
- oxidation-reduction
- hydrolysis
- biodegradation
- advection
- diffusion, and
- dispersion.

Table 4-1 summarizes these mechanisms and their physical and chemical properties that influence contaminant mobility.

4.2 Site 3 Contaminants of Potential Concern

Surface and subsurface soil, groundwater and sediment samples were collected and analyzed at Site 3. No surface water samples were collected. Complete lists of COPCs in these media are found in Sections 3.3.4 through 3.3.6. Only those COPCs that appear to be attributable to dredge disposal and landfill activities at Site 3 will be discussed here (see Section 3.3.4.1.2, 3.3.4.2.2, 3.3.5.2 and 3.3.6.2). Numerous inorganic COPCs were found in

TABLE 4-1
CHEMICAL AND PHYSICAL FATE AND TRANSPORT PROCESSES

Process	Description	Property
Dissolution/ Precipitation	Dissolution is the partitioning of a chemical in the liquid phase. The solubility of a compound is based on salinity, temperature, dissolved organic carbon, oxidation state, polarity and other factors. Metals may precipitate from solution given the right conditions.	Water Solubility low water solubilty: < 100 mg/L[a] high water solubility: > 1,000 mg/L
Sorption	Sorption includes adsorption (adhesion to a solid's surface) and absorption (penetration into the solid). Adsorption can retard the transport of an adsorbed species. Water solubility, polarity, octanol/water partion coefficient (K_{ow}), acid/base chemistry, and redox chemistry influence sorption.	Log K_{ow} Log K_{oc} (log organic carbon coefficient)
Volatilization	The transfer of contaminants from the liquid phase to the vapor phase. Volatilization is important for the removal of contaminants in the unsaturated zone and is dependent on the physical properties of the chemical and the environment.	Henry's Law Constant (K_H) high volatility: $K_H > 5 \times 10^{-3}$ atm-m3/mol low volatility: $K_H < 5 \times 10^{-5}$ atm-m3/mol
Photolysis	Photo-dissociation is the process where chemicals degrade as a result of absorption of radiation in the visible or near-UV region of the electromagnetic spectrum.	Photolysis Rate Constants
Oxidation/ Reduction (Redox)	Redox involves the transfer of electrons between two molecules or elements, with the oxidizing component losing electrons and the reducing component gaining electrons. Common in near-surface environments where oxygen and sunlight are present.	Redox Potential (Eh)
Hydrolysis	Hydrolysis is the reaction of a compound with water resulting in a new chemical species. Hydrolysis reactions are strongly pH dependent. Hydrolysis reactions in groundwater are typically too slow to be significant.	Hydrolysis Rate Constants
Biodegradation	Biodegradation is the biotransformation of a compound into simpler compound(s). This process is directly mediated by microorganisms present in the environment. Metals do not undergo biodegradation.	Biodegradation Rate Constants
Advection	The physical process by which contaminants are transported in solution at the average linear velocity of	Effective Porocity and Average Linear Velocity

TABLE 4-1 CHEMICAL AND PHYSICAL FATE AND TRANSPORT PROCESSES		
	groundwater in the direction of groundwater flow.	
Diffusion	The movement of contaminants in response to concentration gradients.	Diffusion Coefficients
Dispersion	The mechanical process of mixing that results from local variations in the average velocity of groundwater	Dispersion Coefficients

[a]Reidy et al. (1989)

the samples collected from Site 3; fate and transport of the priority pollutant metals will be discussed here.

The organic COPCs in surface soil and/or subsurface soil at Site 3 that appear attributable to dredge disposal and landfill activities at Site 3 include the VOC methylene chloride; PAHs, other SVOCs including carbazole, dibenzofuran, diethyphthalate and pentachlorophenol, and the PCB aroclor-1254. Priority pollutant metal COPCs in surface soil and/or subsurface soil at Site 3 include arsenic, beryllium, chromium, copper, lead, mercury, nickel, thallium and zinc.

The only organic compound detected in the shallow wells completed in the Water Table Aquifer at Site 3 was bis(2-ethylhexyl)phthalate. All of the priority pollutant metals that were detected in the soils at Site 3 were found in the shallow groundwater except mercury and thallium. The priority pollutant metals that were determined to be COPCs in groundwater include arsenic, beryllium, chromium and nickel. The COPCs detected in the sediment that were also detected in Site 3 soils include methylene chloride, PAHs, phthalates, arsenic, beryllium, chromium, copper, lead, mercury and zinc. The VOC toluene, the PCB aroclor-1260 and the priority pollutant metal cadmium were also COPCs for sediments at Site 3.

4.3 Site 3 Characteristics that Affect Fate and Transport

The physical characteristics at Site 3 that affect the persistence and migration of contamination at Site 3 include topography, surficial geology, soil and water properties, hydrology and groundwater flow. In general, Site 3 is relatively flat with a few minor depressions. The surface soils are fine to medium sands and sandy silts and the shallow subsurface soils (less than 4 ft bgs) are grayish brown fine to medium sands and silts with

some clay that appear to be the dredged material placed in the landfill. The flat topography and the porous permeable nature of the sandy material in the surface and subsurface zone at Site 3 encourages downward migration of contaminants at Site 3. Locally, there will be some retardation of contaminants in subsurface areas exhibiting more clayey material, because of lower permeabilty.

The Water Table Aquifer at Site 3 is shallow and was found at a depth of 4 ft bgs. In addition, an apparent perched water zone was found in the shallow subsurface south of the landfill. Infiltration of contaminants to these shallow water tables is rapid. The groundwater flow in the Water Table Aquifer is most likely to the south. Groundwater pH in the monitoring wells completed in the shallow groundwater at the time of groundwater sampling ranged from 6.14 to 7.28, which are relatively neutral pH values. The sandy nature of the surface soils, subsurface soils and aquifers implies a relatively aerobic subsurface environment.

The sediment samples, which were collected in the minor depressions at Site 3, are sandy loams having a high total organic carbon content (TOC) of up to 67,700 mg/kg indicating they are rich in organic material. High organic carbon content in soils means an abundance of adsorption sites for contaminant adsorption.

4.4 Fate and Transport Properties of COPCs at Site 3

4.4.1 VOCs

The VOC COPCs detected at Site 3 include methylene chloride detected in low concentrations in subsurface soils (12J ug/kg) and sediment (100 ug/kg) and toluene detected in very low concentrations in sediment (4J ug/kg). The refuse deposited in the landfill at Site 3 included solvents, which could explain the origin of these two solvents.

The fate and transport properties of these solvents are shown on **Table 4-2**. Methylene chloride and toluene have high Henry's Law Constants indicating that they would have been subject to volatilization when deposited on the surface of the landfill. However, they also have moderate to high water solubilities which would result in subsurface transport to groundwater and surface runoff to sediment and surface water. The low concentrations of methylene chloride and toluene that remain indicate that only residual levels of contamination remain at Site 3. The clays associated with the dredged disposal material

TABLE 4-2
FATE AND TRANSPORT PROPERTIES OF SITE 3 ORGANIC COPCs

COPC	Spec. Density	Water Solubility (mg/l)	Henry's Law Constant (atm-m^3/mol)	Log K_{ow}	Log K_{oc}	Reference
VOCs						
Methylene Chloride	1.3266	$2.00x10^{-4}$	$2.00x10^{-3}$	1.30	0.94	Knox et al (1993)
Toluene	0.8669	$5.15x10^{2}$	$6.70x10^{-3}$	2.65	2.18	Knox et al (1993)
PAHs						
Anthracene	1.2600	$4.50x10^{-2}$	6.50x10-5	4.45	4.27	Knox et al (1993)
Benzo(a) anthracene	1.2740	$1.20x10^{-2}$	$2.30x10^{-6}$	5.90	6.14	Knox et al (1993)
Benzo (a) pyrene	1.3510	$3.90x10^{-3}$	$2.40x10^{-6}$	6.00	6.00	Knox et al (1993)
Benzo (b) fluoranthene	N/A	$1.40x10^{-2}$	$1.20x10^{-5}$	6.57	5.74	Knox et al (1993)
Benzo (k) fluoranthene	N/A	$5.50x10^{-4}$	$1.40x10^{-3}$	6.85	6.64	Knox et al (1993)
Chrysene	1.2740	$1.80x10^{-3}$	$7.26x10^{-20}$	5.61	5.39	Knox et al (1993)
Floranthene	1.2520	$2.40x10^{-1}$	$1.69x10^{-2}$	5.22	4.62	Knox et al (1993)
Fluorene	1.2030	1.69	$2.10x10^{-4}$	4.18	3.70	Knox et al (1993)
Indeno (1,2,3-cd) pyrene	0.0620	$6.20x10^{-2}$	$2.96x10^{-20}$	7.70	7.49E	Knox et al (1993)
Naphthalene	1.1450	$3.00x10^{-1}$	$4.60x10^{-4}$	3.36	3.11	Knox et al (1993)
Phenanthrene	1.1790	1.00	$3.90x10^{-5}$	4.52	4.36	Knox et al (1993)
Pyrene	1.2710	$1.35x10^{-1}$	$1.09x10^{-5}$	5.09	4.81	Knox et al (1993)
OTHER SVOCs /PCBs						
Carbazole	N/A	N/A	N/A	N/A	N/A	
Dibenzofuran	1.0886	$1.00x10^{1}$	N/A	4.17	4.00E	Knox et al (1993)
Penta chlorophenol	1.9780	$2.00x10^{1}$	$2.10X10^{-6}$	5.01	2.95	Knox et al (1993)
Diethyl phthalate	1.1175	$8.96x10^{2}$	$8.46x10^{-7}$	2.35	1.84	Knox et al (1993)
Butylbenzyl phthalate	1.1200	2.76	$1.30x10^{-6}$	4.78	2.18	Knox et al (1993)
Bis (2-ethylhexyl) phthalate	0.9873	$3.00x10^{-1}$	$1.10x10^{-5}$	4.65	5.00	Knox et al (1993)
Aroclor-1254	1.4100	$5.00x10^{-2}$	$2.7x10^{-3}$	6.47	5.64E	Knox et al (1993)
Aroclor-1260	1.5660	$8.00x10^{-2}$	$7.10x10^{-3}$	6.91	6.42E	Knox et al (1993)

N/A = not available
E = estimated

deposited at Site 3 and the high organic carbon content of the sediments may explain the persistence of these volatile organics in the subsurface soil and sediment, respectively. Biodegradation could be a factor with these compounds, given enough time (Knox et al., 1993).

The contaminant pathway for VOC releases at Site 3 is therefore direct discharge to soils, volatilization, leaching to groundwater and runoff to sediments, and migration with groundwater flow.

4.4.2 PAHs

PAHs are contained in the types of material deposited at Site 3, which included waste oils, oil sludges and dredged material. PAHs once deposited may have undergone volatilization (the fluoranthenes primarily) and photolysis (all PAHs) (USEPA, 1983). Table 4-2 also shows that PAHs have high values for adsorption coefficients (K_{ow} and K_{oc}) and low water solubilities indicating that sorption will be a major mechanism controlling PAHs at Site 3. The occurrence of PAHs in the surface soils, subsurface soils and sediments is consistent with sorption as the predominant mechanism controlling PAHs at Site 3. Further breakdown of PAHs via biodegradation is most feasible for the PAHs having less than four aromatic rings (e.g. acenaphthene, anthracene, fluorene, naphthalene and phenanthrene, but not the pyrenes or benzofluoranthenes) (USEPA, 1983).

The contaminant pathway for PAH releases at Site 3 is therefore direct discharge to soils and sediments with no migration to groundwater or surface water.

4.4.3 Other SVOCs

The other SVOCs detected at Site 3 include very low concentrations of carbazole in surface soils, dibenzofuran in surface and subsurface soils and pentachlorophenol in surface soils. Phthalates were also found in low concentrations in surface soil, sediment and groundwater.

The high adsorption coefficients, low Henry's Law Constants and low water solubilties listed in Table 4-2 for carbazole, dibenzofuran and pentachlorophenol indicate that sorption is most likely the dominant mechanism controlling these contaminants at Site 3. The sandy clays at Site 3 enhance the sorption of these compounds in the soils. Biodegradation of pentachlorophenol is possible but may not compete with sorption (USEPA, 1983).

Phthalates, which are used as plasticizers in vinyl products were likely contained in material deposited in the landfill. The fate and transport properties of phthalates as shown on Table 4-2 indicate that the predominant process controlling phthalates at Site 3 is sorption as evidenced by the high log K_{ow} and log K_{oc} and low to moderate water solubilities. Biodegradation is also an important process for phthalates (USEPA, 1983). Volatilization is not important as evidenced by the low Henry's Law Constants for phthalates. The presence of low levels of bis(2-ethylhexyl)phthalate in groundwater indicates some migration of these contaminants to groundwater. However, the low

concentrations of phthalates that remain indicate that only residual levels of contamination remain at Site 3.

4.4.4 PCBs

The PCBs detected at Site 3 include Aroclor-1254 at concentrations up to 100 ug/kg in surface soils and aroclor-1260 at concentrations up to 150 ug/kg in sediment. The waste oil disposed in the landfill could explain the origin of these PCBs. As shown on Table 4-2, the high specific density, extremely low solubility and very high adsorption coefficients (log K_{ow} and log K_{oc}) indicate that PCBs, when deposited on the ground, would strongly adsorb to soils and sediments. There would be no significant biodegradation of these PCBs but there is a strong potential for bioaccumulation (Knox et al., 1993).

Once adsorbed to soil or sediment, the only mechanism for transport would be physical transport associated with runoff and erosion.

4.4.5 Inorganics

Arsenic, beryllium, chromium, copper, lead, mercury, nickel, thallium and zinc were found in surface and subsurface soils at Site 3. Native materials as well as the waste oils and dredged material deposited at the landfill are the likely sources of these metals. All of the metals found in soils except thallium were found in sediments, and all of the metals except mercury and thallium were found in groundwater. The concentrations of these metals were highest in surface soil sample SJS03-SS07, subsurface soil samples SJS03-SB06 and -SB07 and sediment sample SJS03-SD02 which is downgradient of SJS03-SS07.

The concentrations of metals were highest in MW-2S and MW-4S which are south and therefore downgradient of the landfill. The majority of the metals detected in the groundwater samples were associated with the particulate fraction and not the dissolved fraction as evidenced by their low concentrations in filtered samples. Only nickel and zinc had significant dissolved fractions.

Table 4-3 summarizes the fate and transport properties of the metals found at Site 3. The wide range of soil conditions in the environment and the resulting high variability of physical parameters make it difficult to predict the mobility of metals. However, consistent with the pattern of metals observed at Site 3, adsorption and dissolution appear to be the

Table 4-3

Fate and Transport Properties of Site 3 Inorganic COPCs[a]

Chemical	Common Oxidation State	Solubility	Oxidation Reduction	Hydrolysis	Volatilization	Sorption	Biological Processes
Arsenic	+5, +3, -3	As_2O_5 and As_2O_3 are soluble	Under oxidizing conditions, soluble arsenic oxide forms; arsenic is insoluble under reducing conditions	Hydrolyzed to soluble forms	--	Strongly adsorbed to iron, manganese, aluminum and clays	Strong bioaccumulation
Beryllium	+2	0.2 mg/L for BeO	--	Forms insoluble hydroxide	--	Adsorbs to organic material and clays[b]	Slight bioaccumulation
Chromium	+2, +3, +6	CrO_3 is very soluble	Important for the formation of Cr^{3+}	Forms insoluble hydroxides at neutral or alkaline pH	--	Adsorption predominant at neutral to alkalinepH. Cr^{6+} mobile pH 4 to 9	Strong bioaccumulation
Copper	+1, +2, +3	Insoluble under normal env. conditions	Forms CuO and $Cu_2(OH)_2CO_3$	Forms CuO and $Cu_2(OH)_2CO_3$	--	Strong adsorption by iron and manganese; enhanced by ligand complexing which may increase solubility	Bioaaccumulates
Lead	+2, +4	PbO only very slightly soluble; other forms insoluble	Pb^{4+} readily reduces to Pb^{2+}	--	--	Strong adsorption by iron, manganese and aluminum	Bioaccumulates
Mercury	+1, +2	most forms insoluble under natural	Reducing conditions form insoluble HgS	--	Strong volatility	Strong adsorption to clays, oxides and organic material	Bioaccumulates

Table 4-3

Fate and Transport Properties of Site 3 Inorganic COPCs[a]

Chemical	Common Oxidation State	Solubility	Oxidation Reduction	Hydrolysis	Volatilization	Sorption	Biological Processes
		conditions[b]					
Nickel	+2	low solubilty under natural conditions	Reducing conditions form NiS	--	--	Strong coprecipitation with metal oxides	Some bioaccumulation
Thallium	+1, +3	Tl_2S solubility is 200 mg/L	Free thallium (3+) present in very oxidizing water, Tl or TlS precipitates under reducing conditions	--	--	Strong adsorption to clays	Strong bioaccumulation
Zinc	+2	ZnO solubililty is 1.6; complexation with organic and inorganic ligands increases solubility	--	Hydrolyzes to $Zn(OH)_2$ and ZnO which precipitate	--	Strongly adsorbed by metals, clays and organics	Strong bioaccumulation

[a] Source of most of information in table is USEPA (1983) except as otherwise footnoted. Photolysis was not important for any of these metals so it was excluded from the table.

[b] Source is Fetter (1993).

mechanisms controlling the metals at Site 3. There would also be a strong potential for bioaccumulation of metals at Site 3.

The sands at Site 3 will not strongly adsorb metals, but the clays associated with the dredged material and the organic material found in the sediments will adsorb metals. The high amount of iron and manganese in soils also facilitates the adsorption of metals including arsenic and chromium. Under most conditions, there is little soluble inorganic mercury, which explains the absence of mercury in groundwater (Fetter, 1993).

Nickel and zinc have higher mobilities than some of the other metals, explaining their occurrence in the dissolved fraction in groundwater. In general, the relatively neutral pH of the shallow groundwater at Site 3 does not indicate corrosive or alkaline conditions that would rapidly dissolve metals from the solid material comprising the aquifer. The conditions present at Site 3 more likely results in a very slow leaching of metals from the surface and subsurface soils into groundwater.

There is potential for the transport of the dissolved metals in groundwater at Site 3, which include nickel and zinc and low concentrations of the other metals, to the most proximal surface water which is the South Branch of the Elizabeth River. The South Branch of the Elizabeth River is approximately 1,000 ft south of the landfill.

4.5 Summary of Site 3 Contaminant Fate and Transport

The majority of the COPCs detected in the soils, sediments and groundwater at Site 3 can be classified as persistent, non-volatile and non-degradable metals (arsenic, beryllium, chromium, copper, lead, mercury, nickel, thallium and zinc) and very slowly degradable organics that include PAHs, PCBs and other SVOCs. These chemicals strongly sorb to soils and are relatively immobile. Concentrations in soils will persist into the future with only slow dissolution of metals to groundwater.

The volatile, soluble, degradable VOCs such as methylene chloride and toluene were found only in trace concentrations in the soils. No data indicates that these chemicals ever reached the groundwater.

4.6 Site 4 Contaminants of Potential Concern

Surface and subsurface soil, groundwater, surface water and sediment samples were collected and analyzed at Site 4. Complete lists of COPCs in these media are found in Sections 3.4.4 through 3.4.7. Only those COPCs that appear to be attributable to landfill activities at Site 4 will be discussed here (see Section 3.4.4.1.2, 3.4.4.2.2, 3.4.5.2 , 3.4.6.2 and 3.4.7.2). Numerous inorganic COPCs were found in the samples collected from Site 4; fate and transport of the priority pollutant metals and cyanide will be discussed here.

The organic COPCs in surface soil at Site 4 that appear attributable to landfill activities at Site 4 include the VOCs acetone and 2-butanone, PAHs, other SVOCs including carbazole and phthalates, the PCB aroclor-1260 and pesticides dieldrin, endrin aldehyde and endrin ketone. Subsurface soil samples showed only trace amounts of PAHs. The concentrations of the priority pollutant metal COPCs found in the surface soil and subsurface soil samples collected at Site 4 do not indicate contamination attributable to landfill activities but may be related to fill material deposited adjacent to the landfill (see Section 3.4.4.1.2 and 3.4.4.2.2). Note that subsurface soil samples could not be collected in the center of the landfill because the material was full of construction debris.

The organic compounds that were detected in the shallow wells completed in the Water Table Aquifer at Site 4 include the VOCs acetone and carbon disulfide, the PAH acenaphthene and other SVOCs including bis(2-ethylhexyl)phthalate and dibenzofuran. The priority pollutant metal COPCs that were detected in the groundwater at Site 4 include arsenic, chromium, lead, silver and thallium. The COPCs detected in the sediment that were also detected in Site 4 soils include acetone, PAHs, phthalates, aroclor-1260, dieldrin, arsenic, beryllium, chromium, copper, lead, mercury, nickel, silver, thallium and zinc. Carbon disulfide was also found to be a COPC in sediment. Surface water COPCs include acetone, 4-methylphenol and the priority pollutant metals arsenic, beryllium, chromium, copper, lead, mercury, nickel and zinc. Section 4.1 describes the chemical and physical processes influencing contaminant fate and transport.

4.7 Site 4 Characteristics that Affect Fate and Transport

The physical characteristics at Site 4 that affect the persistence and migration of contamination at Site 4 include topography, surficial geology, soil and water properties,

hydrology and groundwater flow. The surface of the landfill at Site 4 is relatively flat and unvegetated but is approximately 5 ft higher than the surrounding area; the area slopes gently to the south towards Blows Creek. A drainage channel runs along the eastern edge of the landfill and terminates in Blows Creek. The marshy depression along the southwestern edge of the landfill where SJS04-SD04 and -SW04 were collected also drains to Blows Creek. The surface soils are sandy silts and the shallow subsurface soils (less than 4 ft bgs and collected on the perimeter) are dark brown silts, fill that appears to be the dredged material placed in the landfill at Site 3 or fill associated with the Patrol Road. The flat topography of the top of the landfill surface and the porous permeable nature of the sandy silts and debris-laden subsurface material encourages downward migration of contaminants. The southwestern portion of the landfill that slopes towards Blows Creek may involve significant surface flow and runoff. Locally, there will be some retardation of contaminants in subsurface areas exhibiting more clayey material, because of lower permeability.

The Water Table Aquifer at Site 4 is shallow and was found at a depth of 4 ft bgs. Infiltration of contaminants to the shallow water table is rapid. The groundwater flow in the Water Table Aquifer is most likely to the southeast, however, the flow direction may fluctuate as a result of the tidal influence. Groundwater pH in the monitoring wells completed in the shallow groundwater at the time of groundwater sampling ranged from 6.3 to 7.36, which are relatively neutral pH values. The sandy nature of the surface soils, subsurface soils and aquifers implies a relatively aerobic subsurface environment.

The sediment samples, which were collected along the perimeter at Site 4, are sandy clayey loams having a high total organic carbon content (TOC) of up to 159,000 mg/kg indicating they are rich in organic material. High organic carbon content in soils means an abundance of adsorption sites for contaminant adsorption.

4.8 Fate and Transport Properties of COPCs at Site 4

4.8.1 VOCs

The VOC COPCs detected at Site 4 include acetone in low concentrations in the surface soils, groundwater, sediment and surface water (up to 79J ug/kg, 8 ug/L, 140 ug/kg and 8 ug/L, respectively), 2-butanone in low concentrations in the surface soils (up to 28 ug/kg),

and carbon disulfide in groundwater and sediments (0.4J ug/L and 19J ug/kg, respectively). The refuse deposited in the landfill at Site 4 was reported to include waste drums, which could potentially explain the origin of these solvents.

The fate and transport properties of these solvents are shown on **Table 4-4**. Acetone, 2-butanone and carbon disulfide have moderate to high Henry's Law Constants indicating that they would have been subject to volatilization when deposited on the surface of the landfill. However, they also have moderate to high water solubilities which would result in subsurface transport to groundwater and surface runoff to sediment and surface water. The low concentrations of acetone, 2-butanone and carbon disulfide that remain indicate that only residual levels of contamination remain at Site 4.

The clays contained in the soils and sediments at Site 4 and the high organic carbon content of the sediments may explain the persistence of these volatile organics in the surface soil and sediment.

The contaminant pathway for VOC releases at Site 4 is therefore direct discharge to soils, volatilization, leaching to groundwater and runoff to sediments and surface water, and migration with groundwater flow.

4.8.2 PAHs

PAHs are contained in the types of material deposited at Site 4, which was reported to include waste drums. PAHs once deposited may have undergone volatilization (the fluoranthenes primarily) and photolysis (all PAHs) (USEPA, 1983). Table 4-4 also shows that PAHs have high values for adsorption coefficients (K_{ow} and K_{oc}) and low water solubilities indicating that sorption will be a major mechanism controlling PAHs at Site 4.

The occurrence of PAHs in the surface soils, subsurface soils and sediments is consistent with sorption as the predominant mechanism controlling PAHs at Site 4. Further breakdown of PAHs via biodegradation is most feasible for the PAHs having less than four aromatic rings (e.g. acenaphthene, anthracene, fluorene, naphthalene and phenanthrene, but not the pyrenes or benzofluoranthenes) (USEPA, 1983).

TABLE 4-4
FATE AND TRANSPORT PROPERTIES OF SITE 4 ORGANIC COPCs

COPC	Spec. Density	Water Solubility (mg/l)	Henry's Law Constant (atm-m^3/mol)	Log K_{ow}	Log K_{oc}	Reference
VOCs						
Acetone	0.7906	$1x10^{6}$	$3.97x10^{-5}$	-0.24	-0.43E	Knox et al (1993)
2-Butanone	0.8051	$2.7x10^{5}$	$4.66x10^{-5}$	0.28	0.09E	Knox et al (1993)
Carbon Disulfide	1.2600	$2.10x10^{3}$	$1.33x10^{-2}$	2.00	2.47E	Knox et al (1993)
PAHs						
Acenaphthene	1.0242	3.47	$1.70x10^{-4}$	4.13	1.25	Knox et al (1993)
Acenaphthylene	0.8988	3.93	$2.00x10^{-4}$	4.07	3.68E	Knox et al (1993)
Anthracene	1.2600	$4.50x10^{-2}$	$6.50x10^{-5}$	4.43	4.27	Knox et al (1993)
Benxo(a) anthracene	1.2740	$1.20x10^{-2}$	$2.30x10^{-6}$	5.90	6.14	Knox et al (1993)
Benzo (b) fluoranthene	N/A	$1.40x10^{-2}$	$1.20x10^{-5}$	6.57	5.74	Knox et al (1993)
Benzo (k) fluoranthene	N/A	$5.50x10^{-4}$	$1.40x10^{-3}$	6.85	6.64E	Knox et al (1993)
Benzo (a) pyrene	1.3510	$3.90x10^{-3}$	$2.40x10^{-6}$	6.00	6.00E	Knox et al (1993)
Chrysene	1.2740	$1.80x10^{-3}$	$7.26x10^{-20}$	5.61	5.39E	Knox et al (1993)
Dibenz (a,h) anthracene	1.2820	$5.00x10^{-3}$	$7.33x10^{-9}$	6.36	6.22	Knox et al (1993)
Floranthene	1.2520	$2.40x10^{-1}$	$1.69x10^{-2}$	5.22	4.62	Knox et al (1993)
Indeno (1,2,3-cd) pyrene	0.0620	$6.20x10^{-2}$	$2.96x10^{-20}$	7.70	7.49E	Knox et al (1993)
2-methylnaphthalene	1.0058	$2.46x10^{1}$	N/A	4.11	3.93	Knox et al (1993)
Naphthalene	1.1450	$3.00x10^{-1}$	$4.60x10^{-4}$	3.36	3.11	Knox et al (1993)
Phenanthrene	1.1790	1.00	$3.90x10^{-5}$	4.52	4.36	Knox et al (1993)
Pyrene	1.2710	$1.35x10^{-1}$	$1.90x10^{-5}$	5.09	4.81	Knox et al (1993)
Other SVOCs						
Diethyl phthalate	1.1175	$8.96x10^{-2}$	$8.46x10^{-7}$	2.35	1.84	Knox et al (1993)
Butylbenzyl phthalate	1.1200	2.76	$1.30x10^{-6}$	4.78	2.18	Knox et al (1993)
Carbazole	N/A	N/A	N/A	N/A	N/A	
4-methyl phenol	1.0178	$2.30x10^{4}$	$7.92x10^{-7}$	1.92	1.69	Knox et al (1993)
Pesticides/PCBs						
Dieldrin	1.7500	$2.00x10^{-1}$	$2.00x10^{-5}$	4.53	4.08	Knox et al (1993)
Endrin aldehyde	N/A	$2.60x10^{-1}$	$3.86x10^{-7}$	5.60	4.43E	Knox et al (1993)
Endrin Ketone	N/A	N/A	N/A	N/A	N/A	
Aroclor – 1260	1.5660	$8.00x10^{-2}$	$7.1x10^{-3}$	6.91	6.42E	Knox et al (1993)

Acenaphthene was found in very low concentrations (2J ug/L and 5J ug/L) in monitoring well MW-1S in both the first and second rounds of sampling, respectively, indicating transport from the vadose zone to groundwater. The solubility of acenaphthene, one of the most soluble PAHs, results in the low concentration of this PAH in groundwater.

The contaminant pathway for PAH releases at Site 4 is therefore direct discharge to soils and sediments with little migration to groundwater and no migration to surface water.

4.8.3 Other SVOCs

The other SVOC COPCs detected at Site 4 include very low concentrations of carbazole in surface soils (up to 300J ug/kg), low concentrations of phthalates including butylbenzylphthalate in surface soils and sediment, diethylphthalate in surface soils and sediment, di-n-butylphthalate in sediment, and bis(2-ethylhexyl)phthalate in groundwater, a low concentration of dibenzofuran in groundwater (2J ug/L in MW-1S) and a low concentration of 4-methylphenol in surface water (13 ug/L).

The high adsorption coefficients (log K_{ow} and log K_{oc}), low Henry's Law Constants and low to moderate water solubilties listed in Table 4-4 for carbazole, phthalates and dibenzofuran indicate that sorption is most likely the dominant mechanism controlling these contaminants at Site 4. Biodegradation is also an important process for phthalates (USEPA, 1983). The presence of low levels of bis(2-ethylhexyl)phthalate and dibenzofuran in groundwater indicates some migration of these contaminants to groundwater. However, the low concentrations of these compounds that remain indicate that only residual levels of contamination remain at Site 4.

4-Methylphenol is different than the other SVOCs detected at Site 4 in that 4-methylphenol has a much higher water solubility and lower adsorption coefficient (Table 4-4). The high water solubility resulted in transport to surface water.

The contaminant pathway for the releases of other SVOCs at Site 4 is therefore direct discharge to soils and sediments with migration of only the more soluble compounds (bis(2-ethylhexyl)phthalate, dibenzofuran and 4-methylphenol) to groundwater and surface water.

4.8.4 Pesticides and PCBs

The pesticide COPCs detected at Site 4 include dieldrin in surface soils and sediment at concentrations up to 72J ug/kg and 23 ug/kg, respectively, and endrin aldehyde and endrin ketone in surface soils at concentrations of 160J ug/kg and 83J ug/kg, respectively. These pesticides have very high adsorption coefficients along with very low Henry's Law Constants and very low water solubilities indicating sorption is the major mechanism

controlling pesticides at Site 4. These pesticides are also very resistant to biodegradation (USEPA, 1983).

The COPC PCBs detected at Site 4 include aroclor-1260 at concentrations up to 6,300 ug/kg and 90J ug/kg in surface soils and sediment, respectively. The ballast containers for fluorescent light fixtures deposited in the landfill were known to contain PCBs.

As shown on Table 4-4, the high specific density, very low solubility and very high adsorption coefficients (log K_{ow} and log K_{oc}) indicate that PCBs, when deposited on the ground, would strongly adsorb to soils and sediments. There would be no significant biodegradation of these PCBs but there is a strong potential for bioaccumulation (Knox et al., 1993).

Once adsorbed to soil or sediment, the only mechanism for transport of pesticides and PCBs at Site 4 would be physical transport associated with runoff and erosion. Little potential exists for these contaminants to reach groundwater.

4.8.5 Inorganics

The fluorescent light ballasts disposed of in the landfill are a likely source for the metals, particularly mercury, found in sediment and surface water at Site 4. Metals concentrations also appear to increase from the upgradient sediment sample (SJS04-SD01) to the downgradient sediment sample (-SD03), indicating that metals in the sediment may have come from the landfill. The priority pollutant metal COPCs detected in sediment at Site 4 include arsenic, beryllium, chromium, copper, lead, mercury, nickel, thallium and zinc. All of these metals except thallium were found in the one surface water sample collected (SJS04-SW04).

The priority metal COPCs detected in the groundwater samples collected from the Water Table Aquifer at Site 4 are more difficult to relate to landfill activities because the aquifer is influenced by the tide. The priority pollutant metal COPCs include arsenic, chromium, lead, silver and thallium. The concentrations of these metals were highest in MW-2S and MW-4S. All of the metals detected in the groundwater samples were associated primarily with the particulate fraction and not the dissolved fraction as evidenced by their low concentrations in filtered samples.

Table 4-5 summarizes the fate and transport properties of the metals found at Site 4. The wide range of soil and sediment conditions in the environment and the resulting high variability of physical parameters make it difficult to predict the mobility of metals. However, consistent with the pattern of metals observed at Site 4, adsorption and dissolution appear to be the mechanisms controlling the metals at Site 4. There would also be a strong potential for bioaccumulation of metals at Site 4.

The high concentration of metals in the downgradient sediment samples SJS04-SD03 and -SD04 suggest that the high amount of organic material found in the sediments at Site 4 are retaining metals. However, the high concentrations of metals at surface water sample location SJS04-SW04 indicate that the metals are suspended in this sample or that oxidizing conditions are present leading to the dissolution of metals from the sediment. The high conductivity of this surface water sample (20,000 uhmos/cm) indicates that the metals in the surface water sample may be associated with suspended material.

In general, the relatively neutral pH of the shallow groundwater and surface water at Site 4 does not indicate corrosive or alkaline conditions that would rapidly dissolve metals from the solid material comprising the aquifer and sediment. The conditions present at Site 4 more likely results in a very slow leaching of metals to groundwater and surface water.

There is potential for the transport of the dissolved or suspended metals in surface water at Site 4 to the most proximal surface water which is Blows Creek. Blows Creek is approximately 300 ft south of this sampling location.

4.9 Summary of Site 4 Contaminant Fate and Transport

The majority of the COPCs detected in the soils, sediments, surface water and groundwater at Site 4 can be classified as persistent, non-volatile and non-degradable metals (arsenic, beryllium, chromium, copper, lead, mercury, nickel, silver, thallium and zinc) and very slowly degradable organics that include PAHs, pesticides, PCBs and other SVOCs. These chemicals strongly sorb to soils and sediments and are relatively immobile. Concentrations in soils and sediment will persist into the future with only slow dissolution of metals and the most soluble SVOCs (acenaphthene, bis(2-ethylhexyl)phthalate and 4-methylphenol) to groundwater and surface water. Transport of contaminants in surface water, whether in the dissolved or particulate form, to Blows Creek is possible.

Table 4-5

Fate and Transport Properties of Site 4 Inorganic COPCs[a]

Chemical	Common Oxidation State	Solubility	Oxidation Reduction	Hydrolysis	Volatilization	Sorption	Biological Processes
Arsenic	+5, +3, -3	As_2O_5 and As_2O_3 are soluble	Under oxidizing conditions, soluble arsenic oxide forms; arsenic is insoluble under reducing conditions	Hydrolyzed to soluble forms	--	Strongly adsorbed to iron, manganese, aluminum and clays	Strong bioaccumulation
Beryllium	+2	0.2 mg/L for BeO	--	Forms insoluble hydroxide	--	Adsorbs to organic material and clays[b]	Slight bioaccumulation
Chromium	+2, +3, +6	CrO_3 is very soluble	Important for the formation of Cr^{3+}	Forms insoluble hydroxides at neutral or alkaline pH	--	Adsorption predominant at neutral to alkalinepH. Cr^{6+} mobile pH 4 to 9	Strong bioaccumulation
Copper	+1, +2, +3	Insoluble under normal env. conditions	Forms CuO and $Cu_2(OH)_2CO_3$	Forms CuO and $Cu_2(OH)_2CO_3$	--	Strong adsorption by iron and manganese; enhanced by ligand complexing which may increase solubility	Bioaaccumulates
Lead	+2, +4	PbO only very slightly soluble; other forms insoluble	Pb^{4+} readily reduces to Pb^{2+}	--	--	Strong adsorption by iron, manganese and aluminum	Bioaccumulates
Mercury	+1, +2	most forms insoluble under natural conditions[b]	Reducing conditions form insoluble HgS	--	Strong volatility	Strong adsorption to clays, oxides and organic material	Bioaccumulates

Table 4-5

Fate and Transport Properties of Site 4 Inorganic COPCs[a]

Chemical	Common Oxidation State	Solubility	Oxidation Reduction	Hydrolysis	Volatilization	Sorption	Biological Processes
Nickel	+2	low solubilty under natural conditions	Reducing conditions form NiS	--	--	Strong coprecipitation with metal oxides	Some bioaccumulation
Silver	+1	Low solubility under natural conditions	Reducing conditions form insoluble precipitate	--	--	Strongly sorbed by manganese, iron, clays, and organic material	Bioaccumulates
Thallium	+1, +3	Tl_2S solubility is 200 mg/L	Free thallium (3+) present in very oxidizing water, Tl or TlS precipitates under reducing conditions	--	--	Strong adsorption to clays	Strong bioaccumulation
Zinc	+2	ZnO solubililty is 1.6; complexation with organic and inorganic ligands increases solubility	--	Hydrolyzes to $Zn(OH)_2$ and ZnO which precipitate	--	Strongly adsorbed by metals, clays and organics	Strong bioaccumulation

[a] Source of most of information in table is USEPA (1983) except as otherwise footnoted. Photolysis was not important for any of these metals so it was excluded from the table.

[b] Source is Fetter (1993).

The volatile, soluble, degradable VOCs such as acetone and carbon disulfide were found only in trace concentrations in the surface soils and sediments. These VOCs were detected in the groundwater and surface water at low concentrations.

5. Human Health Risk Assessment

The primary objective of this risk assessment is to assess the health risks to current and potential future human receptors from contamination present at and migrating from Landfill C (Site 3) and the Burning Grounds (Site 4) at the St. Juliens Creek under existing conditions. The risk assessment is comprised of the following components:

- **Identification of Chemicals of Potential Concern (COPCs)**–identify and characterize the distribution of COPCs found onsite.
- **Exposure Assessment**–identify potential pathways of human exposure, and estimate the magnitude, frequency, and duration of these exposures.
- **Toxicity Assessment**–assess the potential adverse effects of the COPCs.
- **Human Health Risk Characterization**–characterize the potential health risks associated with exposure to site related contamination.
- **Human Health Assessment Uncertainty Analysis**–identify sources of uncertainty in the risk assessment.

All of the above components were evaluated following Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) regulations and using EPA risk assessment guidance as cited in the technical approach memorandum (undated) provided in Appendix H. In addition to the guidance cited in the technical memorandum, this risk assessment was completed following the Consensus Agreement #6A (Parts 1 through 6) prepared and agreed to by the Navy, EPA and the Virginia Department of Environmental Quality. The Consensus Agreements are provided in Appendix H. The technical approach memorandum outlines the assumptions to be used for this risk assessment. The technical memorandum was the subject of a conference call on November 20, 1997 where representatives of the Navy, EPA, VADEQ, and their contractors reviewed the technical approach, clarified issues, and agreed to a final approach for the risk assessment. The decisions made during this conference call are documented in a meeting summary provided as Appendix G. Thus, this risk assessment was performed according to published guidance and the technical approach memorandum as amended. This risk assessment was

evaluated independently in the risk assessment. Upgradient wells at Sites 3 and 4 were not evaluated as part of this risk assessment.

In accordance with EPA Region III *Draft Guidance on the Selection of Analytical Metal Results from Monitoring Well Samples for Use in the Quantitative Assessment of Risk* (EPA, August 1992, unfiltered groundwater samples were used to determine inorganic constituent exposure concentrations. The review of the groundwater data determined that the results from the filtered samples were similar to the results of the unfiltered groundwater samples.

Groundwater sampling locations are shown on Figures 2-7 and 2-8. Discussions of the nature and extent of COPCs in groundwater can be found in Section 3.3.5.1 for Site 3 and Section 3.4.5.1 for Site 4. Appendix E presents the analytical results for the groundwater data that were used in this risk assessment.

5.1.1.2 Surface Soil

Surface soil samples were collected from seven locations at Site 3 and ten locations at Site 4. Surface soil sampling locations are shown on Figure 2-3 for Site 3 and Figure 2-4 for Site 4. Samples collected from upgradient locations were not considered as part of this risk assessment. Discussions of the nature and extent of COPCs in surface soil can be found in Section 3.3.4.1.1 for Site 3 and Section 3.4.4.1.1 for Site 4. Appendix E presents the analytical results for the surface soil data used in the risk assessment.

5.1.1.3 Subsurface Soil

A total of seven subsurface soil samples were collected from Site 3 while three subsurface soil samples were collected from Site 4. Subsurface soil sampling locations are shown on Figures 2-5 and 2-6, respectively. Discussions of the nature and extent of COPCs detected in subsurface soils are presented in Section 3.3.4.2.1 for Site 3 and Section 3.4.4.2.1 for Site 4. Appendix E presents the analytical results for the subsurface soil data used in the risk assessment.

5.1.1.4 Surface Water

Due to dry conditions, only one surface water sample was collected during this investigation. The location of this sample, which was collected from Site 4, is depicted on Figure 2-10. Analytical results for this sample are presented in Appendix E. The nature and extent of COPCs in Site 4 surface water is discussed in Section 3.4.6.1.

5.1.1.5 Sediment

A total of eight sediment samples were collected from areas on and adjacent to Sites 3 and 4. Five of these samples were collected from the Site 3 area and three were collected from Site 4 and surrounding areas. Sediment sampling locations are shown on Figure 2-9 for Site 3 and Figure 2-10 for Site 4. Discussions of the nature and extent of COPCs are presented in Section 3.3.6.1 for Site 3 and 3.4.6.1 for Site 4. Appendix E presents the analytical results for the sediment data used in the risk assessment.

5.1.1.6 Relative Risk Data

Section 1.3.4 describes the Relative Risk study. Analytical results from the RI data and the Relative Risk Data were compared for Sites 3 and 4 for groundwater and surface soil. Note that the groundwater data collected for the RI is from monitoring wells and the groundwater data collected for the Relative Risk study was collected using Geoprobe^{R}.

For Site 3 groundwater, several organic and inorganic constituents were reported in the Relative Risk study which were not reported in the RI data. These include primarily explosives and PAHs. Specifically, they include 1,3,5-trinitrobenzene, 2,6-dinitrotoluene, 2-chlorophenol, 4-chloro-3-methylphenol, 4-nitrophenol, 4-nitrotoluene, carbazole, chrysene, dibenzofuran, fluoranthene, fluorene, magnesium, mercury, naphthalene, pentachlorophenol, phenanthrene, potassium, pyrene, sodium, and thallium. Conversely, for Site 3 soil, several organic and inorganic constituents were detected in the RI samples which were not reported in the Relative Risk study.

For Site 4 groundwater, the only constituents reported in the Relative Risk data which were not reported in the RI data are the essential nutrients and thallium. For Site 4 soil, chromium, lead, magnesium, potassium, and phenanthrene were detected in the Relative Risk study samples but not detected in the RI samples.

5.1.2 Data Screening

This section presents the comparison of the analytical data collected during the remedial investigation (RI) with risk-based concentrations (RBCs) or screening levels. Constituents with maximum detected concentrations that exceed the RBCs or screening levels are considered COPCs. The COPCs identified during this screening are evaluated in the risk assessment.

At the present time, no study of background conditions has been conducted at the St. Juliens Creek Annex. Although samples were collected from locations considered to be upgradient for all media except surface water, these samples are not considered to be a true representation of background conditions. As a result a comparison of analytical data collected during this investigation to background conditions was not possible.

5.1.2.1 Screening Levels

The method for selecting COPCs was determined through a consensus process that involved toxicologists from EPA Region III, Virginia Department of Environmental Quality (VADEQ), U.S. Naval Facilities Engineering Command, Atlantic Division (LANTDIV), and LANTDIV's contractors. The consensus agreement, designated No. 6.A.1, is shown in Appendix H. COPCs were selected using a hierarchical application of selection criteria. The selection criteria are a system consisting of distinct, hierarchical levels designated as primary criteria, secondary criteria, and re-inclusion criteria. This methodology applies only to individual chemical constituents, and does not apply to the evaluation of nonspecific parameters such as TPH and TOC.

5.1.2.2 Primary Selection Criteria

The St. Juliens Creek Annex of the Norfolk Naval Base is located in the Commonwealth of Virginia, therefore, all environmental investigation activities were conducted in accordance with guidance established by EPA Region III (Region III) and the VADEQ. The primary selection criteria are discussed in Region III guidance *Selecting Exposure Routes and Contaminants of Concern, by Risk-Based Screening* dated January 1993. This guidance document, which also serves as the accepted guidance recommended by VADEQ, established the primary COPC selection criteria as a direct comparison of maximum site-measured concentrations with Region III-derived risk-based contaminants of concern (COCs). Region III COC screening levels have been established for soil and tap water. The Region III document references a Region III Risk-Based Concentration (RBC) Table that is periodically updated as new toxicological information becomes available. The most recent version of the Region III Risk-Based Concentration Table (October 22, 1997) was used for this selection process. In this discussion the Region III RBC values are referred to as COC screening values. The Region III COC screening values have been established to be protective of both direct and indirect contact exposure to a contaminated environmental medium. The COC screening values were applied as follows:

- Region III COC screening values established for tap water were applied to the selection of groundwater COPCs, regardless of groundwater depth or classification.
- Region III soil COC screening values established for industrial and/or residential land use were compared to surface and subsurface soil data.

Soil screening levels (SSLs) are risk-based values that are derived using the same exposure assumptions as COC screening values, plus additional assumptions necessary for inter-media extrapolation. Although SSLs may be more applicable to the feasibility study (FS) process, as well as fate and transport assessments, they may be applied to the risk assessment process when indirect exposures to soil via groundwater and soil via air exposure pathways are considered. The SSL values presented in the Region III Risk-Based Concentration Table dated March 17, 1997 were used in this risk assessment. The SSLs were compared to site-measured subsurface soil concentrations for the qualitative evaluation in the following manner (regardless of residential or industrial land use):

- SSLs protective of transfers from soil to groundwater were compared to site-measured surface and subsurface soil concentrations. The soil to groundwater exposure pathway was evaluated qualitatively for Sites 3 and 4.
- SSLs protective of transfers from soil to air were compared to site measured surface and subsurface soil concentrations. The soil to air exposure pathway was evaluated qualitatively for Sites 3 and 4.

The identification of COPCs in surface water and sediment was based on the following criteria or standards:

- Federal Ambient Water Quality Criteria (AWQCs) and Virginia Water Quality Standards were compared to surface water maximum values.
- COC screening values for sediment were calculated for the recreational receptor using the approach discussed in the Region III RBC table and used to screen the constituents detected in Site 3 and 4 sediments. Recreational adult and adolescent health risk-based sediment screening criteria were derived using the equations and exposure assumptions developed through the above mentioned consensus process. The consensus agreement designated No. 6.A.4 is shown in Appendix H. The development of site-specific sediment

RBC values is presented in Appendix J. The screening criteria were compared directly to site-measured maximum sediment concentrations.

- Lead was evaluated for inclusion as a COC in surface soil, sediment, and groundwater using the screening values provided in Consensus Agreement #6.A.6 which is included in Appendix H of this document.

5.1.2.3 Secondary Selection Criteria

Secondary selection criteria also were used to identify COPCs. These criteria are outlined in EPA's *Risk Assessment Guidance for Superfund (RAGS), Volume I, Human Health Evaluation Manual (Part A), Interim Final,* dated December 1989. The secondary selection criteria were applied as follows:

- During data validation, the sample concentrations were compared to blank concentrations. In accordance with EPA's *National Functional Guidelines,* constituent concentrations that are considered to be from blank contamination and not from site-related activities were flagged with a "B" qualifier. It was assumed that the blank-related concentration of a constituent qualified with a "B" is the sample quantitation limit.

- Chemicals detected in groundwater samples that did not have primary risk-based criteria were compared to the most recent Federal Safe Drinking Water Act (SDWA) MCLs. MCLs are not completely risk based because they take into account technical and economic feasibility and are more appropriately used in the FS for determining cleanup levels; however, they are included in the screening process as discussed in Consensus Agreement No. 6.A.1 (Appendix H).

- In accordance with Consensus Agreement No. 6.A.5 (Appendix H), those inorganic constituents considered to be essential human nutrients were automatically screened from further consideration as COPCs for evaluation in the human health risk assessment.

5.1.2.4 Re-Inclusion Criteria

Chemicals initially screened from consideration as COPCs, based on application of the primary and secondary criteria discussed above, were considered for re-inclusion as COPCs for quantitative evaluation in the human health risk assessment based on the re-inclusion criteria presented in Appendix H, Consensus Agreement No. 6.A.1 and summarized below.

- A chemical that was detected at concentrations below the corresponding primary COC screening level may be re-included as a COPC if that chemical is considered a Class A carcinogen (human carcinogen).

- A site-related toxic chemical that persists in the environment and exhibits the tendency to bioaccumulate will be further considered for re-inclusion as a COPC.

5.1.2.5 Use of Region III Risk-Based COC Screening Values

The initial 1993 Region III technical guidance document, entitled *Selecting Exposure Routes and Contaminants of Concern by Risk-Based Screening* and a subsequent document dated March 1994, included a table of COC screening concentrations. However, since the 1994 document, there have been numerous updates to the COC screening concentrations that reflect the updated toxicological information from EPA's toxicological database. The most current version of the *Region III Risk-Based Concentration Table* (October 1997) was used for this evaluation.

The COC screening levels are derived using equations and standard default exposure assumptions published by the EPA. In addition, the screening levels are derived using a cancer risk of $1x10^{-6}$ or a hazard quotient of 1.0. The hazard quotient of 1.0 does not account for potential effects from multiple constituents. Therefore, for this evaluation, the COC screening concentration for non-carcinogenic chemicals was adjusted downward by a factor of 10, corresponding to a hazard quotient of 0.1.

5.1.3 Results of COPC Screening

Tables 2.1 through 2.9 for Site 3 and Tables 2.1 through 2.10 for Site 4, which are located in Appendices H and I, respectively, summarize the COPC screening process and identify COPCs that were selected for each media and pathway of concern.

5.1.3.1 Groundwater

Tables 2.1 through 8.4 in the groundwater sections of Appendices H and I present the COPC selection process, and noncancer and cancer risk calculations for the groundwater at Sites 3 and 4, respectively. No chemicals were re-included as COPCs for Site 3 or 4 groundwater based on the criteria discussed in Section 5.1.2.4. Contaminants that were selected as COPCs for Site 3 groundwater are noted on Tables 2.1 and 2.2 in the groundwater section of Appendix I. These chemicals include aluminum, arsenic, beryllium,

chromium, iron, manganese, nickel, vanadium, and bis(2-ethylhexyl)phthalate in the shallow aquifer at Site 3. Manganese and chloroform were detected at levels above screening criterion in the deep aquifer at Site 3. Contaminants that were selected as COPCs for Site 4 groundwater are noted in Tables 2.1 and 2.2 of Appendix I. These contaminants include aluminum, arsenic, barium, beryllium, cadmium, chromium, iron, lead, manganese, nickel, silver, thallium, vanadium, and bis(2-ethylhexyl)phthalate in the shallow aquifer at Site 4. Arsenic, barium, bis(2-ethylhexyl)phthalate, iron, manganese, and chloroform were detected at levels above the screening criterion in the deep aquifer at Site 4.

5.1.3.2 Surface Soil

Tables 2.3 through 8.11 in the surface soil sections of Appendices H and I present the COPC selection process and noncancer and cancer risk calculations for the surface soil at Sites 3 and 4. Detected concentrations were compared to residential surface soil RBCs to assess potential exposure for trespassers and future residents. Detected concentrations were also compared to soil to groundwater SSLs to qualitatively evaluate the potential for contaminant transfer to the shallow groundwater aquifer. Contaminant levels in surface soils were also compared to soil to air SSLs in order to qualitatively evaluate the potential for transfer of contaminants to air. Note, however, that there are a limited number of published SSLs to evaluate the inter-media transfer. No chemicals were re-included as COPCs for Site 3 or 4 surface soil based on the criteria discussed in Section 5.1.2.4.

Contaminants that exceeded residential surface soil RBCs in Site 3 surface soils include aluminum, arsenic, benzo(a)pyrene, benzo(b)fluoranthene, beryllium, iron, manganese, and vanadium. Dieldrin, nickel, and barium were all detected at concentrations in excess of soil to groundwater SSLs in Site 3 surface soils. No analytes were detected in excess of soil to air SSLs in Site 3 surface soils.

At Site 4, benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, dieldrin, arsenic, beryllium, dieldrin, iron, manganese, nickel, and vanadium exceeded residential surface soil RBCs. Barium, benzo(a)anthracene, chrysene, and nickel were all detected at concentrations in excess of soil to groundwater SSLs in Site 4 surface soils. No analytes were detected in excess of soil to air SSLs in Site 4 surface soils.

5.1.3.3 Subsurface Soil

Tables 2.6 through 8.12 in the subsurface soil section of Appendices H and I present the COPC selection process and non-cancer and cancer risk calculations for the constituents in the subsurface soil at Sites 3 and 4. Detected concentrations were compared to residential surface soil RBCs to assess potential exposure during future excavation work. Detected concentrations were also compared to soil to groundwater SSLs to qualitatively evaluate the potential for contaminant transfer to the deep groundwater aquifer. Contaminant levels in surface soils were also compared to soil to air SSLs in order to qualitatively evaluate the potential for transfer of contaminants to air. Note, however, that there are a limited number of published SSLs to evaluate the inter-media transfer. No chemicals were re-included as COPCs for Site 3 or 4 subsurface soil based on the criteria discussed in Section 5.1.2.4.

Aluminum, arsenic, benzo(a)pyrene, benzo(b)fluoranthene, beryllium, and iron were all detected in Site 3 subsurface soils at concentrations in excess of surface soil RBCs. Barium, chrysene and methylene chloride were detected in Site 3 subsurface soils at concentrations in excess of soil to groundwater SSLs. No compounds were detected at concentrations in excess of soil to air SSLs.

Benzo(a)pyrene, aluminum, arsenic, beryllium, iron, and manganese were all detected in Site 4 subsurface soils at concentrations in excess of residential surface soil RBCs. Arsenic, barium, and nickel were detected at concentrations in excess of soil to groundwater SSLs. No analytes were detected in excess of soil to air SSLs.

5.1.3.4 Sediment

Table 2.9 in each sediment section of Appendices H and I present the COPC selection process for the sediment at Sites 3 and 4. No chemicals were detected in excess of sediment RBC values at either Site 3 or Site 4. Lead was detected at both Sites 3 and 4 at a concentration in excess of the 400 mg/kg screening value stipulated in Partnering Agreement #6.A.6 which is presented in Appendix H. No chemicals were re-included as COPCs for Site 3 or 4 sediments based on the criteria discussed in Section 5.1.2.4.

5.1.3.5 Surface Water

Tables 2.10 through 8.17 in the surface water section of Appendix I summarize the COPC selection process and the noncancer and cancer risk calculations for the surface water at Site 4. Beryllium, chromium, copper, iron, lead, mercury, and zinc were detected in the

surface water samples at a maximum concentration above their respective COPC screening values. No chemicals were re-included as COPCs for Site 3 or 4 surface water based on the criteria discussed in Section 5.1.2.4.

5.2 Exposure Assessment

Exposure assessment is the determination or estimation of the magnitude, frequency, duration, and route of exposure. The purpose of the exposure assessment is to identify and evaluate the contaminant sources, release mechanisms, environmental pathways, routes of exposure, and receptors. Exposure is defined as the contact of an organism with a chemical or physical agent. The magnitude of exposure is determined by measuring or estimating the amount of an agent available at the exchange boundaries (i.e., the lungs, gastrointestinal tract, and skin). Exposure can occur when contaminants migrate from a source to an exposure point, or when a receptor comes into direct contact with waste or contaminated media.

5.2.1 Land Use and Activity Patterns/Demographics

Site 3 is a grass covered former landfill; Site 4, a former trench and landfill, is characterized by raised surface features and areas which lack vegetation. Future land use at these sites is expected to be either industrial or commercial. In order to take a conservative approach in accounting for potential future commercial use of Sites 3 and 4, residential RBC values were used during the COPC screening process.

According to officials from the Virginia Department of Environmental Quality groundwater from the shallow aquifer at the St. Juliens Creek Annex is not considered to be drinkable (Appendix G). As a result, shallow groundwater was not evaluated for the ingestion exposure route in any pathway but was evaluated for the dermal pathway.

5.2.2 Conceptual Site Models

Exposure routes are where humans could potentially come in contact with contamination. Potential exposure routes are evaluated for current site use and potential future site use. Existing and potential pathways are illustrated in the conceptual exposure model (presented as Table 1 in Appendix I for Site 3, and as Table 1 in Appendix I for Site 4).

The Site 3 conceptual model includes exposure to the following media: shallow groundwater, deep groundwater, surface soil, subsurface soil, and sediment. The receptors associated with each Site 3 medium are described below.

- The only receptor identified for the shallow aquifer is a groundskeeper who could be exposed to site contaminants while watering plants.
- Receptors for the deep groundwater aquifer include current residents and a future construction worker who could be exposed to contaminated groundwater during excavation work. Current residents are being considered because the local municipality (City of Chesapeake) has some use for deep groundwater.
- Receptors for site surface soil include child, adolescent, and adult trespassers, child and adult residents, construction workers, and groundskeepers. (Note that the trespasser scenario uses the same exposure assumptions for current and future exposure).
- The only receptor identified for subsurface soil is the future construction worker who could be exposed to contaminated groundwater during excavation work.
- Receptors for site sediment include child, adolescent, and adult trespassers, and child and adult residents. (Note that the trespasser scenario uses the same exposure assumptions for current and future exposure).

Receptors for Site 4 are identical to those identified at Site 3, but with the addition of the surface water exposure media. Receptors for site 4 surface water include child, adolescent, and adult trespassers, and child and adult residents. (Note that the trespasser scenario uses the same exposure assumptions for current and future exposure).

5.2.3 Estimation of Exposure Point Concentration

Exposure concentrations are the estimated chemical concentrations a receptor could contact and are specific to each exposure medium. Exposure point concentrations (EPCs) may be estimated through direct use of monitoring data or by use of environmental fate and transport models. For this evaluation, the EPCs are based on site monitoring data; therefore, modeling of the site data was not conducted. In accordance with the technical approach memorandum and meeting minutes presented in Appendix G, both Reasonable Maximum Exposure (RME) and Central Tendency (CT) EPCs were considered in this risk assessment.

RME and CT represent the two types of exposure estimates required for EPA risk assessments. The RME is defined as the highest exposure that could be reasonably be

expected to occur for a given exposure pathway at a site. The RME is intended to account for both uncertainty in the contaminant concentration and variability in exposure parameters. CT is most representative of the concentration that would be contacted at a site over time. RME is most commonly used for remedial decision making purposes by EPA.

For all media except surface soil, the small number of samples collected allowed for the use of the maximum detected concentration as the RME. For surface soil samples, the RME was calculated as the 95% UCL of the arithmetic mean. The maximum detected concentration was used in place of the 95% UCL when the calculated 95% UCL was greater than the maximum detected value.

Instead of performing the W-test to determine if the soil data were normally or lognormally distributed, as outlined in the technical approach document, the data were assumed to be lognormally distributed and the 95% UCL for a lognormal distribution was calculated as follows:

$$95\%\ UCL = \exp(TM + 0.5*s^2 + (s*H/(n-1)^{0.5}))$$

Where:

exp = natural log
TM = arithmetic mean of the transformed data
s = standard deviation of the transformed data
H = H-statistic
n = sample size

CT concentrations were calculated as the arithmetic average of detected concentrations of COPCs. For samples in which a given COPC was not detected, one-half of the sample quantitation limit was used as the detected value.

Tables 3.1 through 3.4 in Appendix I and tables 3.1 through 3.5 in Appendix I present the results of the calculation of the exposure point concentrations of the COPCs for each medium and the rationale for selection of the exposure point concentration.

5.2.4 Exposure Quantification

The calculation of chemical intake is necessary to quantify exposure. Chemical intake is the amount of the chemical contaminant entering the receptor's body. Chemical intakes are generally expressed as follows:

$$I = \frac{C \times CR \times EF \times ED}{BW \times AT} = (mg / kg - day)$$

Where:

I = intake (mg/kg-day)
C = chemical concentration at exposure point (mg/L, mg/kg, mg/m^3)
CR = contact rate, or amount of contaminated medium contacted per unit time or event (L/day, mg/day, m^3/day)
EF = exposure frequency (days/year)
ED = exposure duration (years)
BW = body weight of exposed individual (kg)
AT = averaging time, or period over which exposure is averaged (years x 365 days)

For dermal exposure to groundwater, the nonsteady state model was used to estimate the absorbed dose as discussed in the *Dermal Exposure Assessment: Principles and Applications* (EPA, 1992).

The intake equation requires exposure parameters that are specific to each exposure pathway. Exposure parameters are often assumed values, and their magnitudes influence the estimates of potential exposure (and risk). The reliability of the values chosen also can contribute substantially to the uncertainty of the resulting risk estimates. Many of the exposure parameters have default values, which were used for this assessment. These assumptions, based on estimates of body weights, media intake levels, and exposure frequencies and duration are provided by EPA guidance. Other assumptions (e.g., for the sediment scenario) required consideration of location-specific information and were determined using professional judgment. Tables 4.1 through 4.12 in Appendix I and Tables 4.1 through 4.17 in Appendix I present the exposure equations and exposure assumptions, respectively, used for different scenarios at Sites 3 and 4.

For the dermal contact with soil scenario, an absorption factor is required. The absorption factors used for this evaluation were 3 percent for volatile organics with vapor pressures lower than benzene; 0.05 percent for volatile organics with vapor pressures equal to or greater than benzene; 10 percent for semivolatile organics; 3.2 percent for arsenic; and 1 percent for other metals (EPA 1995). For the dermal contact with water scenario, skin permeability rates were obtained from *Dermal Exposure Assessment: Principles and Applications* (EPA, 1992) The skin permeability rate for water was used for all metals. All dermal absorption values and permeability constants used in this risk assessment are presented in Appendix K.

5.3 Toxicity Assessment

The toxicity assessment weighs the available evidence regarding the potential for a particular chemical to adversely affect exposed individuals and provides an estimate of the relationship between the extent of exposure and possible severity of adverse effects. The toxicity assessment generally consists of two steps: hazard identification and dose-response assessment.

Hazard identification is the process of determining the potential adverse effects from exposure to the chemical along with the type of health effect involved. Dose-response assessment is the process of quantitatively evaluating the toxicity information and characterizing the relationship between the dose of the contaminant administered or received and the incidence of adverse health effects in the exposed population. From this quantitative dose-response relationship, toxicity values (e.g., reference doses and slope factors) are derived. EPA has performed the toxicity assessment step for many chemicals and has published the resulting toxicity information and toxicity values on the Integrated Risk Information System (IRIS) and Health Effects Assessment Summary Tables (HEAST) databases.

Health effects are divided into two broad groups: noncarcinogenic and carcinogenic effects. This division is based on the different mechanisms of action currently associated with each category. Chemicals causing noncarcinogenic health effects are evaluated independently from those having carcinogenic effects. Some chemicals may produce both noncarcinogenic and carcinogenic effects, and therefore, are evaluated in both groups. This section briefly

discusses the toxicological properties and the noncarcinogenic and carcinogenic effects of selected COPCs.

5.3.1 Toxicological Profiles for COPCs

Toxicological profiles of the COPCs selected for evaluation at Sites 3 and 4 are presented in Appendix L. More detailed toxicity information can be found in EPA's IRIS database, ATSDR's toxicological profiles, and other published literature.

5.3.2 Toxicity Values for COCs

The primary source of toxicity values is the EPA's IRIS database, which contains up-to-date health risk and EPA regulatory information. IRIS includes only those reference doses (RfDs) and slope factors (SFs) that have been verified by EPA work groups. The database is considered by EPA to be the preferred source of toxicity information. The HEAST, which are issued by EPA's Office of Research and Development, was consulted when data were not available in IRIS. If data were not available from either of these sources, National Center for Environmental Assessment (NCEA) data were used. Tables 5.1 through 5.4 in Appendix I and Tables 5.1 through 5.5 in Appendix I present the toxicity values for all non-carcinogenic constituents detected at Sites 3 and 4. Tables 6.1 through 6.4 in Appendix I and Tables 6.1 through 6.4 in Appendix I present toxicity values for all carcinogenic compounds detected at Sites 3 and 4.

Per EPA guidance, oral toxicity values (RfDs and SFs) were adjusted from administered dose to absorbed dose for evaluating dermal toxicity. The oral to dermal conversion factors used in this risk assessment, which were obtained from Linda Watson (EPA Region III toxicologist) on February 12, 1998, are presented in Appendix M.

It should be noted that for chemicals for which no oral to dermal conversion factors were available, values for similar chemicals were used. It should also be noted that for chemicals such as manganese and carcinogenic PAH compounds, oral to dermal extrapolation is not appropriate due to the tendencies of these chemicals to cause a direct action at the point of application. EPA guidance regarding oral to dermal extrapolation for these chemicals is also provided in Appendix M.

5.3.2.1 Noncarcinogens

Noncarcinogenic health effects include a variety of toxic effects on body systems, ranging from renal toxicity (toxicity to the kidneys) to central nervous system disorders. Noncarcinogenic health effects are grouped into two basic categories: acute toxicity and chronic toxicity. Acute toxicity can occur after a single exposure (usually at high doses), and the effect is most often seen immediately. Chronic toxicity criteria describe effects that occur after repeated exposure (usually at low doses). The effects can be seen weeks, months, or years after the initial exposure. The toxicity of a chemical is assessed through a review of toxic effects noted in short-term (acute) animal studies, long-term (chronic) animal studies, and epidemiological investigations.

EPA (1989b) defines the chronic RfD as an estimate (with uncertainty spanning perhaps an order of magnitude or greater) of a daily exposure to the human population, including sensitive subpopulations, in which the exposure is likely to be without appreciable risk of deleterious effects during a lifetime. Chronic RfDs are specifically developed to be protective for long-term exposure to a compound (for example, 7 years to a lifetime). Chronic RfDs may be overly protective if used to evaluate the potential for adverse health effects resulting from short-term exposure. EPA's NCEA develops subchronic RfDs for short-term exposure (2 weeks to 7 years). Subchronic RfDs have been peer-reviewed by Agency and outside reviewers, but they have not undergone verification by an intra-Agency workgroup, and as a result are considered interim rather than verified toxicity values. Chronic and subchronic RfDs are developed for both the inhalation and oral exposures.

In the development of RfDs, all available studies examining the toxicity of a chemical following exposure are considered based on their scientific merit. The lowest dose level at which an observed toxic effect is occurring is identified as the "lowest-observed-adverse-effect-level" (LOAEL) and the dose at which no effect is observed is identified as the "no-observed-adverse-effect-level" (NOAEL). Several uncertainty factors (UFs) are applied to extrapolate these dose points to humans. These UFs range between 10 to 10,000. Additional modification factors are also used based on the professional judgment of the Agency. The toxicity criteria may have a high degree of uncertainty depending on the available scientific data for each compound. Non-cancer toxicity data available for the

COPCs at Sites 3 and 4 are listed in Tables 5.1 through 5.4 in Appendix I and Tables 5.1 through 5.5 in Appendix I.

5.3.2.2 Carcinogens

Potential carcinogenic effects from human exposure to chemicals are estimated quantitatively using oral cancer slope factors, inhalation slope factors, or unit risk factors that convert estimated exposures directly to incremental lifetime cancer risks. Slope factors are expressed in units of risk per milligram per kilogram of body weight per day (mg/kg-day)$^{-1}$, and unit risk factors are expressed in units of risk per micrograms per cubic meter ($\mu g/m^3$)$^{-1}$.

Cancer SFs may be derived from the results of chronic animal bioassays, human epidemiological studies, or both. Animal bioassays usually are conducted at dose levels that are much higher than levels likely to be produced by human exposure to environmental media. This extrapolation detects possible adverse effects in the relatively small test populations used in the studies. Several mathematical models and procedures have been developed to extrapolate from the high doses used in the studies to the low doses typically associated with environmental exposures.

The EPA-preferred linearized multistage model is usually used to estimate the largest linear slope (within the upper 95 percent confidence limit) at low extrapolated doses that is consistent with the data. The 95th percentile upper confidence limit (95% UCL) slope of the dose-response curve is subjected to various adjustments, and an inter-species scaling factor is usually applied to derive a cancer slope factor or inhalation unit risk factor for humans. It is assumed that if a cancer response occurs at the dose level in the study, there is some probability that a response will occur at all lower exposure levels (i.e., a dose-response relationship with no threshold is assumed). Dose-response data derived from human epidemiological studies are fitted to dose- time-response curves on an ad hoc basis. In both types of analyses, conservative (e.g., health protective) assumptions are applied and the models are believed to provide rough estimates of the upper limits on potential lifetime risk.

Exposure is averaged over the average adult lifetime of 70 years. The actual risks associated with exposure to a potential carcinogen that is quantitatively evaluated using the cancer slope factor are not likely to exceed the estimated risks, and are probably much lower.

In addition to deriving a quantitative estimate of cancer potency, EPA also assigns weight-of-evidence classifications to potential carcinogens. Chemicals are classified as either Group A, Group B1, Group B2, Group C, Group D, or Group E carcinogens.

- Group A chemicals (known human carcinogens) are agents for which there is sufficient evidence to support the causal association between exposure to the agents in humans and cancer.
- Group B1 chemicals (probable human carcinogens) are agents for which there is limited evidence of carcinogenicity in humans.
- Group B2 chemicals (probable human carcinogens) are agents for which there is sufficient evidence of carcinogenicity in animals but inadequate or a lack of evidence in humans.
- Group C chemicals (possible human carcinogens) are agents for which there is limited evidence of carcinogenicity in animals and inadequate or a lack of human data.
- Group D chemicals (not classifiable as to human carcinogenicity) are agents with inadequate human and animal evidence of carcinogenicity or for which no data are available.
- Group E chemicals (evidence of noncarcinogenicity in humans) are agents for which there is no evidence of carcinogenicity from human or animal studies, or both.

Currently, EPA is considering regulating all the A, B, and C carcinogens as a common group. Cancer toxicity data available for the COPCs at Sites 3 and 4 are listed in Tables 6.1 through 6.4 in Appendices H and I.

5.3.2.3 Chemicals for Which no EPA Toxicity Values Are Available

Most of the chemicals detected at Sites 3 and 4 have toxicity factors. Toxicity factors do not exist for lead. As a screening tool, lead is screened at 400 mg/kg in soil and 15 µg/L in groundwater (SDWA action level) for a residential receptor. Exposure to lead in children is evaluated using a blood-lead uptake using a physiologically based pharmakokinetic model referred to as 'Integrated Exposure–Uptake Biokinetic' model (IEUBK), in the event of excess lead presence at the site. Adult exposures to lead in soil were evaluated by following the guidelines set forth in *Recommendations of the Technical Workgroup for Lead for an Interim Approach to Assessing Risks Associated with Adult Exposures to Lead in Soil* (EPA, 1996).

5.4 Human Health Risk Characterization

Risk characterization is the process of integrating the previous elements of the risk assessment into quantitative and semi-quantitative expressions of risk. The quantification of risk is then used as an integral component in remedial decision making and selection of potential remedies or actions.

5.4.1 Noncarcinogenic Hazard Evaluation

Noncarcinogenic health risks are estimated by comparing actual or expected exposure levels to threshold concentrations (or RfDs). The expected intake divided by the RfD is equal to the hazard quotient (HQ):

$$\text{Hazard Quotient (HQ)} = \text{Intake} / \text{RfD}$$

The intake and RfD are expressed in the same units and represent the same exposure period (i.e., chronic or subchronic). The intake and RfD also represent the same exposure route, (i.e., inhalation intakes are divided by the inhalation RfD, oral intakes are divided by the oral RfD, and dermal intakes are divided by an adjusted oral RfD). When HQ exceeds unity (i.e., exposure exceeds the RfD), a certain degree of health risk is indicated. To assess the potential for noncarcinogenic health effects posed by exposure to multiple chemicals, a "hazard index" approach is used (EPA, 1989). This approach assumes that noncarcinogenic hazards associated with exposure to more than one chemical are additive. Synergistic or antagonistic interactions between chemicals are not accounted for. The hazard index (HI) may exceed unity even if all of the individual HQs are less than one. The chemicals may then be segregated by similar mechanisms of toxicity and toxicological effects, and separate HIs derived based on mechanism and target organs affected. Tables 7.1 through 7.12 in Appendix I and Tables 7.1 through 7.17 in Appendix I present the media-specific non-cancer hazards to current and future receptors at Sites 3 and 4.

5.4.2 Carcinogenic Risk Evaluation

The potential for carcinogenic effects due to exposure to site-related contamination is evaluated by estimating excess lifetime cancer risk. Excess lifetime carcinogenic risk is the incremental increase in the probability of developing cancer during one's lifetime in addition to the background probability of developing cancer. For example, the background incidence of cancer in the U.S. population is approximately 30 percent (including both lethal

and nonlethal forms). Therefore, a $2x10^{-6}$ excess lifetime carcinogenic risk means that an individual's probability of developing cancer in his or her lifetime changes from approximately 0.300000 to 0.300002. Or, expressed another way, for every 1 million people exposed to the carcinogen throughout their lifetime, the incidence of cancer *may* increase by two cases.

Potential carcinogenic risks associated with exposure to individual carcinogens were calculated using the SFs from IRIS and HEAST presented in the Toxicity Assessment section and the intakes calculated in the Exposure Assessment section. Risk is calculated by multiplying the intake by the SF.

$$\text{Risk} = \text{Intake} \times \text{SF}$$

The combined risk from exposure to multiple chemicals at a site was evaluated by adding the risks from individual chemicals. Risks also were added across the pathways, if an individual would be exposed through multiple pathways. For example, a person contacting the soil onsite could be exposed by both oral and dermal exposure pathways.

When a cumulative carcinogenic risk to an individual receptor under the assumed exposure conditions at the site exceeds 100 in a million ($1x10^{-4}$ excess cancer risk), CERCLA generally requires remedial action at the site (EPA, 1991). If the cumulative risk is less than $1x10^{-4}$, action generally is not required, but may be warranted if a risk-based chemical-specific standard (for example, maximum contaminant level [MCL]) is exceeded. A risk-based remedial decision could be superseded by the presence of noncarcinogenic impact or environmental impact requiring action at the site. Tables 8.1 through 8.12 in Appendix I and Tables 8.1 through 8.17 in Appendix I present the media-specific cancer risks (CR) to current and potential future receptors at Sites 3 and 4.

5.4.3 Quantification of Risks and Hazards

Potential human health risks are discussed independently for carcinogenic and noncarcinogenic contaminants because of the different toxicological endpoints, relevant exposure duration, and methods used to characterize risk. The noncarcinogenic health impacts from carcinogens are also assessed. Tables 9.1 through 10.5 in Appendix I and Tables 9.1 through 10.9 in Appendix I summarize the media-specific cancer risks (CR) and HQ for the current and potential future receptors at Sites 3 and 4.

The Foster and Chrotowski shower model was used to estimate inhalation exposure from showering for the future residential scenario. The results of this modeling are presented in Appendix M and are incorporated into Table 9.2 in Appendices H and I.

For cumulative carcinogenic risk to an individual receptor under the assumed exposure conditions of less than $1x10^{-4}$, action generally is not required. For risk management purposes, EPA has established a target risk range of $1x10^{-6}$ to $1x10^{-4}$.

The EPA also has established a recommended threshold value for the HQ of 1.0 for noncarcinogenic constituents. The recommended value of 1.0 is established such that when the HQ exceeds unity (i.e., exposure exceeds the RfD or HQ>1), a certain degree of health risk is indicated.

5.4.3.1 Lead Modeling

Neither a cancer slope factor nor a reference dose factor is available for lead. Instead, blood lead concentrations have been accepted as the best measure of exposure. USEPA has developed the Integrated Exposure Uptake Biokinetics model for Lead in Children (IEUBK) model to assess chronic, noncancer exposures of children to lead by predicting blood lead concentrations. Version 0.99d of the model was used to evaluate exposures of children to lead in soil.

Consensus Agreement #6.A.6 stipulates screening levels for lead in soil and sediment of 400 mg/kg (Appendix H). For Site 3, the maximum concentration of lead detected in soil is 240 mg/kg and consequently is not considered a COPC. At Site 4, lead was not detected in soil and is not a COPC. The maximum concentration of lead detected in sediment at Site 3 (734 mg/kg) and Site 4 (441 mg/kg) is above the screening level, and therefore, lead is a COPC for sediment at both Sites 3 and 4.

For the IEUBK model, default values for lead in air, dietary ingestion, dust, and maternal contribution were used. Because lead was not detected in groundwater at Sites 3 and 4, the default value of 4 ug/l was used in the model. No contribution from paint was included in the model run. The results of the model and the exceedence probability distribution graph are presented in Appendix N and summarized as follows:

Sites 3 and 4

Year	Maximum Concentration Blood Lead Level (ug/dL)	
	Site 3	Site 4
0.5 -1	6.7	5.3
1 - 2	7.6	6.0
2 - 3	7.1	5.6
3 - 4	6.8	5.3
4 - 5	5.6	4.4
5 - 6	4.8	3.8
6 - 7	4.3	3.4

A blood lead level of 10 ug/dL is the benchmark to evaluate lead exposure. Based on the above assumptions and the maximum sediment concentration of 734 mg/kg, projected blood lead levels of 86.36% of the exposed child population (0 to 84 months of age) would be expected to be below 10 ug/dL at Site 3. At Site 4, based on the maximum sediment concentration of 441 mg/kg, projected blood lead levels of 94.33% of the exposed child population would be expected to be below 10ug/dL. The protection level most often used in practice is a maximum 5 percent risk of elevated blood lead for children in a given household (EPA, 1994b). Thus, lead exposure for children in sediment at Sites 3 and 4 may be problematic.

EPA has also recommended an approach for assessing nonresidential adult risks utilizing a methodology to relate soil lead intake to blood lead concentrations in women of child-bearing age (EPA 1996). The calculation for estimating the blood lead concentration in women of child-bearing age is given by :

$$PbB_{(adult,central)} = PbB_{(adult,0)} + (PbS \times BKSF \times Ir_s \times AF_s \times EF_s / AT)$$ where:

$PbB_{(adult,central)}$ = Central estimate of blood lead concentrations (ug/dL) in adults (i.e., women of child-bearing age) that have site exposures to soil lead at concentrations, PbS.

$PbB_{(adult,0)}$ = Typical blood lead concentration (ug/dL) in adults (i.e., women of child-bearing age) in the absence of exposures to the site.

PbS = Soil lead concentration (ug/g)

BKSF = Biokinetic slope factor relating increase in typical blood lead concentration to average daily lead uptake (ug/dL blood lead increase per ug/day lead uptake)

Ir_s = Intake rate of soil (g/day)

AF_s = Absolute gastrointestinal absorption fraction for ingested lead in soil and lead in dust derived from soil (unitless)

EF_s = Exposure frequency (days/year)

AT = Averaging time (days/year)

The equation was run for maximum lead concentrations for sediment. Default values as specified in the supporting document were used for the remaining parameters. These runs can be found in Appendix N and are summarized below.

For sediment at Site 3, women of child-bearing age would have blood lead concentrations in the range of 2.80 to 3.30 ug/dL based on a maximum lead concentration of 734 mg/kg. For sediment at Site 4, women of child-bearing age would have blood lead concentrations in the range of 2.36 to 2.6 ug/dL based on a maximum lead concentration 441 mg/kg.

5.4.4 Analysis of Total Risk - Site 3

Tables 9.1 through 10.5 in Appendix I summarize the cumulative human health cancer risks and noncancer hazards associated with exposure to all media at Site 3.

For Site 3, all groundwater risks and hazards are within EPA's acceptable range. Current and future cancer risks are within or below EPA's risk range for subsurface soil and sediment for all exposure scenarios (RME and CT). For subsurface soil, the evaluation for the construction worker results in hazard estimates outside EPA's risk range. For surface soil, the evaluation for the child trespasser, residential child, residential adult, groundskeeper and the construction worker results in hazard estimates outside EPA's risk range. The evaluation for surface soil also indicates cancer risks outside of EPA's risk range for the child resident, adult resident and groundskeeper. The current and future risks and hazards are within EPA's risk range for all other exposure scenarios for surface soil.

The analysis of groundwater includes an evaluation of the shallow aquifer for the groundskeeper and the deep aquifer for the construction worker and future residential scenarios. Risks and hazards for these scenarios are within EPA's risk range.

The analysis of surface soil includes inter-media screening for surface soil to shallow groundwater. Three compounds (barium, nickel, and dieldrin) were detected at concentrations which exceed SSLs. These compounds should be further evaluated (through modeling) to determine if they will adversely impact groundwater. Inter-media screening was also performed for surface soil to air. No compounds exceed the SSLs. Note, however, that there are several compounds which were detected in surface soil which do not have generic SSLs for the groundwater or air pathways.

The analysis of surface soil also includes an evaluation of the groundskeeper, trespasser, construction worker and future residential scenarios. Hazard estimates for several exposure pathways are outside of EPA's risk range. The non-cancer hazard estimates for the child trespasser are 1.1 (RME) and 0.6 (CT). The non-cancer hazard estimates for the child resident are 7.7 (RME) and 4.3 (CT). The non-cancer hazard estimates for the adult resident are 2.7 (RME) and 1.5 (CT). The non-cancer hazard estimates for the construction worker are 2.5 (RME) and 1.4 (CT). The non-cancer hazard estimates for the groundskeeper are 1.7 (RME) and 0.9 (CT). Dermal exposure to iron and vanadium is the risk driver for these exceedences. The risks and hazards for the adolescent and adult trespasser are within EPA's risk range.

The RME cancer risk estimates for the child and adult resident in Site 3 surface soil are outside of EPA's risk range, while the CT risk estimates are within EPA's risk range. The risk estimates for the child resident are 1.2E-4 (RME) and 5.6E-5 (CT). The risk estimates for the adult resident are 1.9E-4 (RME) and 8.0E-5 (CT). The risk estimates for the groundskeeper are 1.2E-4 (RME) and 5.2E-5 (CT). Dermal exposure to beryllium drives this risk. The cancer risk estimates for the trespasser (adult, adolescent, child), and construction worker are within EPA's risk range

The analysis of subsurface soil includes inter-media screening for transfer of contaminants from subsurface soil to deep groundwater. Three compounds (barium, chrysene, and methylene chloride) were detected at concentrations which exceed SSLs. These compounds should be further evaluated (through modeling) to determine if they will adversely impact groundwater. Inter-media screening was also performed for subsurface to air. No compounds exceed the SSLs. Note, however, that there are several compounds which were detected in subsurface soil which do not have SSLs for the groundwater or air pathways.

The analysis of subsurface soil also includes an evaluation of the future construction worker scenario. The non-carcinogenic risk calculated using the RME value exceeded EPA's risk range (2.1), while the CT value was within EPA's range (0.7). Dermal exposure to iron drives this exceedence. Carcinogenic risks for this scenario are within EPA's risk range.

The analysis of sediment includes an evaluation of the trespasser (adult, adolescent, and child) and future residential (adult and child) scenarios. Lead was the only contaminant detected above COPC screening levels in Site 3 sediments. Based on the results of the IEUBK model and the adult lead exposure model, lead may be a problem in sediment at Site 3.

5.4.5 Analysis of Total Risk - Site 4

Tables 9.1 through 10.9 in Appendix I summarize the cumulative human health cancer risks and noncancer hazards associated with exposure to all media at Site 4.

For Site 4, current and future risks and hazards are within EPA's risk range for shallow groundwater and sediment for all exposure scenarios (RME and CT). For deep groundwater, non-carcinogenic risk estimates are outside of EPA's risk range for the adult and child resident. For surface soil, non-carcinogenic risks are outside of EPA's range for residents (child, adult), trespassers (child, adolescent, adult), construction worker, and groundskeeper. Carcinogenic risk in surface soil is outside of EPA's risk range for residents (child, adult). For subsurface soil, non-carcinogenic risk estimates are outside EPA's risk range for the construction worker. For surface water, non-carcinogenic risk is outside of EPA's risk range for child and adult residents. The current and future risks and hazards are within EPA's risk range for all other exposure scenarios.

The analysis of groundwater includes an evaluation of the shallow aquifer for the groundskeeper and the deep aquifer for the construction worker and future residential scenarios. Risks and hazards for the shallow aquifer are within EPA's risk range. For deep groundwater, hazards for the child and adult residents exceeded EPA's risk range. For the child resident, the non-carcinogenic risk was 6.5 (RME). For the adult resident, the non-carcinogenic risk was 7.0 (RME). Manganese and iron were the risk drivers for these pathways.

The analysis of surface soil includes inter-media screening for transfer of contaminants from surface soil to shallow groundwater. Arsenic, barium, and nickel were detected at

concentrations which exceed SSLs. These compounds should be further evaluated (through modeling) to determine if they will adversely impact groundwater. Inter-media screening was also performed for surface to air. No compounds exceed the SSLs.

The analysis of surface soil includes an evaluation of the groundskeeper, trespasser, construction worker and future residential scenarios. The RME estimates of non-cancer hazards for all of these pathways exceed EPA's risk range. The CT estimates of non-cancer hazards for trespassers (child, adolescent, adult) is within EPA's risk range. The non-carcinogenic hazard estimates for child trespasser are 1.3 (RME) and 0.6 (CT). The non-carcinogenic hazard estimates for adolescent trespasser are 1.3 (RME) and 0.6 (CT). The non-carcinogenic hazard estimates for adult trespasser are 1.4 (RME) and 0.6 (CT). The non-carcinogenic hazard estimates for the residential child are 8.5 (RME) and 4.1 (CT). The non-carcinogenic hazard estimates for residential adult are 3.1 (RME) and 1.5 (CT). The non-carcinogenic hazard estimates for the future construction worker are 2.7 (RME) and 1.3 (CT). The non-carcinogenic hazard estimates for the groundskeeper are 2.2 (RME) and 1.0 (CT). Dermal exposure to vanadium and iron is the risk driver for the pathways mentioned above.

The cancer risk estimates for the trespasser (child, adolescent, adult) construction worker, and groundskeeper for Site 4 surface soils are within EPA's risk range. For the adult and child resident, carcinogenic risk exceeds EPA's risk range for the RME estimate but is within EPA's risk range for the CT estimate. The carcinogenic risk estimates for the adult resident are 1.6E-4 (RME) and 5.8E-5 (CT). The carcinogenic risk estimates for the child resident are 1.0E-4 (RME) and 4.3E-5 (CT). Dermal exposure to beryllium is the driver for these exceedences.

The analysis of subsurface soil includes inter-media screening for transfer of contaminants from subsurface soil to deep groundwater. Arsenic, barium, and nickel were detected at concentrations which exceed SSLs. These compounds should be further evaluated (through modeling) to determine if they will adversely impact groundwater. Inter-media screening was also performed for subsurface to air. No compounds exceed the SSLs. The subsurface soil risk characterization also includes an evaluation of the construction worker scenario, which resulted in cancer risk estimates (RME and CT) within EPA's risk range. Non-cancer hazard estimates for RME (3.0) and CT (2.0) are outside EPA's risk range. Dermal exposure to iron is responsible for this exceedence.

The analysis of surface water includes an evaluation of the trespasser and future residential scenarios. All risks and hazards for the trespasser scenarios (child, adolescent, adult) are within EPA's risk range. Carcinogenic risks for the child and adult residents are within EPA's risk range. Non-carcinogenic hazards for the child resident (2.2) and adult resident (1.0) are outside of EPA's risk range. Since only one surface water sample was collected at Site 4, calculation of CT exposure point concentrations was not possible.

The analysis of sediment includes an evaluation of the trespasser (adult, adolescent, and child) and future residential (adult and child) scenarios. Lead was the only contaminant detected above COPC screening levels in Site 3 sediments. Based on the results of the IEUBK model and the adult lead exposure model, lead may be a problem in sediment at Site 4.

5.4.6 Human Health Risk Assessment Uncertainty Analysis

The risk measures used in Superfund site risk assessments are not fully probabilistic estimates of risk but are conditional estimates given that a set of assumptions about exposure and toxicity are realized. Thus it is important to specify fully the assumptions and uncertainties inherent in the risk assessment to place the risk estimates in proper perspective (EPA, 1989a).

A qualitative and semiquantitative analysis of each of the risk assessment components is sufficient for most of the sites. The following chart presents the potential uncertainties inherent in the risk assessment process. A site-specific discussion on these individual components is presented in the following sections.

Steps Involved in Risk Assessment Process Contributing to Uncertainty	
Risk Assessment Component	**Potential for Uncertainty**
Hazard Identification	• Initial selection of COPCs • Tentatively identified compounds • Chemical monitoring data • Current and future land uses

Steps Involved in Risk Assessment Process Contributing to Uncertainty	
Risk Assessment Component	**Potential for Uncertainty**
Toxicity Assessment	• Selection of toxicity values • Factors used in derivation of toxicity values, including inter-species differences extrapolation • Weight of evidence for human toxicity • Derivation of carcinogenic slope factors • Extrapolation of less-than-lifetime exposure to lifetime cancer risks • Interaction of multiple substances
Exposure Assessment	• Selection of site-specific exposure pathways • Estimation of exposure concentrations without monitoring data • Estimation of exposure to multiple substances • Estimation of intake parameters • Use of model values for future exposure conditions
Risk Characterization	• Addition of risks across multiple exposure pathways • Addition of risks from multiple substances

5.4.6.1 General Uncertainty in COPC Selection

The largest uncertainty associated with COPC selection is the lack of surface water samples collected from the two sites due to the presence of dry conditions during the field investigation. Only one surface water sample was collected between Sites 3 and 4 combined.

Another source of uncertainty at Sites 3 and 4 is the lack of background samples for either of these sites. Typically, detected levels of inorganic constituents are compared to detected background levels. This comparison allows for the consideration of naturally occurring levels of analytes that may be higher than expected.

It should be noted that in some cases detection limits for undetected chemicals exceeded their corresponding COPC screening levels. As a result, these chemicals may be present in site media at levels that exceed screening levels but do not exceed laboratory detection limits.

Another source of uncertainty results from examination of the Relative Risk data. For Site 3, several organic and inorganic compounds were detected in the groundwater using a Geoprobe® which were not detected in the monitoring wells sampled during the RI. In addition, several organic and inorganic compounds were detected in surface soil sampled during the RI which were not detected in samples collected during the Relative Risk study.

The variation between the results is a source of uncertainty. However, the sampling methods used for the RI follow more closely the data quality objectives for risk assessment, and these results are likely the more reliable.

The quantitative uncertainty associated with the other factors is minimal as the data have been fully validated prior to risk assessment. The general assumptions used in the COPCs' selection are conservative to ensure that chemicals are not eliminated from consideration prematurely.

5.4.6.2 Uncertainty Associated with Exposure Assessment

Most of the exposure pathways analyzed are assumed, and exposure factors used for quantitation of exposure are conservative and reflect worst-case or upper-bound assumptions on the exposure.

Screening of detected contaminant levels against soil to groundwater SSLs was conducted as part of this risk assessment. In order to continue the exposure assessment after the screening process has been completed, a reliable correlation of contaminant concentration in soil to contaminant concentration in groundwater must be derived. In the absence of modeling it is not possible to derive a reliable formula for the transfer of contamination from soil to groundwater. As a result, only a qualitative screening of soil contaminant levels versus soil to groundwater SSLs was conducted.

5.4.6.3 Uncertainty Associated with Toxicity Assessment

The uncertainty associated with CSFs is mostly associated with the low dose extrapolation where carcinogenicity at low doses is assumed to be a straight-line response. This is a conservative assumption, which introduces high uncertainty into slope factors that are from this extrapolated area of the dose-response curve. However, most of the experimental studies indicate the existence of a threshold for carcinogenicity.

Carcinogenic slope factors developed by the EPA represent upper-bound estimates. Any carcinogenic risks generated in this assessment should be regarded as an upper-bound estimate on the potential carcinogenic risks rather than an accurate representation of carcinogenic risk. The true carcinogenic risk is likely to be less than the predicted value (EPA, 1989).

Perhaps the most significant uncertainty is the prediction of relative sensitivities of different species of animals and the applicability of animal data to humans. Humans are assumed to be more sensitive than any animal group.

Screening of detected contaminant levels against soil to groundwater SSLs and soil to air SSLs was conducted. In the absence of toxicity values for many of the detected compounds, an accurate estimate of the inter-media transfer is unlikely. Thus, there is uncertainty associated with the results of this screening based on the lack of toxicity/screening levels for several compounds.

5.4.6.4 Uncertainty in Risk Characterization

The uncertainties identified in each component of risk assessment ultimately contribute to uncertainty in risk characterization. The addition of risks and HIs across pathways and chemicals contributes to uncertainty based on the interaction of chemicals such as additivity, synergism, potentiation, and susceptibility of exposed receptors. The simple assumption of additivity used for this site may or may not be accurate; however, a better alternative is not available at this time.

At this time, there is not adequate background data available for Sites 3 and 4. Once this data is available, further analysis of site-related contaminants may be compared to background values.

In general, assessment of uncertainty is important for sites with contaminant concentrations presenting a risk at the acceptable limit level with questionable exceedence (for example, slightly above the upper-bound risk ranges of 1 in 10,000 risk or HI of 1.0). Therefore, discussion of uncertainty, though it provides insights into the details of the specific uncertainty, may not be a key component of remedial decisions at this site.

5.5. Conclusions

This baseline risk assessment was conducted to evaluate the potential human health risks associated with the presence of site-related groundwater, soil, subsurface soil, surface water, and sediment contamination at Site 3 (Landfill C) and Site 4 (Landfill D) at the St. Juliens Creek Annex in Chesapeake, Virginia . This baseline risk assessment, which characterizes the current and future human health risks at Sites 3 and 4 if no additional

remediation is implemented, was conducted to assess the potential human health impacts from the site under current conditions.

For Site 3, current and future risks and hazards are within or below EPA's risk range for groundwater for all exposure scenarios (RME and CT). For surface soil, the evaluation for the child trespasser, residential child, residential adult, groundskeeper and the construction worker results in non-carcinogenic risk estimates outside EPA's risk range. For the child trespasser and groundskeeper, EPA's risk range was exceeded for the RME evaluation, but not for the CT evaluation. RME estimates of carcinogenic risk exceeded EPA's risk range for the residential child and adult and the groundskeeper. The CT evaluation for these scenarios produced a risk which was within EPA's risk range. For subsurface soil, the evaluation for the construction worker resulted in non-carcinogenic risk above EPA's risk range using the RME value and within EPA's risk range using the CT value. For sediment, lead was the only constituent detected at a concentration above COPC screening levels. The current and future risks and hazards are within EPA's risk range for all other exposure scenarios.

For Site 4, current and future risks and hazards are within EPA's risk range for shallow groundwater for all exposure scenarios (RME and CT). For deep groundwater, non-carcinogenic risk estimates are outside of EPA's risk range for the adult and child resident. For surface soil, the evaluation for the trespasser (child, adult, adolescent), resident (child, adult), groundskeeper and construction worker results in non-carcinogenic risk estimates outside EPA's risk range. For the trespasser (child, adult, adolescent), EPA's risk range was exceeded for the RME evaluation, but not for the CT evaluation. RME estimates of carcinogenic risk exceeded EPA's risk range for the residential child and adult. The CT evaluation for these scenarios produced a risk which was within EPA's risk range. For subsurface soil, risk estimates are outside EPA's risk range for the construction worker. For surface water, non-carcinogenic risk is outside of EPA's risk range for child and adult residents. For sediment, lead was the only constituent detected at a concentration above COPC screening levels. The current and future risks and hazards are within EPA's risk range for all other exposure scenarios.

This risk assessment was conducted on the constituents that were detected at Sites 3 and 4 and had available toxicological values (SFs and RfDs). However, lead does not have published toxicological values and, therefore, was evaluated using the IEUBK lead model

for children and the adult exposure model. The results of this modeling shows that lead may be problematic in sediment. Lead values in soil were below the screening level of 400 ppm.

6. Summary of Results

CDM Federal has performed a Remedial Investigation and Risk Assessment of Site 3, Landfill C, and Site 4, Landfill, D at the St. Juliens Creek Annex in Chesapeake Virginia. This section summarizes the findings, conclusions and recommendations from these studies. The Site 3 recommendations are presented in Section 6.1 and the Site 4 recommendations are presented in Section 6.2. The summary and conclusions of the Human Health Risk Assessment are found in Section 5 of this report.

6.1 Site 3 Summary and Recommendations

Site 3 is an unlined landfill that covers 10 acres along the northern edge of the Annex and is accessible by way of a patrol road. For 30 years (1940 to 1970) refuse, including solvents, acids, bases, and mixed municipal waste, was dumped and allowed to burn on this former dredge disposal area. Two pits reportedly used for disposal of oils and oily sludge's, as well as for periodic burning were also located at the site. The ash was then used to fill in the area. The landfill was graded level and covered with grass, but it has not been formally closed.

This Section briefly summarizes the work performed at Site 3 (Section 6.1.1), the findings of the field and analytical program, including the nature and extent of contamination (Section 6.1.2), the fate and transport of the contaminants of potential concern through the environmental media at the site (Section 6.1.3), and the conclusions and recommendations (Section 6.1.4).

6.1.1 Summary of Work Performed at Site 3

The objectives of the remedial investigation were to delineate the boundary of the landfill, determine the nature and extent of contamination, define the site geology and hydrogeology, and evaluate the potential for contaminants of potential concern (COPCs) to migrate off site. The field investigation included conducting an electromagnetic survey of the area in an attempt to define the landfill boundaries. Nature and extent of contamination was investigated by collecting seven surface soil, seven subsurface soil, and four sediment samples. Four shallow and two deep monitoring wells were installed and sampled to

investigate the potential impact on groundwater quality. Boring logs of the monitoring well boreholes were evaluated to define the subsurface geology and hydrogeology.

6.1.2 Summary of Findings and Nature and Extent of Contamination

The finings of the field investigation, specifically the geologic, hydrogeologic and geophysical investigation, and the analytical results are summarized below.

6.1.2.1 Summary of Geology and Hydrogeology

The stratigraphy encountered during the remedial investigation at Site 3 includes sands and clays of the Yorktown Formation, and silts, sand and clay of the post-Pliocene sediments. At Site 3 these sediments include hydraulic dredge spoil material from the South Branch of the Elizabeth River. The top of the Yorktown Formation is present between depths of 12 to 20 feet below ground surface (bgs). The Yorktown Formation clay, which is the top of the Yorktown Formation, is approximately 25 ft thick and is underlain by fine sand, clay and clayey sand, with the clay content decreasing in the western part of the site.

Immediately overlying the Yorktown Formation clay at this site is a 7 to 9 ft-thick fine sand. This sand unit appears to be continuous across this site although in some southwestern areas there may be increased silt content. The sand is overlain by 7 to 14 feet of silt, clay, and silty clay, with minor silty sand. The great majority of Site 3 is covered with hydraulic dredge material (presumably from the South Branch of the Elizabeth River), and the uppermost silt and clay units encountered at the site consist of this material.

The hydrostratigraphic units identified at Site 3 during the RI include the Yorktown Aquifer, the Yorktown Clay Aquitard, the Water Table Aquifer and a Perched Water Zone. The Yorktown Aquifer is encountered at depths of 45 to 48.5 ft at Site 3 and the potentiometric surface of the Yorktown Aquifer is found at an elevation of 1 to 2 ft msl. Although the direction of groundwater flow could not be determined accurately due to a lack of data points and because water levels in the Yorktown Aquifer are tidally influenced, the apparent groundwater flow direction is west and northwest. The flow gradient is very low (approximately 0.0002 ft/ft), therefore tidal impacts may change the flow direction throughout the day.

The Yorktown Aquifer is confined by the upper clay of the Yorktown Formation. This aquitard is found at a depth of approximately 12 to 20 feet and has an average thickness of

about 25 feet. The vertical hydraulic gradient across this clay is downward at approximately 0.28 ft/ft.

Shallow ground water is found in both the Water Table Aquifer and a perched Water Table zone. During the investigation, two monitoring wells were installed in each shallow zone. The estimated direction of flow in the Water Table Aquifer is to the south or southeast. The direction of groundwater may change at the site during some part of the tidal cycle. Water levels in the perched zone are 1 to 2 ft above those found in the shallow monitoring wells at the site.

6.1.2.2 Summary of Geophysical Investigation

The geophysical (EM) survey conducted at Site 3 did not find any anomalies indicative of typical landfill materials. Increases in EM readings over some areas of the site are probably due to changes in the salt or clay content of hydraulic dredge spoil material.

6.1.2.3 Nature and Extent of COPCs

The nature and extent of contamination was evaluated with respect to the contaminants of potential concern (COPCs) identified by either the Human Health Risk Assessment or the Baseline Ecological Risk Assessment (BERA). The COPCs were developed for each media at each site.

Surface Soil

The distribution of organic and inorganic COPCs is consistent with the use of the area as a former dredge disposal area, although the COPCs identified in the surface soil are also consistent with materials reported to have been disposed in the landfill. Although PAHs are found in all samples, the concentration of PAHs in samples found outside, or at the edges of the dredge disposal area are an order of magnitude lower than the other samples.

Subsurface Soil

The presence of methylene chloride in subsurface soil samples is consistent with the materials reported to have been disposed in the landfill, although its presence in the sample may also be due to laboratory contamination. Methylene chloride and other (non-COPC) solvents were found in two borings located in the western half of the site (SJS03-SB03 and SJS03-SB06, which may be an indication of the area of Site 3 where landfilling activities took place.

The presence of the PAH below ground surface suggests that soil quality has been impacted by site landfill or dredge disposal activities. In the case of Site 3, the likely source of PAHs is the dredge material placed in this area prior to landfilling activities, however PAHs are consistent with the type of materials disposed in the landfill (ash, oil and sludges).

The distribution of COPC metals in the subsurface soil does not indicate a clear pattern of metals contamination that would be associated with landfilling activities.

Groundwater

The estimated groundwater flow direction in the Water Table Aquifer is to the south or southeast. The only organic COPC found in the shallow wells was bis(2-ethylhexyl)phthalate, found in wells screened in the perched water table as well as in the duplicate of a water table aquifer monitoring wells at relatively low concentrations. The concentration in one of the wells is higher than would be expected from laboratory contamination and is most likely present due to landfilling activities. Other phthalates (including diethylphthalate) were detected in surface soils from the site.

The concentrations of manganese in the shallow wells are all within the range of published values (Siudyla et al. 1981), while the measured iron concentrations are considerably higher. The concentrations of iron, however, appear to be relatively consistent across the site, and do not indicate that the site is a source of iron in the groundwater. The measured specific conductance at all wells except SJS03-MW1S were above the maximum published value for the Water Table Aquifer (Siudyla et al. 1981). The elevated readings may be due to naturally elevated salt contents or high total dissolved solids or the presence of contamination from landfilling activities.

There are no clear patterns or distinctive COPCs (i.e. Priority Pollutant metals) in the Yorktown Aquifer samples. The organic COPCs detected (chloroform and bis(2-ethylhexyl)phthalate) were found at low concentrations, in different wells, and during different sampling events. Although chloroform was detected in both deep wells during Round 1 groundwater sampling, the concentrations were very low and it was not found in either well during Round 2. For this reason it is concluded that Site 3 is not the source of chloroform in the Yorktown aquifer samples. Bis-2(ethylhexyl) phthalate is considered to be present as a laboratory contaminant. In contrast to the shallow groundwater, the concentrations of iron in the Yorktown Aquifer are below the average of the published

concentrations for the upper Yorktown Aquifer. The pH values measured in samples from the Yorktown Aquifer at Site 3 and other sites on the Base were higher than the published value. Site 3 is not considered the source of elevated pH in the Yorktown Aquifer.

Sediment

Contaminants in sediments would be expected to have migrated to the low areas and drainage ditches as a result of surface runoff. There are no patterns in the distribution of COPCs in sediments at Site 3 that would indicate deposition of contaminants in a particular source area. The highest concentrations of organic COPCs were generally found in one sample located in a low area at the northeast corner of the site, and another sample located along a drainage ditch that runs along the west side of the site. Generally, the highest concentrations of Priority Pollutant metal COPCs were found in a sample collected in the drainage ditch that runs along Patrol Road on the east side of the site. These three sample locations are all at different corners of the site.

6.1.3 Summary of Fate and Transport

The majority of the COPCs detected in the soils, sediments and groundwater at Site 3 can be classified as persistent, non-volatile and non-degradable metals (arsenic, beryllium, chromium, copper, lead, mercury, nickel, thallium and zinc) and very slowly degradable organics that include PAHs, PCBs and other SVOCs. These chemicals strongly sorb to soils and are relatively immobile. Concentrations in soils will persist into the future with only slow dissolution of metals to groundwater.

The volatile, soluble, degradable VOCs such as methylene chloride and toluene were found only in trace concentrations in the soils. No data indicate that these chemicals have entered the groundwater system.

6.1.4 Conclusion and Recommendations

The objective of the Remedial Investigation at Site 3 was to delineate Landfill C, identify the impact of landfilling activities on environmental media, and determine the extent of any impact that was identified. Although the geophysical survey did not identify any anomalies that could be correlated with buried materials, the presence of organic constituents in subsurface soils indicates that past site activities may have impacted the soil quality. Many of the COPCs developed for the various media at Site 3 are consistent with

materials that were reported to have been disposed of in the landfill. However, some are also consistent with the contaminants that would be expected to be found in dredge spoils materials. Because metals, PCBs, pesticides and semivolatile organic compounds all would be expected to be found in clay-rich dredge spoil material, solvents are considered to be the best indicator of landfilling. Solvents (including TCE which is not a COPC) were detected at low concentrations in subsurface borings on the west side of the site.

Organic and inorganic COPCs were identified for all media at the site. Because there is no distinctive source area, and because of the ambiguity in determining the source of the COPCs (dredge spoil or landfill), the extent of the contamination in soils and sediment was not identified. The COPCs in the Yorktown Aquifer are not considered to be related to site activities. It appears that the small vertical gradient and the Yorktown Formation clay aquitard has prevented the downward migration of contaminants. The groundwater flow direction in the Water Table Aquifer was not defined due to the presence of a perched water table in some areas of the site.

For Site 3, current and future risks and hazards are within or below EPA's risk range for groundwater for all exposure scenarios. For surface soil, the evaluation for the child trespasser, residential child, residential adult, groundskeeper and the construction worker results in non-carcinogenic risk estimates above EPA's acceptable risk range. For the child trespasser and groundskeeper, EPA's acceptable risk range was exceeded for the RME evaluation, but not for the CT evaluation. RME estimates of carcinogenic risk exceeded EPA's acceptable risk range for the residential child and adult and the groundskeeper. The CT evaluation for these scenarios produced a risk which was within EPA's acceptable risk range. For subsurface soil, the evaluation for the construction worker resulted in non-carcinogenic risk above EPA's acceptable risk range for the construction worker using the RME value and within EPA's acceptable risk range using the CT value. For sediment, lead was the only constituent detected at a concentration above COPC screening levels. The current and future risks and hazards are within EPA's acceptable risk range for all other exposure scenarios.

Based on the findings presented in this report, the following recommendations are presented:

1) At present there is insufficient data on the natually occurring concentrations of inorganic constituents in all media that were sampled and evaluated. A study should be conducted with a sufficient number of samples, collected in background locations, to statistically determine the background concentrations of inorganic constituents in groundwater, surface water, sediment, surface soil and subsurface soil.

2) Re-evaluate the risk to human health and the extent of contamination using the results of the planned soil background study to be conducted at St. Juliens Creek Annex.

3) Determine the direction of groundwater flow, and sample the Water Table Aquifer in the area downgradient of the western part of the site (the only area where solvents were detected in subsurface soil).

4) Collect and anlayze surface water samples originally scheduled for the RI.

6.2 Site 4 Summary and Recommendations

Landfill D (Site 4) covers an estimated 5 acres approximately 300 feet south of Site 3 . Site 4 was an unlined trench and fill landfill that reportedly operated from 1970 to 1981. Refuse disposed of at Site 4 includes drums of unknown wastes and polychlorinated biphenyls (PCBs). Several tanks with undetermined wastes were also report to have been located in the area.

This Section briefly summarizes the work performed at Site 4 (Section 6.2.1), the findings of the field and analytical program, including the nature and extent of contamination (Section 6.2.2), the fate and transport of the contaminants of potential concern through the environmental media at the site (Section 6.2.3), and the conclusions and recommendations (Section 6.2.4).

6.2.1 Summary of Work Performed at Site 4

The objectives of the remedial investigation was to delineate the boundary of the landfill, determine the nature and extent of contamination, define the site geology and hydrogeology, and evaluate the potential for contaminants of potential concern (COPCs) to migrate off site. The field investigation included conducting electromagnetic,

magnetometer and GPR surveys of the area in an attempt to define the landfill boundaries and locate buried drums. Nature and extent of contamination was investigated by collecting ten surface soil, three subsurface soil, and four sediment, and one surface soil sample. Four shallow and two deep monitoring wells were installed and sampled to investigate the potential impact on groundwater quality. Boring logs of the monitoring well boreholes were evaluated to define the subsurface geology and hydrogeology.

6.2.2 Summary of Findings and Nature and Extent of Contamination

The findings of the field investigation, specifically the geologic, hydrogeologic and geophysical investigation, and the analytical results are summarized below.

6.2.2.1 Summary of Geology and Hydrogeology

The stratigraphy encountered during the remedial investigation at Site 4 includes sands and clays of the Yorktown Formation, and silts, sand and clay of the post-Pliocene sediments. The top of the Yorktown Formation is encountered at a depths ranging from 25 ft to 32 feet . The Yorktown Formation Clay thins from about 24 feet north of the landfill to approximately 9 feet adjacent to the South Branch of the Elizabeth River.

On the northern side of the site the formation is predominantly clay and silt, with a relatively thin (1 ft-thick) sand unit encountered at a depth of approximately 49 ft. Toward the river, the content of sand beneath the Yorktown Formation clay is greater.

Overlying the Yorktown Formation clay at Site 4 is 25 to 32 ft of silt, clay, silty sand and sand. Immediately above the Yorktown Formation clay is an olive-gray, fine to medium grained, sand unit that appears to be continuous across Site 4. This sand is overlain predominantly by gray and brown clay and silt. Shallow wells drilled along Patrol Road encountered fill material to a depth of 7 or 8 ft.

The hydrostratigraphic units identified at Site 4 include the Yorktown Aquifer, a confining clay (the upper clay of Yorktown Formation), an intermediate aquifer, a confining silt, and the Water Table Aquifer.

The potentiometric surface of the Yorktown Aquifer in the area of the Landfill D is found at an elevation of approximately 1.0 to 2.0 ft msl and the direction of groundwater flow is south. The horizontal flow gradient across Site 4 is approximately 0.001 ft/ft.

The tidal study conducted at other sites on the Base indicates that water levels could change throughout the day, and the direction of the flow may change throughout the day in response to the tides.

The upper confining clay of the Yorktown Formation is found at a depths ranging from 25 to 32 feet bgs and has an average thickness of about 27 feet. The vertical hydraulic gradient across the clay is 0.22 ft/ft downward at the upgradient location, and 0.016 ft/ft at the downgradient location.

The intermediate water-bearing zone is separated from the Water Table Aquifer by an 18-ft thick clay and silt unit at SJS04-MW3D (the downgradient location). The waterbearing unit is a 4-ft thick gray fine sand. This sand unit is found continuously over the site, and may be hydraulically connected to the Water Table Aquifer at other sites. No monitoring wells were screened in this zone during this investigation.

The potentiometric surface of the Water Table Aquifer is at elevations ranging from 7 to 2 ft msl and the direction of groundwater flow in the aquifer is toward the south-southeast. The horizontal flow gradient is approximately 0.008 ft/ft.

6.2.2.2 Summary of Geophysical Investigation

The EM and magnetometer surveys conducted at Site 4 successfully delineated the landfill boundaries by using widely-spaced geophysical profiles. The results of all geophysical surveys indicate typical landfilled materials. The limited GPR survey identified numerous buried objects which could not be definitively identified as buried drums.

6.2.2.3 Nature and Extent of COPCs

The nature and extent of contamination was evaluated with respect to the contaminants of potential concern (COPCs) identified by either the Human Health Risk Assessment or the Ecological Risk Assessment. The COPCs were developed for each media at each site.

Surface Soil

The concentrations and distribution of VOC COPCs in surface soil at Site 4 is not indicative of widespread VOC contamination. Acetone and 2-butanone were found in several locations from the top of the landfill, but, with one exception all samples contained low concentrations. Sample SJS04-SS08 contained 79 J ug/kg of acetone (this sample also had

the highest concentrations of other organic compounds). The use of the site as a landfill is considered to be the likely source of the VOCs in surface soils.

SVOCs were detected in all samples collected at the site. The concentration of total PAH in SJS04-SS05 (16,520 mg/kg) is particularly high. As with VOCs, one of the highest concentrations of PAHs was found at SJS04-SS08 (9130 mg/kg). It is likely that materials containing PAHs were disposed of in the landfill.

Aroclor-1260 was detected in several samples across the northern portion of the top of the landfill including SJS04-SS04, -SS05, -SS06, -SS08, and -SS09. The highest concentration was detected at SJS04-SS08 (6300 ug/kg). PCBs were reported to have been disposed in the landfill as part of ballast containers for fluorescent light fixtures.

At Landfill D, the presence of pesticides is closely correlated with PCBs. The highest concentrations of pesticides was found at SJS04-SS08.

The concentrations and distribution of metals detected in surface soil at Site 4 do not indicate metals contamination in the surface soil. The highest concentrations of several metals were found in SJS04-SS01, collected north of the landfill boundary.

Subsurface Soil

The distribution of organic and inorganic COPCs does not indicate that the landfill is a source of subsurface soil contamination in the areas that were sampled. However, it is clear from the material encountered in the two borings along Patrol Road, that the road was built on fill. Sample SJS04-SB01, while containing organic COPC's and other organic constituents (SVOCs, and pesticides) is located outside of the fill area, and is most likely a sample of the hydraulic dredge material disposed in the area prior to the landfill.

Groundwater

The direction of ground water flow in the Water Table Aquifer is to the southeast. There is no indication of widespread contamination of groundwater by organic or inorganic constituents. Low concentrations of non-COPC organic constituents were detected in both upgradient and downgradient samples. Similarly, the greatest number, and in some cases, highest concentrations of Priority Pollutant metals were detected in SJS04-GW2S, an upgradient well. It is possible that there is some flushing of contaminants to the upgradient wells due to tidal influence. However, the groundwater analytical data from the Water

Table Aquifer at Site 4 does not indicate a consistent pattern of that the contamination that would indicate that the landfill is acting as a source.

As with the Water Table Aquifer, the distribution of COPC and non-COPC organic constituents in the Yorktown Aquifer does not indicate a pattern of contamination with the landfill as a source. The chloroform detected during Round 1 groundwater sampling was not detected during Round 2 and was found in both the upgradient and downgradient samples.

The consistent presence of arsenic in filtered and unfiltered samples from the downgradient Yorktown Aquifer monitoring well may indicate that the landfill is contributing arsenic to the deep groundwater. The evidence for migration of arsenic to the Yorktown Aquifer is inconclusive, however, because arsenic is not found consistently in other monitoring wells. In addition, the vertical flow gradient at the downgradient well cluster is not high.

Surface Water

Due to the proximity of the landfill to the surface water, and the nature of materials disposed of in the landfill, it is likely that the landfill is contributing to the COPCs in surface water at Site 4. The concentrations of metals in the surface water sample appears to be particularly high.

Sediment

The highest concentration of VOC and SVOC contamination was found in the sample from Blows Creek (SJS04-SD04). The widespread (though generally low concentration) presence of acetone in surface soil coupled, with the higher concentration in the sediment sample, indicates that the landfill is a potential source for acetone. That same sample (SJS04-SD04) contained a significant concentration of PAHs. Because the surface soil samples from the top of the landfill also contained elevated levels of PAH the landfill is the likely source of the PAHs.

The landfill does not appear to be a source of 4,4'-DDT or its metabolites in sediment because the concentrations of these pesticides are highest in the "upstream" ditch sample. Dieldrin was detected in a sample collected adjacent to the landfill, but only in that sample. It is interesting to note that the COPC pesticides that were found in landfill surface soil, (endrin ketone, and endrin aldehyde) were not found in the sediments. Therefore it does

not appear that surface soil from those locations (SJS04-SS08 and -SS10 are impacting the sediments.

Several of the metals that appear at highest concentrations in the downstream ditch sample (SJS04-SD03) increase in concentrations along the ditch. These metals include: arsenic, barium, copper, lead, mercury, vanadium and zinc. The data indicate that the landfill is contributing to the concentration of these metals in sediment. The concentration of mercury in these samples is particularly high (6.4 mg/kg in SJS04-SD03). The florescent light containers, reported to have been disposed in this landfill, may be a likely source for the mercury found in the sediment.

6.2.2.4 Summary of Fate and Transport

The majority of the COPCs detected in the soils, sediments, surface water and groundwater at Site 4 can be classified as persistent, non-volatile and non-degradable metals (arsenic, beryllium, chromium, copper, lead, mercury, nickel, silver, thallium and zinc) and very slowly degradable organics that include PAHs, pesticides, PCBs and other SVOCs. These chemicals strongly sorb to soils and sediments and are relatively immobile. Concentrations in soils and sediment will persist into the future with only slow dissolution of metals and the most soluble SVOCs (acenaphthene, bis(2-ethylhexyl)phthalate and 4-methylphenol) to groundwater and surface water. Transport of contaminants in surface water, whether in the dissolved or particulate form, to Blows Creek is possible.

The volatile, soluble, degradable VOCs such as acetone and carbon disulfide were found only in trace concentrations in the surface soils, surface water and sediments.

6.2.3 Conclusion and Recommendations

The objective of the Remedial Investigation at Site 4 was to delineate Landfill D, identify the impact of landfilling activities on environmental media, and determine the extent of any impact that was identified. The boundaries of the landfill were identified with the geophysical survey, however no buried drums could be definitively identified.

Organic and inorganic COPCs were identified for all media at the site. The analytical data provides evidence that VOCs, PAHs, PCBs and pesticides have been disposed of in the landfill. There is no clear indication that the site is acting as a source for metals, although it

can be expected that much of the material in the landfill containes metal. Several metalic objects were visible at the surface of the landfill.

For Site 4, current and future risks and hazards are within EPA's acceptable risk range for shallow groundwater for all exposure scenarios. For deep groundwater, non-carcinogenic risk estimates are outside of EPA's acceptable risk range for the adult and child resident. For surface soil, the evaluation for the trespasser (child, adult, adolescent), resident (child, adult) groundskeeper and construction worker results in non-carcinogenic risk estimates outside EPA's acceptable risk range. For the trespasser (child, adult, adolescent), EPA's acceptable risk range was exceeded for the RME evaluation, but not for the CT evaluation. RME estimates of carcinogenic risk exceeded EPA's risk range for the residential child and adult. The CT evaluation for these scenarios produced a risk which was within EPA's acceptable risk range. For subsurface soil, risk estimates are outside EPA's acceptable risk range for the construction worker. For surface water, non-carcinogenic risk is outside of EPA's risk range for child and adult residents. For sediment, lead was the only constituent detected at a concentration above COPC screening levels. The current and future risks and hazards are within EPA's risk range for all other exposure scenarios.

Based on the findings presented in this report, the following recommendations are presented:

1) At present there is insufficient data on the natually occurring concentrations of inorganic constituents in all media that were sampled and evaluated. A study should be conducted with a sufficient number of samples, collected in background locations, to statistically determine the background concentrtions of inorganic constituents in groundwater, surface water, sediment, surface soil and subsurface soil.

2) Re-evaluate the risk to human health and the extent of contamination using the results of the background study.

3) Collect and surface water samples from the originally scheduled locations, as well as from the recommended additional sediment sampling locations (see below).

4) Conduct additional sediment sampling along the south and southwestern perimeter of the landfill in areas that drain to Blows Creek to further define the extent of contamination in these areas.

7. References

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APPENDIX A

Surface Geophysical Survey

Earth Resources Technology, Inc.

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August 12, 1997

David Schroeder
CDM Federal Prog Corp.
13135 Lee Jackson Memorial Hwy
Suite 200
Fairfax, VA 22033

Re: Results of the Geophysical Surveys at St. Juliens Creek Annex, Norfolk, VA

Dear Mr. Schroeder:

Earth Resources Technology, Inc. (ERT) performed geophysical surveys at Site 2, Landfill B; Site 3, Landfill C; Site 4, Landfill D; and Site 5, the Burning Grounds and the Caged Pit in the week of June 16, 1997. Figure 1-1 and Figure 1-2 show the locations of each site, respectively. The geophysical surveys involved electromagnetic (EM), magnetic, and ground penetrating radar (GPR) techniques. The EM method was used for all four sites; the magnetic method was used for Site 2, Site 4, and the caged pit; and the GPR method was used for Site 4 only. The objective of the surveys was to delineate site boundaries, identify any buried metal such as steel drums and metallic construction debris, and characterize the soil profile above the water table.

1.0 PRINCIPLE AND INSTRUMENTATION

The Geonics EM31 was used for the electromagnetic survey. The EM31 measures the changes in the ground conductivity using a patented electromagnetic inductive technique that makes the measurements without electrodes or ground contact. The unit of conductivity used is millisiemens per meter (mS/m). The conductivity changes are used to infer the geological variations, or groundwater contamination. The EM31 has two analog meters which display both the quadrature-phase (conductivity) and inphase components, respectively. Inphase measurements are the ratio of the induced secondary magnetic field to the primary magnetic field in parts per thousand (ppt). The inphase component is especially useful for searching for buried metal drums, pipes, and other ferrous and non-ferrous metallic debris. The effective depth of exploration of the equipment is about twenty (20) ft and the equipment can be used to collect one electromagnetic reading every second when operating in its auto mode.

The Geometrics Portable Cesium Magnetometer, Model G-858, was used for the magnetic survey. Using self-oscillating split-beam Cesium Vapor (non-radioactive CS-133), this magnetometer measures the earth's total geomagnetic field at a particular location in units of gamma with an accuracy of ± 1.0 gamma (nt). The total field consists of three components: the main field, the external field, and local variations. The main field remains fixed over the period of time of a field investigation. The external field does not remain constant, but is accounted for if necessary by using a diurnal variation correction. Local variations are

attributable to anomalies near the surface such as buried metal objects. When operating in its auto mode, the equipment can be used to collect a maximum of 10 magnetic readings per second.

The Subsurface Interface Radar (SIR) System-3 from Geophysical Survey Systems, Inc. (GSSI) was used for the GPR survey. This device radiates a 500 MHz electromagnetic pulse from a transmitter antenna into the earth and receives at a receiving antenna the reflection of the pulse from subsurface interfaces at which changes in the electrical properties (dielectric constant) of the subsurface materials occur. For example, metallic objects usually exhibit strong subsurface reflection character due to their high electrical impedance or contrast versus surrounding soil or fill. Depth of penetration of the radar signal is reversely proportional to the conductivity of the soil. As a result, electrically resistive earth materials such as coarse-grained, unsaturated sediments allow a deeper radar penetration than the conductive finer-grained soils such as clay and silt. Similarly, reinforced concrete and shallow groundwater are conductive and thus attenuate the radar signals.

2.0 GEOPHYSICAL SURVEYS AT SITE 2 - LANDFILL B

2.1 Field Design & Operation

As shown in Figure 2-1, both EM and magnetic surveys were conducted on grid lines set up on both sides of the existing pond located at Site 2. The grid lines on the east side of the pond were laid out in reference to Building 130. The grid lines on the west side of the pond were laid out with reference to the roads nearby. Note that one of the EW grid lines on the east side extended westerly into the pond. In reality, the gentle sloping area between Building 130 and the pond as shown in the topographic map was flat and dropped off sharply to the pond water at the west ends of the three EW grid lines. Various debris were noticed present in the woods west of Building 130.

Prior to the data collection, each grid line was staked with orange plastic flags every 50 ft. During the field data collection, the EM31 was set at the auto mode with readings in both quadrature-phase and inphase collected every second. With such a setting, approximately one reading was collected at every 3 ft while the operator carried the EM31 and walked slowly along each grid line. The EM readings were downloaded to a laptop computer and contour maps of conductivity and inphase readings were created.

The magnetometer was set to collect one magnetic reading every 0.4 second. With a normal walking pace, approximately one reading was collected per foot while the operator carried the magnetometer and walked along each grid line. The magnetic measurements were recorded and stored in the magnetometer memory and transferred to a computer at the end of the survey. The positions of both the EM and magnetic readings were calibrated against the flags staked every 50 ft.

2.2 Results and Interpretations

Figure 2-2 and Figure 2-3 are the contour maps made of the conductivity and inphase readings collected on the east bank of the pond, respectively. In the either map, the EM anomalies are shown in red or blue; while the background readings are shown in grey. The background conductivity values range around 40 mS/m. The background inphase readings vary from 4 to 6 ppt. Note that the low or high conductivity values are not absolute but relative, reflecting a deviation from the background values. The positive or negative values reflect the change of the dipole orientation of the local electromagnetic field. And it is the deviation that we are using to locate the buried materials. Several anomalies were identified in both the contour maps. They generally agree in positions between the two contour maps. The anomalies occurred

along the west edge of the bank, near the southwest corner of Building 130, and in the southeast corner of the survey area.

Figure 2-4 shows the contour map of the magnetic readings collected on the east bank of the pond. The magnetic anomalies are shown in red or blue with the background readings in grey. The magnetic anomalies occurred in the northern portion and southeast corner of the survey area, generally agreeing in position with those of EM anomalies. The locations of the EM and magnetic anomalies also agree with those of the surface debris observed in the woods, suggesting that the anomaly areas might have been landfilled.

Figures, 2-5 to 2-9, show the EM and magnetic profiles acquired along grid line A-A', B-B', C-C', D-D', and E-E', respectively (see Figure 2-1 for location reference). On an EM profile, anomalies are represented by the sudden change of the conductivity or inphase readings with distance. On a magnetic profile, anomalies are indicated by the magnetic highs or lows above or below the background readings.

As shown in the lower half of Figure 2-5, there is a magnetic high near the starting point (A), followed by relatively flat magnetic readings, representing the background conditions. The EM profile shows a general increase of conductivity and inphase readings toward the end point (A'). It is likely that the magnetic high near Point A was caused by the subsurface magnetic objects and the high conductivity and inphase readings near Point A' were caused by the increase of salt contents in the soil and groundwater. However, the presence of overhead power lines along the nearby roads might also have contributed to the anomalies.

Figure 2-6 shows the increase of both conductivity and inphase readings toward the middle of the profile but no increase or decrease of magnetic readings. The increase of the conductivity and inphase readings is likely related to the increase of salt content in the subsurface soil and groundwater. Along the magnetic profile, the background readings stayed around 52,200 gamma with several anomalies occurring at the distances of 150 ft (a magnetic low), 200 to 240 ft (fluctuated readings), and 320 to 350 ft (a magnetic low between two highs). These anomalies are most likely caused by subsurface magnetic objects or utility lines.

A conductivity low occurred in the middle of EM Profile C-C' as shown in Figure 2-7, associated with no apparent change in inphase and magnetic readings. The variation of the conductivity readings is thus more likely related to the change in soil content than the occurrence of metallic objects. The EM profile shown in Figure 2-8 is similar to that shown in Figure 2-7. However, there is a magnetic high in the middle of the profile (D-D'), which is probably caused by subsurface magnetic objects.

The EM profile along E-E' (Figure 2-9) is similar to that along A-A' with the increase of conductivity and inphase readings toward the end of the profile. Two magnetic anomalies occurred along E-E' with one low at the beginning (E) and one high at the distance of 145 ft. The magnetic high at 145 ft also corresponds to a minor fluctuation in inphase readings at the same location. The high might have been created by subsurface magnetic objects.

In summary, most of the magnetic anomalies shown along the above five transects do not occur in association with any EM anomalies. Similarly, the rise or fall of the EM readings do not concur with the occurrence of the magnetic anomalies. It is likely that the absence of EM anomalies at the locations of magnetic anomalies was due to the potentially high concentration of salt content in the groundwater, which would mask the impact of any metallic objects on the EM readings. The rise or fall of the EM readings might simply be caused by the increase or decrease of salt or clay content in the soil or groundwater, which would not have any impact on magnetic readings.

3.0 EM SURVEYS AT SITE 3 - LANDFILL C

3.1 Field Design and Operations

Figure 3-1 shows the survey grid laid out parallel to the fence lines at Site 3, Landfill C. The grid lines were spaced every 100 ft in the majority of the survey area but spaced every 50 ft in the area along the fences (50 ft) and 200 ft in the southern area. There are a total of eight east-west grid lines and ten north-south grid lines. Only the EM survey was conducted at this site. The data acquisition procedure was the same as that described in Section 2.1.

3.2 Results and Interpretations

Figure 3-2 and Figure 3-3 show the contour maps made of the conductivity and inphase readings collected at the site, respectively. Both maps show the occurrence of the high EM readings in the eastern, southern, and northwestern portions of the site, as marked by the light purple color. The relatively low EM readings occurred in the areas surrounded by the areas of the high readings, as marked by the grey to light blue color. The highest conductivity and inphase readings occurred along the eastern fence line (purple) and are probably caused by the fence line. The EM readings in the light-blue to grey area vary slightly with little fluctuation and these readings may represent the background conditions. The change of the EM readings from the grey to light purple area is steep, reflecting the increase of conductive contents in the subsurface soil or groundwater. Within the light purple area, the EM readings fluctuate from 120 mS/m to 250 mS/m or from 12 ppt to 35 ppt but without erratic changes. Usually, the erratic changes suggest the presence of isolated metallic objects. The lack of the erratic changes indicates that the increase of the EM readings was primarily due to the increase of salt or clay content in the subsurface soil or groundwater. The light-purple areas might have been filled with soils with high salt or clay contents.

Both Figure 3-2 and Figure 3-3 show a linear anomaly originated near the two existing buildings at the coordinates of {900 E, 600 N} to {900 E, 700 N} and extended westerly to the coordinate of {100 E, 650 N}. The anomaly occurred as an EM low (dark blue) near one of the buildings at the coordinate of {900 E, 600 N} and an EM high (closed contour in purple) at the coordinate of {280 E, 600 N}. The anomaly is probably caused by a subsurface utility line.

4.0 GEOPHYSICAL SURVEYS AT SITE 4 - LANDFILL D

4.1 Field Design and Operations

Figure 4-1 shows the survey grid laid out in reference to the eastern fence line at Site 4, Landfill D. The majority of Landfill D was covered by heavy vegetation and brush, which limited the grid layout. The only open area occurred in the eastern portion of the landfill and measured approximately 250 ft by 400 ft. In this open area, the grid lines were laid out every 50 ft to 100 ft. One group of grid lines were parallel to the eastern fence line and the other group in the perpendicular direction. To get access to the other areas, one machete, two brush cutters, one chain saw, and one Bobcat were used to clear the brush and vegetation. A total of four long grid lines were laid out to cover the entire landfill with three in the approximate north-south direction (or parallel to the eastern fence line) and one in the approximate east-west direction. The three north-south grid lines (A-A', B-B', and C-C') were extended northerly beyond the landfill to join the grid laid out at Landfill C. Line D-D' changed its course in the western portion of the landfill due to the obstruction of an abandoned large machine or vehicle. Various debris including concrete, steel bars, bricks, tires, woods, cannon shells and other materials were observed along these four grid lines but primarily in

the western and southern portions of the landfill. Note that the locations of A-A', B-B', C-C', and D-D' were not surveyed and therefore might not be accurate.

EM, magnetic, and GPR surveys were conducted for Landfill D. The EM and magnetic data acquisition procedures were the same as those described in Section 2.1. The collection of the GPR data was through pulling the antenna along each grid line while the marker button was pushed at 10 ft intervals to scale the printout. Because the subject property is underlain by the artificial fill, the two way travel time (TWTT) for a radar signal is estimated around 7 nanoseconds (ns) per foot. The time range was thus selected as 70 ns and would allow a penetration depth of 10 ft. The GPR data were output real-time to a hardcopy graphics recorder as continuous, high-resolution subsurface profiles. In each profile, the horizontal axis represents the distance; while the vertical axis represents the TWTT in ns (see Figure 4-10 for reference). The top horizontal line represents the ground surface. With such a setup, the distance between two horizontal time lines is approximately equal to 1 ft.

4.2 Results and Interpretations

Figures, 4-2 to 4-5, show the EM and magnetic profiles acquired along grid line A-A', B-B', C-C', and D-D', respectively. On an EM profile, anomalies are represented by the sudden change of the conductivity or inphase readings with distance. On a magnetic profile, anomalies are indicated by the magnetic highs or lows above or below the background readings.

As shown in Figure 4-2, EM and magnetic anomalies occurred from the beginning (1,050 ft or A) of the line to the distance of about 1,520 ft. The EM anomalies include two conductivity highs from 1,050 ft to 1,150 ft and 1,380 ft to 1,440 ft, and one inphase high which is completely flat (saturated) from the beginning to 1,450 ft. The magnetic anomalies are represented by fluctuated highs and lows occurring throughout the section from 1,050 ft to 1,520 ft. The saturation of the inphase readings was caused by the limitation of the EM data logger which would record any readings above 46 ppt as 46 ppt. The consistently saturated inphase readings might have been caused by the nearly continuous deposit of metallic debris or conductive materials in the subsurface. The detection of the magnetic highs and lows throughout the inphase-reading saturated area suggests the presence of numerous magnetic debris in the subsurface. The rest of the line is characterized by the smooth variation of both EM and magnetic readings. The magnetic readings stayed around 52,500 gamma, very close to the background readings obtained in Landfill B.

The other two north-south profiles, B-B' and C-C' (Figure 4-3 and 4-4), are similar to those shown in Figure 4-2, characterized by fluctuated readings in the southern section and smooth readings in the northern section. These three north-south profiles clearly define the northern boundary of Landfill D at the locations where the fluctuated EM and magnetic readings were replaced by the smooth readings. The southern boundary of the landfill is less clear because the lines could not be extended further south due to the presence of steep cliff and limitation of wetland and fence line. However, our field observation suggests that the location of the steep cliff may represent the southern boundary of Landfill D.

The east-west profile, D-D' (Figure 4-5) is almost entirely filled with fluctuated EM and magnetic readings with the exception of the first 150 ft of the profile which was lack of fluctuated EM readings but contained fluctuated magnetic readings. This area may represent the western boundary of Landfill D. The eastern boundary of the landfill cannot be determined due to the limitation of the fence line. Figure 4-5A depicts the boundary (dotted line) of the landfill as determined with the geophysical surveys. However, please be cautious when using this figure because the locations of A-A', B-B', C-C', and D-D' were not surveyed.

Figures, 4-6 to 4-8, show the contour maps made of the conductivity, inphase, and magnetic readings, respectively. These readings were collected along the grid lines laid out in the open area in the eastern

portion of the landfill. The open area is located within the extent of the landfill. These contour maps reflected the similar features exhibited by the four profiles presented earlier. Figure 4-6 shows the high conductivity readings in the areas along the fence line and in the northern and western areas, and low conductivities in the middle. Figure 4-7 is characterized by saturated inphase readings almost in the entire survey area with the exception of the northeast and northwest corners. The magnetic contour map as shown in Figure 4-8 shows the occurrence of a number of closed magnetic highs and lows, suggesting the presence of numerous magnetic objects in the subsurface. A linear magnetic low occurred along the eastern fence line and the two may be related.

GPR surveys were conducted along some of the EM and magnetic grid lines in the open areas. Figure 4-9 shows the locations of six GPR profiles acquired along these grid lines. Figures, 4-10 to 4-12, show the representative sections of GPR profiles acquired along three grid lines, respectively. Figure 4-10 shows a portion of the GPR profile acquired along B-B'. The profile ends about 5 ft from the end point (B') of B-B'. The reflections along the profile are weak, suggesting the subsurface materials are clay rich or conductive. The GPR profiles shown in Figure 4-11 and 4-12 are similar and characterized by strong reflections. Each profile contains several reflections that might have been caused by subsurface objects such as concrete blocks, metal pipes, drums, or other materials. These reflections are located at the distances of 4 ft, 22 ft, 27 ft, and 34 ft along C'-C; and at the distances of 60 ft, 74 ft, 79 ft, 82 ft, and 88 ft along D-D', respectively. Among the six GPR profiles, the majority is represented by the two profiles shown in Figure 4-11 and 4-12 with some containing the features similar to those shown in Figure 4-10.

5.0 GEOPHYSICAL SURVEYS AT SITE 5 - BURNING GROUND & CAGED PIT

5.1 Field Design & Operation

Figure 5-1 shows the survey grids laid out at the burning grounds and the caged pit. The grid at the burning grounds was laid out in reference to Building 272; while the exact location of the grid for the caged pit was not determined. Two wooden stakes were placed at the northwest and southwest corners of the grid for the future survey reference. Only the EM survey was conducted at the burning grounds; while both EM and magnetic surveys were conducted at the caged pit. Most of the grid lines were spaced every 50 ft; although some were spaced every 100 ft or 10 ft. The EM and magnetic data acquisition procedures are the same as those described in Section 2.1.

5.2 Results and Interpretations

Figure 5-2 and Figure 5-3 are the contour maps made of the conductivity and inphase readings collected at the burning grounds. The two maps show a similar pattern with the occurrence of several EM highs and lows. Both high and low conductivity and inphase readings occurred in the areas surrounding Building 272. These highs and lows are probably caused by the building. High EM readings occurred in the northeast corner of the area. The magnitude of the EM highs is similar to that of the EM highs at Landfill C. The EM highs are thus likely related to filled material with salt or clay contents. The presence of two transformers in this area might also have contributed to the high readings.

One EM high occurred with its center at the coordinate of {150 E, 330 N}. An EM low occurred directly south of this high at the coordinate of {140 E, 300 N}. No surface metallic objects were present in association with these two anomalies. Therefore, subsurface objects or changes in the soil conditions might have contributed to these two anomalies. A linear EM low occurred from {250 E, 350 N} to {250 E, 150 N}, where wooden poles and other surface metallic objects were present. These surface debris might have created the linear anomaly.

In addition to above large-scale anomalies, several small-scale anomalies also occurred at the site (Figure 5-2 and 5-3). One EM high occurred at {175 E, 200 N} and appeared to be associated with an existing wire trailer at the location. Another EM was located at {300 E, 240 N}, where metallic equipments were present. One EM low occurred at {300 E, 300 N} and seemed to be caused by the surface metallic debris such as trailers and metal boxes.

Figures, 5-4 to 5-6, show the contour maps made of conductivity, inphase, and magnetic readings acquired in the caged pit area. The conductivity contour map (Figure 5-4) shows an isolated conductivity low centered at the coordinate of {160 E, 200 N}. The conductivity values increased from less than 70 mS/m in the western portion to greater than 120 mS/m in the eastern portion. A similar pattern was shown on the contour map of the inphase readings with an isolated inphase low associated with two inphase highs occurrent at the same location as the conductivity low (Figure 5-5). The magnetic contour map (Figure 5-7) revealed a magnetic anomaly with both high and low at the approximately same location as that of the conductivity low. This general area might represent the former caged pit. In addition to the above anomalies, magnetic highs and lows also occurred near the coordinate of {340 E, 200 N}, suggesting the presence of magnetic objects in the subsurface.

6.0 CLOSING

The field procedures and interpretative methodologies used in this project are consistent with standard, recognized practices in similar geophysical investigations. The correlation of geophysical responses with probable subsurface features is based on the past result of similar surveys although it is possible that some variation could exist at this site. This warranty is in lieu of all other warranties either implied or expressed. **ERT** assumes no responsibility for interpretations made by others based on work performed by or recommendations made by **ERT.**

Sincerely,
Earth Resources Technology, Inc.

Peter H. Li, Ph.D., P.G.
Principal Geophysicist

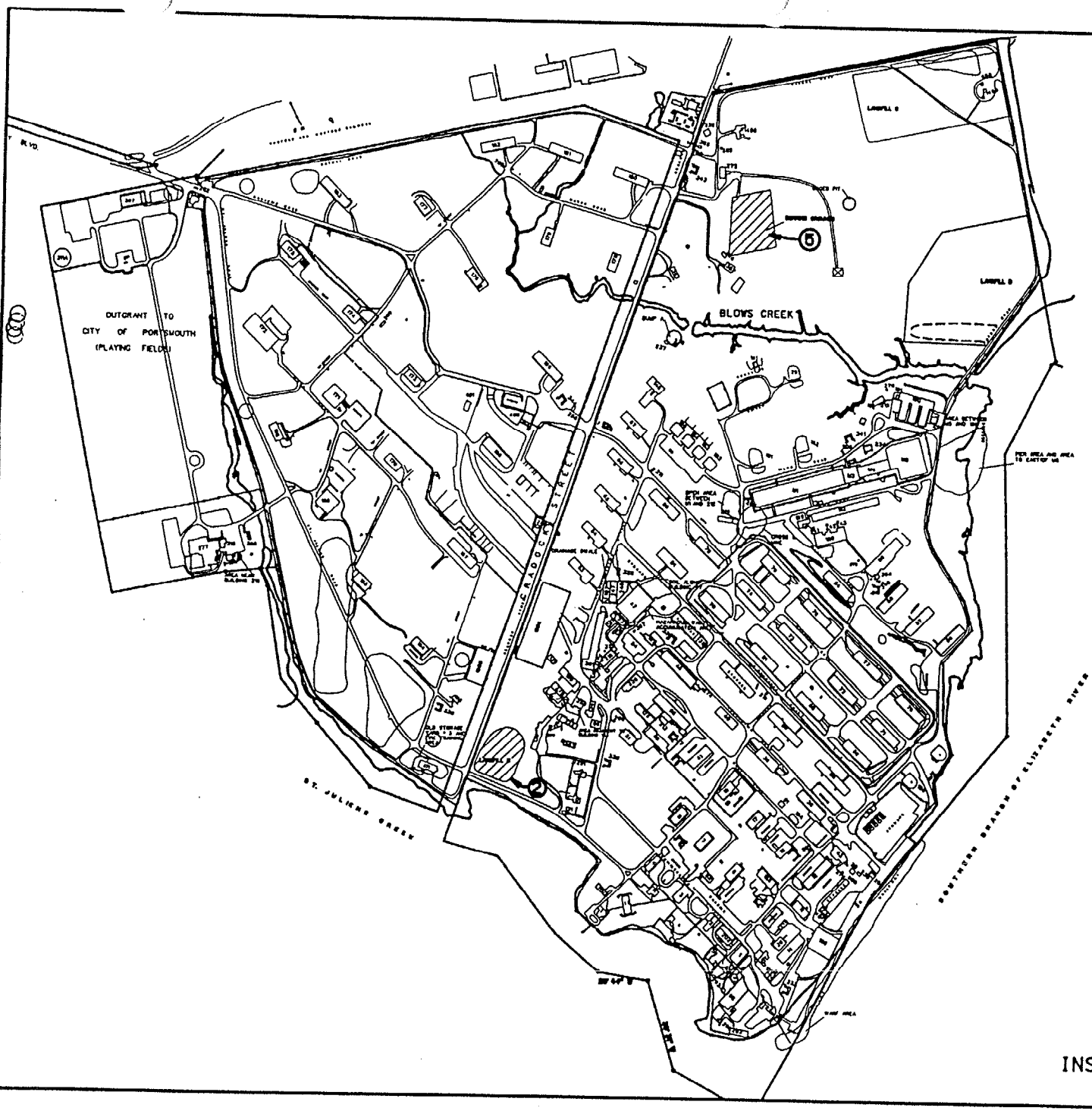


Figure 1-1.
INSTALLATION LOCATION MAP
St. Juliens Creek Annex

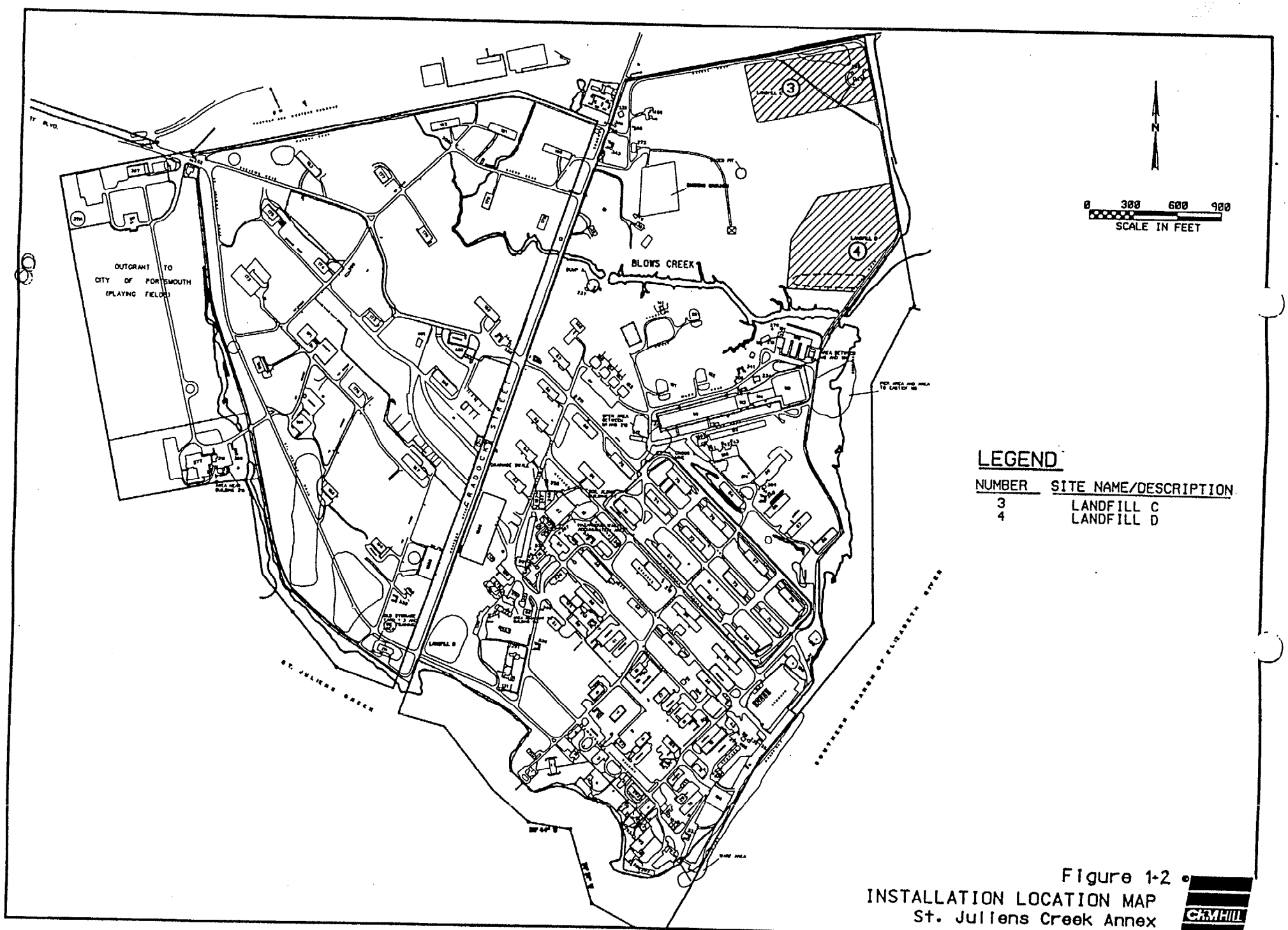
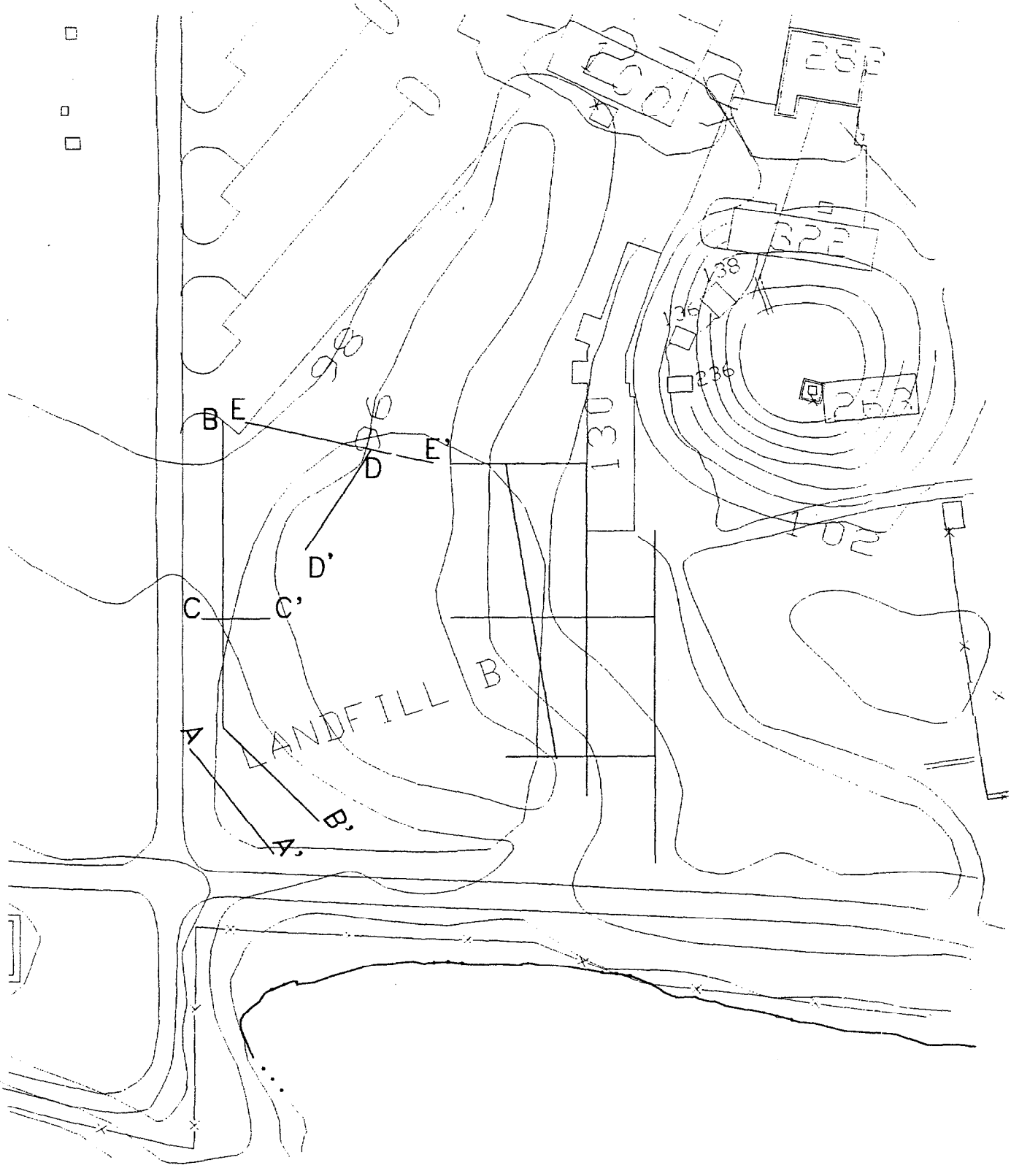


Figure 1-2
INSTALLATION LOCATION MAP
St. Juliens Creek Annex



EARTH RESOURCES TECHNOLOGY

FIGURE 2-1

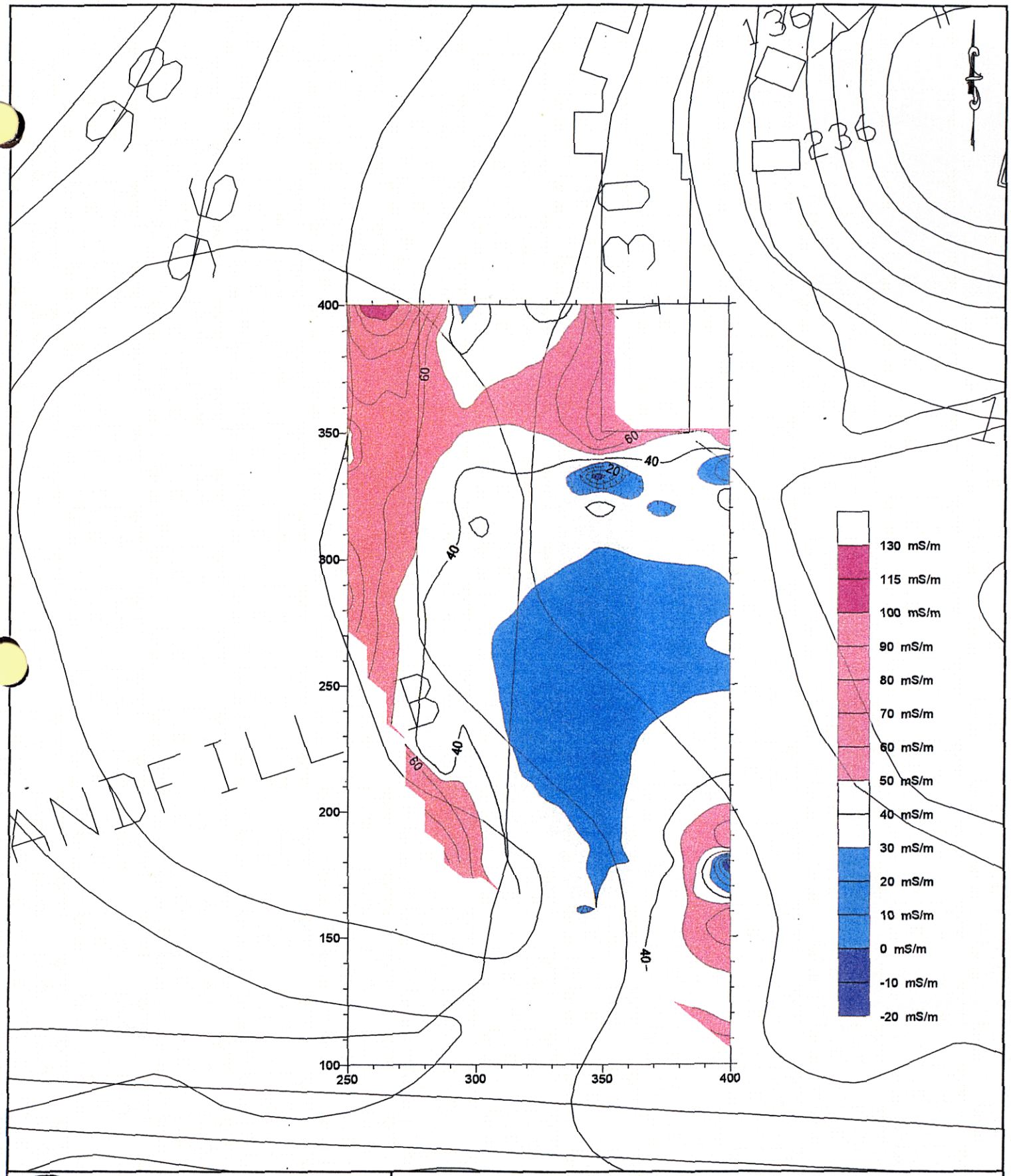
SCALE: 1" = 100'

JULY 17, 1997

EM SURVEY GRID

SITE 2 – LANDFILL B

ST. JULIENS CREEK ANNEX, NORFOLK, VA



ERT EARTH RESOURCES TECHNOLOGY

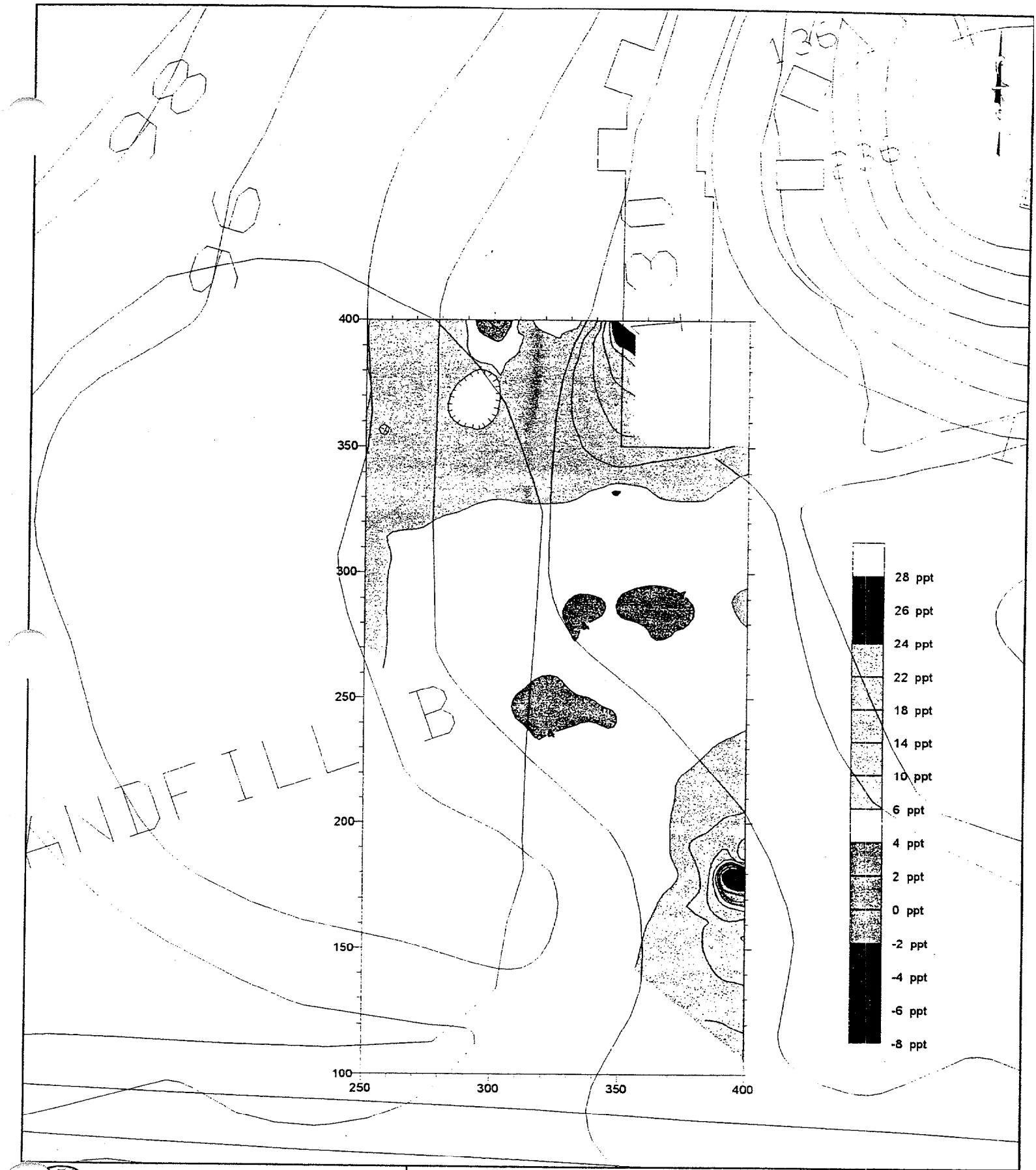
FIGURE 2-2

SCALE: 1" = 50' | JULY 17, 1997

CONTOUR MAP OF CONDUCTIVITY READINGS

SITE 2 – LANDFILL B

ST. JULIENS CREEK ANNEX, NORFOLK, VA



EARTH RESOURCES TECHNOLOGY

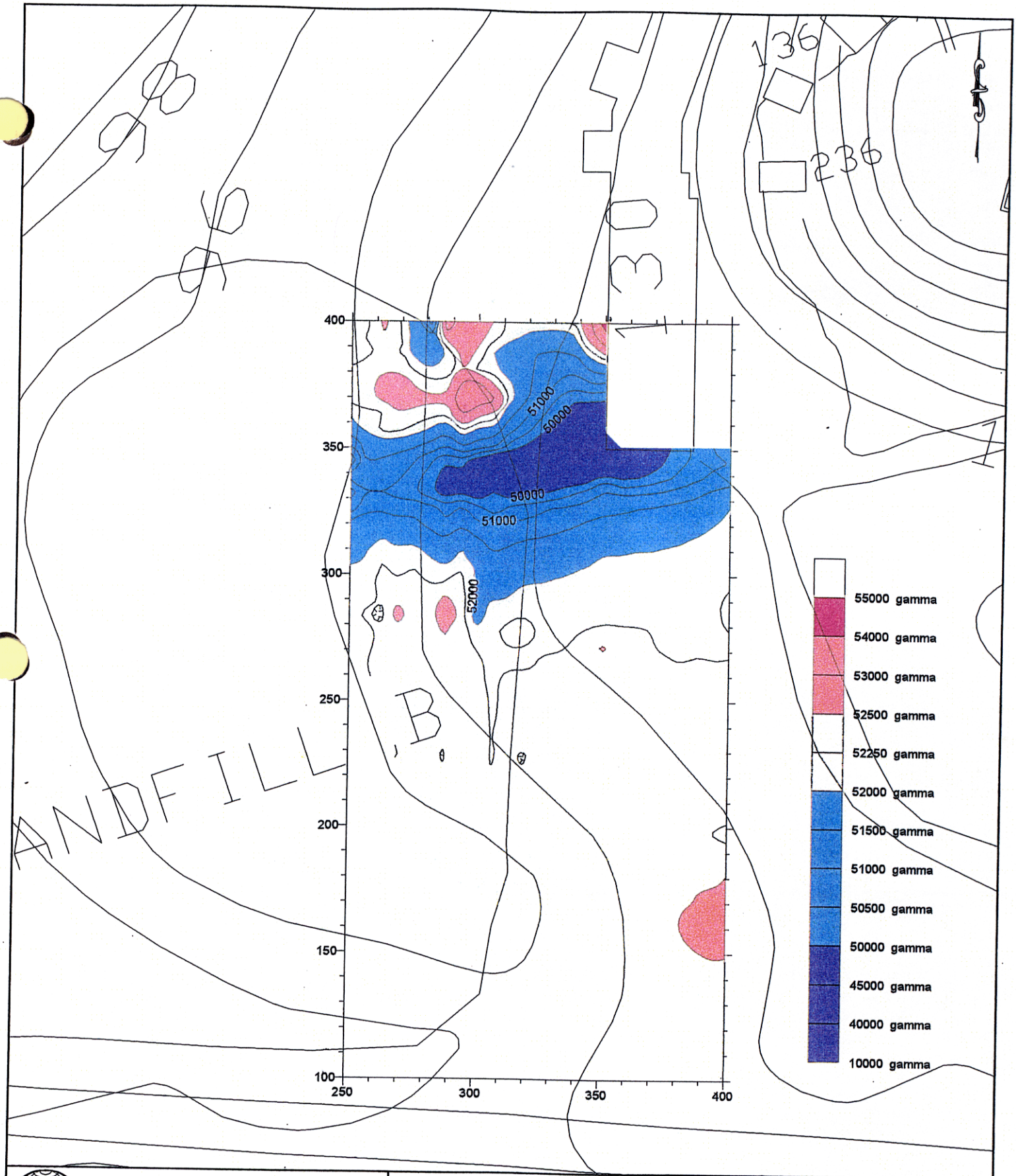
FIGURE 2-3

SCALE: 1" = 50' | JULY 17, 1997

CONTOUR MAP OF INPHASE READINGS

SITE 2 – LANDFILL B

ST. JULIENS CREEK ANNEX, NORFOLK, VA



ERT EARTH RESOURCES TECHNOLOGY

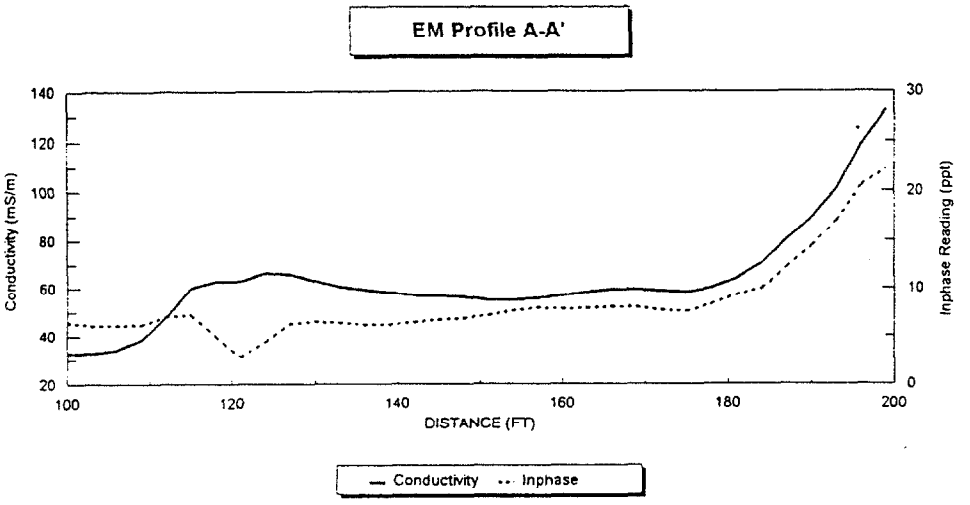
FIGURE 2-4

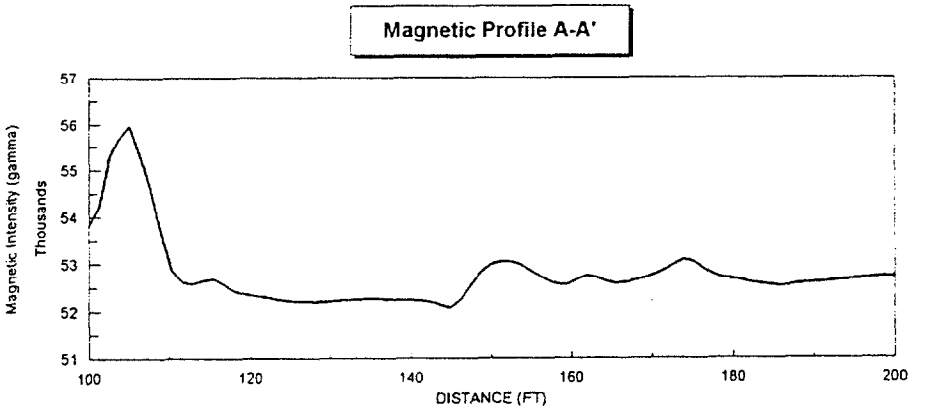
SCALE: 1" = 50' | JULY 17, 1997

CONTOUR MAP OF MAGNETIC READINGS

SITE 2 – LANDFILL B
ST. JULIENS CREEK ANNEX, NORFOLK, VA

168B024





EARTH RESOURCES TECHNOLOGY

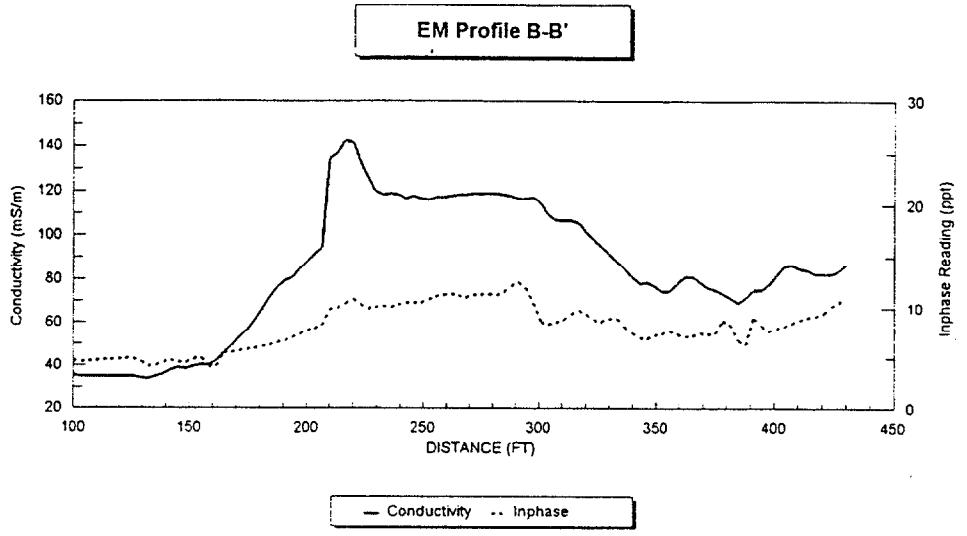
FIGURE 2-5

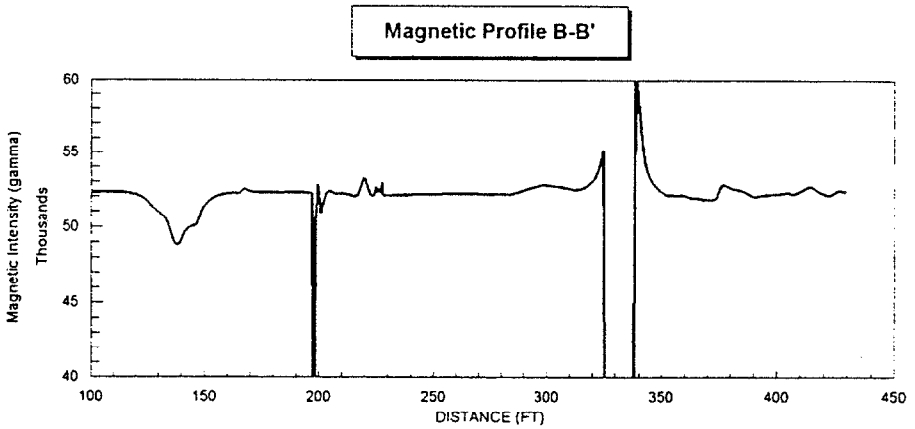
SCALE AS SHOWN | JULY 17, 1997

EM & MAGNETIC PROFILE: A – A'

SITE 2 – LANDFILL B

ST. JULENS CREEK ANNEX, NORFOLK, VA





EARTH RESOURCES TECHNOLOGY

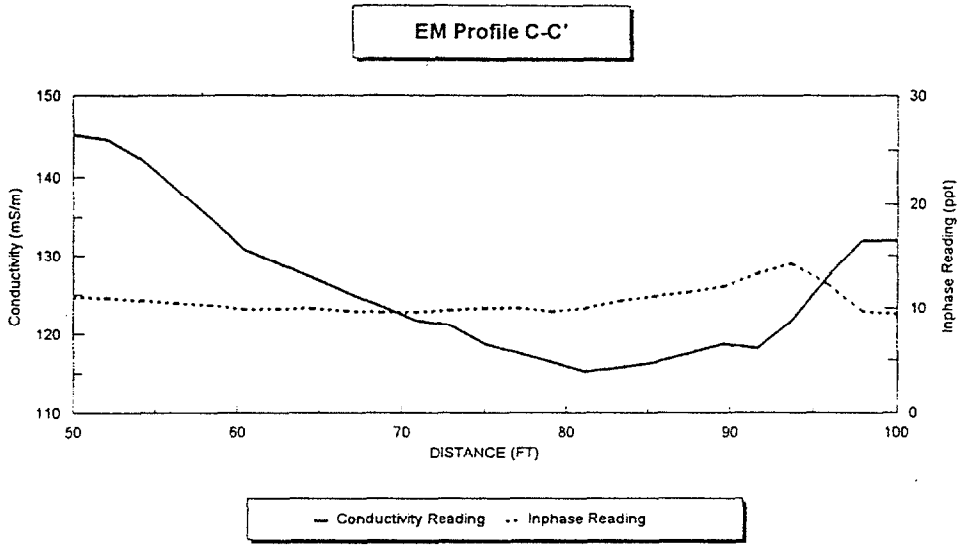
FIGURE 2-6

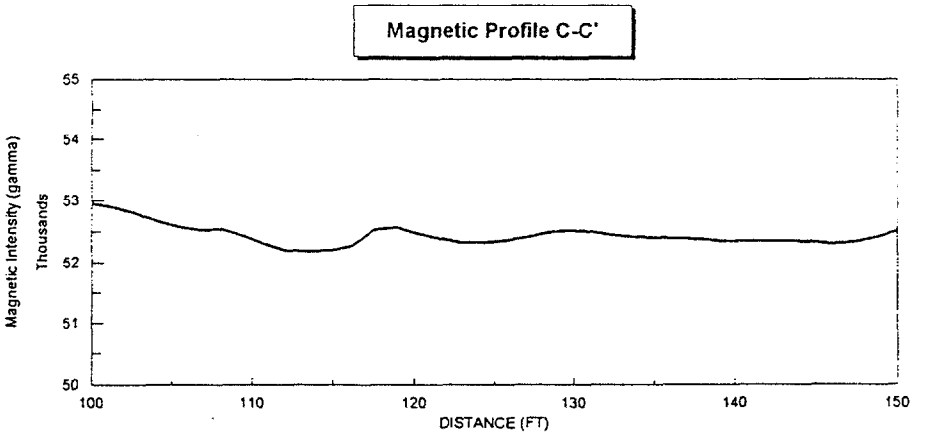
SCALE AS SHOWN | JULY 17, 1997

EM & MAGNETIC PROFILE: B – B'

SITE 2 – LANDFILL B

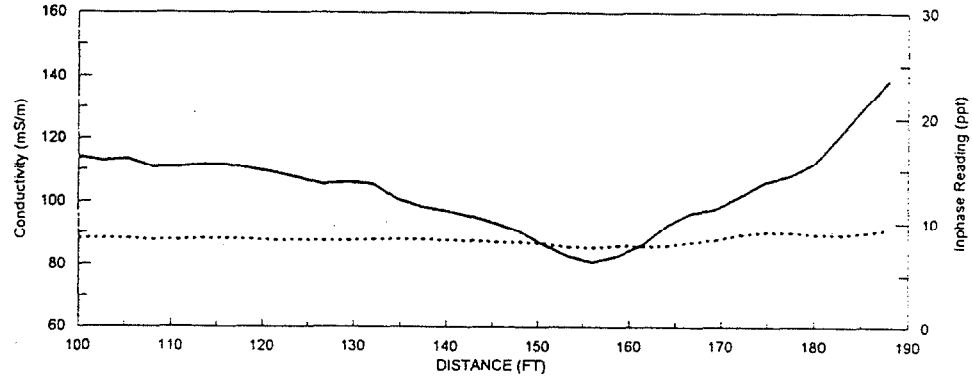
ST. JULENS CREEK ANNEX, NORFOLK, VA



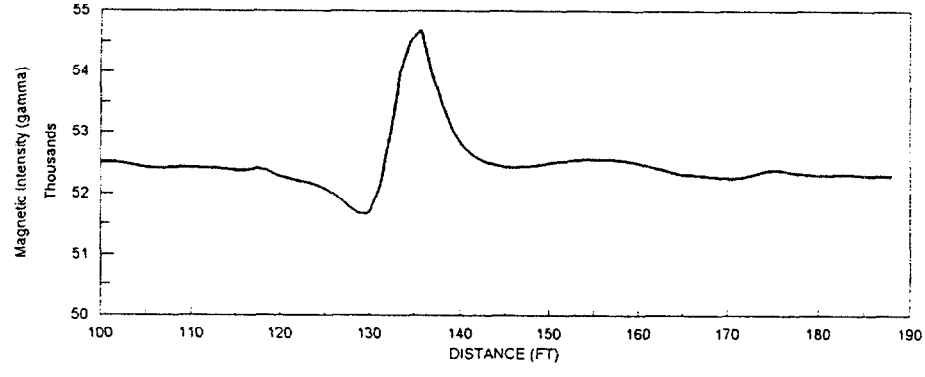


EARTH RESOURCES TECHNOLOGY		EM & MAGNETIC PROFILE: C – C'
FIGURE 2-7		SITE 2 – LANDFILL B
SCALE AS SHOWN	JULY 17, 1997	ST. JULENS CREEK ANNEX, NORFOLK, VA

EM Profile D-D'



Magnetic Profile D-D'



EARTH RESOURCES TECHNOLOGY

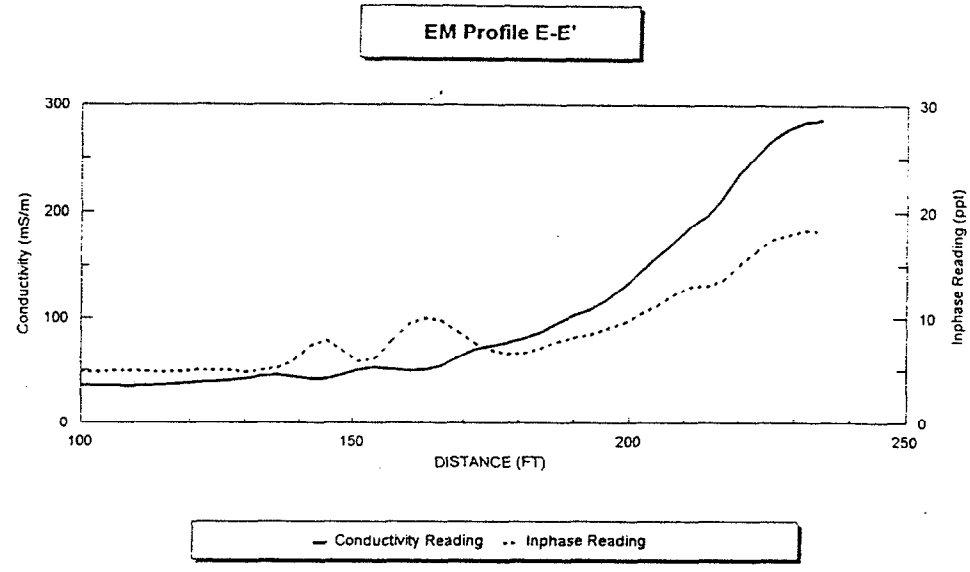
FIGURE 2-8

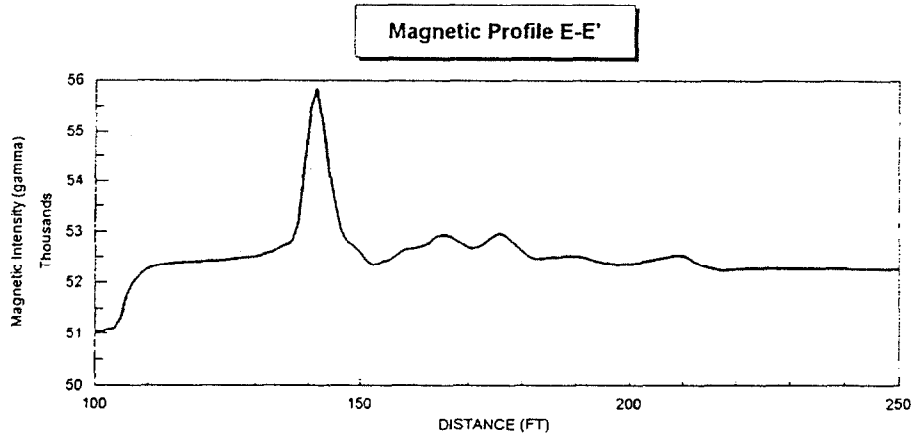
SCALE AS SHOWN | JULY 17, 1997

EM & MAGNETIC PROFILE: D – D'

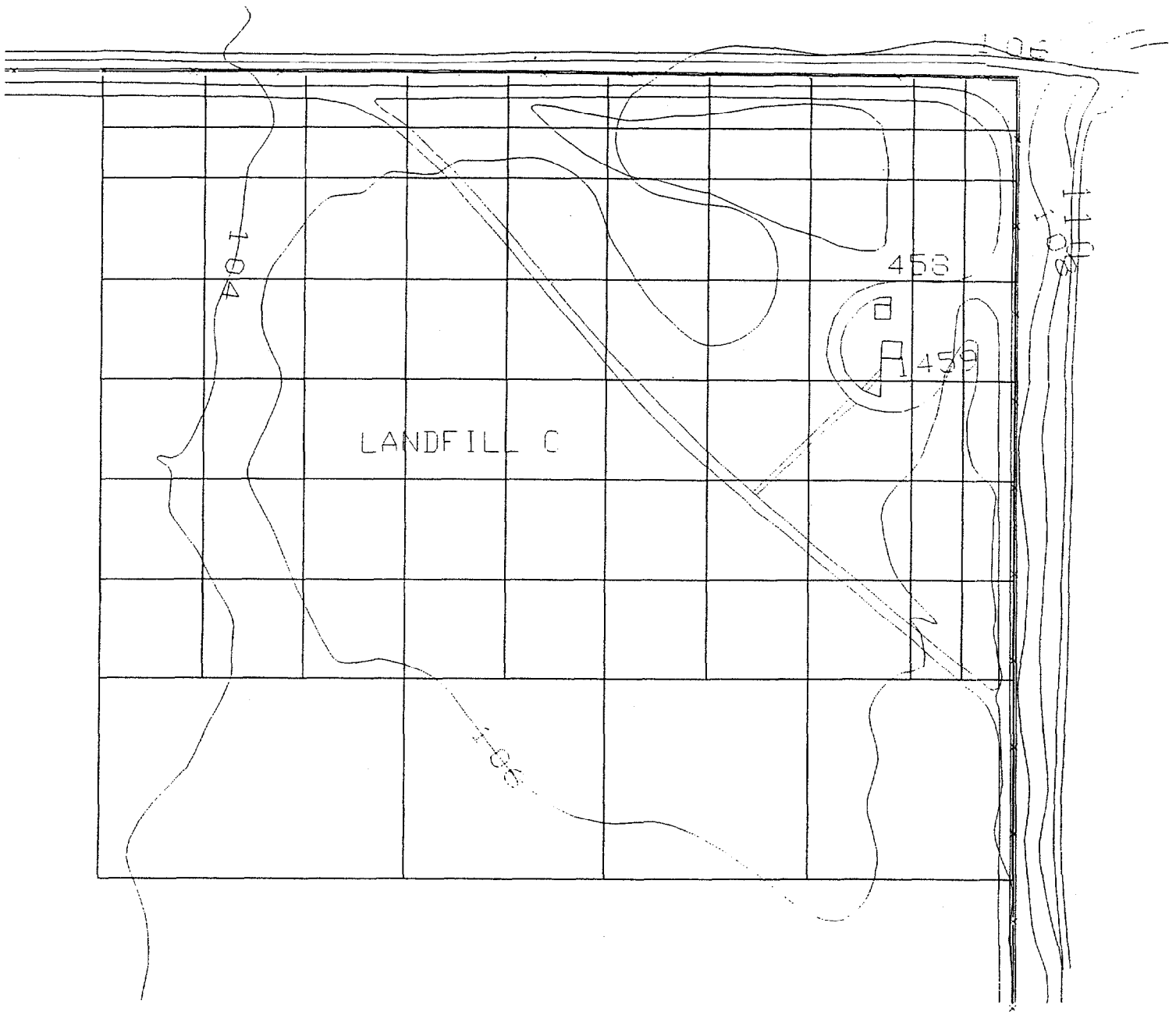
SITE 2 – LANDFILL B

ST. JULENS CREEK ANNEX, NORFOLK, VA





EARTH RESOURCES TECHNOLOGY		EM & MAGNETIC PROFILE: E – E'
FIGURE 2–9		SITE 2 – LANDFILL B
SCALE AS SHOWN	JULY 17, 1997	ST. JULENS CREEK ANNEX, NORFOLK, VA



EARTH RESOURCES TECHNOLOGY

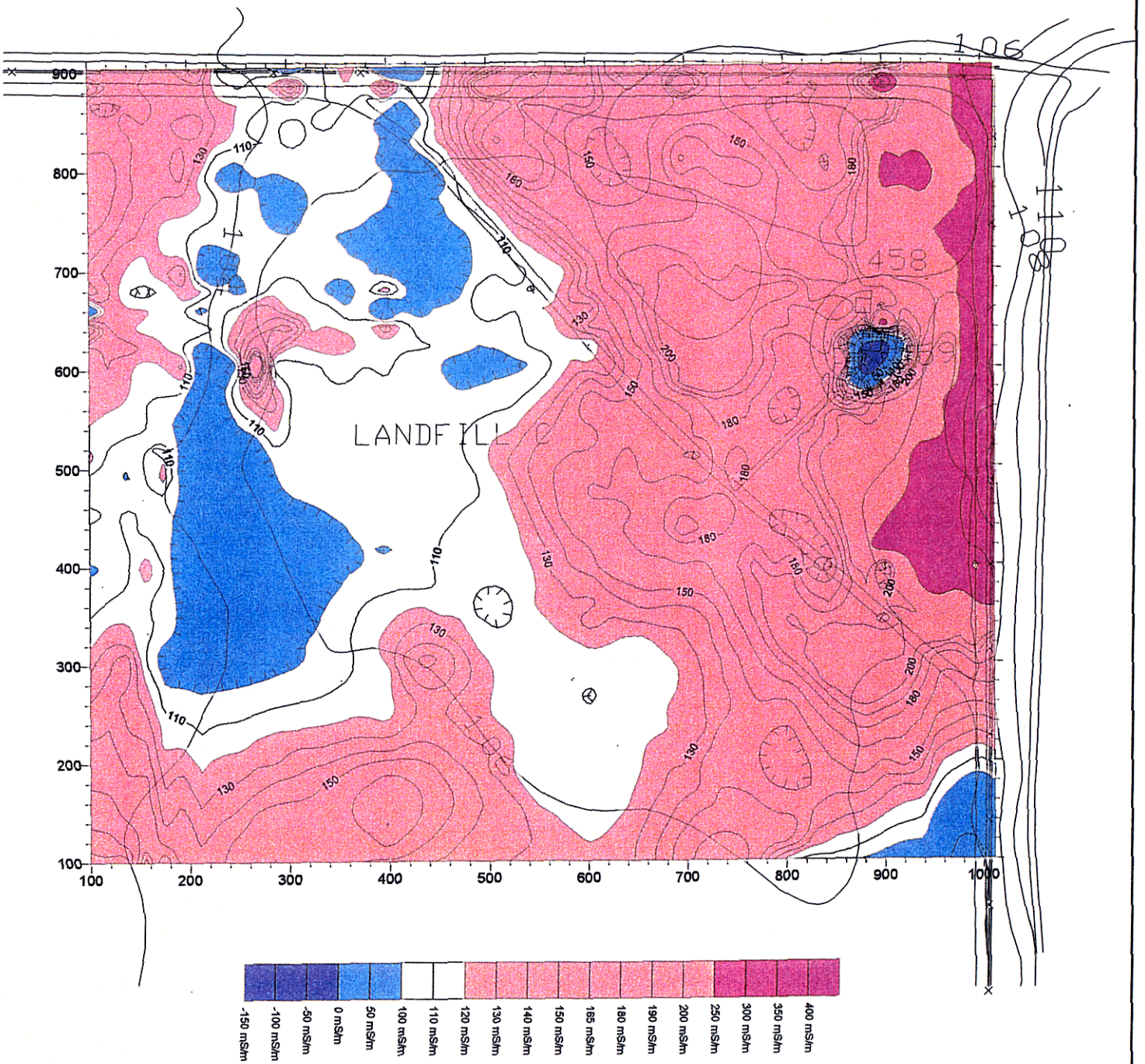
FIGURE 3-1

SCALE: 1" = 150' | JULY 17, 1997

EM SURVEY GRID

SITE 3 – LANDFILL C

ST. JULIENS CREEK ANNEX, NORFOLK, VA



EARTH RESOURCES TECHNOLOGY

FIGURE 3-2

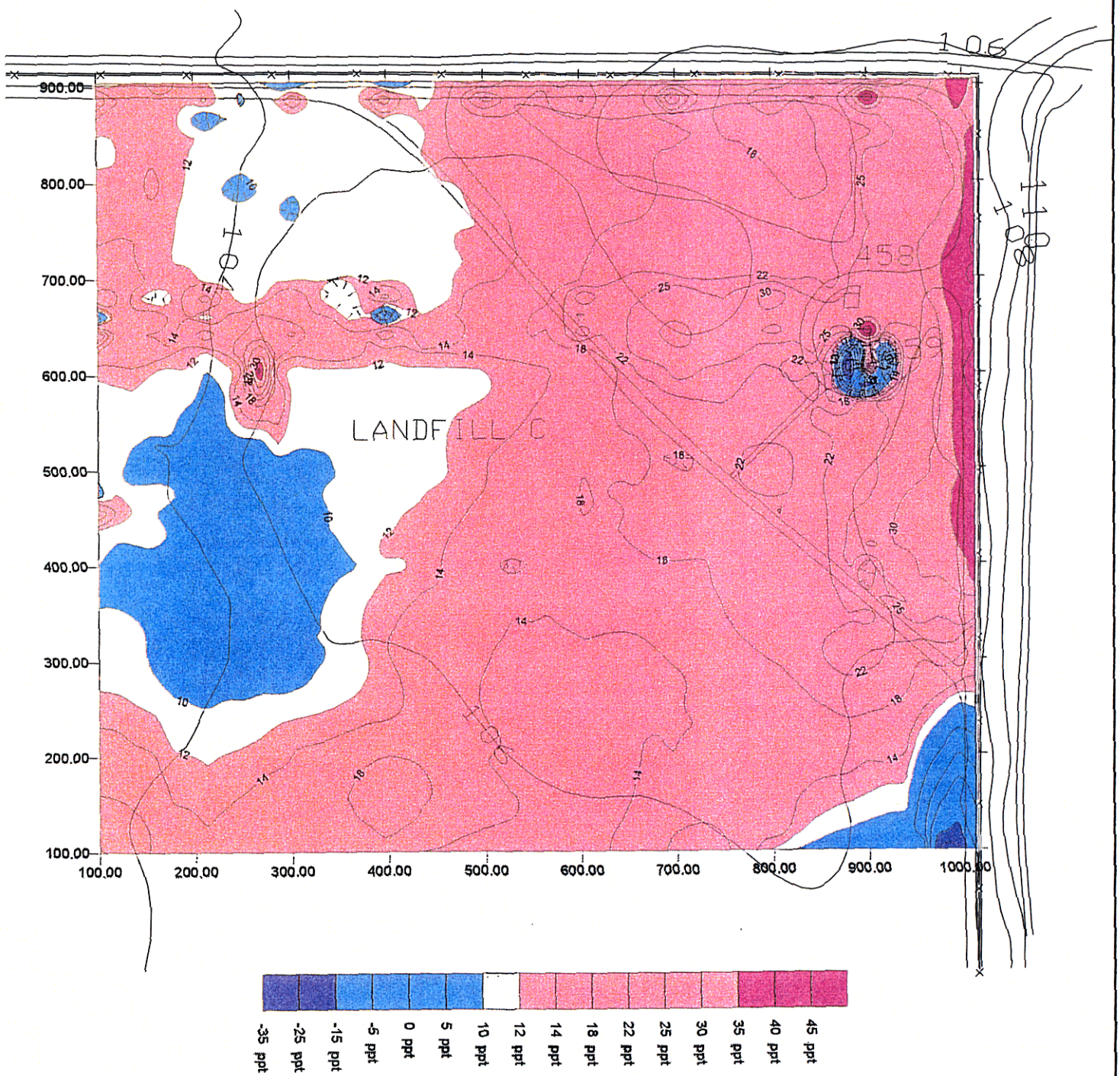
SCALE: 1" = 150' | JULY 17, 1997

CONTOUR MAP OF CONDUCTIVITY READINGS

SITE 3 – LANDFILL C

ST. JULIENS CREEK ANNEX, NORFOLK, VA

168BB34



EARTH RESOURCES TECHNOLOGY

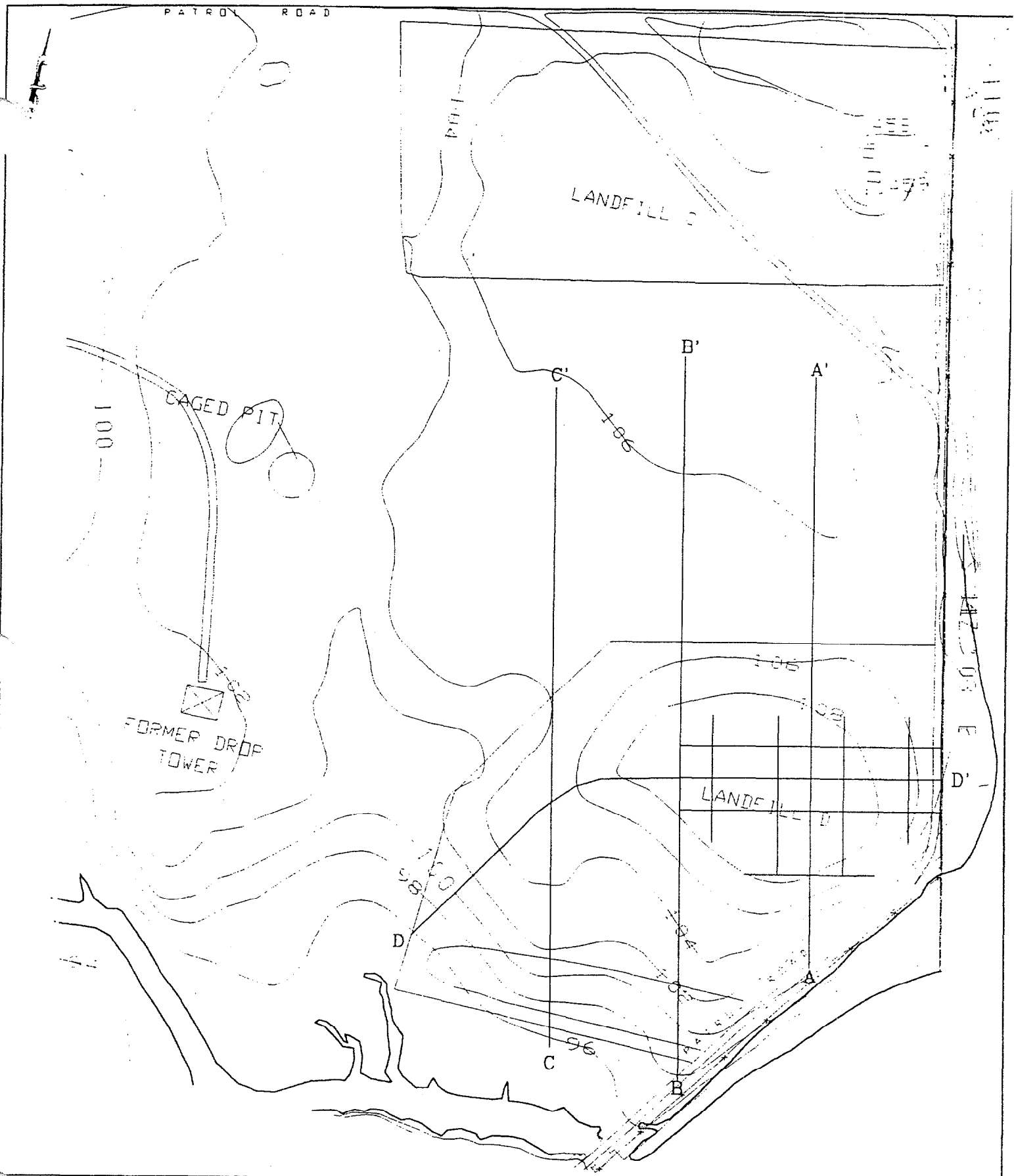
FIGURE 3-3

SCALE: 1" = 150' | JULY 17, 1997

CONTOUR MAP OF INPHASE READINGS

SITE 3 – LANDFILL C

ST. JULIENS CREEK ANNEX, NORFOLK, VA



EARTH RESOURCES TECHNOLOGY

FIGURE 4-1

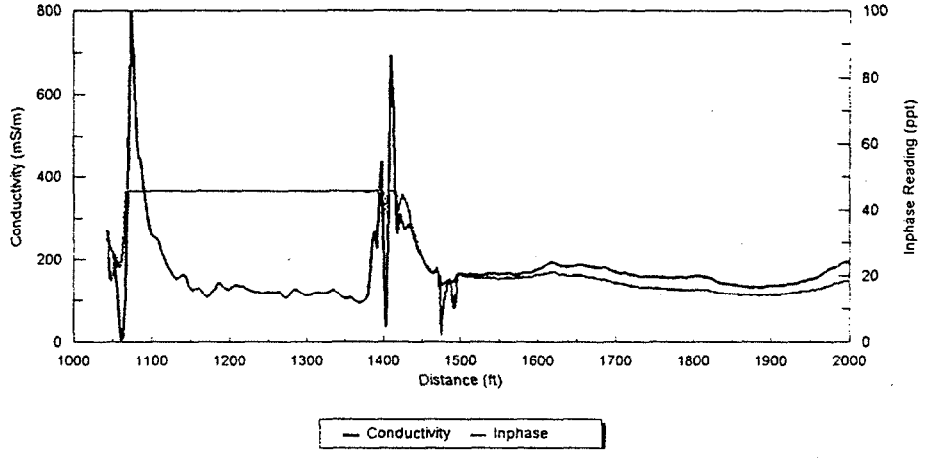
SCALE: 1" = 200' | JULY 17, 1997

EM & MAGNETIC SURVEY GRID

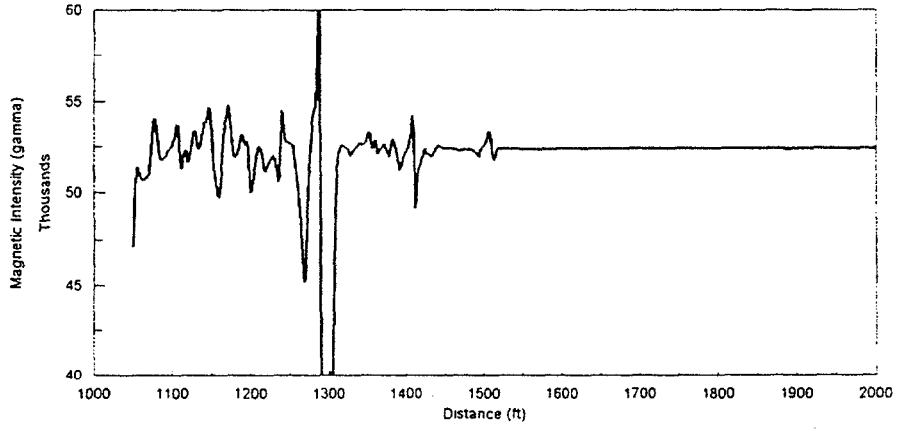
SITE 4 – LANDFILL D

ST. JULENS CREEK ANNEX, NORFOLK, VA

EM PROFILE A - A'

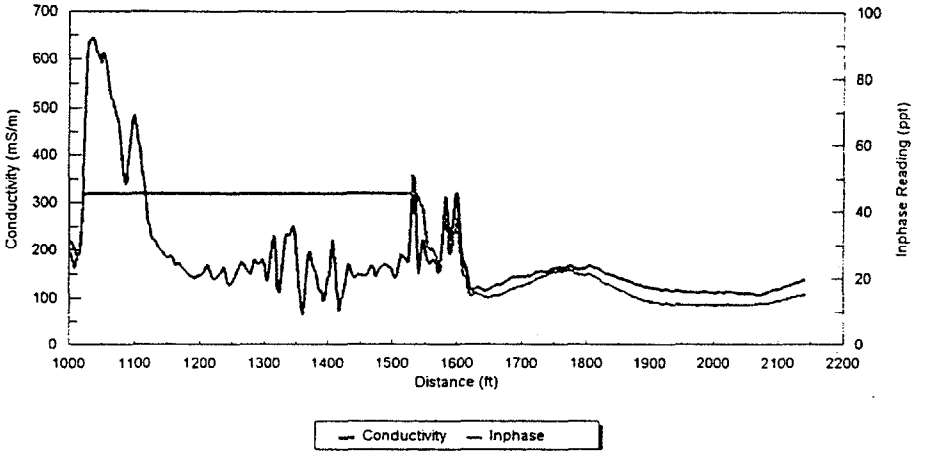


MAGNETIC PROFILE A - A'

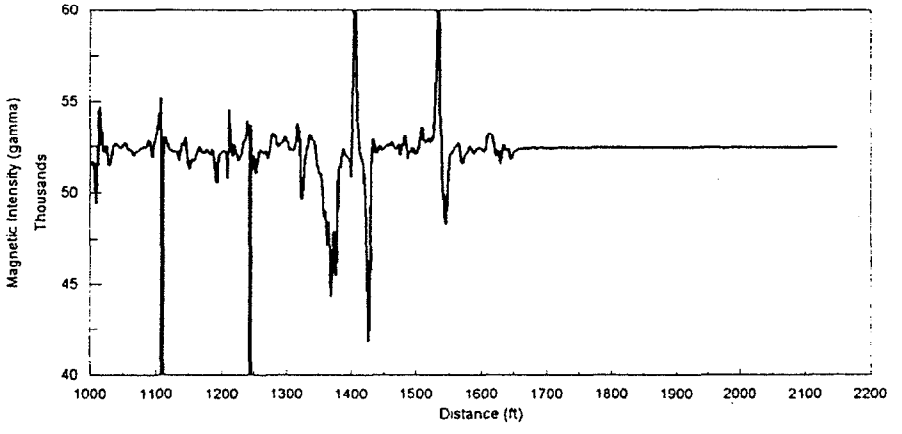


EARTH RESOURCES TECHNOLOGY	EM & MAGNETIC PROFILE: A – A'
FIGURE 4–2	SITE 4 – LANDFILL D
SCALE AS SHOWN / JULY 17, 1997	ST. JULENS CREEK ANNEX, NORFOLK, VA

EM PROFILE B - B'

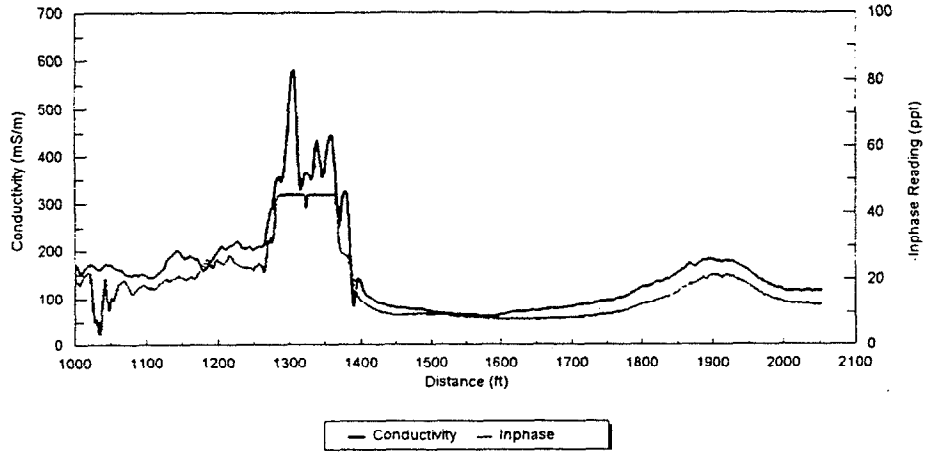


MAGNETIC PROFILE B - B'

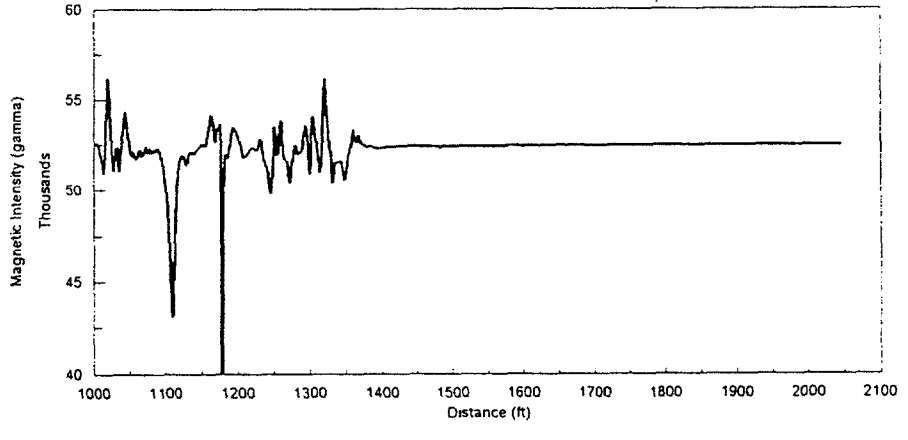


EARTH RESOURCES TECHNOLOGY	EM & MAGNETIC PROFILE: B – B'
FIGURE 4-3	SITE 4 – LANDFILL D
SCALE AS SHOWN / JULY 17, 1997	ST. JULENS CREEK ANNEX, NORFOLK, VA

EM PROFILE C - C'

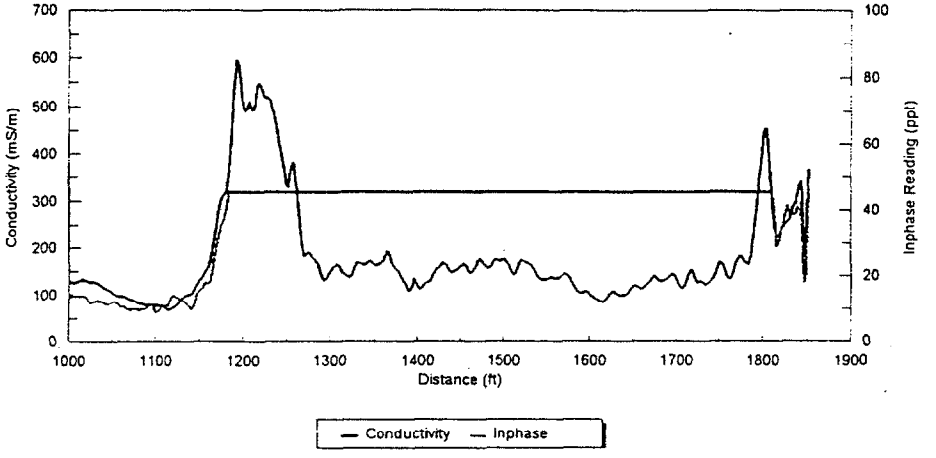


MAGNETIC PROFILE C - C'

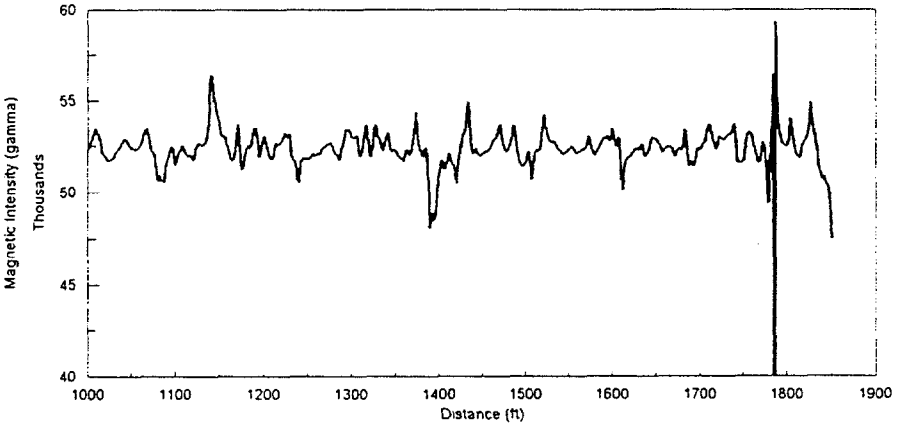


ERT EARTH RESOURCES TECHNOLOGY	EM & MAGNETIC PROFILE: C – C'
FIGURE 4-4	SITE 4 – LANDFILL D
SCALE AS SHOWN | JULY 17, 1997	ST. JULENS CREEK ANNEX, NORFOLK, VA

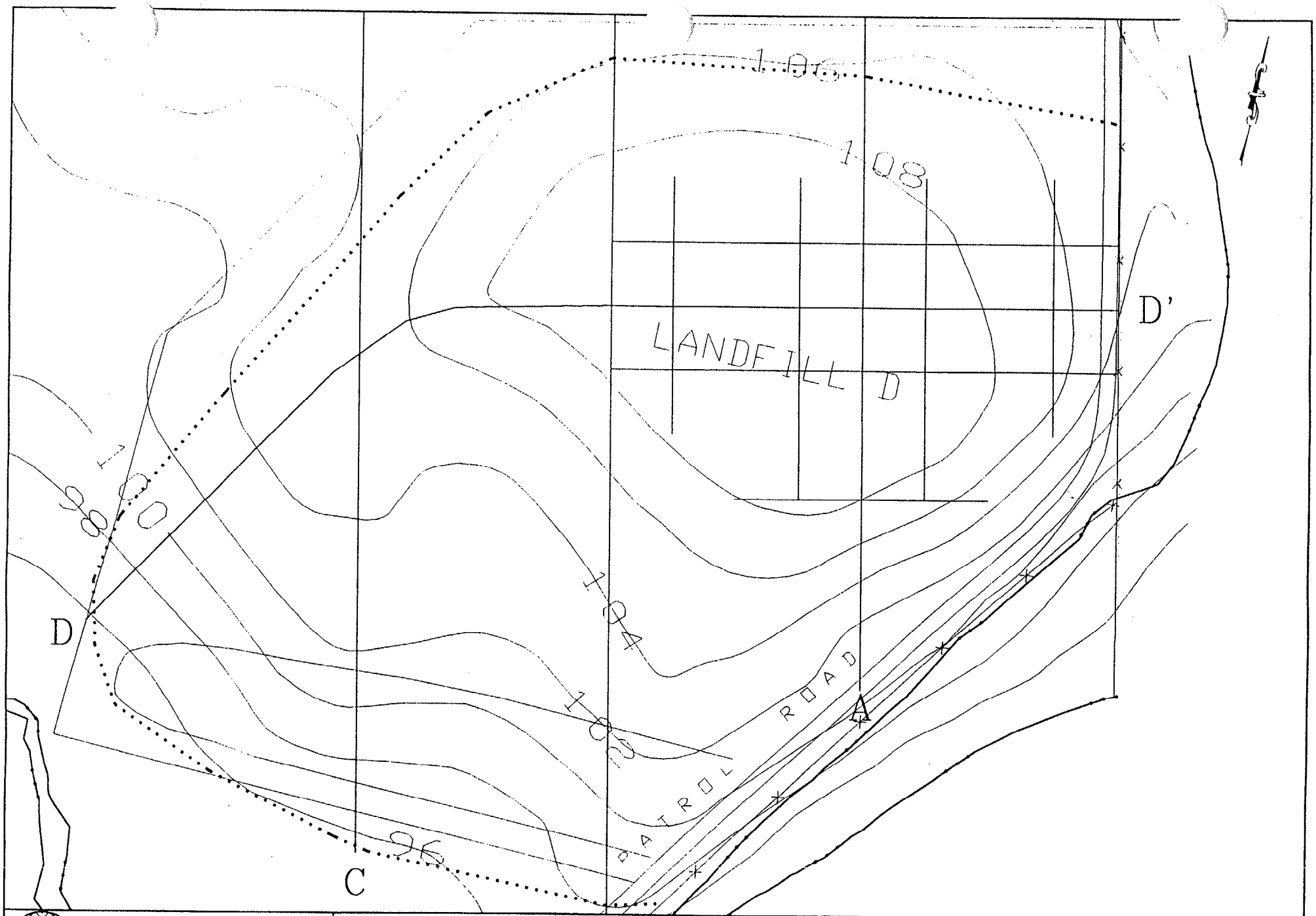
EM PROFILE D - D'



MAGNETIC PROFILE D - D'



EARTH RESOURCES TECHNOLOGY	EM & MAGNETIC PROFILE: D – D'
FIGURE 4-5	SITE 4 – LANDFILL D
SCALE AS SHOWN / JULY 17, 1997	ST. JULENS CREEK ANNEX, NORFOLK, VA



EARTH RESOURCES TECHNOLOGY

SCALE: 1" = 100'

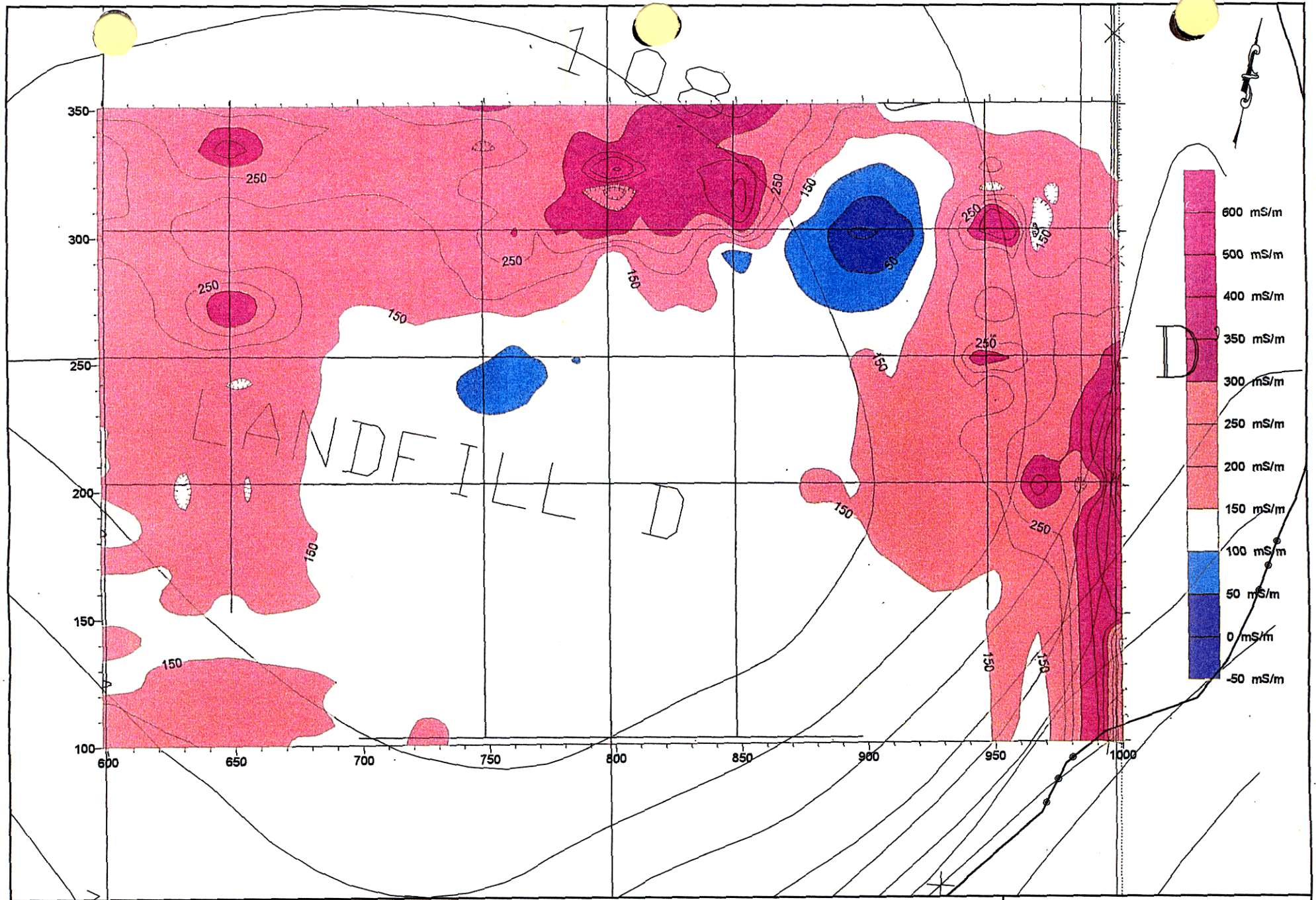
EXTENT OF LANDFILL D

SITE 4 – LANDFILL D

ST. JULIENS CREEK ANNEX, NORFOLK, VA

FIGURE 4-5A

JULY 17, 1997



EARTH RESOURCES TECHNOLOGY

SCALE: 1" = 50'

CONTOUR MAP OF CONDUCTIVITY READINGS

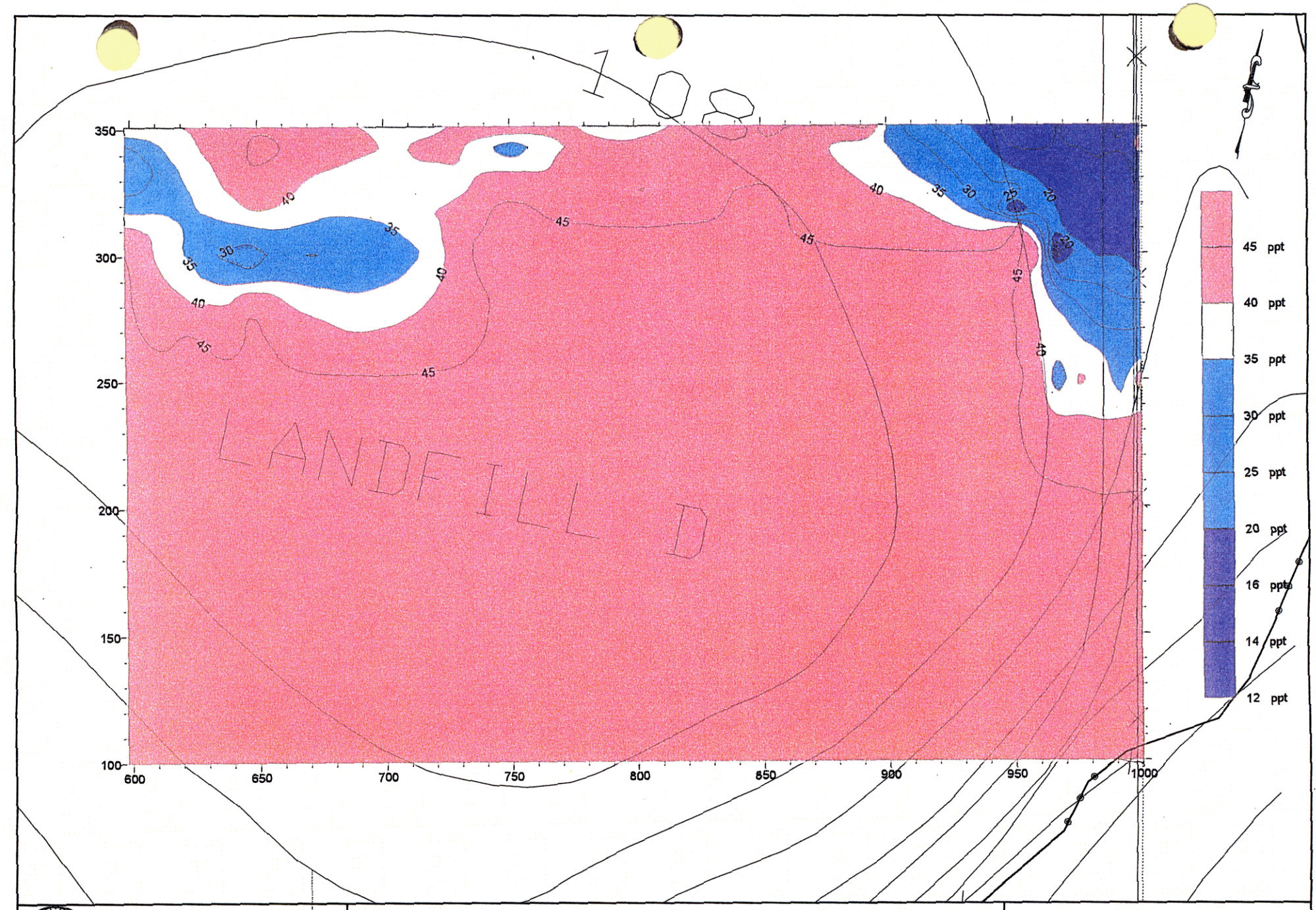
SITE 4 – LANDFILL D

ST. JULIENS CREEK ANNEX, NORFOLK, VA

FIGURE 4-6

JULY 17, 1997

168BB4Y



EARTH RESOURCES TECHNOLOGY

SCALE: 1" = 50'

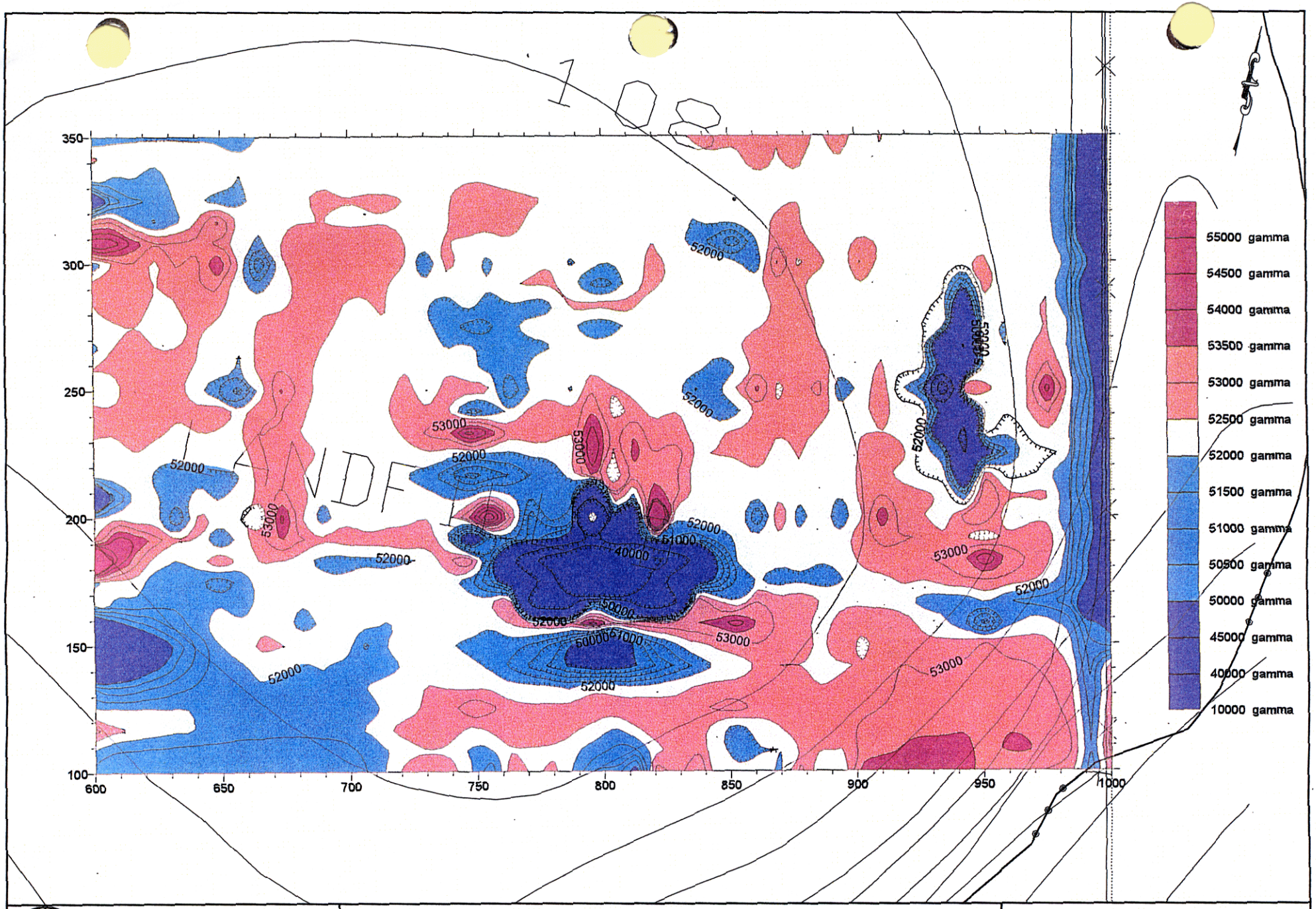
CONTOUR MAP OF INPHASE READINGS

SITE 4 – LANDFILL D

ST. JULIENS CREEK ANNEX, NORFOLK, VA

FIGURE 4-7

JULY 17, 1997



EARTH RESOURCES TECHNOLOGY

SCALE: 1" = 50'

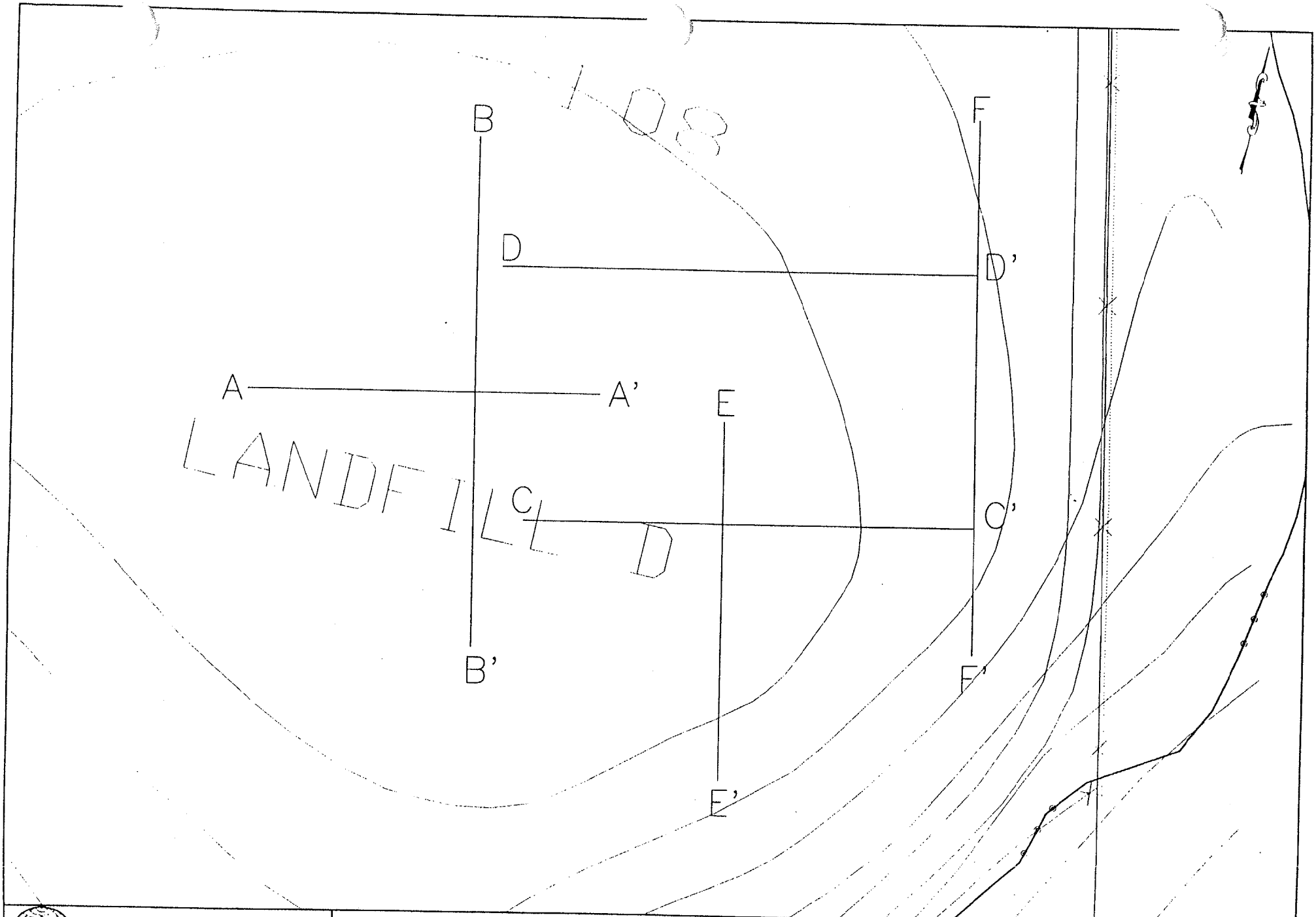
CONTOUR MAP OF MAGNETIC READINGS

SITE 4 – LANDFILL D

ST. JULIENS CREEK ANNEX, NORFOLK, VA

FIGURE 4-8

JULY 17, 1997



EARTH RESOURCES TECHNOLOGY

SCALE: 1" = 50'

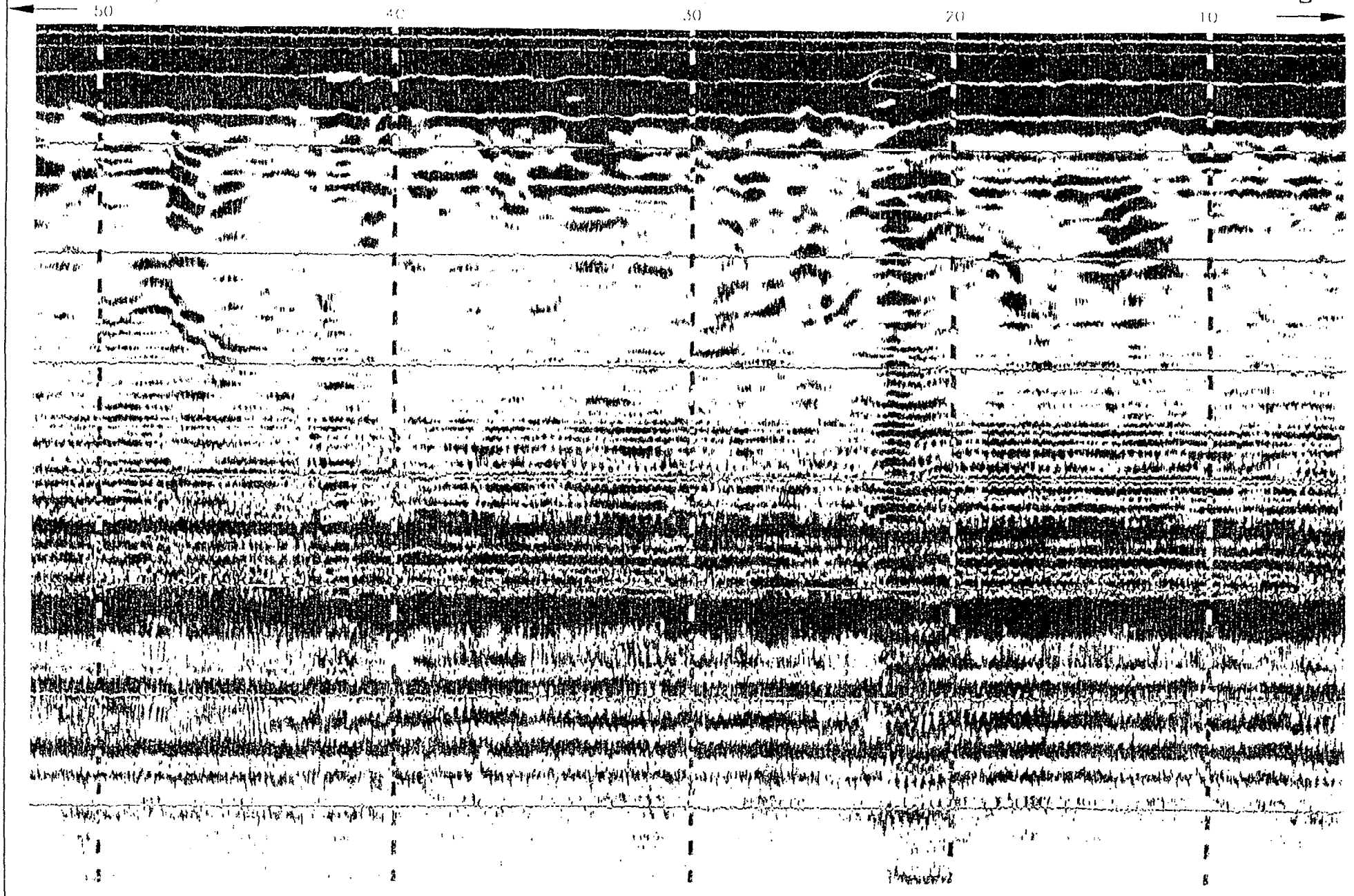
GPR SURVEY GRID

SITE 4 – LANDFILL D

ST. JULIENS CREEK ANNEX, NORFOLK, VA

FIGURE 4–9

JULY 17, 1997



EARTH RESOURCES TECHNOLOGY

HORIZONTAL DISTANCE B/W TWO VERTICAL LINES 10 FT

VERTICAL DISTANCE B/W TWO HORIZONTAL LINES [illegible]

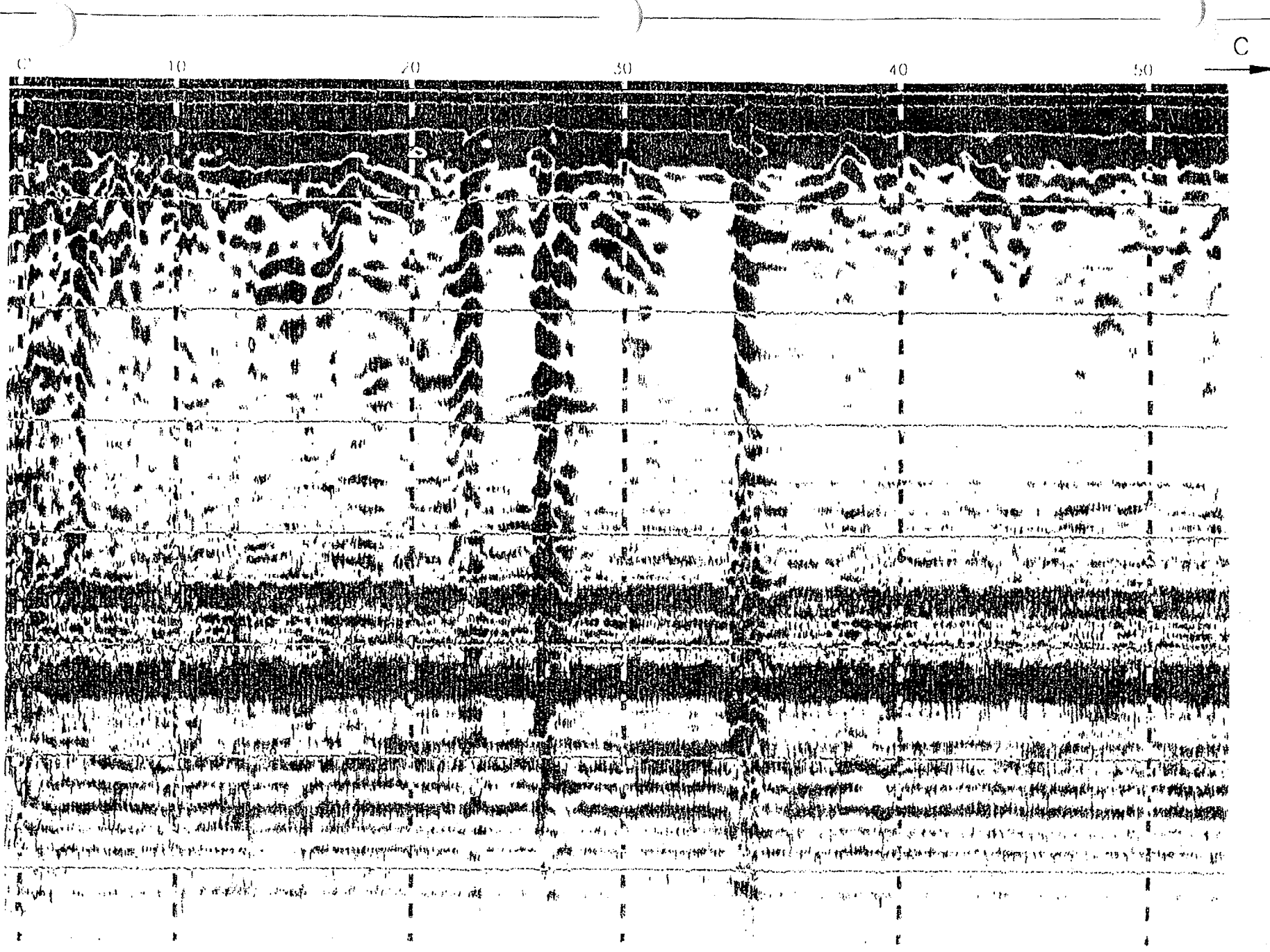
GPR PROFILE B – B'

SITE 4 LANDFILL D

ST. JULIENS CREEK ANNEX, NORFOLK, VA

FIGURE 4-10

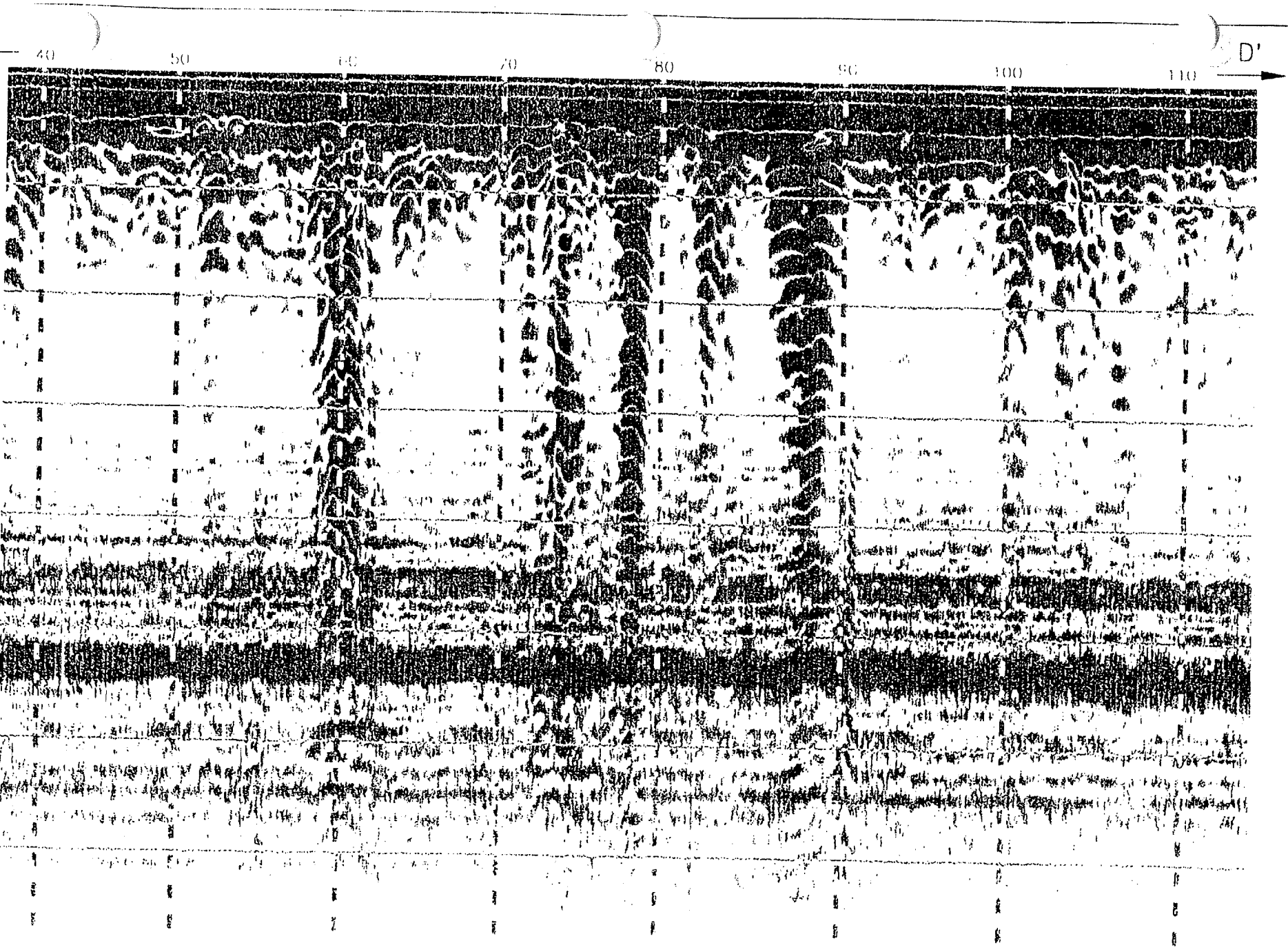
JULY 17, 1997



EARTH RESOURCES TECHNOLOGY

GPR PROFILE C' – C

FIGURE 4-11



EARTH RESOURCES TECHNOLOGY

HORIZONTAL DISTANCE B/W TWO VERTICAL LINES =

VERTICAL DISTANCE B/W TWO HORIZONTAL LINES =

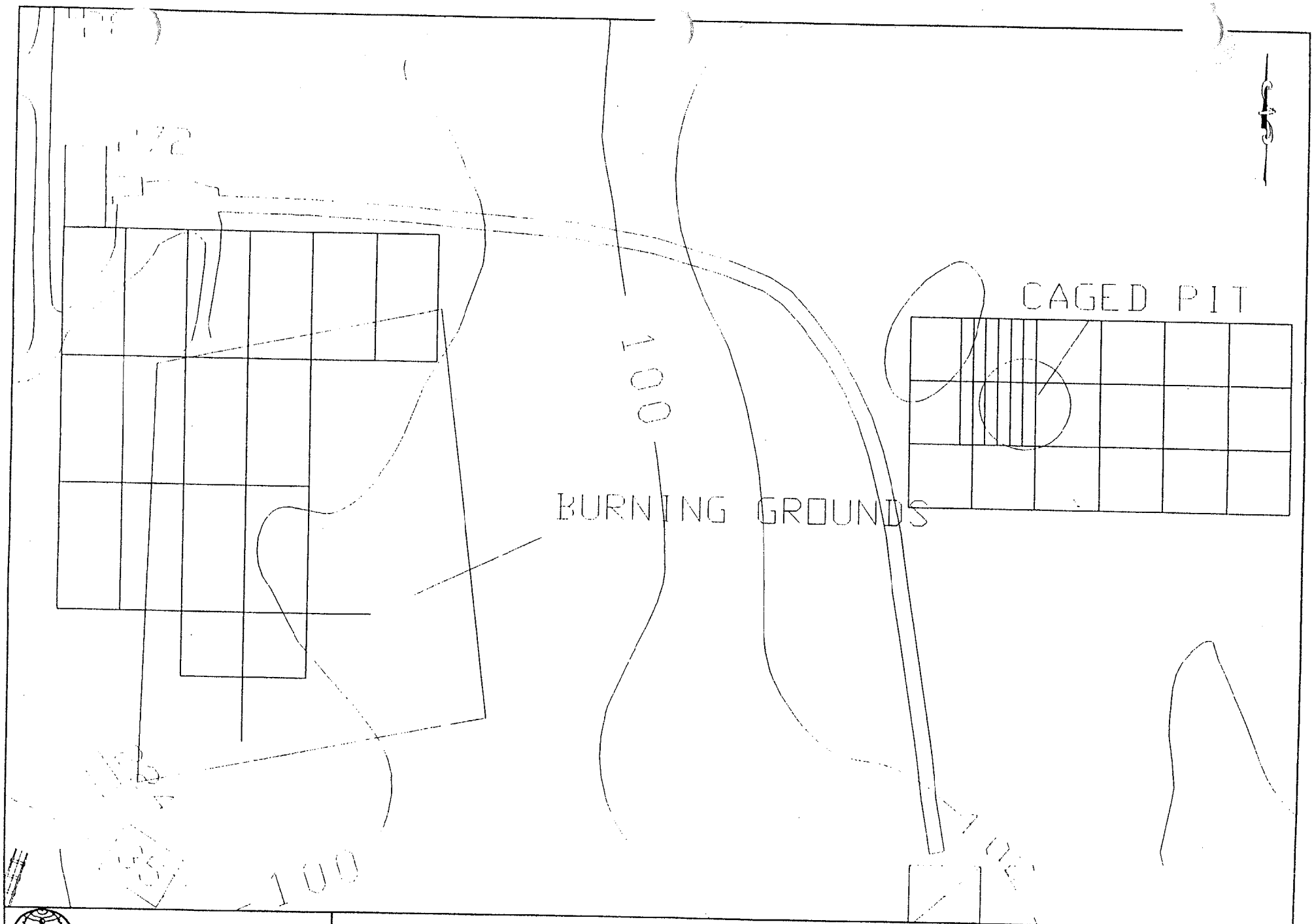
GPR PROFILE D – D'

UNIT 4 LANDFILL D

[illegible] CREEK ANNEX, NORFOLK, VA

FIGURE 4-12

[illegible]



EARTH RESOURCES TECHNOLOGY

SCALE: 1" = 100'

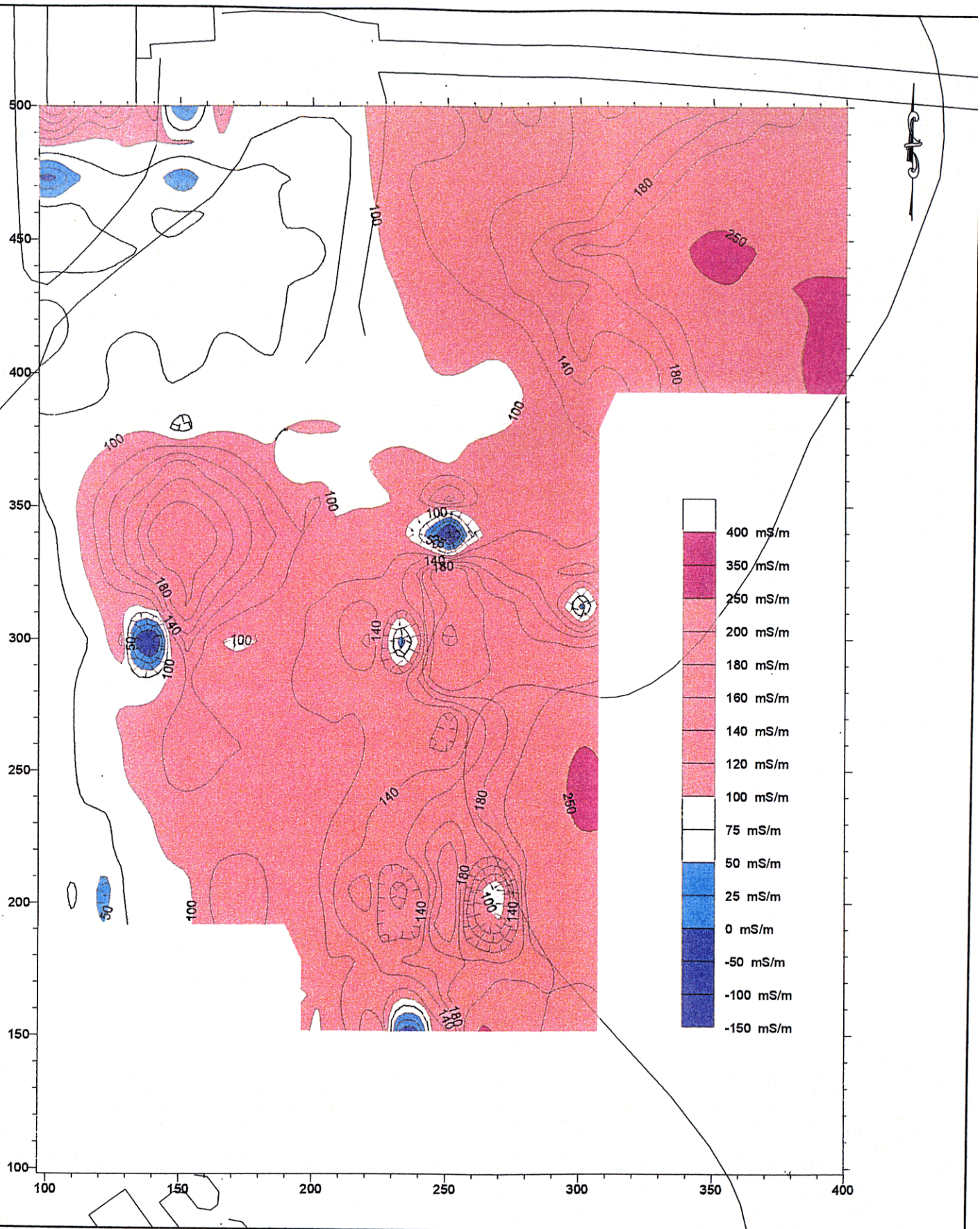
EM SURVEY GRID

SITE 5 – BURNING GROUNDS & CAGED PIT

ST. JULIENS CREEK ANNEX, NORFOLK, VA

FIGURE 5-1

JULY 17, 1997



EARTH RESOURCES TECHNOLOGY

FIGURE 5-2

SCALE: 1" = 50'

JULY 17, 1997

CONTOUR MAP OF CONDUCTIVITY READINGS

SITE 5 – BURNING GROUNDS

ST. JULIENS CREEK ANNEX, NORFOLK, VA

EARTH RESOURCES TECHNOLOGY

FIGURE 5-3

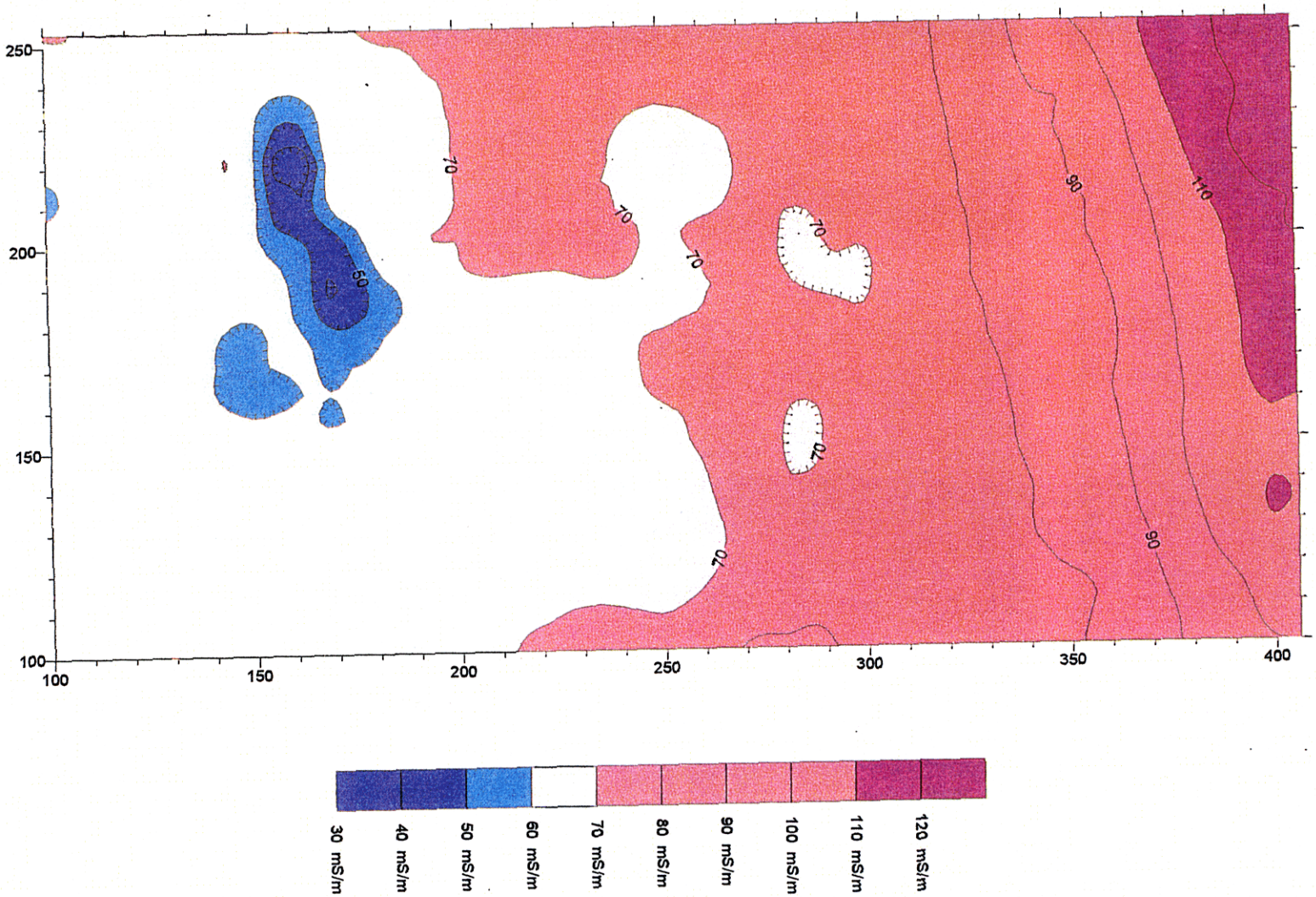
SCALE: 1" = 50'

JULY 17, 1997

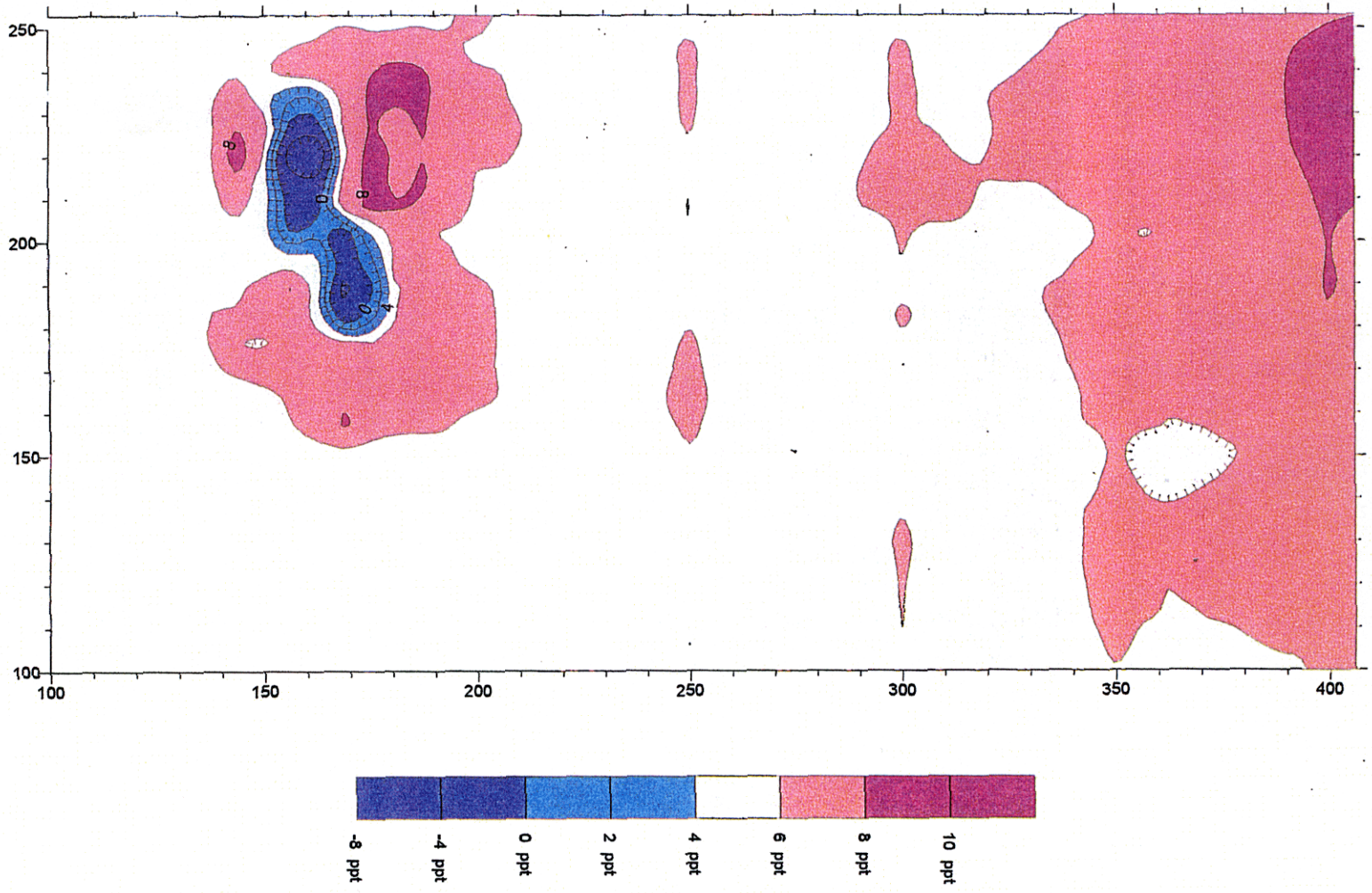
CONTOUR MAP OF INPHASE READINGS

SITE 5 – BURNING GROUNDS

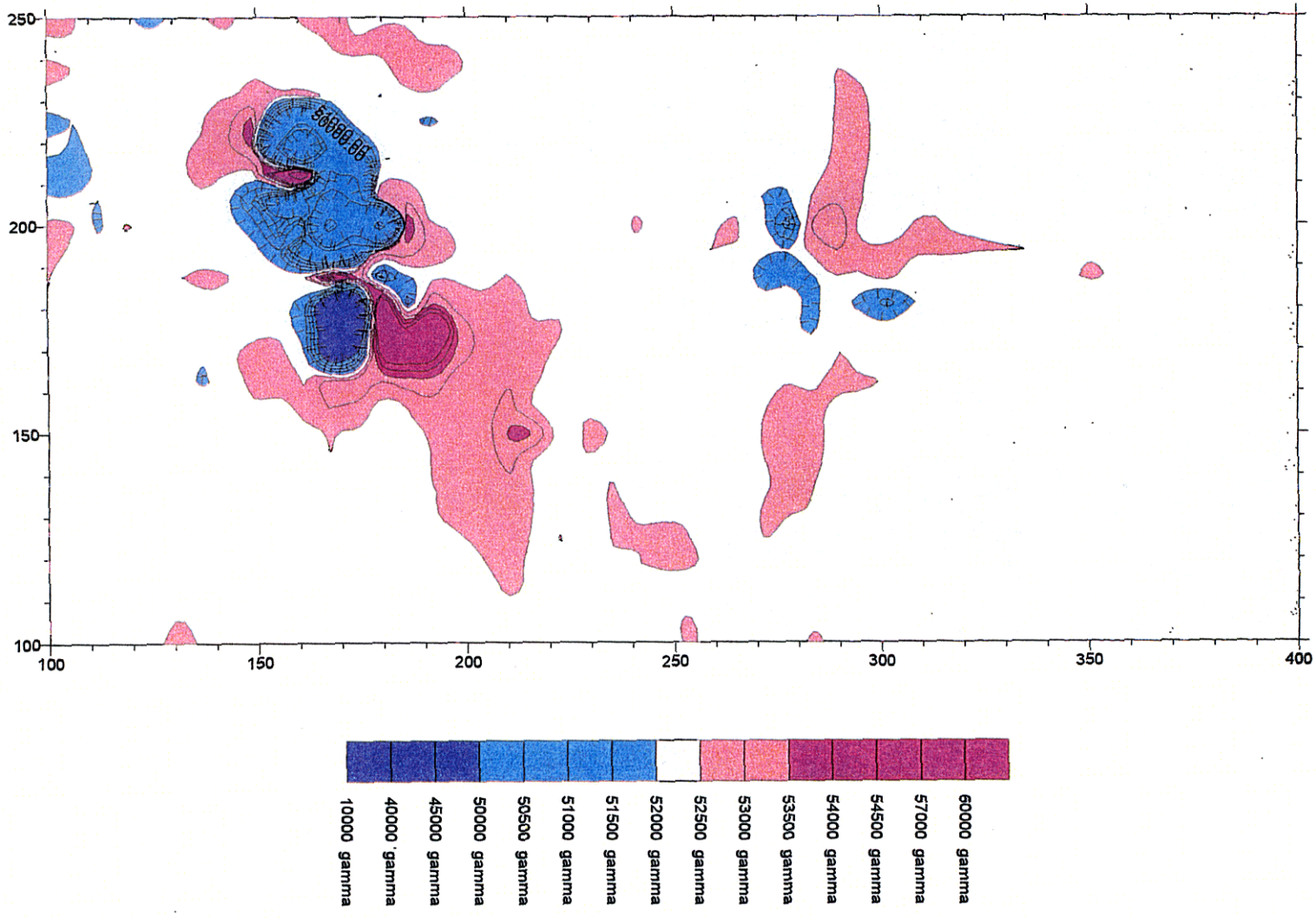
ST. JULIENS CREEK ANNEX, NORFOLK, VA



EARTH RESOURCES TECHNOLOGY	CONTOUR MAP OF CONDUCTIVITY READINGS	FIGURE 5-4
SCALE: 1" = 40'	SITE 5 – CAGED PIT ST. JULIENS CREEK ANNEX, NORFOLK, VA	JULY 17, 1997



EARTH RESOURCES TECHNOLOGY	CONTOUR MAP OF INPHASE READINGS	FIGURE 5-5
SCALE: 1" = 40'	SITE 5 – CAGED PIT ST. JULIENS CREEK ANNEX, NORFOLK, VA	JULY 17, 1997



EARTH RESOURCES TECHNOLOGY

SCALE: 1" = 40'

CONTOUR MAP OF MAGNETIC READINGS

SITE 5 – CAGED PIT

ST. JULIENS CREEK ANNEX, NORFOLK, VA

FIGURE 5–6

JULY 17, 1997

APPENDIX B

Geoprobe Soil Sample Descriptions

DESCRIPTIONS OF DPT SUBSURFACE SOIL SAMPLES SITE 3 AND SITE 4		
Sample	**Depth (in feet)**	**Description**
Site 3		
SJS03-SB01	-	Not recorded.
SJS03-SB02	0 - 2	Olive yellow fine to med. sand.
	2 - 3	Dark grey sand, very moist.
SJS03-SB03		Water at 4 feet.
SJS03-SB04	0 - 2	Sand.
	2 - 4	Brown silt, some shells. Water at 4 feet.
SJS03-SB05	0 - 1.5	Light grey fine sand (SP). Dry.
	1.5 - 3.5	Dark greyish brown silt and fine sand (ML)
	3.5 - 4	Grey fine sand (SP). Very moist. Some shell fragments.
SJS03-SB06	0 - 2	Brown fine sand (SP) and silt. Dry.
	2 - 2.5	Dr. brown silt, some clay. Dry.
	2.5 - 3	Grey, fine to med. sand. Moist.
SJS03-SB07	0 - 2.5	Brown fine sand (SP) and silt (ML).
	2.5 - 3	Grey fine to med. sand (SP). Very moist.
Site 4		
SJS04-SB01	0 - 2	No Recorded.
	2 - 4	Dark brown silt, little fine sand.
SJS04-SB02	0 - 2	Fill material.
	2 - 4	Fill material, gravel, fine to coarse, blak and brown mottled. Brick fragments. Water at 3.5 feet.
SJS04-SB03	0 - 4	Fill material, brown and black sand and gravel. Some shell fragments. Water at 3.5 feet.

APPENDIX C

Monitoring Well Boring Logs

PROJECT NUMBER	BORING NUMBER	SHEET	OF
6207-027	MW-15 SJSO3	1	1

SOIL BORING LOG

PROJECT St Juliens Creek Annex LOCATION Landfill C - Site 3

ELEVATION GROUND: 12.01 / TOC: 11.91 MSL DRILLING CONTRACTOR American Environmental Drilling Services

DRILLING METHOD AND EQUIPMENT 6¼" ID Hollow Stem Augers - Ingersoll Rand A-300 Drill Rig

WATER LEVELS _____ START 7/02/97 FINISH 7/02/97 LOGGER S Bowman (CDM Federal)

DEPTH BELOW SURFACE (FT)	SAMPLE: INTERVAL	SAMPLE: NUMBER AND TYPE	SAMPLE: RECOVERY (FT)	STANDARD PENETRATION TEST RESULTS 6"-6"-6" (N)	SOIL DESCRIPTION: SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY	COMMENTS: DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS AND INSTRUMENTATION
0						0925 Begin Drilling
	3'-5'	S-1	24"/24"	2-2-3-1	(SM) 3-3.9 Silty F. Sand / Color banded light yellowish brown 2.5Y 6/3 and dark yellowish brown 10YR 4/6	OVM OPPM
					3.9-4.5 Clayey Silt (ML) w/ organics moist	
5'					4.5-5 Silty F. Sand (SM) wet dark greenish gray 10Y 4/1	Water at 4' BGS
	5-7'	S-2	24/24	3-3-2-4	5-5.3 Silty F. Sand wet (SM)	
					5.3-7 Silty clay trace organics (CL) soft dark greenish gray 10Y 4/1 Wet Wood in tip of split spoon	OVM OPPM
10'					(SM)	
	10-12'	S-3	24/24"	2-2-3-4	10-10.5 Silt with V.F Sand V. Soft loose dark greyish brown 2.5Y 4/2 Wet	
					10.5-11.4 Color bands - Silt w/ F Sand (SM) Some clay greenish gray 10Y (5/1) and Olive Yellow 2.5Y 6/6 Wet	OVM - 0 ppm
14'					11.4-12 Silty F. Sand (SM) olive yellow 2.5Y 4/6	
					Bottom of Boring - 14' BGS	1030 Complete well

Figure 1
SOIL BORING LOG, FORM D1586

CH2MHILL

PROJECT NUMBER	BORING NUMBER	SHEET
CT027	SJ503-MW1D	1 OF 2

SOIL BORING LOG

PROJECT NAVYCLEAN II / ST. JULIENS CREEK ANNEX LOCATION SITE 3 MW1D

ELEVATION GROUND: 12.04' MSL DRILLING CONTRACTOR AEDS

DRILLING METHOD AND EQUIPMENT INGERSOL RAND A300 HSA1 Mud Rotary (6")

WATER LEVELS _____ START _____ FINISH _____ LOGGER L. FRANKE

DEPTH BELOW SURFACE (FT)	SAMPLE INTERVAL	SAMPLE NUMBER AND TYPE	SAMPLE RECOVERY (FT)	STANDARD PENETRATION TEST RESULTS 6"-6"-6" (N)	SOIL DESCRIPTION: SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY	COMMENTS: DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS AND INSTRUMENTATION
					SEE LOG FOR SITE 3 MW03S FOR 0-12' INTERVAL.	
5						
10						START SAMPLING CENTR @12'. 1920 7/9/97. Through 3¼" HSA
			0.67	10-5-5-6	SAND (SP) V. fine, hard, moist. Light olive brown (2.5Y 5/4) Some gray mottling (2.5Y 6/1)	
15		SP	0.33	4-5-5-5	SAND (SP) as above. Light greenish gray (GLEY 7/1).	
			1.5	6-6-5-6		
		SW	1.0	5-5-4-5	SAND (SW) medium, well graded	
20		CL	2.0	3-4-5-8	CLAY (CL), Soft, Greenish grey (GLEY 5/1). Little Sand at 22'.	
			2.0	3-4-4-3		
25			2.0	3-2-2-3	Trace organics. Trace Silt in <1mm layers	End Augering and Sampling @26'. 2020 7/9/97 Installed 6" PVC Isolation Casing through 8¼" ID HSA
			2.0	3-3-2-3	trace, very fine sand along partings throughout sample	Sample 26-28' 1850 7/13/97 Start 0730 7/14/97 Sampling 28-30'. Mud/Water Ro
30			2.0	2-3-3-2	—	

CH2MHILL

PROJECT NUMBER	BORING NUMBER	SHEET
CT027	SJ503-MW1D	2 OF 2

SOIL BORING LOG

PROJECT _____ LOCATION SITE 3 MW1D

ELEVATION _____ DRILLING CONTRACTOR _____

DRILLING METHOD AND EQUIPMENT _____

WATER LEVELS _____ START _____ FINISH _____ LOGGER L. FRANCE

DEPTH BELOW SURFACE (FT)	SAMPLE: INTERVAL	SAMPLE: NUMBER AND TYPE	SAMPLE: RECOVERY (FT)	STANDARD PENETRATION TEST RESULTS 6"-6"-6" (N)	SOIL DESCRIPTION: SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY	COMMENTS: DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS AND INSTRUMENTATION
		CL	2.0	3-3-2-3	CLAY, as above, no sandy partings	
			2.0	3-3-3-2		
35			2.0	3-3-4-3	Several sandy partings, trace mica.	
			2.0	3-3-2-3	clay, as above, no partings	
			2.0	3-2-2-3	trace silt.	
40			2.0	3-2-2-3	Clay, as above, silt partings DK greenish grey (GLEY 4/1)	
			2.0	3-2-2-3	Few shells at 43', trace organics	
45			2.0	3-2-2-3	CLAY, as above to 45.1'	
		SP	1.25	3-3-3-4	SAND, Fine, trace to little clay DK. greenish grey (GLEY 4/1 5G trace shells	
			2.0	2-3-3-3	V. fine sand, no silt or clay.	
50			0.3	2-3-3-3	little organics	.. Formation taking water drilling to 52'.
			0.3	3-4-4-3	0.25" wood layer	
55			0.5	2-2-3-3	One 1" layer of clay and sandy clay. One 0.5" pebble of sandstone.	
			0.6	3-3-4-3	Sand as above, no clay	
60			0.5	4-4-5-4	Sand, as above. END OF BORING AT 60'	

CH2MHILL

PROJECT NUMBER	BORING NUMBER	SHEET	OF
6207-027	HW-25 SJ503	1	1

SOIL BORING LOG

PROJECT St Juliens Creek Annex LOCATION Landfill C Site 3

ELEVATION Ground: 12.84/TOC: 15.22 NSL DRILLING CONTRACTOR American Environmental Drilling Services

DRILLING METHOD AND EQUIPMENT 6¼" ID Hollow Stem Auger - Ingersoll Rand A-300 Drill Rig

WATER LEVELS _____ START 6/29/97 FINISH 6/29/97 LOGGER S. Bodney (CH2M Hill)

DEPTH BELOW SURFACE (FT)	SAMPLE INTERVAL	SAMPLE NUMBER AND TYPE	SAMPLE RECOVERY (FT)	STANDARD PENETRATION TEST RESULTS 6"-6"-6" (N)	SOIL DESCRIPTION: SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY	COMMENTS: DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS AND INSTRUMENTATION
0						1120 Begin Drilling
2	S-1 2-4'	S-1	13/24"	1/1/3/2	Soft Silty Clay (CL) dry at top - moist at bottom of spoon. dark greenish grey 10Y 3/1 dark reddish brown 5YR 3/4 staining on bottom 4":	OVM - 0 ppm
4						
5	4-6'	S-2	24/24"	2/3/3/3	4-4.2' Silt with fine Sand (ML) wet 4.2-6' Fine to Med. Sand (SP) interbedded with Silty Clay with fine sand very soft. Black organic color at 5.5' BGS approx 2" thick. Some shells below 5.5'.	OVM: 0 ppm
6						
8						
10	S-3	10-12'	22/24"	3/2/4/2	Silty Clay with F. Sand (CL) soft, wet interbedded with clay hard moist dark greenish grey 10Y 3/1 Peat layer ½" thick at 11.3' BGS 11.3-12' Organic material in silty fine sand, wet, light yellowish brown 2.5Y 6/4	OVM - 0 ppm
12						
14						1200 Finished Drilling
15					Bottom of Boring 14' BGS	

Figure 1
SOIL BORING LOG, FORM D1586

PROJECT NUMBER	BORING NUMBER		
CT027	SJS03-MW02D	SHEET 1	OF 3

SOIL BORING LOG

PROJECT NAVYCLEAN II/ST. JULIENS CREEK ANNEX LOCATION SITE 3 MW02D

ELEVATION GROUND: 12.41/TOC: 14.73 DRILLING CONTRACTOR AEDS

DRILLING METHOD AND EQUIPMENT INGERSOL RAND A300 RIG. 8 1/4" and 4 1/4" HSA / 5" MUD ROTARY

WATER LEVELS _____ START _____ FINISH _____ LOGGER L. FRANCE

DEPTH BELOW SURFACE (FT)	SAMPLE INTERVAL	SAMPLE NUMBER AND TYPE	SAMPLE RECOVERY (FT)	STANDARD PENETRATION TEST RESULTS 6"-6"-6" (N)	SOIL DESCRIPTION: SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY	COMMENTS: DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS AND INSTRUMENTATION
					SEE LOG FOR SITE 3 MW02S FOR 0-12' INTERVAL	
5						
10						
		SC	0.25	1-1-1	SAND, Some silt and clay (SC) Greyish brown (2.5Y 5/2), V. Moist	
15		SP	1.0	2-2-1-2	SAND (SP) V. fine. Greenish grey (GLEY 6/1) Wet. Loose	
			0.2	Refusal		
			1.6	3-3-4-3	SAND (SP) med. tr. Coarse. little fine. Loose. Greenish grey (GLEY 5/1)	
20			1.7	2-2-1-2	21.3	
		CL			CLAY (CL) Greenish grey (GLEY C/1)	
			0.7	2-2-2-2	clay as above, some sand. Medium stiff. to soft	
25			1.0	2-2-1-2	Shell fragments (clam) tr. V. fi. Sand.	
			2.0	2-2-3-2	Clay, Sandy to 26.5'.	
			0.7	2-2-2-2	clay, not sandy, Greenish grey (GLEY 5/1) medium stiff.	Stopped drilling 1635 6/29/97 Installed 6" PVC surface casing to 29'.
30						

CH2MHILL

PROJECT NUMBER CTO 27 | BORING NUMBER SJS03-MW02D | SHEET 2 OF 3

SOIL BORING LOG

PROJECT NAVYCLEAN II/ST. JULIENS CREEK ANNEX LOCATION SITE 3 MW02D

ELEVATION _____ DRILLING CONTRACTOR AEDS

DRILLING METHOD AND EQUIPMENT Sonic Rig 1

WATER LEVELS _____ START _____ FINISH _____ LOGGER L. FRANCIS

DEPTH BELOW SURFACE (FT)	SAMPLE INTERVAL	SAMPLE NUMBER AND TYPE	SAMPLE RECOVERY (FT)	STANDARD PENETRATION TEST RESULTS 6"-6"-6" (N)	SOIL DESCRIPTION: SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY	COMMENTS: DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS AND INSTRUMENTATION
30		CL	2.0	1-2-2-1	CLAY, DK greenish grey (GLEY4/1) Soft	Start drilling/sampling 1445 7/14/97 5" mud rotary.
			2.0	1/12"-2-2	clay, as above. Trace organics	
35			2.0	2-3-3-2	trace shells	
			2.0	3-3-3-2		
			2.0	3-2-2-2	clay as above. V. soft	
40			2.0	2-2-2-2		
			2.0	2-3-2-2	Clay, as above, Trace V. fine sand and silt along partings	
45			2.0	1-2-2-1	clay, as above	
			2.0	3-2-2-2	48.5'	
		SP	2.0	2-2-1-2	SAND (SP) v. fine to fine. DK greenish grey (GLEY4/1). tr. shells.	
50			0.7	3-3-4-3	V. fine Sand, as above. tr. clay little shell fragments.	
			1.2	3-4-4-3	Little clay in <0.5" layers	
		CL	1.6	3-3-4-3	CLAY (CL) mica, some organics and wood. Greyish brown (2.5Y 3/2).	
55			2.0	3-2-2-3	Same as above to 57.7' @57.7': Clay, sandy, v. fine sand. DK greenish grey (GLEY5/1)	
60			1.0	2-2-2-2	same as above, more sand	

CH2MHILL

PROJECT NUMBER	BORING NUMBER		
CT027	SJS03-MW21D	SHEET 3	OF 3

SOIL BORING LOG

PROJECT NAVY CLEAN II/ST. JULIENS CREEK ANNEX LOCATION SITE 3 MW02D

ELEVATION _____ DRILLING CONTRACTOR AEOS

DRILLING METHOD AND EQUIPMENT See p. 1

WATER LEVELS _____ START _____ FINISH _____ LOGGER L. France

DEPTH BELOW SURFACE (FT)	SAMPLE: INTERVAL	SAMPLE: NUMBER AND TYPE	SAMPLE: RECOVERY (FT)	STANDARD PENETRATION TEST RESULTS 6"-6"-6" (N)	SOIL DESCRIPTION: SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY	COMMENTS: DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS AND INSTRUMENTATION
60	/	CL/SP	0.75	2-2-2-3	SAND, v. fine and CLAY. Mica. Greenish grey (5GY 5/1).	
					BORING TERMINATED @ 62	
65						

PROJECT NUMBER	BORING NUMBER	SHEET	OF
6207-027	MW-35 SJSC3	1	1

SOIL BORING LOG

PROJECT St Juliens Creek Annex LOCATION Site 3 Landfill C

ELEVATION Ground 11.59 / TOC 13.45 MSL DRILLING CONTRACTOR American Environmental Drilling Services

DRILLING METHOD AND EQUIPMENT 6"4" ID Hollow Stem Augers - Ingersoll Rand A-300 Drill Rig

WATER LEVELS _____ START 6/28/97 FINISH 6/28/97 LOGGER S. Bussey (Lan Federa

DEPTH BELOW SURFACE (FT)	SAMPLE INTERVAL	SAMPLE NUMBER AND TYPE	SAMPLE RECOVERY (FT)	STANDARD PENETRATION TEST RESULTS 6"-6"-6" (N)	SOIL DESCRIPTION: SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY	COMMENTS: DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS AND INSTRUMENTATION
						1647 Started drilling
2	2-4'	S-1	4"/24"	1-2-2-3	Clayey silt (ML) dry trace roots very dark greenish brown 2.5Y 3/2 thin layer - white F. Sand (SP) 2.5Y 8/1	OVM 0 ppm
4						
5					No Sample (SM)	
6	6-8	S-2	24/24	2-3-3-3	6-6.2 Silty F Sand wet yellowish brown 10YR 5/6	
					6.2-7.8 Silty Clay Some F. Sand (CL) Soft moist dark greenish gray 10Y 3/1 trace organic matter 7.5-7.8' Black N 2.5/ wet	OVM 0ppm
					7.8-8 Silty F. Sand (SW) Dark grayish brown	10YR 4/2
10	10-12	S-3	20/24	3-3-4-5	F-Med Sand with Silt wet (SM) water coming into borehole surrounded greenish gray 10Y 5/1	Water coming into borehole
12					Color Bands light olive brown 2.5Y 5/4 Trace roots	OVM 0ppm
14					Bottom of Boring 14' BGS	1750 installed well

Figure 1
SOIL BORING LOG, FORM D1586

CH2MHILL

PROJECT NUMBER	BORING NUMBER	SHEET	OF
6207-027	MW-45 SJS03	1	1

SOIL BORING LOG

PROJECT St Juliens Creek Annex LOCATION Landfill C - Site 3

ELEVATION GROUND: 12.64/TOC 15.09 ft MSL DRILLING CONTRACTOR American Environmental Drilling Services

DRILLING METHOD AND EQUIPMENT 6"/4"ID Hollow Stem Augers Ingersoll Rand A-300 Drill Rig

WATER LEVELS _____ START 6/29/97 FINISH 6/29/97 LOGGER S Bowey (CDM Fed)

DEPTH BELOW SURFACE (FT)	SAMPLE INTERVAL	SAMPLE NUMBER AND TYPE	SAMPLE RECOVERY (FT)	STANDARD PENETRATION TEST RESULTS 6"-6"-6" (N)	SOIL DESCRIPTION: SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY	COMMENTS: DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS AND INSTRUMENTATION
						0855 Begin Drilling
2	2-4'	S-1	13"/24"	2-2-3-2	Clayey Silt with Fine Sand (ML), interbedded with F. Sand (SP) trace shells in bottom of spoon. Bottom of spoon moist dark greenish grey 5GY 4/1 small pocket of	OVM 0 ppm
4						yellowish red 5YR 5/6
6	4-6'	S-2	18/24	2-3-3-1	Silty (SM) med F. Sand trace shells 4-4.5' lower 6" of recovery thin organic layer 1/2" thick dark black	OVM 0 ppm
8						
10	10-12	S-3	12/24	3-2-1-2	Silty Clay with F. Sand soft wet dark greenish grey 10Y 4/1 organic peat layer with shells at 6-8" (recovery) greenish black 10Y 2.5/1 organic roots + weeds present in lower 6" of recovery	OVM - OPPM
12						
14						
14.5					Bottom of Boring 14.5' BGS	

Figure 1
SOIL BORING LOG, FORM D1586

CH2M HILL

PROJECT NUMBER	BORING NUMBER	SHEET
6207-027	MW-15 SJS04	1 OF 1

SOIL BORING LOG

PROJECT St Juliens Creek Annex LOCATION Landfill D - MW-15

ELEVATION Ground: 10.47 / TOC: 13.02 ft MSL DRILLING CONTRACTOR American Environmental Drilling Services

DRILLING METHOD AND EQUIPMENT Hollow Stem Auger 6¼" ID Ingersoll Rand A-300 Drill Rig

WATER LEVELS _____ START 6/28/97 FINISH 6/28/97 LOGGER Sharon Bidwell (CH

DEPTH BELOW SURFACE (FT)	SAMPLE INTERVAL	SAMPLE NUMBER AND TYPE	SAMPLE RECOVERY (FT)	STANDARD PENETRATION TEST RESULTS 6"-6"-6" (N)	SOIL DESCRIPTION: SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY	COMMENTS: DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS AND INSTRUMENTATION
0						0812 Began drilling Water table looks to be appx 3-4' below ground surface.
5	5-7'	S-1	0.1'/2'	1-2-2-2	Clayey Silt with little F Sand (ML) dark greenish grey (10gy 4/1) moist V. Soft	OVM 0 ppm
7	7-9	S-2	2'/2'	2-2-1-1	7-8.75' Clayey Silt with little F Sand (ML) dark greenish grey (10gy 4/1) wet V. Soft 8.75-9' Silty Clay (CL) light olive brown (2.5Y 5/4) moist soft.	OVM 0 ppm
10	10-12	S-3	2'/2'	2-1-2-2	Clayey Silt with little F. Sand (ML) dark greenish grey (10 GY 4/1) wet V. Soft 10.3-10.5' Silty Sand trace Clay (ML)	OVM 0 ppm
15					Bottom of Borehole 15' BGS	1005 completed well.

Figure 1
SOIL BORING LOG, FORM D1586

CH2MHILL

PROJECT NUMBER	BORING NUMBER	SHEET	OF
G027	SJS04 MW01D	1	3

SOIL BORING LOG

PROJECT NAVY CLEANUP / ST JULIENS CREEK ANNEX LOCATION SITE 4 MW01D

ELEVATION GROUND: 10.7' TOC: 13.32 DRILLING CONTRACTOR AEPS

DRILLING METHOD AND EQUIPMENT HSA (4¼ and 8¼) / Mud Rotary - 6"

WATER LEVELS _____ START _____ FINISH _____ LOGGER L. CAMPBELL / L. FINK

DEPTH BELOW SURFACE (FT)	SAMPLE INTERVAL	SAMPLE NUMBER AND TYPE	SAMPLE RECOVERY (FT)	STANDARD PENETRATION TEST RESULTS 6"-6"-6" (N)	SOIL DESCRIPTION: SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY	COMMENTS: DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS AND INSTRUMENTATION
0						
		ML	0.75	1-1-7/12"	SILT, sandy (ML) Brown (10YR 4/3) dry. clayey in bottom 7".	Driller notes void 3-5"
5					wet at 5' v. dark grey (10YR 3/4) and black (10YR 2/1).	
			1.8	1/12"-1/12"	SAME as above. Some sand in bottom of spoon.	
10		CL	2.0	1/12"-2/12"	CLAY, Silty Dark Grey (5Y 4/1) V. Soft. clayey fine Sand 11.6-12.0' (SC).	
		SC	2.0		Clayey SAND to 12.3'	Driller notes clay getting stiff
				2-2-2/12"	CLAY (OH) Some silty, wet dark grey (5Y 4/1).	SILT CONTENT DECREASING
15		OH	2.0		CLAY, as above, Some sand. DK grey (5Y 4/1), Soft	
		SM	2.0	2-2-1/12"	SAND, Silty, some Clay (SM) wet Olive grey (5Y 4/2). Poorly graded	
			1.5	2-1-1-2	at 19': v. fine SAND with silt, tr. clay grey (5Y (6/1)	
20		SP	2.0	2-3-3-3	SAND (SP) fine, little silt, wet poorly graded. Grey (5Y 6/1)	
			2.0	3-3-3-3	SAND as above. Coarsening downward to med sand	
25			2.0	1-1-1-2	Same as above	
		CL			CLAY, v. soft pale olive (5Y 6/3) to gray (5Y 6/1)	
			2.0	2-2-3-4	as above. med soft to stiff GLEY 5/10G greenish gray	SET 6" PVC ISOLATION CASING THROUGH 8¼" HSA to 30' (2.5' into clay).
30			2.0	4-4-5-5		

PROJECT NUMBER	BORING NUMBER	SHEET
CT027	MW01D SJS04	2 OF 3

SOIL BORING LOG

PROJECT NAVYCLEAN II/ST. JULIENS CREEK ANNEX LOCATION SITE 4 MW01D

ELEVATION _____ DRILLING CONTRACTOR AEDS

DRILLING METHOD AND EQUIPMENT SEE P.1

WATER LEVELS _____ START _____ FINISH _____ LOGGER L. FRANCE

DEPTH BELOW SURFACE (FT)	SAMPLE INTERVAL	SAMPLE NUMBER AND TYPE	SAMPLE RECOVERY (FT)	STANDARD PENETRATION TEST RESULTS 6"-6"-6" (N)	SOIL DESCRIPTION: SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY	COMMENTS: DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS AND INSTRUMENTATION
30						Drilled out PVC plug. Plug pushed ahead of D.E to 33. NO SAMPLE 30-33'. 6/30/97 - start drilling and sampling @ 33'
		CL	2.0	3-2-2-3	CLAY (CL), tr. C. SAND. Greenish grey (GLEY 6/1). Some v. fine <1mm layers of v. f. sand, yellowish brown (10YR 5/6)	
35			2.0	3-2-2-2	trace organics, greenish grey (GLEY 5/1)	
			2.0	2-2-3-2	CLAY, as above, somewhat runny and wet SEE NOTE	
					PID NOT SEE SAND LAYER IN SPOON	NOTE: LOSING WATER TO Fm. at 39'. (coarse-med sand" cuttings.
40			2.0	2-3-3-2		
			2.0	1-2-2-1	CLAY, as above, trace f. Sand and silt. in <1mm thick layers	
45			2.0	2-2-3-2	CLAY, as above, little f. sand and silt.	
			1.2	2-3-3-2	CLAY TO 49.5'. Some wood Fragments	
50		SP			SAND (SP), little angular gravel DK bluish grey (GLEY 4/1), little fine sand	Fm taking water at 49.5'.
		CL	1.5		SANDY CLAY 51-52'.	
					CLAY, Some wood and other organics 52'.	
55						
		ML	2.0	2-3-3-2	SILT, clayey, tr. v. fine sand (ML). Some clay. Greenish grey (GLEY 5/1) Some mica.	
60			1.2	3-3-2-3	one 1" clay layer	

CH2MHILL

PROJECT NUMBER	BORING NUMBER	SHEET
CT027	SJSO4-MW01D	3 OF 3

SOIL BORING LOG

PROJECT NAVYCLEAN II/ST. JULIENS CREEK ANNEX LOCATION SITE 4 MW01D

ELEVATION _____ DRILLING CONTRACTOR AEDS

DRILLING METHOD AND EQUIPMENT SEE p. 1

WATER LEVELS _____ START _____ FINISH _____ LOGGER L. FRANCE

DEPTH BELOW SURFACE (FT)	SAMPLE INTERVAL	SAMPLE NUMBER AND TYPE	SAMPLE RECOVERY (FT)	STANDARD PENETRATION TEST RESULTS 6"-6"-6" (N)	SOIL DESCRIPTION: SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY	COMMENTS: DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS AND INSTRUMENTATION
60		ML				
		ML CL	0.8	3-2-2-3	CLAY (CL), silty, and SILT, clayey.	
65		CL	1.7	2-3-3-2	CLAY (CL), silty, tr. v. fine sand. V. soft from 65.0 to 66.5'.	
		ML	0.8	2-2-3-2	SILT (ML) and v. fine sand, clayey DK greenish grey (GLEY 4/1) Very wet.	Fm. taking water 65-7
70			1.7	3-4-4-5	SILT (ML), sandy, little clay. Grey mottling. Sand is v. fine.	
75			1.2	3-3-4-5	shell fragments	
			2.0	4-4-5-5		Stopped drilling/sampling at 75' 7/1/97. Start drilling at 77' 1020, 7/2/97.
80			2.0	5-4-4-5	SILT No clay	
			2.0	5-5-6-5	SILT, tr. clay.	
85			1.75	5-6-6-5		Boring terminated at 91 ft. Borehole backfilled with sand 89-60'. Backfilled with pure bentonite 60-55'.
90			2.0	5-6-6-7	SILT, as above. few clay strings.	
91						

CH2M HILL

PROJECT NUMBER	BORING NUMBER	SHEET	OF
6207-027	MW-2S SJSO4	1	1

SOIL BORING LOG

PROJECT St Juliens Creek Annex LOCATION Site 4 - Landfill D MW-2S

ELEVATION Ground: 9.36 / TOC 11.45 ft MSL DRILLING CONTRACTOR American Environmental Drilling Services

DRILLING METHOD AND EQUIPMENT Hollow Stem Auger 6¼" ID - Ingersoll Rand A-300 Drill Rig

WATER LEVELS _____ START 6/28/97 FINISH 6/28/97 LOGGER Sharon Budney (CH2M)

DEPTH BELOW SURFACE (FT)	SAMPLE INTERVAL	SAMPLE NUMBER AND TYPE	SAMPLE RECOVERY (FT)	STANDARD PENETRATION TEST RESULTS 6"-6"-6" (N)	SOIL DESCRIPTION: SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY	COMMENTS: DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS AND INSTRUMENTATION
						1115 began drilling
2	2-4'	S-1	12"/24"	2-2-3-4	Silty Clay (CL) 0-9" hand dry 9"-12" moist, soft Dark greyish brown (2.5YR 4/2) with Yellow (10YR 7/8) and White (10YR 8/1) layers	BVM 0 ppm
4						
5	4-6'	S-2	16"/24"	1/2/3/3	0-4" Silty Clay (CL) dark greenish grey (10Y 4/1) V. soft moist to wet.	OVM 0 ppm
6					4-4.5" Small + Med Sand (SP) layer	
					4.5-6.5" Silty Clay with roots V. dark grayish brown (10YR 3/2)	
					6.5"-16"-24" interbedded thin layers of Silty Clay (CL) layers with 7" of Medium Sand (SP) dark greenish grey 10Y 4/1 wet. Coarse sand and Shell layer at end of spoon subrounded.	
10	10-12'	S-3	14"/24"	4-3-3-3	interbedded Silty Clay (CL) with Sand layers with ~~Medium~~ Fine to Sand (SP) layers wet, Subrounded Silt - greenish grey 5GY 5/1 Sand greyish brown 2.5Y 5/2 End of Spoon Coarse Sand with Shells (SP)	OVM 0 ppm
12						
14						
15					Bottom of boring 14'	Driller had difficult time setting well. Material heaved in to auger at 14' - Fine to Med Sand with shells. - little silt.
						1445 well completed

Figure 1
SOIL BORING LOG, FORM D1586

CH2M HILL

PROJECT NUMBER	BORING NUMBER	SHEET
6207-027	MW-3S SJS04	1 OF 1

SOIL BORING LOG

PROJECT St Juliens Creek Annex LOCATION Landfill D - Site 4

ELEVATION Ground: 4.19 / Toc: 6.67 ft msl DRILLING CONTRACTOR American Environmental Drilling Services

DRILLING METHOD AND EQUIPMENT 6 1/4" ID Hollow Stem Augers Ingersoll Rand A-300 Drill Rig

WATER LEVELS _____ START 7/01/97 FINISH 7/01/97 LOGGER S Budney (CH2M Hill)

DEPTH BELOW SURFACE (FT)	SAMPLE: INTERVAL	SAMPLE: NUMBER AND TYPE	SAMPLE: RECOVERY (FT)	STANDARD PENETRATION TEST RESULTS 6"-6"-6" (N)	SOIL DESCRIPTION: SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY	COMMENTS: DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS AND INSTRUMENTATION
0					No Samples collected See Boring log for MW-1D	1650 Begin drilling
						Petroleum odor
5					Fill material down to 7' BGS. difficult drilling 0-7' BGS	10' OVM to 2 ppm above Cuttings
						Breathing Zone OK
10						
14						1745 Begin well installation
15					Bottom of Boring 14' BGS	

Figure 1
SOIL BORING LOG, FORM D1586

CH2MHILL

PROJECT NUMBER	BORING NUMBER		
CTO 27	SJS04-MW03D	SHEET 1	OF 2

SOIL BORING LOG

PROJECT NAVYCLEANII / ST JULIENS CREEK ANNEX LOCATION SITE 4 MW03D

ELEVATION GROUND: 3.60/TOC: 5.54 DRILLING CONTRACTOR AEDS

DRILLING METHOD AND EQUIPMENT INGERSOL RAND A300 R16/8 1/4" and 4 1/4" HSA / 5" Mud Rotary

WATER LEVELS _____ START _____ FINISH _____ LOGGER L. FRANCE

DEPTH BELOW SURFACE (FT)	SAMPLE INTERVAL	SAMPLE NUMBER AND TYPE	SAMPLE RECOVERY (FT)	STANDARD PENETRATION TEST RESULTS 6"-6"-6" (N)	SOIL DESCRIPTION: SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY	COMMENTS: DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS AND INSTRUMENTATION
					0-3' FILL MATERIAL: GRAVEL AND SILT.	START 0815 6/28/97 sampling through 4 1/4" HS with 2" split spoon.
5		GM	0.7	5-3-3-5	FILL: Gravel, f-c sand, some silt. (GM). Bluish black (GLEY 2.5/1) bottom 3" is wet Hit auger refusal at 5'.	Oppm on OVM @ borehole @ Petroleum odor.
						Moved location several times final location ~30' N of orig Difficulty in drilling through fill.
		ML	1.75	1-1-1-1	SILT (ML). One 1" layer of fine sand. I. clay. DK greenish grey (GLEY 3/1)	
10		CL			CLAY. Soft DK greenish grey (GLEY 3/1). Some silt.	
			2.0	1-1-1-2		
			2.0	1/12"-1-1	Clay (CL), as above, v. soft. little silt.	
15			2.0	1/12"-1-1	Clay (CL) as above trace m-c sand in bottom 2" (@ ~16')	Strong sulfur odor noted in clay @ 15'
			2.0	1-2-2-1	CLAY, as above, little silt.	
			1.5	1-2-2-1	CLAY, as above. Soft	Sulfur odor at 19'
20			2.0	1-2-2-1		Sulfur odor at 21.
			2.0	1-2-2-2	CLAY, as above, medium stiff	
25		ML	2.0	2-1-1-1	25.3' SILT (ML) Clayey. Dry. V. Dark greyish brown (2.5Y 3/2)	
			1.5	2-1-1-1	Some organics, moist.	
		SP	0.5	1-2-1+1	SAND (SP). Grey (10YR 5/1). fine loose	
30						

CH2M HILL

PROJECT NUMBER	BORING NUMBER	SHEET
CTO 27	SJS04MW03D	2 OF 2

SOIL BORING LOG

PROJECT NAVYCLEAN II/ST. JULIENS CREEK ANNEX LOCATION SITE 4 MW03D

ELEVATION _____ DRILLING CONTRACTOR AEDS

DRILLING METHOD AND EQUIPMENT See p. 1

WATER LEVELS _____ START _____ FINISH _____ LOGGER L. FRANCIS

DEPTH BELOW SURFACE (FT)	SAMPLE: INTERVAL	SAMPLE: NUMBER AND TYPE	SAMPLE: RECOVERY (FT)	STANDARD PENETRATION TEST RESULTS 6"-6"-6" (N)	SOIL DESCRIPTION: SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY	COMMENTS: DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS AND INSTRUMENTATION
30		SP	2.0	Not Recorded	San L, as above. V. Wet, Greenish grey (GLEY 6/1) clayey 32.3	Start drilling and sampling w/ 5" mud rotary at 32' 7/15/97
		CL	2.0	2-2-2-3	CLAY, (CL) Some sand, greenish grey (GLEY 6/1) M. Stiff	
35			2.0	2-2-2-2	CLAY (CL) Light greenish grey (GLEY 7/1) with yellowish brown (10YR 5/6) mottling. Sandy layer (2") at 35'	
			2.0	2-1-2-2	Increased mottling. tr. m-c sand. thin (< 2mm) layers of sand 37-38'.	
			2.0	2-2-1-2	Same as above. No sand, less mottling.	
40			2.0	2-2-3-2	41.7	
		SC			SAND, clayey (SC) well graded c-fine. Tr. qtz gravel	
		SW	1.25	2-1-2-2	SAND, (SW) little clay, fine. tr. well-rounded qtz gravel. greenish grey (GLEY 5/1)	
45		ML	1.25	2-2-3-2	SILT and V. fine SAND (ML) Micaceous DK greenish grey (GLEY 4/1).	
			1.5	2-2-1-2	Same as above. Thin (< 2mm) layers of brown organics.	
			1.5	3-2-2-2	Same as above.	
50		SP	1.5	2-2-1-2	SAND (SP) fine, micaceous	
		SM	1.5	2-2-2-3	SAND (SM) and silt. fine, loose	
55		SP	0.2	2-2-3-2	SAND (SP) coarse sand and fine qtz gravel. well-rounded. V. wet	
		CL			CLAY, soft greenish grey,	
		SP.	1.2	2-2-1-2	SAND, SP. micaceous v. fine.	
66					Total Depth of Boring 60'	

CH2MHILL

PROJECT NUMBER	BORING NUMBER	SHEET	OF
6207-027	SJSC4 MW-4S	1	1

SOIL BORING LOG

PROJECT St Juliens Creek Annex LOCATION Landfill D Site 4

ELEVATION Ground: 6.34/TOC: 8.60 MSL(NGVD) DRILLING CONTRACTOR American Environmental Drilling Services

DRILLING METHOD AND EQUIPMENT 6'4" ID Hollow Stem Augers - Ingersoll Rand A-300 Drill Rig

WATER LEVELS _____ START 6/30/97 FINISH 6/30/97 LOGGER S. Audney (COM for de

DEPTH BELOW SURFACE (FT)	SAMPLE INTERVAL	SAMPLE NUMBER AND TYPE	SAMPLE RECOVERY (FT)	STANDARD PENETRATION TEST RESULTS 6"-6"-6" (N)	SOIL DESCRIPTION: SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY	COMMENTS: DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS AND INSTRUMENTATION
	2-2.5'	S-1	6"/6"		Silty Sand with F. gravel (GM) Black 5Y 2.5/1 dry	1345 Begin drilling Refusal - Bounced on a Rock
3	3-5	S-2	17/24	3-3-4-1	Silt, F-Med Sand trace Coarse Sand moist (SM) Wood stuck in end of split spoon Petroleum Smell	Augers at 3' Petroleum Smell Cuttings Black. OVM up to 1.7 ppm
6	6-8	S-3	15/24	3-3-4-1	Clayey Silt w/ Sand trace gravel (ML) 4" Black 5Y 2.5/1 of wood - piece of brick above wood bottom 4" light yellowish brown 2.5Y 6/3 Silty Clay (CL) Wet @ 6' Dry	at 6' Petroleum odor OVM up to 5.2 ppm above hole 0 to 1.7 ppm in breathing zone not sustained
10	10-12	S-4	24/24	2-3-3-1	Soft silty clay (CL) interbedded with Silty F. Sand (SM) (10.5-11 Feet) dark greenish gray 10Y 3/1	8-10' Drilled through Semi-firm hard. Wet at 8' water Flowing in to open hole
15					Bottom of Boring 15' BGS	1450 ~~1720~~ Drilled to 15' BGS

Figure 1
SOIL BORING LOG, FORM D1586

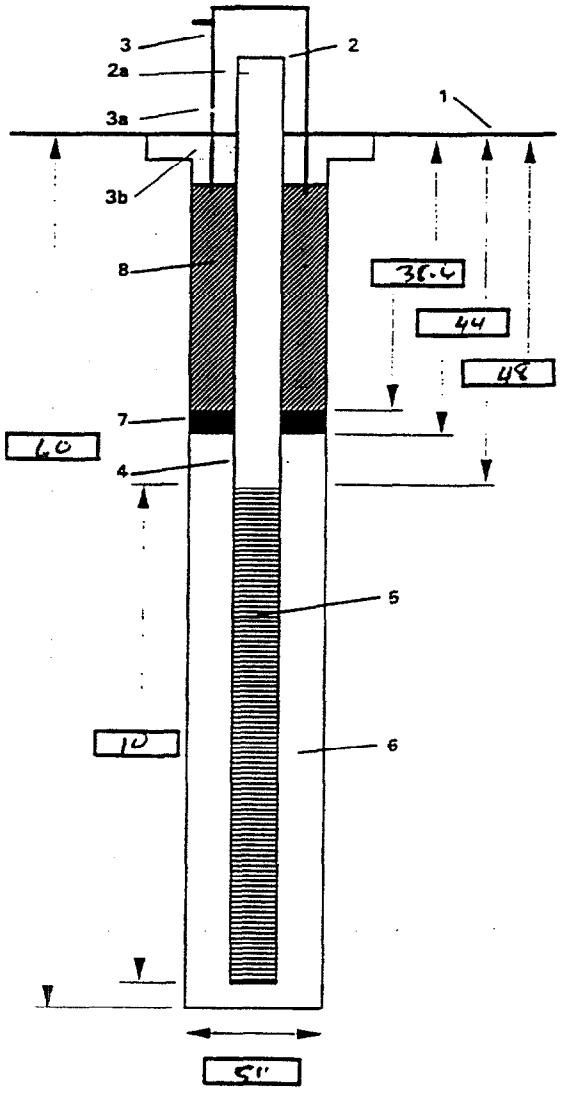
APPENDIX D

Monitoring Well Construction Diagrams

PROJECT NUMBER	BORING NUMBER		
6207-027	SJS03-MW1D	SHEET 1	OF 1

WELL COMPLETION DIAGRAM

PROJECT: NAVY CLEAN II ST. JULIENS CREEK CTO 27 LOCATION: SITE 3 MW1D
ELEVATION: TOC 12.05 ft MSL DRILLING CONTRACTOR: NEDS
DRILLING METHOD AND EQUIPMENT USED: 8 1/4" ID HSA / MUD ROTARY 5" CORE BARREL
WATER LEVELS: START: END: LOGGER: L. FRANCIS



1- Ground elevation at well 12.04 ft msl

2- Top of casing elevation 12.05 ft msl
a) vent hole?

3- Wellhead protection cover type FLUSH MOUNT
a) weep hole? —
b) concrete pad dimensions

4- Diameter/type of well casing 2" PVC Sch. 40

5- Type/slot size of screen 2" PVC 010-SLOT

6- Type screen filter
a) Quantity used Medium (primary) 60 - 46.5'
fine (secondary) 46.5 - ~~38.6~~ 44'

7- Type of seal
a) Quantity used Bentonite Pellet 38.6 - 44'

8- Grout
a) Grout mix used Bentonite/Cement
b) Method of placement pumped/tremmie
c) Quantity of well casing grout

Development method Purge/Surge

Development time 8 hrs.

Estimated purge volume 205 gallons

Comments PVC 6" ESCALATION CASING TO 22FT
0.4' plug below screen

PROJECT NUMBER	BORING NUMBER	SHEET	OF
6207-027	MW-15 SJS03	1	1

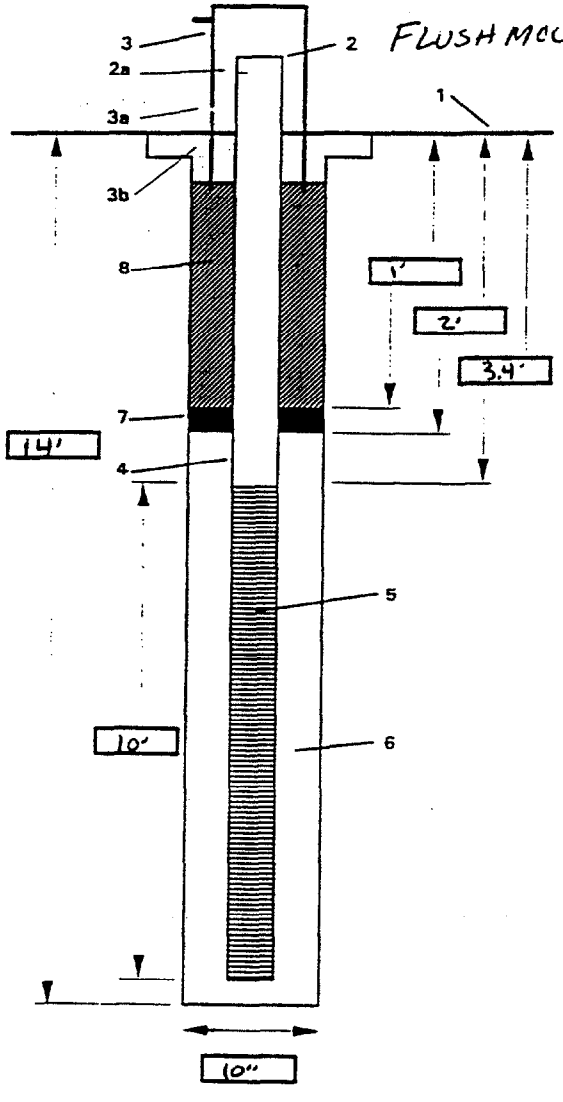
WELL COMPLETION DIAGRAM

PROJECT : St Juliens Creek Annex — LOCATION : Landfill C - Site 3

ELEVATION : TOC 11.91 ft MSL — DRILLING CONTRACTOR : American Environmental Drilling Services

DRILLING METHOD AND EQUIPMENT USED : 6 1/4" ID Hollow Stem Augers, Ingersoll Rand A-300 Drill Rig

WATER LEVELS : — START : 7/02/97 — END : 7/14/97 — LOGGER : S Budney (CDM Federal)



1- Ground elevation at well: 12.01 ft msl

2- Top of casing elevation: 11.91 ft msl
a) vent hole?

3- Wellhead protection cover type: Flush mount
a) weep hole? NO
b) concrete pad dimensions

4- Diameter/type of well casing: 2" PVC

5- Type/slot size of screen: 2" Dia 0.010 Slot PVC Screen 3.4' - 13.4' BGS

6- Type screen filter
a) Quantity used: Med Sand

7- Type of seal
a) Quantity used: Bentonite 1'-2' BGS

8- Grout
a) Grout mix used: Concrete to surface
b) Method of placement: NA
c) Quantity of well casing grout: NA

Development method: Purge / Surge

Development time: 4 hrs 7/13/97 + 2.5 hrs 7/14/97

Estimated purge volume: 75 gal

Comments: Bottom of well 13.9' BGS

ABOVDIAG.XLS

PROJECT NUMBER	BORING NUMBER		
6207-027	SJSC3-MW2D	SHEET 1	OF 1

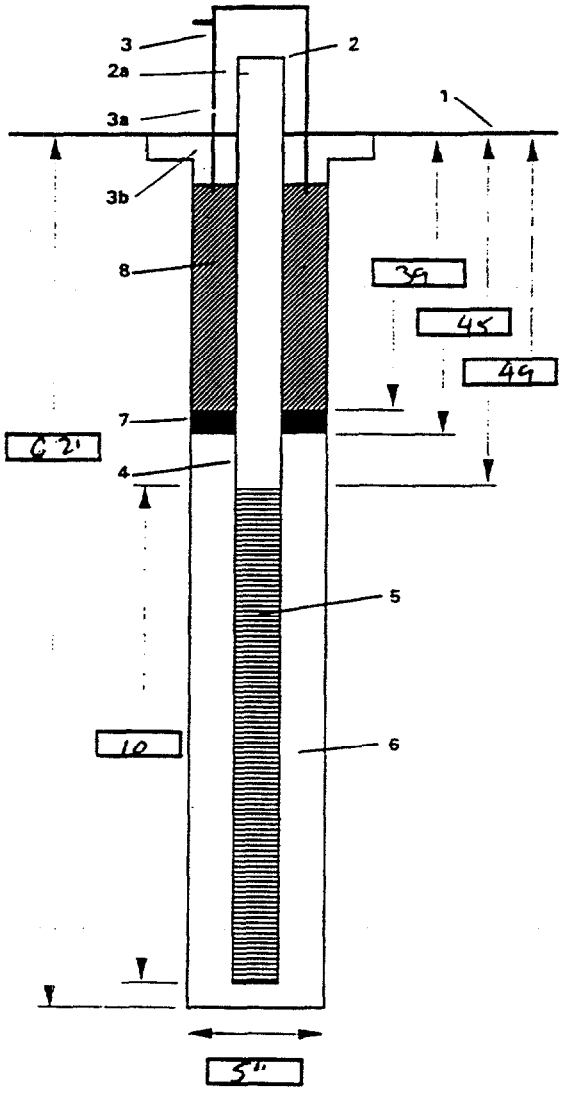
WELL COMPLETION DIAGRAM

PROJECT: NAVY CLEAN II ST. JULIENS CREEK LOCATION: SITE 3 MW2D

ELEVATION: TOC 14.77' MSL DRILLING CONTRACTOR:

DRILLING METHOD AND EQUIPMENT USED: 8 1/4" HSA / MUD ROTARY WITH 5" CORE BARREL

WATER LEVELS: START: END: LOGGER: L. FRANCE



1- Ground elevation at well 12.41 ~~4.56~~ ft msl

2- Top of casing elevation 14.73' ft msl
a) vent hole? YES

3- Wellhead protection cover type STICK-UP
a) weep hole? YES
b) concrete pad dimensions

4- Diameter/type of well casing 2" PVC Sch. 40

5- Type/slot size of screen 2" PVC 010-slot

6- Type screen filter
a) Quantity used medium (primary) 62'-46'
fine (Secondary) 46'-45'

7- Type of seal
a) Quantity used Bentonite Pellet 45'-39'

8- Grout
a) Grout mix used Bentonite/Cement
b) Method of placement pumped/tremmie
c) Quantity of well casing grout

Development method Purge / Surge

Development time 8-hours

Estimated purge volume 210 gallons

Comments 6" PVC isolation casing set at 29'. 0.4' Plug on bottom of Screen

PROJECT NUMBER	BORING NUMBER	SHEET	OF
6207-C27	MW-25 SJS03	1	1

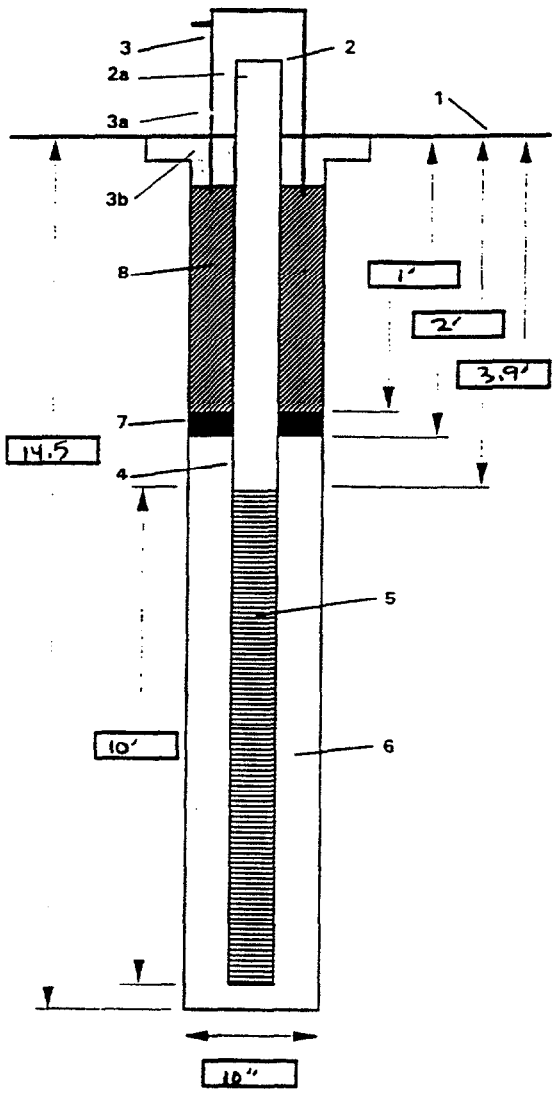
WELL COMPLETION DIAGRAM

PROJECT: St Juliens Creek Annex — LOCATION: Site 3 Landfill C

ELEVATION: TOC: 15.22 ft msl — DRILLING CONTRACTOR: American Environmental Drilling Services

DRILLING METHOD AND EQUIPMENT USED: 6 1/4" ID Hollow Stem Auger - Ingersoll Rand A-300 Drill Rig

WATER LEVELS: — START: 6/29/97 — END: 7/11/97 — LOGGER: S. Gurney (CDM Federal)



1- Ground elevation at well: 12.84 ft msl

2- Top of casing elevation: 15.22 ft msl
   a) vent hole?

3- Wellhead protection cover type: Steel Stick up
   a) weep hole? Yes
   b) concrete pad dimensions: 3' x 3'

4- Diameter/type of well casing: 2" Dia PVC

5- Type/slot size of screen: 0.010 Slot PVC 2" Dia Screen
   Screen 3.9-13.9

6- Type screen filter
   a) Quantity used: Med Sand ~ 5 cubic ft.

7- Type of seal
   a) Quantity used: Bentonite 1'-2' BGS

8- Grout
   a) Grout mix used: Concrete
   b) Method of placement: NA
   c) Quantity of well casing grout: NA

Development method: Purge / Surge

Development time: 4hrs on 7/11/97

Estimated purge volume: 27 gal

Comments: Bottom of well 14.4'

PROJECT NUMBER	BORING NUMBER		
6207-027	MW-3S	SHEET 1	OF 1

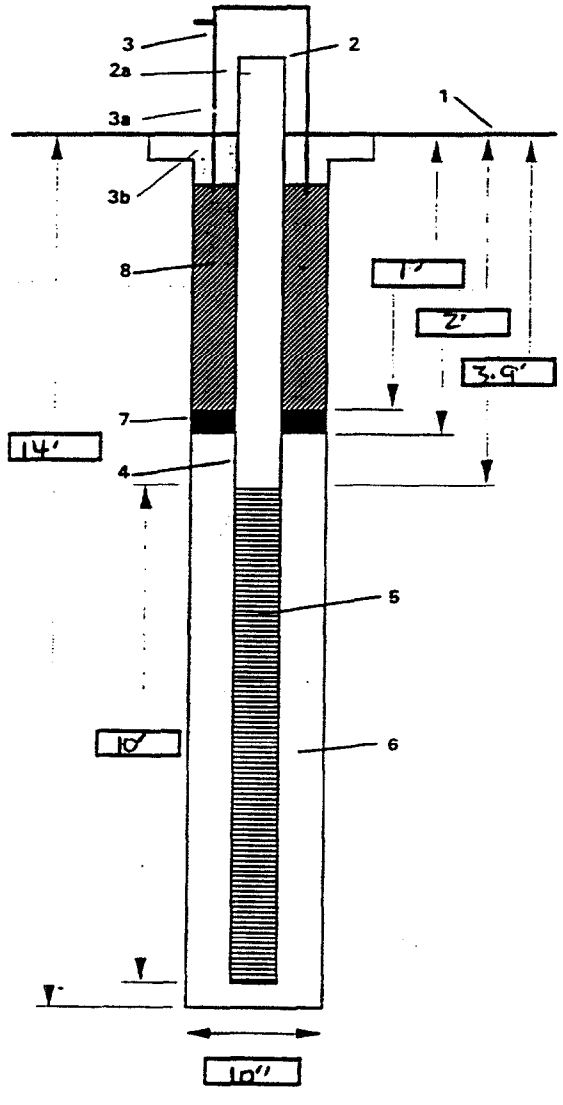
WELL COMPLETION DIAGRAM

PROJECT: St Juliens Creek Annex — LOCATION: Landfill C Site 3

ELEVATION: TOC: 13.48 ft msl — DRILLING CONTRACTOR: CAmerican Environmental Drilling Services

DRILLING METHOD AND EQUIPMENT USED: 6 1/4 ID Hollow Stem Auger Ingersoll Rand A-300 Drill Rig

WATER LEVELS: — START: 6/28/97 — END: 7/1/97 — LOGGER: S. Bushway (COM Federal)



1- Ground elevation at well: 11.31 ft msl

2- Top of casing elevation: 13.48 ft msl
a) vent hole?

3- Wellhead protection cover type: Steel Stick Up
a) weep hole? Yes
b) concrete pad dimensions: 3' x 3'

4- Diameter/type of well casing: 2" ID PVC

5- Type/slot size of screen: PVC 0.010 slot 2" Dia Screen 3.9-13.9' BGS

6- Type screen filter: #2 Med. Sand
a) Quantity used: ~4 Bags w. Feet 14'-2' BGS

7- Type of seal
a) Quantity used: Bentonite 1'-2' BGS

8- Grout
a) Grout mix used: Concrete From 1' BGS
b) Method of placement: N/A
c) Quantity of well casing grout: N/A

Development method: Purge/Surge

Development time: 3 hours on 7/11/97

Estimated purge volume: 55 gal

Comments: Bottom of well 14.3' BGS

ABOVDIAG.XLS

CH2M HILL

PROJECT NUMBER	BORING NUMBER	SHEET	OF
6207-027	MW-4S SJS03	1	1

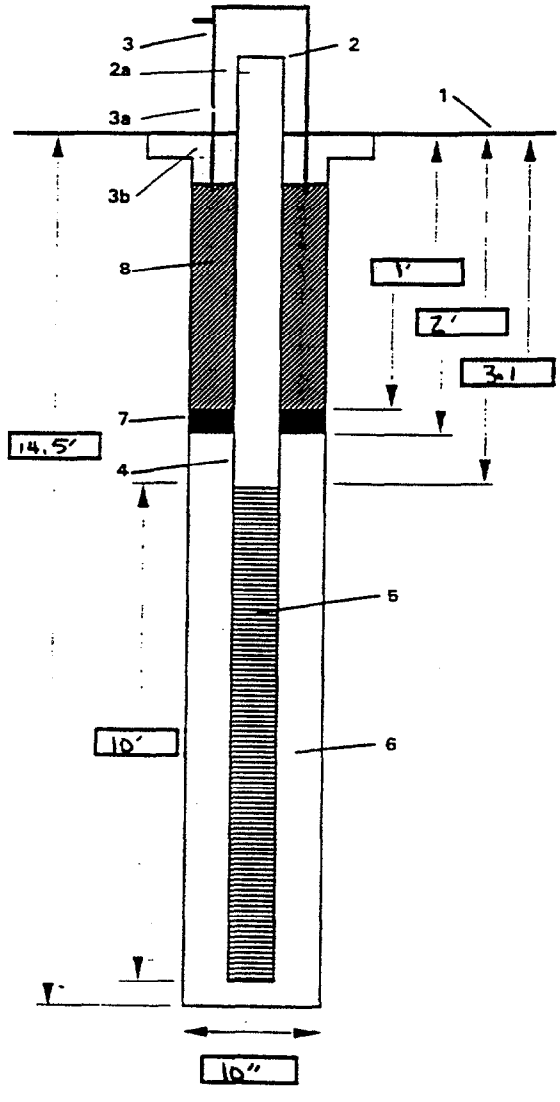
WELL COMPLETION DIAGRAM

PROJECT : St Juliens Creek Annex — LOCATION : Land fill C - Site 3

ELEVATION : TOC: 15.09 ft msl — DRILLING CONTRACTOR : American Environmental Drilling Services

DRILLING METHOD AND EQUIPMENT USED : 6¼ ID Hollow Stem Augers Ingersoll Rand A-300 Drill Rig

WATER LEVELS : — START : 6/29/97 — END : 7/10/97 — LOGGER : S. Budney (CDM Federal)



1- Ground elevation at well: 12.64 ft msl

2- Top of casing elevation: 15.09 ft msl
   a) vent hole? yes

3- Wellhead protection cover type: Steel Stick up
   a) weep hole? Yes
   b) concrete pad dimensions: 3' x 3'

4- Diameter/type of well casing: 2" Diameter PVC

5- Type/slot size of screen: Slot 0.010 - PVC 2" Dia. Screen 3.1 - 13.1' BGS

6- Type screen filter
   a) Quantity used: Approx 5 cu. ft med Sand

7- Type of seal
   a) Quantity used: Bentonite 1-2' BGS

8- Grout
   a) Grout mix used: Concrete
   b) Method of placement: N/A
   c) Quantity of well casing grout: N/A

Development method: purge + Surge

Development time: 4½ hours on 7/10/97

Estimated purge volume: 40 gal 7/10/97

Comments: Bottom of well 13.6'

ABOVDIAG.XLS

PROJECT NUMBER	BORING NUMBER		
6207-027	SJS04-MW1D	SHEET 1	OF 1

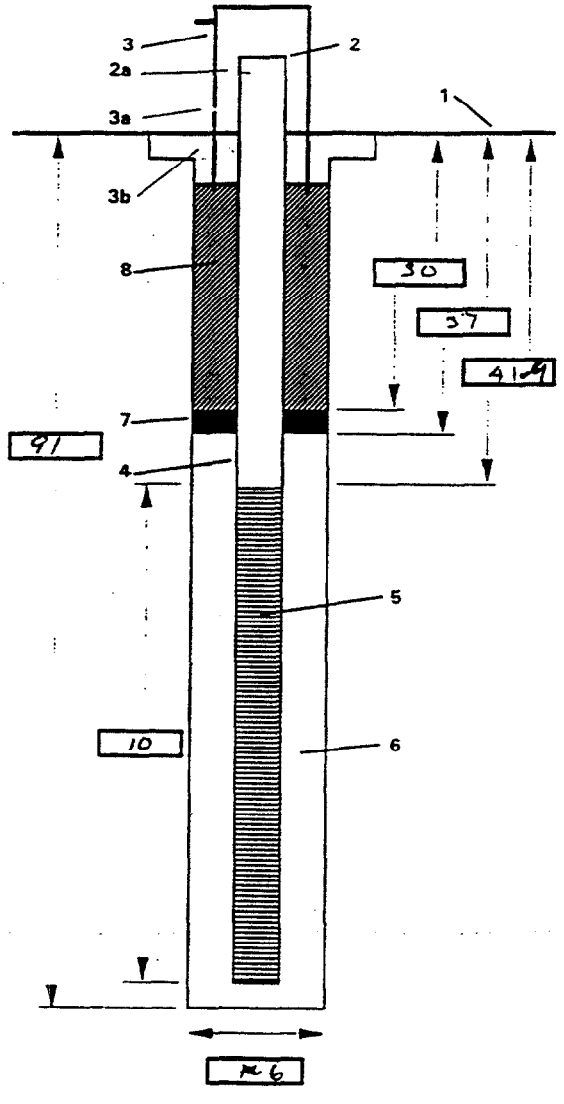
WELL COMPLETION DIAGRAM

PROJECT: NAVY CLEAN # SJ. JULIENS CREEK CTO 27 LOCATION: SITE 4 ~~MW-3D~~ MW1D

ELEVATION: TOC 13.32 ft MSL DRILLING CONTRACTOR: AEDS

DRILLING METHOD AND EQUIPMENT USED: HSA (8 1/4 ID), 6" mud Rotary

WATER LEVELS: START: END: LOGGER: L. CAMPBELL / L. FRANCE



1- Ground elevation at well 10.70 ft MSL

2- Top of casing elevation 13.32 ft MSL
a) vent hole? Yes

3- Wellhead protection cover type Stickup.
a) weep hole? Yes
b) concrete pad dimensions

4- Diameter/type of well casing Isolation - 6" PVC
well - 2" PVC

5- Type/slot size of screen 010-slot PVC, Sch. 40

6- Type screen filter
a) Quantity used Medium Sand.

7- Type of seal
a) Quantity used Bentonite Pellet

8- Grout
a) Grout mix used Portland Cement / Bentonite
b) Method of placement tremmie, pumped
c) Quantity of well casing grout

Development method Purge + Surge

Development time 4.5 Hours

Estimated purge volume 120 gals.

Comments Isolation casing from 0-28'
Med. Sand 60-91' ft.
Bentonite pellet seal 60-55'
med sand 55-38
Fine 2nd sand (fine) 38-37'

PROJECT NUMBER	BORING NUMBER	SHEET	OF
6207-027	MW-15 SJS04	1	1

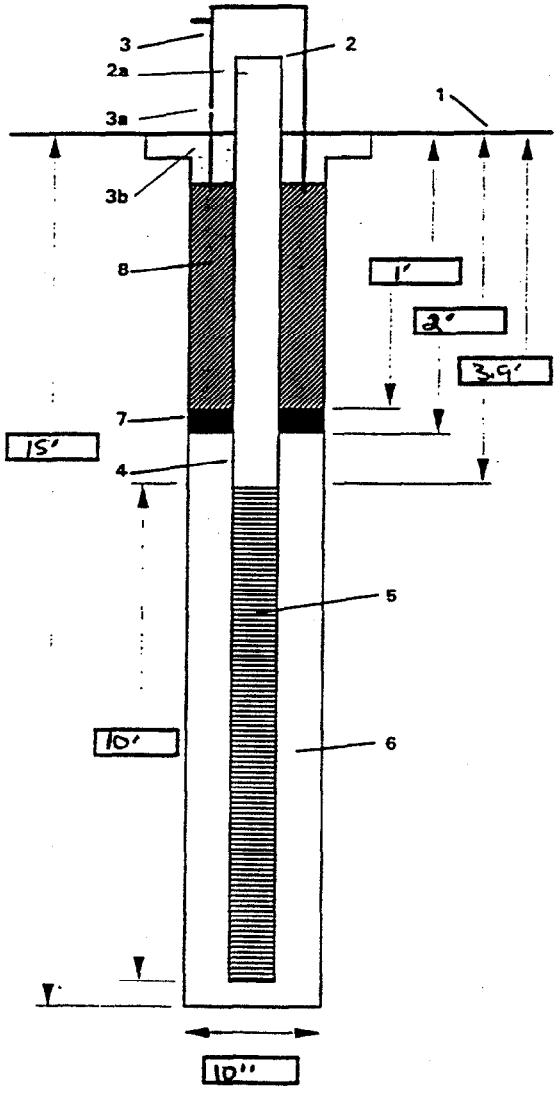
WELL COMPLETION DIAGRAM

PROJECT: St Juliens Creek Annex — LOCATION: Landfill D Site 4

ELEVATION: TOC: 13.07 ft MSL — DRILLING CONTRACTOR: American Environmental Drilling Services

DRILLING METHOD AND EQUIPMENT USED: 6"/4" ID Hollow Stem Augers - Ingersoll Rand A-300 Drill Rig

WATER LEVELS: — START: 6/28/97 — END: 7/10/97 — LOGGER: S. Sidney (CDM Federal)



1- Ground elevation at well: 10.47 ft msl

2- Top of casing elevation: 13.07 ft msl
   a) vent hole? Yes

3- Wellhead protection cover type: Steel Stick up
   a) weep hole? Yes
   b) concrete pad dimensions: 3' x 3'

4- Diameter/type of well casing: 2" Dia PVC

5- Type/slot size of screen: 0.010 Slot 2" ID Screen PVC
   Screen - 3.9' - 13.9' BGS

6- Type screen filter
   a) Quantity used: ~5 cu. ft of med sand

7- Type of seal
   a) Quantity used: Bentonite 1-2' BGS

8- Grout
   a) Grout mix used: Cement 1' to Surface
   b) Method of placement: NA
   c) Quantity of well casing grout: NA

Development method: Purge + Surge

Development time: 3hrs on 7/10/97

Estimated purge volume: 8 gal

Comments: Bottom of well 14' 5" BGS

ABOVDIAG.XLS

PROJECT NUMBER	BORING NUMBER	SHEET	OF
6207-027	MW-25 SJS04	1	1

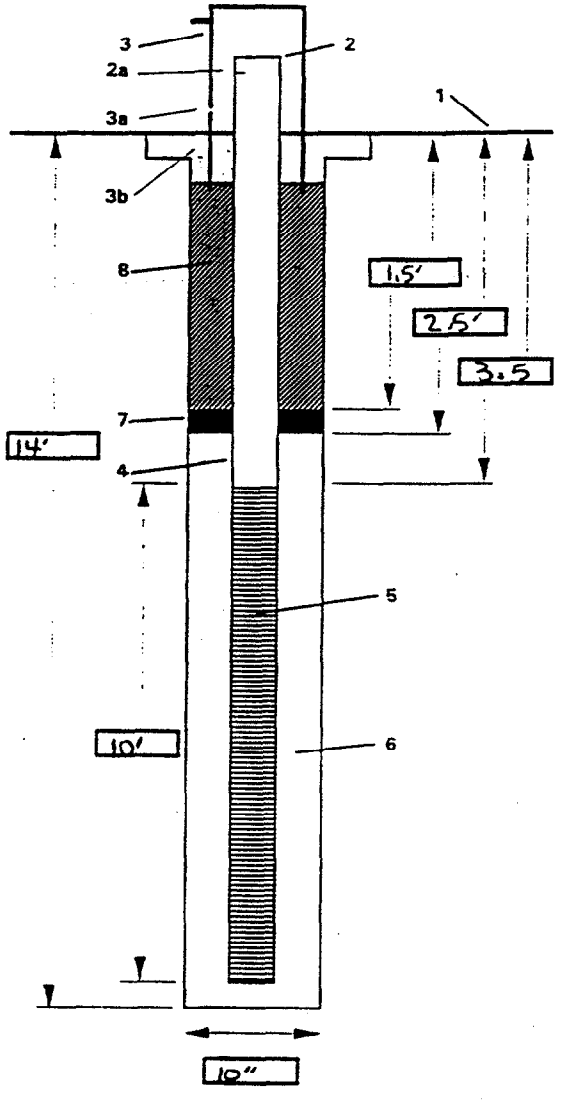
WELL COMPLETION DIAGRAM

PROJECT : St Juliens Creek Annex — LOCATION : Site 48 - Landfill D

ELEVATION : TOC. 11.42 ft msl — DRILLING CONTRACTOR : (American Environmental Drilling Services

DRILLING METHOD AND EQUIPMENT USED : 6 1/4" ID Hollow Stem Auger - Ingersoll Rand A-300 Drill Rig

WATER LEVELS : — START : 6/28/97 END : 7/09/97 7/18/97 — LOGGER : S. Bowey (CDM Federal)



1- Ground elevation at well: 9.36 ft msl

2- Top of casing elevation: 11.42 ft msl
   a) vent hole? yes

3- Wellhead protection cover type: Steel - Stickup
   a) weep hole? Yes
   b) concrete pad dimensions: 3' x 3'

4- Diameter/type of well casing: 2" Dia PVC

5- Type/slot size of screen: PVC 0.010 Slot 2" Dia Screen 3.5-13.5' BGS

6- Type screen filter
   a) Quantity used: ~5 cu. feet 14'-2.5' BGS Med Sand

7- Type of seal
   a) Quantity used: Bentonite 1.5'-2.5' BGS

8- Grout
   a) Grout mix used: Concrete to surface
   b) Method of placement: NA
   c) Quantity of well casing grout: NA

Development method: Purge / Surge

Development time: 1½ hr on 7/09/97, 1 hr on 7/10, 1¼ hr on 7/18

Estimated purge volume: ~4 gal on 7/09/97 + 3½ on 7/10/97, 2.7 on 7/18

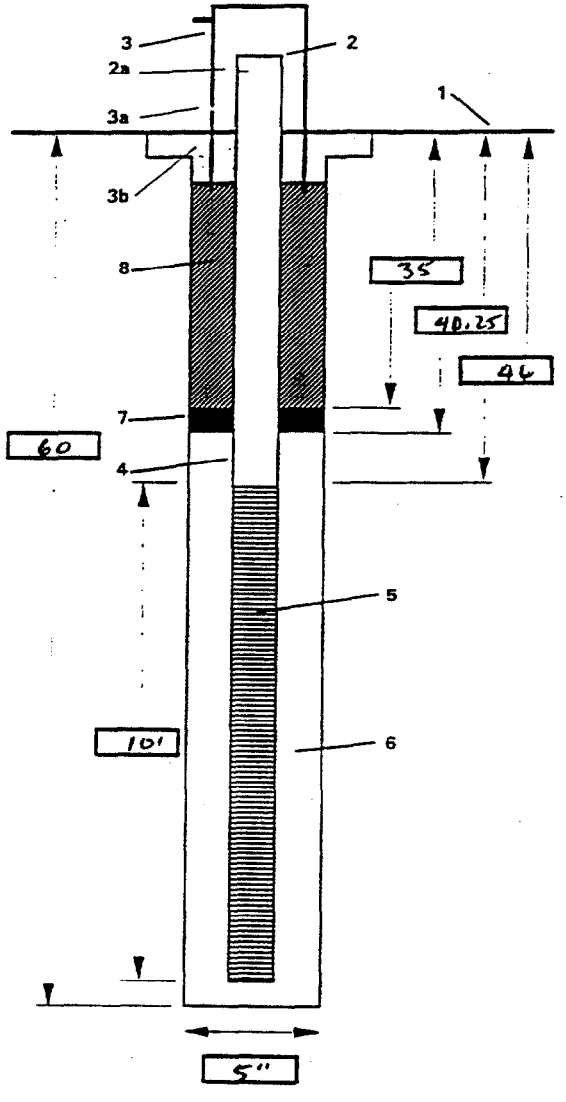
Comments: Bottom of well 14.0' BGS

Development V. silty - low recharge

PROJECT NUMBER	BORING NUMBER		
6207-027	SJS04-MW3D	SHEET 1	OF 1

WELL COMPLETION DIAGRAM

PROJECT: NAVY CLEAN II ST. JULIENS CREEK CTO 27 LOCATION: SITE 4 MW-3D
ELEVATION: TOC 5.56 ft msl DRILLING CONTRACTOR: AEDS
DRILLING METHOD AND EQUIPMENT USED: MUD ROTARY 5" CORE BARREL
WATER LEVELS: START: END: LOGGER: L FRANCE



1- Ground elevation at well: 3.60 ft msl
2- Top of casing elevation: 5.56 ft msl
a) vent hole? YES
3- Wellhead protection cover type: STICK-UP
a) weep hole? YES
b) concrete pad dimensions:
4- Diameter/type of well casing: 2" PVC Sch. 40
5- Type/slot size of screen: 2" PVC 010-SLOT
6- Type screen filter
a) Quantity used: medium sand (primary 40.25 fine sand (secondary) 46-35
7- Type of seal
a) Quantity used: Bentonite pellet to 35'
8- Grout
a) Grout mix used: Bentonite / Cement
b) Method of placement: tremmied / pumped
c) Quantity of well casing grout:
Development method: Purge + Surge
Development time: 4 Hours
Estimated purge volume: 145 gallons
Comments: Note: Isolation Casing 6" PVC to 20.0' 0.4' plug at bottom of Screen

PROJECT NUMBER	BORING NUMBER	SHEET	OF
6207-027	MW-35 SJS04	1	1

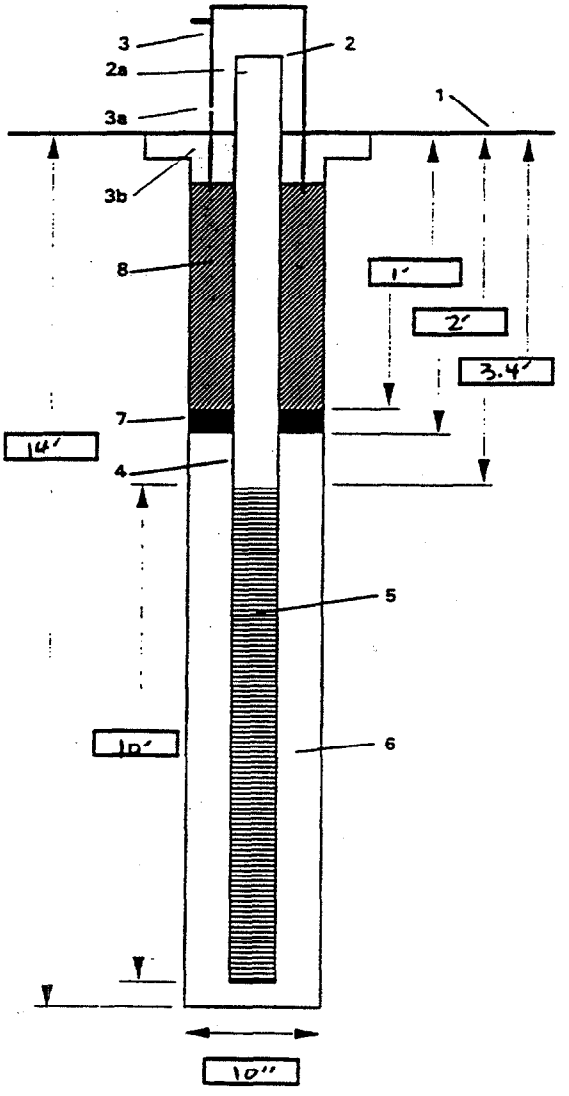
WELL COMPLETION DIAGRAM

PROJECT: St Johns Creek Annex — LOCATION: Landfill D - Site 4

ELEVATION: TOC: 6.67 ft msl — DRILLING CONTRACTOR: American Environmental Drilling Services

DRILLING METHOD AND EQUIPMENT USED: 6" 1/4" ID Hollow Stem Augers - Ingersoll Rand A-300 Drill Rig

WATER LEVELS: — START: 7/01/97 — END: — LOGGER: SBudney (CDM Federal)



1- Ground elevation at well: 4.19 ft msl

2- Top of casing elevation: 6.67 ft msl
   a) vent hole?

3- Wellhead protection cover type: Steel - Stick up
   a) weep hole? Yes
   b) concrete pad dimensions: 3' x 3'

4- Diameter/type of well casing: 2" Dia PVC

5- Type/slot size of screen: 2" Dia 0.010 Slot PVC Screen 3.4' - 13.4'

6- Type screen filter
   a) Quantity used: Med Sand ~ 5 cubic ft.

7- Type of seal
   a) Quantity used: Bentonite 1 - 2' BGS

8- Grout
   a) Grout mix used: Concrete
   b) Method of placement: N/A
   c) Quantity of well casing grout: N/A

Development method: Purge / Surge (Purge W/ Bailer)

Development time: 3 1/2 hours on 7/17/97

Estimated purge volume: 55 gal

Comments: Bottom of well 13.8'

ABOVDIAG.XLS

PROJECT NUMBER	BORING NUMBER		
6207-027	MW-4S	SHEET 1	OF 1

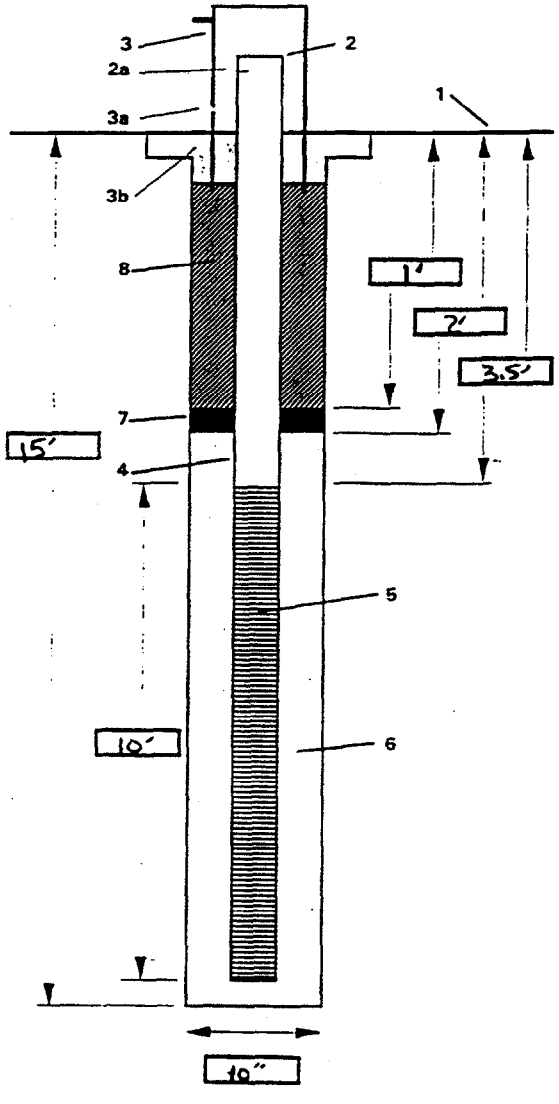
WELL COMPLETION DIAGRAM

PROJECT : St Juliens Creek Annex — LOCATION : Landfill D Site 4

ELEVATION : TOC 8.60 ft msl — DRILLING CONTRACTOR : American Environmental Drilling Services

DRILLING METHOD AND EQUIPMENT USED : 6 1/4" ID Hollow Stem Augers - Ingersoll Rand A-300 Drill Rig

WATER LEVELS : — START : 6/30/97 — END : 7/09/97 — LOGGER : S Brenner (COM Federal)



1- Ground elevation at well: 6.34 ft msl

2- Top of casing elevation: 8.60 ft msl
a) vent hole?

3- Wellhead protection cover type: Steel Stick up
a) weep hole? Yes
b) concrete pad dimensions: 3' x 3'

4- Diameter/type of well casing: 2" Dia PVC

5- Type/slot size of screen: 0.010 slot 2" Dia PVC
Screen 3.5' - 13.5' BGS

6- Type screen filter
a) Quantity used: Med Sand ~5 cubic feet

7- Type of seal
a) Quantity used: Bentonite 1' - 2' BGS

8- Grout
a) Grout mix used: Concrete to Surface
b) Method of placement: NA
c) Quantity of well casing grout: NA

Development method: Purge / Surge

Development time: 3 hrs on 7/09/97

Estimated purge volume: 27 gal

Comments: Bottom of well 14.0'

APPENDIX E

Vertical Flow Gradient Data

VERTICAL HYDRAULIC GRADIENT CALCULATION DATA						
ST. JULIENS CREEK ANNEX						
Monitoring Well	Elevation of Top of Casing (feet msl)	Date	Depth to Water (feet)	Elevation of Potentiometric Surface	Elevation of Bottom of Screen	Veritcal Gradient (Ft/Ft)
SJS02-MW01S	7.72	7/31/97	6.65	1.07	-9.41	
SJS02-MW01D	7.94	7/31/97	6.13	1.81	-62.73	
Elev. Difference				0.74	53.32	0.014
SJS02-MW02S	6.98	7/31/97	8.01	-1.03	-8.41	
SJS02-MW02D	7.04	7/31/97	5.34	1.70	-59.89	
Elev. Difference				2.73	51.48	0.053
SJS03-MW01S	11.91	7/31/97	2.98	8.93	-1.39	
SJS03-MW01D	12.05	7/31/97	10.09	1.96	-45.96	
Elev. Difference				-6.97	44.57	-0.156
SJS03-MW02S	15.22	7/31/97	4.70	10.52	Perched Water Table	
SJS03-MW02D	14.73	7/31/97	13.21	1.52		
Elev. Difference				-9.00		
SJS04-MW01S	13.02	7/30/97	6.10	6.92	-3.43	
SJS04-MW01D	13.32	7/30/97	11.90	1.42	-41.20	
Elev. Difference				-5.50	37.77	-0.146
SJS04-MW03S	6.67	7/30/97	4.90	1.77	-9.21	
SJS04-MW03D	5.56	7/30/97	3.95	1.61	-52.40	
Elev. Difference				-0.16	43.19	-0.004
SJS05-MW01S	9.12	7/31/97	6.65	2.47	-7.05	
SJS05-MW01D	8.59	7/31/97	6.13	2.46	-48.89	
Elev. Difference				-0.01	41.84	0.000
SJS05-MW02S	7.25	7/31/97	8.01	-0.76	-8.95	
SJS05-MW02D	7.12	7/31/97	5.34	1.78	-52.44	
Elev. Difference				2.54	43.49	0.058

APPENDIX F

Site 3 and Site 4 Analytical Data

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS03-GW1D-001	CTOTP	Total Phosphorous (as P)	0.51	0.13	mg/L		7/31/97
SJS03-GW1D-001	MCYAN	Aluminum	415	29	ug/L	B	8/11/97
SJS03-GW1D-001	MCYAN	Arsenic		3	ug/L	U	8/8/97
SJS03-GW1D-001	MCYAN	Barium	15.8	1	ug/L	J	8/11/97
SJS03-GW1D-001	MCYAN	Beryllium	1.1	1	ug/L	B	8/11/97
SJS03-GW1D-001	MCYAN	Cadmium		0.5	ug/L	UL	8/8/97
SJS03-GW1D-001	MCYAN	Calcium	49300	46	ug/L	J	8/11/97
SJS03-GW1D-001	MCYAN	Chromium		7	ug/L	U	8/11/97
SJS03-GW1D-001	MCYAN	Cobalt		8	ug/L	U	8/11/97
SJS03-GW1D-001	MCYAN	Copper		6	ug/L	U	8/11/97
SJS03-GW1D-001	MCYAN	Cyanide		5	ug/L	U	8/1/97
SJS03-GW1D-001	MCYAN	Iron	788	5	ug/L	J	8/11/97
SJS03-GW1D-001	MCYAN	Lead		1	ug/L	UL	8/8/97
SJS03-GW1D-001	MCYAN	Magnesium	14400	45	ug/L	J	8/11/97
SJS03-GW1D-001	MCYAN	Manganese	91.3	1	ug/L	L	8/11/97
SJS03-GW1D-001	MCYAN	Mercury	0.17	0.1	ug/L	B	8/7/97
SJS03-GW1D-001	MCYAN	Nickel	8.1	4	ug/L	J	8/11/97
SJS03-GW1D-001	MCYAN	Potassium	15100	97	ug/L		8/11/97
SJS03-GW1D-001	MCYAN	Silver		1	ug/L	U	8/8/97
SJS03-GW1D-001	MCYAN	Sodium	40600	28	ug/L	J	8/11/97
SJS03-GW1D-001	MCYAN	Thallium	2.7	2	ug/L	J	8/8/97
SJS03-GW1D-001	MCYAN	Vanadium		9	ug/L	U	8/11/97
SJS03-GW1D-001	MCYAN	Zinc	6.4	3	ug/L	B	8/11/97
SJS03-GW1D-001	PSPCB	4,4'-DDD		0.1	ug/L	U	8/9/97
SJS03-GW1D-001	PSPCB	4,4'-DDE		0.1	ug/L	U	8/9/97
SJS03-GW1D-001	PSPCB	4,4'-DDT		0.1	ug/L	U	8/9/97
SJS03-GW1D-001	PSPCB	Aldrin		0.05	ug/L	U	8/9/97
SJS03-GW1D-001	PSPCB	alpha-BHC		0.05	ug/L	U	8/9/97
SJS03-GW1D-001	PSPCB	alpha-Chlordane		0.05	ug/L	U	8/9/97
SJS03-GW1D-001	PSPCB	Aroclor-1016		1	ug/L	U	8/9/97
SJS03-GW1D-001	PSPCB	Aroclor-1221		2	ug/L	U	8/9/97
SJS03-GW1D-001	PSPCB	Aroclor-1232		1	ug/L	U	8/9/97
SJS03-GW1D-001	PSPCB	Aroclor-1242		1	ug/L	U	8/9/97
SJS03-GW1D-001	PSPCB	Aroclor-1248		1	ug/L	U	8/9/97
SJS03-GW1D-001	PSPCB	Aroclor-1254		1	ug/L	U	8/9/97
SJS03-GW1D-001	PSPCB	Aroclor-1260		1	ug/L	U	8/9/97
SJS03-GW1D-001	PSPCB	beta-BHC		0.05	ug/L	U	8/9/97
SJS03-GW1D-001	PSPCB	delta-BHC		0.05	ug/L	U	8/9/97
SJS03-GW1D-001	PSPCB	Dieldrin		0.1	ug/L	U	8/9/97
SJS03-GW1D-001	PSPCB	Endosulfan I		0.05	ug/L	U	8/9/97
SJS03-GW1D-001	PSPCB	Endosulfan II		0.1	ug/L	U	8/9/97
SJS03-GW1D-001	PSPCB	Endosulfan Sulfate		0.1	ug/L	U	8/9/97
SJS03-GW1D-001	PSPCB	Endrin		0.1	ug/L	U	8/9/97
SJS03-GW1D-001	PSPCB	Endrin Aldehyde		0.1	ug/L	U	8/9/97
SJS03-GW1D-001	PSPCB	Endrin Ketone		0.1	ug/L	U	8/9/97
SJS03-GW1D-001	PSPCB	gamma-BHC		0.05	ug/L	U	8/9/97
SJS03-GW1D-001	PSPCB	gamma-Chlordane		0.05	ug/L	U	8/9/97
SJS03-GW1D-001	PSPCB	Heptachlor		0.05	ug/L	U	8/9/97
SJS03-GW1D-001	PSPCB	Heptachlor Epoxide		0.05	ug/L	U	8/9/97
SJS03-GW1D-001	PSPCB	Methoxychlor		0.5	ug/L	U	8/9/97
SJS03-GW1D-001	PSPCB	Toxaphene		5	ug/L	U	8/9/97
SJS03-GW1D-001	SVTCL	1,2,4-Trichlorobenzene		10	ug/L	U	8/8/97
SJS03-GW1D-001	SVTCL	1,2-Dichlorobenzene		10	ug/L	U	8/8/97
SJS03-GW1D-001	SVTCL	1,3-Dichlorobenzene		10	ug/L	U	8/8/97
SJS03-GW1D-001	SVTCL	1,4-Dichlorobenzene		10	ug/L	U	8/8/97
SJS03-GW1D-001	SVTCL	2,2'-oxybis(1-Chloropropane		10	ug/L	U	8/8/97
SJS03-GW1D-001	SVTCL	2,4,5-Trichlorophenol		25	ug/L	U	8/8/97
SJS03-GW1D-001	SVTCL	2,4,6-Trichlorophenol		10	ug/L	U	8/8/97
SJS03-GW1D-001	SVTCL	2,4-Dichlorophenol		10	ug/L	U	8/8/97
SJS03-GW1D-001	SVTCL	2,4-Dimethylphenol		10	ug/L	U	8/8/97
SJS03-GW1D-001	SVTCL	2,4-Dinitrophenol		25	ug/L	U	8/8/97
SJS03-GW1D-001	SVTCL	2,4-Dinitrotoluene		10	ug/L	U	8/8/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS03-GW1D-001	SVTCL	2,6-Dinitrotoluene		10	ug/L	U	8/8/97
SJS03-GW1D-001	SVTCL	2-Chloronaphthalene		10	ug/L	U	8/8/97
SJS03-GW1D-001	SVTCL	2-Chlorophenol		10	ug/L	U	8/8/97
SJS03-GW1D-001	SVTCL	2-Methylnaphthalene		10	ug/L	U	8/8/97
SJS03-GW1D-001	SVTCL	2-Methylphenol		10	ug/L	U	8/8/97
SJS03-GW1D-001	SVTCL	2-Nitroaniline		25	ug/L	U	8/8/97
SJS03-GW1D-001	SVTCL	2-Nitrophenol		10	ug/L	U	8/8/97
SJS03-GW1D-001	SVTCL	3,3'-Dichlorobenzidine		10	ug/L	U	8/8/97
SJS03-GW1D-001	SVTCL	3-Nitroaniline		25	ug/L	U	8/8/97
SJS03-GW1D-001	SVTCL	4,6-Dinitro-2-Methylphenol		25	ug/L	U	8/8/97
SJS03-GW1D-001	SVTCL	4-Bromophenol-phenylether		10	ug/L	U	8/8/97
SJS03-GW1D-001	SVTCL	4-Chloro-3-Methylphenol		10	ug/L	U	8/8/97
SJS03-GW1D-001	SVTCL	4-Chloroaniline		10	ug/L	U	8/8/97
SJS03-GW1D-001	SVTCL	4-Chlorophenyl-phenylether		10	ug/L	U	8/8/97
SJS03-GW1D-001	SVTCL	4-Methylphenol		10	ug/L	U	8/8/97
SJS03-GW1D-001	SVTCL	4-Nitroaniline		25	ug/L	U	8/8/97
SJS03-GW1D-001	SVTCL	4-Nitrophenol		25	ug/L	U	8/8/97
SJS03-GW1D-001	SVTCL	Acenaphthene		10	ug/L	U	8/8/97
SJS03-GW1D-001	SVTCL	Acenaphthylene		10	ug/L	U	8/8/97
SJS03-GW1D-001	SVTCL	Anthracene		10	ug/L	U	8/8/97
SJS03-GW1D-001	SVTCL	Benzo(a)anthracene		10	ug/L	U	8/8/97
SJS03-GW1D-001	SVTCL	Benzo(a)pyrene		10	ug/L	U	8/8/97
SJS03-GW1D-001	SVTCL	Benzo(b)fluoranthene		10	ug/L	U	8/8/97
SJS03-GW1D-001	SVTCL	Benzo(g,h,i)perylene		10	ug/L	U	8/8/97
SJS03-GW1D-001	SVTCL	Benzo(k)fluoranthene		10	ug/L	U	8/8/97
SJS03-GW1D-001	SVTCL	bis(2-Chloroethoxy)methan		10	ug/L	U	8/8/97
SJS03-GW1D-001	SVTCL	bis(2-chloroethyl)ether		10	ug/L	U	8/8/97
SJS03-GW1D-001	SVTCL	bis(2-Ethylhexyl)phthalate		10	ug/L	U	8/8/97
SJS03-GW1D-001	SVTCL	Butylbenzylphthalate		10	ug/L	U	8/8/97
SJS03-GW1D-001	SVTCL	Carbazole		10	ug/L	U	8/8/97
SJS03-GW1D-001	SVTCL	Chrysene		10	ug/L	U	8/8/97
SJS03-GW1D-001	SVTCL	Di-n-butylphthalate		10	ug/L	U	8/8/97
SJS03-GW1D-001	SVTCL	Di-n-Octyl Phthalate		10	ug/L	U	8/8/97
SJS03-GW1D-001	SVTCL	Dibenzo(a,h)anthracene		10	ug/L	U	8/8/97
SJS03-GW1D-001	SVTCL	Dibenzofuran		10	ug/L	U	8/8/97
SJS03-GW1D-001	SVTCL	Diethylphthalate		10	ug/L	U	8/8/97
SJS03-GW1D-001	SVTCL	Dimethyl Phthalate		10	ug/L	U	8/8/97
SJS03-GW1D-001	SVTCL	Fluoranthene		10	ug/L	U	8/8/97
SJS03-GW1D-001	SVTCL	Fluorene		10	ug/L	U	8/8/97
SJS03-GW1D-001	SVTCL	Hexachlorobenzene		10	ug/L	U	8/8/97
SJS03-GW1D-001	SVTCL	Hexachlorobutadiene		10	ug/L	U	8/8/97
SJS03-GW1D-001	SVTCL	Hexachlorocyclopentadien		10	ug/L	U	8/8/97
SJS03-GW1D-001	SVTCL	Hexachloroethane		10	ug/L	U	8/8/97
SJS03-GW1D-001	SVTCL	Indeno(1,2,3-cd)pyrene		10	ug/L	U	8/8/97
SJS03-GW1D-001	SVTCL	Isophorone		10	ug/L	U	8/8/97
SJS03-GW1D-001	SVTCL	N-Nitroso-Di-n-Propylamine		10	ug/L	U	8/8/97
SJS03-GW1D-001	SVTCL	N-Nitrosodiphenylamine		10	ug/L	U	8/8/97
SJS03-GW1D-001	SVTCL	Naphthalene		10	ug/L	U	8/8/97
SJS03-GW1D-001	SVTCL	Nitrobenzene		10	ug/L	U	8/8/97
SJS03-GW1D-001	SVTCL	Pentachlorophenol		25	ug/L	U	8/8/97
SJS03-GW1D-001	SVTCL	Phenanthrene		10	ug/L	U	8/8/97
SJS03-GW1D-001	SVTCL	Phenol		10	ug/L	U	8/8/97
SJS03-GW1D-001	SVTCL	Pyrene		10	ug/L	U	8/8/97
SJS03-GW1D-001	VCLOW	1,1,1-Trichloroethane		1	ug/L	U	8/5/97
SJS03-GW1D-001	VCLOW	1,1,2,2-Tetrachloroethane		1	ug/L	U	8/5/97
SJS03-GW1D-001	VCLOW	1,1,2-Trichloroethane		1	ug/L	U	8/5/97
SJS03-GW1D-001	VCLOW	1,1-Dichloroethane		1	ug/L	U	8/5/97
SJS03-GW1D-001	VCLOW	1,1-Dichloroethene		1	ug/L	U	8/5/97
SJS03-GW1D-001	VCLOW	1,2,4-Trichlorobenzene		1	ug/L	U	8/5/97
SJS03-GW1D-001	VCLOW	1,2-Dibromo-3-chloropropan		1	ug/L	U	8/5/97
SJS03-GW1D-001	VCLOW	1,2-Dibromoethane		1	ug/L	U	8/5/97
SJS03-GW1D-001	VCLOW	1,2-Dichlorobenzene		1	ug/L	U	8/5/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS03-GW1D-001	VCLOW	1,2-Dichloroethane		1	ug/L	U	8/5/97
SJS03-GW1D-001	VCLOW	1,2-Dichloropropane		1	ug/L	U	8/5/97
SJS03-GW1D-001	VCLOW	1,3-Dichlorobenzene		1	ug/L	U	8/5/97
SJS03-GW1D-001	VCLOW	1,4-Dichlorobenzene		1	ug/L	U	8/5/97
SJS03-GW1D-001	VCLOW	2-Hexanone		5	ug/L	U	8/5/97
SJS03-GW1D-001	VCLOW	4-Methyl-2-Pentanone		5	ug/L	U	8/5/97
SJS03-GW1D-001	VCLOW	Acetone		5	ug/L	U	8/5/97
SJS03-GW1D-001	VCLOW	Benzene		1	ug/L	U	8/5/97
SJS03-GW1D-001	VCLOW	Bromochloromethane		1	ug/L	U	8/5/97
SJS03-GW1D-001	VCLOW	Bromodichloromethane		1	ug/L	U	8/5/97
SJS03-GW1D-001	VCLOW	Bromoform		1	ug/L	U	8/5/97
SJS03-GW1D-001	VCLOW	Bromomethane		1	ug/L	U	8/5/97
SJS03-GW1D-001	VCLOW	Carbon Disulfide		1	ug/L	U	8/5/97
SJS03-GW1D-001	VCLOW	Carbon Tetrachloride		1	ug/L	U	8/5/97
SJS03-GW1D-001	VCLOW	Chlorobenzene		1	ug/L	U	8/5/97
SJS03-GW1D-001	VCLOW	Chloroethane		1	ug/L	U	8/5/97
SJS03-GW1D-001	VCLOW	Chloroform	0.4	1	ug/L	J	8/5/97
SJS03-GW1D-001	VCLOW	Chloromethane		1	ug/L	U	8/5/97
SJS03-GW1D-001	VCLOW	cis-1,2-Dichloroethene		1	ug/L	U	8/5/97
SJS03-GW1D-001	VCLOW	cis-1,3-Dichloropropene		1	ug/L	U	8/5/97
SJS03-GW1D-001	VCLOW	Dibromochloromethane		1	ug/L	U	8/5/97
SJS03-GW1D-001	VCLOW	Ethylbenzene		1	ug/L	U	8/5/97
SJS03-GW1D-001	VCLOW	Methylene Chloride	3	1	ug/L	B	8/5/97
SJS03-GW1D-001	VCLOW	Styrene		1	ug/L	U	8/5/97
SJS03-GW1D-001	VCLOW	Tetrachloroethene		1	ug/L	U	8/5/97
SJS03-GW1D-001	VCLOW	Toluene		1	ug/L	U	8/5/97
SJS03-GW1D-001	VCLOW	Total Xylenes		1	ug/L	U	8/5/97
SJS03-GW1D-001	VCLOW	Trans-1,2-Dichloroethene		1	ug/L	U	8/5/97
SJS03-GW1D-001	VCLOW	trans-1,3-Dichloropropene		1	ug/L	U	8/5/97
SJS03-GW1D-001	VCLOW	Trichloroethene		1	ug/L	U	8/5/97
SJS03-GW1D-001	VCLOW	Vinyl Chloride		1	ug/L	U	8/5/97
SJS03-GW1D-001F	METAL	Aluminum		44	ug/L	U	8/11/97
SJS03-GW1D-001F	METAL	Antimony		2	ug/L	UL	8/13/97
SJS03-GW1D-001F	METAL	Arsenic		3	ug/L	UL	8/8/97
SJS03-GW1D-001F	METAL	Barium	14.1	1	ug/L	B	8/11/97
SJS03-GW1D-001F	METAL	Beryllium		1	ug/L	U	8/11/97
SJS03-GW1D-001F	METAL	Cadmium		0.5	ug/L	UL	8/8/97
SJS03-GW1D-001F	METAL	Calcium	53800	46	ug/L	J	8/11/97
SJS03-GW1D-001F	METAL	Chromium		7	ug/L	U	8/11/97
SJS03-GW1D-001F	METAL	Cobalt		8	ug/L	U	8/11/97
SJS03-GW1D-001F	METAL	Copper		6	ug/L	U	8/11/97
SJS03-GW1D-001F	METAL	Iron	180	5	ug/L	B	8/11/97
SJS03-GW1D-001F	METAL	Lead		1	ug/L	U	8/8/97
SJS03-GW1D-001F	METAL	Magnesium	18700	45	ug/L	J	8/11/97
SJS03-GW1D-001F	METAL	Manganese	101	1	ug/L	J	8/11/97
SJS03-GW1D-001F	METAL	Mercury	0.15	0.1	ug/L	B	8/7/97
SJS03-GW1D-001F	METAL	Nickel		7	ug/L	U	8/11/97
SJS03-GW1D-001F	METAL	Potassium	12600	97	ug/L		8/11/97
SJS03-GW1D-001F	METAL	Silver		1	ug/L	U	8/8/97
SJS03-GW1D-001F	METAL	Sodium	44100	28	ug/L	J	8/11/97
SJS03-GW1D-001F	METAL	Thallium	2.1	2	ug/L	J	8/8/97
SJS03-GW1D-001F	METAL	Vanadium		9	ug/L	U	8/11/97
SJS03-GW1D-001F	METAL	Zinc		5	ug/L	U	8/11/97
SJS03-GW1S-001	CTOTP	Total Phosphorous (as P)	0.134	0.05	mg/L	J	7/31/97
SJS03-GW1S-001	MCYAN	Aluminum	4100	29	ug/L	K	8/1/97
SJS03-GW1S-001	MCYAN	Antimony	2.2	1	ug/L	B	8/1/97
SJS03-GW1S-001	MCYAN	Arsenic	4.4	3	ug/L	J	8/1/97
SJS03-GW1S-001	MCYAN	Barium	176	1	ug/L	J	8/1/97
SJS03-GW1S-001	MCYAN	Beryllium	1.4	1	ug/L	J	8/1/97
SJS03-GW1S-001	MCYAN	Cadmium		0.5	ug/L	U	8/1/97
SJS03-GW1S-001	MCYAN	Calcium	100000	46	ug/L		8/1/97
SJS03-GW1S-001	MCYAN	Chromium	16.1	4	ug/L	B	8/1/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS03-GW1S-001	MCYAN	Cobalt	8.5	3	ug/L	J	8/1/97
SJS03-GW1S-001	MCYAN	Copper	7.4	2	ug/L	B	8/1/97
SJS03-GW1S-001	MCYAN	Cyanide		5	ug/L	U	7/22/97
SJS03-GW1S-001	MCYAN	Iron	31900	5	ug/L		8/1/97
SJS03-GW1S-001	MCYAN	Lead	2.4	1	ug/L	B	8/1/97
SJS03-GW1S-001	MCYAN	Magnesium	115000	45	ug/L		8/1/97
SJS03-GW1S-001	MCYAN	Manganese	2000	1	ug/L		8/1/97
SJS03-GW1S-001	MCYAN	Mercury	0.69	0.1	ug/L	B	8/7/97
SJS03-GW1S-001	MCYAN	Nickel		7	ug/L	U	8/1/97
SJS03-GW1S-001	MCYAN	Potassium	37300	97	ug/L		8/1/97
SJS03-GW1S-001	MCYAN	Selenium		3	ug/L	U	8/1/97
SJS03-GW1S-001	MCYAN	Silver	1.9	3	ug/L	J	8/1/97
SJS03-GW1S-001	MCYAN	Sodium	810000	28	ug/L		8/4/97
SJS03-GW1S-001	MCYAN	Thallium	4.6	2	ug/L	B	8/1/97
SJS03-GW1S-001	MCYAN	Vanadium	13.7	4	ug/L	J	8/1/97
SJS03-GW1S-001	MCYAN	Zinc	35.3	3	ug/L	B	8/1/97
SJS03-GW1S-001	PSPCB	4,4'-DDD		0.1	ug/L	U	8/9/97
SJS03-GW1S-001	PSPCB	4,4'-DDE		0.1	ug/L	U	8/9/97
SJS03-GW1S-001	PSPCB	4,4'-DDT		0.1	ug/L	U	8/9/97
SJS03-GW1S-001	PSPCB	Aldrin		0.05	ug/L	U	8/9/97
SJS03-GW1S-001	PSPCB	alpha-BHC		0.05	ug/L	U	8/9/97
SJS03-GW1S-001	PSPCB	alpha-Chlordane		0.05	ug/L	U	8/9/97
SJS03-GW1S-001	PSPCB	Aroclor-1016		1	ug/L	U	8/9/97
SJS03-GW1S-001	PSPCB	Aroclor-1221		2	ug/L	U	8/9/97
SJS03-GW1S-001	PSPCB	Aroclor-1232		1	ug/L	U	8/9/97
SJS03-GW1S-001	PSPCB	Aroclor-1242		1	ug/L	U	8/9/97
SJS03-GW1S-001	PSPCB	Aroclor-1248		1	ug/L	U	8/9/97
SJS03-GW1S-001	PSPCB	Aroclor-1254		1	ug/L	U	8/9/97
SJS03-GW1S-001	PSPCB	Aroclor-1260		1	ug/L	U	8/9/97
SJS03-GW1S-001	PSPCB	beta-BHC		0.05	ug/L	U	8/9/97
SJS03-GW1S-001	PSPCB	delta-BHC		0.05	ug/L	U	8/9/97
SJS03-GW1S-001	PSPCB	Dieldrin		0.1	ug/L	U	8/9/97
SJS03-GW1S-001	PSPCB	Endosulfan I		0.05	ug/L	U	8/9/97
SJS03-GW1S-001	PSPCB	Endosulfan II		0.1	ug/L	U	8/9/97
SJS03-GW1S-001	PSPCB	Endosulfan Sulfate		0.1	ug/L	U	8/9/97
SJS03-GW1S-001	PSPCB	Endrin		0.1	ug/L	U	8/9/97
SJS03-GW1S-001	PSPCB	Endrin Aldehyde		0.1	ug/L	U	8/9/97
SJS03-GW1S-001	PSPCB	Endrin Ketone		0.1	ug/L	U	8/9/97
SJS03-GW1S-001	PSPCB	gamma-BHC		0.05	ug/L	U	8/9/97
SJS03-GW1S-001	PSPCB	gamma-Chlordane		0.05	ug/L	U	8/9/97
SJS03-GW1S-001	PSPCB	Heptachlor		0.05	ug/L	U	8/9/97
SJS03-GW1S-001	PSPCB	Heptachlor Epoxide		0.05	ug/L	U	8/9/97
SJS03-GW1S-001	PSPCB	Methoxychlor		0.5	ug/L	U	8/9/97
SJS03-GW1S-001	PSPCB	Toxaphene		5	ug/L	U	8/9/97
SJS03-GW1S-001	SVTCL	1,2,4-Trichlorobenzene		10	ug/L	U	7/30/97
SJS03-GW1S-001	SVTCL	1,2-Dichlorobenzene		10	ug/L	U	7/30/97
SJS03-GW1S-001	SVTCL	1,3-Dichlorobenzene		10	ug/L	U	7/30/97
SJS03-GW1S-001	SVTCL	1,4-Dichlorobenzene		10	ug/L	U	7/30/97
SJS03-GW1S-001	SVTCL	2,2'-oxybis(1-Chloropropane		10	ug/L	U	7/30/97
SJS03-GW1S-001	SVTCL	2,4,5-Trichlorophenol		25	ug/L	U	7/30/97
SJS03-GW1S-001	SVTCL	2,4,6-Trichlorophenol		10	ug/L	U	7/30/97
SJS03-GW1S-001	SVTCL	2,4-Dichlorophenol		10	ug/L	U	7/30/97
SJS03-GW1S-001	SVTCL	2,4-Dimethylphenol		10	ug/L	U	7/30/97
SJS03-GW1S-001	SVTCL	2,4-Dinitrophenol		25	ug/L	U	7/30/97
SJS03-GW1S-001	SVTCL	2,4-Dinitrotoluene		10	ug/L	U	7/30/97
SJS03-GW1S-001	SVTCL	2,6-Dinitrotoluene		10	ug/L	U	7/30/97
SJS03-GW1S-001	SVTCL	2-Chloronaphthalene		10	ug/L	U	7/30/97
SJS03-GW1S-001	SVTCL	2-Chlorophenol		10	ug/L	U	7/30/97
SJS03-GW1S-001	SVTCL	2-Methylnaphthalene	1	10	ug/L	J	7/30/97
SJS03-GW1S-001	SVTCL	2-Methylphenol		10	ug/L	U	7/30/97
SJS03-GW1S-001	SVTCL	2-Nitroaniline		25	ug/L	U	7/30/97
SJS03-GW1S-001	SVTCL	2-Nitrophenol		10	ug/L	U	7/30/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS03-GW1D-002	CTOTP	Total Phosphorous (as P)	0.56	0.13	mg/L		11/17/97
SJS03-GW1D-002	MCYAN	Aluminum	48.4	29	ug/L	B	11/26/97
SJS03-GW1D-002	MCYAN	Antimony		1.7	ug/L	U	11/18/97
SJS03-GW1D-002	MCYAN	Arsenic		3.2	ug/L	U	11/18/97
SJS03-GW1D-002	MCYAN	Barium	21.7	1	ug/L	J	11/26/97
SJS03-GW1D-002	MCYAN	Beryllium		0.58	ug/L	U	11/26/97
SJS03-GW1D-002	MCYAN	Cadmium		0.4	ug/L	U	11/18/97
SJS03-GW1D-002	MCYAN	Calcium	49500	46	ug/L		11/26/97
SJS03-GW1D-002	MCYAN	Chromium		4.6	ug/L	U	11/26/97
SJS03-GW1D-002	MCYAN	Cobalt		6	ug/L	U	11/26/97
SJS03-GW1D-002	MCYAN	Copper		5.8	ug/L	U	11/26/97
SJS03-GW1D-002	MCYAN	Cyanide		5	ug/L	U	11/12/97
SJS03-GW1D-002	MCYAN	Iron	170	5	ug/L	B	11/26/97
SJS03-GW1D-002	MCYAN	Lead	1.8	1	ug/L	J	11/18/97
SJS03-GW1D-002	MCYAN	Magnesium	12700	45	ug/L		11/26/97
SJS03-GW1D-002	MCYAN	Manganese	45.6	1	ug/L		11/26/97
SJS03-GW1D-002	MCYAN	Mercury		0.13	ug/L	U	11/19/97
SJS03-GW1D-002	MCYAN	Nickel		6.3	ug/L	U	11/26/97
SJS03-GW1D-002	MCYAN	Potassium	15400	97	ug/L		11/26/97
SJS03-GW1D-002	MCYAN	Selenium		3.3	ug/L	U	11/18/97
SJS03-GW1D-002	MCYAN	Silver		1.1	ug/L	U	11/18/97
SJS03-GW1D-002	MCYAN	Sodium	43300	28	ug/L		11/26/97
SJS03-GW1D-002	MCYAN	Thallium	2.5	2	ug/L	B	11/19/97
SJS03-GW1D-002	MCYAN	Vanadium		6.8	ug/L	U	11/26/97
SJS03-GW1D-002	MCYAN	Zinc	10.9	3	ug/L	B	11/26/97
SJS03-GW1D-002	PSPCB	4,4'-DDD		0.1	ug/L	U	11/20/97
SJS03-GW1D-002	PSPCB	4,4'-DDE		0.1	ug/L	U	11/20/97
SJS03-GW1D-002	PSPCB	4,4'-DDT		0.1	ug/L	U	11/20/97
SJS03-GW1D-002	PSPCB	Aldrin		0.05	ug/L	U	11/20/97
SJS03-GW1D-002	PSPCB	alpha-BHC		0.05	ug/L	U	11/20/97
SJS03-GW1D-002	PSPCB	alpha-Chlordane		0.05	ug/L	U	11/20/97
SJS03-GW1D-002	PSPCB	Aroclor-1016		1	ug/L	U	11/20/97
SJS03-GW1D-002	PSPCB	Aroclor-1221		2	ug/L	U	11/20/97
SJS03-GW1D-002	PSPCB	Aroclor-1232		1	ug/L	U	11/20/97
SJS03-GW1D-002	PSPCB	Aroclor-1242		1	ug/L	U	11/20/97
SJS03-GW1D-002	PSPCB	Aroclor-1248		1	ug/L	U	11/20/97
SJS03-GW1D-002	PSPCB	Aroclor-1254		1	ug/L	U	11/20/97
SJS03-GW1D-002	PSPCB	Aroclor-1260		1	ug/L	U	11/20/97
SJS03-GW1D-002	PSPCB	beta-BHC		0.05	ug/L	U	11/20/97
SJS03-GW1D-002	PSPCB	delta-BHC		0.05	ug/L	U	11/20/97
SJS03-GW1D-002	PSPCB	Dieldrin		0.1	ug/L	U	11/20/97
SJS03-GW1D-002	PSPCB	Endosulfan I		0.05	ug/L	U	11/20/97
SJS03-GW1D-002	PSPCB	Endosulfan II		0.1	ug/L	U	11/20/97
SJS03-GW1D-002	PSPCB	Endosulfan Sulfate		0.1	ug/L	U	11/20/97
SJS03-GW1D-002	PSPCB	Endrin		0.1	ug/L	U	11/20/97
SJS03-GW1D-002	PSPCB	Endrin Aldehyde		0.1	ug/L	U	11/20/97
SJS03-GW1D-002	PSPCB	Endrin Ketone		0.1	ug/L	U	11/20/97
SJS03-GW1D-002	PSPCB	gamma-BHC		0.05	ug/L	U	11/20/97
SJS03-GW1D-002	PSPCB	gamma-Chlordane		0.05	ug/L	U	11/20/97
SJS03-GW1D-002	PSPCB	Heptachlor		0.05	ug/L	U	11/20/97
SJS03-GW1D-002	PSPCB	Heptachlor Epoxide		0.05	ug/L	U	11/20/97
SJS03-GW1D-002	PSPCB	Methoxychlor		0.5	ug/L	U	11/20/97
SJS03-GW1D-002	PSPCB	Toxaphene		5	ug/L	U	11/20/97
SJS03-GW1D-002	SVTCL	1,2,4-Trichlorobenzene		10	ug/L	U	11/19/97
SJS03-GW1D-002	SVTCL	1,2-Dichlorobenzene		10	ug/L	U	11/19/97
SJS03-GW1D-002	SVTCL	1,3-Dichlorobenzene		10	ug/L	U	11/19/97
SJS03-GW1D-002	SVTCL	1,4-Dichlorobenzene		10	ug/L	U	11/19/97
SJS03-GW1D-002	SVTCL	2,2'-oxybis(1-Chloropropan		10	ug/L	U	11/19/97
SJS03-GW1D-002	SVTCL	2,4,5-Trichlorophenol		25	ug/L	U	11/19/97
SJS03-GW1D-002	SVTCL	2,4,6-Trichlorophenol		10	ug/L	U	11/19/97
SJS03-GW1D-002	SVTCL	2,4-Dichlorophenol		10	ug/L	U	11/19/97
SJS03-GW1D-002	SVTCL	2,4-Dimethylphenol		10	ug/L	U	11/19/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS03-GW1D-002	SVTCL	2,4-Dinitrophenol		25	ug/L	U	11/19/97
SJS03-GW1D-002	SVTCL	2,4-Dinitrotoluene		10	ug/L	U	11/19/97
SJS03-GW1D-002	SVTCL	2,6-Dinitrotoluene		10	ug/L	U	11/19/97
SJS03-GW1D-002	SVTCL	2-Chloronaphthalene		10	ug/L	U	11/19/97
SJS03-GW1D-002	SVTCL	2-Chlorophenol		10	ug/L	U	11/19/97
SJS03-GW1D-002	SVTCL	2-Methylnaphthalene		10	ug/L	U	11/19/97
SJS03-GW1D-002	SVTCL	2-Methylphenol		10	ug/L	U	11/19/97
SJS03-GW1D-002	SVTCL	2-Nitroaniline		25	ug/L	U	11/19/97
SJS03-GW1D-002	SVTCL	2-Nitrophenol		10	ug/L	U	11/19/97
SJS03-GW1D-002	SVTCL	3,3'-Dichlorobenzidine		10	ug/L	U	11/19/97
SJS03-GW1D-002	SVTCL	3-Nitroaniline		25	ug/L	U	11/19/97
SJS03-GW1D-002	SVTCL	4,6-Dinitro-2-Methylphenol		25	ug/L	U	11/19/97
SJS03-GW1D-002	SVTCL	4-Bromophenol-phenyleth		10	ug/L	U	11/19/97
SJS03-GW1D-002	SVTCL	4-Chloro-3-Methylphenol		10	ug/L	U	11/19/97
SJS03-GW1D-002	SVTCL	4-Chloroaniline		10	ug/L	U	11/19/97
SJS03-GW1D-002	SVTCL	4-Chlorophenyl-phenyleth		10	ug/L	U	11/19/97
SJS03-GW1D-002	SVTCL	4-Methylphenol		10	ug/L	U	11/19/97
SJS03-GW1D-002	SVTCL	4-Nitroaniline		25	ug/L	U	11/19/97
SJS03-GW1D-002	SVTCL	4-Nitrophenol		25	ug/L	U	11/19/97
SJS03-GW1D-002	SVTCL	Acenaphthene		10	ug/L	U	11/19/97
SJS03-GW1D-002	SVTCL	Acenaphthylene		10	ug/L	U	11/19/97
SJS03-GW1D-002	SVTCL	Anthracene		10	ug/L	U	11/19/97
SJS03-GW1D-002	SVTCL	Benzo(a)anthracene		10	ug/L	U	11/19/97
SJS03-GW1D-002	SVTCL	Benzo(a)pyrene		10	ug/L	U	11/19/97
SJS03-GW1D-002	SVTCL	Benzo(b)fluoranthene		10	ug/L	U	11/19/97
SJS03-GW1D-002	SVTCL	Benzo(g,h,i)perylene		10	ug/L	U	11/19/97
SJS03-GW1D-002	SVTCL	Benzo(k)fluoranthene		10	ug/L	U	11/19/97
SJS03-GW1D-002	SVTCL	bis(2-Chloroethoxy)metha		10	ug/L	U	11/19/97
SJS03-GW1D-002	SVTCL	bis(2-chloroethyl)ether		10	ug/L	U	11/19/97
SJS03-GW1D-002	SVTCL	bis(2-Ethylhexyl)phthalate	3	10	ug/L	J	11/19/97
SJS03-GW1D-002	SVTCL	Butylbenzylphthalate		10	ug/L	U	11/19/97
SJS03-GW1D-002	SVTCL	Carbazole		10	ug/L	U	11/19/97
SJS03-GW1D-002	SVTCL	Chrysene		10	ug/L	U	11/19/97
SJS03-GW1D-002	SVTCL	Di-n-butylphthalate		10	ug/L	U	11/19/97
SJS03-GW1D-002	SVTCL	Di-n-Octyl Phthalate		10	ug/L	U	11/19/97
SJS03-GW1D-002	SVTCL	Dibenzo(a,h)anthracene		10	ug/L	U	11/19/97
SJS03-GW1D-002	SVTCL	Dibenzofuran		10	ug/L	U	11/19/97
SJS03-GW1D-002	SVTCL	Diethylphthalate		10	ug/L	U	11/19/97
SJS03-GW1D-002	SVTCL	Dimethyl Phthalate		10	ug/L	U	11/19/97
SJS03-GW1D-002	SVTCL	Fluoranthene		10	ug/L	U	11/19/97
SJS03-GW1D-002	SVTCL	Fluorene		10	ug/L	U	11/19/97
SJS03-GW1D-002	SVTCL	Hexachlorobenzene		10	ug/L	U	11/19/97
SJS03-GW1D-002	SVTCL	Hexachlorobutadiene		10	ug/L	U	11/19/97
SJS03-GW1D-002	SVTCL	Hexachlorocyclopentadie		10	ug/L	U	11/19/97
SJS03-GW1D-002	SVTCL	Hexachloroethane		10	ug/L	U	11/19/97
SJS03-GW1D-002	SVTCL	Indeno(1,2,3-cd)pyrene		10	ug/L	U	11/19/97
SJS03-GW1D-002	SVTCL	Isophorone		10	ug/L	U	11/19/97
SJS03-GW1D-002	SVTCL	N-Nitroso-Di-n-Propylamine		10	ug/L	U	11/19/97
SJS03-GW1D-002	SVTCL	N-Nitrosodiphenylamine		10	ug/L	U	11/19/97
SJS03-GW1D-002	SVTCL	Naphthalene		10	ug/L	U	11/19/97
SJS03-GW1D-002	SVTCL	Nitrobenzene		10	ug/L	U	11/19/97
SJS03-GW1D-002	SVTCL	Pentachlorophenol		25	ug/L	U	11/19/97
SJS03-GW1D-002	SVTCL	Phenanthrene		10	ug/L	U	11/19/97
SJS03-GW1D-002	SVTCL	Phenol		10	ug/L	U	11/19/97
SJS03-GW1D-002	SVTCL	Pyrene		10	ug/L	U	11/19/97
SJS03-GW1D-002	VCLOW	1,1,1-Trichloroethane		1	ug/L	U	11/11/97
SJS03-GW1D-002	VCLOW	1,1,2,2-Tetrachloroethane		1	ug/L	U	11/11/97
SJS03-GW1D-002	VCLOW	1,1,2-Trichloroethane		1	ug/L	U	11/11/97
SJS03-GW1D-002	VCLOW	1,1-Dichloroethane		1	ug/L	U	11/11/97
SJS03-GW1D-002	VCLOW	1,1-Dichloroethene		1	ug/L	U	11/11/97
SJS03-GW1D-002	VCLOW	1,2,4-Trichlorobenzene		1	ug/L	U	11/11/97
SJS03-GW1D-002	VCLOW	1,2-Dibromo-3-chloropropa		1	ug/L	U	11/11/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS03-GW1D-002	VCLOW	1,2-Dibromoethane		1	ug/L	U	11/11/97
SJS03-GW1D-002	VCLOW	1,2-Dichlorobenzene		1	ug/L	U	11/11/97
SJS03-GW1D-002	VCLOW	1,2-Dichloroethane		1	ug/L	U	11/11/97
SJS03-GW1D-002	VCLOW	1,2-Dichloropropane		1	ug/L	U	11/11/97
SJS03-GW1D-002	VCLOW	1,3-Dichlorobenzene		1	ug/L	U	11/11/97
SJS03-GW1D-002	VCLOW	1,4-Dichlorobenzene		1	ug/L	U	11/11/97
SJS03-GW1D-002	VCLOW	2-Hexanone		5	ug/L	U	11/11/97
SJS03-GW1D-002	VCLOW	4-Methyl-2-Pentanone		5	ug/L	U	11/11/97
SJS03-GW1D-002	VCLOW	Acetone	20	5	ug/L	B	11/11/97
SJS03-GW1D-002	VCLOW	Benzene		1	ug/L	U	11/11/97
SJS03-GW1D-002	VCLOW	Bromochloromethane		1	ug/L	U	11/11/97
SJS03-GW1D-002	VCLOW	Bromodichloromethane		1	ug/L	U	11/11/97
SJS03-GW1D-002	VCLOW	Bromoform		1	ug/L	U	11/11/97
SJS03-GW1D-002	VCLOW	Bromomethane		1	ug/L	U	11/11/97
SJS03-GW1D-002	VCLOW	Carbon Disulfide	0.3	1	ug/L	J	11/11/97
SJS03-GW1D-002	VCLOW	Carbon Tetrachloride		1	ug/L	U	11/11/97
SJS03-GW1D-002	VCLOW	Chlorobenzene		1	ug/L	U	11/11/97
SJS03-GW1D-002	VCLOW	Chloroethane		1	ug/L	U	11/11/97
SJS03-GW1D-002	VCLOW	Chloroform		1	ug/L	U	11/11/97
SJS03-GW1D-002	VCLOW	Chloromethane		1	ug/L	U	11/11/97
SJS03-GW1D-002	VCLOW	cis-1,2-Dichloroethene		1	ug/L	U	11/11/97
SJS03-GW1D-002	VCLOW	cis-1,3-Dichloropropene		1	ug/L	U	11/11/97
SJS03-GW1D-002	VCLOW	Dibromochloromethane		1	ug/L	U	11/11/97
SJS03-GW1D-002	VCLOW	Ethylbenzene		1	ug/L	U	11/11/97
SJS03-GW1D-002	VCLOW	Methylene Chloride	3	2	ug/L	B	11/11/97
SJS03-GW1D-002	VCLOW	Styrene		1	ug/L	U	11/11/97
SJS03-GW1D-002	VCLOW	Tetrachloroethene		1	ug/L	U	11/11/97
SJS03-GW1D-002	VCLOW	Toluene		1	ug/L	U	11/11/97
SJS03-GW1D-002	VCLOW	Total Xylenes		1	ug/L	U	11/11/97
SJS03-GW1D-002	VCLOW	Trans-1,2-Dichloroethene		1	ug/L	U	11/11/97
SJS03-GW1D-002	VCLOW	trans-1,3-Dichloropropene		1	ug/L	U	11/11/97
SJS03-GW1D-002	VCLOW	Trichloroethene		1	ug/L	U	11/11/97
SJS03-GW1D-002	VCLOW	Vinyl Chloride		1	ug/L	U	11/11/97
SJS03-GW1D-002F	METAL	Aluminum	42.3	29	ug/L	B	11/26/97
SJS03-GW1D-002F	METAL	Antimony		1.7	ug/L	U	11/18/97
SJS03-GW1D-002F	METAL	Arsenic		3.2	ug/L	U	11/18/97
SJS03-GW1D-002F	METAL	Barium	20.8	1	ug/L	J	11/26/97
SJS03-GW1D-002F	METAL	Beryllium		0.58	ug/L	U	11/26/97
SJS03-GW1D-002F	METAL	Cadmium		0.4	ug/L	U	11/18/97
SJS03-GW1D-002F	METAL	Calcium	51100	46	ug/L		11/26/97
SJS03-GW1D-002F	METAL	Chromium		4.6	ug/L	U	11/26/97
SJS03-GW1D-002F	METAL	Cobalt		6	ug/L	U	11/26/97
SJS03-GW1D-002F	METAL	Copper		5.8	ug/L	U	11/26/97
SJS03-GW1D-002F	METAL	Iron	130	5	ug/L	B	11/26/97
SJS03-GW1D-002F	METAL	Lead		1.3	ug/L	U	11/18/97
SJS03-GW1D-002F	METAL	Magnesium	13200	45	ug/L		11/26/97
SJS03-GW1D-002F	METAL	Manganese	46.4	1	ug/L		11/26/97
SJS03-GW1D-002F	METAL	Mercury		0.12	ug/L	U	11/19/97
SJS03-GW1D-002F	METAL	Nickel		6.3	ug/L	U	11/26/97
SJS03-GW1D-002F	METAL	Potassium	15100	97	ug/L		11/26/97
SJS03-GW1D-002F	METAL	Selenium		3.3	ug/L	U	11/18/97
SJS03-GW1D-002F	METAL	Silver		1.1	ug/L	U	11/18/97
SJS03-GW1D-002F	METAL	Sodium	44800	28	ug/L		11/26/97
SJS03-GW1D-002F	METAL	Thallium		1.5	ug/L	U	11/19/97
SJS03-GW1D-002F	METAL	Vanadium		6.8	ug/L	U	11/26/97
SJS03-GW1D-002F	METAL	Zinc	5.7	3	ug/L	B	11/26/97
SJS03-GW1S-002	CTOTP	Total Phosphorous (as P)	0.56	0.13	mg/L		11/17/97
SJS03-GW1S-002	MCYAN	Aluminum	1710	29	ug/L		11/26/97
SJS03-GW1S-002	MCYAN	Antimony	2.3	1	ug/L	J	11/18/97
SJS03-GW1S-002	MCYAN	Arsenic		3.2	ug/L	U	11/18/97
SJS03-GW1S-002	MCYAN	Barium	31.1	1	ug/L	J	11/26/97
SJS03-GW1S-002	MCYAN	Beryllium	0.76	1	ug/L	J	11/26/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS03-GW1S-002	MCYAN	Cadmium		0.4	ug/L	U	11/18/97
SJS03-GW1S-002	MCYAN	Calcium	92000	46	ug/L		11/26/97
SJS03-GW1S-002	MCYAN	Chromium	12	4	ug/L	B	11/26/97
SJS03-GW1S-002	MCYAN	Cobalt	8.8	3	ug/L	J	11/26/97
SJS03-GW1S-002	MCYAN	Copper	6.3	2	ug/L	J	11/26/97
SJS03-GW1S-002	MCYAN	Cyanide		5	ug/L	U	11/12/97
SJS03-GW1S-002	MCYAN	Iron	26200	5	ug/L		11/26/97
SJS03-GW1S-002	MCYAN	Lead	3.5	1	ug/L		11/18/97
SJS03-GW1S-002	MCYAN	Magnesium	34800	45	ug/L		11/26/97
SJS03-GW1S-002	MCYAN	Manganese	1720	1	ug/L		11/26/97
SJS03-GW1S-002	MCYAN	Mercury		0.12	ug/L	U	11/19/97
SJS03-GW1S-002	MCYAN	Nickel	14.5	4	ug/L	J	11/26/97
SJS03-GW1S-002	MCYAN	Potassium	26600	97	ug/L		11/26/97
SJS03-GW1S-002	MCYAN	Selenium		3.3	ug/L	U	11/18/97
SJS03-GW1S-002	MCYAN	Silver		1.1	ug/L	U	11/18/97
SJS03-GW1S-002	MCYAN	Sodium	122000	28	ug/L		11/26/97
SJS03-GW1S-002	MCYAN	Thallium	3.1	2	ug/L	B	11/19/97
SJS03-GW1S-002	MCYAN	Vanadium	12.2	4	ug/L	J	11/26/97
SJS03-GW1S-002	MCYAN	Zinc	55.2	3	ug/L	B	11/26/97
SJS03-GW1S-002	PSPCB	4,4'-DDD		0.1	ug/L	U	11/20/97
SJS03-GW1S-002	PSPCB	4,4'-DDE		0.1	ug/L	U	11/20/97
SJS03-GW1S-002	PSPCB	4,4'-DDT		0.1	ug/L	U	11/20/97
SJS03-GW1S-002	PSPCB	Aldrin		0.05	ug/L	U	11/20/97
SJS03-GW1S-002	PSPCB	alpha-BHC		0.05	ug/L	U	11/20/97
SJS03-GW1S-002	PSPCB	alpha-Chlordane		0.05	ug/L	U	11/20/97
SJS03-GW1S-002	PSPCB	Aroclor-1016		1	ug/L	U	11/20/97
SJS03-GW1S-002	PSPCB	Aroclor-1221		2	ug/L	U	11/20/97
SJS03-GW1S-002	PSPCB	Aroclor-1232		1	ug/L	U	11/20/97
SJS03-GW1S-002	PSPCB	Aroclor-1242		1	ug/L	U	11/20/97
SJS03-GW1S-002	PSPCB	Aroclor-1248		1	ug/L	U	11/20/97
SJS03-GW1S-002	PSPCB	Aroclor-1254		1	ug/L	U	11/20/97
SJS03-GW1S-002	PSPCB	Aroclor-1260		1	ug/L	U	11/20/97
SJS03-GW1S-002	PSPCB	beta-BHC		0.05	ug/L	U	11/20/97
SJS03-GW1S-002	PSPCB	delta-BHC		0.05	ug/L	U	11/20/97
SJS03-GW1S-002	PSPCB	Dieldrin		0.1	ug/L	U	11/20/97
SJS03-GW1S-002	PSPCB	Endosulfan I		0.05	ug/L	U	11/20/97
SJS03-GW1S-002	PSPCB	Endosulfan II		0.1	ug/L	U	11/20/97
SJS03-GW1S-002	PSPCB	Endosulfan Sulfate		0.1	ug/L	U	11/20/97
SJS03-GW1S-002	PSPCB	Endrin		0.1	ug/L	U	11/20/97
SJS03-GW1S-002	PSPCB	Endrin Aldehyde		0.1	ug/L	U	11/20/97
SJS03-GW1S-002	PSPCB	Endrin Ketone		0.1	ug/L	U	11/20/97
SJS03-GW1S-002	PSPCB	gamma-BHC		0.05	ug/L	U	11/20/97
SJS03-GW1S-002	PSPCB	gamma-Chlordane		0.05	ug/L	U	11/20/97
SJS03-GW1S-002	PSPCB	Heptachlor		0.05	ug/L	U	11/20/97
SJS03-GW1S-002	PSPCB	Heptachlor Epoxide		0.05	ug/L	U	11/20/97
SJS03-GW1S-002	PSPCB	Methoxychlor		0.5	ug/L	U	11/20/97
SJS03-GW1S-002	PSPCB	Toxaphene		5	ug/L	U	11/20/97
SJS03-GW1S-002	SVTCL	1,2,4-Trichlorobenzene		10	ug/L	U	11/19/97
SJS03-GW1S-002	SVTCL	1,2-Dichlorobenzene		10	ug/L	U	11/19/97
SJS03-GW1S-002	SVTCL	1,3-Dichlorobenzene		10	ug/L	U	11/19/97
SJS03-GW1S-002	SVTCL	1,4-Dichlorobenzene		10	ug/L	U	11/19/97
SJS03-GW1S-002	SVTCL	2,2'-oxybis(1-Chloropropan		10	ug/L	U	11/19/97
SJS03-GW1S-002	SVTCL	2,4,5-Trichlorophenol		25	ug/L	U	11/19/97
SJS03-GW1S-002	SVTCL	2,4,6-Trichlorophenol		10	ug/L	U	11/19/97
SJS03-GW1S-002	SVTCL	2,4-Dichlorophenol		10	ug/L	U	11/19/97
SJS03-GW1S-002	SVTCL	2,4-Dimethylphenol		10	ug/L	U	11/19/97
SJS03-GW1S-002	SVTCL	2,4-Dinitrophenol		25	ug/L	U	11/19/97
SJS03-GW1S-002	SVTCL	2,4-Dinitrotoluene		10	ug/L	U	11/19/97
SJS03-GW1S-002	SVTCL	2,6-Dinitrotoluene		10	ug/L	U	11/19/97
SJS03-GW1S-002	SVTCL	2-Chloronaphthalene		10	ug/L	U	11/19/97
SJS03-GW1S-002	SVTCL	2-Chlorophenol		10	ug/L	U	11/19/97
SJS03-GW1S-002	SVTCL	2-Methylnaphthalene		10	ug/L	U	11/19/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS03-GW1S-002	SVTCL	2-Methylphenol		10	ug/L	U	11/19/97
SJS03-GW1S-002	SVTCL	2-Nitroaniline		25	ug/L	U	11/19/97
SJS03-GW1S-002	SVTCL	2-Nitrophenol		10	ug/L	U	11/19/97
SJS03-GW1S-002	SVTCL	3,3'-Dichlorobenzidine		10	ug/L	U	11/19/97
SJS03-GW1S-002	SVTCL	3-Nitroaniline		25	ug/L	U	11/19/97
SJS03-GW1S-002	SVTCL	4,6-Dinitro-2-Methylphenol		25	ug/L	U	11/19/97
SJS03-GW1S-002	SVTCL	4-Bromophenol-phenyleth		10	ug/L	U	11/19/97
SJS03-GW1S-002	SVTCL	4-Chloro-3-Methylphenol		10	ug/L	U	11/19/97
SJS03-GW1S-002	SVTCL	4-Chloroaniline		10	ug/L	U	11/19/97
SJS03-GW1S-002	SVTCL	4-Chlorophenyl-phenyleth		10	ug/L	U	11/19/97
SJS03-GW1S-002	SVTCL	4-Methylphenol		10	ug/L	U	11/19/97
SJS03-GW1S-002	SVTCL	4-Nitroaniline		25	ug/L	U	11/19/97
SJS03-GW1S-002	SVTCL	4-Nitrophenol		25	ug/L	U	11/19/97
SJS03-GW1S-002	SVTCL	Acenaphthene	4	10	ug/L	J	11/19/97
SJS03-GW1S-002	SVTCL	Acenaphthylene		10	ug/L	U	11/19/97
SJS03-GW1S-002	SVTCL	Anthracene		10	ug/L	U	11/19/97
SJS03-GW1S-002	SVTCL	Benzo(a)anthracene		10	ug/L	U	11/19/97
SJS03-GW1S-002	SVTCL	Benzo(a)pyrene		10	ug/L	U	11/19/97
SJS03-GW1S-002	SVTCL	Benzo(b)fluoranthene		10	ug/L	U	11/19/97
SJS03-GW1S-002	SVTCL	Benzo(g,h,i)perylene		10	ug/L	U	11/19/97
SJS03-GW1S-002	SVTCL	Benzo(k)fluoranthene		10	ug/L	U	11/19/97
SJS03-GW1S-002	SVTCL	bis(2-Chloroethoxy)metha		10	ug/L	U	11/19/97
SJS03-GW1S-002	SVTCL	bis(2-chloroethyl)ether		10	ug/L	U	11/19/97
SJS03-GW1S-002	SVTCL	bis(2-Ethylhexyl)phthalate		10	ug/L	U	11/19/97
SJS03-GW1S-002	SVTCL	Butylbenzylphthalate		10	ug/L	U	11/19/97
SJS03-GW1S-002	SVTCL	Carbazole		10	ug/L	U	11/19/97
SJS03-GW1S-002	SVTCL	Chrysene		10	ug/L	U	11/19/97
SJS03-GW1S-002	SVTCL	Di-n-butylphthalate		10	ug/L	U	11/19/97
SJS03-GW1S-002	SVTCL	Di-n-Octyl Phthalate		10	ug/L	U	11/19/97
SJS03-GW1S-002	SVTCL	Dibenzo(a,h)anthracene		10	ug/L	U	11/19/97
SJS03-GW1S-002	SVTCL	Dibenzofuran	1	10	ug/L	J	11/19/97
SJS03-GW1S-002	SVTCL	Diethylphthalate		10	ug/L	U	11/19/97
SJS03-GW1S-002	SVTCL	Dimethyl Phthalate		10	ug/L	U	11/19/97
SJS03-GW1S-002	SVTCL	Fluoranthene	1	10	ug/L	J	11/19/97
SJS03-GW1S-002	SVTCL	Fluorene		10	ug/L	U	11/19/97
SJS03-GW1S-002	SVTCL	Hexachlorobenzene		10	ug/L	U	11/19/97
SJS03-GW1S-002	SVTCL	Hexachlorobutadiene		10	ug/L	U	11/19/97
SJS03-GW1S-002	SVTCL	Hexachlorocyclopentadie		10	ug/L	U	11/19/97
SJS03-GW1S-002	SVTCL	Hexachloroethane		10	ug/L	U	11/19/97
SJS03-GW1S-002	SVTCL	Indeno(1,2,3-cd)pyrene		10	ug/L	U	11/19/97
SJS03-GW1S-002	SVTCL	Isophorone		10	ug/L	U	11/19/97
SJS03-GW1S-002	SVTCL	N-Nitroso-Di-n-Propylamine		10	ug/L	U	11/19/97
SJS03-GW1S-002	SVTCL	N-Nitrosodiphenylamine		10	ug/L	U	11/19/97
SJS03-GW1S-002	SVTCL	Naphthalene		10	ug/L	U	11/19/97
SJS03-GW1S-002	SVTCL	Nitrobenzene		10	ug/L	U	11/19/97
SJS03-GW1S-002	SVTCL	Pentachlorophenol		25	ug/L	U	11/19/97
SJS03-GW1S-002	SVTCL	Phenanthrene		10	ug/L	U	11/19/97
SJS03-GW1S-002	SVTCL	Phenol		10	ug/L	U	11/19/97
SJS03-GW1S-002	SVTCL	Pyrene		10	ug/L	U	11/19/97
SJS03-GW1S-002	VCLOW	1,1,1-Trichloroethane		1	ug/L	U	11/11/97
SJS03-GW1S-002	VCLOW	1,1,2,2-Tetrachloroethane		1	ug/L	U	11/11/97
SJS03-GW1S-002	VCLOW	1,1,2-Trichloroethane		1	ug/L	U	11/11/97
SJS03-GW1S-002	VCLOW	1,1-Dichloroethane		1	ug/L	U	11/11/97
SJS03-GW1S-002	VCLOW	1,1-Dichloroethene		1	ug/L	U	11/11/97
SJS03-GW1S-002	VCLOW	1,2,4-Trichlorobenzene		1	ug/L	U	11/11/97
SJS03-GW1S-002	VCLOW	1,2-Dibromo-3-chloropropa		1	ug/L	U	11/11/97
SJS03-GW1S-002	VCLOW	1,2-Dibromoethane		1	ug/L	U	11/11/97
SJS03-GW1S-002	VCLOW	1,2-Dichlorobenzene		1	ug/L	U	11/11/97
SJS03-GW1S-002	VCLOW	1,2-Dichloroethane		1	ug/L	U	11/11/97
SJS03-GW1S-002	VCLOW	1,2-Dichloropropane		1	ug/L	U	11/11/97
SJS03-GW1S-002	VCLOW	1,3-Dichlorobenzene		1	ug/L	U	11/11/97
SJS03-GW1S-002	VCLOW	1,4-Dichlorobenzene		1	ug/L	U	11/11/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS03-GW1S-002	VCLOW	2-Hexanone		5	ug/L	U	11/11/97
SJS03-GW1S-002	VCLOW	4-Methyl-2-Pentanone		5	ug/L	U	11/11/97
SJS03-GW1S-002	VCLOW	Benzene		1	ug/L	U	11/11/97
SJS03-GW1S-002	VCLOW	Bromochloromethane		1	ug/L	U	11/11/97
SJS03-GW1S-002	VCLOW	Bromodichloromethane		1	ug/L	U	11/11/97
SJS03-GW1S-002	VCLOW	Bromoform		1	ug/L	U	11/11/97
SJS03-GW1S-002	VCLOW	Bromomethane		1	ug/L	U	11/11/97
SJS03-GW1S-002	VCLOW	Carbon Disulfide		1	ug/L	U	11/11/97
SJS03-GW1S-002	VCLOW	Carbon Tetrachloride		1	ug/L	U	11/11/97
SJS03-GW1S-002	VCLOW	Chlorobenzene		1	ug/L	U	11/11/97
SJS03-GW1S-002	VCLOW	Chloroethane		1	ug/L	U	11/11/97
SJS03-GW1S-002	VCLOW	Chloroform		1	ug/L	U	11/11/97
SJS03-GW1S-002	VCLOW	Chloromethane		1	ug/L	U	11/11/97
SJS03-GW1S-002	VCLOW	cis-1,2-Dichloroethene		1	ug/L	U	11/11/97
SJS03-GW1S-002	VCLOW	cis-1,3-Dichloropropene		1	ug/L	U	11/11/97
SJS03-GW1S-002	VCLOW	Dibromochloromethane		1	ug/L	U	11/11/97
SJS03-GW1S-002	VCLOW	Ethylbenzene		1	ug/L	U	11/11/97
SJS03-GW1S-002	VCLOW	Methylene Chloride	2	2	ug/L	B	11/11/97
SJS03-GW1S-002	VCLOW	Styrene		1	ug/L	U	11/11/97
SJS03-GW1S-002	VCLOW	Tetrachloroethene		1	ug/L	U	11/11/97
SJS03-GW1S-002	VCLOW	Toluene		1	ug/L	U	11/11/97
SJS03-GW1S-002	VCLOW	Total Xylenes		1	ug/L	U	11/11/97
SJS03-GW1S-002	VCLOW	Trans-1,2-Dichloroethene		1	ug/L	U	11/11/97
SJS03-GW1S-002	VCLOW	trans-1,3-Dichloropropene		1	ug/L	U	11/11/97
SJS03-GW1S-002	VCLOW	Trichloroethene		1	ug/L	U	11/11/97
SJS03-GW1S-002	VCLOW	Vinyl Chloride		1	ug/L	U	11/11/97
SJS03-GW1S-002F	METAL	Aluminum	64.2	29	ug/L	B	11/26/97
SJS03-GW1S-002F	METAL	Antimony	3.8	1	ug/L	J	11/18/97
SJS03-GW1S-002F	METAL	Arsenic		3.2	ug/L	U	11/18/97
SJS03-GW1S-002F	METAL	Barium	26	1	ug/L	J	11/26/97
SJS03-GW1S-002F	METAL	Beryllium		0.58	ug/L	U	11/26/97
SJS03-GW1S-002F	METAL	Cadmium		0.4	ug/L	U	11/18/97
SJS03-GW1S-002F	METAL	Calcium	93500	46	ug/L		11/26/97
SJS03-GW1S-002F	METAL	Chromium	5.8	4	ug/L	J	11/26/97
SJS03-GW1S-002F	METAL	Cobalt	7.7	3	ug/L	J	11/26/97
SJS03-GW1S-002F	METAL	Copper		5.8	ug/L	U	11/26/97
SJS03-GW1S-002F	METAL	Iron	24900	5	ug/L		11/26/97
SJS03-GW1S-002F	METAL	Lead	1.9	1	ug/L	B	11/18/97
SJS03-GW1S-002F	METAL	Magnesium	35400	45	ug/L		11/26/97
SJS03-GW1S-002F	METAL	Manganese	1750	1	ug/L		11/26/97
SJS03-GW1S-002F	METAL	Mercury		0.13	ug/L	U	11/19/97
SJS03-GW1S-002F	METAL	Nickel	8.3	4	ug/L	B	11/26/97
SJS03-GW1S-002F	METAL	Potassium	27000	97	ug/L		11/26/97
SJS03-GW1S-002F	METAL	Selenium		3.3	ug/L	U	11/18/97
SJS03-GW1S-002F	METAL	Silver	1.5	3	ug/L	B	11/18/97
SJS03-GW1S-002F	METAL	Sodium	125000	28	ug/L		11/26/97
SJS03-GW1S-002F	METAL	Thallium	2.5	2	ug/L	B	11/19/97
SJS03-GW1S-002F	METAL	Vanadium	7.1	4	ug/L	J	11/26/97
SJS03-GW1S-002F	METAL	Zinc	49.7	3	ug/L	B	11/26/97
SJS03-GW2D-002	CTOTP	Total Phosphorous (as P)	1.17	0.25	mg/L		11/14/97
SJS03-GW2D-002	MCYAN	Aluminum		38.1	ug/L	U	11/25/97
SJS03-GW2D-002	MCYAN	Antimony		1.7	ug/L	U	11/13/97
SJS03-GW2D-002	MCYAN	Arsenic		3.2	ug/L	U	11/13/97
SJS03-GW2D-002	MCYAN	Barium	49.1	1	ug/L	J	11/25/97
SJS03-GW2D-002	MCYAN	Beryllium		0.58	ug/L	U	11/25/97
SJS03-GW2D-002	MCYAN	Cadmium		0.4	ug/L	U	11/13/97
SJS03-GW2D-002	MCYAN	Calcium	95200	46	ug/L		11/25/97
SJS03-GW2D-002	MCYAN	Chromium		4.6	ug/L	U	11/25/97
SJS03-GW2D-002	MCYAN	Cobalt		6	ug/L	U	11/25/97
SJS03-GW2D-002	MCYAN	Copper		5.8	ug/L	U	11/25/97
SJS03-GW2D-002	MCYAN	Cyanide		5	ug/L	U	11/7/97
SJS03-GW2D-002	MCYAN	Iron	272	5	ug/L		11/25/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS03-GW2D-002	MCYAN	Lead		1.3	ug/L	U	11/13/97
SJS03-GW2D-002	MCYAN	Magnesium	37100	45	ug/L		11/25/97
SJS03-GW2D-002	MCYAN	Manganese	354	1	ug/L		11/25/97
SJS03-GW2D-002	MCYAN	Mercury		0.13	ug/L	U	11/13/97
SJS03-GW2D-002	MCYAN	Nickel		6.3	ug/L	U	11/25/97
SJS03-GW2D-002	MCYAN	Potassium	16000	97	ug/L		11/25/97
SJS03-GW2D-002	MCYAN	Selenium		3.3	ug/L	U	11/13/97
SJS03-GW2D-002	MCYAN	Silver	1.2	3	ug/L	J	11/13/97
SJS03-GW2D-002	MCYAN	Sodium	34500	28	ug/L		11/25/97
SJS03-GW2D-002	MCYAN	Thallium	1.5	2	ug/L	B	11/13/97
SJS03-GW2D-002	MCYAN	Vanadium		6.8	ug/L	U	11/25/97
SJS03-GW2D-002	MCYAN	Zinc	9	3	ug/L	B	11/25/97
SJS03-GW2D-002	PSPCB	4,4'-DDD		0.1	ug/L	U	11/21/97
SJS03-GW2D-002	PSPCB	4,4'-DDE		0.1	ug/L	U	11/21/97
SJS03-GW2D-002	PSPCB	4,4'-DDT		0.1	ug/L	U	11/21/97
SJS03-GW2D-002	PSPCB	Aldrin		0.05	ug/L	U	11/21/97
SJS03-GW2D-002	PSPCB	alpha-BHC		0.05	ug/L	U	11/21/97
SJS03-GW2D-002	PSPCB	alpha-Chlordane		0.05	ug/L	U	11/21/97
SJS03-GW2D-002	PSPCB	Aroclor-1016		1	ug/L	U	11/21/97
SJS03-GW2D-002	PSPCB	Aroclor-1221		2	ug/L	U	11/21/97
SJS03-GW2D-002	PSPCB	Aroclor-1232		1	ug/L	U	11/21/97
SJS03-GW2D-002	PSPCB	Aroclor-1242		1	ug/L	U	11/21/97
SJS03-GW2D-002	PSPCB	Aroclor-1248		1	ug/L	U	11/21/97
SJS03-GW2D-002	PSPCB	Aroclor-1254		1	ug/L	U	11/21/97
SJS03-GW2D-002	PSPCB	Aroclor-1260		1	ug/L	U	11/21/97
SJS03-GW2D-002	PSPCB	beta-BHC		0.05	ug/L	U	11/21/97
SJS03-GW2D-002	PSPCB	delta-BHC		0.05	ug/L	U	11/21/97
SJS03-GW2D-002	PSPCB	Dieldrin		0.1	ug/L	U	11/21/97
SJS03-GW2D-002	PSPCB	Endosulfan I		0.05	ug/L	U	11/21/97
SJS03-GW2D-002	PSPCB	Endosulfan II		0.1	ug/L	U	11/21/97
SJS03-GW2D-002	PSPCB	Endosulfan Sulfate		0.1	ug/L	U	11/21/97
SJS03-GW2D-002	PSPCB	Endrin		0.1	ug/L	U	11/21/97
SJS03-GW2D-002	PSPCB	Endrin Aldehyde		0.1	ug/L	U	11/21/97
SJS03-GW2D-002	PSPCB	Endrin Ketone		0.1	ug/L	U	11/21/97
SJS03-GW2D-002	PSPCB	gamma-BHC		0.05	ug/L	U	11/21/97
SJS03-GW2D-002	PSPCB	gamma-Chlordane		0.05	ug/L	U	11/21/97
SJS03-GW2D-002	PSPCB	Heptachlor		0.05	ug/L	U	11/21/97
SJS03-GW2D-002	PSPCB	Heptachlor Epoxide		0.05	ug/L	U	11/21/97
SJS03-GW2D-002	PSPCB	Methoxychlor		0.5	ug/L	U	11/21/97
SJS03-GW2D-002	PSPCB	Toxaphene		5	ug/L	U	11/21/97
SJS03-GW2D-002	SVTCL	1,2,4-Trichlorobenzene		10	ug/L	U	11/15/97
SJS03-GW2D-002	SVTCL	1,2-Dichlorobenzene		10	ug/L	U	11/15/97
SJS03-GW2D-002	SVTCL	1,3-Dichlorobenzene		10	ug/L	U	11/15/97
SJS03-GW2D-002	SVTCL	1,4-Dichlorobenzene		10	ug/L	U	11/15/97
SJS03-GW2D-002	SVTCL	2,2'-oxybis(1-Chloropropan		10	ug/L	U	11/15/97
SJS03-GW2D-002	SVTCL	2,4,5-Trichlorophenol		25	ug/L	U	11/15/97
SJS03-GW2D-002	SVTCL	2,4,6-Trichlorophenol		10	ug/L	U	11/15/97
SJS03-GW2D-002	SVTCL	2,4-Dichlorophenol		10	ug/L	U	11/15/97
SJS03-GW2D-002	SVTCL	2,4-Dimethylphenol		10	ug/L	U	11/15/97
SJS03-GW2D-002	SVTCL	2,4-Dinitrophenol		25	ug/L	U	11/15/97
SJS03-GW2D-002	SVTCL	2,4-Dinitrotoluene		10	ug/L	U	11/15/97
SJS03-GW2D-002	SVTCL	2,6-Dinitrotoluene		10	ug/L	U	11/15/97
SJS03-GW2D-002	SVTCL	2-Chloronaphthalene		10	ug/L	U	11/15/97
SJS03-GW2D-002	SVTCL	2-Chlorophenol		10	ug/L	U	11/15/97
SJS03-GW2D-002	SVTCL	2-Methylnaphthalene		10	ug/L	U	11/15/97
SJS03-GW2D-002	SVTCL	2-Methylphenol		10	ug/L	U	11/15/97
SJS03-GW2D-002	SVTCL	2-Nitroaniline		25	ug/L	U	11/15/97
SJS03-GW2D-002	SVTCL	2-Nitrophenol		10	ug/L	U	11/15/97
SJS03-GW2D-002	SVTCL	3,3'-Dichlorobenzidine		10	ug/L	U	11/15/97
SJS03-GW2D-002	SVTCL	3-Nitroaniline		25	ug/L	U	11/15/97
SJS03-GW2D-002	SVTCL	4,6-Dinitro-2-Methylphenol		25	ug/L	U	11/15/97
SJS03-GW2D-002	SVTCL	4-Bromophenol-phenyleth		10	ug/L	U	11/15/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS03-GW2D-002	SVTCL	4-Chloro-3-Methylphenol		10	ug/L	U	11/15/97
SJS03-GW2D-002	SVTCL	4-Chloroaniline		10	ug/L	U	11/15/97
SJS03-GW2D-002	SVTCL	4-Chlorophenyl-phenyleth		10	ug/L	U	11/15/97
SJS03-GW2D-002	SVTCL	4-Methylphenol		10	ug/L	U	11/15/97
SJS03-GW2D-002	SVTCL	4-Nitroaniline		25	ug/L	U	11/15/97
SJS03-GW2D-002	SVTCL	4-Nitrophenol		25	ug/L	U	11/15/97
SJS03-GW2D-002	SVTCL	Acenaphthene		10	ug/L	U	11/15/97
SJS03-GW2D-002	SVTCL	Acenaphthylene		10	ug/L	U	11/15/97
SJS03-GW2D-002	SVTCL	Anthracene		10	ug/L	U	11/15/97
SJS03-GW2D-002	SVTCL	Benzo(a)anthracene		10	ug/L	U	11/15/97
SJS03-GW2D-002	SVTCL	Benzo(a)pyrene		10	ug/L	U	11/15/97
SJS03-GW2D-002	SVTCL	Benzo(b)fluoranthene		10	ug/L	U	11/15/97
SJS03-GW2D-002	SVTCL	Benzo(g,h,i)perylene		10	ug/L	U	11/15/97
SJS03-GW2D-002	SVTCL	Benzo(k)fluoranthene		10	ug/L	U	11/15/97
SJS03-GW2D-002	SVTCL	bis(2-Chloroethoxy)metha		10	ug/L	U	11/15/97
SJS03-GW2D-002	SVTCL	bis(2-chloroethyl)ether		10	ug/L	U	11/15/97
SJS03-GW2D-002	SVTCL	bis(2-Ethylhexyl)phthalate		10	ug/L	U	11/15/97
SJS03-GW2D-002	SVTCL	Butylbenzylphthalate		10	ug/L	U	11/15/97
SJS03-GW2D-002	SVTCL	Carbazole		10	ug/L	U	11/15/97
SJS03-GW2D-002	SVTCL	Chrysene		10	ug/L	U	11/15/97
SJS03-GW2D-002	SVTCL	Di-n-butylphthalate		10	ug/L	U	11/15/97
SJS03-GW2D-002	SVTCL	Di-n-Octyl Phthalate		10	ug/L	U	11/15/97
SJS03-GW2D-002	SVTCL	Dibenzo(a,h)anthracene		10	ug/L	U	11/15/97
SJS03-GW2D-002	SVTCL	Dibenzofuran		10	ug/L	U	11/15/97
SJS03-GW2D-002	SVTCL	Diethylphthalate		10	ug/L	U	11/15/97
SJS03-GW2D-002	SVTCL	Dimethyl Phthalate		10	ug/L	U	11/15/97
SJS03-GW2D-002	SVTCL	Fluoranthene		10	ug/L	U	11/15/97
SJS03-GW2D-002	SVTCL	Fluorene		10	ug/L	U	11/15/97
SJS03-GW2D-002	SVTCL	Hexachlorobenzene		10	ug/L	U	11/15/97
SJS03-GW2D-002	SVTCL	Hexachlorobutadiene		10	ug/L	U	11/15/97
SJS03-GW2D-002	SVTCL	Hexachlorocyclopentadie		10	ug/L	U	11/15/97
SJS03-GW2D-002	SVTCL	Hexachloroethane		10	ug/L	U	11/15/97
SJS03-GW2D-002	SVTCL	Indeno(1,2,3-cd)pyrene		10	ug/L	U	11/15/97
SJS03-GW2D-002	SVTCL	Isophorone		10	ug/L	U	11/15/97
SJS03-GW2D-002	SVTCL	N-Nitroso-Di-n-Propylamine		10	ug/L	U	11/15/97
SJS03-GW2D-002	SVTCL	N-Nitrosodiphenylamine		10	ug/L	U	11/15/97
SJS03-GW2D-002	SVTCL	Naphthalene		10	ug/L	U	11/15/97
SJS03-GW2D-002	SVTCL	Nitrobenzene		10	ug/L	U	11/15/97
SJS03-GW2D-002	SVTCL	Pentachlorophenol		25	ug/L	U	11/15/97
SJS03-GW2D-002	SVTCL	Phenanthrene		10	ug/L	U	11/15/97
SJS03-GW2D-002	SVTCL	Phenol		10	ug/L	U	11/15/97
SJS03-GW2D-002	SVTCL	Pyrene		10	ug/L	U	11/15/97
SJS03-GW2D-002	VCLOW	1,1,1-Trichloroethane		1	ug/L	U	11/10/97
SJS03-GW2D-002	VCLOW	1,1,2,2-Tetrachloroethane		1	ug/L	U	11/10/97
SJS03-GW2D-002	VCLOW	1,1,2-Trichloroethane		1	ug/L	U	11/10/97
SJS03-GW2D-002	VCLOW	1,1-Dichloroethane		1	ug/L	U	11/10/97
SJS03-GW2D-002	VCLOW	1,1-Dichloroethene		1	ug/L	U	11/10/97
SJS03-GW2D-002	VCLOW	1,2,4-Trichlorobenzene		1	ug/L	U	11/10/97
SJS03-GW2D-002	VCLOW	1,2-Dibromo-3-chloropropa		1	ug/L	U	11/10/97
SJS03-GW2D-002	VCLOW	1,2-Dibromoethane		1	ug/L	U	11/10/97
SJS03-GW2D-002	VCLOW	1,2-Dichlorobenzene		1	ug/L	U	11/10/97
SJS03-GW2D-002	VCLOW	1,2-Dichloroethane		1	ug/L	U	11/10/97
SJS03-GW2D-002	VCLOW	1,2-Dichloropropane		1	ug/L	U	11/10/97
SJS03-GW2D-002	VCLOW	1,3-Dichlorobenzene		1	ug/L	U	11/10/97
SJS03-GW2D-002	VCLOW	1,4-Dichlorobenzene		1	ug/L	U	11/10/97
SJS03-GW2D-002	VCLOW	2-Hexanone		5	ug/L	U	11/10/97
SJS03-GW2D-002	VCLOW	4-Methyl-2-Pentanone		5	ug/L	U	11/10/97
SJS03-GW2D-002	VCLOW	Acetone		5	ug/L	U	11/10/97
SJS03-GW2D-002	VCLOW	Benzene		1	ug/L	U	11/10/97
SJS03-GW2D-002	VCLOW	Bromochloromethane		1	ug/L	U	11/10/97
SJS03-GW2D-002	VCLOW	Bromodichloromethane		1	ug/L	U	11/10/97
SJS03-GW2D-002	VCLOW	Bromoform		1	ug/L	U	11/10/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS03-GW2D-002	VCLOW	Bromomethane		1	ug/L	U	11/10/97
SJS03-GW2D-002	VCLOW	Carbon Disulfide		1	ug/L	U	11/10/97
SJS03-GW2D-002	VCLOW	Carbon Tetrachloride		1	ug/L	U	11/10/97
SJS03-GW2D-002	VCLOW	Chlorobenzene		1	ug/L	U	11/10/97
SJS03-GW2D-002	VCLOW	Chloroethane		1	ug/L	U	11/10/97
SJS03-GW2D-002	VCLOW	Chloroform		1	ug/L	U	11/10/97
SJS03-GW2D-002	VCLOW	Chloromethane		1	ug/L	U	11/10/97
SJS03-GW2D-002	VCLOW	cis-1,2-Dichloroethene		1	ug/L	U	11/10/97
SJS03-GW2D-002	VCLOW	cis-1,3-Dichloropropene		1	ug/L	U	11/10/97
SJS03-GW2D-002	VCLOW	Dibromochloromethane		1	ug/L	U	11/10/97
SJS03-GW2D-002	VCLOW	Ethylbenzene		1	ug/L	U	11/10/97
SJS03-GW2D-002	VCLOW	Methylene Chloride	3	2	ug/L	B	11/10/97
SJS03-GW2D-002	VCLOW	Styrene		1	ug/L	U	11/10/97
SJS03-GW2D-002	VCLOW	Tetrachloroethene		1	ug/L	U	11/10/97
SJS03-GW2D-002	VCLOW	Toluene		1	ug/L	U	11/10/97
SJS03-GW2D-002	VCLOW	Total Xylenes		1	ug/L	U	11/10/97
SJS03-GW2D-002	VCLOW	Trans-1,2-Dichloroethene		1	ug/L	U	11/10/97
SJS03-GW2D-002	VCLOW	trans-1,3-Dichloropropene		1	ug/L	U	11/10/97
SJS03-GW2D-002	VCLOW	Trichloroethene		1	ug/L	U	11/10/97
SJS03-GW2D-002	VCLOW	Vinyl Chloride		1	ug/L	U	11/10/97
SJS03-GW2D-002F	METAL	Aluminum		38.1	ug/L	U	11/25/97
SJS03-GW2D-002F	METAL	Antimony		1.7	ug/L	U	11/13/97
SJS03-GW2D-002F	METAL	Arsenic		3.2	ug/L	U	11/13/97
SJS03-GW2D-002F	METAL	Barium	53.7	1	ug/L	J	11/25/97
SJS03-GW2D-002F	METAL	Beryllium		0.58	ug/L	U	11/25/97
SJS03-GW2D-002F	METAL	Cadmium		0.4	ug/L	U	11/13/97
SJS03-GW2D-002F	METAL	Calcium	103000	46	ug/L		11/25/97
SJS03-GW2D-002F	METAL	Chromium		4.6	ug/L	U	11/25/97
SJS03-GW2D-002F	METAL	Cobalt		6	ug/L	U	11/25/97
SJS03-GW2D-002F	METAL	Copper		5.8	ug/L	U	11/25/97
SJS03-GW2D-002F	METAL	Iron	276	5	ug/L		11/25/97
SJS03-GW2D-002F	METAL	Lead		1.3	ug/L	U	11/13/97
SJS03-GW2D-002F	METAL	Magnesium	40900	45	ug/L		11/25/97
SJS03-GW2D-002F	METAL	Manganese	385	1	ug/L		11/25/97
SJS03-GW2D-002F	METAL	Mercury		0.13	ug/L	U	11/13/97
SJS03-GW2D-002F	METAL	Nickel		6.3	ug/L	U	11/25/97
SJS03-GW2D-002F	METAL	Potassium	17600	97	ug/L		11/25/97
SJS03-GW2D-002F	METAL	Selenium		3.3	ug/L	U	11/13/97
SJS03-GW2D-002F	METAL	Silver	3.1	3	ug/L	B	11/13/97
SJS03-GW2D-002F	METAL	Sodium	37800	28	ug/L		11/25/97
SJS03-GW2D-002F	METAL	Thallium	1.9	2	ug/L	B	11/13/97
SJS03-GW2D-002F	METAL	Vanadium		6.8	ug/L	U	11/25/97
SJS03-GW2D-002F	METAL	Zinc	18.5	3	ug/L	B	11/25/97
SJS03-GW2S-002	CTOTP	Total Phosphorous (as P)	0.241	0.05	mg/L		11/14/97
SJS03-GW2S-002	MCYAN	Aluminum	7660	29	ug/L		11/25/97
SJS03-GW2S-002	MCYAN	Antimony		1.7	ug/L	U	11/13/97
SJS03-GW2S-002	MCYAN	Arsenic	3.4	3	ug/L	J	11/13/97
SJS03-GW2S-002	MCYAN	Barium	24.7	1	ug/L	J	11/25/97
SJS03-GW2S-002	MCYAN	Beryllium	4	1	ug/L	J	11/25/97
SJS03-GW2S-002	MCYAN	Cadmium		0.4	ug/L	U	11/13/97
SJS03-GW2S-002	MCYAN	Calcium	488000	46	ug/L		11/25/97
SJS03-GW2S-002	MCYAN	Chromium		4.6	ug/L	U	11/25/97
SJS03-GW2S-002	MCYAN	Cobalt	59.7	3	ug/L		11/25/97
SJS03-GW2S-002	MCYAN	Copper		5.8	ug/L	U	11/25/97
SJS03-GW2S-002	MCYAN	Cyanide		5	ug/L	U	11/7/97
SJS03-GW2S-002	MCYAN	Iron	19400	5	ug/L		11/25/97
SJS03-GW2S-002	MCYAN	Lead		1.3	ug/L	U	11/13/97
SJS03-GW2S-002	MCYAN	Magnesium	168000	45	ug/L		11/25/97
SJS03-GW2S-002	MCYAN	Manganese	5330	1	ug/L		11/25/97
SJS03-GW2S-002	MCYAN	Mercury		0.13	ug/L	U	11/13/97
SJS03-GW2S-002	MCYAN	Nickel	84.8	4	ug/L		11/25/97
SJS03-GW2S-002	MCYAN	Potassium	25100	97	ug/L		11/25/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS03-GW2S-002	MCYAN	Selenium	3.3	3	ug/L	K	11/13/97
SJS03-GW2S-002	MCYAN	Silver		1.1	ug/L	U	11/13/97
SJS03-GW2S-002	MCYAN	Sodium	298000	28	ug/L		11/25/97
SJS03-GW2S-002	MCYAN	Thallium		1.5	ug/L	U	11/13/97
SJS03-GW2S-002	MCYAN	Vanadium		6.8	ug/L	U	11/25/97
SJS03-GW2S-002	MCYAN	Zinc	397	3	ug/L		11/25/97
SJS03-GW2S-002	PSPCB	4,4'-DDD		0.1	ug/L	U	11/21/97
SJS03-GW2S-002	PSPCB	4,4'-DDE		0.1	ug/L	U	11/21/97
SJS03-GW2S-002	PSPCB	4,4'-DDT		0.1	ug/L	U	11/21/97
SJS03-GW2S-002	PSPCB	Aldrin		0.05	ug/L	U	11/21/97
SJS03-GW2S-002	PSPCB	alpha-BHC		0.05	ug/L	U	11/21/97
SJS03-GW2S-002	PSPCB	alpha-Chlordane		0.05	ug/L	U	11/21/97
SJS03-GW2S-002	PSPCB	Aroclor-1016		1	ug/L	U	11/21/97
SJS03-GW2S-002	PSPCB	Aroclor-1221		2	ug/L	U	11/21/97
SJS03-GW2S-002	PSPCB	Aroclor-1232		1	ug/L	U	11/21/97
SJS03-GW2S-002	PSPCB	Aroclor-1242		1	ug/L	U	11/21/97
SJS03-GW2S-002	PSPCB	Aroclor-1248		1	ug/L	U	11/21/97
SJS03-GW2S-002	PSPCB	Aroclor-1254		1	ug/L	U	11/21/97
SJS03-GW2S-002	PSPCB	Aroclor-1260		1	ug/L	U	11/21/97
SJS03-GW2S-002	PSPCB	beta-BHC		0.05	ug/L	U	11/21/97
SJS03-GW2S-002	PSPCB	delta-BHC		0.05	ug/L	U	11/21/97
SJS03-GW2S-002	PSPCB	Dieldrin		0.1	ug/L	U	11/21/97
SJS03-GW2S-002	PSPCB	Endosulfan I		0.05	ug/L	U	11/21/97
SJS03-GW2S-002	PSPCB	Endosulfan II		0.1	ug/L	U	11/21/97
SJS03-GW2S-002	PSPCB	Endosulfan Sulfate		0.1	ug/L	U	11/21/97
SJS03-GW2S-002	PSPCB	Endrin		0.1	ug/L	U	11/21/97
SJS03-GW2S-002	PSPCB	Endrin Aldehyde		0.1	ug/L	U	11/21/97
SJS03-GW2S-002	PSPCB	Endrin Ketone		0.1	ug/L	U	11/21/97
SJS03-GW2S-002	PSPCB	gamma-BHC		0.05	ug/L	U	11/21/97
SJS03-GW2S-002	PSPCB	gamma-Chlordane		0.05	ug/L	U	11/21/97
SJS03-GW2S-002	PSPCB	Heptachlor		0.05	ug/L	U	11/21/97
SJS03-GW2S-002	PSPCB	Heptachlor Epoxide		0.05	ug/L	U	11/21/97
SJS03-GW2S-002	PSPCB	Methoxychlor		0.5	ug/L	U	11/21/97
SJS03-GW2S-002	PSPCB	Toxaphene		5	ug/L	U	11/21/97
SJS03-GW2S-002	SVTCL	1,2,4-Trichlorobenzene		10	ug/L	U	11/14/97
SJS03-GW2S-002	SVTCL	1,2-Dichlorobenzene		10	ug/L	U	11/14/97
SJS03-GW2S-002	SVTCL	1,3-Dichlorobenzene		10	ug/L	U	11/14/97
SJS03-GW2S-002	SVTCL	1,4-Dichlorobenzene		10	ug/L	U	11/14/97
SJS03-GW2S-002	SVTCL	2,2'-oxybis(1-Chloropropan		10	ug/L	U	11/14/97
SJS03-GW2S-002	SVTCL	2,4,5-Trichlorophenol		25	ug/L	U	11/14/97
SJS03-GW2S-002	SVTCL	2,4,6-Trichlorophenol		10	ug/L	U	11/14/97
SJS03-GW2S-002	SVTCL	2,4-Dichlorophenol		10	ug/L	U	11/14/97
SJS03-GW2S-002	SVTCL	2,4-Dimethylphenol		10	ug/L	U	11/14/97
SJS03-GW2S-002	SVTCL	2,4-Dinitrophenol		25	ug/L	U	11/14/97
SJS03-GW2S-002	SVTCL	2,4-Dinitrotoluene		10	ug/L	U	11/14/97
SJS03-GW2S-002	SVTCL	2,6-Dinitrotoluene		10	ug/L	U	11/14/97
SJS03-GW2S-002	SVTCL	2-Chloronaphthalene		10	ug/L	U	11/14/97
SJS03-GW2S-002	SVTCL	2-Chlorophenol		10	ug/L	U	11/14/97
SJS03-GW2S-002	SVTCL	2-Methylnaphthalene		10	ug/L	U	11/14/97
SJS03-GW2S-002	SVTCL	2-Methylphenol		10	ug/L	U	11/14/97
SJS03-GW2S-002	SVTCL	2-Nitroaniline		25	ug/L	U	11/14/97
SJS03-GW2S-002	SVTCL	2-Nitrophenol		10	ug/L	U	11/14/97
SJS03-GW2S-002	SVTCL	3,3'-Dichlorobenzidine		10	ug/L	U	11/14/97
SJS03-GW2S-002	SVTCL	3-Nitroaniline		25	ug/L	U	11/14/97
SJS03-GW2S-002	SVTCL	4,6-Dinitro-2-Methylphenol		25	ug/L	U	11/14/97
SJS03-GW2S-002	SVTCL	4-Bromophenol-phenyleth		10	ug/L	U	11/14/97
SJS03-GW2S-002	SVTCL	4-Chloro-3-Methylphenol		10	ug/L	U	11/14/97
SJS03-GW2S-002	SVTCL	4-Chloroaniline		10	ug/L	U	11/14/97
SJS03-GW2S-002	SVTCL	4-Chlorophenyl-phenyleth		10	ug/L	U	11/14/97
SJS03-GW2S-002	SVTCL	4-Methylphenol		10	ug/L	U	11/14/97
SJS03-GW2S-002	SVTCL	4-Nitroaniline		25	ug/L	U	11/14/97
SJS03-GW2S-002	SVTCL	4-Nitrophenol		25	ug/L	U	11/14/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS03-GW2S-002	SVTCL	Acenaphthene		10	ug/L	U	11/14/97
SJS03-GW2S-002	SVTCL	Acenaphthylene		10	ug/L	U	11/14/97
SJS03-GW2S-002	SVTCL	Anthracene		10	ug/L	U	11/14/97
SJS03-GW2S-002	SVTCL	Benzo(a)anthracene		10	ug/L	U	11/14/97
SJS03-GW2S-002	SVTCL	Benzo(a)pyrene		10	ug/L	U	11/14/97
SJS03-GW2S-002	SVTCL	Benzo(b)fluoranthene		10	ug/L	U	11/14/97
SJS03-GW2S-002	SVTCL	Benzo(g,h,i)perylene		10	ug/L	U	11/14/97
SJS03-GW2S-002	SVTCL	Benzo(k)fluoranthene		10	ug/L	U	11/14/97
SJS03-GW2S-002	SVTCL	bis(2-Chloroethoxy)metha		10	ug/L	U	11/14/97
SJS03-GW2S-002	SVTCL	bis(2-chloroethyl)ether		10	ug/L	U	11/14/97
SJS03-GW2S-002	SVTCL	bis(2-Ethylhexyl)phthalate		10	ug/L	U	11/14/97
SJS03-GW2S-002	SVTCL	Butylbenzylphthalate		10	ug/L	U	11/14/97
SJS03-GW2S-002	SVTCL	Carbazole		10	ug/L	U	11/14/97
SJS03-GW2S-002	SVTCL	Chrysene		10	ug/L	U	11/14/97
SJS03-GW2S-002	SVTCL	Di-n-butylphthalate		10	ug/L	U	11/14/97
SJS03-GW2S-002	SVTCL	Di-n-Octyl Phthalate		10	ug/L	U	11/14/97
SJS03-GW2S-002	SVTCL	Dibenzo(a,h)anthracene		10	ug/L	U	11/14/97
SJS03-GW2S-002	SVTCL	Dibenzofuran		10	ug/L	U	11/14/97
SJS03-GW2S-002	SVTCL	Diethylphthalate		10	ug/L	U	11/14/97
SJS03-GW2S-002	SVTCL	Dimethyl Phthalate		10	ug/L	U	11/14/97
SJS03-GW2S-002	SVTCL	Fluoranthene		10	ug/L	U	11/14/97
SJS03-GW2S-002	SVTCL	Fluorene		10	ug/L	U	11/14/97
SJS03-GW2S-002	SVTCL	Hexachlorobenzene		10	ug/L	U	11/14/97
SJS03-GW2S-002	SVTCL	Hexachlorobutadiene		10	ug/L	U	11/14/97
SJS03-GW2S-002	SVTCL	Hexachlorocyclopentadie		10	ug/L	U	11/14/97
SJS03-GW2S-002	SVTCL	Hexachloroethane		10	ug/L	U	11/14/97
SJS03-GW2S-002	SVTCL	Indeno(1,2,3-cd)pyrene		10	ug/L	U	11/14/97
SJS03-GW2S-002	SVTCL	Isophorone		10	ug/L	U	11/14/97
SJS03-GW2S-002	SVTCL	N-Nitroso-Di-n-Propylamine		10	ug/L	U	11/14/97
SJS03-GW2S-002	SVTCL	N-Nitrosodiphenylamine		10	ug/L	U	11/14/97
SJS03-GW2S-002	SVTCL	Naphthalene		10	ug/L	U	11/14/97
SJS03-GW2S-002	SVTCL	Nitrobenzene		10	ug/L	U	11/14/97
SJS03-GW2S-002	SVTCL	Pentachlorophenol		25	ug/L	U	11/14/97
SJS03-GW2S-002	SVTCL	Phenanthrene		10	ug/L	U	11/14/97
SJS03-GW2S-002	SVTCL	Phenol		10	ug/L	U	11/14/97
SJS03-GW2S-002	SVTCL	Pyrene		10	ug/L	U	11/14/97
SJS03-GW2S-002	VCLOW	1,1,1-Trichloroethane		1	ug/L	U	11/10/97
SJS03-GW2S-002	VCLOW	1,1,2,2-Tetrachloroethane		1	ug/L	U	11/10/97
SJS03-GW2S-002	VCLOW	1,1,2-Trichloroethane		1	ug/L	U	11/10/97
SJS03-GW2S-002	VCLOW	1,1-Dichloroethane		1	ug/L	U	11/10/97
SJS03-GW2S-002	VCLOW	1,1-Dichloroethene		1	ug/L	U	11/10/97
SJS03-GW2S-002	VCLOW	1,2,4-Trichlorobenzene		1	ug/L	U	11/10/97
SJS03-GW2S-002	VCLOW	1,2-Dibromo-3-chloropropa		1	ug/L	U	11/10/97
SJS03-GW2S-002	VCLOW	1,2-Dibromoethane		1	ug/L	U	11/10/97
SJS03-GW2S-002	VCLOW	1,2-Dichlorobenzene		1	ug/L	U	11/10/97
SJS03-GW2S-002	VCLOW	1,2-Dichloroethane		1	ug/L	U	11/10/97
SJS03-GW2S-002	VCLOW	1,2-Dichloropropane		1	ug/L	U	11/10/97
SJS03-GW2S-002	VCLOW	1,3-Dichlorobenzene		1	ug/L	U	11/10/97
SJS03-GW2S-002	VCLOW	1,4-Dichlorobenzene		1	ug/L	U	11/10/97
SJS03-GW2S-002	VCLOW	2-Hexanone		5	ug/L	U	11/10/97
SJS03-GW2S-002	VCLOW	4-Methyl-2-Pentanone		5	ug/L	U	11/10/97
SJS03-GW2S-002	VCLOW	Acetone		5	ug/L	U	11/10/97
SJS03-GW2S-002	VCLOW	Benzene		1	ug/L	U	11/10/97
SJS03-GW2S-002	VCLOW	Bromochloromethane		1	ug/L	U	11/10/97
SJS03-GW2S-002	VCLOW	Bromodichloromethane		1	ug/L	U	11/10/97
SJS03-GW2S-002	VCLOW	Bromoform		1	ug/L	U	11/10/97
SJS03-GW2S-002	VCLOW	Bromomethane		1	ug/L	U	11/10/97
SJS03-GW2S-002	VCLOW	Carbon Disulfide		1	ug/L	U	11/10/97
SJS03-GW2S-002	VCLOW	Carbon Tetrachloride		1	ug/L	U	11/10/97
SJS03-GW2S-002	VCLOW	Chlorobenzene		1	ug/L	U	11/10/97
SJS03-GW2S-002	VCLOW	Chloroethane		1	ug/L	U	11/10/97
SJS03-GW2S-002	VCLOW	Chloroform		1	ug/L	U	11/10/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS03-GW2S-002	VCLOW	Chloromethane		1	ug/L	U	11/10/97
SJS03-GW2S-002	VCLOW	cis-1,2-Dichloroethene		1	ug/L	U	11/10/97
SJS03-GW2S-002	VCLOW	cis-1,3-Dichloropropene		1	ug/L	U	11/10/97
SJS03-GW2S-002	VCLOW	Dibromochloromethane		1	ug/L	U	11/10/97
SJS03-GW2S-002	VCLOW	Ethylbenzene		1	ug/L	U	11/10/97
SJS03-GW2S-002	VCLOW	Methylene Chloride	2	2	ug/L	B	11/10/97
SJS03-GW2S-002	VCLOW	Styrene		1	ug/L	U	11/10/97
SJS03-GW2S-002	VCLOW	Tetrachloroethene		1	ug/L	U	11/10/97
SJS03-GW2S-002	VCLOW	Toluene		1	ug/L	U	11/10/97
SJS03-GW2S-002	VCLOW	Total Xylenes		1	ug/L	U	11/10/97
SJS03-GW2S-002	VCLOW	Trans-1,2-Dichloroethene		1	ug/L	U	11/10/97
SJS03-GW2S-002	VCLOW	trans-1,3-Dichloropropene		1	ug/L	U	11/10/97
SJS03-GW2S-002	VCLOW	Trichloroethene		1	ug/L	U	11/10/97
SJS03-GW2S-002	VCLOW	Vinyl Chloride		1	ug/L	U	11/10/97
SJS03-GW2S-002F	METAL	Aluminum	807	29	ug/L		11/25/97
SJS03-GW2S-002F	METAL	Antimony		1.7	ug/L	U	11/13/97
SJS03-GW2S-002F	METAL	Arsenic		3.2	ug/L	U	11/13/97
SJS03-GW2S-002F	METAL	Barium	25	1	ug/L	J	11/25/97
SJS03-GW2S-002F	METAL	Beryllium	1.9	1	ug/L	J	11/25/97
SJS03-GW2S-002F	METAL	Cadmium	0.49	0.3	ug/L	J	11/13/97
SJS03-GW2S-002F	METAL	Calcium	524000	46	ug/L		11/25/97
SJS03-GW2S-002F	METAL	Chromium		4.6	ug/L	U	11/25/97
SJS03-GW2S-002F	METAL	Cobalt	63	3	ug/L		11/25/97
SJS03-GW2S-002F	METAL	Copper		5.8	ug/L	U	11/25/97
SJS03-GW2S-002F	METAL	Iron	20000	5	ug/L		11/25/97
SJS03-GW2S-002F	METAL	Lead	1.4	1	ug/L	J	11/13/97
SJS03-GW2S-002F	METAL	Magnesium	183000	45	ug/L		11/25/97
SJS03-GW2S-002F	METAL	Manganese	5710	1	ug/L		11/25/97
SJS03-GW2S-002F	METAL	Mercury		0.13	ug/L	U	11/13/97
SJS03-GW2S-002F	METAL	Nickel	88.1	4	ug/L		11/25/97
SJS03-GW2S-002F	METAL	Potassium	27100	97	ug/L		11/25/97
SJS03-GW2S-002F	METAL	Selenium	4.3	3	ug/L	J	11/13/97
SJS03-GW2S-002F	METAL	Silver		1.1	ug/L	U	11/13/97
SJS03-GW2S-002F	METAL	Sodium	307000	28	ug/L		11/26/97
SJS03-GW2S-002F	METAL	Thallium		1.5	ug/L	U	11/13/97
SJS03-GW2S-002F	METAL	Vanadium		6.8	ug/L	U	11/25/97
SJS03-GW2S-002F	METAL	Zinc	497	3	ug/L		11/25/97
SJS03-GW3S-002	CTOTP	Total Phosphorous (as P)	0.78	0.25	mg/L		11/14/97
SJS03-GW3S-002	MCYAN	Aluminum		38.1	ug/L	U	11/25/97
SJS03-GW3S-002	MCYAN	Antimony		1.7	ug/L	U	11/13/97
SJS03-GW3S-002	MCYAN	Arsenic		3.2	ug/L	U	11/13/97
SJS03-GW3S-002	MCYAN	Barium	16.1	1	ug/L	J	11/25/97
SJS03-GW3S-002	MCYAN	Beryllium	0.96	1	ug/L	J	11/25/97
SJS03-GW3S-002	MCYAN	Cadmium		0.4	ug/L	U	11/13/97
SJS03-GW3S-002	MCYAN	Calcium	367000	46	ug/L		11/25/97
SJS03-GW3S-002	MCYAN	Chromium		4.6	ug/L	U	11/25/97
SJS03-GW3S-002	MCYAN	Cobalt		6	ug/L	U	11/25/97
SJS03-GW3S-002	MCYAN	Copper		5.8	ug/L	U	11/25/97
SJS03-GW3S-002	MCYAN	Cyanide		5	ug/L	U	11/7/97
SJS03-GW3S-002	MCYAN	Iron	45000	5	ug/L		11/25/97
SJS03-GW3S-002	MCYAN	Lead	1.7	1	ug/L	J	11/13/97
SJS03-GW3S-002	MCYAN	Magnesium	33600	45	ug/L		11/25/97
SJS03-GW3S-002	MCYAN	Manganese	2960	1	ug/L		11/25/97
SJS03-GW3S-002	MCYAN	Mercury		0.16	ug/L	U	11/13/97
SJS03-GW3S-002	MCYAN	Nickel		6.3	ug/L	U	11/25/97
SJS03-GW3S-002	MCYAN	Potassium	23000	97	ug/L		11/25/97
SJS03-GW3S-002	MCYAN	Selenium		3.3	ug/L	U	11/13/97
SJS03-GW3S-002	MCYAN	Silver	1.3	3	ug/L	J	11/13/97
SJS03-GW3S-002	MCYAN	Sodium	39400	28	ug/L		11/25/97
SJS03-GW3S-002	MCYAN	Thallium		1.5	ug/L	U	11/13/97
SJS03-GW3S-002	MCYAN	Vanadium		6.8	ug/L	U	11/25/97
SJS03-GW3S-002	MCYAN	Zinc	15.5	3	ug/L	B	11/25/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS03-GW3S-002	PSPCB	4,4'-DDD		0.1	ug/L	U	11/21/97
SJS03-GW3S-002	PSPCB	4,4'-DDE		0.1	ug/L	U	11/21/97
SJS03-GW3S-002	PSPCB	4,4'-DDT		0.1	ug/L	U	11/21/97
SJS03-GW3S-002	PSPCB	Aldrin		0.05	ug/L	U	11/21/97
SJS03-GW3S-002	PSPCB	alpha-BHC		0.05	ug/L	U	11/21/97
SJS03-GW3S-002	PSPCB	alpha-Chlordane		0.05	ug/L	U	11/21/97
SJS03-GW3S-002	PSPCB	Aroclor-1016		1	ug/L	U	11/21/97
SJS03-GW3S-002	PSPCB	Aroclor-1221		2	ug/L	U	11/21/97
SJS03-GW3S-002	PSPCB	Aroclor-1232		1	ug/L	U	11/21/97
SJS03-GW3S-002	PSPCB	Aroclor-1242		1	ug/L	U	11/21/97
SJS03-GW3S-002	PSPCB	Aroclor-1248		1	ug/L	U	11/21/97
SJS03-GW3S-002	PSPCB	Aroclor-1254		1	ug/L	U	11/21/97
SJS03-GW3S-002	PSPCB	Aroclor-1260		1	ug/L	U	11/21/97
SJS03-GW3S-002	PSPCB	beta-BHC		0.05	ug/L	U	11/21/97
SJS03-GW3S-002	PSPCB	delta-BHC		0.05	ug/L	U	11/21/97
SJS03-GW3S-002	PSPCB	Dieldrin		0.1	ug/L	U	11/21/97
SJS03-GW3S-002	PSPCB	Endosulfan I		0.05	ug/L	U	11/21/97
SJS03-GW3S-002	PSPCB	Endosulfan II		0.1	ug/L	U	11/21/97
SJS03-GW3S-002	PSPCB	Endosulfan Sulfate		0.1	ug/L	U	11/21/97
SJS03-GW3S-002	PSPCB	Endrin		0.1	ug/L	U	11/21/97
SJS03-GW3S-002	PSPCB	Endrin Aldehyde		0.1	ug/L	U	11/21/97
SJS03-GW3S-002	PSPCB	Endrin Ketone		0.1	ug/L	U	11/21/97
SJS03-GW3S-002	PSPCB	gamma-BHC		0.05	ug/L	U	11/21/97
SJS03-GW3S-002	PSPCB	gamma-Chlordane		0.05	ug/L	U	11/21/97
SJS03-GW3S-002	PSPCB	Heptachlor		0.05	ug/L	U	11/21/97
SJS03-GW3S-002	PSPCB	Heptachlor Epoxide		0.05	ug/L	U	11/21/97
SJS03-GW3S-002	PSPCB	Methoxychlor		0.5	ug/L	U	11/21/97
SJS03-GW3S-002	PSPCB	Toxaphene		5	ug/L	U	11/21/97
SJS03-GW3S-002	SVTCL	1,2,4-Trichlorobenzene		10	ug/L	U	11/18/97
SJS03-GW3S-002	SVTCL	1,2-Dichlorobenzene		10	ug/L	U	11/18/97
SJS03-GW3S-002	SVTCL	1,3-Dichlorobenzene		10	ug/L	U	11/18/97
SJS03-GW3S-002	SVTCL	1,4-Dichlorobenzene		10	ug/L	U	11/18/97
SJS03-GW3S-002	SVTCL	2,2'-oxybis(1-Chloropropan		10	ug/L	U	11/18/97
SJS03-GW3S-002	SVTCL	2,4,5-Trichlorophenol		25	ug/L	U	11/18/97
SJS03-GW3S-002	SVTCL	2,4,6-Trichlorophenol		10	ug/L	U	11/18/97
SJS03-GW3S-002	SVTCL	2,4-Dichlorophenol		10	ug/L	U	11/18/97
SJS03-GW3S-002	SVTCL	2,4-Dimethylphenol		10	ug/L	U	11/18/97
SJS03-GW3S-002	SVTCL	2,4-Dinitrophenol		25	ug/L	U	11/18/97
SJS03-GW3S-002	SVTCL	2,4-Dinitrotoluene		10	ug/L	U	11/18/97
SJS03-GW3S-002	SVTCL	2,6-Dinitrotoluene		10	ug/L	U	11/18/97
SJS03-GW3S-002	SVTCL	2-Chloronaphthalene		10	ug/L	U	11/18/97
SJS03-GW3S-002	SVTCL	2-Chlorophenol		10	ug/L	U	11/18/97
SJS03-GW3S-002	SVTCL	2-Methylnaphthalene		10	ug/L	U	11/18/97
SJS03-GW3S-002	SVTCL	2-Methylphenol		10	ug/L	U	11/18/97
SJS03-GW3S-002	SVTCL	2-Nitroaniline		25	ug/L	U	11/18/97
SJS03-GW3S-002	SVTCL	2-Nitrophenol		10	ug/L	U	11/18/97
SJS03-GW3S-002	SVTCL	3,3'-Dichlorobenzidine		10	ug/L	U	11/18/97
SJS03-GW3S-002	SVTCL	3-Nitroaniline		25	ug/L	U	11/18/97
SJS03-GW3S-002	SVTCL	4,6-Dinitro-2-Methylphenol		25	ug/L	U	11/18/97
SJS03-GW3S-002	SVTCL	4-Bromophenol-phenyleth		10	ug/L	U	11/18/97
SJS03-GW3S-002	SVTCL	4-Chloro-3-Methylphenol		10	ug/L	U	11/18/97
SJS03-GW3S-002	SVTCL	4-Chloroaniline		10	ug/L	U	11/18/97
SJS03-GW3S-002	SVTCL	4-Chlorophenyl-phenyleth		10	ug/L	U	11/18/97
SJS03-GW3S-002	SVTCL	4-Methylphenol		10	ug/L	U	11/18/97
SJS03-GW3S-002	SVTCL	4-Nitroaniline		25	ug/L	U	11/18/97
SJS03-GW3S-002	SVTCL	4-Nitrophenol		25	ug/L	U	11/18/97
SJS03-GW3S-002	SVTCL	Acenaphthene	7	10	ug/L	J	11/18/97
SJS03-GW3S-002	SVTCL	Acenaphthylene		10	ug/L	U	11/18/97
SJS03-GW3S-002	SVTCL	Anthracene		10	ug/L	U	11/18/97
SJS03-GW3S-002	SVTCL	Benzo(a)anthracene		10	ug/L	U	11/18/97
SJS03-GW3S-002	SVTCL	Benzo(a)pyrene		10	ug/L	U	11/18/97
SJS03-GW3S-002	SVTCL	Benzo(b)fluoranthene		10	ug/L	U	11/18/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS03-GW3S-002	SVTCL	Benzo(g,h,i)perylene		10	ug/L	U	11/18/97
SJS03-GW3S-002	SVTCL	Benzo(k)fluoranthene		10	ug/L	U	11/18/97
SJS03-GW3S-002	SVTCL	bis(2-Chloroethoxy)metha		10	ug/L	U	11/18/97
SJS03-GW3S-002	SVTCL	bis(2-chloroethyl)ether		10	ug/L	U	11/18/97
SJS03-GW3S-002	SVTCL	bis(2-Ethylhexyl)phthalate		10	ug/L	U	11/18/97
SJS03-GW3S-002	SVTCL	Butylbenzylphthalate		10	ug/L	U	11/18/97
SJS03-GW3S-002	SVTCL	Carbazole		10	ug/L	U	11/18/97
SJS03-GW3S-002	SVTCL	Chrysene		10	ug/L	U	11/18/97
SJS03-GW3S-002	SVTCL	Di-n-butylphthalate		10	ug/L	U	11/18/97
SJS03-GW3S-002	SVTCL	Di-n-Octyl Phthalate		10	ug/L	U	11/18/97
SJS03-GW3S-002	SVTCL	Dibenzo(a,h)anthracene		10	ug/L	U	11/18/97
SJS03-GW3S-002	SVTCL	Dibenzofuran		10	ug/L	U	11/18/97
SJS03-GW3S-002	SVTCL	Diethylphthalate		10	ug/L	U	11/18/97
SJS03-GW3S-002	SVTCL	Dimethyl Phthalate		10	ug/L	U	11/18/97
SJS03-GW3S-002	SVTCL	Fluoranthene		10	ug/L	U	11/18/97
SJS03-GW3S-002	SVTCL	Fluorene		10	ug/L	U	11/18/97
SJS03-GW3S-002	SVTCL	Hexachlorobenzene		10	ug/L	U	11/18/97
SJS03-GW3S-002	SVTCL	Hexachlorobutadiene		10	ug/L	U	11/18/97
SJS03-GW3S-002	SVTCL	Hexachlorocyclopentadie		10	ug/L	U	11/18/97
SJS03-GW3S-002	SVTCL	Hexachloroethane		10	ug/L	U	11/18/97
SJS03-GW3S-002	SVTCL	Indeno(1,2,3-cd)pyrene		10	ug/L	U	11/18/97
SJS03-GW3S-002	SVTCL	Isophorone		10	ug/L	U	11/18/97
SJS03-GW3S-002	SVTCL	N-Nitroso-Di-n-Propylamine		10	ug/L	U	11/18/97
SJS03-GW3S-002	SVTCL	N-Nitrosodiphenylamine		10	ug/L	U	11/18/97
SJS03-GW3S-002	SVTCL	Naphthalene		10	ug/L	U	11/18/97
SJS03-GW3S-002	SVTCL	Nitrobenzene		10	ug/L	U	11/18/97
SJS03-GW3S-002	SVTCL	Pentachlorophenol		25	ug/L	U	11/18/97
SJS03-GW3S-002	SVTCL	Phenanthrene		10	ug/L	U	11/18/97
SJS03-GW3S-002	SVTCL	Phenol		10	ug/L	U	11/18/97
SJS03-GW3S-002	SVTCL	Pyrene		10	ug/L	U	11/18/97
SJS03-GW3S-002	VCLOW	1,1,1-Trichloroethane		1	ug/L	U	11/10/97
SJS03-GW3S-002	VCLOW	1,1,2,2-Tetrachloroethane		1	ug/L	U	11/10/97
SJS03-GW3S-002	VCLOW	1,1,2-Trichloroethane		1	ug/L	U	11/10/97
SJS03-GW3S-002	VCLOW	1,1-Dichloroethane		1	ug/L	U	11/10/97
SJS03-GW3S-002	VCLOW	1,1-Dichloroethene		1	ug/L	U	11/10/97
SJS03-GW3S-002	VCLOW	1,2,4-Trichlorobenzene		1	ug/L	U	11/10/97
SJS03-GW3S-002	VCLOW	1,2-Dibromo-3-chloropropa		1	ug/L	U	11/10/97
SJS03-GW3S-002	VCLOW	1,2-Dibromoethane		1	ug/L	U	11/10/97
SJS03-GW3S-002	VCLOW	1,2-Dichlorobenzene		1	ug/L	U	11/10/97
SJS03-GW3S-002	VCLOW	1,2-Dichloroethane		1	ug/L	U	11/10/97
SJS03-GW3S-002	VCLOW	1,2-Dichloropropane		1	ug/L	U	11/10/97
SJS03-GW3S-002	VCLOW	1,3-Dichlorobenzene		1	ug/L	U	11/10/97
SJS03-GW3S-002	VCLOW	1,4-Dichlorobenzene		1	ug/L	U	11/10/97
SJS03-GW3S-002	VCLOW	2-Hexanone		5	ug/L	U	11/10/97
SJS03-GW3S-002	VCLOW	4-Methyl-2-Pentanone		5	ug/L	U	11/10/97
SJS03-GW3S-002	VCLOW	Acetone	10	5	ug/L		11/10/97
SJS03-GW3S-002	VCLOW	Benzene		1	ug/L	U	11/10/97
SJS03-GW3S-002	VCLOW	Bromochloromethane		1	ug/L	U	11/10/97
SJS03-GW3S-002	VCLOW	Bromodichloromethane		1	ug/L	U	11/10/97
SJS03-GW3S-002	VCLOW	Bromoform		1	ug/L	U	11/10/97
SJS03-GW3S-002	VCLOW	Bromomethane		1	ug/L	U	11/10/97
SJS03-GW3S-002	VCLOW	Carbon Disulfide		1	ug/L	U	11/10/97
SJS03-GW3S-002	VCLOW	Carbon Tetrachloride		1	ug/L	U	11/10/97
SJS03-GW3S-002	VCLOW	Chlorobenzene		1	ug/L	U	11/10/97
SJS03-GW3S-002	VCLOW	Chloroethane		1	ug/L	U	11/10/97
SJS03-GW3S-002	VCLOW	Chloroform		1	ug/L	U	11/10/97
SJS03-GW3S-002	VCLOW	Chloromethane		1	ug/L	U	11/10/97
SJS03-GW3S-002	VCLOW	cis-1,2-Dichloroethene		1	ug/L	U	11/10/97
SJS03-GW3S-002	VCLOW	cis-1,3-Dichloropropene		1	ug/L	U	11/10/97
SJS03-GW3S-002	VCLOW	Dibromochloromethane		1	ug/L	U	11/10/97
SJS03-GW3S-002	VCLOW	Ethylbenzene		1	ug/L	U	11/10/97
SJS03-GW3S-002	VCLOW	Methylene Chloride	3	2	ug/L	B	11/10/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS03-GW3S-002	VCLOW	Styrene		1	ug/L	U	11/10/97
SJS03-GW3S-002	VCLOW	Tetrachloroethene		1	ug/L	U	11/10/97
SJS03-GW3S-002	VCLOW	Toluene		1	ug/L	U	11/10/97
SJS03-GW3S-002	VCLOW	Total Xylenes		1	ug/L	U	11/10/97
SJS03-GW3S-002	VCLOW	Trans-1,2-Dichloroethene		1	ug/L	U	11/10/97
SJS03-GW3S-002	VCLOW	trans-1,3-Dichloropropene		1	ug/L	U	11/10/97
SJS03-GW3S-002	VCLOW	Trichloroethene		1	ug/L	U	11/10/97
SJS03-GW3S-002	VCLOW	Vinyl Chloride		1	ug/L	U	11/10/97
SJS03-GW3S-002F	METAL	Aluminum		38.1	ug/L	U	11/25/97
SJS03-GW3S-002F	METAL	Antimony		1.7	ug/L	U	11/13/97
SJS03-GW3S-002F	METAL	Arsenic		3.2	ug/L	U	11/13/97
SJS03-GW3S-002F	METAL	Barium	14.9	1	ug/L	J	11/25/97
SJS03-GW3S-002F	METAL	Beryllium		0.58	ug/L	U	11/25/97
SJS03-GW3S-002F	METAL	Cadmium		0.4	ug/L	U	11/13/97
SJS03-GW3S-002F	METAL	Calcium	340000	46	ug/L		11/25/97
SJS03-GW3S-002F	METAL	Chromium		4.6	ug/L	U	11/25/97
SJS03-GW3S-002F	METAL	Cobalt		6	ug/L	U	11/25/97
SJS03-GW3S-002F	METAL	Copper		5.8	ug/L	U	11/25/97
SJS03-GW3S-002F	METAL	Iron	42200	5	ug/L		11/25/97
SJS03-GW3S-002F	METAL	Lead		1.3	ug/L	U	11/13/97
SJS03-GW3S-002F	METAL	Magnesium	31900	45	ug/L		11/25/97
SJS03-GW3S-002F	METAL	Manganese	2760	1	ug/L		11/25/97
SJS03-GW3S-002F	METAL	Mercury		0.12	ug/L	U	11/13/97
SJS03-GW3S-002F	METAL	Nickel		6.3	ug/L	U	11/25/97
SJS03-GW3S-002F	METAL	Potassium	21400	97	ug/L		11/25/97
SJS03-GW3S-002F	METAL	Selenium		3.3	ug/L	U	11/13/97
SJS03-GW3S-002F	METAL	Silver	2	3	ug/L	B	11/13/97
SJS03-GW3S-002F	METAL	Sodium	38700	28	ug/L		11/25/97
SJS03-GW3S-002F	METAL	Thallium		1.5	ug/L	U	11/13/97
SJS03-GW3S-002F	METAL	Vanadium		6.8	ug/L	U	11/25/97
SJS03-GW3S-002F	METAL	Zinc	24.4	3	ug/L	B	11/25/97
SJS03-GW4S-002	CTOTP	Total Phosphorous (as P)	0.47	0.13	mg/L		11/14/97
SJS03-GW4S-002	MCYAN	Aluminum	56.8	29	ug/L	J	11/25/97
SJS03-GW4S-002	MCYAN	Antimony		1.7	ug/L	U	11/13/97
SJS03-GW4S-002	MCYAN	Arsenic		3.2	ug/L	U	11/13/97
SJS03-GW4S-002	MCYAN	Barium	20.7	1	ug/L	J	11/25/97
SJS03-GW4S-002	MCYAN	Beryllium	0.96	1	ug/L	J	11/25/97
SJS03-GW4S-002	MCYAN	Cadmium		0.4	ug/L	U	11/13/97
SJS03-GW4S-002	MCYAN	Calcium	130000	46	ug/L		11/25/97
SJS03-GW4S-002	MCYAN	Chromium		4.6	ug/L	U	11/25/97
SJS03-GW4S-002	MCYAN	Cobalt	38.5	3	ug/L	J	11/25/97
SJS03-GW4S-002	MCYAN	Copper		5.8	ug/L	U	11/25/97
SJS03-GW4S-002	MCYAN	Cyanide		5	ug/L	U	11/7/97
SJS03-GW4S-002	MCYAN	Iron	20100	5	ug/L		11/25/97
SJS03-GW4S-002	MCYAN	Lead	1.4	1	ug/L	J	11/13/97
SJS03-GW4S-002	MCYAN	Magnesium	48900	45	ug/L		11/25/97
SJS03-GW4S-002	MCYAN	Manganese	1320	1	ug/L		11/25/97
SJS03-GW4S-002	MCYAN	Mercury		0.13	ug/L	U	11/13/97
SJS03-GW4S-002	MCYAN	Nickel	46.1	4	ug/L		11/25/97
SJS03-GW4S-002	MCYAN	Potassium	28200	97	ug/L		11/25/97
SJS03-GW4S-002	MCYAN	Selenium		3.3	ug/L	U	11/13/97
SJS03-GW4S-002	MCYAN	Silver	1.7	3	ug/L	J	11/13/97
SJS03-GW4S-002	MCYAN	Sodium	155000	28	ug/L		11/25/97
SJS03-GW4S-002	MCYAN	Thallium		1.5	ug/L	U	11/13/97
SJS03-GW4S-002	MCYAN	Vanadium		6.8	ug/L	U	11/25/97
SJS03-GW4S-002	MCYAN	Zinc	327	3	ug/L		11/25/97
SJS03-GW4S-002	PSPCB	4,4'-DDD		0.1	ug/L	U	11/21/97
SJS03-GW4S-002	PSPCB	4,4'-DDE		0.1	ug/L	U	11/21/97
SJS03-GW4S-002	PSPCB	4,4'-DDT		0.1	ug/L	U	11/21/97
SJS03-GW4S-002	PSPCB	Aldrin		0.05	ug/L	U	11/21/97
SJS03-GW4S-002	PSPCB	alpha-BHC		0.05	ug/L	U	11/21/97
SJS03-GW4S-002	PSPCB	alpha-Chlordane		0.05	ug/L	U	11/21/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS03-GW4S-002	PSPCB	Aroclor-1016		1	ug/L	U	11/21/97
SJS03-GW4S-002	PSPCB	Aroclor-1221		2	ug/L	U	11/21/97
SJS03-GW4S-002	PSPCB	Aroclor-1232		1	ug/L	U	11/21/97
SJS03-GW4S-002	PSPCB	Aroclor-1242		1	ug/L	U	11/21/97
SJS03-GW4S-002	PSPCB	Aroclor-1248		1	ug/L	U	11/21/97
SJS03-GW4S-002	PSPCB	Aroclor-1254		1	ug/L	U	11/21/97
SJS03-GW4S-002	PSPCB	Aroclor-1260		1	ug/L	U	11/21/97
SJS03-GW4S-002	PSPCB	beta-BHC		0.05	ug/L	U	11/21/97
SJS03-GW4S-002	PSPCB	delta-BHC		0.05	ug/L	U	11/21/97
SJS03-GW4S-002	PSPCB	Dieldrin		0.1	ug/L	U	11/21/97
SJS03-GW4S-002	PSPCB	Endosulfan I		0.05	ug/L	U	11/21/97
SJS03-GW4S-002	PSPCB	Endosulfan II		0.1	ug/L	U	11/21/97
SJS03-GW4S-002	PSPCB	Endosulfan Sulfate		0.1	ug/L	U	11/21/97
SJS03-GW4S-002	PSPCB	Endrin		0.1	ug/L	U	11/21/97
SJS03-GW4S-002	PSPCB	Endrin Aldehyde		0.1	ug/L	U	11/21/97
SJS03-GW4S-002	PSPCB	Endrin Ketone		0.1	ug/L	U	11/21/97
SJS03-GW4S-002	PSPCB	gamma-BHC		0.05	ug/L	U	11/21/97
SJS03-GW4S-002	PSPCB	gamma-Chlordane		0.05	ug/L	U	11/21/97
SJS03-GW4S-002	PSPCB	Heptachlor		0.05	ug/L	U	11/21/97
SJS03-GW4S-002	PSPCB	Heptachlor Epoxide		0.05	ug/L	U	11/21/97
SJS03-GW4S-002	PSPCB	Methoxychlor		0.5	ug/L	U	11/21/97
SJS03-GW4S-002	PSPCB	Toxaphene		5	ug/L	U	11/21/97
SJS03-GW4S-002	SVTCL	1,2,4-Trichlorobenzene		10	ug/L	U	11/14/97
SJS03-GW4S-002	SVTCL	1,2-Dichlorobenzene		10	ug/L	U	11/14/97
SJS03-GW4S-002	SVTCL	1,3-Dichlorobenzene		10	ug/L	U	11/14/97
SJS03-GW4S-002	SVTCL	1,4-Dichlorobenzene		10	ug/L	U	11/14/97
SJS03-GW4S-002	SVTCL	2,2'-oxybis(1-Chloropropan		10	ug/L	U	11/14/97
SJS03-GW4S-002	SVTCL	2,4,5-Trichlorophenol		25	ug/L	U	11/14/97
SJS03-GW4S-002	SVTCL	2,4,6-Trichlorophenol		10	ug/L	U	11/14/97
SJS03-GW4S-002	SVTCL	2,4-Dichlorophenol		10	ug/L	U	11/14/97
SJS03-GW4S-002	SVTCL	2,4-Dimethylphenol		10	ug/L	U	11/14/97
SJS03-GW4S-002	SVTCL	2,4-Dinitrophenol		25	ug/L	U	11/14/97
SJS03-GW4S-002	SVTCL	2,4-Dinitrotoluene		10	ug/L	U	11/14/97
SJS03-GW4S-002	SVTCL	2,6-Dinitrotoluene		10	ug/L	U	11/14/97
SJS03-GW4S-002	SVTCL	2-Chloronaphthalene		10	ug/L	U	11/14/97
SJS03-GW4S-002	SVTCL	2-Chlorophenol		10	ug/L	U	11/14/97
SJS03-GW4S-002	SVTCL	2-Methylnaphthalene		10	ug/L	U	11/14/97
SJS03-GW4S-002	SVTCL	2-Methylphenol		10	ug/L	U	11/14/97
SJS03-GW4S-002	SVTCL	2-Nitroaniline		25	ug/L	U	11/14/97
SJS03-GW4S-002	SVTCL	2-Nitrophenol		10	ug/L	U	11/14/97
SJS03-GW4S-002	SVTCL	3,3'-Dichlorobenzidine		10	ug/L	U	11/14/97
SJS03-GW4S-002	SVTCL	3-Nitroaniline		25	ug/L	U	11/14/97
SJS03-GW4S-002	SVTCL	4,6-Dinitro-2-Methylphenol		25	ug/L	U	11/14/97
SJS03-GW4S-002	SVTCL	4-Bromophenol-phenyleth		10	ug/L	U	11/14/97
SJS03-GW4S-002	SVTCL	4-Chloro-3-Methylphenol		10	ug/L	U	11/14/97
SJS03-GW4S-002	SVTCL	4-Chloroaniline		10	ug/L	U	11/14/97
SJS03-GW4S-002	SVTCL	4-Chlorophenyl-phenyleth		10	ug/L	U	11/14/97
SJS03-GW4S-002	SVTCL	4-Methylphenol		10	ug/L	U	11/14/97
SJS03-GW4S-002	SVTCL	4-Nitroaniline		25	ug/L	U	11/14/97
SJS03-GW4S-002	SVTCL	4-Nitrophenol		25	ug/L	U	11/14/97
SJS03-GW4S-002	SVTCL	Acenaphthene		10	ug/L	U	11/14/97
SJS03-GW4S-002	SVTCL	Acenaphthylene		10	ug/L	U	11/14/97
SJS03-GW4S-002	SVTCL	Anthracene		10	ug/L	U	11/14/97
SJS03-GW4S-002	SVTCL	Benzo(a)anthracene		10	ug/L	U	11/14/97
SJS03-GW4S-002	SVTCL	Benzo(a)pyrene		10	ug/L	U	11/14/97
SJS03-GW4S-002	SVTCL	Benzo(b)fluoranthene		10	ug/L	U	11/14/97
SJS03-GW4S-002	SVTCL	Benzo(g,h,i)perylene		10	ug/L	U	11/14/97
SJS03-GW4S-002	SVTCL	Benzo(k)fluoranthene		10	ug/L	U	11/14/97
SJS03-GW4S-002	SVTCL	bis(2-Chloroethoxy)metha		10	ug/L	U	11/14/97
SJS03-GW4S-002	SVTCL	bis(2-chloroethyl)ether		10	ug/L	U	11/14/97
SJS03-GW4S-002	SVTCL	bis(2-Ethylhexyl)phthalate	14	10	ug/L	B	11/14/97
SJS03-GW4S-002	SVTCL	Butylbenzylphthalate		10	ug/L	U	11/14/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS03-GW4S-002	SVTCL	Carbazole		10	ug/L	U	11/14/97
SJS03-GW4S-002	SVTCL	Chrysene		10	ug/L	U	11/14/97
SJS03-GW4S-002	SVTCL	Di-n-butylphthalate		10	ug/L	U	11/14/97
SJS03-GW4S-002	SVTCL	Di-n-Octyl Phthalate		10	ug/L	U	11/14/97
SJS03-GW4S-002	SVTCL	Dibenzo(a,h)anthracene		10	ug/L	U	11/14/97
SJS03-GW4S-002	SVTCL	Dibenzofuran		10	ug/L	U	11/14/97
SJS03-GW4S-002	SVTCL	Diethylphthalate		10	ug/L	U	11/14/97
SJS03-GW4S-002	SVTCL	Dimethyl Phthalate		10	ug/L	U	11/14/97
SJS03-GW4S-002	SVTCL	Fluoranthene		10	ug/L	U	11/14/97
SJS03-GW4S-002	SVTCL	Fluorene		10	ug/L	U	11/14/97
SJS03-GW4S-002	SVTCL	Hexachlorobenzene		10	ug/L	U	11/14/97
SJS03-GW4S-002	SVTCL	Hexachlorobutadiene		10	ug/L	U	11/14/97
SJS03-GW4S-002	SVTCL	Hexachlorocyclopentadie		10	ug/L	U	11/14/97
SJS03-GW4S-002	SVTCL	Hexachloroethane		10	ug/L	U	11/14/97
SJS03-GW4S-002	SVTCL	Indeno(1,2,3-cd)pyrene		10	ug/L	U	11/14/97
SJS03-GW4S-002	SVTCL	Isophorone		10	ug/L	U	11/14/97
SJS03-GW4S-002	SVTCL	N-Nitroso-Di-n-Propylamine		10	ug/L	U	11/14/97
SJS03-GW4S-002	SVTCL	N-Nitrosodiphenylamine		10	ug/L	U	11/14/97
SJS03-GW4S-002	SVTCL	Naphthalene		10	ug/L	U	11/14/97
SJS03-GW4S-002	SVTCL	Nitrobenzene		10	ug/L	U	11/14/97
SJS03-GW4S-002	SVTCL	Pentachlorophenol		25	ug/L	U	11/14/97
SJS03-GW4S-002	SVTCL	Phenanthrene		10	ug/L	U	11/14/97
SJS03-GW4S-002	SVTCL	Phenol		10	ug/L	U	11/14/97
SJS03-GW4S-002	SVTCL	Pyrene		10	ug/L	U	11/14/97
SJS03-GW4S-002	VCLOW	1,1,1-Trichloroethane		1	ug/L	U	11/10/97
SJS03-GW4S-002	VCLOW	1,1,2,2-Tetrachloroethane		1	ug/L	U	11/10/97
SJS03-GW4S-002	VCLOW	1,1,2-Trichloroethane		1	ug/L	U	11/10/97
SJS03-GW4S-002	VCLOW	1,1-Dichloroethane		1	ug/L	U	11/10/97
SJS03-GW4S-002	VCLOW	1,1-Dichloroethene		1	ug/L	U	11/10/97
SJS03-GW4S-002	VCLOW	1,2,4-Trichlorobenzene		1	ug/L	U	11/10/97
SJS03-GW4S-002	VCLOW	1,2-Dibromo-3-chloropropa		1	ug/L	U	11/10/97
SJS03-GW4S-002	VCLOW	1,2-Dibromoethane		1	ug/L	U	11/10/97
SJS03-GW4S-002	VCLOW	1,2-Dichlorobenzene		1	ug/L	U	11/10/97
SJS03-GW4S-002	VCLOW	1,2-Dichloroethane		1	ug/L	U	11/10/97
SJS03-GW4S-002	VCLOW	1,2-Dichloropropane		1	ug/L	U	11/10/97
SJS03-GW4S-002	VCLOW	1,3-Dichlorobenzene		1	ug/L	U	11/10/97
SJS03-GW4S-002	VCLOW	1,4-Dichlorobenzene		1	ug/L	U	11/10/97
SJS03-GW4S-002	VCLOW	2-Hexanone		5	ug/L	U	11/10/97
SJS03-GW4S-002	VCLOW	4-Methyl-2-Pentanone		5	ug/L	U	11/10/97
SJS03-GW4S-002	VCLOW	Acetone		5	ug/L	U	11/10/97
SJS03-GW4S-002	VCLOW	Benzene		1	ug/L	U	11/10/97
SJS03-GW4S-002	VCLOW	Bromochloromethane		1	ug/L	U	11/10/97
SJS03-GW4S-002	VCLOW	Bromodichloromethane		1	ug/L	U	11/10/97
SJS03-GW4S-002	VCLOW	Bromoform		1	ug/L	U	11/10/97
SJS03-GW4S-002	VCLOW	Bromomethane		1	ug/L	U	11/10/97
SJS03-GW4S-002	VCLOW	Carbon Disulfide		1	ug/L	U	11/10/97
SJS03-GW4S-002	VCLOW	Carbon Tetrachloride		1	ug/L	U	11/10/97
SJS03-GW4S-002	VCLOW	Chlorobenzene		1	ug/L	U	11/10/97
SJS03-GW4S-002	VCLOW	Chloroethane		1	ug/L	U	11/10/97
SJS03-GW4S-002	VCLOW	Chloroform		1	ug/L	U	11/10/97
SJS03-GW4S-002	VCLOW	Chloromethane		1	ug/L	U	11/10/97
SJS03-GW4S-002	VCLOW	cis-1,2-Dichloroethene		1	ug/L	U	11/10/97
SJS03-GW4S-002	VCLOW	cis-1,3-Dichloropropene		1	ug/L	U	11/10/97
SJS03-GW4S-002	VCLOW	Dibromochloromethane		1	ug/L	U	11/10/97
SJS03-GW4S-002	VCLOW	Ethylbenzene		1	ug/L	U	11/10/97
SJS03-GW4S-002	VCLOW	Methylene Chloride	3	2	ug/L	B	11/10/97
SJS03-GW4S-002	VCLOW	Styrene		1	ug/L	U	11/10/97
SJS03-GW4S-002	VCLOW	Tetrachloroethene		1	ug/L	U	11/10/97
SJS03-GW4S-002	VCLOW	Toluene		1	ug/L	U	11/10/97
SJS03-GW4S-002	VCLOW	Total Xylenes		1	ug/L	U	11/10/97
SJS03-GW4S-002	VCLOW	Trans-1,2-Dichloroethene		1	ug/L	U	11/10/97
SJS03-GW4S-002	VCLOW	trans-1,3-Dichloropropene		1	ug/L	U	11/10/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS03-GW4S-002	VCLOW	Trichloroethene		1	ug/L	U	11/10/97
SJS03-GW4S-002	VCLOW	Vinyl Chloride		1	ug/L	U	11/10/97
SJS03-GW4S-002F	METAL	Aluminum		38.1	ug/L	U	11/25/97
SJS03-GW4S-002F	METAL	Antimony		1.7	ug/L	U	11/13/97
SJS03-GW4S-002F	METAL	Arsenic		3.2	ug/L	U	11/13/97
SJS03-GW4S-002F	METAL	Barium	23.6	1	ug/L	J	11/25/97
SJS03-GW4S-002F	METAL	Beryllium	1.2	1	ug/L	J	11/25/97
SJS03-GW4S-002F	METAL	Cadmium		0.4	ug/L	U	11/13/97
SJS03-GW4S-002F	METAL	Calcium	139000	46	ug/L		11/25/97
SJS03-GW4S-002F	METAL	Chromium		4.6	ug/L	U	11/25/97
SJS03-GW4S-002F	METAL	Cobalt	42.9	3	ug/L	J	11/25/97
SJS03-GW4S-002F	METAL	Copper		5.8	ug/L	U	11/25/97
SJS03-GW4S-002F	METAL	Iron	21400	5	ug/L		11/25/97
SJS03-GW4S-002F	METAL	Lead		1.3	ug/L	U	11/13/97
SJS03-GW4S-002F	METAL	Magnesium	52500	45	ug/L		11/25/97
SJS03-GW4S-002F	METAL	Manganese	1420	1	ug/L		11/25/97
SJS03-GW4S-002F	METAL	Mercury		0.13	ug/L	U	11/13/97
SJS03-GW4S-002F	METAL	Nickel	50.5	4	ug/L		11/25/97
SJS03-GW4S-002F	METAL	Potassium	30300	97	ug/L		11/25/97
SJS03-GW4S-002F	METAL	Selenium		3.3	ug/L	U	11/13/97
SJS03-GW4S-002F	METAL	Silver	1.6	3	ug/L	B	11/13/97
SJS03-GW4S-002F	METAL	Sodium	168000	28	ug/L		11/25/97
SJS03-GW4S-002F	METAL	Thallium	1.5	2	ug/L	B	11/13/97
SJS03-GW4S-002F	METAL	Vanadium		6.8	ug/L	U	11/25/97
SJS03-GW4S-002F	METAL	Zinc	325	3	ug/L		11/25/97
SJS03-GW4S-002FP	METAL	Aluminum		38.1	ug/L	U	11/25/97
SJS03-GW4S-002FP	METAL	Antimony		1.7	ug/L	U	11/13/97
SJS03-GW4S-002FP	METAL	Arsenic		3.2	ug/L	U	11/13/97
SJS03-GW4S-002FP	METAL	Barium	22.1	1	ug/L	J	11/25/97
SJS03-GW4S-002FP	METAL	Beryllium	1.2	1	ug/L	J	11/25/97
SJS03-GW4S-002FP	METAL	Cadmium		0.4	ug/L	U	11/13/97
SJS03-GW4S-002FP	METAL	Calcium	133000	46	ug/L		11/25/97
SJS03-GW4S-002FP	METAL	Chromium		4.6	ug/L	U	11/25/97
SJS03-GW4S-002FP	METAL	Cobalt	41.8	3	ug/L	J	11/25/97
SJS03-GW4S-002FP	METAL	Copper		5.8	ug/L	U	11/25/97
SJS03-GW4S-002FP	METAL	Iron	20700	5	ug/L		11/25/97
SJS03-GW4S-002FP	METAL	Lead		1.3	ug/L	U	11/13/97
SJS03-GW4S-002FP	METAL	Magnesium	50600	45	ug/L		11/25/97
SJS03-GW4S-002FP	METAL	Manganese	1370	1	ug/L		11/25/97
SJS03-GW4S-002FP	METAL	Mercury		0.13	ug/L	U	11/13/97
SJS03-GW4S-002FP	METAL	Nickel	45.7	4	ug/L		11/25/97
SJS03-GW4S-002FP	METAL	Potassium	29000	97	ug/L		11/25/97
SJS03-GW4S-002FP	METAL	Selenium		3.3	ug/L	U	11/13/97
SJS03-GW4S-002FP	METAL	Silver	2.7	3	ug/L	B	11/13/97
SJS03-GW4S-002FP	METAL	Sodium	161000	28	ug/L		11/25/97
SJS03-GW4S-002FP	METAL	Thallium		1.5	ug/L	U	11/13/97
SJS03-GW4S-002FP	METAL	Vanadium		6.8	ug/L	U	11/25/97
SJS03-GW4S-002FP	METAL	Zinc	311	3	ug/L		11/25/97
SJS03-GW4S-002P	CTOTP	Total Phosphorous (as P)	0.45	0.25	mg/L		11/14/97
SJS03-GW4S-002P	MCYAN	Aluminum		38.1	ug/L	U	11/25/97
SJS03-GW4S-002P	MCYAN	Antimony		1.7	ug/L	U	11/13/97
SJS03-GW4S-002P	MCYAN	Arsenic		3.2	ug/L	U	11/13/97
SJS03-GW4S-002P	MCYAN	Barium	20.7	1	ug/L	J	11/25/97
SJS03-GW4S-002P	MCYAN	Beryllium	1.2	1	ug/L	J	11/25/97
SJS03-GW4S-002P	MCYAN	Cadmium		0.4	ug/L	U	11/13/97
SJS03-GW4S-002P	MCYAN	Calcium	129000	46	ug/L		11/25/97
SJS03-GW4S-002P	MCYAN	Chromium		4.6	ug/L	U	11/25/97
SJS03-GW4S-002P	MCYAN	Cobalt	36.8	3	ug/L	J	11/25/97
SJS03-GW4S-002P	MCYAN	Copper		5.8	ug/L	U	11/25/97
SJS03-GW4S-002P	MCYAN	Cyanide		5	ug/L	U	11/7/97
SJS03-GW4S-002P	MCYAN	Iron	20000	5	ug/L		11/25/97
SJS03-GW4S-002P	MCYAN	Lead		1.3	ug/L	U	11/13/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS03-GW4S-002P	MCYAN	Magnesium	48700	45	ug/L		11/25/97
SJS03-GW4S-002P	MCYAN	Manganese	1320	1	ug/L		11/25/97
SJS03-GW4S-002P	MCYAN	Mercury		0.13	ug/L	U	11/13/97
SJS03-GW4S-002P	MCYAN	Nickel	43.1	4	ug/L		11/25/97
SJS03-GW4S-002P	MCYAN	Potassium	27800	97	ug/L		11/25/97
SJS03-GW4S-002P	MCYAN	Selenium		3.3	ug/L	U	11/13/97
SJS03-GW4S-002P	MCYAN	Silver	2	3	ug/L	J	11/13/97
SJS03-GW4S-002P	MCYAN	Sodium	154000	28	ug/L		11/25/97
SJS03-GW4S-002P	MCYAN	Thallium		1.5	ug/L	U	11/13/97
SJS03-GW4S-002P	MCYAN	Vanadium		6.8	ug/L	U	11/25/97
SJS03-GW4S-002P	MCYAN	Zinc	327	3	ug/L		11/25/97
SJS03-GW4S-002P	PSPCB	4,4'-DDD		0.1	ug/L	U	11/21/97
SJS03-GW4S-002P	PSPCB	4,4'-DDE		0.1	ug/L	U	11/21/97
SJS03-GW4S-002P	PSPCB	4,4'-DDT		0.1	ug/L	U	11/21/97
SJS03-GW4S-002P	PSPCB	Aldrin		0.05	ug/L	U	11/21/97
SJS03-GW4S-002P	PSPCB	alpha-BHC		0.05	ug/L	U	11/21/97
SJS03-GW4S-002P	PSPCB	alpha-Chlordane		0.05	ug/L	U	11/21/97
SJS03-GW4S-002P	PSPCB	Aroclor-1016		1	ug/L	U	11/21/97
SJS03-GW4S-002P	PSPCB	Aroclor-1221		2	ug/L	U	11/21/97
SJS03-GW4S-002P	PSPCB	Aroclor-1232		1	ug/L	U	11/21/97
SJS03-GW4S-002P	PSPCB	Aroclor-1242		1	ug/L	U	11/21/97
SJS03-GW4S-002P	PSPCB	Aroclor-1248		1	ug/L	U	11/21/97
SJS03-GW4S-002P	PSPCB	Aroclor-1254		1	ug/L	U	11/21/97
SJS03-GW4S-002P	PSPCB	Aroclor-1260		1	ug/L	U	11/21/97
SJS03-GW4S-002P	PSPCB	beta-BHC		0.05	ug/L	U	11/21/97
SJS03-GW4S-002P	PSPCB	delta-BHC		0.05	ug/L	U	11/21/97
SJS03-GW4S-002P	PSPCB	Dieldrin		0.1	ug/L	U	11/21/97
SJS03-GW4S-002P	PSPCB	Endosulfan I		0.05	ug/L	U	11/21/97
SJS03-GW4S-002P	PSPCB	Endosulfan II		0.1	ug/L	U	11/21/97
SJS03-GW4S-002P	PSPCB	Endosulfan Sulfate		0.1	ug/L	U	11/21/97
SJS03-GW4S-002P	PSPCB	Endrin		0.1	ug/L	U	11/21/97
SJS03-GW4S-002P	PSPCB	Endrin Aldehyde		0.1	ug/L	U	11/21/97
SJS03-GW4S-002P	PSPCB	Endrin Ketone		0.1	ug/L	U	11/21/97
SJS03-GW4S-002P	PSPCB	gamma-BHC		0.05	ug/L	U	11/21/97
SJS03-GW4S-002P	PSPCB	gamma-Chlordane		0.05	ug/L	U	11/21/97
SJS03-GW4S-002P	PSPCB	Heptachlor		0.05	ug/L	U	11/21/97
SJS03-GW4S-002P	PSPCB	Heptachlor Epoxide		0.05	ug/L	U	11/21/97
SJS03-GW4S-002P	PSPCB	Methoxychlor		0.5	ug/L	U	11/21/97
SJS03-GW4S-002P	PSPCB	Toxaphene		5	ug/L	U	11/21/97
SJS03-GW4S-002P	SVTCL	1,2,4-Trichlorobenzene		10	ug/L	U	11/14/97
SJS03-GW4S-002P	SVTCL	1,2-Dichlorobenzene		10	ug/L	U	11/14/97
SJS03-GW4S-002P	SVTCL	1,3-Dichlorobenzene		10	ug/L	U	11/14/97
SJS03-GW4S-002P	SVTCL	1,4-Dichlorobenzene		10	ug/L	U	11/14/97
SJS03-GW4S-002P	SVTCL	2,2'-oxybis(1-Chloropropan		10	ug/L	U	11/14/97
SJS03-GW4S-002P	SVTCL	2,4,5-Trichlorophenol		25	ug/L	U	11/14/97
SJS03-GW4S-002P	SVTCL	2,4,6-Trichlorophenol		10	ug/L	U	11/14/97
SJS03-GW4S-002P	SVTCL	2,4-Dichlorophenol		10	ug/L	U	11/14/97
SJS03-GW4S-002P	SVTCL	2,4-Dimethylphenol		10	ug/L	U	11/14/97
SJS03-GW4S-002P	SVTCL	2,4-Dinitrophenol		25	ug/L	U	11/14/97
SJS03-GW4S-002P	SVTCL	2,4-Dinitrotoluene		10	ug/L	U	11/14/97
SJS03-GW4S-002P	SVTCL	2,6-Dinitrotoluene		10	ug/L	U	11/14/97
SJS03-GW4S-002P	SVTCL	2-Chloronaphthalene		10	ug/L	U	11/14/97
SJS03-GW4S-002P	SVTCL	2-Chlorophenol		10	ug/L	U	11/14/97
SJS03-GW4S-002P	SVTCL	2-Methylnaphthalene		10	ug/L	U	11/14/97
SJS03-GW4S-002P	SVTCL	2-Methylphenol		10	ug/L	U	11/14/97
SJS03-GW4S-002P	SVTCL	2-Nitroaniline		25	ug/L	U	11/14/97
SJS03-GW4S-002P	SVTCL	2-Nitrophenol		10	ug/L	U	11/14/97
SJS03-GW4S-002P	SVTCL	3,3'-Dichlorobenzidine		10	ug/L	U	11/14/97
SJS03-GW4S-002P	SVTCL	3-Nitroaniline		25	ug/L	U	11/14/97
SJS03-GW4S-002P	SVTCL	4,6-Dinitro-2-Methylphenol		25	ug/L	U	11/14/97
SJS03-GW4S-002P	SVTCL	4-Bromophenol-phenyleth		10	ug/L	U	11/14/97
SJS03-GW4S-002P	SVTCL	4-Chloro-3-Methylphenol		10	ug/L	U	11/14/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS03-GW4S-002P	SVTCL	4-Chloroaniline		10	ug/L	U	11/14/97
SJS03-GW4S-002P	SVTCL	4-Chlorophenyl-phenyleth		10	ug/L	U	11/14/97
SJS03-GW4S-002P	SVTCL	4-Methylphenol		10	ug/L	U	11/14/97
SJS03-GW4S-002P	SVTCL	4-Nitroaniline		25	ug/L	U	11/14/97
SJS03-GW4S-002P	SVTCL	4-Nitrophenol		25	ug/L	U	11/14/97
SJS03-GW4S-002P	SVTCL	Acenaphthene		10	ug/L	U	11/14/97
SJS03-GW4S-002P	SVTCL	Acenaphthylene		10	ug/L	U	11/14/97
SJS03-GW4S-002P	SVTCL	Anthracene		10	ug/L	U	11/14/97
SJS03-GW4S-002P	SVTCL	Benzo(a)anthracene		10	ug/L	U	11/14/97
SJS03-GW4S-002P	SVTCL	Benzo(a)pyrene		10	ug/L	U	11/14/97
SJS03-GW4S-002P	SVTCL	Benzo(b)fluoranthene		10	ug/L	U	11/14/97
SJS03-GW4S-002P	SVTCL	Benzo(g,h,i)perylene		10	ug/L	U	11/14/97
SJS03-GW4S-002P	SVTCL	Benzo(k)fluoranthene		10	ug/L	U	11/14/97
SJS03-GW4S-002P	SVTCL	bis(2-Chloroethoxy)metha		10	ug/L	U	11/14/97
SJS03-GW4S-002P	SVTCL	bis(2-chloroethyl)ether		10	ug/L	U	11/14/97
SJS03-GW4S-002P	SVTCL	bis(2-Ethylhexyl)phthalate	7	10	ug/L	B	11/14/97
SJS03-GW4S-002P	SVTCL	Butylbenzylphthalate		10	ug/L	U	11/14/97
SJS03-GW4S-002P	SVTCL	Carbazole		10	ug/L	U	11/14/97
SJS03-GW4S-002P	SVTCL	Chrysene		10	ug/L	U	11/14/97
SJS03-GW4S-002P	SVTCL	Di-n-butylphthalate		10	ug/L	U	11/14/97
SJS03-GW4S-002P	SVTCL	Di-n-Octyl Phthalate		10	ug/L	U	11/14/97
SJS03-GW4S-002P	SVTCL	Dibenzo(a,h)anthracene		10	ug/L	U	11/14/97
SJS03-GW4S-002P	SVTCL	Dibenzofuran		10	ug/L	U	11/14/97
SJS03-GW4S-002P	SVTCL	Diethylphthalate		10	ug/L	U	11/14/97
SJS03-GW4S-002P	SVTCL	Dimethyl Phthalate		10	ug/L	U	11/14/97
SJS03-GW4S-002P	SVTCL	Fluoranthene		10	ug/L	U	11/14/97
SJS03-GW4S-002P	SVTCL	Fluorene		10	ug/L	U	11/14/97
SJS03-GW4S-002P	SVTCL	Hexachlorobenzene		10	ug/L	U	11/14/97
SJS03-GW4S-002P	SVTCL	Hexachlorobutadiene		10	ug/L	U	11/14/97
SJS03-GW4S-002P	SVTCL	Hexachlorocyclopentadie		10	ug/L	U	11/14/97
SJS03-GW4S-002P	SVTCL	Hexachloroethane		10	ug/L	U	11/14/97
SJS03-GW4S-002P	SVTCL	Indeno(1,2,3-cd)pyrene		10	ug/L	U	11/14/97
SJS03-GW4S-002P	SVTCL	Isophorone		10	ug/L	U	11/14/97
SJS03-GW4S-002P	SVTCL	N-Nitroso-Di-n-Propylamine		10	ug/L	U	11/14/97
SJS03-GW4S-002P	SVTCL	N-Nitrosodiphenylamine		10	ug/L	U	11/14/97
SJS03-GW4S-002P	SVTCL	Naphthalene		10	ug/L	U	11/14/97
SJS03-GW4S-002P	SVTCL	Nitrobenzene		10	ug/L	U	11/14/97
SJS03-GW4S-002P	SVTCL	Pentachlorophenol		25	ug/L	U	11/14/97
SJS03-GW4S-002P	SVTCL	Phenanthrene		10	ug/L	U	11/14/97
SJS03-GW4S-002P	SVTCL	Phenol		10	ug/L	U	11/14/97
SJS03-GW4S-002P	SVTCL	Pyrene		10	ug/L	U	11/14/97
SJS03-GW4S-002P	VCLOW	1,1,1-Trichloroethane		1	ug/L	U	11/10/97
SJS03-GW4S-002P	VCLOW	1,1,2,2-Tetrachloroethane		1	ug/L	U	11/10/97
SJS03-GW4S-002P	VCLOW	1,1,2-Trichloroethane		1	ug/L	U	11/10/97
SJS03-GW4S-002P	VCLOW	1,1-Dichloroethane		1	ug/L	U	11/10/97
SJS03-GW4S-002P	VCLOW	1,1-Dichloroethene		1	ug/L	U	11/10/97
SJS03-GW4S-002P	VCLOW	1,2,4-Trichlorobenzene		1	ug/L	U	11/10/97
SJS03-GW4S-002P	VCLOW	1,2-Dibromo-3-chloropropa		1	ug/L	U	11/10/97
SJS03-GW4S-002P	VCLOW	1,2-Dibromoethane		1	ug/L	U	11/10/97
SJS03-GW4S-002P	VCLOW	1,2-Dichlorobenzene		1	ug/L	U	11/10/97
SJS03-GW4S-002P	VCLOW	1,2-Dichloroethane		1	ug/L	U	11/10/97
SJS03-GW4S-002P	VCLOW	1,2-Dichloropropane		1	ug/L	U	11/10/97
SJS03-GW4S-002P	VCLOW	1,3-Dichlorobenzene		1	ug/L	U	11/10/97
SJS03-GW4S-002P	VCLOW	1,4-Dichlorobenzene		1	ug/L	U	11/10/97
SJS03-GW4S-002P	VCLOW	2-Hexanone		5	ug/L	U	11/10/97
SJS03-GW4S-002P	VCLOW	4-Methyl-2-Pentanone		5	ug/L	U	11/10/97
SJS03-GW4S-002P	VCLOW	Acetone		5	ug/L	U	11/10/97
SJS03-GW4S-002P	VCLOW	Benzene		1	ug/L	U	11/10/97
SJS03-GW4S-002P	VCLOW	Bromochloromethane		1	ug/L	U	11/10/97
SJS03-GW4S-002P	VCLOW	Bromodichloromethane		1	ug/L	U	11/10/97
SJS03-GW4S-002P	VCLOW	Bromoform		1	ug/L	U	11/10/97
SJS03-GW4S-002P	VCLOW	Bromomethane		1	ug/L	U	11/10/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS03-GW4S-002P	VCLOW	Carbon Disulfide		1	ug/L	U	11/10/97
SJS03-GW4S-002P	VCLOW	Carbon Tetrachloride		1	ug/L	U	11/10/97
SJS03-GW4S-002P	VCLOW	Chlorobenzene		1	ug/L	U	11/10/97
SJS03-GW4S-002P	VCLOW	Chloroethane		1	ug/L	U	11/10/97
SJS03-GW4S-002P	VCLOW	Chloroform		1	ug/L	U	11/10/97
SJS03-GW4S-002P	VCLOW	Chloromethane		1	ug/L	U	11/10/97
SJS03-GW4S-002P	VCLOW	cis-1,2-Dichloroethene		1	ug/L	U	11/10/97
SJS03-GW4S-002P	VCLOW	cis-1,3-Dichloropropene		1	ug/L	U	11/10/97
SJS03-GW4S-002P	VCLOW	Dibromochloromethane		1	ug/L	U	11/10/97
SJS03-GW4S-002P	VCLOW	Ethylbenzene		1	ug/L	U	11/10/97
SJS03-GW4S-002P	VCLOW	Methylene Chloride	2	2	ug/L	B	11/10/97
SJS03-GW4S-002P	VCLOW	Styrene		1	ug/L	U	11/10/97
SJS03-GW4S-002P	VCLOW	Tetrachloroethene		1	ug/L	U	11/10/97
SJS03-GW4S-002P	VCLOW	Toluene		1	ug/L	U	11/10/97
SJS03-GW4S-002P	VCLOW	Total Xylenes		1	ug/L	U	11/10/97
SJS03-GW4S-002P	VCLOW	Trans-1,2-Dichloroethene		1	ug/L	U	11/10/97
SJS03-GW4S-002P	VCLOW	trans-1,3-Dichloropropene		1	ug/L	U	11/10/97
SJS03-GW4S-002P	VCLOW	Trichloroethene		1	ug/L	U	11/10/97
SJS03-GW4S-002P	VCLOW	Vinyl Chloride		1	ug/L	U	11/10/97
SJS04-GW1D-002	CTOTP	Total Phosphorous (as P)	0.397	0.05	mg/L		11/13/97
SJS04-GW1D-002	MCYAN	Aluminum	39.2	29	ug/L	B	11/24/97
SJS04-GW1D-002	MCYAN	Antimony		1.7	ug/L	U	11/17/97
SJS04-GW1D-002	MCYAN	Arsenic		3.2	ug/L	U	11/17/97
SJS04-GW1D-002	MCYAN	Barium	404	1	ug/L		11/24/97
SJS04-GW1D-002	MCYAN	Beryllium	0.77	1	ug/L	B	11/24/97
SJS04-GW1D-002	MCYAN	Cadmium		0.4	ug/L	U	11/17/97
SJS04-GW1D-002	MCYAN	Calcium	218000	46	ug/L		11/24/97
SJS04-GW1D-002	MCYAN	Chromium	5	4	ug/L	L	11/24/97
SJS04-GW1D-002	MCYAN	Cobalt		6	ug/L	U	11/24/97
SJS04-GW1D-002	MCYAN	Copper		5.8	ug/L	UL	11/24/97
SJS04-GW1D-002	MCYAN	Cyanide		5	ug/L	U	11/7/97
SJS04-GW1D-002	MCYAN	Iron	38100	5	ug/L		11/24/97
SJS04-GW1D-002	MCYAN	Lead		1.3	ug/L	U	11/17/97
SJS04-GW1D-002	MCYAN	Magnesium	115000	45	ug/L		11/24/97
SJS04-GW1D-002	MCYAN	Manganese	8880	1	ug/L		11/24/97
SJS04-GW1D-002	MCYAN	Mercury		0.13	ug/L	U	11/13/97
SJS04-GW1D-002	MCYAN	Nickel		6.3	ug/L	U	11/24/97
SJS04-GW1D-002	MCYAN	Potassium	24900	97	ug/L		11/24/97
SJS04-GW1D-002	MCYAN	Selenium		3.3	ug/L	U	11/17/97
SJS04-GW1D-002	MCYAN	Silver	3	3	ug/L	B	11/17/97
SJS04-GW1D-002	MCYAN	Sodium	495000	28	ug/L		11/26/97
SJS04-GW1D-002	MCYAN	Thallium		1.5	ug/L	U	11/17/97
SJS04-GW1D-002	MCYAN	Vanadium		6.8	ug/L	U	11/24/97
SJS04-GW1D-002	MCYAN	Zinc	10.1	3	ug/L	B	11/24/97
SJS04-GW1D-002	PSPCB	4,4'-DDD		0.1	ug/L	U	11/21/97
SJS04-GW1D-002	PSPCB	4,4'-DDE		0.1	ug/L	U	11/21/97
SJS04-GW1D-002	PSPCB	4,4'-DDT		0.1	ug/L	U	11/21/97
SJS04-GW1D-002	PSPCB	Aldrin		0.05	ug/L	U	11/21/97
SJS04-GW1D-002	PSPCB	alpha-BHC		0.05	ug/L	U	11/21/97
SJS04-GW1D-002	PSPCB	alpha-Chlordane		0.05	ug/L	U	11/21/97
SJS04-GW1D-002	PSPCB	Aroclor-1016		1	ug/L	U	11/21/97
SJS04-GW1D-002	PSPCB	Aroclor-1221		2	ug/L	U	11/21/97
SJS04-GW1D-002	PSPCB	Aroclor-1232		1	ug/L	U	11/21/97
SJS04-GW1D-002	PSPCB	Aroclor-1242		1	ug/L	U	11/21/97
SJS04-GW1D-002	PSPCB	Aroclor-1248		1	ug/L	U	11/21/97
SJS04-GW1D-002	PSPCB	Aroclor-1254		1	ug/L	U	11/21/97
SJS04-GW1D-002	PSPCB	Aroclor-1260		1	ug/L	U	11/21/97
SJS04-GW1D-002	PSPCB	beta-BHC		0.05	ug/L	U	11/21/97
SJS04-GW1D-002	PSPCB	delta-BHC		0.05	ug/L	U	11/21/97
SJS04-GW1D-002	PSPCB	Dieldrin		0.1	ug/L	U	11/21/97
SJS04-GW1D-002	PSPCB	Endosulfan I		0.05	ug/L	U	11/21/97
SJS04-GW1D-002	PSPCB	Endosulfan II		0.1	ug/L	U	11/21/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS04-GW1D-002	PSPCB	Endosulfan Sulfate		0.1	ug/L	U	11/21/97
SJS04-GW1D-002	PSPCB	Endrin		0.1	ug/L	U	11/21/97
SJS04-GW1D-002	PSPCB	Endrin Aldehyde		0.1	ug/L	U	11/21/97
SJS04-GW1D-002	PSPCB	Endrin Ketone		0.1	ug/L	U	11/21/97
SJS04-GW1D-002	PSPCB	gamma-BHC		0.05	ug/L	U	11/21/97
SJS04-GW1D-002	PSPCB	gamma-Chlordane		0.05	ug/L	U	11/21/97
SJS04-GW1D-002	PSPCB	Heptachlor		0.05	ug/L	U	11/21/97
SJS04-GW1D-002	PSPCB	Heptachlor Epoxide		0.05	ug/L	U	11/21/97
SJS04-GW1D-002	PSPCB	Methoxychlor		0.5	ug/L	U	11/21/97
SJS04-GW1D-002	PSPCB	Toxaphene		5	ug/L	U	11/21/97
SJS04-GW1D-002	SVTCL	1,2,4-Trichlorobenzene		10	ug/L	U	11/14/97
SJS04-GW1D-002	SVTCL	1,2-Dichlorobenzene		10	ug/L	U	11/14/97
SJS04-GW1D-002	SVTCL	1,3-Dichlorobenzene		10	ug/L	U	11/14/97
SJS04-GW1D-002	SVTCL	1,4-Dichlorobenzene		10	ug/L	U	11/14/97
SJS04-GW1D-002	SVTCL	2,2'-oxybis(1-Chloropropan		10	ug/L	U	11/14/97
SJS04-GW1D-002	SVTCL	2,4,5-Trichlorophenol		25	ug/L	U	11/14/97
SJS04-GW1D-002	SVTCL	2,4,6-Trichlorophenol		10	ug/L	U	11/14/97
SJS04-GW1D-002	SVTCL	2,4-Dichlorophenol		10	ug/L	U	11/14/97
SJS04-GW1D-002	SVTCL	2,4-Dimethylphenol		10	ug/L	U	11/14/97
SJS04-GW1D-002	SVTCL	2,4-Dinitrophenol		25	ug/L	U	11/14/97
SJS04-GW1D-002	SVTCL	2,4-Dinitrotoluene		10	ug/L	U	11/14/97
SJS04-GW1D-002	SVTCL	2,6-Dinitrotoluene		10	ug/L	U	11/14/97
SJS04-GW1D-002	SVTCL	2-Chloronaphthalene		10	ug/L	U	11/14/97
SJS04-GW1D-002	SVTCL	2-Chlorophenol		10	ug/L	U	11/14/97
SJS04-GW1D-002	SVTCL	2-Methylnaphthalene		10	ug/L	U	11/14/97
SJS04-GW1D-002	SVTCL	2-Methylphenol		10	ug/L	U	11/14/97
SJS04-GW1D-002	SVTCL	2-Nitroaniline		25	ug/L	U	11/14/97
SJS04-GW1D-002	SVTCL	2-Nitrophenol		10	ug/L	U	11/14/97
SJS04-GW1D-002	SVTCL	3,3'-Dichlorobenzidine		10	ug/L	U	11/14/97
SJS04-GW1D-002	SVTCL	3-Nitroaniline		25	ug/L	U	11/14/97
SJS04-GW1D-002	SVTCL	4,6-Dinitro-2-Methylphenol		25	ug/L	U	11/14/97
SJS04-GW1D-002	SVTCL	4-Bromophenol-phenyleth		10	ug/L	U	11/14/97
SJS04-GW1D-002	SVTCL	4-Chloro-3-Methylphenol		10	ug/L	U	11/14/97
SJS04-GW1D-002	SVTCL	4-Chloroaniline		10	ug/L	U	11/14/97
SJS04-GW1D-002	SVTCL	4-Chlorophenyl-phenyleth		10	ug/L	U	11/14/97
SJS04-GW1D-002	SVTCL	4-Methylphenol		10	ug/L	U	11/14/97
SJS04-GW1D-002	SVTCL	4-Nitroaniline		25	ug/L	U	11/14/97
SJS04-GW1D-002	SVTCL	4-Nitrophenol		25	ug/L	U	11/14/97
SJS04-GW1D-002	SVTCL	Acenaphthene		10	ug/L	U	11/14/97
SJS04-GW1D-002	SVTCL	Acenaphthylene		10	ug/L	U	11/14/97
SJS04-GW1D-002	SVTCL	Anthracene		10	ug/L	U	11/14/97
SJS04-GW1D-002	SVTCL	Benzo(a)anthracene		10	ug/L	U	11/14/97
SJS04-GW1D-002	SVTCL	Benzo(a)pyrene		10	ug/L	U	11/14/97
SJS04-GW1D-002	SVTCL	Benzo(b)fluoranthene		10	ug/L	U	11/14/97
SJS04-GW1D-002	SVTCL	Benzo(g,h,i)perylene		10	ug/L	U	11/14/97
SJS04-GW1D-002	SVTCL	Benzo(k)fluoranthene		10	ug/L	U	11/14/97
SJS04-GW1D-002	SVTCL	bis(2-Chloroethoxy)metha		10	ug/L	U	11/14/97
SJS04-GW1D-002	SVTCL	bis(2-chloroethyl)ether		10	ug/L	U	11/14/97
SJS04-GW1D-002	SVTCL	bis(2-Ethylhexyl)phthalate		10	ug/L	U	11/14/97
SJS04-GW1D-002	SVTCL	Butylbenzylphthalate		10	ug/L	U	11/14/97
SJS04-GW1D-002	SVTCL	Carbazole		10	ug/L	U	11/14/97
SJS04-GW1D-002	SVTCL	Chrysene		10	ug/L	U	11/14/97
SJS04-GW1D-002	SVTCL	Di-n-butylphthalate		10	ug/L	U	11/14/97
SJS04-GW1D-002	SVTCL	Di-n-Octyl Phthalate		10	ug/L	U	11/14/97
SJS04-GW1D-002	SVTCL	Dibenzo(a,h)anthracene		10	ug/L	U	11/14/97
SJS04-GW1D-002	SVTCL	Dibenzofuran		10	ug/L	U	11/14/97
SJS04-GW1D-002	SVTCL	Diethylphthalate		10	ug/L	U	11/14/97
SJS04-GW1D-002	SVTCL	Dimethyl Phthalate		10	ug/L	U	11/14/97
SJS04-GW1D-002	SVTCL	Fluoranthene		10	ug/L	U	11/14/97
SJS04-GW1D-002	SVTCL	Fluorene		10	ug/L	U	11/14/97
SJS04-GW1D-002	SVTCL	Hexachlorobenzene		10	ug/L	U	11/14/97
SJS04-GW1D-002	SVTCL	Hexachlorobutadiene		10	ug/L	U	11/14/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS04-GW1D-002	SVTCL	Hexachlorocyclopentadie		10	ug/L	U	11/14/97
SJS04-GW1D-002	SVTCL	Hexachloroethane		10	ug/L	U	11/14/97
SJS04-GW1D-002	SVTCL	Indeno(1,2,3-cd)pyrene		10	ug/L	U	11/14/97
SJS04-GW1D-002	SVTCL	Isophorone		10	ug/L	U	11/14/97
SJS04-GW1D-002	SVTCL	N-Nitroso-Di-n-Propylamine		10	ug/L	U	11/14/97
SJS04-GW1D-002	SVTCL	N-Nitrosodiphenylamine		10	ug/L	U	11/14/97
SJS04-GW1D-002	SVTCL	Naphthalene		10	ug/L	U	11/14/97
SJS04-GW1D-002	SVTCL	Nitrobenzene		10	ug/L	U	11/14/97
SJS04-GW1D-002	SVTCL	Pentachlorophenol		25	ug/L	U	11/14/97
SJS04-GW1D-002	SVTCL	Phenanthrene		10	ug/L	U	11/14/97
SJS04-GW1D-002	SVTCL	Phenol		10	ug/L	U	11/14/97
SJS04-GW1D-002	SVTCL	Pyrene		10	ug/L	U	11/14/97
SJS04-GW1D-002	VCLOW	1,1,1-Trichloroethane		1	ug/L	U	11/9/97
SJS04-GW1D-002	VCLOW	1,1,2,2-Tetrachloroethane		1	ug/L	U	11/9/97
SJS04-GW1D-002	VCLOW	1,1,2-Trichloroethane		1	ug/L	U	11/9/97
SJS04-GW1D-002	VCLOW	1,1-Dichloroethane		1	ug/L	U	11/9/97
SJS04-GW1D-002	VCLOW	1,1-Dichloroethene		1	ug/L	U	11/9/97
SJS04-GW1D-002	VCLOW	1,2,4-Trichlorobenzene		1	ug/L	U	11/9/97
SJS04-GW1D-002	VCLOW	1,2-Dibromo-3-chloropropa		1	ug/L	U	11/9/97
SJS04-GW1D-002	VCLOW	1,2-Dibromoethane		1	ug/L	U	11/9/97
SJS04-GW1D-002	VCLOW	1,2-Dichlorobenzene		1	ug/L	U	11/9/97
SJS04-GW1D-002	VCLOW	1,2-Dichloroethane		1	ug/L	U	11/9/97
SJS04-GW1D-002	VCLOW	1,2-Dichloropropane		1	ug/L	U	11/9/97
SJS04-GW1D-002	VCLOW	1,3-Dichlorobenzene		1	ug/L	U	11/9/97
SJS04-GW1D-002	VCLOW	1,4-Dichlorobenzene		1	ug/L	U	11/9/97
SJS04-GW1D-002	VCLOW	2-Hexanone		5	ug/L	U	11/9/97
SJS04-GW1D-002	VCLOW	4-Methyl-2-Pentanone		5	ug/L	U	11/9/97
SJS04-GW1D-002	VCLOW	Benzene		1	ug/L	U	11/9/97
SJS04-GW1D-002	VCLOW	Bromochloromethane		1	ug/L	U	11/9/97
SJS04-GW1D-002	VCLOW	Bromodichloromethane		1	ug/L	U	11/9/97
SJS04-GW1D-002	VCLOW	Bromoform		1	ug/L	U	11/9/97
SJS04-GW1D-002	VCLOW	Bromomethane		1	ug/L	U	11/9/97
SJS04-GW1D-002	VCLOW	Carbon Disulfide	0.3	1	ug/L	J	11/9/97
SJS04-GW1D-002	VCLOW	Carbon Tetrachloride		1	ug/L	U	11/9/97
SJS04-GW1D-002	VCLOW	Chlorobenzene		1	ug/L	U	11/9/97
SJS04-GW1D-002	VCLOW	Chloroethane		1	ug/L	U	11/9/97
SJS04-GW1D-002	VCLOW	Chloroform		1	ug/L	U	11/9/97
SJS04-GW1D-002	VCLOW	Chloromethane		1	ug/L	U	11/9/97
SJS04-GW1D-002	VCLOW	cis-1,2-Dichloroethene		1	ug/L	U	11/9/97
SJS04-GW1D-002	VCLOW	cis-1,3-Dichloropropene		1	ug/L	U	11/9/97
SJS04-GW1D-002	VCLOW	Dibromochloromethane		1	ug/L	U	11/9/97
SJS04-GW1D-002	VCLOW	Ethylbenzene		1	ug/L	U	11/9/97
SJS04-GW1D-002	VCLOW	Methylene Chloride	2	1	ug/L	B	11/9/97
SJS04-GW1D-002	VCLOW	Styrene		1	ug/L	U	11/9/97
SJS04-GW1D-002	VCLOW	Tetrachloroethene		1	ug/L	U	11/9/97
SJS04-GW1D-002	VCLOW	Toluene		1	ug/L	U	11/9/97
SJS04-GW1D-002	VCLOW	Total Xylenes		1	ug/L	U	11/9/97
SJS04-GW1D-002	VCLOW	Trans-1,2-Dichloroethene		1	ug/L	U	11/9/97
SJS04-GW1D-002	VCLOW	trans-1,3-Dichloropropene		1	ug/L	U	11/9/97
SJS04-GW1D-002	VCLOW	Trichloroethene		1	ug/L	U	11/9/97
SJS04-GW1D-002	VCLOW	Vinyl Chloride		1	ug/L	U	11/9/97
SJS04-GW1D-002F	METAL	Aluminum		38.1	ug/L	U	11/24/97
SJS04-GW1D-002F	METAL	Antimony		1.7	ug/L	U	11/17/97
SJS04-GW1D-002F	METAL	Arsenic		3.2	ug/L	U	11/17/97
SJS04-GW1D-002F	METAL	Barium	391	1	ug/L		11/24/97
SJS04-GW1D-002F	METAL	Beryllium	0.77	1	ug/L	B	11/24/97
SJS04-GW1D-002F	METAL	Cadmium		0.4	ug/L	U	11/17/97
SJS04-GW1D-002F	METAL	Calcium	210000	46	ug/L		11/24/97
SJS04-GW1D-002F	METAL	Chromium		4.6	ug/L	UL	11/24/97
SJS04-GW1D-002F	METAL	Cobalt		6	ug/L	U	11/24/97
SJS04-GW1D-002F	METAL	Copper		5.8	ug/L	UL	11/24/97
SJS04-GW1D-002F	METAL	Iron	36400	5	ug/L		11/24/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS04-GW1D-002F	METAL	Lead	1.3	1	ug/L	J	11/17/97
SJS04-GW1D-002F	METAL	Magnesium	111000	45	ug/L		11/24/97
SJS04-GW1D-002F	METAL	Manganese	8530	1	ug/L		11/24/97
SJS04-GW1D-002F	METAL	Mercury		0.13	ug/L	U	11/13/97
SJS04-GW1D-002F	METAL	Nickel		6.3	ug/L	U	11/24/97
SJS04-GW1D-002F	METAL	Potassium	24600	97	ug/L		11/24/97
SJS04-GW1D-002F	METAL	Selenium		3.3	ug/L	U	11/17/97
SJS04-GW1D-002F	METAL	Silver	4.3	3	ug/L	J	11/17/97
SJS04-GW1D-002F	METAL	Sodium	481000	28	ug/L		11/26/97
SJS04-GW1D-002F	METAL	Thallium		1.5	ug/L	U	11/17/97
SJS04-GW1D-002F	METAL	Vanadium		6.8	ug/L	U	11/24/97
SJS04-GW1D-002F	METAL	Zinc	8.7	3	ug/L	B	11/24/97
SJS04-GW1S-002	CTOTP	Total Phosphorous (as P)	0.307	0.05	mg/L		11/13/97
SJS04-GW1S-002	MCYAN	Aluminum	349	29	ug/L		11/24/97
SJS04-GW1S-002	MCYAN	Antimony		1.7	ug/L	U	11/17/97
SJS04-GW1S-002	MCYAN	Arsenic		3.2	ug/L	U	11/17/97
SJS04-GW1S-002	MCYAN	Barium	22.4	1	ug/L	B	11/24/97
SJS04-GW1S-002	MCYAN	Beryllium	0.77	1	ug/L	B	11/24/97
SJS04-GW1S-002	MCYAN	Cadmium		0.4	ug/L	U	11/17/97
SJS04-GW1S-002	MCYAN	Calcium	116000	46	ug/L		11/24/97
SJS04-GW1S-002	MCYAN	Chromium		4.6	ug/L	UL	11/24/97
SJS04-GW1S-002	MCYAN	Cobalt	20	3	ug/L	J	11/24/97
SJS04-GW1S-002	MCYAN	Copper		5.8	ug/L	UL	11/24/97
SJS04-GW1S-002	MCYAN	Cyanide		5	ug/L	U	11/7/97
SJS04-GW1S-002	MCYAN	Iron	84000	5	ug/L		11/24/97
SJS04-GW1S-002	MCYAN	Lead	2.6	1	ug/L	J	11/17/97
SJS04-GW1S-002	MCYAN	Magnesium	115000	45	ug/L		11/24/97
SJS04-GW1S-002	MCYAN	Manganese	3590	1	ug/L		11/24/97
SJS04-GW1S-002	MCYAN	Mercury		0.13	ug/L	U	11/13/97
SJS04-GW1S-002	MCYAN	Nickel	28.3	4	ug/L	J	11/24/97
SJS04-GW1S-002	MCYAN	Potassium	43800	97	ug/L		11/24/97
SJS04-GW1S-002	MCYAN	Selenium		3.3	ug/L	U	11/17/97
SJS04-GW1S-002	MCYAN	Silver	3.6	3	ug/L	B	11/17/97
SJS04-GW1S-002	MCYAN	Sodium	274000	28	ug/L		11/24/97
SJS04-GW1S-002	MCYAN	Thallium		1.5	ug/L	U	11/17/97
SJS04-GW1S-002	MCYAN	Vanadium		6.8	ug/L	U	11/24/97
SJS04-GW1S-002	MCYAN	Zinc	19.7	3	ug/L	B	11/24/97
SJS04-GW1S-002	PSPCB	4,4'-DDD		0.1	ug/L	U	11/20/97
SJS04-GW1S-002	PSPCB	4,4'-DDE		0.1	ug/L	U	11/20/97
SJS04-GW1S-002	PSPCB	4,4'-DDT		0.1	ug/L	U	11/20/97
SJS04-GW1S-002	PSPCB	Aldrin		0.05	ug/L	U	11/20/97
SJS04-GW1S-002	PSPCB	alpha-BHC		0.05	ug/L	U	11/20/97
SJS04-GW1S-002	PSPCB	alpha-Chlordane		0.05	ug/L	U	11/20/97
SJS04-GW1S-002	PSPCB	Aroclor-1016		1	ug/L	U	11/20/97
SJS04-GW1S-002	PSPCB	Aroclor-1221		2	ug/L	U	11/20/97
SJS04-GW1S-002	PSPCB	Aroclor-1232		1	ug/L	U	11/20/97
SJS04-GW1S-002	PSPCB	Aroclor-1242		1	ug/L	U	11/20/97
SJS04-GW1S-002	PSPCB	Aroclor-1248		1	ug/L	U	11/20/97
SJS04-GW1S-002	PSPCB	Aroclor-1254		1	ug/L	U	11/20/97
SJS04-GW1S-002	PSPCB	Aroclor-1260		1	ug/L	U	11/20/97
SJS04-GW1S-002	PSPCB	beta-BHC		0.05	ug/L	U	11/20/97
SJS04-GW1S-002	PSPCB	delta-BHC		0.05	ug/L	U	11/20/97
SJS04-GW1S-002	PSPCB	Dieldrin		0.1	ug/L	U	11/20/97
SJS04-GW1S-002	PSPCB	Endosulfan I		0.05	ug/L	U	11/20/97
SJS04-GW1S-002	PSPCB	Endosulfan II		0.1	ug/L	U	11/20/97
SJS04-GW1S-002	PSPCB	Endosulfan Sulfate		0.1	ug/L	U	11/20/97
SJS04-GW1S-002	PSPCB	Endrin		0.1	ug/L	U	11/20/97
SJS04-GW1S-002	PSPCB	Endrin Aldehyde		0.1	ug/L	U	11/20/97
SJS04-GW1S-002	PSPCB	Endrin Ketone		0.1	ug/L	U	11/20/97
SJS04-GW1S-002	PSPCB	gamma-BHC		0.05	ug/L	U	11/20/97
SJS04-GW1S-002	PSPCB	gamma-Chlordane		0.05	ug/L	U	11/20/97
SJS04-GW1S-002	PSPCB	Heptachlor		0.05	ug/L	U	11/20/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS04-GW1S-002	PSPCB	Heptachlor Epoxide		0.05	ug/L	U	11/20/97
SJS04-GW1S-002	PSPCB	Methoxychlor		0.5	ug/L	U	11/20/97
SJS04-GW1S-002	PSPCB	Toxaphene		5	ug/L	U	11/20/97
SJS04-GW1S-002	SVTCL	1,2,4-Trichlorobenzene		10	ug/L	U	11/16/97
SJS04-GW1S-002	SVTCL	1,2-Dichlorobenzene		10	ug/L	U	11/16/97
SJS04-GW1S-002	SVTCL	1,3-Dichlorobenzene		10	ug/L	U	11/16/97
SJS04-GW1S-002	SVTCL	1,4-Dichlorobenzene		10	ug/L	U	11/16/97
SJS04-GW1S-002	SVTCL	2,2'-oxybis(1-Chloropropan		10	ug/L	U	11/16/97
SJS04-GW1S-002	SVTCL	2,4,5-Trichlorophenol		25	ug/L	U	11/16/97
SJS04-GW1S-002	SVTCL	2,4,6-Trichlorophenol		10	ug/L	U	11/16/97
SJS04-GW1S-002	SVTCL	2,4-Dichlorophenol		10	ug/L	U	11/16/97
SJS04-GW1S-002	SVTCL	2,4-Dimethylphenol		10	ug/L	U	11/16/97
SJS04-GW1S-002	SVTCL	2,4-Dinitrophenol		25	ug/L	U	11/16/97
SJS04-GW1S-002	SVTCL	2,4-Dinitrotoluene		10	ug/L	U	11/16/97
SJS04-GW1S-002	SVTCL	2,6-Dinitrotoluene		10	ug/L	U	11/16/97
SJS04-GW1S-002	SVTCL	2-Chloronaphthalene		10	ug/L	U	11/16/97
SJS04-GW1S-002	SVTCL	2-Chlorophenol		10	ug/L	U	11/16/97
SJS04-GW1S-002	SVTCL	2-Methylnaphthalene		10	ug/L	U	11/16/97
SJS04-GW1S-002	SVTCL	2-Methylphenol		10	ug/L	U	11/16/97
SJS04-GW1S-002	SVTCL	2-Nitroaniline		25	ug/L	U	11/16/97
SJS04-GW1S-002	SVTCL	2-Nitrophenol		10	ug/L	U	11/16/97
SJS04-GW1S-002	SVTCL	3,3'-Dichlorobenzidine		10	ug/L	U	11/16/97
SJS04-GW1S-002	SVTCL	3-Nitroaniline		25	ug/L	U	11/16/97
SJS04-GW1S-002	SVTCL	4,6-Dinitro-2-Methylphenol		25	ug/L	U	11/16/97
SJS04-GW1S-002	SVTCL	4-Bromophenol-phenyleth		10	ug/L	U	11/16/97
SJS04-GW1S-002	SVTCL	4-Chloro-3-Methylphenol		10	ug/L	U	11/16/97
SJS04-GW1S-002	SVTCL	4-Chloroaniline		10	ug/L	U	11/16/97
SJS04-GW1S-002	SVTCL	4-Chlorophenyl-phenyleth		10	ug/L	U	11/16/97
SJS04-GW1S-002	SVTCL	4-Methylphenol		10	ug/L	U	11/16/97
SJS04-GW1S-002	SVTCL	4-Nitroaniline		25	ug/L	U	11/16/97
SJS04-GW1S-002	SVTCL	4-Nitrophenol		25	ug/L	U	11/16/97
SJS04-GW1S-002	SVTCL	Acenaphthene	5	10	ug/L	J	11/16/97
SJS04-GW1S-002	SVTCL	Acenaphthylene		10	ug/L	U	11/16/97
SJS04-GW1S-002	SVTCL	Anthracene		10	ug/L	U	11/16/97
SJS04-GW1S-002	SVTCL	Benzo(a)anthracene		10	ug/L	U	11/16/97
SJS04-GW1S-002	SVTCL	Benzo(a)pyrene		10	ug/L	U	11/16/97
SJS04-GW1S-002	SVTCL	Benzo(b)fluoranthene		10	ug/L	U	11/16/97
SJS04-GW1S-002	SVTCL	Benzo(g,h,i)perylene		10	ug/L	U	11/16/97
SJS04-GW1S-002	SVTCL	Benzo(k)fluoranthene		10	ug/L	U	11/16/97
SJS04-GW1S-002	SVTCL	bis(2-Chloroethoxy)metha		10	ug/L	U	11/16/97
SJS04-GW1S-002	SVTCL	bis(2-chloroethyl)ether		10	ug/L	U	11/16/97
SJS04-GW1S-002	SVTCL	bis(2-Ethylhexyl)phthalate		10	ug/L	U	11/16/97
SJS04-GW1S-002	SVTCL	Butylbenzylphthalate		10	ug/L	U	11/16/97
SJS04-GW1S-002	SVTCL	Carbazole		10	ug/L	U	11/16/97
SJS04-GW1S-002	SVTCL	Chrysene		10	ug/L	U	11/16/97
SJS04-GW1S-002	SVTCL	Di-n-butylphthalate		10	ug/L	U	11/16/97
SJS04-GW1S-002	SVTCL	Di-n-Octyl Phthalate		10	ug/L	U	11/16/97
SJS04-GW1S-002	SVTCL	Dibenzo(a,h)anthracene		10	ug/L	U	11/16/97
SJS04-GW1S-002	SVTCL	Dibenzofuran	2	10	ug/L	J	11/16/97
SJS04-GW1S-002	SVTCL	Diethylphthalate		10	ug/L	U	11/16/97
SJS04-GW1S-002	SVTCL	Dimethyl Phthalate		10	ug/L	U	11/16/97
SJS04-GW1S-002	SVTCL	Fluoranthene		10	ug/L	U	11/16/97
SJS04-GW1S-002	SVTCL	Fluorene		10	ug/L	U	11/16/97
SJS04-GW1S-002	SVTCL	Hexachlorobenzene		10	ug/L	U	11/16/97
SJS04-GW1S-002	SVTCL	Hexachlorobutadiene		10	ug/L	U	11/16/97
SJS04-GW1S-002	SVTCL	Hexachlorocyclopentadie		10	ug/L	U	11/16/97
SJS04-GW1S-002	SVTCL	Hexachloroethane		10	ug/L	U	11/16/97
SJS04-GW1S-002	SVTCL	Indeno(1,2,3-cd)pyrene		10	ug/L	U	11/16/97
SJS04-GW1S-002	SVTCL	Isophorone		10	ug/L	U	11/16/97
SJS04-GW1S-002	SVTCL	N-Nitroso-Di-n-Propylamine		10	ug/L	U	11/16/97
SJS04-GW1S-002	SVTCL	N-Nitrosodiphenylamine		10	ug/L	U	11/16/97
SJS04-GW1S-002	SVTCL	Naphthalene		10	ug/L	U	11/16/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS04-GW1S-002	SVTCL	Nitrobenzene		10	ug/L	U	11/16/97
SJS04-GW1S-002	SVTCL	Pentachlorophenol		25	ug/L	U	11/16/97
SJS04-GW1S-002	SVTCL	Phenanthrene		10	ug/L	U	11/16/97
SJS04-GW1S-002	SVTCL	Phenol		10	ug/L	U	11/16/97
SJS04-GW1S-002	SVTCL	Pyrene		10	ug/L	U	11/16/97
SJS04-GW1S-002	VCLOW	1,1,1-Trichloroethane		1	ug/L	U	11/9/97
SJS04-GW1S-002	VCLOW	1,1,2,2-Tetrachloroethane		1	ug/L	U	11/9/97
SJS04-GW1S-002	VCLOW	1,1,2-Trichloroethane		1	ug/L	U	11/9/97
SJS04-GW1S-002	VCLOW	1,1-Dichloroethane		1	ug/L	U	11/9/97
SJS04-GW1S-002	VCLOW	1,1-Dichloroethene		1	ug/L	U	11/9/97
SJS04-GW1S-002	VCLOW	1,2,4-Trichlorobenzene		1	ug/L	U	11/9/97
SJS04-GW1S-002	VCLOW	1,2-Dibromo-3-chloropropa		1	ug/L	U	11/9/97
SJS04-GW1S-002	VCLOW	1,2-Dibromoethane		1	ug/L	U	11/9/97
SJS04-GW1S-002	VCLOW	1,2-Dichlorobenzene		1	ug/L	U	11/9/97
SJS04-GW1S-002	VCLOW	1,2-Dichloroethane		1	ug/L	U	11/9/97
SJS04-GW1S-002	VCLOW	1,2-Dichloropropane		1	ug/L	U	11/9/97
SJS04-GW1S-002	VCLOW	1,3-Dichlorobenzene		1	ug/L	U	11/9/97
SJS04-GW1S-002	VCLOW	1,4-Dichlorobenzene		1	ug/L	U	11/9/97
SJS04-GW1S-002	VCLOW	2-Hexanone		5	ug/L	U	11/9/97
SJS04-GW1S-002	VCLOW	4-Methyl-2-Pentanone		5	ug/L	U	11/9/97
SJS04-GW1S-002	VCLOW	Benzene		1	ug/L	U	11/9/97
SJS04-GW1S-002	VCLOW	Bromochloromethane		1	ug/L	U	11/9/97
SJS04-GW1S-002	VCLOW	Bromodichloromethane		1	ug/L	U	11/9/97
SJS04-GW1S-002	VCLOW	Bromoform		1	ug/L	U	11/9/97
SJS04-GW1S-002	VCLOW	Bromomethane		1	ug/L	U	11/9/97
SJS04-GW1S-002	VCLOW	Carbon Disulfide		1	ug/L	U	11/9/97
SJS04-GW1S-002	VCLOW	Carbon Tetrachloride		1	ug/L	U	11/9/97
SJS04-GW1S-002	VCLOW	Chlorobenzene		1	ug/L	U	11/9/97
SJS04-GW1S-002	VCLOW	Chloroethane		1	ug/L	U	11/9/97
SJS04-GW1S-002	VCLOW	Chloroform		1	ug/L	U	11/9/97
SJS04-GW1S-002	VCLOW	Chloromethane		1	ug/L	U	11/9/97
SJS04-GW1S-002	VCLOW	cis-1,2-Dichloroethene		1	ug/L	U	11/9/97
SJS04-GW1S-002	VCLOW	cis-1,3-Dichloropropene		1	ug/L	U	11/9/97
SJS04-GW1S-002	VCLOW	Dibromochloromethane		1	ug/L	U	11/9/97
SJS04-GW1S-002	VCLOW	Ethylbenzene		1	ug/L	U	11/9/97
SJS04-GW1S-002	VCLOW	Methylene Chloride	2	1	ug/L	B	11/9/97
SJS04-GW1S-002	VCLOW	Styrene		1	ug/L	U	11/9/97
SJS04-GW1S-002	VCLOW	Tetrachloroethene		1	ug/L	U	11/9/97
SJS04-GW1S-002	VCLOW	Toluene		1	ug/L	U	11/9/97
SJS04-GW1S-002	VCLOW	Total Xylenes		1	ug/L	U	11/9/97
SJS04-GW1S-002	VCLOW	Trans-1,2-Dichloroethene		1	ug/L	U	11/9/97
SJS04-GW1S-002	VCLOW	trans-1,3-Dichloropropene		1	ug/L	U	11/9/97
SJS04-GW1S-002	VCLOW	Trichloroethene		1	ug/L	U	11/9/97
SJS04-GW1S-002	VCLOW	Vinyl Chloride		1	ug/L	U	11/9/97
SJS04-GW1S-002F	METAL	Aluminum		38.1	ug/L	U	11/24/97
SJS04-GW1S-002F	METAL	Antimony		1.7	ug/L	U	11/17/97
SJS04-GW1S-002F	METAL	Arsenic		3.2	ug/L	U	11/17/97
SJS04-GW1S-002F	METAL	Barium	23.6	1	ug/L	B	11/24/97
SJS04-GW1S-002F	METAL	Beryllium	0.77	1	ug/L	B	11/24/97
SJS04-GW1S-002F	METAL	Cadmium		0.4	ug/L	U	11/17/97
SJS04-GW1S-002F	METAL	Calcium	133000	46	ug/L		11/24/97
SJS04-GW1S-002F	METAL	Chromium		4.6	ug/L	UL	11/24/97
SJS04-GW1S-002F	METAL	Cobalt	17.7	3	ug/L	J	11/24/97
SJS04-GW1S-002F	METAL	Copper		5.8	ug/L	UL	11/24/97
SJS04-GW1S-002F	METAL	Iron	88800	5	ug/L		11/24/97
SJS04-GW1S-002F	METAL	Lead	3	1	ug/L		11/17/97
SJS04-GW1S-002F	METAL	Magnesium	130000	45	ug/L		11/24/97
SJS04-GW1S-002F	METAL	Manganese	3760	1	ug/L		11/24/97
SJS04-GW1S-002F	METAL	Mercury		0.12	ug/L	U	11/13/97
SJS04-GW1S-002F	METAL	Nickel	26.1	4	ug/L	J	11/24/97
SJS04-GW1S-002F	METAL	Potassium	49500	97	ug/L		11/24/97
SJS04-GW1S-002F	METAL	Selenium		6.6	ug/L	U	11/17/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS04-GW1S-002F	METAL	Silver	3.7	3	ug/L	J	11/17/97
SJS04-GW1S-002F	METAL	Sodium	316000	28	ug/L		11/26/97
SJS04-GW1S-002F	METAL	Thallium	2.1	2	ug/L	K	11/17/97
SJS04-GW1S-002F	METAL	Vanadium		6.8	ug/L	U	11/24/97
SJS04-GW1S-002F	METAL	Zinc	9.6	3	ug/L	B	11/24/97
SJS04-GW2S-002	CTOTP	Total Phosphorous (as P)	0.076	0.05	mg/L		11/14/97
SJS04-GW2S-002	MCYAN	Aluminum	2900	29	ug/L		11/25/97
SJS04-GW2S-002	MCYAN	Antimony		1.7	ug/L	U	11/13/97
SJS04-GW2S-002	MCYAN	Arsenic		3.2	ug/L	U	11/13/97
SJS04-GW2S-002	MCYAN	Barium	33	1	ug/L	J	11/25/97
SJS04-GW2S-002	MCYAN	Beryllium	3.3	1	ug/L	J	11/25/97
SJS04-GW2S-002	MCYAN	Cadmium	2.1	0.3	ug/L	J	11/13/97
SJS04-GW2S-002	MCYAN	Calcium	375000	46	ug/L		11/25/97
SJS04-GW2S-002	MCYAN	Chromium		4.6	ug/L	U	11/25/97
SJS04-GW2S-002	MCYAN	Cobalt	88.7	3	ug/L		11/25/97
SJS04-GW2S-002	MCYAN	Copper	8.7	2	ug/L	J	11/25/97
SJS04-GW2S-002	MCYAN	Cyanide		5	ug/L	U	11/7/97
SJS04-GW2S-002	MCYAN	Iron	6490	5	ug/L		11/25/97
SJS04-GW2S-002	MCYAN	Lead		1.3	ug/L	U	11/13/97
SJS04-GW2S-002	MCYAN	Magnesium	83900	45	ug/L		11/25/97
SJS04-GW2S-002	MCYAN	Manganese	3180	1	ug/L		11/25/97
SJS04-GW2S-002	MCYAN	Mercury		0.13	ug/L	U	11/13/97
SJS04-GW2S-002	MCYAN	Nickel	110	4	ug/L		11/25/97
SJS04-GW2S-002	MCYAN	Potassium	22500	97	ug/L		11/25/97
SJS04-GW2S-002	MCYAN	Selenium		3.3	ug/L	U	11/13/97
SJS04-GW2S-002	MCYAN	Silver	1.5	3	ug/L	J	11/13/97
SJS04-GW2S-002	MCYAN	Sodium	43400	28	ug/L		11/25/97
SJS04-GW2S-002	MCYAN	Thallium		1.5	ug/L	U	11/13/97
SJS04-GW2S-002	MCYAN	Vanadium		6.8	ug/L	U	11/25/97
SJS04-GW2S-002	MCYAN	Zinc	542	3	ug/L		11/25/97
SJS04-GW2S-002	PSPCB	4,4'-DDD		0.1	ug/L	U	11/21/97
SJS04-GW2S-002	PSPCB	4,4'-DDE		0.1	ug/L	U	11/21/97
SJS04-GW2S-002	PSPCB	4,4'-DDT		0.1	ug/L	U	11/21/97
SJS04-GW2S-002	PSPCB	Aldrin		0.05	ug/L	U	11/21/97
SJS04-GW2S-002	PSPCB	alpha-BHC		0.05	ug/L	U	11/21/97
SJS04-GW2S-002	PSPCB	alpha-Chlordane		0.05	ug/L	U	11/21/97
SJS04-GW2S-002	PSPCB	Aroclor-1016		1	ug/L	U	11/21/97
SJS04-GW2S-002	PSPCB	Aroclor-1221		2	ug/L	U	11/21/97
SJS04-GW2S-002	PSPCB	Aroclor-1232		1	ug/L	U	11/21/97
SJS04-GW2S-002	PSPCB	Aroclor-1242		1	ug/L	U	11/21/97
SJS04-GW2S-002	PSPCB	Aroclor-1248		1	ug/L	U	11/21/97
SJS04-GW2S-002	PSPCB	Aroclor-1254		1	ug/L	U	11/21/97
SJS04-GW2S-002	PSPCB	Aroclor-1260		1	ug/L	U	11/21/97
SJS04-GW2S-002	PSPCB	beta-BHC		0.05	ug/L	U	11/21/97
SJS04-GW2S-002	PSPCB	delta-BHC		0.05	ug/L	U	11/21/97
SJS04-GW2S-002	PSPCB	Dieldrin		0.1	ug/L	U	11/21/97
SJS04-GW2S-002	PSPCB	Endosulfan I		0.05	ug/L	U	11/21/97
SJS04-GW2S-002	PSPCB	Endosulfan II		0.1	ug/L	U	11/21/97
SJS04-GW2S-002	PSPCB	Endosulfan Sulfate		0.1	ug/L	U	11/21/97
SJS04-GW2S-002	PSPCB	Endrin		0.1	ug/L	U	11/21/97
SJS04-GW2S-002	PSPCB	Endrin Aldehyde		0.1	ug/L	U	11/21/97
SJS04-GW2S-002	PSPCB	Endrin Ketone		0.1	ug/L	U	11/21/97
SJS04-GW2S-002	PSPCB	gamma-BHC		0.05	ug/L	U	11/21/97
SJS04-GW2S-002	PSPCB	gamma-Chlordane		0.05	ug/L	U	11/21/97
SJS04-GW2S-002	PSPCB	Heptachlor		0.05	ug/L	U	11/21/97
SJS04-GW2S-002	PSPCB	Heptachlor Epoxide		0.05	ug/L	U	11/21/97
SJS04-GW2S-002	PSPCB	Methoxychlor		0.5	ug/L	U	11/21/97
SJS04-GW2S-002	PSPCB	Toxaphene		5	ug/L	U	11/21/97
SJS04-GW2S-002	SVTCL	1,2,4-Trichlorobenzene		10	ug/L	U	11/14/97
SJS04-GW2S-002	SVTCL	1,2-Dichlorobenzene		10	ug/L	U	11/14/97
SJS04-GW2S-002	SVTCL	1,3-Dichlorobenzene		10	ug/L	U	11/14/97
SJS04-GW2S-002	SVTCL	1,4-Dichlorobenzene		10	ug/L	U	11/14/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS04-GW2S-002	SVTCL	2,2'-oxybis(1-Chloropropan		10	ug/L	U	11/14/97
SJS04-GW2S-002	SVTCL	2,4,5-Trichlorophenol		25	ug/L	U	11/14/97
SJS04-GW2S-002	SVTCL	2,4,6-Trichlorophenol		10	ug/L	U	11/14/97
SJS04-GW2S-002	SVTCL	2,4-Dichlorophenol		10	ug/L	U	11/14/97
SJS04-GW2S-002	SVTCL	2,4-Dimethylphenol		10	ug/L	U	11/14/97
SJS04-GW2S-002	SVTCL	2,4-Dinitrophenol		25	ug/L	U	11/14/97
SJS04-GW2S-002	SVTCL	2,4-Dinitrotoluene		10	ug/L	U	11/14/97
SJS04-GW2S-002	SVTCL	2,6-Dinitrotoluene		10	ug/L	U	11/14/97
SJS04-GW2S-002	SVTCL	2-Chloronaphthalene		10	ug/L	U	11/14/97
SJS04-GW2S-002	SVTCL	2-Chlorophenol		10	ug/L	U	11/14/97
SJS04-GW2S-002	SVTCL	2-Methylnaphthalene		10	ug/L	U	11/14/97
SJS04-GW2S-002	SVTCL	2-Methylphenol		10	ug/L	U	11/14/97
SJS04-GW2S-002	SVTCL	2-Nitroaniline		25	ug/L	U	11/14/97
SJS04-GW2S-002	SVTCL	2-Nitrophenol		10	ug/L	U	11/14/97
SJS04-GW2S-002	SVTCL	3,3'-Dichlorobenzidine		10	ug/L	U	11/14/97
SJS04-GW2S-002	SVTCL	3-Nitroaniline		25	ug/L	U	11/14/97
SJS04-GW2S-002	SVTCL	4,6-Dinitro-2-Methylphenol		25	ug/L	U	11/14/97
SJS04-GW2S-002	SVTCL	4-Bromophenol-phenyleth		10	ug/L	U	11/14/97
SJS04-GW2S-002	SVTCL	4-Chloro-3-Methylphenol		10	ug/L	U	11/14/97
SJS04-GW2S-002	SVTCL	4-Chloroaniline		10	ug/L	U	11/14/97
SJS04-GW2S-002	SVTCL	4-Chlorophenyl-phenyleth		10	ug/L	U	11/14/97
SJS04-GW2S-002	SVTCL	4-Methylphenol		10	ug/L	U	11/14/97
SJS04-GW2S-002	SVTCL	4-Nitroaniline		25	ug/L	U	11/14/97
SJS04-GW2S-002	SVTCL	4-Nitrophenol		25	ug/L	U	11/14/97
SJS04-GW2S-002	SVTCL	Acenaphthene		10	ug/L	U	11/14/97
SJS04-GW2S-002	SVTCL	Acenaphthylene		10	ug/L	U	11/14/97
SJS04-GW2S-002	SVTCL	Anthracene		10	ug/L	U	11/14/97
SJS04-GW2S-002	SVTCL	Benzo(a)anthracene		10	ug/L	U	11/14/97
SJS04-GW2S-002	SVTCL	Benzo(a)pyrene		10	ug/L	U	11/14/97
SJS04-GW2S-002	SVTCL	Benzo(b)fluoranthene		10	ug/L	U	11/14/97
SJS04-GW2S-002	SVTCL	Benzo(g,h,i)perylene		10	ug/L	U	11/14/97
SJS04-GW2S-002	SVTCL	Benzo(k)fluoranthene		10	ug/L	U	11/14/97
SJS04-GW2S-002	SVTCL	bis(2-Chloroethoxy)metha		10	ug/L	U	11/14/97
SJS04-GW2S-002	SVTCL	bis(2-chloroethyl)ether		10	ug/L	U	11/14/97
SJS04-GW2S-002	SVTCL	bis(2-Ethylhexyl)phthalate		10	ug/L	U	11/14/97
SJS04-GW2S-002	SVTCL	Butylbenzylphthalate		10	ug/L	U	11/14/97
SJS04-GW2S-002	SVTCL	Carbazole		10	ug/L	U	11/14/97
SJS04-GW2S-002	SVTCL	Chrysene		10	ug/L	U	11/14/97
SJS04-GW2S-002	SVTCL	Di-n-butylphthalate		10	ug/L	U	11/14/97
SJS04-GW2S-002	SVTCL	Di-n-Octyl Phthalate		10	ug/L	U	11/14/97
SJS04-GW2S-002	SVTCL	Dibenzo(a,h)anthracene		10	ug/L	U	11/14/97
SJS04-GW2S-002	SVTCL	Dibenzofuran		10	ug/L	U	11/14/97
SJS04-GW2S-002	SVTCL	Diethylphthalate		10	ug/L	U	11/14/97
SJS04-GW2S-002	SVTCL	Dimethyl Phthalate		10	ug/L	U	11/14/97
SJS04-GW2S-002	SVTCL	Fluoranthene		10	ug/L	U	11/14/97
SJS04-GW2S-002	SVTCL	Fluorene		10	ug/L	U	11/14/97
SJS04-GW2S-002	SVTCL	Hexachlorobenzene		10	ug/L	U	11/14/97
SJS04-GW2S-002	SVTCL	Hexachlorobutadiene		10	ug/L	U	11/14/97
SJS04-GW2S-002	SVTCL	Hexachlorocyclopentadie		10	ug/L	U	11/14/97
SJS04-GW2S-002	SVTCL	Hexachloroethane		10	ug/L	U	11/14/97
SJS04-GW2S-002	SVTCL	Indeno(1,2,3-cd)pyrene		10	ug/L	U	11/14/97
SJS04-GW2S-002	SVTCL	Isophorone		10	ug/L	U	11/14/97
SJS04-GW2S-002	SVTCL	N-Nitroso-Di-n-Propylamine		10	ug/L	U	11/14/97
SJS04-GW2S-002	SVTCL	N-Nitrosodiphenylamine		10	ug/L	U	11/14/97
SJS04-GW2S-002	SVTCL	Naphthalene		10	ug/L	U	11/14/97
SJS04-GW2S-002	SVTCL	Nitrobenzene		10	ug/L	U	11/14/97
SJS04-GW2S-002	SVTCL	Pentachlorophenol		25	ug/L	U	11/14/97
SJS04-GW2S-002	SVTCL	Phenanthrene		10	ug/L	U	11/14/97
SJS04-GW2S-002	SVTCL	Phenol		10	ug/L	U	11/14/97
SJS04-GW2S-002	SVTCL	Pyrene		10	ug/L	U	11/14/97
SJS04-GW2S-002	VCLOW	1,1,1-Trichloroethane		1	ug/L	U	11/10/97
SJS04-GW2S-002	VCLOW	1,1,2,2-Tetrachloroethane		1	ug/L	U	11/10/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS04-GW2S-002	VCLOW	1,1,2-Trichloroethane		1	ug/L	U	11/10/97
SJS04-GW2S-002	VCLOW	1,1-Dichloroethane		1	ug/L	U	11/10/97
SJS04-GW2S-002	VCLOW	1,1-Dichloroethene		1	ug/L	U	11/10/97
SJS04-GW2S-002	VCLOW	1,2,4-Trichlorobenzene		1	ug/L	U	11/10/97
SJS04-GW2S-002	VCLOW	1,2-Dibromo-3-chloropropa		1	ug/L	U	11/10/97
SJS04-GW2S-002	VCLOW	1,2-Dibromoethane		1	ug/L	U	11/10/97
SJS04-GW2S-002	VCLOW	1,2-Dichlorobenzene		1	ug/L	U	11/10/97
SJS04-GW2S-002	VCLOW	1,2-Dichloroethane		1	ug/L	U	11/10/97
SJS04-GW2S-002	VCLOW	1,2-Dichloropropane		1	ug/L	U	11/10/97
SJS04-GW2S-002	VCLOW	1,3-Dichlorobenzene		1	ug/L	U	11/10/97
SJS04-GW2S-002	VCLOW	1,4-Dichlorobenzene		1	ug/L	U	11/10/97
SJS04-GW2S-002	VCLOW	2-Hexanone		5	ug/L	U	11/10/97
SJS04-GW2S-002	VCLOW	4-Methyl-2-Pentanone		5	ug/L	U	11/10/97
SJS04-GW2S-002	VCLOW	Acetone		5	ug/L	U	11/10/97
SJS04-GW2S-002	VCLOW	Benzene		1	ug/L	U	11/10/97
SJS04-GW2S-002	VCLOW	Bromochloromethane		1	ug/L	U	11/10/97
SJS04-GW2S-002	VCLOW	Bromodichloromethane		1	ug/L	U	11/10/97
SJS04-GW2S-002	VCLOW	Bromoform		1	ug/L	U	11/10/97
SJS04-GW2S-002	VCLOW	Bromomethane		1	ug/L	U	11/10/97
SJS04-GW2S-002	VCLOW	Carbon Disulfide		1	ug/L	U	11/10/97
SJS04-GW2S-002	VCLOW	Carbon Tetrachloride		1	ug/L	U	11/10/97
SJS04-GW2S-002	VCLOW	Chlorobenzene		1	ug/L	U	11/10/97
SJS04-GW2S-002	VCLOW	Chloroethane		1	ug/L	U	11/10/97
SJS04-GW2S-002	VCLOW	Chloroform		1	ug/L	U	11/10/97
SJS04-GW2S-002	VCLOW	Chloromethane		1	ug/L	U	11/10/97
SJS04-GW2S-002	VCLOW	cis-1,2-Dichloroethene		1	ug/L	U	11/10/97
SJS04-GW2S-002	VCLOW	cis-1,3-Dichloropropene		1	ug/L	U	11/10/97
SJS04-GW2S-002	VCLOW	Dibromochloromethane		1	ug/L	U	11/10/97
SJS04-GW2S-002	VCLOW	Ethylbenzene		1	ug/L	U	11/10/97
SJS04-GW2S-002	VCLOW	Methylene Chloride	3	2	ug/L		11/10/97
SJS04-GW2S-002	VCLOW	Styrene		1	ug/L	U	11/10/97
SJS04-GW2S-002	VCLOW	Tetrachloroethene		1	ug/L	U	11/10/97
SJS04-GW2S-002	VCLOW	Toluene		1	ug/L	U	11/10/97
SJS04-GW2S-002	VCLOW	Total Xylenes		1	ug/L	U	11/10/97
SJS04-GW2S-002	VCLOW	Trans-1,2-Dichloroethene		1	ug/L	U	11/10/97
SJS04-GW2S-002	VCLOW	trans-1,3-Dichloropropene		1	ug/L	U	11/10/97
SJS04-GW2S-002	VCLOW	Trichloroethene		1	ug/L	U	11/10/97
SJS04-GW2S-002	VCLOW	Vinyl Chloride		1	ug/L	U	11/10/97
SJS04-GW2S-002F	METAL	Aluminum	2500	29	ug/L		11/25/97
SJS04-GW2S-002F	METAL	Antimony		1.7	ug/L	U	11/13/97
SJS04-GW2S-002F	METAL	Arsenic		3.2	ug/L	U	11/13/97
SJS04-GW2S-002F	METAL	Barium	34.5	1	ug/L	J	11/25/97
SJS04-GW2S-002F	METAL	Beryllium	3.5	1	ug/L	J	11/25/97
SJS04-GW2S-002F	METAL	Cadmium	2.3	0.3	ug/L	J	11/13/97
SJS04-GW2S-002F	METAL	Calcium	393000	46	ug/L		11/25/97
SJS04-GW2S-002F	METAL	Chromium		4.6	ug/L	U	11/25/97
SJS04-GW2S-002F	METAL	Cobalt	92.6	3	ug/L		11/25/97
SJS04-GW2S-002F	METAL	Copper	8.7	2	ug/L	B	11/25/97
SJS04-GW2S-002F	METAL	Iron	6830	5	ug/L		11/25/97
SJS04-GW2S-002F	METAL	Lead	1.5	1	ug/L	J	11/13/97
SJS04-GW2S-002F	METAL	Magnesium	88500	45	ug/L		11/25/97
SJS04-GW2S-002F	METAL	Manganese	3410	1	ug/L		11/25/97
SJS04-GW2S-002F	METAL	Mercury		0.13	ug/L	U	11/13/97
SJS04-GW2S-002F	METAL	Nickel	110	4	ug/L		11/25/97
SJS04-GW2S-002F	METAL	Potassium	24100	97	ug/L		11/25/97
SJS04-GW2S-002F	METAL	Selenium		3.3	ug/L	U	11/13/97
SJS04-GW2S-002F	METAL	Silver		1.1	ug/L	U	11/13/97
SJS04-GW2S-002F	METAL	Sodium	45500	28	ug/L		11/25/97
SJS04-GW2S-002F	METAL	Thallium		1.5	ug/L	U	11/13/97
SJS04-GW2S-002F	METAL	Vanadium		6.8	ug/L	U	11/25/97
SJS04-GW2S-002F	METAL	Zinc	566	3	ug/L		11/25/97
SJS04-GW3D-002	CTOTP	Total Phosphorous (as P)	0.6	0.13	mg/L		11/13/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS04-GW3D-002	MCYAN	Aluminum		38.1	ug/L	U	11/24/97
SJS04-GW3D-002	MCYAN	Antimony		1.7	ug/L	U	11/17/97
SJS04-GW3D-002	MCYAN	Arsenic	3.8	3	ug/L	J	11/17/97
SJS04-GW3D-002	MCYAN	Barium	56.5	1	ug/L	J	11/24/97
SJS04-GW3D-002	MCYAN	Beryllium	0.77	1	ug/L	B	11/24/97
SJS04-GW3D-002	MCYAN	Cadmium		0.4	ug/L	U	11/17/97
SJS04-GW3D-002	MCYAN	Calcium	80000	46	ug/L		11/24/97
SJS04-GW3D-002	MCYAN	Chromium		4.6	ug/L	UL	11/24/97
SJS04-GW3D-002	MCYAN	Cobalt		6	ug/L	U	11/24/97
SJS04-GW3D-002	MCYAN	Copper		5.8	ug/L	UL	11/24/97
SJS04-GW3D-002	MCYAN	Cyanide		5	ug/L	U	11/7/97
SJS04-GW3D-002	MCYAN	Iron	11800	5	ug/L		11/24/97
SJS04-GW3D-002	MCYAN	Lead		1.3	ug/L	U	11/17/97
SJS04-GW3D-002	MCYAN	Magnesium	32300	45	ug/L		11/24/97
SJS04-GW3D-002	MCYAN	Manganese	2300	1	ug/L		11/24/97
SJS04-GW3D-002	MCYAN	Mercury		0.13	ug/L	U	11/13/97
SJS04-GW3D-002	MCYAN	Nickel		6.3	ug/L	U	11/24/97
SJS04-GW3D-002	MCYAN	Potassium	10000	97	ug/L		11/24/97
SJS04-GW3D-002	MCYAN	Selenium		3.3	ug/L	U	11/17/97
SJS04-GW3D-002	MCYAN	Silver	2.6	3	ug/L	B	11/17/97
SJS04-GW3D-002	MCYAN	Sodium	125000	28	ug/L		11/24/97
SJS04-GW3D-002	MCYAN	Thallium		1.5	ug/L	U	11/17/97
SJS04-GW3D-002	MCYAN	Vanadium		6.8	ug/L	U	11/24/97
SJS04-GW3D-002	MCYAN	Zinc	18.6	3	ug/L	B	11/24/97
SJS04-GW3D-002	PSPCB	4,4'-DDD		0.1	ug/L	U	11/20/97
SJS04-GW3D-002	PSPCB	4,4'-DDE		0.1	ug/L	U	11/20/97
SJS04-GW3D-002	PSPCB	4,4'-DDT		0.1	ug/L	U	11/20/97
SJS04-GW3D-002	PSPCB	Aldrin		0.05	ug/L	U	11/20/97
SJS04-GW3D-002	PSPCB	alpha-BHC		0.05	ug/L	U	11/20/97
SJS04-GW3D-002	PSPCB	alpha-Chlordane		0.05	ug/L	U	11/20/97
SJS04-GW3D-002	PSPCB	Aroclor-1016		1	ug/L	U	11/20/97
SJS04-GW3D-002	PSPCB	Aroclor-1221		2	ug/L	U	11/20/97
SJS04-GW3D-002	PSPCB	Aroclor-1232		1	ug/L	U	11/20/97
SJS04-GW3D-002	PSPCB	Aroclor-1242		1	ug/L	U	11/20/97
SJS04-GW3D-002	PSPCB	Aroclor-1248		1	ug/L	U	11/20/97
SJS04-GW3D-002	PSPCB	Aroclor-1254		1	ug/L	U	11/20/97
SJS04-GW3D-002	PSPCB	Aroclor-1260		1	ug/L	U	11/20/97
SJS04-GW3D-002	PSPCB	beta-BHC		0.05	ug/L	U	11/20/97
SJS04-GW3D-002	PSPCB	delta-BHC		0.05	ug/L	U	11/20/97
SJS04-GW3D-002	PSPCB	Dieldrin		0.1	ug/L	U	11/20/97
SJS04-GW3D-002	PSPCB	Endosulfan I		0.05	ug/L	U	11/20/97
SJS04-GW3D-002	PSPCB	Endosulfan II		0.1	ug/L	U	11/20/97
SJS04-GW3D-002	PSPCB	Endosulfan Sulfate		0.1	ug/L	U	11/20/97
SJS04-GW3D-002	PSPCB	Endrin		0.1	ug/L	U	11/20/97
SJS04-GW3D-002	PSPCB	Endrin Aldehyde		0.1	ug/L	U	11/20/97
SJS04-GW3D-002	PSPCB	Endrin Ketone		0.1	ug/L	U	11/20/97
SJS04-GW3D-002	PSPCB	gamma-BHC		0.05	ug/L	U	11/20/97
SJS04-GW3D-002	PSPCB	gamma-Chlordane		0.05	ug/L	U	11/20/97
SJS04-GW3D-002	PSPCB	Heptachlor		0.05	ug/L	U	11/20/97
SJS04-GW3D-002	PSPCB	Heptachlor Epoxide		0.05	ug/L	U	11/20/97
SJS04-GW3D-002	PSPCB	Methoxychlor		0.5	ug/L	U	11/20/97
SJS04-GW3D-002	PSPCB	Toxaphene		5	ug/L	U	11/20/97
SJS04-GW3D-002	SVTCL	1,2,4-Trichlorobenzene		10	ug/L	U	11/14/97
SJS04-GW3D-002	SVTCL	1,2-Dichlorobenzene		10	ug/L	U	11/14/97
SJS04-GW3D-002	SVTCL	1,3-Dichlorobenzene		10	ug/L	U	11/14/97
SJS04-GW3D-002	SVTCL	1,4-Dichlorobenzene		10	ug/L	U	11/14/97
SJS04-GW3D-002	SVTCL	2,2'-oxybis(1-Chloropropan		10	ug/L	U	11/14/97
SJS04-GW3D-002	SVTCL	2,4,5-Trichlorophenol		25	ug/L	U	11/14/97
SJS04-GW3D-002	SVTCL	2,4,6-Trichlorophenol		10	ug/L	U	11/14/97
SJS04-GW3D-002	SVTCL	2,4-Dichlorophenol		10	ug/L	U	11/14/97
SJS04-GW3D-002	SVTCL	2,4-Dimethylphenol		10	ug/L	U	11/14/97
SJS04-GW3D-002	SVTCL	2,4-Dinitrophenol		25	ug/L	U	11/14/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS04-GW3D-002	SVTCL	2,4-Dinitrotoluene		10	ug/L	U	11/14/97
SJS04-GW3D-002	SVTCL	2,6-Dinitrotoluene		10	ug/L	U	11/14/97
SJS04-GW3D-002	SVTCL	2-Chloronaphthalene		10	ug/L	U	11/14/97
SJS04-GW3D-002	SVTCL	2-Chlorophenol		10	ug/L	U	11/14/97
SJS04-GW3D-002	SVTCL	2-Methylnaphthalene		10	ug/L	U	11/14/97
SJS04-GW3D-002	SVTCL	2-Methylphenol		10	ug/L	U	11/14/97
SJS04-GW3D-002	SVTCL	2-Nitroaniline		25	ug/L	U	11/14/97
SJS04-GW3D-002	SVTCL	2-Nitrophenol		10	ug/L	U	11/14/97
SJS04-GW3D-002	SVTCL	3,3'-Dichlorobenzidine		10	ug/L	U	11/14/97
SJS04-GW3D-002	SVTCL	3-Nitroaniline		25	ug/L	U	11/14/97
SJS04-GW3D-002	SVTCL	4,6-Dinitro-2-Methylphenol		25	ug/L	U	11/14/97
SJS04-GW3D-002	SVTCL	4-Bromophenol-phenyleth		10	ug/L	U	11/14/97
SJS04-GW3D-002	SVTCL	4-Chloro-3-Methylphenol		10	ug/L	U	11/14/97
SJS04-GW3D-002	SVTCL	4-Chloroaniline		10	ug/L	U	11/14/97
SJS04-GW3D-002	SVTCL	4-Chlorophenyl-phenyleth		10	ug/L	U	11/14/97
SJS04-GW3D-002	SVTCL	4-Methylphenol		10	ug/L	U	11/14/97
SJS04-GW3D-002	SVTCL	4-Nitroaniline		25	ug/L	U	11/14/97
SJS04-GW3D-002	SVTCL	4-Nitrophenol		25	ug/L	U	11/14/97
SJS04-GW3D-002	SVTCL	Acenaphthene		10	ug/L	U	11/14/97
SJS04-GW3D-002	SVTCL	Acenaphthylene		10	ug/L	U	11/14/97
SJS04-GW3D-002	SVTCL	Anthracene		10	ug/L	U	11/14/97
SJS04-GW3D-002	SVTCL	Benzo(a)anthracene		10	ug/L	U	11/14/97
SJS04-GW3D-002	SVTCL	Benzo(a)pyrene		10	ug/L	U	11/14/97
SJS04-GW3D-002	SVTCL	Benzo(b)fluoranthene		10	ug/L	U	11/14/97
SJS04-GW3D-002	SVTCL	Benzo(g,h,i)perylene		10	ug/L	U	11/14/97
SJS04-GW3D-002	SVTCL	Benzo(k)fluoranthene		10	ug/L	U	11/14/97
SJS04-GW3D-002	SVTCL	bis(2-Chloroethoxy)metha		10	ug/L	U	11/14/97
SJS04-GW3D-002	SVTCL	bis(2-chloroethyl)ether		10	ug/L	U	11/14/97
SJS04-GW3D-002	SVTCL	bis(2-Ethylhexyl)phthalate	5	7	ug/L	J	11/14/97
SJS04-GW3D-002	SVTCL	Butylbenzylphthalate		10	ug/L	U	11/14/97
SJS04-GW3D-002	SVTCL	Carbazole		10	ug/L	U	11/14/97
SJS04-GW3D-002	SVTCL	Chrysene		10	ug/L	U	11/14/97
SJS04-GW3D-002	SVTCL	Di-n-butylphthalate		10	ug/L	U	11/14/97
SJS04-GW3D-002	SVTCL	Di-n-Octyl Phthalate		10	ug/L	U	11/14/97
SJS04-GW3D-002	SVTCL	Dibenzo(a,h)anthracene		10	ug/L	U	11/14/97
SJS04-GW3D-002	SVTCL	Dibenzofuran		10	ug/L	U	11/14/97
SJS04-GW3D-002	SVTCL	Diethylphthalate		10	ug/L	U	11/14/97
SJS04-GW3D-002	SVTCL	Dimethyl Phthalate		10	ug/L	U	11/14/97
SJS04-GW3D-002	SVTCL	Fluoranthene		10	ug/L	U	11/14/97
SJS04-GW3D-002	SVTCL	Fluorene		10	ug/L	U	11/14/97
SJS04-GW3D-002	SVTCL	Hexachlorobenzene		10	ug/L	U	11/14/97
SJS04-GW3D-002	SVTCL	Hexachlorobutadiene		10	ug/L	U	11/14/97
SJS04-GW3D-002	SVTCL	Hexachlorocyclopentadie		10	ug/L	U	11/14/97
SJS04-GW3D-002	SVTCL	Hexachloroethane		10	ug/L	U	11/14/97
SJS04-GW3D-002	SVTCL	Indeno(1,2,3-cd)pyrene		10	ug/L	U	11/14/97
SJS04-GW3D-002	SVTCL	Isophorone		10	ug/L	U	11/14/97
SJS04-GW3D-002	SVTCL	N-Nitroso-Di-n-Propylamine		10	ug/L	U	11/14/97
SJS04-GW3D-002	SVTCL	N-Nitrosodiphenylamine		10	ug/L	U	11/14/97
SJS04-GW3D-002	SVTCL	Naphthalene		10	ug/L	U	11/14/97
SJS04-GW3D-002	SVTCL	Nitrobenzene		10	ug/L	U	11/14/97
SJS04-GW3D-002	SVTCL	Pentachlorophenol		25	ug/L	U	11/14/97
SJS04-GW3D-002	SVTCL	Phenanthrene		10	ug/L	U	11/14/97
SJS04-GW3D-002	SVTCL	Phenol		10	ug/L	U	11/14/97
SJS04-GW3D-002	SVTCL	Pyrene		10	ug/L	U	11/14/97
SJS04-GW3D-002	VCLOW	1,1,1-Trichloroethane		1	ug/L	U	11/9/97
SJS04-GW3D-002	VCLOW	1,1,2,2-Tetrachloroethane		1	ug/L	U	11/9/97
SJS04-GW3D-002	VCLOW	1,1,2-Trichloroethane		1	ug/L	U	11/9/97
SJS04-GW3D-002	VCLOW	1,1-Dichloroethane		1	ug/L	U	11/9/97
SJS04-GW3D-002	VCLOW	1,1-Dichloroethene		1	ug/L	U	11/9/97
SJS04-GW3D-002	VCLOW	1,2,4-Trichlorobenzene		1	ug/L	U	11/9/97
SJS04-GW3D-002	VCLOW	1,2-Dibromo-3-chloropropa		1	ug/L	U	11/9/97
SJS04-GW3D-002	VCLOW	1,2-Dibromoethane		1	ug/L	U	11/9/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS04-GW3D-002	VCLOW	1,2-Dichlorobenzene		1	ug/L	U	11/9/97
SJS04-GW3D-002	VCLOW	1,2-Dichloroethane		1	ug/L	U	11/9/97
SJS04-GW3D-002	VCLOW	1,2-Dichloropropane		1	ug/L	U	11/9/97
SJS04-GW3D-002	VCLOW	1,3-Dichlorobenzene		1	ug/L	U	11/9/97
SJS04-GW3D-002	VCLOW	1,4-Dichlorobenzene		1	ug/L	U	11/9/97
SJS04-GW3D-002	VCLOW	2-Hexanone		5	ug/L	U	11/9/97
SJS04-GW3D-002	VCLOW	4-Methyl-2-Pentanone		5	ug/L	U	11/9/97
SJS04-GW3D-002	VCLOW	Benzene		1	ug/L	U	11/9/97
SJS04-GW3D-002	VCLOW	Bromochloromethane		1	ug/L	U	11/9/97
SJS04-GW3D-002	VCLOW	Bromodichloromethane		1	ug/L	U	11/9/97
SJS04-GW3D-002	VCLOW	Bromoform		1	ug/L	U	11/9/97
SJS04-GW3D-002	VCLOW	Bromomethane		1	ug/L	U	11/9/97
SJS04-GW3D-002	VCLOW	Carbon Disulfide		1	ug/L	U	11/9/97
SJS04-GW3D-002	VCLOW	Carbon Tetrachloride		1	ug/L	U	11/9/97
SJS04-GW3D-002	VCLOW	Chlorobenzene		1	ug/L	U	11/9/97
SJS04-GW3D-002	VCLOW	Chloroethane		1	ug/L	U	11/9/97
SJS04-GW3D-002	VCLOW	Chloroform		1	ug/L	U	11/9/97
SJS04-GW3D-002	VCLOW	Chloromethane		1	ug/L	U	11/9/97
SJS04-GW3D-002	VCLOW	cis-1,2-Dichloroethene		1	ug/L	U	11/9/97
SJS04-GW3D-002	VCLOW	cis-1,3-Dichloropropene		1	ug/L	U	11/9/97
SJS04-GW3D-002	VCLOW	Dibromochloromethane		1	ug/L	U	11/9/97
SJS04-GW3D-002	VCLOW	Ethylbenzene		1	ug/L	U	11/9/97
SJS04-GW3D-002	VCLOW	Methylene Chloride	2	1	ug/L	B	11/9/97
SJS04-GW3D-002	VCLOW	Styrene		1	ug/L	U	11/9/97
SJS04-GW3D-002	VCLOW	Tetrachloroethene		1	ug/L	U	11/9/97
SJS04-GW3D-002	VCLOW	Toluene		1	ug/L	U	11/9/97
SJS04-GW3D-002	VCLOW	Total Xylenes		1	ug/L	U	11/9/97
SJS04-GW3D-002	VCLOW	Trans-1,2-Dichloroethene		1	ug/L	U	11/9/97
SJS04-GW3D-002	VCLOW	trans-1,3-Dichloropropene		1	ug/L	U	11/9/97
SJS04-GW3D-002	VCLOW	Trichloroethene		1	ug/L	U	11/9/97
SJS04-GW3D-002	VCLOW	Vinyl Chloride		1	ug/L	U	11/9/97
SJS04-GW3D-002F	METAL	Aluminum		38.1	ug/L	U	11/24/97
SJS04-GW3D-002F	METAL	Antimony		1.7	ug/L	U	11/17/97
SJS04-GW3D-002F	METAL	Arsenic		3.2	ug/L	U	11/17/97
SJS04-GW3D-002F	METAL	Barium	57.1	1	ug/L	J	11/24/97
SJS04-GW3D-002F	METAL	Beryllium	0.77	1	ug/L	B	11/24/97
SJS04-GW3D-002F	METAL	Cadmium		0.4	ug/L	U	11/17/97
SJS04-GW3D-002F	METAL	Calcium	75500	46	ug/L		11/24/97
SJS04-GW3D-002F	METAL	Chromium		4.6	ug/L	UL	11/24/97
SJS04-GW3D-002F	METAL	Cobalt		6	ug/L	U	11/24/97
SJS04-GW3D-002F	METAL	Copper		5.8	ug/L	UL	11/24/97
SJS04-GW3D-002F	METAL	Iron	11100	5	ug/L		11/24/97
SJS04-GW3D-002F	METAL	Lead		1.3	ug/L	U	11/17/97
SJS04-GW3D-002F	METAL	Magnesium	30300	45	ug/L		11/24/97
SJS04-GW3D-002F	METAL	Manganese	2170	1	ug/L		11/24/97
SJS04-GW3D-002F	METAL	Mercury		0.13	ug/L	U	11/13/97
SJS04-GW3D-002F	METAL	Nickel		6.3	ug/L	U	11/24/97
SJS04-GW3D-002F	METAL	Potassium	9380	97	ug/L		11/24/97
SJS04-GW3D-002F	METAL	Selenium		3.3	ug/L	U	11/17/97
SJS04-GW3D-002F	METAL	Silver	1.6	3	ug/L	J	11/17/97
SJS04-GW3D-002F	METAL	Sodium	117000	28	ug/L		11/24/97
SJS04-GW3D-002F	METAL	Thallium		1.5	ug/L	U	11/17/97
SJS04-GW3D-002F	METAL	Vanadium		6.8	ug/L	U	11/24/97
SJS04-GW3D-002F	METAL	Zinc	6.4	3	ug/L	B	11/24/97
SJS04-GW3D-002FP	METAL	Aluminum		38.1	ug/L	U	11/24/97
SJS04-GW3D-002FP	METAL	Antimony		1.7	ug/L	U	11/17/97
SJS04-GW3D-002FP	METAL	Arsenic	3.4	3	ug/L	J	11/17/97
SJS04-GW3D-002FP	METAL	Barium	55.1	1	ug/L	J	11/24/97
SJS04-GW3D-002FP	METAL	Beryllium		0.58	ug/L	U	11/24/97
SJS04-GW3D-002FP	METAL	Cadmium		0.4	ug/L	U	11/17/97
SJS04-GW3D-002FP	METAL	Calcium	79800	46	ug/L		11/24/97
SJS04-GW3D-002FP	METAL	Chromium		4.6	ug/L	UL	11/24/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS04-GW3D-002FP	METAL	Cobalt		6	ug/L	U	11/24/97
SJS04-GW3D-002FP	METAL	Copper		5.8	ug/L	UL	11/24/97
SJS04-GW3D-002FP	METAL	Iron	11600	5	ug/L		11/24/97
SJS04-GW3D-002FP	METAL	Lead		1.3	ug/L	U	11/17/97
SJS04-GW3D-002FP	METAL	Magnesium	32000	45	ug/L		11/24/97
SJS04-GW3D-002FP	METAL	Manganese	2280	1	ug/L		11/24/97
SJS04-GW3D-002FP	METAL	Mercury		0.13	ug/L	U	11/13/97
SJS04-GW3D-002FP	METAL	Nickel		6.3	ug/L	U	11/24/97
SJS04-GW3D-002FP	METAL	Potassium	9760	97	ug/L		11/24/97
SJS04-GW3D-002FP	METAL	Selenium		3.3	ug/L	U	11/17/97
SJS04-GW3D-002FP	METAL	Silver	2.3	3	ug/L	J	11/17/97
SJS04-GW3D-002FP	METAL	Sodium	124000	28	ug/L		11/24/97
SJS04-GW3D-002FP	METAL	Thallium		1.5	ug/L	U	11/17/97
SJS04-GW3D-002FP	METAL	Vanadium		6.8	ug/L	U	11/24/97
SJS04-GW3D-002FP	METAL	Zinc		3.9	ug/L	UL	11/24/97
SJS04-GW3D-002P	CTOTP	Total Phosphorous (as P)	0.69	0.13	mg/L		11/13/97
SJS04-GW3D-002P	MCYAN	Aluminum		38.1	ug/L	U	11/24/97
SJS04-GW3D-002P	MCYAN	Antimony		1.7	ug/L	U	11/17/97
SJS04-GW3D-002P	MCYAN	Arsenic		3.2	ug/L	U	11/17/97
SJS04-GW3D-002P	MCYAN	Barium	65	1	ug/L	J	11/24/97
SJS04-GW3D-002P	MCYAN	Beryllium	0.58	1	ug/L	B	11/24/97
SJS04-GW3D-002P	MCYAN	Cadmium		0.4	ug/L	U	11/17/97
SJS04-GW3D-002P	MCYAN	Calcium	86400	46	ug/L		11/24/97
SJS04-GW3D-002P	MCYAN	Chromium		4.6	ug/L	UL	11/24/97
SJS04-GW3D-002P	MCYAN	Cobalt		6	ug/L	U	11/24/97
SJS04-GW3D-002P	MCYAN	Copper		5.8	ug/L	UL	11/24/97
SJS04-GW3D-002P	MCYAN	Cyanide		5	ug/L	U	11/7/97
SJS04-GW3D-002P	MCYAN	Iron	12700	5	ug/L		11/24/97
SJS04-GW3D-002P	MCYAN	Lead		1.3	ug/L	U	11/17/97
SJS04-GW3D-002P	MCYAN	Magnesium	34600	45	ug/L		11/24/97
SJS04-GW3D-002P	MCYAN	Manganese	2490	1	ug/L		11/24/97
SJS04-GW3D-002P	MCYAN	Mercury		0.13	ug/L	U	11/13/97
SJS04-GW3D-002P	MCYAN	Nickel		6.3	ug/L	U	11/24/97
SJS04-GW3D-002P	MCYAN	Potassium	10600	97	ug/L		11/24/97
SJS04-GW3D-002P	MCYAN	Selenium		3.3	ug/L	U	11/17/97
SJS04-GW3D-002P	MCYAN	Silver	2.5	3	ug/L	B	11/17/97
SJS04-GW3D-002P	MCYAN	Sodium	134000	28	ug/L		11/24/97
SJS04-GW3D-002P	MCYAN	Thallium		1.5	ug/L	U	11/17/97
SJS04-GW3D-002P	MCYAN	Vanadium		6.8	ug/L	U	11/24/97
SJS04-GW3D-002P	MCYAN	Zinc	5.6	3	ug/L	B	11/24/97
SJS04-GW3D-002P	PSPCB	4,4'-DDD		0.1	ug/L	U	11/20/97
SJS04-GW3D-002P	PSPCB	4,4'-DDE		0.1	ug/L	U	11/20/97
SJS04-GW3D-002P	PSPCB	4,4'-DDT		0.1	ug/L	U	11/20/97
SJS04-GW3D-002P	PSPCB	Aldrin		0.05	ug/L	U	11/20/97
SJS04-GW3D-002P	PSPCB	alpha-BHC		0.05	ug/L	U	11/20/97
SJS04-GW3D-002P	PSPCB	alpha-Chlordane		0.05	ug/L	U	11/20/97
SJS04-GW3D-002P	PSPCB	Aroclor-1016		1	ug/L	U	11/20/97
SJS04-GW3D-002P	PSPCB	Aroclor-1221		2	ug/L	U	11/20/97
SJS04-GW3D-002P	PSPCB	Aroclor-1232		1	ug/L	U	11/20/97
SJS04-GW3D-002P	PSPCB	Aroclor-1242		1	ug/L	U	11/20/97
SJS04-GW3D-002P	PSPCB	Aroclor-1248		1	ug/L	U	11/20/97
SJS04-GW3D-002P	PSPCB	Aroclor-1254		1	ug/L	U	11/20/97
SJS04-GW3D-002P	PSPCB	Aroclor-1260		1	ug/L	U	11/20/97
SJS04-GW3D-002P	PSPCB	beta-BHC		0.05	ug/L	U	11/20/97
SJS04-GW3D-002P	PSPCB	delta-BHC		0.05	ug/L	U	11/20/97
SJS04-GW3D-002P	PSPCB	Dieldrin		0.1	ug/L	U	11/20/97
SJS04-GW3D-002P	PSPCB	Endosulfan I		0.05	ug/L	U	11/20/97
SJS04-GW3D-002P	PSPCB	Endosulfan II		0.1	ug/L	U	11/20/97
SJS04-GW3D-002P	PSPCB	Endosulfan Sulfate		0.1	ug/L	U	11/20/97
SJS04-GW3D-002P	PSPCB	Endrin		0.1	ug/L	U	11/20/97
SJS04-GW3D-002P	PSPCB	Endrin Aldehyde		0.1	ug/L	U	11/20/97
SJS04-GW3D-002P	PSPCB	Endrin Ketone		0.1	ug/L	U	11/20/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS04-GW3D-002P	PSPCB	gamma-BHC		0.05	ug/L	U	11/20/97
SJS04-GW3D-002P	PSPCB	gamma-Chlordane		0.05	ug/L	U	11/20/97
SJS04-GW3D-002P	PSPCB	Heptachlor		0.05	ug/L	U	11/20/97
SJS04-GW3D-002P	PSPCB	Heptachlor Epoxide		0.05	ug/L	U	11/20/97
SJS04-GW3D-002P	PSPCB	Methoxychlor		0.5	ug/L	U	11/20/97
SJS04-GW3D-002P	PSPCB	Toxaphene		5	ug/L	U	11/20/97
SJS04-GW3D-002P	SVTCL	1,2,4-Trichlorobenzene		10	ug/L	U	11/14/97
SJS04-GW3D-002P	SVTCL	1,2-Dichlorobenzene		10	ug/L	U	11/14/97
SJS04-GW3D-002P	SVTCL	1,3-Dichlorobenzene		10	ug/L	U	11/14/97
SJS04-GW3D-002P	SVTCL	1,4-Dichlorobenzene		10	ug/L	U	11/14/97
SJS04-GW3D-002P	SVTCL	2,2'-oxybis(1-Chloropropan		10	ug/L	U	11/14/97
SJS04-GW3D-002P	SVTCL	2,4,5-Trichlorophenol		25	ug/L	U	11/14/97
SJS04-GW3D-002P	SVTCL	2,4,6-Trichlorophenol		10	ug/L	U	11/14/97
SJS04-GW3D-002P	SVTCL	2,4-Dichlorophenol		10	ug/L	U	11/14/97
SJS04-GW3D-002P	SVTCL	2,4-Dimethylphenol		10	ug/L	U	11/14/97
SJS04-GW3D-002P	SVTCL	2,4-Dinitrophenol		25	ug/L	U	11/14/97
SJS04-GW3D-002P	SVTCL	2,4-Dinitrotoluene		10	ug/L	U	11/14/97
SJS04-GW3D-002P	SVTCL	2,6-Dinitrotoluene		10	ug/L	U	11/14/97
SJS04-GW3D-002P	SVTCL	2-Chloronaphthalene		10	ug/L	U	11/14/97
SJS04-GW3D-002P	SVTCL	2-Chlorophenol		10	ug/L	U	11/14/97
SJS04-GW3D-002P	SVTCL	2-Methylnaphthalene		10	ug/L	U	11/14/97
SJS04-GW3D-002P	SVTCL	2-Methylphenol		10	ug/L	U	11/14/97
SJS04-GW3D-002P	SVTCL	2-Nitroaniline		25	ug/L	U	11/14/97
SJS04-GW3D-002P	SVTCL	2-Nitrophenol		10	ug/L	U	11/14/97
SJS04-GW3D-002P	SVTCL	3,3'-Dichlorobenzidine		10	ug/L	U	11/14/97
SJS04-GW3D-002P	SVTCL	3-Nitroaniline		25	ug/L	U	11/14/97
SJS04-GW3D-002P	SVTCL	4,6-Dinitro-2-Methylphenol		25	ug/L	U	11/14/97
SJS04-GW3D-002P	SVTCL	4-Bromophenol-phenyleth		10	ug/L	U	11/14/97
SJS04-GW3D-002P	SVTCL	4-Chloro-3-Methylphenol		10	ug/L	U	11/14/97
SJS04-GW3D-002P	SVTCL	4-Chloroaniline		10	ug/L	U	11/14/97
SJS04-GW3D-002P	SVTCL	4-Chlorophenyl-phenyleth		10	ug/L	U	11/14/97
SJS04-GW3D-002P	SVTCL	4-Methylphenol		10	ug/L	U	11/14/97
SJS04-GW3D-002P	SVTCL	4-Nitroaniline		25	ug/L	U	11/14/97
SJS04-GW3D-002P	SVTCL	4-Nitrophenol		25	ug/L	U	11/14/97
SJS04-GW3D-002P	SVTCL	Acenaphthene		10	ug/L	U	11/14/97
SJS04-GW3D-002P	SVTCL	Acenaphthylene		10	ug/L	U	11/14/97
SJS04-GW3D-002P	SVTCL	Anthracene		10	ug/L	U	11/14/97
SJS04-GW3D-002P	SVTCL	Benzo(a)anthracene		10	ug/L	U	11/14/97
SJS04-GW3D-002P	SVTCL	Benzo(a)pyrene		10	ug/L	U	11/14/97
SJS04-GW3D-002P	SVTCL	Benzo(b)fluoranthene		10	ug/L	U	11/14/97
SJS04-GW3D-002P	SVTCL	Benzo(g,h,i)perylene		10	ug/L	U	11/14/97
SJS04-GW3D-002P	SVTCL	Benzo(k)fluoranthene		10	ug/L	U	11/14/97
SJS04-GW3D-002P	SVTCL	bis(2-Chloroethoxy)metha		10	ug/L	U	11/14/97
SJS04-GW3D-002P	SVTCL	bis(2-chloroethyl)ether		10	ug/L	U	11/14/97
SJS04-GW3D-002P	SVTCL	bis(2-Ethylhexyl)phthalate		10	ug/L	U	11/14/97
SJS04-GW3D-002P	SVTCL	Butylbenzylphthalate		10	ug/L	U	11/14/97
SJS04-GW3D-002P	SVTCL	Carbazole		10	ug/L	U	11/14/97
SJS04-GW3D-002P	SVTCL	Chrysene		10	ug/L	U	11/14/97
SJS04-GW3D-002P	SVTCL	Di-n-butylphthalate		10	ug/L	U	11/14/97
SJS04-GW3D-002P	SVTCL	Di-n-Octyl Phthalate		10	ug/L	U	11/14/97
SJS04-GW3D-002P	SVTCL	Dibenzo(a,h)anthracene		10	ug/L	U	11/14/97
SJS04-GW3D-002P	SVTCL	Dibenzofuran		10	ug/L	U	11/14/97
SJS04-GW3D-002P	SVTCL	Diethylphthalate		10	ug/L	U	11/14/97
SJS04-GW3D-002P	SVTCL	Dimethyl Phthalate		10	ug/L	U	11/14/97
SJS04-GW3D-002P	SVTCL	Fluoranthene		10	ug/L	U	11/14/97
SJS04-GW3D-002P	SVTCL	Fluorene		10	ug/L	U	11/14/97
SJS04-GW3D-002P	SVTCL	Hexachlorobenzene		10	ug/L	U	11/14/97
SJS04-GW3D-002P	SVTCL	Hexachlorobutadiene		10	ug/L	U	11/14/97
SJS04-GW3D-002P	SVTCL	Hexachlorocyclopentadie		10	ug/L	U	11/14/97
SJS04-GW3D-002P	SVTCL	Hexachloroethane		10	ug/L	U	11/14/97
SJS04-GW3D-002P	SVTCL	Indeno(1,2,3-cd)pyrene		10	ug/L	U	11/14/97
SJS04-GW3D-002P	SVTCL	Isophorone		10	ug/L	U	11/14/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS04-GW3D-002P	SVTCL	N-Nitroso-Di-n-Propylamine		10	ug/L	U	11/14/97
SJS04-GW3D-002P	SVTCL	N-Nitrosodiphenylamine		10	ug/L	U	11/14/97
SJS04-GW3D-002P	SVTCL	Naphthalene		10	ug/L	U	11/14/97
SJS04-GW3D-002P	SVTCL	Nitrobenzene		10	ug/L	U	11/14/97
SJS04-GW3D-002P	SVTCL	Pentachlorophenol		25	ug/L	U	11/14/97
SJS04-GW3D-002P	SVTCL	Phenanthrene		10	ug/L	U	11/14/97
SJS04-GW3D-002P	SVTCL	Phenol		10	ug/L	U	11/14/97
SJS04-GW3D-002P	SVTCL	Pyrene		10	ug/L	U	11/14/97
SJS04-GW3D-002P	VCLOW	1,1,1-Trichloroethane		1	ug/L	U	11/9/97
SJS04-GW3D-002P	VCLOW	1,1,2,2-Tetrachloroethane		1	ug/L	U	11/9/97
SJS04-GW3D-002P	VCLOW	1,1,2-Trichloroethane		1	ug/L	U	11/9/97
SJS04-GW3D-002P	VCLOW	1,1-Dichloroethane		1	ug/L	U	11/9/97
SJS04-GW3D-002P	VCLOW	1,1-Dichloroethene		1	ug/L	U	11/9/97
SJS04-GW3D-002P	VCLOW	1,2,4-Trichlorobenzene		1	ug/L	U	11/9/97
SJS04-GW3D-002P	VCLOW	1,2-Dibromo-3-chloropropa		1	ug/L	U	11/9/97
SJS04-GW3D-002P	VCLOW	1,2-Dibromoethane		1	ug/L	U	11/9/97
SJS04-GW3D-002P	VCLOW	1,2-Dichlorobenzene		1	ug/L	U	11/9/97
SJS04-GW3D-002P	VCLOW	1,2-Dichloroethane		1	ug/L	U	11/9/97
SJS04-GW3D-002P	VCLOW	1,2-Dichloropropane		1	ug/L	U	11/9/97
SJS04-GW3D-002P	VCLOW	1,3-Dichlorobenzene		1	ug/L	U	11/9/97
SJS04-GW3D-002P	VCLOW	1,4-Dichlorobenzene		1	ug/L	U	11/9/97
SJS04-GW3D-002P	VCLOW	2-Hexanone		5	ug/L	U	11/9/97
SJS04-GW3D-002P	VCLOW	4-Methyl-2-Pentanone		5	ug/L	U	11/9/97
SJS04-GW3D-002P	VCLOW	Benzene		1	ug/L	U	11/9/97
SJS04-GW3D-002P	VCLOW	Bromochloromethane		1	ug/L	U	11/9/97
SJS04-GW3D-002P	VCLOW	Bromodichloromethane		1	ug/L	U	11/9/97
SJS04-GW3D-002P	VCLOW	Bromoform		1	ug/L	U	11/9/97
SJS04-GW3D-002P	VCLOW	Bromomethane		1	ug/L	U	11/9/97
SJS04-GW3D-002P	VCLOW	Carbon Disulfide		1	ug/L	U	11/9/97
SJS04-GW3D-002P	VCLOW	Carbon Tetrachloride		1	ug/L	U	11/9/97
SJS04-GW3D-002P	VCLOW	Chlorobenzene		1	ug/L	U	11/9/97
SJS04-GW3D-002P	VCLOW	Chloroethane		1	ug/L	U	11/9/97
SJS04-GW3D-002P	VCLOW	Chloroform		1	ug/L	U	11/9/97
SJS04-GW3D-002P	VCLOW	Chloromethane		1	ug/L	U	11/9/97
SJS04-GW3D-002P	VCLOW	cis-1,2-Dichloroethene		1	ug/L	U	11/9/97
SJS04-GW3D-002P	VCLOW	cis-1,3-Dichloropropene		1	ug/L	U	11/9/97
SJS04-GW3D-002P	VCLOW	Dibromochloromethane		1	ug/L	U	11/9/97
SJS04-GW3D-002P	VCLOW	Ethylbenzene		1	ug/L	U	11/9/97
SJS04-GW3D-002P	VCLOW	Methylene Chloride	2	1	ug/L	B	11/9/97
SJS04-GW3D-002P	VCLOW	Styrene		1	ug/L	U	11/9/97
SJS04-GW3D-002P	VCLOW	Tetrachloroethene		1	ug/L	U	11/9/97
SJS04-GW3D-002P	VCLOW	Toluene		1	ug/L	U	11/9/97
SJS04-GW3D-002P	VCLOW	Total Xylenes		1	ug/L	U	11/9/97
SJS04-GW3D-002P	VCLOW	Trans-1,2-Dichloroethene		1	ug/L	U	11/9/97
SJS04-GW3D-002P	VCLOW	trans-1,3-Dichloropropene		1	ug/L	U	11/9/97
SJS04-GW3D-002P	VCLOW	Trichloroethene		1	ug/L	U	11/9/97
SJS04-GW3D-002P	VCLOW	Vinyl Chloride		1	ug/L	U	11/9/97
SJS04-GW3S-002	CTOTP	Total Phosphorous (as P)	0.107	0.05	mg/L		11/13/97
SJS04-GW3S-002	MCYAN	Aluminum	115	29	ug/L	B	11/24/97
SJS04-GW3S-002	MCYAN	Antimony	4.7	1	ug/L	B	11/17/97
SJS04-GW3S-002	MCYAN	Arsenic		3.2	ug/L	U	11/17/97
SJS04-GW3S-002	MCYAN	Barium	59.6	1	ug/L	J	11/24/97
SJS04-GW3S-002	MCYAN	Beryllium	0.77	1	ug/L	B	11/24/97
SJS04-GW3S-002	MCYAN	Cadmium	6.1	0.3	ug/L	K	11/17/97
SJS04-GW3S-002	MCYAN	Calcium	96500	46	ug/L		11/24/97
SJS04-GW3S-002	MCYAN	Chromium	6.1	4	ug/L	L	11/24/97
SJS04-GW3S-002	MCYAN	Cobalt		6	ug/L	U	11/24/97
SJS04-GW3S-002	MCYAN	Copper	25.2	2	ug/L	L	11/24/97
SJS04-GW3S-002	MCYAN	Cyanide		5	ug/L	U	11/7/97
SJS04-GW3S-002	MCYAN	Iron	339	5	ug/L		11/24/97
SJS04-GW3S-002	MCYAN	Lead	2.3	1	ug/L	J	11/17/97
SJS04-GW3S-002	MCYAN	Magnesium	37300	45	ug/L		11/24/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS04-GW3S-002	MCYAN	Manganese	46.7	1	ug/L	B	12/1/97
SJS04-GW3S-002	MCYAN	Mercury		0.16	ug/L	U	11/13/97
SJS04-GW3S-002	MCYAN	Nickel		6.3	ug/L	U	11/24/97
SJS04-GW3S-002	MCYAN	Potassium	25500	97	ug/L		11/24/97
SJS04-GW3S-002	MCYAN	Selenium		3.3	ug/L	U	11/17/97
SJS04-GW3S-002	MCYAN	Silver	3.8	3	ug/L	B	11/17/97
SJS04-GW3S-002	MCYAN	Sodium	235000	28	ug/L		11/24/97
SJS04-GW3S-002	MCYAN	Thallium		1.5	ug/L	U	11/17/97
SJS04-GW3S-002	MCYAN	Vanadium		6.8	ug/L	U	11/24/97
SJS04-GW3S-002	MCYAN	Zinc	105	3	ug/L	B	11/24/97
SJS04-GW3S-002	PSPCB	4,4'-DDD		0.1	ug/L	U	11/20/97
SJS04-GW3S-002	PSPCB	4,4'-DDE		0.1	ug/L	U	11/20/97
SJS04-GW3S-002	PSPCB	4,4'-DDT		0.1	ug/L	U	11/20/97
SJS04-GW3S-002	PSPCB	Aldrin		0.05	ug/L	U	11/20/97
SJS04-GW3S-002	PSPCB	alpha-BHC		0.05	ug/L	U	11/20/97
SJS04-GW3S-002	PSPCB	alpha-Chlordane		0.05	ug/L	U	11/20/97
SJS04-GW3S-002	PSPCB	Aroclor-1016		1	ug/L	U	11/20/97
SJS04-GW3S-002	PSPCB	Aroclor-1221		2	ug/L	U	11/20/97
SJS04-GW3S-002	PSPCB	Aroclor-1232		1	ug/L	U	11/20/97
SJS04-GW3S-002	PSPCB	Aroclor-1242		1	ug/L	U	11/20/97
SJS04-GW3S-002	PSPCB	Aroclor-1248		1	ug/L	U	11/20/97
SJS04-GW3S-002	PSPCB	Aroclor-1254		1	ug/L	U	11/20/97
SJS04-GW3S-002	PSPCB	Aroclor-1260		1	ug/L	U	11/20/97
SJS04-GW3S-002	PSPCB	beta-BHC		0.05	ug/L	U	11/20/97
SJS04-GW3S-002	PSPCB	delta-BHC		0.05	ug/L	U	11/20/97
SJS04-GW3S-002	PSPCB	Dieldrin		0.1	ug/L	U	11/20/97
SJS04-GW3S-002	PSPCB	Endosulfan I		0.05	ug/L	U	11/20/97
SJS04-GW3S-002	PSPCB	Endosulfan II		0.1	ug/L	U	11/20/97
SJS04-GW3S-002	PSPCB	Endosulfan Sulfate		0.1	ug/L	U	11/20/97
SJS04-GW3S-002	PSPCB	Endrin		0.1	ug/L	U	11/20/97
SJS04-GW3S-002	PSPCB	Endrin Aldehyde		0.1	ug/L	U	11/20/97
SJS04-GW3S-002	PSPCB	Endrin Ketone		0.1	ug/L	U	11/20/97
SJS04-GW3S-002	PSPCB	gamma-BHC		0.05	ug/L	U	11/20/97
SJS04-GW3S-002	PSPCB	gamma-Chlordane		0.05	ug/L	U	11/20/97
SJS04-GW3S-002	PSPCB	Heptachlor		0.05	ug/L	U	11/20/97
SJS04-GW3S-002	PSPCB	Heptachlor Epoxide		0.05	ug/L	U	11/20/97
SJS04-GW3S-002	PSPCB	Methoxychlor		0.5	ug/L	U	11/20/97
SJS04-GW3S-002	PSPCB	Toxaphene		5	ug/L	U	11/20/97
SJS04-GW3S-002	SVTCL	1,2,4-Trichlorobenzene		10	ug/L	U	11/13/97
SJS04-GW3S-002	SVTCL	1,2-Dichlorobenzene		10	ug/L	U	11/13/97
SJS04-GW3S-002	SVTCL	1,3-Dichlorobenzene		10	ug/L	U	11/13/97
SJS04-GW3S-002	SVTCL	1,4-Dichlorobenzene		10	ug/L	U	11/13/97
SJS04-GW3S-002	SVTCL	2,2'-oxybis(1-Chloropropan		10	ug/L	U	11/13/97
SJS04-GW3S-002	SVTCL	2,4,5-Trichlorophenol		25	ug/L	U	11/13/97
SJS04-GW3S-002	SVTCL	2,4,6-Trichlorophenol		10	ug/L	U	11/13/97
SJS04-GW3S-002	SVTCL	2,4-Dichlorophenol		10	ug/L	U	11/13/97
SJS04-GW3S-002	SVTCL	2,4-Dimethylphenol		10	ug/L	U	11/13/97
SJS04-GW3S-002	SVTCL	2,4-Dinitrophenol		25	ug/L	UJ	11/13/97
SJS04-GW3S-002	SVTCL	2,4-Dinitrotoluene		10	ug/L	U	11/13/97
SJS04-GW3S-002	SVTCL	2,6-Dinitrotoluene		10	ug/L	U	11/13/97
SJS04-GW3S-002	SVTCL	2-Chloronaphthalene		10	ug/L	U	11/13/97
SJS04-GW3S-002	SVTCL	2-Chlorophenol		10	ug/L	U	11/13/97
SJS04-GW3S-002	SVTCL	2-Methylnaphthalene		10	ug/L	U	11/13/97
SJS04-GW3S-002	SVTCL	2-Methylphenol		10	ug/L	U	11/13/97
SJS04-GW3S-002	SVTCL	2-Nitroaniline		25	ug/L	U	11/13/97
SJS04-GW3S-002	SVTCL	2-Nitrophenol		10	ug/L	U	11/13/97
SJS04-GW3S-002	SVTCL	3,3'-Dichlorobenzidine		10	ug/L	U	11/13/97
SJS04-GW3S-002	SVTCL	3-Nitroaniline		25	ug/L	UJ	11/13/97
SJS04-GW3S-002	SVTCL	4,6-Dinitro-2-Methylphenol		25	ug/L	U	11/13/97
SJS04-GW3S-002	SVTCL	4-Bromophenol-phenyleth		10	ug/L	U	11/13/97
SJS04-GW3S-002	SVTCL	4-Chloro-3-Methylphenol		10	ug/L	U	11/13/97
SJS04-GW3S-002	SVTCL	4-Chloroaniline		10	ug/L	U	11/13/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS04-GW3S-002	SVTCL	4-Chlorophenyl-phenyleth		10	ug/L	U	11/13/97
SJS04-GW3S-002	SVTCL	4-Methylphenol		10	ug/L	U	11/13/97
SJS04-GW3S-002	SVTCL	4-Nitroaniline		25	ug/L	UJ	11/13/97
SJS04-GW3S-002	SVTCL	4-Nitrophenol		25	ug/L	U	11/13/97
SJS04-GW3S-002	SVTCL	Acenaphthene		10	ug/L	U	11/13/97
SJS04-GW3S-002	SVTCL	Acenaphthylene		10	ug/L	U	11/13/97
SJS04-GW3S-002	SVTCL	Anthracene		10	ug/L	U	11/13/97
SJS04-GW3S-002	SVTCL	Benzo(a)anthracene		10	ug/L	U	11/13/97
SJS04-GW3S-002	SVTCL	Benzo(a)pyrene		10	ug/L	U	11/13/97
SJS04-GW3S-002	SVTCL	Benzo(b)fluoranthene		10	ug/L	U	11/13/97
SJS04-GW3S-002	SVTCL	Benzo(g,h,i)perylene		10	ug/L	U	11/13/97
SJS04-GW3S-002	SVTCL	Benzo(k)fluoranthene		10	ug/L	U	11/13/97
SJS04-GW3S-002	SVTCL	bis(2-Chloroethoxy)metha		10	ug/L	U	11/13/97
SJS04-GW3S-002	SVTCL	bis(2-chloroethyl)ether		10	ug/L	U	11/13/97
SJS04-GW3S-002	SVTCL	bis(2-Ethylhexyl)phthalate	13	7	ug/L		11/13/97
SJS04-GW3S-002	SVTCL	Butylbenzylphthalate		10	ug/L	U	11/13/97
SJS04-GW3S-002	SVTCL	Carbazole		10	ug/L	UJ	11/13/97
SJS04-GW3S-002	SVTCL	Chrysene		10	ug/L	U	11/13/97
SJS04-GW3S-002	SVTCL	Di-n-butylphthalate		10	ug/L	U	11/13/97
SJS04-GW3S-002	SVTCL	Di-n-Octyl Phthalate		10	ug/L	U	11/13/97
SJS04-GW3S-002	SVTCL	Dibenzo(a,h)anthracene		10	ug/L	U	11/13/97
SJS04-GW3S-002	SVTCL	Dibenzofuran		10	ug/L	U	11/13/97
SJS04-GW3S-002	SVTCL	Diethylphthalate	2	10	ug/L	B	11/13/97
SJS04-GW3S-002	SVTCL	Dimethyl Phthalate		10	ug/L	U	11/13/97
SJS04-GW3S-002	SVTCL	Fluoranthene		10	ug/L	U	11/13/97
SJS04-GW3S-002	SVTCL	Fluorene		10	ug/L	U	11/13/97
SJS04-GW3S-002	SVTCL	Hexachlorobenzene		10	ug/L	U	11/13/97
SJS04-GW3S-002	SVTCL	Hexachlorobutadiene		10	ug/L	U	11/13/97
SJS04-GW3S-002	SVTCL	Hexachlorocyclopentadie		10	ug/L	U	11/13/97
SJS04-GW3S-002	SVTCL	Hexachloroethane		10	ug/L	U	11/13/97
SJS04-GW3S-002	SVTCL	Indeno(1,2,3-cd)pyrene		10	ug/L	U	11/13/97
SJS04-GW3S-002	SVTCL	Isophorone		10	ug/L	U	11/13/97
SJS04-GW3S-002	SVTCL	N-Nitroso-Di-n-Propylamine		10	ug/L	U	11/13/97
SJS04-GW3S-002	SVTCL	N-Nitrosodiphenylamine		10	ug/L	U	11/13/97
SJS04-GW3S-002	SVTCL	Naphthalene		10	ug/L	U	11/13/97
SJS04-GW3S-002	SVTCL	Nitrobenzene		10	ug/L	U	11/13/97
SJS04-GW3S-002	SVTCL	Pentachlorophenol		25	ug/L	U	11/13/97
SJS04-GW3S-002	SVTCL	Phenanthrene		10	ug/L	U	11/13/97
SJS04-GW3S-002	SVTCL	Phenol		10	ug/L	U	11/13/97
SJS04-GW3S-002	SVTCL	Pyrene		10	ug/L	U	11/13/97
SJS04-GW3S-002	VCLOW	1,1,1-Trichloroethane		1	ug/L	U	11/9/97
SJS04-GW3S-002	VCLOW	1,1,2,2-Tetrachloroethane		1	ug/L	U	11/9/97
SJS04-GW3S-002	VCLOW	1,1,2-Trichloroethane		1	ug/L	U	11/9/97
SJS04-GW3S-002	VCLOW	1,1-Dichloroethane		1	ug/L	U	11/9/97
SJS04-GW3S-002	VCLOW	1,1-Dichloroethene		1	ug/L	U	11/9/97
SJS04-GW3S-002	VCLOW	1,2,4-Trichlorobenzene		1	ug/L	U	11/9/97
SJS04-GW3S-002	VCLOW	1,2-Dibromo-3-chloropropa		1	ug/L	U	11/9/97
SJS04-GW3S-002	VCLOW	1,2-Dibromoethane		1	ug/L	U	11/9/97
SJS04-GW3S-002	VCLOW	1,2-Dichlorobenzene		1	ug/L	U	11/9/97
SJS04-GW3S-002	VCLOW	1,2-Dichloroethane		1	ug/L	U	11/9/97
SJS04-GW3S-002	VCLOW	1,2-Dichloropropane		1	ug/L	U	11/9/97
SJS04-GW3S-002	VCLOW	1,3-Dichlorobenzene		1	ug/L	U	11/9/97
SJS04-GW3S-002	VCLOW	1,4-Dichlorobenzene		1	ug/L	U	11/9/97
SJS04-GW3S-002	VCLOW	2-Hexanone		5	ug/L	U	11/9/97
SJS04-GW3S-002	VCLOW	4-Methyl-2-Pentanone		5	ug/L	U	11/9/97
SJS04-GW3S-002	VCLOW	Acetone	17	5	ug/L	B	11/9/97
SJS04-GW3S-002	VCLOW	Benzene		1	ug/L	U	11/9/97
SJS04-GW3S-002	VCLOW	Bromochloromethane		1	ug/L	U	11/9/97
SJS04-GW3S-002	VCLOW	Bromodichloromethane		1	ug/L	U	11/9/97
SJS04-GW3S-002	VCLOW	Bromoform		1	ug/L	U	11/9/97
SJS04-GW3S-002	VCLOW	Bromomethane		1	ug/L	U	11/9/97
SJS04-GW3S-002	VCLOW	Carbon Disulfide		1	ug/L	U	11/9/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS04-GW3S-002	VCLOW	Carbon Tetrachloride		1	ug/L	U	11/9/97
SJS04-GW3S-002	VCLOW	Chlorobenzene		1	ug/L	U	11/9/97
SJS04-GW3S-002	VCLOW	Chloroethane		1	ug/L	U	11/9/97
SJS04-GW3S-002	VCLOW	Chloroform		1	ug/L	U	11/9/97
SJS04-GW3S-002	VCLOW	Chloromethane		1	ug/L	U	11/9/97
SJS04-GW3S-002	VCLOW	cis-1,2-Dichloroethene		1	ug/L	U	11/9/97
SJS04-GW3S-002	VCLOW	cis-1,3-Dichloropropene		1	ug/L	U	11/9/97
SJS04-GW3S-002	VCLOW	Dibromochloromethane		1	ug/L	U	11/9/97
SJS04-GW3S-002	VCLOW	Ethylbenzene		1	ug/L	U	11/9/97
SJS04-GW3S-002	VCLOW	Methylene Chloride	2	1	ug/L	B	11/9/97
SJS04-GW3S-002	VCLOW	Styrene		1	ug/L	U	11/9/97
SJS04-GW3S-002	VCLOW	Tetrachloroethene		1	ug/L	U	11/9/97
SJS04-GW3S-002	VCLOW	Toluene		1	ug/L	U	11/9/97
SJS04-GW3S-002	VCLOW	Total Xylenes		1	ug/L	U	11/9/97
SJS04-GW3S-002	VCLOW	Trans-1,2-Dichloroethene		1	ug/L	U	11/9/97
SJS04-GW3S-002	VCLOW	trans-1,3-Dichloropropene		1	ug/L	U	11/9/97
SJS04-GW3S-002	VCLOW	Trichloroethene		1	ug/L	U	11/9/97
SJS04-GW3S-002	VCLOW	Vinyl Chloride		1	ug/L	U	11/9/97
SJS04-GW3S-002F	METAL	Aluminum		38.1	ug/L	U	11/24/97
SJS04-GW3S-002F	METAL	Antimony	5	1	ug/L	K	11/17/97
SJS04-GW3S-002F	METAL	Arsenic		3.2	ug/L	U	11/17/97
SJS04-GW3S-002F	METAL	Barium	55.1	1	ug/L	J	11/24/97
SJS04-GW3S-002F	METAL	Beryllium		0.58	ug/L	U	11/24/97
SJS04-GW3S-002F	METAL	Cadmium	5.7	0.3	ug/L	K	11/17/97
SJS04-GW3S-002F	METAL	Calcium	91000	46	ug/L		11/24/97
SJS04-GW3S-002F	METAL	Chromium		4.6	ug/L	UL	11/24/97
SJS04-GW3S-002F	METAL	Cobalt		6	ug/L	U	11/24/97
SJS04-GW3S-002F	METAL	Copper	10	2	ug/L	L	11/24/97
SJS04-GW3S-002F	METAL	Iron	211	5	ug/L	B	11/24/97
SJS04-GW3S-002F	METAL	Lead		1.3	ug/L	U	11/17/97
SJS04-GW3S-002F	METAL	Magnesium	34300	45	ug/L		11/24/97
SJS04-GW3S-002F	METAL	Manganese	40.1	1	ug/L		12/1/97
SJS04-GW3S-002F	METAL	Mercury		0.13	ug/L	U	11/13/97
SJS04-GW3S-002F	METAL	Nickel		6.3	ug/L	U	11/24/97
SJS04-GW3S-002F	METAL	Potassium	24000	97	ug/L		11/24/97
SJS04-GW3S-002F	METAL	Selenium		3.3	ug/L	U	11/17/97
SJS04-GW3S-002F	METAL	Silver	3.2	3	ug/L	J	11/17/97
SJS04-GW3S-002F	METAL	Sodium	215000	28	ug/L		11/24/97
SJS04-GW3S-002F	METAL	Thallium		1.5	ug/L	U	11/17/97
SJS04-GW3S-002F	METAL	Vanadium	8	4	ug/L	J	11/24/97
SJS04-GW3S-002F	METAL	Zinc	87.8	3	ug/L		11/24/97
SJS04-GW4S-002	CTOTP	Total Phosphorous (as P)	0.59	0.25	mg/L		11/14/97
SJS04-GW4S-002	MCYAN	Aluminum	179	29	ug/L	J	11/25/97
SJS04-GW4S-002	MCYAN	Antimony		1.7	ug/L	U	11/13/97
SJS04-GW4S-002	MCYAN	Arsenic	11	3	ug/L		11/13/97
SJS04-GW4S-002	MCYAN	Barium	488	1	ug/L		11/25/97
SJS04-GW4S-002	MCYAN	Beryllium		0.58	ug/L	U	11/25/97
SJS04-GW4S-002	MCYAN	Cadmium		0.4	ug/L	U	11/13/97
SJS04-GW4S-002	MCYAN	Calcium	157000	46	ug/L		11/25/97
SJS04-GW4S-002	MCYAN	Chromium		4.6	ug/L	U	11/25/97
SJS04-GW4S-002	MCYAN	Cobalt		6	ug/L	U	11/25/97
SJS04-GW4S-002	MCYAN	Copper	6.8	2	ug/L	B	11/25/97
SJS04-GW4S-002	MCYAN	Cyanide		5	ug/L	U	11/7/97
SJS04-GW4S-002	MCYAN	Iron	27200	5	ug/L		11/25/97
SJS04-GW4S-002	MCYAN	Lead	3.2	1	ug/L		11/13/97
SJS04-GW4S-002	MCYAN	Magnesium	91900	45	ug/L		11/25/97
SJS04-GW4S-002	MCYAN	Manganese	438	1	ug/L		11/25/97
SJS04-GW4S-002	MCYAN	Mercury		0.13	ug/L	U	11/13/97
SJS04-GW4S-002	MCYAN	Nickel		6.3	ug/L	U	11/25/97
SJS04-GW4S-002	MCYAN	Potassium	44300	97	ug/L		11/25/97
SJS04-GW4S-002	MCYAN	Selenium		3.3	ug/L	U	11/13/97
SJS04-GW4S-002	MCYAN	Silver	3.2	3	ug/L	J	11/13/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS04-GW4S-002	MCYAN	Sodium	361000	28	ug/L		11/26/97
SJS04-GW4S-002	MCYAN	Thallium	2.2	2	ug/L	B	11/13/97
SJS04-GW4S-002	MCYAN	Vanadium		6.8	ug/L	U	11/25/97
SJS04-GW4S-002	MCYAN	Zinc	31.5	3	ug/L	B	11/25/97
SJS04-GW4S-002	PSPCB	4,4'-DDD		0.1	ug/L	U	11/21/97
SJS04-GW4S-002	PSPCB	4,4'-DDE		0.1	ug/L	U	11/21/97
SJS04-GW4S-002	PSPCB	4,4'-DDT		0.1	ug/L	U	11/21/97
SJS04-GW4S-002	PSPCB	Aldrin		0.05	ug/L	U	11/21/97
SJS04-GW4S-002	PSPCB	alpha-BHC		0.05	ug/L	U	11/21/97
SJS04-GW4S-002	PSPCB	alpha-Chlordane		0.05	ug/L	U	11/21/97
SJS04-GW4S-002	PSPCB	Aroclor-1016		1	ug/L	U	11/21/97
SJS04-GW4S-002	PSPCB	Aroclor-1221		2	ug/L	U	11/21/97
SJS04-GW4S-002	PSPCB	Aroclor-1232		1	ug/L	U	11/21/97
SJS04-GW4S-002	PSPCB	Aroclor-1242		1	ug/L	U	11/21/97
SJS04-GW4S-002	PSPCB	Aroclor-1248		1	ug/L	U	11/21/97
SJS04-GW4S-002	PSPCB	Aroclor-1254		1	ug/L	U	11/21/97
SJS04-GW4S-002	PSPCB	Aroclor-1260		1	ug/L	U	11/21/97
SJS04-GW4S-002	PSPCB	beta-BHC		0.05	ug/L	U	11/21/97
SJS04-GW4S-002	PSPCB	delta-BHC		0.05	ug/L	U	11/21/97
SJS04-GW4S-002	PSPCB	Dieldrin		0.1	ug/L	U	11/21/97
SJS04-GW4S-002	PSPCB	Endosulfan I		0.05	ug/L	U	11/21/97
SJS04-GW4S-002	PSPCB	Endosulfan II		0.1	ug/L	U	11/21/97
SJS04-GW4S-002	PSPCB	Endosulfan Sulfate		0.1	ug/L	U	11/21/97
SJS04-GW4S-002	PSPCB	Endrin		0.1	ug/L	U	11/21/97
SJS04-GW4S-002	PSPCB	Endrin Aldehyde		0.1	ug/L	U	11/21/97
SJS04-GW4S-002	PSPCB	Endrin Ketone		0.1	ug/L	U	11/21/97
SJS04-GW4S-002	PSPCB	gamma-BHC		0.05	ug/L	U	11/21/97
SJS04-GW4S-002	PSPCB	gamma-Chlordane		0.05	ug/L	U	11/21/97
SJS04-GW4S-002	PSPCB	Heptachlor		0.05	ug/L	U	11/21/97
SJS04-GW4S-002	PSPCB	Heptachlor Epoxide		0.05	ug/L	U	11/21/97
SJS04-GW4S-002	PSPCB	Methoxychlor		0.5	ug/L	U	11/21/97
SJS04-GW4S-002	PSPCB	Toxaphene		5	ug/L	U	11/21/97
SJS04-GW4S-002	SVTCL	1,2,4-Trichlorobenzene		10	ug/L	U	11/14/97
SJS04-GW4S-002	SVTCL	1,2-Dichlorobenzene		10	ug/L	U	11/14/97
SJS04-GW4S-002	SVTCL	1,3-Dichlorobenzene		10	ug/L	U	11/14/97
SJS04-GW4S-002	SVTCL	1,4-Dichlorobenzene		10	ug/L	U	11/14/97
SJS04-GW4S-002	SVTCL	2,2'-oxybis(1-Chloropropan		10	ug/L	U	11/14/97
SJS04-GW4S-002	SVTCL	2,4,5-Trichlorophenol		25	ug/L	U	11/14/97
SJS04-GW4S-002	SVTCL	2,4,6-Trichlorophenol		10	ug/L	U	11/14/97
SJS04-GW4S-002	SVTCL	2,4-Dichlorophenol		10	ug/L	U	11/14/97
SJS04-GW4S-002	SVTCL	2,4-Dimethylphenol		10	ug/L	U	11/14/97
SJS04-GW4S-002	SVTCL	2,4-Dinitrophenol		25	ug/L	U	11/14/97
SJS04-GW4S-002	SVTCL	2,4-Dinitrotoluene		10	ug/L	U	11/14/97
SJS04-GW4S-002	SVTCL	2,6-Dinitrotoluene		10	ug/L	U	11/14/97
SJS04-GW4S-002	SVTCL	2-Chloronaphthalene		10	ug/L	U	11/14/97
SJS04-GW4S-002	SVTCL	2-Chlorophenol		10	ug/L	U	11/14/97
SJS04-GW4S-002	SVTCL	2-Methylnaphthalene		10	ug/L	U	11/14/97
SJS04-GW4S-002	SVTCL	2-Methylphenol		10	ug/L	U	11/14/97
SJS04-GW4S-002	SVTCL	2-Nitroaniline		25	ug/L	U	11/14/97
SJS04-GW4S-002	SVTCL	2-Nitrophenol		10	ug/L	U	11/14/97
SJS04-GW4S-002	SVTCL	3,3'-Dichlorobenzidine		10	ug/L	U	11/14/97
SJS04-GW4S-002	SVTCL	3-Nitroaniline		25	ug/L	U	11/14/97
SJS04-GW4S-002	SVTCL	4,6-Dinitro-2-Methylphenol		25	ug/L	U	11/14/97
SJS04-GW4S-002	SVTCL	4-Bromophenol-phenyleth		10	ug/L	U	11/14/97
SJS04-GW4S-002	SVTCL	4-Chloro-3-Methylphenol		10	ug/L	U	11/14/97
SJS04-GW4S-002	SVTCL	4-Chloroaniline		10	ug/L	U	11/14/97
SJS04-GW4S-002	SVTCL	4-Chlorophenyl-phenyleth		10	ug/L	U	11/14/97
SJS04-GW4S-002	SVTCL	4-Methylphenol		10	ug/L	U	11/14/97
SJS04-GW4S-002	SVTCL	4-Nitroaniline		25	ug/L	U	11/14/97
SJS04-GW4S-002	SVTCL	4-Nitrophenol		25	ug/L	U	11/14/97
SJS04-GW4S-002	SVTCL	Acenaphthene		10	ug/L	U	11/14/97
SJS04-GW4S-002	SVTCL	Acenaphthylene		10	ug/L	U	11/14/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS04-GW4S-002	SVTCL	Anthracene		10	ug/L	U	11/14/97
SJS04-GW4S-002	SVTCL	Benzo(a)anthracene		10	ug/L	U	11/14/97
SJS04-GW4S-002	SVTCL	Benzo(a)pyrene		10	ug/L	U	11/14/97
SJS04-GW4S-002	SVTCL	Benzo(b)fluoranthene		10	ug/L	U	11/14/97
SJS04-GW4S-002	SVTCL	Benzo(g,h,i)perylene		10	ug/L	U	11/14/97
SJS04-GW4S-002	SVTCL	Benzo(k)fluoranthene		10	ug/L	U	11/14/97
SJS04-GW4S-002	SVTCL	bis(2-Chloroethoxy)metha		10	ug/L	U	11/14/97
SJS04-GW4S-002	SVTCL	bis(2-chloroethyl)ether		10	ug/L	U	11/14/97
SJS04-GW4S-002	SVTCL	bis(2-Ethylhexyl)phthalate		10	ug/L	U	11/14/97
SJS04-GW4S-002	SVTCL	Butylbenzylphthalate		10	ug/L	U	11/14/97
SJS04-GW4S-002	SVTCL	Carbazole		10	ug/L	U	11/14/97
SJS04-GW4S-002	SVTCL	Chrysene		10	ug/L	U	11/14/97
SJS04-GW4S-002	SVTCL	Di-n-butylphthalate		10	ug/L	U	11/14/97
SJS04-GW4S-002	SVTCL	Di-n-Octyl Phthalate		10	ug/L	U	11/14/97
SJS04-GW4S-002	SVTCL	Dibenzo(a,h)anthracene		10	ug/L	U	11/14/97
SJS04-GW4S-002	SVTCL	Dibenzofuran		10	ug/L	U	11/14/97
SJS04-GW4S-002	SVTCL	Diethylphthalate		10	ug/L	U	11/14/97
SJS04-GW4S-002	SVTCL	Dimethyl Phthalate		10	ug/L	U	11/14/97
SJS04-GW4S-002	SVTCL	Fluoranthene		10	ug/L	U	11/14/97
SJS04-GW4S-002	SVTCL	Fluorene		10	ug/L	U	11/14/97
SJS04-GW4S-002	SVTCL	Hexachlorobenzene		10	ug/L	U	11/14/97
SJS04-GW4S-002	SVTCL	Hexachlorobutadiene		10	ug/L	U	11/14/97
SJS04-GW4S-002	SVTCL	Hexachlorocyclopentadie		10	ug/L	U	11/14/97
SJS04-GW4S-002	SVTCL	Hexachloroethane		10	ug/L	U	11/14/97
SJS04-GW4S-002	SVTCL	Indeno(1,2,3-cd)pyrene		10	ug/L	U	11/14/97
SJS04-GW4S-002	SVTCL	Isophorone		10	ug/L	U	11/14/97
SJS04-GW4S-002	SVTCL	N-Nitroso-Di-n-Propylamine		10	ug/L	U	11/14/97
SJS04-GW4S-002	SVTCL	N-Nitrosodiphenylamine		10	ug/L	U	11/14/97
SJS04-GW4S-002	SVTCL	Naphthalene		10	ug/L	U	11/14/97
SJS04-GW4S-002	SVTCL	Nitrobenzene		10	ug/L	U	11/14/97
SJS04-GW4S-002	SVTCL	Pentachlorophenol		25	ug/L	U	11/14/97
SJS04-GW4S-002	SVTCL	Phenanthrene		10	ug/L	U	11/14/97
SJS04-GW4S-002	SVTCL	Phenol		10	ug/L	U	11/14/97
SJS04-GW4S-002	SVTCL	Pyrene		10	ug/L	U	11/14/97
SJS04-GW4S-002	VCLOW	1,1,1-Trichloroethane		1	ug/L	U	11/10/97
SJS04-GW4S-002	VCLOW	1,1,2,2-Tetrachloroethane		1	ug/L	U	11/10/97
SJS04-GW4S-002	VCLOW	1,1,2-Trichloroethane		1	ug/L	U	11/10/97
SJS04-GW4S-002	VCLOW	1,1-Dichloroethane		1	ug/L	U	11/10/97
SJS04-GW4S-002	VCLOW	1,1-Dichloroethene		1	ug/L	U	11/10/97
SJS04-GW4S-002	VCLOW	1,2,4-Trichlorobenzene		1	ug/L	U	11/10/97
SJS04-GW4S-002	VCLOW	1,2-Dibromo-3-chloropropa		1	ug/L	U	11/10/97
SJS04-GW4S-002	VCLOW	1,2-Dibromoethane		1	ug/L	U	11/10/97
SJS04-GW4S-002	VCLOW	1,2-Dichlorobenzene		1	ug/L	U	11/10/97
SJS04-GW4S-002	VCLOW	1,2-Dichloroethane		1	ug/L	U	11/10/97
SJS04-GW4S-002	VCLOW	1,2-Dichloropropane		1	ug/L	U	11/10/97
SJS04-GW4S-002	VCLOW	1,3-Dichlorobenzene		1	ug/L	U	11/10/97
SJS04-GW4S-002	VCLOW	1,4-Dichlorobenzene		1	ug/L	U	11/10/97
SJS04-GW4S-002	VCLOW	2-Hexanone		5	ug/L	U	11/10/97
SJS04-GW4S-002	VCLOW	4-Methyl-2-Pentanone		5	ug/L	U	11/10/97
SJS04-GW4S-002	VCLOW	Acetone	8	5	ug/L	B	11/10/97
SJS04-GW4S-002	VCLOW	Benzene		1	ug/L	U	11/10/97
SJS04-GW4S-002	VCLOW	Bromochloromethane		1	ug/L	U	11/10/97
SJS04-GW4S-002	VCLOW	Bromodichloromethane		1	ug/L	U	11/10/97
SJS04-GW4S-002	VCLOW	Bromoform		1	ug/L	U	11/10/97
SJS04-GW4S-002	VCLOW	Bromomethane		1	ug/L	U	11/10/97
SJS04-GW4S-002	VCLOW	Carbon Disulfide		1	ug/L	U	11/10/97
SJS04-GW4S-002	VCLOW	Carbon Tetrachloride		1	ug/L	U	11/10/97
SJS04-GW4S-002	VCLOW	Chlorobenzene		1	ug/L	U	11/10/97
SJS04-GW4S-002	VCLOW	Chloroethane		1	ug/L	U	11/10/97
SJS04-GW4S-002	VCLOW	Chloroform		1	ug/L	U	11/10/97
SJS04-GW4S-002	VCLOW	Chloromethane		1	ug/L	U	11/10/97
SJS04-GW4S-002	VCLOW	cis-1,2-Dichloroethene		1	ug/L	U	11/10/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS04-GW4S-002	VCLOW	cis-1,3-Dichloropropene		1	ug/L	U	11/10/97
SJS04-GW4S-002	VCLOW	Dibromochloromethane		1	ug/L	U	11/10/97
SJS04-GW4S-002	VCLOW	Ethylbenzene		1	ug/L	U	11/10/97
SJS04-GW4S-002	VCLOW	Methylene Chloride	3	2	ug/L	B	11/10/97
SJS04-GW4S-002	VCLOW	Styrene		1	ug/L	U	11/10/97
SJS04-GW4S-002	VCLOW	Tetrachloroethene		1	ug/L	U	11/10/97
SJS04-GW4S-002	VCLOW	Toluene		1	ug/L	U	11/10/97
SJS04-GW4S-002	VCLOW	Total Xylenes		1	ug/L	U	11/10/97
SJS04-GW4S-002	VCLOW	Trans-1,2-Dichloroethene		1	ug/L	U	11/10/97
SJS04-GW4S-002	VCLOW	trans-1,3-Dichloropropene		1	ug/L	U	11/10/97
SJS04-GW4S-002	VCLOW	Trichloroethene		1	ug/L	U	11/10/97
SJS04-GW4S-002	VCLOW	Vinyl Chloride		1	ug/L	U	11/10/97
SJS04-GW4S-002F	METAL	Aluminum		38.1	ug/L	U	11/25/97
SJS04-GW4S-002F	METAL	Antimony		1.7	ug/L	U	11/13/97
SJS04-GW4S-002F	METAL	Arsenic	5.5	3	ug/L	J	11/13/97
SJS04-GW4S-002F	METAL	Barium	499	1	ug/L		11/25/97
SJS04-GW4S-002F	METAL	Beryllium		0.58	ug/L	U	11/25/97
SJS04-GW4S-002F	METAL	Cadmium		0.4	ug/L	U	11/13/97
SJS04-GW4S-002F	METAL	Calcium	160000	46	ug/L		11/25/97
SJS04-GW4S-002F	METAL	Chromium		4.6	ug/L	U	11/25/97
SJS04-GW4S-002F	METAL	Cobalt		6	ug/L	U	11/25/97
SJS04-GW4S-002F	METAL	Copper		5.8	ug/L	U	11/25/97
SJS04-GW4S-002F	METAL	Iron	25700	5	ug/L		11/25/97
SJS04-GW4S-002F	METAL	Lead		1.3	ug/L	U	11/13/97
SJS04-GW4S-002F	METAL	Magnesium	105000	45	ug/L		11/25/97
SJS04-GW4S-002F	METAL	Manganese	444	1	ug/L		11/25/97
SJS04-GW4S-002F	METAL	Mercury		0.13	ug/L	U	11/13/97
SJS04-GW4S-002F	METAL	Nickel		6.3	ug/L	U	11/25/97
SJS04-GW4S-002F	METAL	Potassium	48800	97	ug/L		11/25/97
SJS04-GW4S-002F	METAL	Selenium		3.3	ug/L	U	11/13/97
SJS04-GW4S-002F	METAL	Silver	2.6	3	ug/L	B	11/13/97
SJS04-GW4S-002F	METAL	Sodium	482000	28	ug/L		11/26/97
SJS04-GW4S-002F	METAL	Thallium		1.5	ug/L	U	11/13/97
SJS04-GW4S-002F	METAL	Vanadium		6.8	ug/L	U	11/25/97
SJS04-GW4S-002F	METAL	Zinc	15.3	3	ug/L	B	11/25/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS03-GW1S-001	SVTCL	3,3'-Dichlorobenzidine		10	ug/L	U	7/30/97
SJS03-GW1S-001	SVTCL	3-Nitroaniline		25	ug/L	U	7/30/97
SJS03-GW1S-001	SVTCL	4,6-Dinitro-2-Methylphenol		25	ug/L	U	7/30/97
SJS03-GW1S-001	SVTCL	4-Bromophenyl phenylether		10	ug/L	U	7/30/97
SJS03-GW1S-001	SVTCL	4-Chloro-3-Methylphenol		10	ug/L	U	7/30/97
SJS03-GW1S-001	SVTCL	4-Chloroaniline		10	ug/L	U	7/30/97
SJS03-GW1S-001	SVTCL	4-Chlorophenyl-phenylether		10	ug/L	U	7/30/97
SJS03-GW1S-001	SVTCL	4-Methylphenol		10	ug/L	U	7/30/97
SJS03-GW1S-001	SVTCL	4-Nitroaniline		25	ug/L	U	7/30/97
SJS03-GW1S-001	SVTCL	4-Nitrophenol		25	ug/L	U	7/30/97
SJS03-GW1S-001	SVTCL	Acenaphthene	15	10	ug/L		7/30/97
SJS03-GW1S-001	SVTCL	Acenaphthylene		10	ug/L	U	7/30/97
SJS03-GW1S-001	SVTCL	Anthracene		10	ug/L	U	7/30/97
SJS03-GW1S-001	SVTCL	Benzo(a)Anthracene		10	ug/L	U	7/30/97
SJS03-GW1S-001	SVTCL	Benzo(a)Pyrene		10	ug/L	U	7/30/97
SJS03-GW1S-001	SVTCL	Benzo(b)Fluoranthene		10	ug/L	U	7/30/97
SJS03-GW1S-001	SVTCL	Benzo(g,h,i)Perylene		10	ug/L	U	7/30/97
SJS03-GW1S-001	SVTCL	Benzo(k)fluoranthene		10	ug/L	U	7/30/97
SJS03-GW1S-001	SVTCL	Bis(2-chloroethoxy)Methane		10	ug/L	U	7/30/97
SJS03-GW1S-001	SVTCL	Bis(2-chloroethyl)Ether		10	ug/L	U	7/30/97
SJS03-GW1S-001	SVTCL	Bis(2-Ethylhexyl)Phthalate		10	ug/L	U	7/30/97
SJS03-GW1S-001	SVTCL	Butylbenzylphthalate		10	ug/L	U	7/30/97
SJS03-GW1S-001	SVTCL	Carbazole	2	10	ug/L	J	7/30/97
SJS03-GW1S-001	SVTCL	Chrysene		10	ug/L	U	7/30/97
SJS03-GW1S-001	SVTCL	Di-n-Butylphthalate		10	ug/L	U	7/30/97
SJS03-GW1S-001	SVTCL	Di-n-Octyl Phthalate		10	ug/L	U	7/30/97
SJS03-GW1S-001	SVTCL	Dibenz(a,h)Anthracene		10	ug/L	U	7/30/97
SJS03-GW1S-001	SVTCL	Dibenzofuran	8	10	ug/L	J	7/30/97
SJS03-GW1S-001	SVTCL	Diethylphthalate		10	ug/L	U	7/30/97
SJS03-GW1S-001	SVTCL	Dimethyl Phthalate		10	ug/L	U	7/30/97
SJS03-GW1S-001	SVTCL	Fluoranthene		10	ug/L	U	7/30/97
SJS03-GW1S-001	SVTCL	Fluorene	9	10	ug/L	J	7/30/97
SJS03-GW1S-001	SVTCL	Hexachlorobenzene		10	ug/L	U	7/30/97
SJS03-GW1S-001	SVTCL	Hexachlorobutadiene		10	ug/L	U	7/30/97
SJS03-GW1S-001	SVTCL	Hexachlorocyclopentadien		10	ug/L	U	7/30/97
SJS03-GW1S-001	SVTCL	Hexachloroethane		10	ug/L	U	7/30/97
SJS03-GW1S-001	SVTCL	Indeno(1,2,3-cd)Pyrene		10	ug/L	U	7/30/97
SJS03-GW1S-001	SVTCL	Isophorone		10	ug/L	U	7/30/97
SJS03-GW1S-001	SVTCL	N-Nitroso-Di-n-Propylamine		10	ug/L	U	7/30/97
SJS03-GW1S-001	SVTCL	N-Nitrosodiphenylamine		10	ug/L	U	7/30/97
SJS03-GW1S-001	SVTCL	Naphthalene	19	10	ug/L		7/30/97
SJS03-GW1S-001	SVTCL	Nitrobenzene		10	ug/L	U	7/30/97
SJS03-GW1S-001	SVTCL	Pentachlorophenol		25	ug/L	U	7/30/97
SJS03-GW1S-001	SVTCL	Phenanthrene	5	10	ug/L	J	7/30/97
SJS03-GW1S-001	SVTCL	Phenol		10	ug/L	U	7/30/97
SJS03-GW1S-001	SVTCL	Pyrene		10	ug/L	U	7/30/97
SJS03-GW1S-001	VCLOW	1,1,1-Trichloroethane		1	ug/L	U	7/25/97
SJS03-GW1S-001	VCLOW	1,1,2,2-Tetrachloroethane		1	ug/L	U	7/25/97
SJS03-GW1S-001	VCLOW	1,1,2-Trichloroethane		1	ug/L	U	7/25/97
SJS03-GW1S-001	VCLOW	1,1-Dichloroethane		1	ug/L	U	7/25/97
SJS03-GW1S-001	VCLOW	1,1-Dichloroethene		1	ug/L	U	7/25/97
SJS03-GW1S-001	VCLOW	1,2,4-Trichlorobenzene		1	ug/L	U	7/25/97
SJS03-GW1S-001	VCLOW	1,2-Dibromo-3-chloropropan		1	ug/L	U	7/25/97
SJS03-GW1S-001	VCLOW	1,2-Dibromoethane		1	ug/L	U	7/25/97
SJS03-GW1S-001	VCLOW	1,2-Dichlorobenzene		1	ug/L	U	7/25/97
SJS03-GW1S-001	VCLOW	1,2-Dichloroethane		1	ug/L	U	7/25/97
SJS03-GW1S-001	VCLOW	1,2-Dichloropropane		1	ug/L	U	7/25/97
SJS03-GW1S-001	VCLOW	1,3-Dichlorobenzene		1	ug/L	U	7/25/97
SJS03-GW1S-001	VCLOW	1,4-Dichlorobenzene		1	ug/L	U	7/25/97
SJS03-GW1S-001	VCLOW	2-Butanone		5	ug/L	U	7/25/97
SJS03-GW1S-001	VCLOW	2-Hexanone		5	ug/L	U	7/25/97
SJS03-GW1S-001	VCLOW	4-Methyl-2-Pentanone		5	ug/L	U	7/25/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS03-GW2D-001	SVTCL	4-Methylphenol		10	ug/L	U	8/8/97
SJS03-GW2D-001	SVTCL	4-Nitroaniline		25	ug/L	U	8/8/97
SJS03-GW2D-001	SVTCL	4-Nitrophenol		25	ug/L	U	8/8/97
SJS03-GW2D-001	SVTCL	Acenaphthene		10	ug/L	U	8/8/97
SJS03-GW2D-001	SVTCL	Acenaphthylene		10	ug/L	U	8/8/97
SJS03-GW2D-001	SVTCL	Anthracene		10	ug/L	U	8/8/97
SJS03-GW2D-001	SVTCL	Benzo(a)anthracene		10	ug/L	U	8/8/97
SJS03-GW2D-001	SVTCL	Benzo(a)pyrene		10	ug/L	U	8/8/97
SJS03-GW2D-001	SVTCL	Benzo(b)fluoranthene		10	ug/L	U	8/8/97
SJS03-GW2D-001	SVTCL	Benzo(g,h,i)perylene		10	ug/L	U	8/8/97
SJS03-GW2D-001	SVTCL	Benzo(k)fluoranthene		10	ug/L	U	8/8/97
SJS03-GW2D-001	SVTCL	bis(2-Chloroethoxy)methan		10	ug/L	U	8/8/97
SJS03-GW2D-001	SVTCL	bis(2-chloroethyl)ether		10	ug/L	U	8/8/97
SJS03-GW2D-001	SVTCL	bis(2-Ethylhexyl)phthalate		10	ug/L	U	8/8/97
SJS03-GW2D-001	SVTCL	Butylbenzylphthalate		10	ug/L	U	8/8/97
SJS03-GW2D-001	SVTCL	Carbazole		10	ug/L	U	8/8/97
SJS03-GW2D-001	SVTCL	Chrysene		10	ug/L	U	8/8/97
SJS03-GW2D-001	SVTCL	Di-n-butylphthalate		10	ug/L	U	8/8/97
SJS03-GW2D-001	SVTCL	Di-n-Octyl Phthalate		10	ug/L	U	8/8/97
SJS03-GW2D-001	SVTCL	Dibenzo(a,h)anthracene		10	ug/L	U	8/8/97
SJS03-GW2D-001	SVTCL	Dibenzofuran		10	ug/L	U	8/8/97
SJS03-GW2D-001	SVTCL	Diethylphthalate		10	ug/L	U	8/8/97
SJS03-GW2D-001	SVTCL	Dimethyl Phthalate		10	ug/L	U	8/8/97
SJS03-GW2D-001	SVTCL	Fluoranthene		10	ug/L	U	8/8/97
SJS03-GW2D-001	SVTCL	Fluorene		10	ug/L	U	8/8/97
SJS03-GW2D-001	SVTCL	Hexachlorobenzene		10	ug/L	U	8/8/97
SJS03-GW2D-001	SVTCL	Hexachlorobutadiene		10	ug/L	U	8/8/97
SJS03-GW2D-001	SVTCL	Hexachlorocyclopentadien		10	ug/L	U	8/8/97
SJS03-GW2D-001	SVTCL	Hexachloroethane		10	ug/L	U	8/8/97
SJS03-GW2D-001	SVTCL	Indeno(1,2,3-cd)pyrene		10	ug/L	U	8/8/97
SJS03-GW2D-001	SVTCL	Isophorone		10	ug/L	U	8/8/97
SJS03-GW2D-001	SVTCL	N-Nitroso-Di-n-Propylamine		10	ug/L	U	8/8/97
SJS03-GW2D-001	SVTCL	N-Nitrosodiphenylamine		10	ug/L	U	8/8/97
SJS03-GW2D-001	SVTCL	Naphthalene		10	ug/L	U	8/8/97
SJS03-GW2D-001	SVTCL	Nitrobenzene		10	ug/L	U	8/8/97
SJS03-GW2D-001	SVTCL	Pentachlorophenol		25	ug/L	U	8/8/97
SJS03-GW2D-001	SVTCL	Phenanthrene		10	ug/L	U	8/8/97
SJS03-GW2D-001	SVTCL	Phenol		10	ug/L	U	8/8/97
SJS03-GW2D-001	SVTCL	Pyrene		10	ug/L	U	8/8/97
SJS03-GW2D-001	VCLOW	1,1,1-Trichloroethane		1	ug/L	U	8/1/97
SJS03-GW2D-001	VCLOW	1,1,2,2-Tetrachloroethane		1	ug/L	U	8/1/97
SJS03-GW2D-001	VCLOW	1,1,2-Trichloroethane		1	ug/L	U	8/1/97
SJS03-GW2D-001	VCLOW	1,1-Dichloroethane		1	ug/L	U	8/1/97
SJS03-GW2D-001	VCLOW	1,1-Dichloroethene		1	ug/L	U	8/1/97
SJS03-GW2D-001	VCLOW	1,2,4-Trichlorobenzene		1	ug/L	U	8/1/97
SJS03-GW2D-001	VCLOW	1,2-Dibromo-3-chloropropan		1	ug/L	U	8/1/97
SJS03-GW2D-001	VCLOW	1,2-Dibromoethane		1	ug/L	U	8/1/97
SJS03-GW2D-001	VCLOW	1,2-Dichlorobenzene		1	ug/L	U	8/1/97
SJS03-GW2D-001	VCLOW	1,2-Dichloroethane		1	ug/L	U	8/1/97
SJS03-GW2D-001	VCLOW	1,2-Dichloropropane		1	ug/L	U	8/1/97
SJS03-GW2D-001	VCLOW	1,3-Dichlorobenzene		1	ug/L	U	8/1/97
SJS03-GW2D-001	VCLOW	1,4-Dichlorobenzene		1	ug/L	U	8/1/97
SJS03-GW2D-001	VCLOW	2-Hexanone		5	ug/L	U	8/1/97
SJS03-GW2D-001	VCLOW	4-Methyl-2-Pentanone		5	ug/L	U	8/1/97
SJS03-GW2D-001	VCLOW	Acetone	8	5	ug/L	B	8/1/97
SJS03-GW2D-001	VCLOW	Benzene		1	ug/L	U	8/1/97
SJS03-GW2D-001	VCLOW	Bromochloromethane		1	ug/L	U	8/1/97
SJS03-GW2D-001	VCLOW	Bromodichloromethane		1	ug/L	U	8/1/97
SJS03-GW2D-001	VCLOW	Bromoform		1	ug/L	U	8/1/97
SJS03-GW2D-001	VCLOW	Bromomethane		1	ug/L	U	8/1/97
SJS03-GW2D-001	VCLOW	Carbon Disulfide		1	ug/L	U	8/1/97
SJS03-GW2D-001	VCLOW	Carbon Tetrachloride		1	ug/L	U	8/1/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS03-GW2D-001	VCLOW	Chlorobenzene		1	ug/L	U	8/1/97
SJS03-GW2D-001	VCLOW	Chloroethane		1	ug/L	U	8/1/97
SJS03-GW2D-001	VCLOW	Chloroform	0.3	1	ug/L	J	8/1/97
SJS03-GW2D-001	VCLOW	Chloromethane		1	ug/L	U	8/1/97
SJS03-GW2D-001	VCLOW	cis-1,2-Dichloroethene		1	ug/L	U	8/1/97
SJS03-GW2D-001	VCLOW	cis-1,3-Dichloropropene		1	ug/L	U	8/1/97
SJS03-GW2D-001	VCLOW	Dibromochloromethane		1	ug/L	U	8/1/97
SJS03-GW2D-001	VCLOW	Ethylbenzene		1	ug/L	U	8/1/97
SJS03-GW2D-001	VCLOW	Methylene Chloride	2	1	ug/L	B	8/1/97
SJS03-GW2D-001	VCLOW	Styrene		1	ug/L	U	8/1/97
SJS03-GW2D-001	VCLOW	Tetrachloroethene		1	ug/L	U	8/1/97
SJS03-GW2D-001	VCLOW	Toluene		1	ug/L	U	8/1/97
SJS03-GW2D-001	VCLOW	Total Xylenes		1	ug/L	U	8/1/97
SJS03-GW2D-001	VCLOW	Trans-1,2-Dichloroethene		1	ug/L	U	8/1/97
SJS03-GW2D-001	VCLOW	trans-1,3-Dichloropropene		1	ug/L	U	8/1/97
SJS03-GW2D-001	VCLOW	Trichloroethene		1	ug/L	U	8/1/97
SJS03-GW2D-001	VCLOW	Vinyl Chloride		1	ug/L	U	8/1/97
SJS03-GW2D-001F	METAL	Aluminum	47	29	ug/L	B	8/11/97
SJS03-GW2D-001F	METAL	Antimony		2	ug/L	UL	8/13/97
SJS03-GW2D-001F	METAL	Arsenic		3	ug/L	UL	8/8/97
SJS03-GW2D-001F	METAL	Barium	42.8	1	ug/L	J	8/11/97
SJS03-GW2D-001F	METAL	Beryllium	1.1	1	ug/L	B	8/11/97
SJS03-GW2D-001F	METAL	Cadmium		0.5	ug/L	UL	8/8/97
SJS03-GW2D-001F	METAL	Calcium	98400	46	ug/L	J	8/11/97
SJS03-GW2D-001F	METAL	Chromium		7	ug/L	U	8/11/97
SJS03-GW2D-001F	METAL	Cobalt		8	ug/L	U	8/11/97
SJS03-GW2D-001F	METAL	Copper		6	ug/L	U	8/11/97
SJS03-GW2D-001F	METAL	Iron	156	5	ug/L	B	8/11/97
SJS03-GW2D-001F	METAL	Lead		1	ug/L	U	8/8/97
SJS03-GW2D-001F	METAL	Magnesium	38200	45	ug/L	J	8/11/97
SJS03-GW2D-001F	METAL	Manganese	284	1	ug/L	J	8/11/97
SJS03-GW2D-001F	METAL	Mercury	0.17	0.1	ug/L	B	8/7/97
SJS03-GW2D-001F	METAL	Nickel		7	ug/L	U	8/11/97
SJS03-GW2D-001F	METAL	Potassium	16600	97	ug/L		8/11/97
SJS03-GW2D-001F	METAL	Silver		1	ug/L	U	8/8/97
SJS03-GW2D-001F	METAL	Sodium	35200	28	ug/L	J	8/11/97
SJS03-GW2D-001F	METAL	Thallium		2	ug/L	U	8/8/97
SJS03-GW2D-001F	METAL	Vanadium		9	ug/L	U	8/11/97
SJS03-GW2D-001F	METAL	Zinc	7.2	3	ug/L	B	8/11/97
SJS03-GW2S-001	CTOTP	Total Phosphorous (as P)	0.173	0.05	mg/L	J	7/31/97
SJS03-GW2S-001	MCYAN	Aluminum	19200	29	ug/L	K	8/1/97
SJS03-GW2S-001	MCYAN	Antimony		2	ug/L	U	8/1/97
SJS03-GW2S-001	MCYAN	Arsenic		3	ug/L	U	8/1/97
SJS03-GW2S-001	MCYAN	Barium	75.6	1	ug/L	J	8/1/97
SJS03-GW2S-001	MCYAN	Beryllium		1	ug/L	U	8/1/97
SJS03-GW2S-001	MCYAN	Cadmium		0.5	ug/L	U	8/1/97
SJS03-GW2S-001	MCYAN	Calcium	366000	46	ug/L		8/1/97
SJS03-GW2S-001	MCYAN	Chromium	56.7	4	ug/L		8/1/97
SJS03-GW2S-001	MCYAN	Cobalt	16	3	ug/L	J	8/1/97
SJS03-GW2S-001	MCYAN	Copper	15.9	2	ug/L	B	8/1/97
SJS03-GW2S-001	MCYAN	Cyanide		5	ug/L	U	7/25/97
SJS03-GW2S-001	MCYAN	Iron	33900	5	ug/L		8/1/97
SJS03-GW2S-001	MCYAN	Lead	9	1	ug/L		8/6/97
SJS03-GW2S-001	MCYAN	Magnesium	179000	45	ug/L		8/1/97
SJS03-GW2S-001	MCYAN	Manganese	2990	1	ug/L		8/1/97
SJS03-GW2S-001	MCYAN	Mercury	0.26	0.1	ug/L	B	8/7/97
SJS03-GW2S-001	MCYAN	Nickel	25.1	4	ug/L	J	8/1/97
SJS03-GW2S-001	MCYAN	Potassium	61100	97	ug/L		8/1/97
SJS03-GW2S-001	MCYAN	Selenium		3	ug/L	U	8/1/97
SJS03-GW2S-001	MCYAN	Silver		1	ug/L	U	8/1/97
SJS03-GW2S-001	MCYAN	Sodium	612000	28	ug/L		8/4/97
SJS03-GW2S-001	MCYAN	Thallium		2	ug/L	U	8/1/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS03-GW2S-001	MCYAN	Vanadium	43	4	ug/L	J	8/1/97
SJS03-GW2S-001	MCYAN	Zinc	90	3	ug/L		8/1/97
SJS03-GW2S-001	PSPCB	4,4'-DDD		0.1	ug/L	U	8/9/97
SJS03-GW2S-001	PSPCB	4,4'-DDE		0.1	ug/L	U	8/9/97
SJS03-GW2S-001	PSPCB	4,4'-DDT		0.1	ug/L	U	8/9/97
SJS03-GW2S-001	PSPCB	Aldrin		0.05	ug/L	U	8/9/97
SJS03-GW2S-001	PSPCB	alpha-BHC		0.05	ug/L	U	8/9/97
SJS03-GW2S-001	PSPCB	alpha-Chlordane		0.05	ug/L	U	8/9/97
SJS03-GW2S-001	PSPCB	Aroclor-1016		1	ug/L	U	8/9/97
SJS03-GW2S-001	PSPCB	Aroclor-1221		2	ug/L	U	8/9/97
SJS03-GW2S-001	PSPCB	Aroclor-1232		1	ug/L	U	8/9/97
SJS03-GW2S-001	PSPCB	Aroclor-1242		1	ug/L	U	8/9/97
SJS03-GW2S-001	PSPCB	Aroclor-1248		1	ug/L	U	8/9/97
SJS03-GW2S-001	PSPCB	Aroclor-1254		1	ug/L	U	8/9/97
SJS03-GW2S-001	PSPCB	Aroclor-1260		1	ug/L	U	8/9/97
SJS03-GW2S-001	PSPCB	beta-BHC		0.05	ug/L	U	8/9/97
SJS03-GW2S-001	PSPCB	delta-BHC		0.05	ug/L	U	8/9/97
SJS03-GW2S-001	PSPCB	Dieldrin		0.1	ug/L	U	8/9/97
SJS03-GW2S-001	PSPCB	Endosulfan I		0.05	ug/L	U	8/9/97
SJS03-GW2S-001	PSPCB	Endosulfan II		0.1	ug/L	U	8/9/97
SJS03-GW2S-001	PSPCB	Endosulfan Sulfate		0.1	ug/L	U	8/9/97
SJS03-GW2S-001	PSPCB	Endrin		0.1	ug/L	U	8/9/97
SJS03-GW2S-001	PSPCB	Endrin Aldehyde		0.1	ug/L	U	8/9/97
SJS03-GW2S-001	PSPCB	Endrin Ketone		0.1	ug/L	U	8/9/97
SJS03-GW2S-001	PSPCB	gamma-BHC		0.05	ug/L	U	8/9/97
SJS03-GW2S-001	PSPCB	gamma-Chlordane		0.05	ug/L	U	8/9/97
SJS03-GW2S-001	PSPCB	Heptachlor		0.05	ug/L	U	8/9/97
SJS03-GW2S-001	PSPCB	Heptachlor Epoxide		0.05	ug/L	U	8/9/97
SJS03-GW2S-001	PSPCB	Methoxychlor		0.5	ug/L	U	8/9/97
SJS03-GW2S-001	PSPCB	Toxaphene		5	ug/L	U	8/9/97
SJS03-GW2S-001	SVTCL	1,2,4-Trichlorobenzene		10	ug/L	U	7/31/97
SJS03-GW2S-001	SVTCL	1,2-Dichlorobenzene		10	ug/L	U	7/31/97
SJS03-GW2S-001	SVTCL	1,3-Dichlorobenzene		10	ug/L	U	7/31/97
SJS03-GW2S-001	SVTCL	1,4-Dichlorobenzene		10	ug/L	U	7/31/97
SJS03-GW2S-001	SVTCL	2,2'-oxybis(1-Chloropropane		10	ug/L	U	7/31/97
SJS03-GW2S-001	SVTCL	2,4,5-Trichlorophenol		25	ug/L	U	7/31/97
SJS03-GW2S-001	SVTCL	2,4,6-Trichlorophenol		10	ug/L	U	7/31/97
SJS03-GW2S-001	SVTCL	2,4-Dichlorophenol		10	ug/L	U	7/31/97
SJS03-GW2S-001	SVTCL	2,4-Dimethylphenol		10	ug/L	U	7/31/97
SJS03-GW2S-001	SVTCL	2,4-Dinitrophenol		25	ug/L	U	7/31/97
SJS03-GW2S-001	SVTCL	2,4-Dinitrotoluene		10	ug/L	U	7/31/97
SJS03-GW2S-001	SVTCL	2,6-Dinitrotoluene		10	ug/L	U	7/31/97
SJS03-GW2S-001	SVTCL	2-Chloronaphthalene		10	ug/L	U	7/31/97
SJS03-GW2S-001	SVTCL	2-Chlorophenol		10	ug/L	U	7/31/97
SJS03-GW2S-001	SVTCL	2-Methylnaphthalene		10	ug/L	U	7/31/97
SJS03-GW2S-001	SVTCL	2-Methylphenol		10	ug/L	U	7/31/97
SJS03-GW2S-001	SVTCL	2-Nitroaniline		25	ug/L	U	7/31/97
SJS03-GW2S-001	SVTCL	2-Nitrophenol		10	ug/L	U	7/31/97
SJS03-GW2S-001	SVTCL	3,3'-Dichlorobenzidine		10	ug/L	U	7/31/97
SJS03-GW2S-001	SVTCL	3-Nitroaniline		25	ug/L	U	7/31/97
SJS03-GW2S-001	SVTCL	4,6-Dinitro-2-Methylphenol		25	ug/L	U	7/31/97
SJS03-GW2S-001	SVTCL	4-Bromophenyl phenylether		10	ug/L	U	7/31/97
SJS03-GW2S-001	SVTCL	4-Chloro-3-Methylphenol		10	ug/L	U	7/31/97
SJS03-GW2S-001	SVTCL	4-Chloroaniline		10	ug/L	U	7/31/97
SJS03-GW2S-001	SVTCL	4-Chlorophenyl-phenylether		10	ug/L	U	7/31/97
SJS03-GW2S-001	SVTCL	4-Methylphenol		10	ug/L	U	7/31/97
SJS03-GW2S-001	SVTCL	4-Nitroaniline		25	ug/L	U	7/31/97
SJS03-GW2S-001	SVTCL	4-Nitrophenol		25	ug/L	U	7/31/97
SJS03-GW2S-001	SVTCL	Acenaphthene		10	ug/L	U	7/31/97
SJS03-GW2S-001	SVTCL	Acenaphthylene		10	ug/L	U	7/31/97
SJS03-GW2S-001	SVTCL	Anthracene		10	ug/L	U	7/31/97
SJS03-GW2S-001	SVTCL	Benzo(a)Anthracene		10	ug/L	U	7/31/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS03-GW2S-001	SVTCL	Benzo(a)Pyrene		10	ug/L	U	7/31/97
SJS03-GW2S-001	SVTCL	Benzo(b)Fluoranthene		10	ug/L	U	7/31/97
SJS03-GW2S-001	SVTCL	Benzo(g,h,i)Perylene		10	ug/L	U	7/31/97
SJS03-GW2S-001	SVTCL	Benzo(k)fluoranthene		10	ug/L	U	7/31/97
SJS03-GW2S-001	SVTCL	Bis(2-chloroethoxy)Methane		10	ug/L	U	7/31/97
SJS03-GW2S-001	SVTCL	Bis(2-chloroethyl)Ether		10	ug/L	U	7/31/97
SJS03-GW2S-001	SVTCL	Bis(2-Ethylhexyl)Phthalate		10	ug/L	U	7/31/97
SJS03-GW2S-001	SVTCL	Butylbenzylphthalate		10	ug/L	U	7/31/97
SJS03-GW2S-001	SVTCL	Carbazole		10	ug/L	U	7/31/97
SJS03-GW2S-001	SVTCL	Chrysene		10	ug/L	U	7/31/97
SJS03-GW2S-001	SVTCL	Di-n-Butylphthalate		10	ug/L	U	7/31/97
SJS03-GW2S-001	SVTCL	Di-n-Octyl Phthalate		10	ug/L	U	7/31/97
SJS03-GW2S-001	SVTCL	Dibenz(a,h)Anthracene		10	ug/L	U	7/31/97
SJS03-GW2S-001	SVTCL	Dibenzofuran		10	ug/L	U	7/31/97
SJS03-GW2S-001	SVTCL	Diethylphthalate		10	ug/L	U	7/31/97
SJS03-GW2S-001	SVTCL	Dimethyl Phthalate		10	ug/L	U	7/31/97
SJS03-GW2S-001	SVTCL	Fluoranthene		10	ug/L	U	7/31/97
SJS03-GW2S-001	SVTCL	Fluorene		10	ug/L	U	7/31/97
SJS03-GW2S-001	SVTCL	Hexachlorobenzene		10	ug/L	U	7/31/97
SJS03-GW2S-001	SVTCL	Hexachlorobutadiene		10	ug/L	U	7/31/97
SJS03-GW2S-001	SVTCL	Hexachlorocyclopentadien		10	ug/L	U	7/31/97
SJS03-GW2S-001	SVTCL	Hexachloroethane		10	ug/L	U	7/31/97
SJS03-GW2S-001	SVTCL	Indeno(1,2,3-cd)Pyrene		10	ug/L	U	7/31/97
SJS03-GW2S-001	SVTCL	Isophorone		10	ug/L	U	7/31/97
SJS03-GW2S-001	SVTCL	N-Nitroso-Di-n-Propylamine		10	ug/L	U	7/31/97
SJS03-GW2S-001	SVTCL	N-Nitrosodiphenylamine		10	ug/L	U	7/31/97
SJS03-GW2S-001	SVTCL	Naphthalene		10	ug/L	U	7/31/97
SJS03-GW2S-001	SVTCL	Nitrobenzene		10	ug/L	U	7/31/97
SJS03-GW2S-001	SVTCL	Pentachlorophenol		25	ug/L	U	7/31/97
SJS03-GW2S-001	SVTCL	Phenanthrene		10	ug/L	U	7/31/97
SJS03-GW2S-001	SVTCL	Phenol		10	ug/L	U	7/31/97
SJS03-GW2S-001	SVTCL	Pyrene		10	ug/L	U	7/31/97
SJS03-GW2S-001	VCLOW	1,1,1-Trichloroethane		1	ug/L	U	7/25/97
SJS03-GW2S-001	VCLOW	1,1,2,2-Tetrachloroethane		1	ug/L	U	7/25/97
SJS03-GW2S-001	VCLOW	1,1,2-Trichloroethane		1	ug/L	U	7/25/97
SJS03-GW2S-001	VCLOW	1,1-Dichloroethane		1	ug/L	U	7/25/97
SJS03-GW2S-001	VCLOW	1,1-Dichloroethene		1	ug/L	U	7/25/97
SJS03-GW2S-001	VCLOW	1,2,4-Trichlorobenzene		1	ug/L	U	7/25/97
SJS03-GW2S-001	VCLOW	1,2-Dibromo-3-chloropropan		1	ug/L	U	7/25/97
SJS03-GW2S-001	VCLOW	1,2-Dibromoethane		1	ug/L	U	7/25/97
SJS03-GW2S-001	VCLOW	1,2-Dichlorobenzene		1	ug/L	U	7/25/97
SJS03-GW2S-001	VCLOW	1,2-Dichloroethane		1	ug/L	U	7/25/97
SJS03-GW2S-001	VCLOW	1,2-Dichloropropane		1	ug/L	U	7/25/97
SJS03-GW2S-001	VCLOW	1,3-Dichlorobenzene		1	ug/L	U	7/25/97
SJS03-GW2S-001	VCLOW	1,4-Dichlorobenzene		1	ug/L	U	7/25/97
SJS03-GW2S-001	VCLOW	2-Butanone		5	ug/L	U	7/25/97
SJS03-GW2S-001	VCLOW	2-Hexanone		5	ug/L	U	7/25/97
SJS03-GW2S-001	VCLOW	4-Methyl-2-Pentanone		5	ug/L	U	7/25/97
SJS03-GW2S-001	VCLOW	Acetone	8	5	ug/L		7/25/97
SJS03-GW2S-001	VCLOW	Benzene		1	ug/L	U	7/25/97
SJS03-GW2S-001	VCLOW	Bromochloromethane		1	ug/L	U	7/25/97
SJS03-GW2S-001	VCLOW	Bromodichloromethane		1	ug/L	U	7/25/97
SJS03-GW2S-001	VCLOW	Bromoform		1	ug/L	U	7/25/97
SJS03-GW2S-001	VCLOW	Bromomethane		1	ug/L	U	7/25/97
SJS03-GW2S-001	VCLOW	Carbon Disulfide		1	ug/L	U	7/25/97
SJS03-GW2S-001	VCLOW	Carbon Tetrachloride		1	ug/L	U	7/25/97
SJS03-GW2S-001	VCLOW	Chlorobenzene		1	ug/L	U	7/25/97
SJS03-GW2S-001	VCLOW	Chloroethane		1	ug/L	U	7/25/97
SJS03-GW2S-001	VCLOW	Chloroform		1	ug/L	U	7/25/97
SJS03-GW2S-001	VCLOW	Chloromethane		1	ug/L	U	7/25/97
SJS03-GW2S-001	VCLOW	cis-1,2-Dichloroethene		1	ug/L	U	7/25/97
SJS03-GW2S-001	VCLOW	cis-1,3-Dichloropropene		1	ug/L	U	7/25/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS03-GW2S-001	VCLOW	Dibromochloromethane		1	ug/L	U	7/25/97
SJS03-GW2S-001	VCLOW	Ethylbenzene		1	ug/L	U	7/25/97
SJS03-GW2S-001	VCLOW	Methylene Chloride	2	1	ug/L	B	7/25/97
SJS03-GW2S-001	VCLOW	Styrene		1	ug/L	U	7/25/97
SJS03-GW2S-001	VCLOW	Tetrachloroethene		1	ug/L	U	7/25/97
SJS03-GW2S-001	VCLOW	Toluene		1	ug/L	U	7/25/97
SJS03-GW2S-001	VCLOW	Total Xylenes		1	ug/L	U	7/25/97
SJS03-GW2S-001	VCLOW	Trans-1,2-Dichloroethene		1	ug/L	U	7/25/97
SJS03-GW2S-001	VCLOW	Trans-1,3-Dichloropropene		1	ug/L	U	7/25/97
SJS03-GW2S-001	VCLOW	Trichloroethene		1	ug/L	U	7/25/97
SJS03-GW2S-001	VCLOW	Vinyl Chloride		1	ug/L	U	7/25/97
SJS03-GW2S-001F	METAL	Aluminum		44	ug/L	U	8/1/97
SJS03-GW2S-001F	METAL	Antimony		2	ug/L	U	8/1/97
SJS03-GW2S-001F	METAL	Arsenic		3	ug/L	U	8/1/97
SJS03-GW2S-001F	METAL	Barium	43.4	1	ug/L	J	8/1/97
SJS03-GW2S-001F	METAL	Beryllium		1	ug/L	U	8/1/97
SJS03-GW2S-001F	METAL	Cadmium		0.5	ug/L	U	8/1/97
SJS03-GW2S-001F	METAL	Calcium	348000	46	ug/L		8/1/97
SJS03-GW2S-001F	METAL	Chromium		7	ug/L	U	8/1/97
SJS03-GW2S-001F	METAL	Cobalt	12.2	3	ug/L	J	8/1/97
SJS03-GW2S-001F	METAL	Copper		6	ug/L	U	8/1/97
SJS03-GW2S-001F	METAL	Iron	10900	5	ug/L		8/1/97
SJS03-GW2S-001F	METAL	Lead		1	ug/L	U	8/1/97
SJS03-GW2S-001F	METAL	Magnesium	170000	45	ug/L		8/1/97
SJS03-GW2S-001F	METAL	Manganese	2770	1	ug/L		8/1/97
SJS03-GW2S-001F	METAL	Mercury	0.22	0.1	ug/L	B	8/7/97
SJS03-GW2S-001F	METAL	Nickel		7	ug/L	U	8/1/97
SJS03-GW2S-001F	METAL	Potassium	57200	97	ug/L		8/1/97
SJS03-GW2S-001F	METAL	Selenium		3	ug/L	U	8/1/97
SJS03-GW2S-001F	METAL	Silver		1	ug/L	U	8/1/97
SJS03-GW2S-001F	METAL	Sodium	587000	28	ug/L		8/4/97
SJS03-GW2S-001F	METAL	Thallium		2	ug/L	U	8/1/97
SJS03-GW2S-001F	METAL	Vanadium		9	ug/L	U	8/1/97
SJS03-GW2S-001F	METAL	Zinc	27.3	3	ug/L	B	8/1/97
SJS03-GW3S-001	CTOTP	Total Phosphorous (as P)	0.142	0.05	mg/L	J	7/31/97
SJS03-GW3S-001	MCYAN	Aluminum	4460	29	ug/L	K	8/1/97
SJS03-GW3S-001	MCYAN	Antimony		2	ug/L	U	8/1/97
SJS03-GW3S-001	MCYAN	Arsenic		3	ug/L	U	8/1/97
SJS03-GW3S-001	MCYAN	Barium	43	1	ug/L	J	8/1/97
SJS03-GW3S-001	MCYAN	Beryllium		1	ug/L	U	8/1/97
SJS03-GW3S-001	MCYAN	Cadmium		0.5	ug/L	U	8/1/97
SJS03-GW3S-001	MCYAN	Calcium	89700	46	ug/L		8/1/97
SJS03-GW3S-001	MCYAN	Chromium	13.8	4	ug/L	B	8/1/97
SJS03-GW3S-001	MCYAN	Cobalt		8	ug/L	U	8/1/97
SJS03-GW3S-001	MCYAN	Copper	6.8	2	ug/L	B	8/1/97
SJS03-GW3S-001	MCYAN	Cyanide		5	ug/L	U	7/25/97
SJS03-GW3S-001	MCYAN	Iron	32900	5	ug/L		8/1/97
SJS03-GW3S-001	MCYAN	Lead	2.6	1	ug/L	J	8/6/97
SJS03-GW3S-001	MCYAN	Magnesium	75300	45	ug/L		8/1/97
SJS03-GW3S-001	MCYAN	Manganese	830	1	ug/L		8/1/97
SJS03-GW3S-001	MCYAN	Mercury	0.22	0.1	ug/L	B	8/7/97
SJS03-GW3S-001	MCYAN	Nickel		7	ug/L	U	8/1/97
SJS03-GW3S-001	MCYAN	Potassium	30200	97	ug/L		8/1/97
SJS03-GW3S-001	MCYAN	Selenium		3	ug/L	U	8/1/97
SJS03-GW3S-001	MCYAN	Silver	1.4	3	ug/L	B	8/1/97
SJS03-GW3S-001	MCYAN	Sodium	470000	28	ug/L		8/4/97
SJS03-GW3S-001	MCYAN	Thallium	2.8	2	ug/L	B	8/1/97
SJS03-GW3S-001	MCYAN	Vanadium	18.5	4	ug/L	J	8/1/97
SJS03-GW3S-001	MCYAN	Zinc	20.8	3	ug/L	B	8/1/97
SJS03-GW3S-001	PSPCB	4,4'-DDD		0.1	ug/L	U	8/10/97
SJS03-GW3S-001	PSPCB	4,4'-DDE		0.1	ug/L	U	8/10/97
SJS03-GW3S-001	PSPCB	4,4'-DDT		0.1	ug/L	U	8/10/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS03-GW3S-001	PSPCB	Aldrin		0.05	ug/L	U	8/10/97
SJS03-GW3S-001	PSPCB	alpha-BHC		0.05	ug/L	U	8/10/97
SJS03-GW3S-001	PSPCB	alpha-Chlordane		0.05	ug/L	U	8/10/97
SJS03-GW3S-001	PSPCB	Aroclor-1016		1	ug/L	U	8/10/97
SJS03-GW3S-001	PSPCB	Aroclor-1221		2	ug/L	U	8/10/97
SJS03-GW3S-001	PSPCB	Aroclor-1232		1	ug/L	U	8/10/97
SJS03-GW3S-001	PSPCB	Aroclor-1242		1	ug/L	U	8/10/97
SJS03-GW3S-001	PSPCB	Aroclor-1248		1	ug/L	U	8/10/97
SJS03-GW3S-001	PSPCB	Aroclor-1254		1	ug/L	U	8/10/97
SJS03-GW3S-001	PSPCB	Aroclor-1260		1	ug/L	U	8/10/97
SJS03-GW3S-001	PSPCB	beta-BHC		0.05	ug/L	U	8/10/97
SJS03-GW3S-001	PSPCB	delta-BHC		0.05	ug/L	U	8/10/97
SJS03-GW3S-001	PSPCB	Dieldrin		0.1	ug/L	U	8/10/97
SJS03-GW3S-001	PSPCB	Endosulfan I		0.05	ug/L	U	8/10/97
SJS03-GW3S-001	PSPCB	Endosulfan II		0.1	ug/L	U	8/10/97
SJS03-GW3S-001	PSPCB	Endosulfan Sulfate		0.1	ug/L	U	8/10/97
SJS03-GW3S-001	PSPCB	Endrin		0.1	ug/L	U	8/10/97
SJS03-GW3S-001	PSPCB	Endrin Aldehyde		0.1	ug/L	U	8/10/97
SJS03-GW3S-001	PSPCB	Endrin Ketone		0.1	ug/L	U	8/10/97
SJS03-GW3S-001	PSPCB	gamma-BHC		0.05	ug/L	U	8/10/97
SJS03-GW3S-001	PSPCB	gamma-Chlordane		0.05	ug/L	U	8/10/97
SJS03-GW3S-001	PSPCB	Heptachlor		0.05	ug/L	U	8/10/97
SJS03-GW3S-001	PSPCB	Heptachlor Epoxide		0.05	ug/L	U	8/10/97
SJS03-GW3S-001	PSPCB	Methoxychlor		0.5	ug/L	U	8/10/97
SJS03-GW3S-001	PSPCB	Toxaphene		5	ug/L	U	8/10/97
SJS03-GW3S-001	SVTCL	1,2,4-Trichlorobenzene		10	ug/L	U	7/27/97
SJS03-GW3S-001	SVTCL	1,2-Dichlorobenzene		10	ug/L	U	7/27/97
SJS03-GW3S-001	SVTCL	1,3-Dichlorobenzene		10	ug/L	U	7/27/97
SJS03-GW3S-001	SVTCL	1,4-Dichlorobenzene		10	ug/L	U	7/27/97
SJS03-GW3S-001	SVTCL	2,2'-oxybis(1-Chloropropane		10	ug/L	U	7/27/97
SJS03-GW3S-001	SVTCL	2,4,5-Trichlorophenol		25	ug/L	U	7/27/97
SJS03-GW3S-001	SVTCL	2,4,6-Trichlorophenol		10	ug/L	U	7/27/97
SJS03-GW3S-001	SVTCL	2,4-Dichlorophenol		10	ug/L	U	7/27/97
SJS03-GW3S-001	SVTCL	2,4-Dimethylphenol		10	ug/L	U	7/27/97
SJS03-GW3S-001	SVTCL	2,4-Dinitrophenol		25	ug/L	U	7/27/97
SJS03-GW3S-001	SVTCL	2,4-Dinitrotoluene		10	ug/L	U	7/27/97
SJS03-GW3S-001	SVTCL	2,6-Dinitrotoluene		10	ug/L	U	7/27/97
SJS03-GW3S-001	SVTCL	2-Chloronaphthalene		10	ug/L	U	7/27/97
SJS03-GW3S-001	SVTCL	2-Chlorophenol		10	ug/L	U	7/27/97
SJS03-GW3S-001	SVTCL	2-Methylnaphthalene		10	ug/L	U	7/27/97
SJS03-GW3S-001	SVTCL	2-Methylphenol		10	ug/L	U	7/27/97
SJS03-GW3S-001	SVTCL	2-Nitroaniline		25	ug/L	U	7/27/97
SJS03-GW3S-001	SVTCL	2-Nitrophenol		10	ug/L	U	7/27/97
SJS03-GW3S-001	SVTCL	3,3'-Dichlorobenzidine		10	ug/L	U	7/27/97
SJS03-GW3S-001	SVTCL	3-Nitroaniline		25	ug/L	U	7/27/97
SJS03-GW3S-001	SVTCL	4,6-Dinitro-2-Methylphenol		25	ug/L	U	7/27/97
SJS03-GW3S-001	SVTCL	4-Bromophenyl phenylether		10	ug/L	U	7/27/97
SJS03-GW3S-001	SVTCL	4-Chloro-3-Methylphenol		10	ug/L	U	7/27/97
SJS03-GW3S-001	SVTCL	4-Chloroaniline		10	ug/L	U	7/27/97
SJS03-GW3S-001	SVTCL	4-Chlorophenyl-phenylether		10	ug/L	U	7/27/97
SJS03-GW3S-001	SVTCL	4-Methylphenol		10	ug/L	U	7/27/97
SJS03-GW3S-001	SVTCL	4-Nitroaniline		25	ug/L	U	7/27/97
SJS03-GW3S-001	SVTCL	4-Nitrophenol		25	ug/L	U	7/27/97
SJS03-GW3S-001	SVTCL	Acenaphthene	2	10	ug/L	J	7/27/97
SJS03-GW3S-001	SVTCL	Acenaphthylene		10	ug/L	U	7/27/97
SJS03-GW3S-001	SVTCL	Anthracene		10	ug/L	U	7/27/97
SJS03-GW3S-001	SVTCL	Benzo(a)Anthracene		10	ug/L	U	7/27/97
SJS03-GW3S-001	SVTCL	Benzo(a)Pyrene		10	ug/L	U	7/27/97
SJS03-GW3S-001	SVTCL	Benzo(b)Fluoranthene		10	ug/L	U	7/27/97
SJS03-GW3S-001	SVTCL	Benzo(g,h,i)Perylene		10	ug/L	U	7/27/97
SJS03-GW3S-001	SVTCL	Benzo(k)fluoranthene		10	ug/L	U	7/27/97
SJS03-GW3S-001	SVTCL	Bis(2-chloroethoxy)Methane		10	ug/L	U	7/27/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS03-GW3S-001	SVTCL	Bis(2-chloroethyl)Ether		10	ug/L	U	7/27/97
SJS03-GW3S-001	SVTCL	Bis(2-Ethylhexyl)Phthalate		10	ug/L	U	7/27/97
SJS03-GW3S-001	SVTCL	Butylbenzylphthalate		10	ug/L	U	7/27/97
SJS03-GW3S-001	SVTCL	Carbazole		10	ug/L	U	7/27/97
SJS03-GW3S-001	SVTCL	Chrysene		10	ug/L	U	7/27/97
SJS03-GW3S-001	SVTCL	Di-n-Butylphthalate		10	ug/L	U	7/27/97
SJS03-GW3S-001	SVTCL	Di-n-Octyl Phthalate		10	ug/L	U	7/27/97
SJS03-GW3S-001	SVTCL	Dibenz(a,h)Anthracene		10	ug/L	U	7/27/97
SJS03-GW3S-001	SVTCL	Dibenzofuran		10	ug/L	U	7/27/97
SJS03-GW3S-001	SVTCL	Diethylphthalate		10	ug/L	U	7/27/97
SJS03-GW3S-001	SVTCL	Dimethyl Phthalate		10	ug/L	U	7/27/97
SJS03-GW3S-001	SVTCL	Fluoranthene		10	ug/L	U	7/27/97
SJS03-GW3S-001	SVTCL	Fluorene		10	ug/L	U	7/27/97
SJS03-GW3S-001	SVTCL	Hexachlorobenzene		10	ug/L	U	7/27/97
SJS03-GW3S-001	SVTCL	Hexachlorobutadiene		10	ug/L	U	7/27/97
SJS03-GW3S-001	SVTCL	Hexachlorocyclopentadien		10	ug/L	U	7/27/97
SJS03-GW3S-001	SVTCL	Hexachloroethane		10	ug/L	U	7/27/97
SJS03-GW3S-001	SVTCL	Indeno(1,2,3-cd)Pyrene		10	ug/L	U	7/27/97
SJS03-GW3S-001	SVTCL	Isophorone		10	ug/L	U	7/27/97
SJS03-GW3S-001	SVTCL	N-Nitroso-Di-n-Propylamine		10	ug/L	U	7/27/97
SJS03-GW3S-001	SVTCL	N-Nitrosodiphenylamine		10	ug/L	U	7/27/97
SJS03-GW3S-001	SVTCL	Naphthalene		10	ug/L	U	7/27/97
SJS03-GW3S-001	SVTCL	Nitrobenzene		10	ug/L	U	7/27/97
SJS03-GW3S-001	SVTCL	Pentachlorophenol		25	ug/L	U	7/27/97
SJS03-GW3S-001	SVTCL	Phenanthrene		10	ug/L	U	7/27/97
SJS03-GW3S-001	SVTCL	Phenol		10	ug/L	U	7/27/97
SJS03-GW3S-001	SVTCL	Pyrene		10	ug/L	U	7/27/97
SJS03-GW3S-001	VCLOW	1,1,1-Trichloroethane		1	ug/L	U	7/27/97
SJS03-GW3S-001	VCLOW	1,1,2,2-Tetrachloroethane		1	ug/L	U	7/27/97
SJS03-GW3S-001	VCLOW	1,1,2-Trichloroethane		1	ug/L	U	7/27/97
SJS03-GW3S-001	VCLOW	1,1-Dichloroethane		1	ug/L	U	7/27/97
SJS03-GW3S-001	VCLOW	1,1-Dichloroethene		1	ug/L	U	7/27/97
SJS03-GW3S-001	VCLOW	1,2,4-Trichlorobenzene		1	ug/L	U	7/27/97
SJS03-GW3S-001	VCLOW	1,2-Dibromo-3-chloropropan		1	ug/L	U	7/27/97
SJS03-GW3S-001	VCLOW	1,2-Dibromoethane		1	ug/L	U	7/27/97
SJS03-GW3S-001	VCLOW	1,2-Dichlorobenzene		1	ug/L	U	7/27/97
SJS03-GW3S-001	VCLOW	1,2-Dichloroethane		1	ug/L	U	7/27/97
SJS03-GW3S-001	VCLOW	1,2-Dichloropropane		1	ug/L	U	7/27/97
SJS03-GW3S-001	VCLOW	1,3-Dichlorobenzene		1	ug/L	U	7/27/97
SJS03-GW3S-001	VCLOW	1,4-Dichlorobenzene		1	ug/L	U	7/27/97
SJS03-GW3S-001	VCLOW	2-Butanone		5	ug/L	U	7/27/97
SJS03-GW3S-001	VCLOW	2-Hexanone		5	ug/L	U	7/27/97
SJS03-GW3S-001	VCLOW	4-Methyl-2-Pentanone		5	ug/L	U	7/27/97
SJS03-GW3S-001	VCLOW	Acetone		5	ug/L	U	7/27/97
SJS03-GW3S-001	VCLOW	Benzene		1	ug/L	U	7/27/97
SJS03-GW3S-001	VCLOW	Bromochloromethane		1	ug/L	U	7/27/97
SJS03-GW3S-001	VCLOW	Bromodichloromethane		1	ug/L	U	7/27/97
SJS03-GW3S-001	VCLOW	Bromoform		1	ug/L	U	7/27/97
SJS03-GW3S-001	VCLOW	Bromomethane		1	ug/L	U	7/27/97
SJS03-GW3S-001	VCLOW	Carbon Disulfide		1	ug/L	U	7/27/97
SJS03-GW3S-001	VCLOW	Carbon Tetrachloride		1	ug/L	U	7/27/97
SJS03-GW3S-001	VCLOW	Chlorobenzene		1	ug/L	U	7/27/97
SJS03-GW3S-001	VCLOW	Chloroethane		1	ug/L	U	7/27/97
SJS03-GW3S-001	VCLOW	Chloroform		1	ug/L	U	7/27/97
SJS03-GW3S-001	VCLOW	Chloromethane		1	ug/L	U	7/27/97
SJS03-GW3S-001	VCLOW	cis-1,2-Dichloroethene		1	ug/L	U	7/27/97
SJS03-GW3S-001	VCLOW	cis-1,3-Dichloropropene		1	ug/L	U	7/27/97
SJS03-GW3S-001	VCLOW	Dibromochloromethane		1	ug/L	U	7/27/97
SJS03-GW3S-001	VCLOW	Ethylbenzene		1	ug/L	U	7/27/97
SJS03-GW3S-001	VCLOW	Methylene Chloride	0.9	1	ug/L	B	7/27/97
SJS03-GW3S-001	VCLOW	Styrene		1	ug/L	U	7/27/97
SJS03-GW3S-001	VCLOW	Tetrachloroethene		1	ug/L	U	7/27/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS03-GW3S-001	VCLOW	Toluene		1	ug/L	U	7/27/97
SJS03-GW3S-001	VCLOW	Total Xylenes		1	ug/L	U	7/27/97
SJS03-GW3S-001	VCLOW	Trans-1,2-Dichloroethene		1	ug/L	U	7/27/97
SJS03-GW3S-001	VCLOW	Trans-1,3-Dichloropropene		1	ug/L	U	7/27/97
SJS03-GW3S-001	VCLOW	Trichloroethene		1	ug/L	U	7/27/97
SJS03-GW3S-001	VCLOW	Vinyl Chloride		1	ug/L	U	7/27/97
SJS03-GW3S-001F	METAL	Aluminum	149	29	ug/L	B	8/1/97
SJS03-GW3S-001F	METAL	Antimony		2	ug/L	U	8/1/97
SJS03-GW3S-001F	METAL	Arsenic		3	ug/L	U	8/1/97
SJS03-GW3S-001F	METAL	Barium	37.6	1	ug/L	J	8/1/97
SJS03-GW3S-001F	METAL	Beryllium		1	ug/L	U	8/1/97
SJS03-GW3S-001F	METAL	Cadmium		0.5	ug/L	U	8/1/97
SJS03-GW3S-001F	METAL	Calcium	87500	46	ug/L		8/1/97
SJS03-GW3S-001F	METAL	Chromium	9.2	4	ug/L	B	8/1/97
SJS03-GW3S-001F	METAL	Cobalt		8	ug/L	U	8/1/97
SJS03-GW3S-001F	METAL	Copper		6	ug/L	U	8/1/97
SJS03-GW3S-001F	METAL	Iron	30000	5	ug/L		8/1/97
SJS03-GW3S-001F	METAL	Lead		1	ug/L	U	8/1/97
SJS03-GW3S-001F	METAL	Magnesium	77800	45	ug/L		8/1/97
SJS03-GW3S-001F	METAL	Manganese	809	1	ug/L		8/1/97
SJS03-GW3S-001F	METAL	Mercury	0.2	0.1	ug/L	B	8/7/97
SJS03-GW3S-001F	METAL	Nickel		7	ug/L	U	8/1/97
SJS03-GW3S-001F	METAL	Potassium	30800	97	ug/L		8/1/97
SJS03-GW3S-001F	METAL	Selenium		3	ug/L	U	8/1/97
SJS03-GW3S-001F	METAL	Silver	1.2	3	ug/L	B	8/1/97
SJS03-GW3S-001F	METAL	Sodium	525000	28	ug/L		8/4/97
SJS03-GW3S-001F	METAL	Thallium	4	2	ug/L	B	8/1/97
SJS03-GW3S-001F	METAL	Vanadium		9	ug/L	U	8/1/97
SJS03-GW3S-001F	METAL	Zinc	20.5	3	ug/L	B	8/1/97
SJS03-GW3S-001FP	METAL	Aluminum	164	29	ug/L	B	8/1/97
SJS03-GW3S-001FP	METAL	Antimony		2	ug/L	U	8/1/97
SJS03-GW3S-001FP	METAL	Arsenic		3	ug/L	U	8/1/97
SJS03-GW3S-001FP	METAL	Barium	44.3	1	ug/L	J	8/1/97
SJS03-GW3S-001FP	METAL	Beryllium		1	ug/L	U	8/1/97
SJS03-GW3S-001FP	METAL	Cadmium		0.5	ug/L	U	8/1/97
SJS03-GW3S-001FP	METAL	Calcium	98200	46	ug/L		8/1/97
SJS03-GW3S-001FP	METAL	Chromium	12.5	4	ug/L	B	8/1/97
SJS03-GW3S-001FP	METAL	Cobalt		8	ug/L	U	8/1/97
SJS03-GW3S-001FP	METAL	Copper		6	ug/L	U	8/1/97
SJS03-GW3S-001FP	METAL	Iron	33600	5	ug/L		8/1/97
SJS03-GW3S-001FP	METAL	Lead		1	ug/L	U	8/1/97
SJS03-GW3S-001FP	METAL	Magnesium	86800	45	ug/L		8/1/97
SJS03-GW3S-001FP	METAL	Manganese	911	1	ug/L		8/1/97
SJS03-GW3S-001FP	METAL	Mercury	0.18	0.1	ug/L	B	8/7/97
SJS03-GW3S-001FP	METAL	Nickel		7	ug/L	U	8/1/97
SJS03-GW3S-001FP	METAL	Potassium	34600	97	ug/L		8/1/97
SJS03-GW3S-001FP	METAL	Selenium		3	ug/L	U	8/1/97
SJS03-GW3S-001FP	METAL	Silver		1	ug/L	U	8/1/97
SJS03-GW3S-001FP	METAL	Sodium	557000	28	ug/L		8/4/97
SJS03-GW3S-001FP	METAL	Thallium		2	ug/L	U	8/1/97
SJS03-GW3S-001FP	METAL	Vanadium		9	ug/L	U	8/1/97
SJS03-GW3S-001FP	METAL	Zinc	11.7	3	ug/L	B	8/1/97
SJS03-GW3S-001P	CTOTP	Total Phosphorous (as P)	0.101	0.05	mg/L	J	7/31/97
SJS03-GW3S-001P	MCYAN	Aluminum	8270	29	ug/L	K	8/1/97
SJS03-GW3S-001P	MCYAN	Antimony		2	ug/L	U	8/1/97
SJS03-GW3S-001P	MCYAN	Arsenic		3	ug/L	U	8/1/97
SJS03-GW3S-001P	MCYAN	Barium	47.6	1	ug/L	J	8/1/97
SJS03-GW3S-001P	MCYAN	Beryllium		1	ug/L	U	8/1/97
SJS03-GW3S-001P	MCYAN	Cadmium		0.5	ug/L	U	8/1/97
SJS03-GW3S-001P	MCYAN	Calcium	95900	46	ug/L		8/1/97
SJS03-GW3S-001P	MCYAN	Chromium	18.3	4	ug/L	B	8/1/97
SJS03-GW3S-001P	MCYAN	Cobalt		8	ug/L	U	8/1/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS03-GW3S-001P	MCYAN	Copper	7.8	2	ug/L	B	8/1/97
SJS03-GW3S-001P	MCYAN	Cyanide		5	ug/L	U	7/25/97
SJS03-GW3S-001P	MCYAN	Iron	35000	5	ug/L		8/1/97
SJS03-GW3S-001P	MCYAN	Lead	4.3	1	ug/L		8/6/97
SJS03-GW3S-001P	MCYAN	Magnesium	77000	45	ug/L		8/1/97
SJS03-GW3S-001P	MCYAN	Manganese	890	1	ug/L		8/1/97
SJS03-GW3S-001P	MCYAN	Mercury	0.22	0.1	ug/L	B	8/7/97
SJS03-GW3S-001P	MCYAN	Nickel		7	ug/L	U	8/1/97
SJS03-GW3S-001P	MCYAN	Potassium	31000	97	ug/L		8/1/97
SJS03-GW3S-001P	MCYAN	Selenium		3	ug/L	U	8/1/97
SJS03-GW3S-001P	MCYAN	Silver		1	ug/L	U	8/1/97
SJS03-GW3S-001P	MCYAN	Sodium	468000	28	ug/L		8/4/97
SJS03-GW3S-001P	MCYAN	Thallium	2.4	2	ug/L	B	8/1/97
SJS03-GW3S-001P	MCYAN	Vanadium	22.7	4	ug/L	J	8/1/97
SJS03-GW3S-001P	MCYAN	Zinc	22	3	ug/L	B	8/1/97
SJS03-GW3S-001P	PSPCB	4,4'-DDD		0.1	ug/L	U	8/10/97
SJS03-GW3S-001P	PSPCB	4,4'-DDE		0.1	ug/L	U	8/10/97
SJS03-GW3S-001P	PSPCB	4,4'-DDT		0.1	ug/L	U	8/10/97
SJS03-GW3S-001P	PSPCB	Aldrin		0.05	ug/L	U	8/10/97
SJS03-GW3S-001P	PSPCB	alpha-BHC		0.05	ug/L	U	8/10/97
SJS03-GW3S-001P	PSPCB	alpha-Chlordane		0.05	ug/L	U	8/10/97
SJS03-GW3S-001P	PSPCB	Aroclor-1016		1	ug/L	U	8/10/97
SJS03-GW3S-001P	PSPCB	Aroclor-1221		2	ug/L	U	8/10/97
SJS03-GW3S-001P	PSPCB	Aroclor-1232		1	ug/L	U	8/10/97
SJS03-GW3S-001P	PSPCB	Aroclor-1242		1	ug/L	U	8/10/97
SJS03-GW3S-001P	PSPCB	Aroclor-1248		1	ug/L	U	8/10/97
SJS03-GW3S-001P	PSPCB	Aroclor-1254		1	ug/L	U	8/10/97
SJS03-GW3S-001P	PSPCB	Aroclor-1260		1	ug/L	U	8/10/97
SJS03-GW3S-001P	PSPCB	beta-BHC		0.05	ug/L	U	8/10/97
SJS03-GW3S-001P	PSPCB	delta-BHC		0.05	ug/L	U	8/10/97
SJS03-GW3S-001P	PSPCB	Dieldrin		0.1	ug/L	U	8/10/97
SJS03-GW3S-001P	PSPCB	Endosulfan I		0.05	ug/L	U	8/10/97
SJS03-GW3S-001P	PSPCB	Endosulfan II		0.1	ug/L	U	8/10/97
SJS03-GW3S-001P	PSPCB	Endosulfan Sulfate		0.1	ug/L	U	8/10/97
SJS03-GW3S-001P	PSPCB	Endrin		0.1	ug/L	U	8/10/97
SJS03-GW3S-001P	PSPCB	Endrin Aldehyde		0.1	ug/L	U	8/10/97
SJS03-GW3S-001P	PSPCB	Endrin Ketone		0.1	ug/L	U	8/10/97
SJS03-GW3S-001P	PSPCB	gamma-BHC		0.05	ug/L	U	8/10/97
SJS03-GW3S-001P	PSPCB	gamma-Chlordane		0.05	ug/L	U	8/10/97
SJS03-GW3S-001P	PSPCB	Heptachlor		0.05	ug/L	U	8/10/97
SJS03-GW3S-001P	PSPCB	Heptachlor Epoxide		0.05	ug/L	U	8/10/97
SJS03-GW3S-001P	PSPCB	Methoxychlor		0.5	ug/L	U	8/10/97
SJS03-GW3S-001P	PSPCB	Toxaphene		5	ug/L	U	8/10/97
SJS03-GW3S-001P	SVTCL	1,2,4-Trichlorobenzene		10	ug/L	U	7/27/97
SJS03-GW3S-001P	SVTCL	1,2-Dichlorobenzene		10	ug/L	U	7/27/97
SJS03-GW3S-001P	SVTCL	1,3-Dichlorobenzene		10	ug/L	U	7/27/97
SJS03-GW3S-001P	SVTCL	1,4-Dichlorobenzene		10	ug/L	U	7/27/97
SJS03-GW3S-001P	SVTCL	2,2'-oxybis(1-Chloropropane		10	ug/L	U	7/27/97
SJS03-GW3S-001P	SVTCL	2,4,5-Trichlorophenol		25	ug/L	U	7/27/97
SJS03-GW3S-001P	SVTCL	2,4,6-Trichlorophenol		10	ug/L	U	7/27/97
SJS03-GW3S-001P	SVTCL	2,4-Dichlorophenol		10	ug/L	U	7/27/97
SJS03-GW3S-001P	SVTCL	2,4-Dimethylphenol		10	ug/L	U	7/27/97
SJS03-GW3S-001P	SVTCL	2,4-Dinitrophenol		25	ug/L	U	7/27/97
SJS03-GW3S-001P	SVTCL	2,4-Dinitrotoluene		10	ug/L	U	7/27/97
SJS03-GW3S-001P	SVTCL	2,6-Dinitrotoluene		10	ug/L	U	7/27/97
SJS03-GW3S-001P	SVTCL	2-Chloronaphthalene		10	ug/L	U	7/27/97
SJS03-GW3S-001P	SVTCL	2-Chlorophenol		10	ug/L	U	7/27/97
SJS03-GW3S-001P	SVTCL	2-Methylnaphthalene		10	ug/L	U	7/27/97
SJS03-GW3S-001P	SVTCL	2-Methylphenol		10	ug/L	U	7/27/97
SJS03-GW3S-001P	SVTCL	2-Nitroaniline		25	ug/L	U	7/27/97
SJS03-GW3S-001P	SVTCL	2-Nitrophenol		10	ug/L	U	7/27/97
SJS03-GW3S-001P	SVTCL	3,3'-Dichlorobenzidine		10	ug/L	U	7/27/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS03-GW3S-001P	SVTCL	3-Nitroaniline		25	ug/L	U	7/27/97
SJS03-GW3S-001P	SVTCL	4,6-Dinitro-2-Methylphenol		25	ug/L	U	7/27/97
SJS03-GW3S-001P	SVTCL	4-Bromophenyl phenylether		10	ug/L	U	7/27/97
SJS03-GW3S-001P	SVTCL	4-Chloro-3-Methylphenol		10	ug/L	U	7/27/97
SJS03-GW3S-001P	SVTCL	4-Chloroaniline		10	ug/L	U	7/27/97
SJS03-GW3S-001P	SVTCL	4-Chlorophenyl-phenylether		10	ug/L	U	7/27/97
SJS03-GW3S-001P	SVTCL	4-Methylphenol		10	ug/L	U	7/27/97
SJS03-GW3S-001P	SVTCL	4-Nitroaniline		25	ug/L	U	7/27/97
SJS03-GW3S-001P	SVTCL	4-Nitrophenol		25	ug/L	U	7/27/97
SJS03-GW3S-001P	SVTCL	Acenaphthene	2	10	ug/L	J	7/27/97
SJS03-GW3S-001P	SVTCL	Acenaphthylene		10	ug/L	U	7/27/97
SJS03-GW3S-001P	SVTCL	Anthracene		10	ug/L	U	7/27/97
SJS03-GW3S-001P	SVTCL	Benzo(a)Anthracene		10	ug/L	U	7/27/97
SJS03-GW3S-001P	SVTCL	Benzo(a)Pyrene		10	ug/L	U	7/27/97
SJS03-GW3S-001P	SVTCL	Benzo(b)Fluoranthene		10	ug/L	U	7/27/97
SJS03-GW3S-001P	SVTCL	Benzo(g,h,i)Perylene		10	ug/L	U	7/27/97
SJS03-GW3S-001P	SVTCL	Benzo(k)fluoranthene		10	ug/L	U	7/27/97
SJS03-GW3S-001P	SVTCL	Bis(2-chloroethoxy)Methane		10	ug/L	U	7/27/97
SJS03-GW3S-001P	SVTCL	Bis(2-chloroethyl)Ether		10	ug/L	U	7/27/97
SJS03-GW3S-001P	SVTCL	Bis(2-Ethylhexyl)Phthalate	2	10	ug/L	J	7/27/97
SJS03-GW3S-001P	SVTCL	Butylbenzylphthalate		10	ug/L	U	7/27/97
SJS03-GW3S-001P	SVTCL	Carbazole		10	ug/L	U	7/27/97
SJS03-GW3S-001P	SVTCL	Chrysene		10	ug/L	U	7/27/97
SJS03-GW3S-001P	SVTCL	Di-n-Butylphthalate		10	ug/L	U	7/27/97
SJS03-GW3S-001P	SVTCL	Di-n-Octyl Phthalate		10	ug/L	U	7/27/97
SJS03-GW3S-001P	SVTCL	Dibenz(a,h)Anthracene		10	ug/L	U	7/27/97
SJS03-GW3S-001P	SVTCL	Dibenzofuran		10	ug/L	U	7/27/97
SJS03-GW3S-001P	SVTCL	Diethylphthalate		10	ug/L	U	7/27/97
SJS03-GW3S-001P	SVTCL	Dimethyl Phthalate		10	ug/L	U	7/27/97
SJS03-GW3S-001P	SVTCL	Fluoranthene		10	ug/L	U	7/27/97
SJS03-GW3S-001P	SVTCL	Fluorene		10	ug/L	U	7/27/97
SJS03-GW3S-001P	SVTCL	Hexachlorobenzene		10	ug/L	U	7/27/97
SJS03-GW3S-001P	SVTCL	Hexachlorobutadiene		10	ug/L	U	7/27/97
SJS03-GW3S-001P	SVTCL	Hexachlorocyclopentadien		10	ug/L	U	7/27/97
SJS03-GW3S-001P	SVTCL	Hexachloroethane		10	ug/L	U	7/27/97
SJS03-GW3S-001P	SVTCL	Indeno(1,2,3-cd)Pyrene		10	ug/L	U	7/27/97
SJS03-GW3S-001P	SVTCL	Isophorone		10	ug/L	U	7/27/97
SJS03-GW3S-001P	SVTCL	N-Nitroso-Di-n-Propylamine		10	ug/L	U	7/27/97
SJS03-GW3S-001P	SVTCL	N-Nitrosodiphenylamine		10	ug/L	U	7/27/97
SJS03-GW3S-001P	SVTCL	Naphthalene		10	ug/L	U	7/27/97
SJS03-GW3S-001P	SVTCL	Nitrobenzene		10	ug/L	U	7/27/97
SJS03-GW3S-001P	SVTCL	Pentachlorophenol		25	ug/L	U	7/27/97
SJS03-GW3S-001P	SVTCL	Phenanthrene		10	ug/L	U	7/27/97
SJS03-GW3S-001P	SVTCL	Phenol		10	ug/L	U	7/27/97
SJS03-GW3S-001P	SVTCL	Pyrene		10	ug/L	U	7/27/97
SJS03-GW3S-001P	VCLOW	1,1,1-Trichloroethane		1	ug/L	U	7/27/97
SJS03-GW3S-001P	VCLOW	1,1,2,2-Tetrachloroethane		1	ug/L	U	7/27/97
SJS03-GW3S-001P	VCLOW	1,1,2-Trichloroethane		1	ug/L	U	7/27/97
SJS03-GW3S-001P	VCLOW	1,1-Dichloroethane		1	ug/L	U	7/27/97
SJS03-GW3S-001P	VCLOW	1,1-Dichloroethene		1	ug/L	U	7/27/97
SJS03-GW3S-001P	VCLOW	1,2,4-Trichlorobenzene		1	ug/L	U	7/27/97
SJS03-GW3S-001P	VCLOW	1,2-Dibromo-3-chloropropan		1	ug/L	U	7/27/97
SJS03-GW3S-001P	VCLOW	1,2-Dibromoethane		1	ug/L	U	7/27/97
SJS03-GW3S-001P	VCLOW	1,2-Dichlorobenzene		1	ug/L	U	7/27/97
SJS03-GW3S-001P	VCLOW	1,2-Dichloroethane		1	ug/L	U	7/27/97
SJS03-GW3S-001P	VCLOW	1,2-Dichloropropane		1	ug/L	U	7/27/97
SJS03-GW3S-001P	VCLOW	1,3-Dichlorobenzene		1	ug/L	U	7/27/97
SJS03-GW3S-001P	VCLOW	1,4-Dichlorobenzene		1	ug/L	U	7/27/97
SJS03-GW3S-001P	VCLOW	2-Butanone		5	ug/L	U	7/27/97
SJS03-GW3S-001P	VCLOW	2-Hexanone		5	ug/L	U	7/27/97
SJS03-GW3S-001P	VCLOW	4-Methyl-2-Pentanone		5	ug/L	U	7/27/97
SJS03-GW3S-001P	VCLOW	Acetone	5	5	ug/L	J	7/27/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS03-GW3S-001P	VCLOW	Benzene		1	ug/L	U	7/27/97
SJS03-GW3S-001P	VCLOW	Bromochloromethane		1	ug/L	U	7/27/97
SJS03-GW3S-001P	VCLOW	Bromodichloromethane		1	ug/L	U	7/27/97
SJS03-GW3S-001P	VCLOW	Bromoform		1	ug/L	U	7/27/97
SJS03-GW3S-001P	VCLOW	Bromomethane		1	ug/L	U	7/27/97
SJS03-GW3S-001P	VCLOW	Carbon Disulfide		1	ug/L	U	7/27/97
SJS03-GW3S-001P	VCLOW	Carbon Tetrachloride		1	ug/L	U	7/27/97
SJS03-GW3S-001P	VCLOW	Chlorobenzene		1	ug/L	U	7/27/97
SJS03-GW3S-001P	VCLOW	Chloroethane		1	ug/L	U	7/27/97
SJS03-GW3S-001P	VCLOW	Chloroform		1	ug/L	U	7/27/97
SJS03-GW3S-001P	VCLOW	Chloromethane		1	ug/L	U	7/27/97
SJS03-GW3S-001P	VCLOW	cis-1,2-Dichloroethene		1	ug/L	U	7/27/97
SJS03-GW3S-001P	VCLOW	cis-1,3-Dichloropropene		1	ug/L	U	7/27/97
SJS03-GW3S-001P	VCLOW	Dibromochloromethane		1	ug/L	U	7/27/97
SJS03-GW3S-001P	VCLOW	Ethylbenzene		1	ug/L	U	7/27/97
SJS03-GW3S-001P	VCLOW	Methylene Chloride	1	1	ug/L	B	7/27/97
SJS03-GW3S-001P	VCLOW	Styrene		1	ug/L	U	7/27/97
SJS03-GW3S-001P	VCLOW	Tetrachloroethene		1	ug/L	U	7/27/97
SJS03-GW3S-001P	VCLOW	Toluene		1	ug/L	U	7/27/97
SJS03-GW3S-001P	VCLOW	Total Xylenes		1	ug/L	U	7/27/97
SJS03-GW3S-001P	VCLOW	Trans-1,2-Dichloroethene		1	ug/L	U	7/27/97
SJS03-GW3S-001P	VCLOW	Trans-1,3-Dichloropropene		1	ug/L	U	7/27/97
SJS03-GW3S-001P	VCLOW	Trichloroethene		1	ug/L	U	7/27/97
SJS03-GW3S-001P	VCLOW	Vinyl Chloride		1	ug/L	U	7/27/97
SJS03-GW4S-001	CTOTP	Total Phosphorous (as P)	0.48	0.13	mg/L	J	7/31/97
SJS03-GW4S-001	MCYAN	Aluminum	9170	29	ug/L	K	8/1/97
SJS03-GW4S-001	MCYAN	Antimony		2	ug/L	U	8/1/97
SJS03-GW4S-001	MCYAN	Arsenic		3	ug/L	U	8/1/97
SJS03-GW4S-001	MCYAN	Barium	51.4	1	ug/L	J	8/1/97
SJS03-GW4S-001	MCYAN	Beryllium	1.4	1	ug/L	J	8/1/97
SJS03-GW4S-001	MCYAN	Cadmium		0.5	ug/L	U	8/1/97
SJS03-GW4S-001	MCYAN	Calcium	178000	46	ug/L		8/1/97
SJS03-GW4S-001	MCYAN	Chromium	35.2	4	ug/L		8/1/97
SJS03-GW4S-001	MCYAN	Cobalt		8	ug/L	U	8/1/97
SJS03-GW4S-001	MCYAN	Copper	9	2	ug/L	J	8/1/97
SJS03-GW4S-001	MCYAN	Cyanide		5	ug/L	U	7/25/97
SJS03-GW4S-001	MCYAN	Iron	16900	5	ug/L		8/1/97
SJS03-GW4S-001	MCYAN	Lead	5.7	1	ug/L		8/6/97
SJS03-GW4S-001	MCYAN	Magnesium	154000	45	ug/L		8/1/97
SJS03-GW4S-001	MCYAN	Manganese	1030	1	ug/L		8/1/97
SJS03-GW4S-001	MCYAN	Mercury	0.3	0.1	ug/L	B	8/7/97
SJS03-GW4S-001	MCYAN	Nickel		7	ug/L	U	8/1/97
SJS03-GW4S-001	MCYAN	Potassium	57000	97	ug/L		8/1/97
SJS03-GW4S-001	MCYAN	Selenium		3	ug/L	U	8/1/97
SJS03-GW4S-001	MCYAN	Silver	2.3	3	ug/L	B	8/1/97
SJS03-GW4S-001	MCYAN	Sodium	799000	28	ug/L		8/4/97
SJS03-GW4S-001	MCYAN	Thallium		2	ug/L	U	8/1/97
SJS03-GW4S-001	MCYAN	Vanadium	15.5	4	ug/L	J	8/1/97
SJS03-GW4S-001	MCYAN	Zinc	36.4	3	ug/L	B	8/1/97
SJS03-GW4S-001	PSPCB	4,4'-DDD		0.1	ug/L	U	8/9/97
SJS03-GW4S-001	PSPCB	4,4'-DDE		0.1	ug/L	U	8/9/97
SJS03-GW4S-001	PSPCB	4,4'-DDT		0.1	ug/L	U	8/9/97
SJS03-GW4S-001	PSPCB	Aldrin		0.05	ug/L	U	8/9/97
SJS03-GW4S-001	PSPCB	alpha-BHC		0.05	ug/L	U	8/9/97
SJS03-GW4S-001	PSPCB	alpha-Chlordane		0.05	ug/L	U	8/9/97
SJS03-GW4S-001	PSPCB	Aroclor-1016		1	ug/L	U	8/9/97
SJS03-GW4S-001	PSPCB	Aroclor-1221		2	ug/L	U	8/9/97
SJS03-GW4S-001	PSPCB	Aroclor-1232		1	ug/L	U	8/9/97
SJS03-GW4S-001	PSPCB	Aroclor-1242		1	ug/L	U	8/9/97
SJS03-GW4S-001	PSPCB	Aroclor-1248		1	ug/L	U	8/9/97
SJS03-GW4S-001	PSPCB	Aroclor-1254		1	ug/L	U	8/9/97
SJS03-GW4S-001	PSPCB	Aroclor-1260		1	ug/L	U	8/9/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS03-GW4S-001	PSPCB	beta-BHC		0.05	ug/L	U	8/9/97
SJS03-GW4S-001	PSPCB	delta-BHC		0.05	ug/L	U	8/9/97
SJS03-GW4S-001	PSPCB	Dieldrin		0.1	ug/L	U	8/9/97
SJS03-GW4S-001	PSPCB	Endosulfan I		0.05	ug/L	U	8/9/97
SJS03-GW4S-001	PSPCB	Endosulfan II		0.1	ug/L	U	8/9/97
SJS03-GW4S-001	PSPCB	Endosulfan Sulfate		0.1	ug/L	U	8/9/97
SJS03-GW4S-001	PSPCB	Endrin		0.1	ug/L	U	8/9/97
SJS03-GW4S-001	PSPCB	Endrin Aldehyde		0.1	ug/L	U	8/9/97
SJS03-GW4S-001	PSPCB	Endrin Ketone		0.1	ug/L	U	8/9/97
SJS03-GW4S-001	PSPCB	gamma-BHC		0.05	ug/L	U	8/9/97
SJS03-GW4S-001	PSPCB	gamma-Chlordane		0.05	ug/L	U	8/9/97
SJS03-GW4S-001	PSPCB	Heptachlor		0.05	ug/L	U	8/9/97
SJS03-GW4S-001	PSPCB	Heptachlor Epoxide		0.05	ug/L	U	8/9/97
SJS03-GW4S-001	PSPCB	Methoxychlor		0.5	ug/L	U	8/9/97
SJS03-GW4S-001	PSPCB	Toxaphene		5	ug/L	U	8/9/97
SJS03-GW4S-001	SVTCL	1,2,4-Trichlorobenzene		10	ug/L	U	7/31/97
SJS03-GW4S-001	SVTCL	1,2-Dichlorobenzene		10	ug/L	U	7/31/97
SJS03-GW4S-001	SVTCL	1,3-Dichlorobenzene		10	ug/L	U	7/31/97
SJS03-GW4S-001	SVTCL	1,4-Dichlorobenzene		10	ug/L	U	7/31/97
SJS03-GW4S-001	SVTCL	2,2'-oxybis(1-Chloropropane		10	ug/L	U	7/31/97
SJS03-GW4S-001	SVTCL	2,4,5-Trichlorophenol		25	ug/L	U	7/31/97
SJS03-GW4S-001	SVTCL	2,4,6-Trichlorophenol		10	ug/L	U	7/31/97
SJS03-GW4S-001	SVTCL	2,4-Dichlorophenol		10	ug/L	U	7/31/97
SJS03-GW4S-001	SVTCL	2,4-Dimethylphenol		10	ug/L	U	7/31/97
SJS03-GW4S-001	SVTCL	2,4-Dinitrophenol		25	ug/L	U	7/31/97
SJS03-GW4S-001	SVTCL	2,4-Dinitrotoluene		10	ug/L	U	7/31/97
SJS03-GW4S-001	SVTCL	2,6-Dinitrotoluene		10	ug/L	U	7/31/97
SJS03-GW4S-001	SVTCL	2-Chloronaphthalene		10	ug/L	U	7/31/97
SJS03-GW4S-001	SVTCL	2-Chlorophenol		10	ug/L	U	7/31/97
SJS03-GW4S-001	SVTCL	2-Methylnaphthalene		10	ug/L	U	7/31/97
SJS03-GW4S-001	SVTCL	2-Methylphenol		10	ug/L	U	7/31/97
SJS03-GW4S-001	SVTCL	2-Nitroaniline		25	ug/L	U	7/31/97
SJS03-GW4S-001	SVTCL	2-Nitrophenol		10	ug/L	U	7/31/97
SJS03-GW4S-001	SVTCL	3,3'-Dichlorobenzidine		10	ug/L	U	7/31/97
SJS03-GW4S-001	SVTCL	3-Nitroaniline		25	ug/L	U	7/31/97
SJS03-GW4S-001	SVTCL	4,6-Dinitro-2-Methylphenol		25	ug/L	U	7/31/97
SJS03-GW4S-001	SVTCL	4-Bromophenyl phenylether		10	ug/L	U	7/31/97
SJS03-GW4S-001	SVTCL	4-Chloro-3-Methylphenol		10	ug/L	U	7/31/97
SJS03-GW4S-001	SVTCL	4-Chloroaniline		10	ug/L	U	7/31/97
SJS03-GW4S-001	SVTCL	4-Chlorophenyl-phenylether		10	ug/L	U	7/31/97
SJS03-GW4S-001	SVTCL	4-Methylphenol		10	ug/L	U	7/31/97
SJS03-GW4S-001	SVTCL	4-Nitroaniline		25	ug/L	U	7/31/97
SJS03-GW4S-001	SVTCL	4-Nitrophenol		25	ug/L	U	7/31/97
SJS03-GW4S-001	SVTCL	Acenaphthene		10	ug/L	U	7/31/97
SJS03-GW4S-001	SVTCL	Acenaphthylene		10	ug/L	U	7/31/97
SJS03-GW4S-001	SVTCL	Anthracene		10	ug/L	U	7/31/97
SJS03-GW4S-001	SVTCL	Benzo(a)Anthracene		10	ug/L	U	7/31/97
SJS03-GW4S-001	SVTCL	Benzo(a)Pyrene		10	ug/L	U	7/31/97
SJS03-GW4S-001	SVTCL	Benzo(b)Fluoranthene		10	ug/L	U	7/31/97
SJS03-GW4S-001	SVTCL	Benzo(g,h,i)Perylene		10	ug/L	U	7/31/97
SJS03-GW4S-001	SVTCL	Benzo(k)fluoranthene		10	ug/L	U	7/31/97
SJS03-GW4S-001	SVTCL	Bis(2-chloroethoxy)Methane		10	ug/L	U	7/31/97
SJS03-GW4S-001	SVTCL	Bis(2-chloroethyl)Ether		10	ug/L	U	7/31/97
SJS03-GW4S-001	SVTCL	Bis(2-Ethylhexyl)Phthalate	25	10	ug/L		7/31/97
SJS03-GW4S-001	SVTCL	Butylbenzylphthalate		10	ug/L	U	7/31/97
SJS03-GW4S-001	SVTCL	Carbazole		10	ug/L	U	7/31/97
SJS03-GW4S-001	SVTCL	Chrysene		10	ug/L	U	7/31/97
SJS03-GW4S-001	SVTCL	Di-n-Butylphthalate		10	ug/L	U	7/31/97
SJS03-GW4S-001	SVTCL	Di-n-Octyl Phthalate		10	ug/L	U	7/31/97
SJS03-GW4S-001	SVTCL	Dibenz(a,h)Anthracene		10	ug/L	U	7/31/97
SJS03-GW4S-001	SVTCL	Dibenzofuran		10	ug/L	U	7/31/97
SJS03-GW4S-001	SVTCL	Diethylphthalate		10	ug/L	U	7/31/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS03-GW4S-001	SVTCL	Dimethyl Phthalate		10	ug/L	U	7/31/97
SJS03-GW4S-001	SVTCL	Fluoranthene		10	ug/L	U	7/31/97
SJS03-GW4S-001	SVTCL	Fluorene		10	ug/L	U	7/31/97
SJS03-GW4S-001	SVTCL	Hexachlorobenzene		10	ug/L	U	7/31/97
SJS03-GW4S-001	SVTCL	Hexachlorobutadiene		10	ug/L	U	7/31/97
SJS03-GW4S-001	SVTCL	Hexachlorocyclopentadien		10	ug/L	U	7/31/97
SJS03-GW4S-001	SVTCL	Hexachloroethane		10	ug/L	U	7/31/97
SJS03-GW4S-001	SVTCL	Indeno(1,2,3-cd)Pyrene		10	ug/L	U	7/31/97
SJS03-GW4S-001	SVTCL	Isophorone		10	ug/L	U	7/31/97
SJS03-GW4S-001	SVTCL	N-Nitroso-Di-n-Propylamine		10	ug/L	U	7/31/97
SJS03-GW4S-001	SVTCL	N-Nitrosodiphenylamine		10	ug/L	U	7/31/97
SJS03-GW4S-001	SVTCL	Naphthalene		10	ug/L	U	7/31/97
SJS03-GW4S-001	SVTCL	Nitrobenzene		10	ug/L	U	7/31/97
SJS03-GW4S-001	SVTCL	Pentachlorophenol		25	ug/L	U	7/31/97
SJS03-GW4S-001	SVTCL	Phenanthrene		10	ug/L	U	7/31/97
SJS03-GW4S-001	SVTCL	Phenol		10	ug/L	U	7/31/97
SJS03-GW4S-001	SVTCL	Pyrene		10	ug/L	U	7/31/97
SJS03-GW4S-001	VCLOW	1,1,1-Trichloroethane		1	ug/L	U	7/25/97
SJS03-GW4S-001	VCLOW	1,1,2,2-Tetrachloroethane		1	ug/L	U	7/25/97
SJS03-GW4S-001	VCLOW	1,1,2-Trichloroethane		1	ug/L	U	7/25/97
SJS03-GW4S-001	VCLOW	1,1-Dichloroethane		1	ug/L	U	7/25/97
SJS03-GW4S-001	VCLOW	1,1-Dichloroethene		1	ug/L	U	7/25/97
SJS03-GW4S-001	VCLOW	1,2,4-Trichlorobenzene		1	ug/L	U	7/25/97
SJS03-GW4S-001	VCLOW	1,2-Dibromo-3-chloropropan		1	ug/L	U	7/25/97
SJS03-GW4S-001	VCLOW	1,2-Dibromoethane		1	ug/L	U	7/25/97
SJS03-GW4S-001	VCLOW	1,2-Dichlorobenzene		1	ug/L	U	7/25/97
SJS03-GW4S-001	VCLOW	1,2-Dichloroethane		1	ug/L	U	7/25/97
SJS03-GW4S-001	VCLOW	1,2-Dichloropropane		1	ug/L	U	7/25/97
SJS03-GW4S-001	VCLOW	1,3-Dichlorobenzene		1	ug/L	U	7/25/97
SJS03-GW4S-001	VCLOW	1,4-Dichlorobenzene		1	ug/L	U	7/25/97
SJS03-GW4S-001	VCLOW	2-Butanone		5	ug/L	U	7/25/97
SJS03-GW4S-001	VCLOW	2-Hexanone		5	ug/L	U	7/25/97
SJS03-GW4S-001	VCLOW	4-Methyl-2-Pentanone		5	ug/L	U	7/25/97
SJS03-GW4S-001	VCLOW	Acetone		5	ug/L	U	7/25/97
SJS03-GW4S-001	VCLOW	Benzene		1	ug/L	U	7/25/97
SJS03-GW4S-001	VCLOW	Bromochloromethane		1	ug/L	U	7/25/97
SJS03-GW4S-001	VCLOW	Bromodichloromethane		1	ug/L	U	7/25/97
SJS03-GW4S-001	VCLOW	Bromoform		1	ug/L	U	7/25/97
SJS03-GW4S-001	VCLOW	Bromomethane		1	ug/L	U	7/25/97
SJS03-GW4S-001	VCLOW	Carbon Disulfide		1	ug/L	U	7/25/97
SJS03-GW4S-001	VCLOW	Carbon Tetrachloride		1	ug/L	U	7/25/97
SJS03-GW4S-001	VCLOW	Chlorobenzene		1	ug/L	U	7/25/97
SJS03-GW4S-001	VCLOW	Chloroethane		1	ug/L	U	7/25/97
SJS03-GW4S-001	VCLOW	Chloroform		1	ug/L	U	7/25/97
SJS03-GW4S-001	VCLOW	Chloromethane		1	ug/L	U	7/25/97
SJS03-GW4S-001	VCLOW	cis-1,2-Dichloroethene		1	ug/L	U	7/25/97
SJS03-GW4S-001	VCLOW	cis-1,3-Dichloropropene		1	ug/L	U	7/25/97
SJS03-GW4S-001	VCLOW	Dibromochloromethane		1	ug/L	U	7/25/97
SJS03-GW4S-001	VCLOW	Ethylbenzene		1	ug/L	U	7/25/97
SJS03-GW4S-001	VCLOW	Methylene Chloride	2	1	ug/L	B	7/25/97
SJS03-GW4S-001	VCLOW	Styrene		1	ug/L	U	7/25/97
SJS03-GW4S-001	VCLOW	Tetrachloroethene		1	ug/L	U	7/25/97
SJS03-GW4S-001	VCLOW	Toluene		1	ug/L	U	7/25/97
SJS03-GW4S-001	VCLOW	Total Xylenes		1	ug/L	U	7/25/97
SJS03-GW4S-001	VCLOW	Trans-1,2-Dichloroethene		1	ug/L	U	7/25/97
SJS03-GW4S-001	VCLOW	Trans-1,3-Dichloropropene		1	ug/L	U	7/25/97
SJS03-GW4S-001	VCLOW	Trichloroethene		1	ug/L	U	7/25/97
SJS03-GW4S-001	VCLOW	Vinyl Chloride		1	ug/L	U	7/25/97
SJS03-GW4S-001F	METAL	Aluminum		44	ug/L	U	8/1/97
SJS03-GW4S-001F	METAL	Antimony		2	ug/L	U	8/1/97
SJS03-GW4S-001F	METAL	Arsenic		3	ug/L	U	8/1/97
SJS03-GW4S-001F	METAL	Barium	38	1	ug/L	J	8/1/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS03-GW4S-001F	METAL	Beryllium		1	ug/L	U	8/1/97
SJS03-GW4S-001F	METAL	Cadmium		0.5	ug/L	U	8/1/97
SJS03-GW4S-001F	METAL	Calcium	178000	46	ug/L		8/1/97
SJS03-GW4S-001F	METAL	Chromium		7	ug/L	U	8/1/97
SJS03-GW4S-001F	METAL	Cobalt		8	ug/L	U	8/1/97
SJS03-GW4S-001F	METAL	Copper		6	ug/L	U	8/1/97
SJS03-GW4S-001F	METAL	Iron	6990	5	ug/L		8/1/97
SJS03-GW4S-001F	METAL	Lead		1	ug/L	U	8/1/97
SJS03-GW4S-001F	METAL	Magnesium	150000	45	ug/L		8/1/97
SJS03-GW4S-001F	METAL	Manganese	1020	1	ug/L		8/1/97
SJS03-GW4S-001F	METAL	Mercury	0.19	0.1	ug/L	B	8/7/97
SJS03-GW4S-001F	METAL	Nickel		7	ug/L	U	8/1/97
SJS03-GW4S-001F	METAL	Potassium	56000	97	ug/L		8/1/97
SJS03-GW4S-001F	METAL	Selenium		3	ug/L	U	8/1/97
SJS03-GW4S-001F	METAL	Silver		1	ug/L	U	8/1/97
SJS03-GW4S-001F	METAL	Sodium	793000	28	ug/L		8/4/97
SJS03-GW4S-001F	METAL	Thallium	2	2	ug/L	B	8/1/97
SJS03-GW4S-001F	METAL	Vanadium		9	ug/L	U	8/1/97
SJS03-GW4S-001F	METAL	Zinc	13.5	3	ug/L	B	8/1/97
SJS03-SB01-001	CTOTP	Total Phosphorous (as P)	18.6	4.6	mg/kg		7/14/97
SJS03-SB01-001	MCYAN	Aluminum	8250	12.83	mg/kg		7/2/97
SJS03-SB01-001	MCYAN	Antimony		0.58	mg/kg	UL	7/2/97
SJS03-SB01-001	MCYAN	Arsenic	5.3	0.87	mg/kg		7/2/97
SJS03-SB01-001	MCYAN	Barium	30.2	0.58	mg/kg	J	7/2/97
SJS03-SB01-001	MCYAN	Beryllium		0.29	mg/kg	U	7/2/97
SJS03-SB01-001	MCYAN	Cadmium	3.4	0.15	mg/kg		7/2/97
SJS03-SB01-001	MCYAN	Calcium	1340	25.37	mg/kg	J	7/2/97
SJS03-SB01-001	MCYAN	Chromium	17.9	2.04	mg/kg		7/2/97
SJS03-SB01-001	MCYAN	Cobalt	5.9	2.33	mg/kg	J	7/2/97
SJS03-SB01-001	MCYAN	Copper	10.3	1.75	mg/kg	B	7/2/97
SJS03-SB01-001	MCYAN	Cyanide		0.73	mg/kg	U	7/2/97
SJS03-SB01-001	MCYAN	Iron	11200	4.96	mg/kg		7/2/97
SJS03-SB01-001	MCYAN	Lead	32.2	0.29	mg/kg	J	7/2/97
SJS03-SB01-001	MCYAN	Magnesium	1880	52.77	mg/kg		7/2/97
SJS03-SB01-001	MCYAN	Manganese	85.6	0.58	mg/kg		7/2/97
SJS03-SB01-001	MCYAN	Mercury		0.07	mg/kg	U	6/30/97
SJS03-SB01-001	MCYAN	Nickel	11.1	2.04	mg/kg	B	7/2/97
SJS03-SB01-001	MCYAN	Potassium	1520	64.72	mg/kg		7/2/97
SJS03-SB01-001	MCYAN	Selenium		0.87	mg/kg	U	7/3/97
SJS03-SB01-001	MCYAN	Silver		0.29	mg/kg	U	7/2/97
SJS03-SB01-001	MCYAN	Sodium	176	16.91	mg/kg	B	7/2/97
SJS03-SB01-001	MCYAN	Thallium	0.71	0.58	mg/kg	J	7/2/97
SJS03-SB01-001	MCYAN	Vanadium	23	2.62	mg/kg		7/2/97
SJS03-SB01-001	MCYAN	Zinc	130	1.46	mg/kg		7/2/97
SJS03-SB01-001	PSPCB	4,4'-DDD		4	ug/kg	U	7/13/97
SJS03-SB01-001	PSPCB	4,4'-DDE		4	ug/kg	U	7/13/97
SJS03-SB01-001	PSPCB	4,4'-DDT		4	ug/kg	U	7/13/97
SJS03-SB01-001	PSPCB	Aldrin		2.1	ug/kg	U	7/13/97
SJS03-SB01-001	PSPCB	alpha-BHC		2.1	ug/kg	U	7/13/97
SJS03-SB01-001	PSPCB	alpha-Chlordane		2.1	ug/kg	U	7/13/97
SJS03-SB01-001	PSPCB	Aroclor-1016		40	ug/kg	U	7/13/97
SJS03-SB01-001	PSPCB	Aroclor-1221		82	ug/kg	U	7/13/97
SJS03-SB01-001	PSPCB	Aroclor-1232		40	ug/kg	U	7/13/97
SJS03-SB01-001	PSPCB	Aroclor-1242		40	ug/kg	U	7/13/97
SJS03-SB01-001	PSPCB	Aroclor-1248		40	ug/kg	U	7/13/97
SJS03-SB01-001	PSPCB	Aroclor-1254		40	ug/kg	U	7/13/97
SJS03-SB01-001	PSPCB	Aroclor-1260		40	ug/kg	U	7/13/97
SJS03-SB01-001	PSPCB	beta-BHC		2.1	ug/kg	U	7/13/97
SJS03-SB01-001	PSPCB	delta-BHC		2.1	ug/kg	U	7/13/97
SJS03-SB01-001	PSPCB	Dieldrin		4	ug/kg	U	7/13/97
SJS03-SB01-001	PSPCB	Endosulfan I		2.1	ug/kg	U	7/13/97
SJS03-SB01-001	PSPCB	Endosulfan II		4	ug/kg	U	7/13/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS03-SB01-001	PSPCB	Endosulfan Sulfate		4	ug/kg	U	7/13/97
SJS03-SB01-001	PSPCB	Endrin		4	ug/kg	U	7/13/97
SJS03-SB01-001	PSPCB	Endrin Aldehyde		4	ug/kg	U	7/13/97
SJS03-SB01-001	PSPCB	Endrin Ketone		4	ug/kg	U	7/13/97
SJS03-SB01-001	PSPCB	gamma-BHC		2.1	ug/kg	U	7/13/97
SJS03-SB01-001	PSPCB	gamma-Chlordane		2.1	ug/kg	U	7/13/97
SJS03-SB01-001	PSPCB	Heptachlor		2.1	ug/kg	U	7/13/97
SJS03-SB01-001	PSPCB	Heptachlor Epoxide		2.1	ug/kg	U	7/13/97
SJS03-SB01-001	PSPCB	Methoxychlor		21	ug/kg	U	7/13/97
SJS03-SB01-001	PSPCB	Toxaphene		210	ug/kg	U	7/13/97
SJS03-SB01-001	SVTCL	1,2,4-Trichlorobenzene		400	ug/kg	U	7/3/97
SJS03-SB01-001	SVTCL	1,2-Dichlorobenzene		400	ug/kg	U	7/3/97
SJS03-SB01-001	SVTCL	1,3-Dichlorobenzene		400	ug/kg	U	7/3/97
SJS03-SB01-001	SVTCL	1,4-Dichlorobenzene		400	ug/kg	U	7/3/97
SJS03-SB01-001	SVTCL	2,2'-oxybis(1-Chloropropane		400	ug/kg	U	7/3/97
SJS03-SB01-001	SVTCL	2,4,5-Trichlorophenol		1000	ug/kg	U	7/3/97
SJS03-SB01-001	SVTCL	2,4,6-Trichlorophenol		400	ug/kg	U	7/3/97
SJS03-SB01-001	SVTCL	2,4-Dichlorophenol		400	ug/kg	U	7/3/97
SJS03-SB01-001	SVTCL	2,4-Dimethylphenol		400	ug/kg	U	7/3/97
SJS03-SB01-001	SVTCL	2,4-Dinitrophenol		1000	ug/kg	U	7/3/97
SJS03-SB01-001	SVTCL	2,4-Dinitrotoluene		400	ug/kg	U	7/3/97
SJS03-SB01-001	SVTCL	2,6-Dinitrotoluene		400	ug/kg	U	7/3/97
SJS03-SB01-001	SVTCL	2-Chloronaphthalene		400	ug/kg	U	7/3/97
SJS03-SB01-001	SVTCL	2-Chlorophenol		400	ug/kg	U	7/3/97
SJS03-SB01-001	SVTCL	2-Methylnaphthalene		400	ug/kg	U	7/3/97
SJS03-SB01-001	SVTCL	2-Methylphenol		400	ug/kg	U	7/3/97
SJS03-SB01-001	SVTCL	2-Nitroaniline		1000	ug/kg	U	7/3/97
SJS03-SB01-001	SVTCL	2-Nitrophenol		400	ug/kg	U	7/3/97
SJS03-SB01-001	SVTCL	3,3'-Dichlorobenzidine		400	ug/kg	U	7/3/97
SJS03-SB01-001	SVTCL	3-Nitroaniline		1000	ug/kg	U	7/3/97
SJS03-SB01-001	SVTCL	4,6-Dinitro-2-Methylphenol		1000	ug/kg	U	7/3/97
SJS03-SB01-001	SVTCL	4-Bromophenyl phenylether		400	ug/kg	U	7/3/97
SJS03-SB01-001	SVTCL	4-Chloro-3-Methylphenol		400	ug/kg	U	7/3/97
SJS03-SB01-001	SVTCL	4-Chloroaniline		400	ug/kg	U	7/3/97
SJS03-SB01-001	SVTCL	4-Chlorophenyl-phenylether		400	ug/kg	U	7/3/97
SJS03-SB01-001	SVTCL	4-Methylphenol		400	ug/kg	U	7/3/97
SJS03-SB01-001	SVTCL	4-Nitroaniline		1000	ug/kg	U	7/3/97
SJS03-SB01-001	SVTCL	4-Nitrophenol		1000	ug/kg	U	7/3/97
SJS03-SB01-001	SVTCL	Acenaphthene		400	ug/kg	U	7/3/97
SJS03-SB01-001	SVTCL	Acenaphthylene		400	ug/kg	U	7/3/97
SJS03-SB01-001	SVTCL	Anthracene	74	400	ug/kg	J	7/3/97
SJS03-SB01-001	SVTCL	Benzo(a)Anthracene	500	400	ug/kg		7/3/97
SJS03-SB01-001	SVTCL	Benzo(a)Pyrene	370	400	ug/kg	J	7/3/97
SJS03-SB01-001	SVTCL	Benzo(b)Fluoranthene	820	400	ug/kg		7/3/97
SJS03-SB01-001	SVTCL	Benzo(g,h,i)Perylene	280	400	ug/kg	J	7/3/97
SJS03-SB01-001	SVTCL	Benzo(k)Fluoranthene	160	400	ug/kg	J	7/3/97
SJS03-SB01-001	SVTCL	Bis(2-chloroethoxy)Methane		400	ug/kg	U	7/3/97
SJS03-SB01-001	SVTCL	Bis(2-chloroethyl)Ether		400	ug/kg	U	7/3/97
SJS03-SB01-001	SVTCL	Bis(2-Ethylhexyl)Phthalate	120	83	ug/kg	B	7/3/97
SJS03-SB01-001	SVTCL	Butylbenzylphthalate		400	ug/kg	U	7/3/97
SJS03-SB01-001	SVTCL	Carbazole		400	ug/kg	U	7/3/97
SJS03-SB01-001	SVTCL	Chrysene	580	400	ug/kg		7/3/97
SJS03-SB01-001	SVTCL	Di-n-Butylphthalate		400	ug/kg	U	7/3/97
SJS03-SB01-001	SVTCL	Di-n-Octyl Phthalate		400	ug/kg	U	7/3/97
SJS03-SB01-001	SVTCL	Dibenz(a,h)Anthracene		400	ug/kg	U	7/3/97
SJS03-SB01-001	SVTCL	Dibenzofuran		400	ug/kg	U	7/3/97
SJS03-SB01-001	SVTCL	Diethylphthalate		400	ug/kg	U	7/3/97
SJS03-SB01-001	SVTCL	Dimethyl Phthalate		400	ug/kg	U	7/3/97
SJS03-SB01-001	SVTCL	Fluoranthene	670	400	ug/kg		7/3/97
SJS03-SB01-001	SVTCL	Fluorene		400	ug/kg	U	7/3/97
SJS03-SB01-001	SVTCL	Hexachlorobenzene		400	ug/kg	U	7/3/97
SJS03-SB01-001	SVTCL	Hexachlorobutadiene		400	ug/kg	U	7/3/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS03-SB01-001	SVTCL	Hexachlorocyclopentadien		400	ug/kg	U	7/3/97
SJS03-SB01-001	SVTCL	Hexachloroethane		400	ug/kg	U	7/3/97
SJS03-SB01-001	SVTCL	Indeno(1,2,3-cd)Pyrene	280	400	ug/kg	J	7/3/97
SJS03-SB01-001	SVTCL	Isophorone		400	ug/kg	U	7/3/97
SJS03-SB01-001	SVTCL	N-Nitroso-Di-n-Propylamine		400	ug/kg	U	7/3/97
SJS03-SB01-001	SVTCL	N-Nitrosodiphenylamine		400	ug/kg	U	7/3/97
SJS03-SB01-001	SVTCL	Naphthalene		400	ug/kg	U	7/3/97
SJS03-SB01-001	SVTCL	Nitrobenzene		400	ug/kg	U	7/3/97
SJS03-SB01-001	SVTCL	Pentachlorophenol		1000	ug/kg	U	7/3/97
SJS03-SB01-001	SVTCL	Phenanthrene	140	400	ug/kg	J	7/3/97
SJS03-SB01-001	SVTCL	Phenol		400	ug/kg	U	7/3/97
SJS03-SB01-001	SVTCL	Pyrene	440	400	ug/kg		7/3/97
SJS03-SB01-001	VCTCL	1,1,1-Trichloroethane		15	ug/kg	U	6/27/97
SJS03-SB01-001	VCTCL	1,1,2,2-Tetrachloroethane		15	ug/kg	UJ	6/27/97
SJS03-SB01-001	VCTCL	1,1,2-Trichloroethane		15	ug/kg	U	6/27/97
SJS03-SB01-001	VCTCL	1,1-Dichloroethane		15	ug/kg	U	6/27/97
SJS03-SB01-001	VCTCL	1,1-Dichloroethene		15	ug/kg	U	6/27/97
SJS03-SB01-001	VCTCL	1,2-Dichloroethane		15	ug/kg	U	6/27/97
SJS03-SB01-001	VCTCL	1,2-Dichloroethene (total)		15	ug/kg	U	6/27/97
SJS03-SB01-001	VCTCL	1,2-Dichloropropane		15	ug/kg	U	6/27/97
SJS03-SB01-001	VCTCL	2-Butanone	31	15	ug/kg		6/27/97
SJS03-SB01-001	VCTCL	2-Hexanone		15	ug/kg	UJ	6/27/97
SJS03-SB01-001	VCTCL	4-Methyl-2-Pentanone		15	ug/kg	U	6/27/97
SJS03-SB01-001	VCTCL	Acetone	160	15	ug/kg	B	6/27/97
SJS03-SB01-001	VCTCL	Benzene		15	ug/kg	U	6/27/97
SJS03-SB01-001	VCTCL	Bromodichloromethane		15	ug/kg	U	6/27/97
SJS03-SB01-001	VCTCL	Bromoform		15	ug/kg	U	6/27/97
SJS03-SB01-001	VCTCL	Bromomethane		15	ug/kg	U	6/27/97
SJS03-SB01-001	VCTCL	Carbon Disulfide	8	15	ug/kg	J	6/27/97
SJS03-SB01-001	VCTCL	Carbon Tetrachloride		15	ug/kg	U	6/27/97
SJS03-SB01-001	VCTCL	Chlorobenzene		15	ug/kg	UJ	6/27/97
SJS03-SB01-001	VCTCL	Chloroethane		15	ug/kg	U	6/27/97
SJS03-SB01-001	VCTCL	Chloroform		15	ug/kg	U	6/27/97
SJS03-SB01-001	VCTCL	Chloromethane		15	ug/kg	U	6/27/97
SJS03-SB01-001	VCTCL	cis-1,3-Dichloropropene		15	ug/kg	U	6/27/97
SJS03-SB01-001	VCTCL	Dibromochloromethane		15	ug/kg	U	6/27/97
SJS03-SB01-001	VCTCL	Ethylbenzene		15	ug/kg	UJ	6/27/97
SJS03-SB01-001	VCTCL	Methylene Chloride	47	15	ug/kg	B	6/27/97
SJS03-SB01-001	VCTCL	Styrene		15	ug/kg	UJ	6/27/97
SJS03-SB01-001	VCTCL	Tetrachloroethene	5	15	ug/kg	J	6/27/97
SJS03-SB01-001	VCTCL	Toluene	2	15	ug/kg	J	6/27/97
SJS03-SB01-001	VCTCL	Total Xylenes		15	ug/kg	UJ	6/27/97
SJS03-SB01-001	VCTCL	Trans-1,3-Dichloropropene		15	ug/kg	U	6/27/97
SJS03-SB01-001	VCTCL	Trichloroethene		15	ug/kg	U	6/27/97
SJS03-SB01-001	VCTCL	Vinyl Chloride		15	ug/kg	U	6/27/97
SJS03-SB02-001	CTOTP	Total Phosphorous (as P)	6.5	1.8	mg/kg		7/14/97
SJS03-SB02-001	MCYAN	Aluminum	6520	12.45	mg/kg		7/2/97
SJS03-SB02-001	MCYAN	Antimony		0.57	mg/kg	UL	7/2/97
SJS03-SB02-001	MCYAN	Arsenic	4.7	0.85	mg/kg		7/2/97
SJS03-SB02-001	MCYAN	Barium	22.9	0.57	mg/kg	J	7/2/97
SJS03-SB02-001	MCYAN	Beryllium		0.28	mg/kg	U	7/2/97
SJS03-SB02-001	MCYAN	Cadmium		0.14	mg/kg	U	7/2/97
SJS03-SB02-001	MCYAN	Calcium	5730	24.63	mg/kg		7/2/97
SJS03-SB02-001	MCYAN	Chromium	14.7	1.98	mg/kg		7/2/97
SJS03-SB02-001	MCYAN	Cobalt	5	2.26	mg/kg	J	7/2/97
SJS03-SB02-001	MCYAN	Copper	8.1	1.7	mg/kg		7/2/97
SJS03-SB02-001	MCYAN	Cyanide		0.72	mg/kg	U	7/2/97
SJS03-SB02-001	MCYAN	Iron	9180	4.81	mg/kg		7/2/97
SJS03-SB02-001	MCYAN	Lead	42.6	0.28	mg/kg	J	7/2/97
SJS03-SB02-001	MCYAN	Magnesium	904	51.23	mg/kg	J	7/2/97
SJS03-SB02-001	MCYAN	Manganese	54.1	0.57	mg/kg		7/2/97
SJS03-SB02-001	MCYAN	Mercury	0.3	0.07	mg/kg		6/30/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS03-SB02-001	IMCYAN	Nickel	6.1	1.98	mg/kg	J	7/2/97
SJS03-SB02-001	IMCYAN	Potassium	723	62.84	mg/kg	J	7/2/97
SJS03-SB02-001	IMCYAN	Selenium		0.85	mg/kg	U	7/3/97
SJS03-SB02-001	IMCYAN	Silver	0.73	0.28	mg/kg	J	7/2/97
SJS03-SB02-001	IMCYAN	Sodium	151	16.42	mg/kg	J	7/2/97
SJS03-SB02-001	IMCYAN	Thallium		0.57	mg/kg	U	7/2/97
SJS03-SB02-001	IMCYAN	Vanadium	19	2.55	mg/kg		7/2/97
SJS03-SB02-001	IMCYAN	Zinc	20.1	1.42	mg/kg	B	7/2/97
SJS03-SB02-001	PSPCB	4,4'-DDD		5	ug/kg	U	7/13/97
SJS03-SB02-001	PSPCB	4,4'-DDE		5	ug/kg	U	7/13/97
SJS03-SB02-001	PSPCB	4,4'-DDT		5	ug/kg	U	7/13/97
SJS03-SB02-001	PSPCB	Aldrin		2.6	ug/kg	U	7/13/97
SJS03-SB02-001	PSPCB	alpha-BHC		2.6	ug/kg	U	7/13/97
SJS03-SB02-001	PSPCB	alpha-Chlordane		2.6	ug/kg	U	7/13/97
SJS03-SB02-001	PSPCB	Aroclor-1016		50	ug/kg	U	7/13/97
SJS03-SB02-001	PSPCB	Aroclor-1221		100	ug/kg	U	7/13/97
SJS03-SB02-001	PSPCB	Aroclor-1232		50	ug/kg	U	7/13/97
SJS03-SB02-001	PSPCB	Aroclor-1242		50	ug/kg	U	7/13/97
SJS03-SB02-001	PSPCB	Aroclor-1248		50	ug/kg	U	7/13/97
SJS03-SB02-001	PSPCB	Aroclor-1254		50	ug/kg	U	7/13/97
SJS03-SB02-001	PSPCB	Aroclor-1260		50	ug/kg	U	7/13/97
SJS03-SB02-001	PSPCB	beta-BHC		2.6	ug/kg	U	7/13/97
SJS03-SB02-001	PSPCB	delta-BHC		2.6	ug/kg	U	7/13/97
SJS03-SB02-001	PSPCB	Dieldrin		5	ug/kg	U	7/13/97
SJS03-SB02-001	PSPCB	Endosulfan I		2.6	ug/kg	U	7/13/97
SJS03-SB02-001	PSPCB	Endosulfan II		5	ug/kg	U	7/13/97
SJS03-SB02-001	PSPCB	Endosulfan Sulfate		5	ug/kg	U	7/13/97
SJS03-SB02-001	PSPCB	Endrin		5	ug/kg	U	7/13/97
SJS03-SB02-001	PSPCB	Endrin Aldehyde		5	ug/kg	U	7/13/97
SJS03-SB02-001	PSPCB	Endrin Ketone		5	ug/kg	U	7/13/97
SJS03-SB02-001	PSPCB	gamma-BHC		2.6	ug/kg	U	7/13/97
SJS03-SB02-001	PSPCB	gamma-Chlordane		2.6	ug/kg	U	7/13/97
SJS03-SB02-001	PSPCB	Heptachlor		2.6	ug/kg	U	7/13/97
SJS03-SB02-001	PSPCB	Heptachlor Epoxide		2.6	ug/kg	U	7/13/97
SJS03-SB02-001	PSPCB	Methoxychlor		26	ug/kg	U	7/13/97
SJS03-SB02-001	PSPCB	Toxaphene		260	ug/kg	U	7/13/97
SJS03-SB02-001	SVTCL	1,2,4-Trichlorobenzene		510	ug/kg	U	7/3/97
SJS03-SB02-001	SVTCL	1,2-Dichlorobenzene		510	ug/kg	U	7/3/97
SJS03-SB02-001	SVTCL	1,3-Dichlorobenzene		510	ug/kg	U	7/3/97
SJS03-SB02-001	SVTCL	1,4-Dichlorobenzene		510	ug/kg	U	7/3/97
SJS03-SB02-001	SVTCL	2,2'-oxybis(1-Chloropropane		510	ug/kg	U	7/3/97
SJS03-SB02-001	SVTCL	2,4,5-Trichlorophenol		1300	ug/kg	U	7/3/97
SJS03-SB02-001	SVTCL	2,4,6-Trichlorophenol		510	ug/kg	U	7/3/97
SJS03-SB02-001	SVTCL	2,4-Dichlorophenol		510	ug/kg	U	7/3/97
SJS03-SB02-001	SVTCL	2,4-Dimethylphenol		510	ug/kg	U	7/3/97
SJS03-SB02-001	SVTCL	2,4-Dinitrophenol		1300	ug/kg	U	7/3/97
SJS03-SB02-001	SVTCL	2,4-Dinitrotoluene		510	ug/kg	U	7/3/97
SJS03-SB02-001	SVTCL	2,6-Dinitrotoluene		510	ug/kg	U	7/3/97
SJS03-SB02-001	SVTCL	2-Chloronaphthalene		510	ug/kg	U	7/3/97
SJS03-SB02-001	SVTCL	2-Chlorophenol		510	ug/kg	U	7/3/97
SJS03-SB02-001	SVTCL	2-Methylnaphthalene		510	ug/kg	U	7/3/97
SJS03-SB02-001	SVTCL	2-Methylphenol		510	ug/kg	U	7/3/97
SJS03-SB02-001	SVTCL	2-Nitroaniline		1300	ug/kg	U	7/3/97
SJS03-SB02-001	SVTCL	2-Nitrophenol		510	ug/kg	U	7/3/97
SJS03-SB02-001	SVTCL	3,3'-Dichlorobenzidine		510	ug/kg	U	7/3/97
SJS03-SB02-001	SVTCL	3-Nitroaniline		1300	ug/kg	U	7/3/97
SJS03-SB02-001	SVTCL	4,6-Dinitro-2-Methylphenol		1300	ug/kg	U	7/3/97
SJS03-SB02-001	SVTCL	4-Bromophenyl phenylether		510	ug/kg	U	7/3/97
SJS03-SB02-001	SVTCL	4-Chloro-3-Methylphenol		510	ug/kg	U	7/3/97
SJS03-SB02-001	SVTCL	4-Chloroaniline		510	ug/kg	U	7/3/97
SJS03-SB02-001	SVTCL	4-Chlorophenyl-phenylether		510	ug/kg	U	7/3/97
SJS03-SB02-001	SVTCL	4-Methylphenol		510	ug/kg	U	7/3/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS03-SB02-001	SVTCL	4-Nitroaniline		1300	ug/kg	U	7/3/97
SJS03-SB02-001	SVTCL	4-Nitrophenol		1300	ug/kg	U	7/3/97
SJS03-SB02-001	SVTCL	Acenaphthene		510	ug/kg	U	7/3/97
SJS03-SB02-001	SVTCL	Acenaphthylene		510	ug/kg	U	7/3/97
SJS03-SB02-001	SVTCL	Anthracene	170	510	ug/kg	J	7/3/97
SJS03-SB02-001	SVTCL	Benzo(a)Anthracene	490	510	ug/kg	J	7/3/97
SJS03-SB02-001	SVTCL	Benzo(a)Pyrene	330	510	ug/kg	J	7/3/97
SJS03-SB02-001	SVTCL	Benzo(b)Fluoranthene	1500	510	ug/kg		7/3/97
SJS03-SB02-001	SVTCL	Benzo(g,h,i)Perylene	400	510	ug/kg	J	7/3/97
SJS03-SB02-001	SVTCL	Benzo(k)Fluoranthene	490	510	ug/kg	J	7/3/97
SJS03-SB02-001	SVTCL	Bis(2-chloroethoxy)Methane		510	ug/kg	U	7/3/97
SJS03-SB02-001	SVTCL	Bis(2-chloroethyl)Ether		510	ug/kg	U	7/3/97
SJS03-SB02-001	SVTCL	Bis(2-Ethylhexyl)Phthalate		510	ug/kg	U	7/3/97
SJS03-SB02-001	SVTCL	Butylbenzylphthalate		510	ug/kg	U	7/3/97
SJS03-SB02-001	SVTCL	Carbazole		510	ug/kg	U	7/3/97
SJS03-SB02-001	SVTCL	Chrysene	1200	510	ug/kg		7/3/97
SJS03-SB02-001	SVTCL	Di-n-Butylphthalate		510	ug/kg	U	7/3/97
SJS03-SB02-001	SVTCL	Di-n-Octyl Phthalate		510	ug/kg	U	7/3/97
SJS03-SB02-001	SVTCL	Dibenz(a,h)Anthracene		510	ug/kg	U	7/3/97
SJS03-SB02-001	SVTCL	Dibenzofuran		510	ug/kg	U	7/3/97
SJS03-SB02-001	SVTCL	Diethylphthalate		510	ug/kg	U	7/3/97
SJS03-SB02-001	SVTCL	Dimethyl Phthalate		510	ug/kg	U	7/3/97
SJS03-SB02-001	SVTCL	Fluoranthene	350	510	ug/kg	J	7/3/97
SJS03-SB02-001	SVTCL	Fluorene		510	ug/kg	U	7/3/97
SJS03-SB02-001	SVTCL	Hexachlorobenzene		510	ug/kg	U	7/3/97
SJS03-SB02-001	SVTCL	Hexachlorobutadiene		510	ug/kg	U	7/3/97
SJS03-SB02-001	SVTCL	Hexachlorocyclopentadien		510	ug/kg	U	7/3/97
SJS03-SB02-001	SVTCL	Hexachloroethane		510	ug/kg	U	7/3/97
SJS03-SB02-001	SVTCL	Indeno(1,2,3-cd)Pyrene	500	510	ug/kg	J	7/3/97
SJS03-SB02-001	SVTCL	Isophorone		510	ug/kg	U	7/3/97
SJS03-SB02-001	SVTCL	N-Nitroso-Di-n-Propylamine		510	ug/kg	U	7/3/97
SJS03-SB02-001	SVTCL	N-Nitrosodiphenylamine		510	ug/kg	U	7/3/97
SJS03-SB02-001	SVTCL	Naphthalene		510	ug/kg	U	7/3/97
SJS03-SB02-001	SVTCL	Nitrobenzene		510	ug/kg	U	7/3/97
SJS03-SB02-001	SVTCL	Pentachlorophenol		1300	ug/kg	U	7/3/97
SJS03-SB02-001	SVTCL	Phenanthrene	94	510	ug/kg	J	7/3/97
SJS03-SB02-001	SVTCL	Phenol		510	ug/kg	U	7/3/97
SJS03-SB02-001	SVTCL	Pyrene	230	510	ug/kg	J	7/3/97
SJS03-SB02-001	VCTCL	1,1,1-Trichloroethane		14	ug/kg	U	7/2/97
SJS03-SB02-001	VCTCL	1,1,2,2-Tetrachloroethane		14	ug/kg	U	7/2/97
SJS03-SB02-001	VCTCL	1,1,2-Trichloroethane		14	ug/kg	U	7/2/97
SJS03-SB02-001	VCTCL	1,1-Dichloroethane		14	ug/kg	U	7/2/97
SJS03-SB02-001	VCTCL	1,1-Dichloroethene		14	ug/kg	U	7/2/97
SJS03-SB02-001	VCTCL	1,2-Dichloroethane		14	ug/kg	U	7/2/97
SJS03-SB02-001	VCTCL	1,2-Dichloroethene (total)		14	ug/kg	U	7/2/97
SJS03-SB02-001	VCTCL	1,2-Dichloropropane		14	ug/kg	U	7/2/97
SJS03-SB02-001	VCTCL	2-Butanone	21	14	ug/kg		7/2/97
SJS03-SB02-001	VCTCL	2-Hexanone		14	ug/kg	U	7/2/97
SJS03-SB02-001	VCTCL	4-Methyl-2-Pentanone		14	ug/kg	U	7/2/97
SJS03-SB02-001	VCTCL	Acetone	120	14	ug/kg	B	7/2/97
SJS03-SB02-001	VCTCL	Benzene		14	ug/kg	U	7/2/97
SJS03-SB02-001	VCTCL	Bromodichloromethane		14	ug/kg	U	7/2/97
SJS03-SB02-001	VCTCL	Bromoform		14	ug/kg	U	7/2/97
SJS03-SB02-001	VCTCL	Bromomethane		14	ug/kg	U	7/2/97
SJS03-SB02-001	VCTCL	Carbon Disulfide		14	ug/kg	U	7/2/97
SJS03-SB02-001	VCTCL	Carbon Tetrachloride		14	ug/kg	U	7/2/97
SJS03-SB02-001	VCTCL	Chlorobenzene		14	ug/kg	U	7/2/97
SJS03-SB02-001	VCTCL	Chloroethane		14	ug/kg	U	7/2/97
SJS03-SB02-001	VCTCL	Chloroform		14	ug/kg	U	7/2/97
SJS03-SB02-001	VCTCL	Chloromethane		14	ug/kg	U	7/2/97
SJS03-SB02-001	VCTCL	cis-1,3-Dichloropropene		14	ug/kg	U	7/2/97
SJS03-SB02-001	VCTCL	Dibromochloromethane		14	ug/kg	U	7/2/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS03-SB02-001	VCTCL	Ethylbenzene		14	ug/kg	U	7/2/97
SJS03-SB02-001	VCTCL	Methylene Chloride	73	14	ug/kg	B	7/2/97
SJS03-SB02-001	VCTCL	Styrene		14	ug/kg	U	7/2/97
SJS03-SB02-001	VCTCL	Tetrachloroethene		14	ug/kg	U	7/2/97
SJS03-SB02-001	VCTCL	Toluene		14	ug/kg	U	7/2/97
SJS03-SB02-001	VCTCL	Total Xylenes		14	ug/kg	U	7/2/97
SJS03-SB02-001	VCTCL	Trans-1,3-Dichloropropene		14	ug/kg	U	7/2/97
SJS03-SB02-001	VCTCL	Trichloroethene		14	ug/kg	U	7/2/97
SJS03-SB02-001	VCTCL	Vinyl Chloride		14	ug/kg	U	7/2/97
SJS03-SB03-002	CTOTP	Total Phosphorous (as P)	5.4	1.4	mg/kg		7/16/97
SJS03-SB03-002	MCYAN	Aluminum	963	9.07	mg/kg		7/8/97
SJS03-SB03-002	MCYAN	Antimony		0.41	mg/kg	U	7/9/97
SJS03-SB03-002	MCYAN	Arsenic	0.79	0.62	mg/kg	J	7/9/97
SJS03-SB03-002	MCYAN	Barium	5.1	0.41	mg/kg	B	7/8/97
SJS03-SB03-002	MCYAN	Beryllium		0.21	mg/kg	U	7/8/97
SJS03-SB03-002	MCYAN	Cadmium		0.1	mg/kg	U	7/9/97
SJS03-SB03-002	MCYAN	Calcium	7550	17.93	mg/kg		7/8/97
SJS03-SB03-002	MCYAN	Chromium	3	1.44	mg/kg		7/8/97
SJS03-SB03-002	MCYAN	Cobalt		1.65	mg/kg	U	7/8/97
SJS03-SB03-002	MCYAN	Copper	7.6	1.24	mg/kg		7/8/97
SJS03-SB03-002	MCYAN	Cyanide		0.57	mg/kg	U	7/3/97
SJS03-SB03-002	MCYAN	Iron	2030	3.5	mg/kg		7/8/97
SJS03-SB03-002	MCYAN	Lead	10.1	0.21	mg/kg		7/9/97
SJS03-SB03-002	MCYAN	Magnesium	203	37.31	mg/kg	J	7/8/97
SJS03-SB03-002	MCYAN	Manganese	26	0.41	mg/kg		7/8/97
SJS03-SB03-002	MCYAN	Mercury	0.09	0.05	mg/kg	J	7/10/97
SJS03-SB03-002	MCYAN	Nickel		1.44	mg/kg	U	7/8/97
SJS03-SB03-002	MCYAN	Potassium	162	45.76	mg/kg	J	7/8/97
SJS03-SB03-002	MCYAN	Selenium		0.62	mg/kg	U	7/9/97
SJS03-SB03-002	MCYAN	Silver	1	0.21	mg/kg	B	7/9/97
SJS03-SB03-002	MCYAN	Sodium	65.4	11.96	mg/kg	B	7/8/97
SJS03-SB03-002	MCYAN	Thallium		0.41	mg/kg	U	7/9/97
SJS03-SB03-002	MCYAN	Vanadium	2	1.86	mg/kg	J	7/8/97
SJS03-SB03-002	MCYAN	Zinc	10.9	1.03	mg/kg	B	7/8/97
SJS03-SB03-002	PSPCB	4,4'-DDD		3.7	ug/kg	U	7/18/97
SJS03-SB03-002	PSPCB	4,4'-DDE		3.7	ug/kg	U	7/18/97
SJS03-SB03-002	PSPCB	4,4'-DDT		3.7	ug/kg	U	7/18/97
SJS03-SB03-002	PSPCB	Aldrin		1.9	ug/kg	U	7/18/97
SJS03-SB03-002	PSPCB	alpha-BHC		1.9	ug/kg	U	7/18/97
SJS03-SB03-002	PSPCB	alpha-Chlordane		1.9	ug/kg	U	7/18/97
SJS03-SB03-002	PSPCB	Aroclor-1016		37	ug/kg	U	7/18/97
SJS03-SB03-002	PSPCB	Aroclor-1221		75	ug/kg	U	7/18/97
SJS03-SB03-002	PSPCB	Aroclor-1232		37	ug/kg	U	7/18/97
SJS03-SB03-002	PSPCB	Aroclor-1242		37	ug/kg	U	7/18/97
SJS03-SB03-002	PSPCB	Aroclor-1248		37	ug/kg	U	7/18/97
SJS03-SB03-002	PSPCB	Aroclor-1254		37	ug/kg	U	7/18/97
SJS03-SB03-002	PSPCB	Aroclor-1260		37	ug/kg	U	7/18/97
SJS03-SB03-002	PSPCB	beta-BHC		1.9	ug/kg	U	7/18/97
SJS03-SB03-002	PSPCB	delta-BHC		1.9	ug/kg	U	7/18/97
SJS03-SB03-002	PSPCB	Dieldrin		3.7	ug/kg	U	7/18/97
SJS03-SB03-002	PSPCB	Endosulfan I		1.9	ug/kg	U	7/18/97
SJS03-SB03-002	PSPCB	Endosulfan II		3.7	ug/kg	U	7/18/97
SJS03-SB03-002	PSPCB	Endosulfan Sulfate		3.7	ug/kg	U	7/18/97
SJS03-SB03-002	PSPCB	Endrin		3.7	ug/kg	U	7/18/97
SJS03-SB03-002	PSPCB	Endrin Aldehyde		3.7	ug/kg	U	7/18/97
SJS03-SB03-002	PSPCB	Endrin Ketone		3.7	ug/kg	U	7/18/97
SJS03-SB03-002	PSPCB	gamma-BHC		1.9	ug/kg	U	7/18/97
SJS03-SB03-002	PSPCB	gamma-Chlordane		1.9	ug/kg	U	7/18/97
SJS03-SB03-002	PSPCB	Heptachlor		1.9	ug/kg	U	7/18/97
SJS03-SB03-002	PSPCB	Heptachlor Epoxide		1.9	ug/kg	U	7/18/97
SJS03-SB03-002	PSPCB	Methoxychlor		19	ug/kg	U	7/18/97
SJS03-SB03-002	PSPCB	Toxaphene		190	ug/kg	U	7/18/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS03-SB03-002	SVTCL	1,2,4-Trichlorobenzene		370	ug/kg	U	7/10/97
SJS03-SB03-002	SVTCL	1,2-Dichlorobenzene		370	ug/kg	U	7/10/97
SJS03-SB03-002	SVTCL	1,3-Dichlorobenzene		370	ug/kg	U	7/10/97
SJS03-SB03-002	SVTCL	1,4-Dichlorobenzene		370	ug/kg	U	7/10/97
SJS03-SB03-002	SVTCL	2,2'-oxybis(1-Chloropropane		370	ug/kg	U	7/10/97
SJS03-SB03-002	SVTCL	2,4,5-Trichlorophenol		940	ug/kg	U	7/10/97
SJS03-SB03-002	SVTCL	2,4,6-Trichlorophenol		370	ug/kg	U	7/10/97
SJS03-SB03-002	SVTCL	2,4-Dichlorophenol		370	ug/kg	U	7/10/97
SJS03-SB03-002	SVTCL	2,4-Dimethylphenol		370	ug/kg	U	7/10/97
SJS03-SB03-002	SVTCL	2,4-Dinitrophenol		940	ug/kg	U	7/10/97
SJS03-SB03-002	SVTCL	2,4-Dinitrotoluene		370	ug/kg	U	7/10/97
SJS03-SB03-002	SVTCL	2,6-Dinitrotoluene		370	ug/kg	U	7/10/97
SJS03-SB03-002	SVTCL	2-Chloronaphthalene		370	ug/kg	U	7/10/97
SJS03-SB03-002	SVTCL	2-Chlorophenol		370	ug/kg	U	7/10/97
SJS03-SB03-002	SVTCL	2-Methylnaphthalene		370	ug/kg	U	7/10/97
SJS03-SB03-002	SVTCL	2-Methylphenol		370	ug/kg	U	7/10/97
SJS03-SB03-002	SVTCL	2-Nitroaniline		940	ug/kg	U	7/10/97
SJS03-SB03-002	SVTCL	2-Nitrophenol		370	ug/kg	U	7/10/97
SJS03-SB03-002	SVTCL	3,3'-Dichlorobenzidine		370	ug/kg	U	7/10/97
SJS03-SB03-002	SVTCL	3-Nitroaniline		940	ug/kg	U	7/10/97
SJS03-SB03-002	SVTCL	4,6-Dinitro-2-Methylphenol		940	ug/kg	U	7/10/97
SJS03-SB03-002	SVTCL	4-Bromophenyl phenylether		370	ug/kg	U	7/10/97
SJS03-SB03-002	SVTCL	4-Chloro-3-Methylphenol		370	ug/kg	U	7/10/97
SJS03-SB03-002	SVTCL	4-Chloroaniline		370	ug/kg	U	7/10/97
SJS03-SB03-002	SVTCL	4-Chlorophenyl-phenylether		370	ug/kg	U	7/10/97
SJS03-SB03-002	SVTCL	4-Methylphenol		370	ug/kg	U	7/10/97
SJS03-SB03-002	SVTCL	4-Nitroaniline		940	ug/kg	U	7/10/97
SJS03-SB03-002	SVTCL	4-Nitrophenol		940	ug/kg	U	7/10/97
SJS03-SB03-002	SVTCL	Acenaphthene		370	ug/kg	U	7/10/97
SJS03-SB03-002	SVTCL	Acenaphthylene		370	ug/kg	U	7/10/97
SJS03-SB03-002	SVTCL	Anthracene		370	ug/kg	U	7/10/97
SJS03-SB03-002	SVTCL	Benzo(a)Anthracene		370	ug/kg	U	7/10/97
SJS03-SB03-002	SVTCL	Benzo(a)Pyrene		370	ug/kg	U	7/10/97
SJS03-SB03-002	SVTCL	Benzo(b)Fluoranthene		370	ug/kg	U	7/10/97
SJS03-SB03-002	SVTCL	Benzo(g,h,i)Perylene		370	ug/kg	U	7/10/97
SJS03-SB03-002	SVTCL	Benzo(k)Fluoranthene		370	ug/kg	U	7/10/97
SJS03-SB03-002	SVTCL	Bis(2-chloroethoxy)Methane		370	ug/kg	U	7/10/97
SJS03-SB03-002	SVTCL	Bis(2-chloroethyl)Ether		370	ug/kg	U	7/10/97
SJS03-SB03-002	SVTCL	Bis(2-Ethylhexyl)Phthalate	75	370	ug/kg	B	7/10/97
SJS03-SB03-002	SVTCL	Butylbenzylphthalate		370	ug/kg	U	7/10/97
SJS03-SB03-002	SVTCL	Carbazole		370	ug/kg	U	7/10/97
SJS03-SB03-002	SVTCL	Chrysene		370	ug/kg	U	7/10/97
SJS03-SB03-002	SVTCL	Di-n-Butylphthalate		370	ug/kg	U	7/10/97
SJS03-SB03-002	SVTCL	Di-n-Octyl Phthalate		370	ug/kg	U	7/10/97
SJS03-SB03-002	SVTCL	Dibenz(a,h)Anthracene		370	ug/kg	U	7/10/97
SJS03-SB03-002	SVTCL	Dibenzofuran		370	ug/kg	U	7/10/97
SJS03-SB03-002	SVTCL	Diethylphthalate		370	ug/kg	U	7/10/97
SJS03-SB03-002	SVTCL	Dimethyl Phthalate		370	ug/kg	U	7/10/97
SJS03-SB03-002	SVTCL	Fluoranthene		370	ug/kg	U	7/10/97
SJS03-SB03-002	SVTCL	Fluorene		370	ug/kg	U	7/10/97
SJS03-SB03-002	SVTCL	Hexachlorobenzene		370	ug/kg	U	7/10/97
SJS03-SB03-002	SVTCL	Hexachlorobutadiene		370	ug/kg	U	7/10/97
SJS03-SB03-002	SVTCL	Hexachlorocyclopentadien		370	ug/kg	U	7/10/97
SJS03-SB03-002	SVTCL	Hexachloroethane		370	ug/kg	U	7/10/97
SJS03-SB03-002	SVTCL	Indeno(1,2,3-cd)Pyrene		370	ug/kg	U	7/10/97
SJS03-SB03-002	SVTCL	Isophorone		370	ug/kg	U	7/10/97
SJS03-SB03-002	SVTCL	N-Nitroso-Di-n-Propylamine		370	ug/kg	U	7/10/97
SJS03-SB03-002	SVTCL	N-Nitrosodiphenylamine		370	ug/kg	U	7/10/97
SJS03-SB03-002	SVTCL	Naphthalene		370	ug/kg	U	7/10/97
SJS03-SB03-002	SVTCL	Nitrobenzene		370	ug/kg	U	7/10/97
SJS03-SB03-002	SVTCL	Pentachlorophenol		940	ug/kg	U	7/10/97
SJS03-SB03-002	SVTCL	Phenanthrene		370	ug/kg	U	7/10/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS03-SB03-002	SVTCL	Phenol		370	ug/kg	U	7/10/97
SJS03-SB03-002	SVTCL	Pyrene		370	ug/kg	U	7/10/97
SJS03-SB03-002	VCTCL	1,1,1-Trichloroethane		14	ug/kg	U	7/6/97
SJS03-SB03-002	VCTCL	1,1,2,2-Tetrachloroethane		14	ug/kg	U	7/6/97
SJS03-SB03-002	VCTCL	1,1,2-Trichloroethane		14	ug/kg	U	7/6/97
SJS03-SB03-002	VCTCL	1,1-Dichloroethane		14	ug/kg	U	7/6/97
SJS03-SB03-002	VCTCL	1,1-Dichloroethene		14	ug/kg	U	7/6/97
SJS03-SB03-002	VCTCL	1,2-Dichloroethane		14	ug/kg	U	7/6/97
SJS03-SB03-002	VCTCL	1,2-Dichloroethene (total)		14	ug/kg	U	7/6/97
SJS03-SB03-002	VCTCL	1,2-Dichloropropane		14	ug/kg	U	7/6/97
SJS03-SB03-002	VCTCL	2-Butanone		14	ug/kg	U	7/6/97
SJS03-SB03-002	VCTCL	2-Hexanone		14	ug/kg	U	7/6/97
SJS03-SB03-002	VCTCL	4-Methyl-2-Pentanone		14	ug/kg	U	7/6/97
SJS03-SB03-002	VCTCL	Acetone	6	14	ug/kg	B	7/6/97
SJS03-SB03-002	VCTCL	Benzene		14	ug/kg	U	7/6/97
SJS03-SB03-002	VCTCL	Bromodichloromethane		14	ug/kg	U	7/6/97
SJS03-SB03-002	VCTCL	Bromoform		14	ug/kg	U	7/6/97
SJS03-SB03-002	VCTCL	Bromomethane		14	ug/kg	U	7/6/97
SJS03-SB03-002	VCTCL	Carbon Disulfide		14	ug/kg	U	7/6/97
SJS03-SB03-002	VCTCL	Carbon Tetrachloride		14	ug/kg	U	7/6/97
SJS03-SB03-002	VCTCL	Chlorobenzene		14	ug/kg	U	7/6/97
SJS03-SB03-002	VCTCL	Chloroethane		14	ug/kg	U	7/6/97
SJS03-SB03-002	VCTCL	Chloroform		14	ug/kg	U	7/6/97
SJS03-SB03-002	VCTCL	Chloromethane		14	ug/kg	U	7/6/97
SJS03-SB03-002	VCTCL	cis-1,3-Dichloropropene		14	ug/kg	U	7/6/97
SJS03-SB03-002	VCTCL	Dibromochloromethane		14	ug/kg	U	7/6/97
SJS03-SB03-002	VCTCL	Ethylbenzene		14	ug/kg	U	7/6/97
SJS03-SB03-002	VCTCL	Methylene Chloride	12	14	ug/kg	J	7/6/97
SJS03-SB03-002	VCTCL	Styrene		14	ug/kg	U	7/6/97
SJS03-SB03-002	VCTCL	Tetrachloroethene		14	ug/kg	U	7/6/97
SJS03-SB03-002	VCTCL	Toluene		14	ug/kg	U	7/6/97
SJS03-SB03-002	VCTCL	Total Xylenes		14	ug/kg	U	7/6/97
SJS03-SB03-002	VCTCL	Trans-1,3-Dichloropropene		14	ug/kg	U	7/6/97
SJS03-SB03-002	VCTCL	Trichloroethene		14	ug/kg	U	7/6/97
SJS03-SB03-002	VCTCL	Vinyl Chloride		14	ug/kg	U	7/6/97
SJS03-SB04-002	CTOTP	Total Phosphorous (as P)	5	1.5	mg/kg		7/16/97
SJS03-SB04-002	MCYAN	Aluminum	2390	8.3	mg/kg		7/8/97
SJS03-SB04-002	MCYAN	Antimony	0.38	0.38	mg/kg	J	7/9/97
SJS03-SB04-002	MCYAN	Arsenic	1.9	0.57	mg/kg	J	7/9/97
SJS03-SB04-002	MCYAN	Barium	11.3	0.38	mg/kg	J	7/8/97
SJS03-SB04-002	MCYAN	Beryllium		0.19	mg/kg	U	7/8/97
SJS03-SB04-002	MCYAN	Cadmium		0.09	mg/kg	U	7/9/97
SJS03-SB04-002	MCYAN	Calcium	5290	16.42	mg/kg		7/8/97
SJS03-SB04-002	MCYAN	Chromium	5.9	1.32	mg/kg	B	7/8/97
SJS03-SB04-002	MCYAN	Cobalt	2.3	1.51	mg/kg	J	7/8/97
SJS03-SB04-002	MCYAN	Copper	4.8	1.13	mg/kg		7/8/97
SJS03-SB04-002	MCYAN	Cyanide		0.6	mg/kg	U	7/3/97
SJS03-SB04-002	MCYAN	Iron	4550	3.21	mg/kg		7/8/97
SJS03-SB04-002	MCYAN	Lead	16.6	0.19	mg/kg		7/9/97
SJS03-SB04-002	MCYAN	Magnesium	516	34.16	mg/kg	J	7/8/97
SJS03-SB04-002	MCYAN	Manganese	38.8	0.38	mg/kg		7/8/97
SJS03-SB04-002	MCYAN	Mercury	0.22	0.06	mg/kg		7/10/97
SJS03-SB04-002	MCYAN	Nickel	3	1.32	mg/kg	J	7/8/97
SJS03-SB04-002	MCYAN	Potassium	389	41.89	mg/kg	J	7/8/97
SJS03-SB04-002	MCYAN	Selenium		0.57	mg/kg	U	7/9/97
SJS03-SB04-002	MCYAN	Silver	1.1	0.19	mg/kg	B	7/9/97
SJS03-SB04-002	MCYAN	Sodium	81.9	10.95	mg/kg	B	7/8/97
SJS03-SB04-002	MCYAN	Thallium		0.38	mg/kg	U	7/9/97
SJS03-SB04-002	MCYAN	Vanadium	6.2	1.7	mg/kg	J	7/8/97
SJS03-SB04-002	MCYAN	Zinc	13.3	0.94	mg/kg	B	7/8/97
SJS03-SB04-002	PSPCB	4,4'-DDD		4	ug/kg	U	7/18/97
SJS03-SB04-002	PSPCB	4,4'-DDE		4	ug/kg	U	7/18/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS03-SB04-002	PSPCB	4,4'-DDT		4	ug/kg	U	7/18/97
SJS03-SB04-002	PSPCB	Aldrin		2.1	ug/kg	U	7/18/97
SJS03-SB04-002	PSPCB	alpha-BHC		2.1	ug/kg	U	7/18/97
SJS03-SB04-002	PSPCB	alpha-Chlordane		2.1	ug/kg	U	7/18/97
SJS03-SB04-002	PSPCB	Aroclor-1016		40	ug/kg	U	7/18/97
SJS03-SB04-002	PSPCB	Aroclor-1221		81	ug/kg	U	7/18/97
SJS03-SB04-002	PSPCB	Aroclor-1232		40	ug/kg	U	7/18/97
SJS03-SB04-002	PSPCB	Aroclor-1242		40	ug/kg	U	7/18/97
SJS03-SB04-002	PSPCB	Aroclor-1248		40	ug/kg	U	7/18/97
SJS03-SB04-002	PSPCB	Aroclor-1254		40	ug/kg	U	7/18/97
SJS03-SB04-002	PSPCB	Aroclor-1260		40	ug/kg	U	7/18/97
SJS03-SB04-002	PSPCB	beta-BHC		2.1	ug/kg	U	7/18/97
SJS03-SB04-002	PSPCB	delta-BHC		2.1	ug/kg	U	7/18/97
SJS03-SB04-002	PSPCB	Dieldrin		4	ug/kg	U	7/18/97
SJS03-SB04-002	PSPCB	Endosulfan I		2.1	ug/kg	U	7/18/97
SJS03-SB04-002	PSPCB	Endosulfan II		4	ug/kg	U	7/18/97
SJS03-SB04-002	PSPCB	Endosulfan Sulfate		4	ug/kg	U	7/18/97
SJS03-SB04-002	PSPCB	Endrin		4	ug/kg	U	7/18/97
SJS03-SB04-002	PSPCB	Endrin Aldehyde		4	ug/kg	U	7/18/97
SJS03-SB04-002	PSPCB	Endrin Ketone		4	ug/kg	U	7/18/97
SJS03-SB04-002	PSPCB	gamma-BHC		2.1	ug/kg	U	7/18/97
SJS03-SB04-002	PSPCB	gamma-Chlordane		2.1	ug/kg	U	7/18/97
SJS03-SB04-002	PSPCB	Heptachlor		2.1	ug/kg	U	7/18/97
SJS03-SB04-002	PSPCB	Heptachlor Epoxide		2.1	ug/kg	U	7/18/97
SJS03-SB04-002	PSPCB	Methoxychlor		21	ug/kg	U	7/18/97
SJS03-SB04-002	PSPCB	Toxaphene		210	ug/kg	U	7/18/97
SJS03-SB04-002	SVTCL	1,2,4-Trichlorobenzene		400	ug/kg	U	7/10/97
SJS03-SB04-002	SVTCL	1,2-Dichlorobenzene		400	ug/kg	U	7/10/97
SJS03-SB04-002	SVTCL	1,3-Dichlorobenzene		400	ug/kg	U	7/10/97
SJS03-SB04-002	SVTCL	1,4-Dichlorobenzene		400	ug/kg	U	7/10/97
SJS03-SB04-002	SVTCL	2,2'-oxybis(1-Chloropropane		400	ug/kg	U	7/10/97
SJS03-SB04-002	SVTCL	2,4,5-Trichlorophenol		1000	ug/kg	U	7/10/97
SJS03-SB04-002	SVTCL	2,4,6-Trichlorophenol		400	ug/kg	U	7/10/97
SJS03-SB04-002	SVTCL	2,4-Dichlorophenol		400	ug/kg	U	7/10/97
SJS03-SB04-002	SVTCL	2,4-Dimethylphenol		400	ug/kg	U	7/10/97
SJS03-SB04-002	SVTCL	2,4-Dinitrophenol		1000	ug/kg	U	7/10/97
SJS03-SB04-002	SVTCL	2,4-Dinitrotoluene		400	ug/kg	U	7/10/97
SJS03-SB04-002	SVTCL	2,6-Dinitrotoluene		400	ug/kg	U	7/10/97
SJS03-SB04-002	SVTCL	2-Chloronaphthalene		400	ug/kg	U	7/10/97
SJS03-SB04-002	SVTCL	2-Chlorophenol		400	ug/kg	U	7/10/97
SJS03-SB04-002	SVTCL	2-Methylnaphthalene		400	ug/kg	U	7/10/97
SJS03-SB04-002	SVTCL	2-Methylphenol		400	ug/kg	U	7/10/97
SJS03-SB04-002	SVTCL	2-Nitroaniline		1000	ug/kg	U	7/10/97
SJS03-SB04-002	SVTCL	2-Nitrophenol		400	ug/kg	U	7/10/97
SJS03-SB04-002	SVTCL	3,3'-Dichlorobenzidine		400	ug/kg	U	7/10/97
SJS03-SB04-002	SVTCL	3-Nitroaniline		1000	ug/kg	U	7/10/97
SJS03-SB04-002	SVTCL	4,6-Dinitro-2-Methylphenol		1000	ug/kg	U	7/10/97
SJS03-SB04-002	SVTCL	4-Bromophenyl phenylether		400	ug/kg	U	7/10/97
SJS03-SB04-002	SVTCL	4-Chloro-3-Methylphenol		400	ug/kg	U	7/10/97
SJS03-SB04-002	SVTCL	4-Chloroaniline		400	ug/kg	U	7/10/97
SJS03-SB04-002	SVTCL	4-Chlorophenyl-phenylether		400	ug/kg	U	7/10/97
SJS03-SB04-002	SVTCL	4-Methylphenol		400	ug/kg	U	7/10/97
SJS03-SB04-002	SVTCL	4-Nitroaniline		1000	ug/kg	U	7/10/97
SJS03-SB04-002	SVTCL	4-Nitrophenol		1000	ug/kg	U	7/10/97
SJS03-SB04-002	SVTCL	Acenaphthene		400	ug/kg	U	7/10/97
SJS03-SB04-002	SVTCL	Acenaphthylene		400	ug/kg	U	7/10/97
SJS03-SB04-002	SVTCL	Anthracene		400	ug/kg	U	7/10/97
SJS03-SB04-002	SVTCL	Benzo(a)Anthracene		400	ug/kg	U	7/10/97
SJS03-SB04-002	SVTCL	Benzo(a)Pyrene		400	ug/kg	U	7/10/97
SJS03-SB04-002	SVTCL	Benzo(b)Fluoranthene		400	ug/kg	U	7/10/97
SJS03-SB04-002	SVTCL	Benzo(g,h,i)Perylene		400	ug/kg	U	7/10/97
SJS03-SB04-002	SVTCL	Benzo(k)Fluoranthene		400	ug/kg	U	7/10/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS03-SB04-002	SVTCL	Bis(2-chloroethoxy)Methane		400	ug/kg	U	7/10/97
SJS03-SB04-002	SVTCL	Bis(2-chloroethyl)Ether		400	ug/kg	U	7/10/97
SJS03-SB04-002	SVTCL	Bis(2-Ethylhexyl)Phthalate	53	400	ug/kg	B	7/10/97
SJS03-SB04-002	SVTCL	Butylbenzylphthalate		400	ug/kg	U	7/10/97
SJS03-SB04-002	SVTCL	Carbazole		400	ug/kg	U	7/10/97
SJS03-SB04-002	SVTCL	Chrysene		400	ug/kg	U	7/10/97
SJS03-SB04-002	SVTCL	Di-n-Butylphthalate		400	ug/kg	U	7/10/97
SJS03-SB04-002	SVTCL	Di-n-Octyl Phthalate		400	ug/kg	U	7/10/97
SJS03-SB04-002	SVTCL	Dibenz(a,h)Anthracene		400	ug/kg	U	7/10/97
SJS03-SB04-002	SVTCL	Dibenzofuran		400	ug/kg	U	7/10/97
SJS03-SB04-002	SVTCL	Diethylphthalate		400	ug/kg	U	7/10/97
SJS03-SB04-002	SVTCL	Dimethyl Phthalate		400	ug/kg	U	7/10/97
SJS03-SB04-002	SVTCL	Fluoranthene	110	400	ug/kg	J	7/10/97
SJS03-SB04-002	SVTCL	Fluorene		400	ug/kg	U	7/10/97
SJS03-SB04-002	SVTCL	Hexachlorobenzene		400	ug/kg	U	7/10/97
SJS03-SB04-002	SVTCL	Hexachlorobutadiene		400	ug/kg	U	7/10/97
SJS03-SB04-002	SVTCL	Hexachlorocyclopentadien		400	ug/kg	U	7/10/97
SJS03-SB04-002	SVTCL	Hexachloroethane		400	ug/kg	U	7/10/97
SJS03-SB04-002	SVTCL	Indeno(1,2,3-cd)Pyrene		400	ug/kg	U	7/10/97
SJS03-SB04-002	SVTCL	Isophorone		400	ug/kg	U	7/10/97
SJS03-SB04-002	SVTCL	N-Nitroso-Di-n-Propylamine		400	ug/kg	U	7/10/97
SJS03-SB04-002	SVTCL	N-Nitrosodiphenylamine		400	ug/kg	U	7/10/97
SJS03-SB04-002	SVTCL	Naphthalene		400	ug/kg	U	7/10/97
SJS03-SB04-002	SVTCL	Nitrobenzene		400	ug/kg	U	7/10/97
SJS03-SB04-002	SVTCL	Pentachlorophenol		1000	ug/kg	U	7/10/97
SJS03-SB04-002	SVTCL	Phenanthrene		400	ug/kg	U	7/10/97
SJS03-SB04-002	SVTCL	Phenol		400	ug/kg	U	7/10/97
SJS03-SB04-002	SVTCL	Pyrene	81	400	ug/kg	J	7/10/97
SJS03-SB04-002	VCTCL	1,1,1-Trichloroethane		18	ug/kg	U	7/2/97
SJS03-SB04-002	VCTCL	1,1,2,2-Tetrachloroethane		18	ug/kg	U	7/2/97
SJS03-SB04-002	VCTCL	1,1,2-Trichloroethane		18	ug/kg	U	7/2/97
SJS03-SB04-002	VCTCL	1,1-Dichloroethane		18	ug/kg	U	7/2/97
SJS03-SB04-002	VCTCL	1,1-Dichloroethene		18	ug/kg	U	7/2/97
SJS03-SB04-002	VCTCL	1,2-Dichloroethane		18	ug/kg	U	7/2/97
SJS03-SB04-002	VCTCL	1,2-Dichloroethene (total)		18	ug/kg	U	7/2/97
SJS03-SB04-002	VCTCL	1,2-Dichloropropane		18	ug/kg	U	7/2/97
SJS03-SB04-002	VCTCL	2-Butanone		18	ug/kg	U	7/2/97
SJS03-SB04-002	VCTCL	2-Hexanone		18	ug/kg	U	7/2/97
SJS03-SB04-002	VCTCL	4-Methyl-2-Pentanone		18	ug/kg	U	7/2/97
SJS03-SB04-002	VCTCL	Acetone	44	18	ug/kg	B	7/2/97
SJS03-SB04-002	VCTCL	Benzene		18	ug/kg	U	7/2/97
SJS03-SB04-002	VCTCL	Bromodichloromethane		18	ug/kg	U	7/2/97
SJS03-SB04-002	VCTCL	Bromoform		18	ug/kg	U	7/2/97
SJS03-SB04-002	VCTCL	Bromomethane		18	ug/kg	U	7/2/97
SJS03-SB04-002	VCTCL	Carbon Disulfide		18	ug/kg	U	7/2/97
SJS03-SB04-002	VCTCL	Carbon Tetrachloride		18	ug/kg	U	7/2/97
SJS03-SB04-002	VCTCL	Chlorobenzene		18	ug/kg	U	7/2/97
SJS03-SB04-002	VCTCL	Chloroethane		18	ug/kg	U	7/2/97
SJS03-SB04-002	VCTCL	Chloroform		18	ug/kg	U	7/2/97
SJS03-SB04-002	VCTCL	Chloromethane		18	ug/kg	U	7/2/97
SJS03-SB04-002	VCTCL	cis-1,3-Dichloropropene		18	ug/kg	U	7/2/97
SJS03-SB04-002	VCTCL	Dibromochloromethane		18	ug/kg	U	7/2/97
SJS03-SB04-002	VCTCL	Ethylbenzene		18	ug/kg	U	7/2/97
SJS03-SB04-002	VCTCL	Methylene Chloride	40	18	ug/kg	B	7/2/97
SJS03-SB04-002	VCTCL	Styrene		18	ug/kg	U	7/2/97
SJS03-SB04-002	VCTCL	Tetrachloroethene		18	ug/kg	U	7/2/97
SJS03-SB04-002	VCTCL	Toluene		18	ug/kg	U	7/2/97
SJS03-SB04-002	VCTCL	Total Xylenes		18	ug/kg	U	7/2/97
SJS03-SB04-002	VCTCL	Trans-1,3-Dichloropropene		18	ug/kg	U	7/2/97
SJS03-SB04-002	VCTCL	Trichloroethene		18	ug/kg	U	7/2/97
SJS03-SB04-002	VCTCL	Vinyl Chloride		18	ug/kg	U	7/2/97
SJS03-SB05-002	CTOTP	Total Phosphorous (as P)	8.5	1.5	mg/kg		7/15/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS03-SB05-002	MCYAN	Aluminum	3580	10.29	mg/kg		7/2/97
SJS03-SB05-002	MCYAN	Arsenic		0.7	mg/kg	UL	7/2/97
SJS03-SB05-002	MCYAN	Barium	7.2	0.47	mg/kg	J	7/2/97
SJS03-SB05-002	MCYAN	Beryllium	0.44	0.23	mg/kg	J	7/2/97
SJS03-SB05-002	MCYAN	Cadmium		0.12	mg/kg	U	7/7/97
SJS03-SB05-002	MCYAN	Calcium	683	20.35	mg/kg	J	7/2/97
SJS03-SB05-002	MCYAN	Chromium	3.4	1.64	mg/kg	K	7/2/97
SJS03-SB05-002	MCYAN	Cobalt	3.9	1.87	mg/kg	J	7/2/97
SJS03-SB05-002	MCYAN	Copper	1.7	1.4	mg/kg	B	7/2/97
SJS03-SB05-002	MCYAN	Cyanide		0.59	mg/kg	U	7/2/97
SJS03-SB05-002	MCYAN	Iron	2420	3.98	mg/kg		7/2/97
SJS03-SB05-002	MCYAN	Lead	2.5	0.23	mg/kg	B	7/2/97
SJS03-SB05-002	MCYAN	Magnesium	396	42.34	mg/kg	J	7/2/97
SJS03-SB05-002	MCYAN	Manganese	19.2	0.47	mg/kg		7/2/97
SJS03-SB05-002	MCYAN	Mercury		0.06	mg/kg	U	6/30/97
SJS03-SB05-002	MCYAN	Nickel	4.5	1.64	mg/kg	B	7/2/97
SJS03-SB05-002	MCYAN	Potassium	351	51.94	mg/kg	J	7/2/97
SJS03-SB05-002	MCYAN	Selenium		0.7	mg/kg	UL	7/2/97
SJS03-SB05-002	MCYAN	Silver		0.23	mg/kg	U	7/2/97
SJS03-SB05-002	MCYAN	Sodium	91.2	13.57	mg/kg	B	7/2/97
SJS03-SB05-002	MCYAN	Thallium		0.47	mg/kg	U	7/2/97
SJS03-SB05-002	MCYAN	Vanadium	4.5	2.11	mg/kg	B	7/2/97
SJS03-SB05-002	MCYAN	Zinc	37.4	1.17	mg/kg	L	7/2/97
SJS03-SB05-002	PSPCB	4,4'-DDD		5.2	ug/kg	U	7/16/97
SJS03-SB05-002	PSPCB	4,4'-DDE		5.2	ug/kg	U	7/16/97
SJS03-SB05-002	PSPCB	4,4'-DDT		5.2	ug/kg	U	7/16/97
SJS03-SB05-002	PSPCB	Aldrin		2.7	ug/kg	U	7/16/97
SJS03-SB05-002	PSPCB	alpha-BHC		2.7	ug/kg	U	7/16/97
SJS03-SB05-002	PSPCB	alpha-Chlordane		2.7	ug/kg	U	7/16/97
SJS03-SB05-002	PSPCB	Aroclor-1016		52	ug/kg	U	7/16/97
SJS03-SB05-002	PSPCB	Aroclor-1221		110	ug/kg	U	7/16/97
SJS03-SB05-002	PSPCB	Aroclor-1232		52	ug/kg	U	7/16/97
SJS03-SB05-002	PSPCB	Aroclor-1242		52	ug/kg	U	7/16/97
SJS03-SB05-002	PSPCB	Aroclor-1248		52	ug/kg	U	7/16/97
SJS03-SB05-002	PSPCB	Aroclor-1254		52	ug/kg	U	7/16/97
SJS03-SB05-002	PSPCB	Aroclor-1260		52	ug/kg	U	7/16/97
SJS03-SB05-002	PSPCB	beta-BHC		2.7	ug/kg	U	7/16/97
SJS03-SB05-002	PSPCB	delta-BHC		2.7	ug/kg	U	7/16/97
SJS03-SB05-002	PSPCB	Dieldrin		5.2	ug/kg	U	7/16/97
SJS03-SB05-002	PSPCB	Endosulfan I		2.7	ug/kg	U	7/16/97
SJS03-SB05-002	PSPCB	Endosulfan II		5.2	ug/kg	U	7/16/97
SJS03-SB05-002	PSPCB	Endosulfan Sulfate		5.2	ug/kg	U	7/16/97
SJS03-SB05-002	PSPCB	Endrin		5.2	ug/kg	U	7/16/97
SJS03-SB05-002	PSPCB	Endrin Aldehyde		5.2	ug/kg	U	7/16/97
SJS03-SB05-002	PSPCB	Endrin Ketone		5.2	ug/kg	U	7/16/97
SJS03-SB05-002	PSPCB	gamma-BHC		2.7	ug/kg	U	7/16/97
SJS03-SB05-002	PSPCB	gamma-Chlordane		2.7	ug/kg	U	7/16/97
SJS03-SB05-002	PSPCB	Heptachlor		2.7	ug/kg	U	7/16/97
SJS03-SB05-002	PSPCB	Heptachlor Epoxide		2.7	ug/kg	U	7/16/97
SJS03-SB05-002	PSPCB	Methoxychlor		27	ug/kg	U	7/16/97
SJS03-SB05-002	PSPCB	Toxaphene		270	ug/kg	U	7/16/97
SJS03-SB05-002	SVTCL	1,2,4-Trichlorobenzene		520	ug/kg	U	7/9/97
SJS03-SB05-002	SVTCL	1,2-Dichlorobenzene		520	ug/kg	U	7/9/97
SJS03-SB05-002	SVTCL	1,3-Dichlorobenzene		520	ug/kg	U	7/9/97
SJS03-SB05-002	SVTCL	1,4-Dichlorobenzene		520	ug/kg	U	7/9/97
SJS03-SB05-002	SVTCL	2,2'-oxybis(1-Chloropropane		520	ug/kg	U	7/9/97
SJS03-SB05-002	SVTCL	2,4,5-Trichlorophenol		1300	ug/kg	U	7/9/97
SJS03-SB05-002	SVTCL	2,4,6-Trichlorophenol		520	ug/kg	U	7/9/97
SJS03-SB05-002	SVTCL	2,4-Dichlorophenol		520	ug/kg	U	7/9/97
SJS03-SB05-002	SVTCL	2,4-Dimethylphenol		520	ug/kg	U	7/9/97
SJS03-SB05-002	SVTCL	2,4-Dinitrophenol		1300	ug/kg	U	7/9/97
SJS03-SB05-002	SVTCL	2,4-Dinitrotoluene		520	ug/kg	U	7/9/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS03-SB05-002	SVTCL	2,6-Dinitrotoluene		520	ug/kg	U	7/9/97
SJS03-SB05-002	SVTCL	2-Chloronaphthalene		520	ug/kg	U	7/9/97
SJS03-SB05-002	SVTCL	2-Chlorophenol		520	ug/kg	U	7/9/97
SJS03-SB05-002	SVTCL	2-Methylnaphthalene		520	ug/kg	U	7/9/97
SJS03-SB05-002	SVTCL	2-Methylphenol		520	ug/kg	U	7/9/97
SJS03-SB05-002	SVTCL	2-Nitroaniline		1300	ug/kg	U	7/9/97
SJS03-SB05-002	SVTCL	2-Nitrophenol		520	ug/kg	U	7/9/97
SJS03-SB05-002	SVTCL	3,3'-Dichlorobenzidine		520	ug/kg	U	7/9/97
SJS03-SB05-002	SVTCL	3-Nitroaniline		1300	ug/kg	U	7/9/97
SJS03-SB05-002	SVTCL	4,6-Dinitro-2-Methylphenol		1300	ug/kg	U	7/9/97
SJS03-SB05-002	SVTCL	4-Bromophenyl phenylether		520	ug/kg	U	7/9/97
SJS03-SB05-002	SVTCL	4-Chloro-3-Methylphenol		520	ug/kg	U	7/9/97
SJS03-SB05-002	SVTCL	4-Chloroaniline		520	ug/kg	U	7/9/97
SJS03-SB05-002	SVTCL	4-Chlorophenyl-phenylether		520	ug/kg	U	7/9/97
SJS03-SB05-002	SVTCL	4-Methylphenol		520	ug/kg	U	7/9/97
SJS03-SB05-002	SVTCL	4-Nitroaniline		1300	ug/kg	U	7/9/97
SJS03-SB05-002	SVTCL	4-Nitrophenol		1300	ug/kg	U	7/9/97
SJS03-SB05-002	SVTCL	Acenaphthene		520	ug/kg	U	7/9/97
SJS03-SB05-002	SVTCL	Acenaphthylene	100	520	ug/kg	J	7/9/97
SJS03-SB05-002	SVTCL	Anthracene	120	520	ug/kg	J	7/9/97
SJS03-SB05-002	SVTCL	Benzo(a)Anthracene	640	520	ug/kg		7/9/97
SJS03-SB05-002	SVTCL	Benzo(a)Pyrene	440	520	ug/kg	J	7/9/97
SJS03-SB05-002	SVTCL	Benzo(b)Fluoranthene	1300	520	ug/kg		7/9/97
SJS03-SB05-002	SVTCL	Benzo(g,h,i)Perylene	290	520	ug/kg	J	7/9/97
SJS03-SB05-002	SVTCL	Benzo(k)Fluoranthene	410	520	ug/kg	J	7/9/97
SJS03-SB05-002	SVTCL	Bis(2-chloroethoxy)Methane		520	ug/kg	U	7/9/97
SJS03-SB05-002	SVTCL	Bis(2-chloroethyl)Ether		520	ug/kg	U	7/9/97
SJS03-SB05-002	SVTCL	Bis(2-Ethylhexyl)Phthalate	64	420	ug/kg	B	7/9/97
SJS03-SB05-002	SVTCL	Butylbenzylphthalate		520	ug/kg	U	7/9/97
SJS03-SB05-002	SVTCL	Carbazole		520	ug/kg	U	7/9/97
SJS03-SB05-002	SVTCL	Chrysene	960	520	ug/kg		7/9/97
SJS03-SB05-002	SVTCL	Di-n-Butylphthalate		520	ug/kg	U	7/9/97
SJS03-SB05-002	SVTCL	Di-n-Octyl Phthalate		520	ug/kg	U	7/9/97
SJS03-SB05-002	SVTCL	Dibenz(a,h)Anthracene		520	ug/kg	U	7/9/97
SJS03-SB05-002	SVTCL	Dibenzofuran		520	ug/kg	U	7/9/97
SJS03-SB05-002	SVTCL	Diethylphthalate		520	ug/kg	U	7/9/97
SJS03-SB05-002	SVTCL	Dimethyl Phthalate		520	ug/kg	U	7/9/97
SJS03-SB05-002	SVTCL	Fluoranthene	1100	520	ug/kg		7/9/97
SJS03-SB05-002	SVTCL	Fluorene		520	ug/kg	U	7/9/97
SJS03-SB05-002	SVTCL	Hexachlorobenzene		520	ug/kg	U	7/9/97
SJS03-SB05-002	SVTCL	Hexachlorobutadiene		520	ug/kg	U	7/9/97
SJS03-SB05-002	SVTCL	Hexachlorocyclopentadien		520	ug/kg	U	7/9/97
SJS03-SB05-002	SVTCL	Hexachloroethane		520	ug/kg	U	7/9/97
SJS03-SB05-002	SVTCL	Indeno(1,2,3-cd)Pyrene	360	520	ug/kg	J	7/9/97
SJS03-SB05-002	SVTCL	Isophorone		520	ug/kg	U	7/9/97
SJS03-SB05-002	SVTCL	N-Nitroso-Di-n-Propylamine		520	ug/kg	U	7/9/97
SJS03-SB05-002	SVTCL	N-Nitrosodiphenylamine		520	ug/kg	U	7/9/97
SJS03-SB05-002	SVTCL	Naphthalene	140	520	ug/kg	J	7/9/97
SJS03-SB05-002	SVTCL	Nitrobenzene		520	ug/kg	U	7/9/97
SJS03-SB05-002	SVTCL	Pentachlorophenol		1300	ug/kg	U	7/9/97
SJS03-SB05-002	SVTCL	Phenanthrene	140	520	ug/kg	J	7/9/97
SJS03-SB05-002	SVTCL	Phenol		520	ug/kg	U	7/9/97
SJS03-SB05-002	SVTCL	Pyrene	760	520	ug/kg		7/9/97
SJS03-SB05-002	VCTCL	1,1,1-Trichloroethane		14	ug/kg	U	6/30/97
SJS03-SB05-002	VCTCL	1,1,2,2-Tetrachloroethane		14	ug/kg	U	6/30/97
SJS03-SB05-002	VCTCL	1,1,2-Trichloroethane		14	ug/kg	U	6/30/97
SJS03-SB05-002	VCTCL	1,1-Dichloroethane		14	ug/kg	U	6/30/97
SJS03-SB05-002	VCTCL	1,1-Dichloroethene		14	ug/kg	U	6/30/97
SJS03-SB05-002	VCTCL	1,2-Dichloroethane		14	ug/kg	U	6/30/97
SJS03-SB05-002	VCTCL	1,2-Dichloroethene (total)		14	ug/kg	U	6/30/97
SJS03-SB05-002	VCTCL	1,2-Dichloropropane		14	ug/kg	U	6/30/97
SJS03-SB05-002	VCTCL	2-Butanone		14	ug/kg	U	6/30/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS03-SB05-002	VCTCL	2-Hexanone		14	ug/kg	U	6/30/97
SJS03-SB05-002	VCTCL	4-Methyl-2-Pentanone		14	ug/kg	U	6/30/97
SJS03-SB05-002	VCTCL	Acetone	52	14	ug/kg	B	6/30/97
SJS03-SB05-002	VCTCL	Benzene		14	ug/kg	U	6/30/97
SJS03-SB05-002	VCTCL	Bromodichloromethane		14	ug/kg	U	6/30/97
SJS03-SB05-002	VCTCL	Bromoform		14	ug/kg	U	6/30/97
SJS03-SB05-002	VCTCL	Bromomethane		14	ug/kg	U	6/30/97
SJS03-SB05-002	VCTCL	Carbon Disulfide		14	ug/kg	U	6/30/97
SJS03-SB05-002	VCTCL	Carbon Tetrachloride		14	ug/kg	U	6/30/97
SJS03-SB05-002	VCTCL	Chlorobenzene		14	ug/kg	U	6/30/97
SJS03-SB05-002	VCTCL	Chloroethane		14	ug/kg	U	6/30/97
SJS03-SB05-002	VCTCL	Chloroform		14	ug/kg	U	6/30/97
SJS03-SB05-002	VCTCL	Chloromethane		14	ug/kg	U	6/30/97
SJS03-SB05-002	VCTCL	cis-1,3-Dichloropropene		14	ug/kg	U	6/30/97
SJS03-SB05-002	VCTCL	Dibromochloromethane		14	ug/kg	U	6/30/97
SJS03-SB05-002	VCTCL	Ethylbenzene		14	ug/kg	U	6/30/97
SJS03-SB05-002	VCTCL	Methylene Chloride	24	14	ug/kg	B	6/30/97
SJS03-SB05-002	VCTCL	Styrene		14	ug/kg	U	6/30/97
SJS03-SB05-002	VCTCL	Tetrachloroethene		14	ug/kg	U	6/30/97
SJS03-SB05-002	VCTCL	Toluene		14	ug/kg	U	6/30/97
SJS03-SB05-002	VCTCL	Total Xylenes		14	ug/kg	U	6/30/97
SJS03-SB05-002	VCTCL	Trans-1,3-Dichloropropene		14	ug/kg	U	6/30/97
SJS03-SB05-002	VCTCL	Trichloroethene		14	ug/kg	U	6/30/97
SJS03-SB05-002	VCTCL	Vinyl Chloride		14	ug/kg	U	6/30/97
SJS03-SB05-002P	CTOTP	Total Phosphorous (as P)	4.6	1.9	mg/kg		7/15/97
SJS03-SB05-002P	MCYAN	Aluminum	5370	12.31	mg/kg		7/2/97
SJS03-SB05-002P	MCYAN	Arsenic	1.6	0.84	mg/kg	L	7/2/97
SJS03-SB05-002P	MCYAN	Barium	13.3	0.56	mg/kg	J	7/2/97
SJS03-SB05-002P	MCYAN	Beryllium		0.28	mg/kg	U	7/2/97
SJS03-SB05-002P	MCYAN	Cadmium	0.2	0.14	mg/kg	J	7/7/97
SJS03-SB05-002P	MCYAN	Calcium	371	24.34	mg/kg	J	7/2/97
SJS03-SB05-002P	MCYAN	Chromium	8.9	1.96	mg/kg		7/2/97
SJS03-SB05-002P	MCYAN	Cobalt	6.2	2.24	mg/kg	J	7/2/97
SJS03-SB05-002P	MCYAN	Copper	13.8	1.68	mg/kg	B	7/2/97
SJS03-SB05-002P	MCYAN	Cyanide		0.77	mg/kg	U	7/2/97
SJS03-SB05-002P	MCYAN	Iron	4140	4.76	mg/kg		7/2/97
SJS03-SB05-002P	MCYAN	Lead	17.9	0.28	mg/kg	J	7/2/97
SJS03-SB05-002P	MCYAN	Magnesium	840	50.64	mg/kg	J	7/2/97
SJS03-SB05-002P	MCYAN	Manganese	33.8	0.56	mg/kg		7/2/97
SJS03-SB05-002P	MCYAN	Mercury	0.18	0.07	mg/kg		6/30/97
SJS03-SB05-002P	MCYAN	Nickel	8.2	1.96	mg/kg	B	7/2/97
SJS03-SB05-002P	MCYAN	Potassium	647	62.11	mg/kg	J	7/2/97
SJS03-SB05-002P	MCYAN	Selenium		0.84	mg/kg	UL	7/2/97
SJS03-SB05-002P	MCYAN	Silver		0.28	mg/kg	U	7/2/97
SJS03-SB05-002P	MCYAN	Sodium	102	16.23	mg/kg	B	7/2/97
SJS03-SB05-002P	MCYAN	Thallium		0.56	mg/kg	U	7/2/97
SJS03-SB05-002P	MCYAN	Vanadium	9.1	2.52	mg/kg	B	7/2/97
SJS03-SB05-002P	MCYAN	Zinc	104	1.4	mg/kg	L	7/2/97
SJS03-SB05-002P	PSPCB	4,4'-DDD		4.7	ug/kg	U	7/16/97
SJS03-SB05-002P	PSPCB	4,4'-DDE		4.7	ug/kg	U	7/16/97
SJS03-SB05-002P	PSPCB	4,4'-DDT		4.7	ug/kg	U	7/16/97
SJS03-SB05-002P	PSPCB	Aldrin		2.4	ug/kg	U	7/16/97
SJS03-SB05-002P	PSPCB	alpha-BHC		2.4	ug/kg	U	7/16/97
SJS03-SB05-002P	PSPCB	alpha-Chlordane		2.4	ug/kg	U	7/16/97
SJS03-SB05-002P	PSPCB	Aroclor-1016		47	ug/kg	U	7/16/97
SJS03-SB05-002P	PSPCB	Aroclor-1221		96	ug/kg	U	7/16/97
SJS03-SB05-002P	PSPCB	Aroclor-1232		47	ug/kg	U	7/16/97
SJS03-SB05-002P	PSPCB	Aroclor-1242		47	ug/kg	U	7/16/97
SJS03-SB05-002P	PSPCB	Aroclor-1248		47	ug/kg	U	7/16/97
SJS03-SB05-002P	PSPCB	Aroclor-1254		47	ug/kg	U	7/16/97
SJS03-SB05-002P	PSPCB	Aroclor-1260		47	ug/kg	U	7/16/97
SJS03-SB05-002P	PSPCB	beta-BHC		2.4	ug/kg	U	7/16/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS03-SB05-002P	PSPCB	delta-BHC		2.4	ug/kg	U	7/16/97
SJS03-SB05-002P	PSPCB	Dieldrin		4.7	ug/kg	U	7/16/97
SJS03-SB05-002P	PSPCB	Endosulfan I		2.4	ug/kg	U	7/16/97
SJS03-SB05-002P	PSPCB	Endosulfan II		4.7	ug/kg	U	7/16/97
SJS03-SB05-002P	PSPCB	Endosulfan Sulfate		4.7	ug/kg	U	7/16/97
SJS03-SB05-002P	PSPCB	Endrin		4.7	ug/kg	U	7/16/97
SJS03-SB05-002P	PSPCB	Endrin Aldehyde		4.7	ug/kg	U	7/16/97
SJS03-SB05-002P	PSPCB	Endrin Ketone		4.7	ug/kg	U	7/16/97
SJS03-SB05-002P	PSPCB	gamma-BHC		2.4	ug/kg	U	7/16/97
SJS03-SB05-002P	PSPCB	gamma-Chlordane		2.4	ug/kg	U	7/16/97
SJS03-SB05-002P	PSPCB	Heptachlor		2.4	ug/kg	U	7/16/97
SJS03-SB05-002P	PSPCB	Heptachlor Epoxide		2.4	ug/kg	U	7/16/97
SJS03-SB05-002P	PSPCB	Methoxychlor		24	ug/kg	U	7/16/97
SJS03-SB05-002P	PSPCB	Toxaphene		240	ug/kg	U	7/16/97
SJS03-SB05-002P	SVTCL	1,2,4-Trichlorobenzene		470	ug/kg	U	7/9/97
SJS03-SB05-002P	SVTCL	1,2-Dichlorobenzene		470	ug/kg	U	7/9/97
SJS03-SB05-002P	SVTCL	1,3-Dichlorobenzene		470	ug/kg	U	7/9/97
SJS03-SB05-002P	SVTCL	1,4-Dichlorobenzene		470	ug/kg	U	7/9/97
SJS03-SB05-002P	SVTCL	2,2'-oxybis(1-Chloropropane		470	ug/kg	U	7/9/97
SJS03-SB05-002P	SVTCL	2,4,5-Trichlorophenol		1200	ug/kg	U	7/9/97
SJS03-SB05-002P	SVTCL	2,4,6-Trichlorophenol		470	ug/kg	U	7/9/97
SJS03-SB05-002P	SVTCL	2,4-Dichlorophenol		470	ug/kg	U	7/9/97
SJS03-SB05-002P	SVTCL	2,4-Dimethylphenol		470	ug/kg	U	7/9/97
SJS03-SB05-002P	SVTCL	2,4-Dinitrophenol		1200	ug/kg	U	7/9/97
SJS03-SB05-002P	SVTCL	2,4-Dinitrotoluene		470	ug/kg	U	7/9/97
SJS03-SB05-002P	SVTCL	2,6-Dinitrotoluene		470	ug/kg	U	7/9/97
SJS03-SB05-002P	SVTCL	2-Chloronaphthalene		470	ug/kg	U	7/9/97
SJS03-SB05-002P	SVTCL	2-Chlorophenol		470	ug/kg	U	7/9/97
SJS03-SB05-002P	SVTCL	2-Methylnaphthalene		470	ug/kg	U	7/9/97
SJS03-SB05-002P	SVTCL	2-Methylphenol		470	ug/kg	U	7/9/97
SJS03-SB05-002P	SVTCL	2-Nitroaniline		1200	ug/kg	U	7/9/97
SJS03-SB05-002P	SVTCL	2-Nitrophenol		470	ug/kg	U	7/9/97
SJS03-SB05-002P	SVTCL	3,3'-Dichlorobenzidine		470	ug/kg	U	7/9/97
SJS03-SB05-002P	SVTCL	3-Nitroaniline		1200	ug/kg	U	7/9/97
SJS03-SB05-002P	SVTCL	4,6-Dinitro-2-Methylphenol		1200	ug/kg	U	7/9/97
SJS03-SB05-002P	SVTCL	4-Bromophenyl phenylether		470	ug/kg	U	7/9/97
SJS03-SB05-002P	SVTCL	4-Chloro-3-Methylphenol		470	ug/kg	U	7/9/97
SJS03-SB05-002P	SVTCL	4-Chloroaniline		470	ug/kg	U	7/9/97
SJS03-SB05-002P	SVTCL	4-Chlorophenyl-phenylether		470	ug/kg	U	7/9/97
SJS03-SB05-002P	SVTCL	4-Methylphenol		470	ug/kg	U	7/9/97
SJS03-SB05-002P	SVTCL	4-Nitroaniline		1200	ug/kg	U	7/9/97
SJS03-SB05-002P	SVTCL	4-Nitrophenol		1200	ug/kg	U	7/9/97
SJS03-SB05-002P	SVTCL	Acenaphthene	49	470	ug/kg	J	7/9/97
SJS03-SB05-002P	SVTCL	Acenaphthylene	84	470	ug/kg	J	7/9/97
SJS03-SB05-002P	SVTCL	Anthracene	170	470	ug/kg	J	7/9/97
SJS03-SB05-002P	SVTCL	Benzo(a)Anthracene	700	470	ug/kg		7/9/97
SJS03-SB05-002P	SVTCL	Benzo(a)Pyrene	560	470	ug/kg		7/9/97
SJS03-SB05-002P	SVTCL	Benzo(b)Fluoranthene	1200	470	ug/kg		7/9/97
SJS03-SB05-002P	SVTCL	Benzo(g,h,i)Perylene	300	470	ug/kg	J	7/9/97
SJS03-SB05-002P	SVTCL	Benzo(k)Fluoranthene	410	470	ug/kg	J	7/9/97
SJS03-SB05-002P	SVTCL	Bis(2-chloroethoxy)Methane		470	ug/kg	U	7/9/97
SJS03-SB05-002P	SVTCL	Bis(2-chloroethyl)Ether		470	ug/kg	U	7/9/97
SJS03-SB05-002P	SVTCL	Bis(2-Ethylhexyl)Phthalate	94	360	ug/kg	B	7/9/97
SJS03-SB05-002P	SVTCL	Butylbenzylphthalate		470	ug/kg	U	7/9/97
SJS03-SB05-002P	SVTCL	Carbazole		470	ug/kg	U	7/9/97
SJS03-SB05-002P	SVTCL	Chrysene	660	470	ug/kg		7/9/97
SJS03-SB05-002P	SVTCL	Di-n-Butylphthalate		470	ug/kg	U	7/9/97
SJS03-SB05-002P	SVTCL	Di-n-Octyl Phthalate		470	ug/kg	U	7/9/97
SJS03-SB05-002P	SVTCL	Dibenz(a,h)Anthracene		470	ug/kg	U	7/9/97
SJS03-SB05-002P	SVTCL	Dibenzofuran	60	470	ug/kg	J	7/9/97
SJS03-SB05-002P	SVTCL	Diethylphthalate		470	ug/kg	U	7/9/97
SJS03-SB05-002P	SVTCL	Dimethyl Phthalate		470	ug/kg	U	7/9/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS03-SB05-002P	SVTCL	Fluoranthene	1100	470	ug/kg		7/9/97
SJS03-SB05-002P	SVTCL	Fluorene	51	470	ug/kg	J	7/9/97
SJS03-SB05-002P	SVTCL	Hexachlorobenzene		470	ug/kg	U	7/9/97
SJS03-SB05-002P	SVTCL	Hexachlorobutadiene		470	ug/kg	U	7/9/97
SJS03-SB05-002P	SVTCL	Hexachlorocyclopentadien		470	ug/kg	U	7/9/97
SJS03-SB05-002P	SVTCL	Hexachloroethane		470	ug/kg	U	7/9/97
SJS03-SB05-002P	SVTCL	Indeno(1,2,3-cd)Pyrene	320	470	ug/kg	J	7/9/97
SJS03-SB05-002P	SVTCL	Isophorone		470	ug/kg	U	7/9/97
SJS03-SB05-002P	SVTCL	N-Nitroso-Di-n-Propylamine		470	ug/kg	U	7/9/97
SJS03-SB05-002P	SVTCL	N-Nitrosodiphenylamine		470	ug/kg	U	7/9/97
SJS03-SB05-002P	SVTCL	Naphthalene	160	470	ug/kg	J	7/9/97
SJS03-SB05-002P	SVTCL	Nitrobenzene		470	ug/kg	U	7/9/97
SJS03-SB05-002P	SVTCL	Pentachlorophenol		1200	ug/kg	U	7/9/97
SJS03-SB05-002P	SVTCL	Phenanthrene	250	470	ug/kg	J	7/9/97
SJS03-SB05-002P	SVTCL	Phenol		470	ug/kg	U	7/9/97
SJS03-SB05-002P	SVTCL	Pyrene	990	470	ug/kg		7/9/97
SJS03-SB05-002P	VCTCL	1,1,1-Trichloroethane		15	ug/kg	U	6/30/97
SJS03-SB05-002P	VCTCL	1,1,2,2-Tetrachloroethane		15	ug/kg	U	6/30/97
SJS03-SB05-002P	VCTCL	1,1,2-Trichloroethane		15	ug/kg	U	6/30/97
SJS03-SB05-002P	VCTCL	1,1-Dichloroethane		15	ug/kg	U	6/30/97
SJS03-SB05-002P	VCTCL	1,1-Dichloroethene		15	ug/kg	U	6/30/97
SJS03-SB05-002P	VCTCL	1,2-Dichloroethane		15	ug/kg	U	6/30/97
SJS03-SB05-002P	VCTCL	1,2-Dichloroethene (total)		15	ug/kg	U	6/30/97
SJS03-SB05-002P	VCTCL	1,2-Dichloropropane		15	ug/kg	U	6/30/97
SJS03-SB05-002P	VCTCL	2-Butanone	19	15	ug/kg	J	6/30/97
SJS03-SB05-002P	VCTCL	2-Hexanone		15	ug/kg	U	6/30/97
SJS03-SB05-002P	VCTCL	4-Methyl-2-Pentanone		15	ug/kg	U	6/30/97
SJS03-SB05-002P	VCTCL	Acetone	130	15	ug/kg	B	6/30/97
SJS03-SB05-002P	VCTCL	Benzene		15	ug/kg	U	6/30/97
SJS03-SB05-002P	VCTCL	Bromodichloromethane		15	ug/kg	U	6/30/97
SJS03-SB05-002P	VCTCL	Bromoform		15	ug/kg	U	6/30/97
SJS03-SB05-002P	VCTCL	Bromomethane		15	ug/kg	U	6/30/97
SJS03-SB05-002P	VCTCL	Carbon Disulfide		15	ug/kg	U	6/30/97
SJS03-SB05-002P	VCTCL	Carbon Tetrachloride		15	ug/kg	U	6/30/97
SJS03-SB05-002P	VCTCL	Chlorobenzene		15	ug/kg	U	6/30/97
SJS03-SB05-002P	VCTCL	Chloroethane		15	ug/kg	U	6/30/97
SJS03-SB05-002P	VCTCL	Chloroform		15	ug/kg	U	6/30/97
SJS03-SB05-002P	VCTCL	Chloromethane		15	ug/kg	U	6/30/97
SJS03-SB05-002P	VCTCL	cis-1,3-Dichloropropene		15	ug/kg	U	6/30/97
SJS03-SB05-002P	VCTCL	Dibromochloromethane		15	ug/kg	U	6/30/97
SJS03-SB05-002P	VCTCL	Ethylbenzene		15	ug/kg	U	6/30/97
SJS03-SB05-002P	VCTCL	Methylene Chloride	31	15	ug/kg	B	6/30/97
SJS03-SB05-002P	VCTCL	Styrene		15	ug/kg	U	6/30/97
SJS03-SB05-002P	VCTCL	Tetrachloroethene		15	ug/kg	U	6/30/97
SJS03-SB05-002P	VCTCL	Toluene	2	15	ug/kg	J	6/30/97
SJS03-SB05-002P	VCTCL	Total Xylenes		15	ug/kg	U	6/30/97
SJS03-SB05-002P	VCTCL	Trans-1,3-Dichloropropene		15	ug/kg	U	6/30/97
SJS03-SB05-002P	VCTCL	Trichloroethene		15	ug/kg	U	6/30/97
SJS03-SB05-002P	VCTCL	Vinyl Chloride		15	ug/kg	U	6/30/97
SJS03-SB06-000	CTOTP	Total Phosphorous (as P)	9.6	1.7	mg/kg		7/15/97
SJS03-SB06-000	MCYAN	Aluminum	17100	11.47	mg/kg		7/2/97
SJS03-SB06-000	MCYAN	Arsenic	12.3	0.78	mg/kg	L	7/2/97
SJS03-SB06-000	MCYAN	Barium	67.7	0.52	mg/kg		7/2/97
SJS03-SB06-000	MCYAN	Beryllium	0.48	0.26	mg/kg	J	7/2/97
SJS03-SB06-000	MCYAN	Cadmium		0.13	mg/kg	U	7/7/97
SJS03-SB06-000	MCYAN	Calcium	1030	22.67	mg/kg	J	7/2/97
SJS03-SB06-000	MCYAN	Chromium	34.4	1.82	mg/kg		7/2/97
SJS03-SB06-000	MCYAN	Cobalt	6	2.08	mg/kg	J	7/2/97
SJS03-SB06-000	MCYAN	Copper	43.5	1.56	mg/kg		7/2/97
SJS03-SB06-000	MCYAN	Cyanide		0.67	mg/kg	U	7/2/97
SJS03-SB06-000	MCYAN	Iron	34300	4.43	mg/kg		7/2/97
SJS03-SB06-000	MCYAN	Lead	77.9	0.26	mg/kg	J	7/2/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS03-SB06-000	MCYAN	Magnesium	3250	47.17	mg/kg		7/2/97
SJS03-SB06-000	MCYAN	Manganese	114	0.52	mg/kg		7/2/97
SJS03-SB06-000	MCYAN	Mercury	0.88	0.07	mg/kg		6/30/97
SJS03-SB06-000	MCYAN	Nickel	10.5	1.82	mg/kg	B	7/2/97
SJS03-SB06-000	MCYAN	Potassium	2900	57.85	mg/kg		7/2/97
SJS03-SB06-000	MCYAN	Selenium		0.78	mg/kg	UL	7/2/97
SJS03-SB06-000	MCYAN	Silver	1	0.26	mg/kg	B	7/2/97
SJS03-SB06-000	MCYAN	Sodium	445	15.12	mg/kg	B	7/2/97
SJS03-SB06-000	MCYAN	Thallium	2.8	0.52	mg/kg		7/2/97
SJS03-SB06-000	MCYAN	Vanadium	40.9	2.35	mg/kg		7/2/97
SJS03-SB06-000	MCYAN	Zinc	83.9	1.3	mg/kg	L	7/2/97
SJS03-SB06-000	PSPCB	4,4'-DDD		4.8	ug/kg	U	7/16/97
SJS03-SB06-000	PSPCB	4,4'-DDE		4.8	ug/kg	U	7/16/97
SJS03-SB06-000	PSPCB	4,4'-DDT		4.8	ug/kg	U	7/16/97
SJS03-SB06-000	PSPCB	Aldrin		2.5	ug/kg	U	7/16/97
SJS03-SB06-000	PSPCB	alpha-BHC		2.5	ug/kg	U	7/16/97
SJS03-SB06-000	PSPCB	alpha-Chlordane		2.5	ug/kg	U	7/16/97
SJS03-SB06-000	PSPCB	Aroclor-1016		48	ug/kg	U	7/16/97
SJS03-SB06-000	PSPCB	Aroclor-1221		98	ug/kg	U	7/16/97
SJS03-SB06-000	PSPCB	Aroclor-1232		48	ug/kg	U	7/16/97
SJS03-SB06-000	PSPCB	Aroclor-1242		48	ug/kg	U	7/16/97
SJS03-SB06-000	PSPCB	Aroclor-1248		48	ug/kg	U	7/16/97
SJS03-SB06-000	PSPCB	Aroclor-1254		48	ug/kg	U	7/16/97
SJS03-SB06-000	PSPCB	Aroclor-1260		48	ug/kg	U	7/16/97
SJS03-SB06-000	PSPCB	beta-BHC		2.5	ug/kg	U	7/16/97
SJS03-SB06-000	PSPCB	delta-BHC		2.5	ug/kg	U	7/16/97
SJS03-SB06-000	PSPCB	Dieldrin		4.8	ug/kg	U	7/16/97
SJS03-SB06-000	PSPCB	Endosulfan I		2.5	ug/kg	U	7/16/97
SJS03-SB06-000	PSPCB	Endosulfan II		4.8	ug/kg	U	7/16/97
SJS03-SB06-000	PSPCB	Endosulfan Sulfate		4.8	ug/kg	U	7/16/97
SJS03-SB06-000	PSPCB	Endrin		4.8	ug/kg	U	7/16/97
SJS03-SB06-000	PSPCB	Endrin Aldehyde		4.8	ug/kg	U	7/16/97
SJS03-SB06-000	PSPCB	Endrin Ketone		4.8	ug/kg	U	7/16/97
SJS03-SB06-000	PSPCB	gamma-BHC		2.5	ug/kg	U	7/16/97
SJS03-SB06-000	PSPCB	gamma-Chlordane		2.5	ug/kg	U	7/16/97
SJS03-SB06-000	PSPCB	Heptachlor		2.5	ug/kg	U	7/16/97
SJS03-SB06-000	PSPCB	Heptachlor Epoxide		2.5	ug/kg	U	7/16/97
SJS03-SB06-000	PSPCB	Methoxychlor		25	ug/kg	U	7/16/97
SJS03-SB06-000	PSPCB	Toxaphene		250	ug/kg	U	7/16/97
SJS03-SB06-000	SVTCL	1,2,4-Trichlorobenzene		480	ug/kg	U	7/9/97
SJS03-SB06-000	SVTCL	1,2-Dichlorobenzene		480	ug/kg	U	7/9/97
SJS03-SB06-000	SVTCL	1,3-Dichlorobenzene		480	ug/kg	U	7/9/97
SJS03-SB06-000	SVTCL	1,4-Dichlorobenzene		480	ug/kg	U	7/9/97
SJS03-SB06-000	SVTCL	2,2'-oxybis(1-Chloropropane		480	ug/kg	U	7/9/97
SJS03-SB06-000	SVTCL	2,4,5-Trichlorophenol		1200	ug/kg	U	7/9/97
SJS03-SB06-000	SVTCL	2,4,6-Trichlorophenol		480	ug/kg	U	7/9/97
SJS03-SB06-000	SVTCL	2,4-Dichlorophenol		480	ug/kg	U	7/9/97
SJS03-SB06-000	SVTCL	2,4-Dimethylphenol		480	ug/kg	U	7/9/97
SJS03-SB06-000	SVTCL	2,4-Dinitrophenol		1200	ug/kg	U	7/9/97
SJS03-SB06-000	SVTCL	2,4-Dinitrotoluene		480	ug/kg	U	7/9/97
SJS03-SB06-000	SVTCL	2,6-Dinitrotoluene		480	ug/kg	U	7/9/97
SJS03-SB06-000	SVTCL	2-Chloronaphthalene		480	ug/kg	U	7/9/97
SJS03-SB06-000	SVTCL	2-Chlorophenol		480	ug/kg	U	7/9/97
SJS03-SB06-000	SVTCL	2-Methylnaphthalene		480	ug/kg	U	7/9/97
SJS03-SB06-000	SVTCL	2-Methylphenol		480	ug/kg	U	7/9/97
SJS03-SB06-000	SVTCL	2-Nitroaniline		1200	ug/kg	U	7/9/97
SJS03-SB06-000	SVTCL	2-Nitrophenol		480	ug/kg	U	7/9/97
SJS03-SB06-000	SVTCL	3,3'-Dichlorobenzidine		480	ug/kg	U	7/9/97
SJS03-SB06-000	SVTCL	3-Nitroaniline		1200	ug/kg	U	7/9/97
SJS03-SB06-000	SVTCL	4,6-Dinitro-2-Methylphenol		1200	ug/kg	U	7/9/97
SJS03-SB06-000	SVTCL	4-Bromophenyl phenylether		480	ug/kg	U	7/9/97
SJS03-SB06-000	SVTCL	4-Chloro-3-Methylphenol		480	ug/kg	U	7/9/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS03-SB06-000	SVTCL	4-Chloroaniline		480	ug/kg	U	7/9/97
SJS03-SB06-000	SVTCL	4-Chlorophenyl-phenylether		480	ug/kg	U	7/9/97
SJS03-SB06-000	SVTCL	4-Methylphenol		480	ug/kg	U	7/9/97
SJS03-SB06-000	SVTCL	4-Nitroaniline		1200	ug/kg	U	7/9/97
SJS03-SB06-000	SVTCL	4-Nitrophenol		1200	ug/kg	U	7/9/97
SJS03-SB06-000	SVTCL	Acenaphthene		480	ug/kg	U	7/9/97
SJS03-SB06-000	SVTCL	Acenaphthylene		480	ug/kg	U	7/9/97
SJS03-SB06-000	SVTCL	Anthracene	65	480	ug/kg	J	7/9/97
SJS03-SB06-000	SVTCL	Benzo(a)Anthracene	190	480	ug/kg	J	7/9/97
SJS03-SB06-000	SVTCL	Benzo(a)Pyrene	200	480	ug/kg	J	7/9/97
SJS03-SB06-000	SVTCL	Benzo(b)Fluoranthene	540	480	ug/kg		7/9/97
SJS03-SB06-000	SVTCL	Benzo(g,h,i)Perylene	140	480	ug/kg	J	7/9/97
SJS03-SB06-000	SVTCL	Benzo(k)Fluoranthene	200	480	ug/kg	J	7/9/97
SJS03-SB06-000	SVTCL	Bis(2-chloroethoxy)Methane		480	ug/kg	U	7/9/97
SJS03-SB06-000	SVTCL	Bis(2-chloroethyl)Ether		480	ug/kg	U	7/9/97
SJS03-SB06-000	SVTCL	Bis(2-Ethylhexyl)Phthalate		480	ug/kg	U	7/9/97
SJS03-SB06-000	SVTCL	Butylbenzylphthalate		480	ug/kg	U	7/9/97
SJS03-SB06-000	SVTCL	Carbazole		480	ug/kg	U	7/9/97
SJS03-SB06-000	SVTCL	Chrysene	370	480	ug/kg	J	7/9/97
SJS03-SB06-000	SVTCL	Di-n-Butylphthalate		480	ug/kg	U	7/9/97
SJS03-SB06-000	SVTCL	Di-n-Octyl Phthalate		480	ug/kg	U	7/9/97
SJS03-SB06-000	SVTCL	Dibenz(a,h)Anthracene		480	ug/kg	U	7/9/97
SJS03-SB06-000	SVTCL	Dibenzofuran		480	ug/kg	U	7/9/97
SJS03-SB06-000	SVTCL	Diethylphthalate		480	ug/kg	U	7/9/97
SJS03-SB06-000	SVTCL	Dimethyl Phthalate		480	ug/kg	U	7/9/97
SJS03-SB06-000	SVTCL	Fluoranthene	250	480	ug/kg	J	7/9/97
SJS03-SB06-000	SVTCL	Fluorene		480	ug/kg	U	7/9/97
SJS03-SB06-000	SVTCL	Hexachlorobenzene		480	ug/kg	U	7/9/97
SJS03-SB06-000	SVTCL	Hexachlorobutadiene		480	ug/kg	U	7/9/97
SJS03-SB06-000	SVTCL	Hexachlorocyclopentadien		480	ug/kg	U	7/9/97
SJS03-SB06-000	SVTCL	Hexachloroethane		480	ug/kg	U	7/9/97
SJS03-SB06-000	SVTCL	Indeno(1,2,3-cd)Pyrene	180	480	ug/kg	J	7/9/97
SJS03-SB06-000	SVTCL	Isophorone		480	ug/kg	U	7/9/97
SJS03-SB06-000	SVTCL	N-Nitroso-Di-n-Propylamine		480	ug/kg	U	7/9/97
SJS03-SB06-000	SVTCL	N-Nitrosodiphenylamine		480	ug/kg	U	7/9/97
SJS03-SB06-000	SVTCL	Naphthalene	60	480	ug/kg	J	7/9/97
SJS03-SB06-000	SVTCL	Nitrobenzene		480	ug/kg	U	7/9/97
SJS03-SB06-000	SVTCL	Pentachlorophenol		1200	ug/kg	U	7/9/97
SJS03-SB06-000	SVTCL	Phenanthrene	97	480	ug/kg	J	7/9/97
SJS03-SB06-000	SVTCL	Phenol		480	ug/kg	U	7/9/97
SJS03-SB06-000	SVTCL	Pyrene	210	480	ug/kg	J	7/9/97
SJS03-SB06-000	VCTCL	1,1,1-Trichloroethane		13	ug/kg	U	7/1/97
SJS03-SB06-000	VCTCL	1,1,2,2-Tetrachloroethane		13	ug/kg	U	7/1/97
SJS03-SB06-000	VCTCL	1,1,2-Trichloroethane		13	ug/kg	U	7/1/97
SJS03-SB06-000	VCTCL	1,1-Dichloroethane		13	ug/kg	U	7/1/97
SJS03-SB06-000	VCTCL	1,1-Dichloroethene		13	ug/kg	U	7/1/97
SJS03-SB06-000	VCTCL	1,2-Dichloroethane		13	ug/kg	U	7/1/97
SJS03-SB06-000	VCTCL	1,2-Dichloroethene (total)		13	ug/kg	U	7/1/97
SJS03-SB06-000	VCTCL	1,2-Dichloropropane		13	ug/kg	U	7/1/97
SJS03-SB06-000	VCTCL	2-Butanone		13	ug/kg	U	7/1/97
SJS03-SB06-000	VCTCL	2-Hexanone		13	ug/kg	U	7/1/97
SJS03-SB06-000	VCTCL	4-Methyl-2-Pentanone		13	ug/kg	U	7/1/97
SJS03-SB06-000	VCTCL	Acetone	120	13	ug/kg	B	7/1/97
SJS03-SB06-000	VCTCL	Benzene		13	ug/kg	U	7/1/97
SJS03-SB06-000	VCTCL	Bromodichloromethane		13	ug/kg	U	7/1/97
SJS03-SB06-000	VCTCL	Bromoform		13	ug/kg	U	7/1/97
SJS03-SB06-000	VCTCL	Bromomethane		13	ug/kg	U	7/1/97
SJS03-SB06-000	VCTCL	Carbon Disulfide		13	ug/kg	U	7/1/97
SJS03-SB06-000	VCTCL	Carbon Tetrachloride		13	ug/kg	U	7/1/97
SJS03-SB06-000	VCTCL	Chlorobenzene		13	ug/kg	U	7/1/97
SJS03-SB06-000	VCTCL	Chloroethane		13	ug/kg	U	7/1/97
SJS03-SB06-000	VCTCL	Chloroform		13	ug/kg	U	7/1/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS03-SB06-000	VCTCL	Chloromethane		13	ug/kg	U	7/1/97
SJS03-SB06-000	VCTCL	cis-1,3-Dichloropropene		13	ug/kg	U	7/1/97
SJS03-SB06-000	VCTCL	Dibromochloromethane		13	ug/kg	U	7/1/97
SJS03-SB06-000	VCTCL	Ethylbenzene		13	ug/kg	U	7/1/97
SJS03-SB06-000	VCTCL	Methylene Chloride	170	13	ug/kg	B	7/1/97
SJS03-SB06-000	VCTCL	Styrene		13	ug/kg	U	7/1/97
SJS03-SB06-000	VCTCL	Tetrachloroethene	3	13	ug/kg	J	7/1/97
SJS03-SB06-000	VCTCL	Toluene	3	13	ug/kg	J	7/1/97
SJS03-SB06-000	VCTCL	Total Xylenes		13	ug/kg	U	7/1/97
SJS03-SB06-000	VCTCL	Trans-1,3-Dichloropropene		13	ug/kg	U	7/1/97
SJS03-SB06-000	VCTCL	Trichloroethene		13	ug/kg	U	7/1/97
SJS03-SB06-000	VCTCL	Vinyl Chloride		13	ug/kg	U	7/1/97
SJS03-SB07-000	CTOTP	Total Phosphorous (as P)	3.4	1.8	mg/kg		7/15/97
SJS03-SB07-000	MCYAN	Aluminum	8190	11.97	mg/kg		7/2/97
SJS03-SB07-000	MCYAN	Arsenic	7.8	0.82	mg/kg	L	7/2/97
SJS03-SB07-000	MCYAN	Barium	29.2	0.54	mg/kg	J	7/2/97
SJS03-SB07-000	MCYAN	Beryllium	0.51	0.27	mg/kg	J	7/2/97
SJS03-SB07-000	MCYAN	Cadmium		0.14	mg/kg	U	7/7/97
SJS03-SB07-000	MCYAN	Calcium	6720	23.67	mg/kg		7/2/97
SJS03-SB07-000	MCYAN	Chromium	15.9	1.9	mg/kg		7/2/97
SJS03-SB07-000	MCYAN	Cobalt	7.7	2.18	mg/kg	J	7/2/97
SJS03-SB07-000	MCYAN	Copper	12.7	1.63	mg/kg	B	7/2/97
SJS03-SB07-000	MCYAN	Cyanide		0.7	mg/kg	U	7/2/97
SJS03-SB07-000	MCYAN	Iron	16900	4.63	mg/kg		7/2/97
SJS03-SB07-000	MCYAN	Lead	69.9	0.27	mg/kg	J	7/2/97
SJS03-SB07-000	MCYAN	Magnesium	2500	49.25	mg/kg		7/2/97
SJS03-SB07-000	MCYAN	Manganese	133	0.54	mg/kg		7/2/97
SJS03-SB07-000	MCYAN	Mercury		0.07	mg/kg	U	6/30/97
SJS03-SB07-000	MCYAN	Nickel	9	1.9	mg/kg	B	7/2/97
SJS03-SB07-000	MCYAN	Potassium	1430	60.41	mg/kg		7/2/97
SJS03-SB07-000	MCYAN	Selenium		0.82	mg/kg	UL	7/2/97
SJS03-SB07-000	MCYAN	Silver	0.87	0.27	mg/kg	B	7/2/97
SJS03-SB07-000	MCYAN	Sodium	925	15.78	mg/kg	B	7/2/97
SJS03-SB07-000	MCYAN	Thallium	2.4	0.54	mg/kg	J	7/2/97
SJS03-SB07-000	MCYAN	Vanadium	21	2.45	mg/kg		7/2/97
SJS03-SB07-000	MCYAN	Zinc	533	1.36	mg/kg	L	7/2/97
SJS03-SB07-000	PSPCB	4,4'-DDD		4.3	ug/kg	UJ	7/16/97
SJS03-SB07-000	PSPCB	4,4'-DDE		4.3	ug/kg	UJ	7/16/97
SJS03-SB07-000	PSPCB	4,4'-DDT		4.3	ug/kg	UJ	7/16/97
SJS03-SB07-000	PSPCB	Aldrin		2.2	ug/kg	UJ	7/16/97
SJS03-SB07-000	PSPCB	alpha-BHC		2.2	ug/kg	UJ	7/16/97
SJS03-SB07-000	PSPCB	alpha-Chlordane		2.2	ug/kg	UJ	7/16/97
SJS03-SB07-000	PSPCB	Aroclor-1016		43	ug/kg	UJ	7/16/97
SJS03-SB07-000	PSPCB	Aroclor-1221		87	ug/kg	UJ	7/16/97
SJS03-SB07-000	PSPCB	Aroclor-1232		43	ug/kg	UJ	7/16/97
SJS03-SB07-000	PSPCB	Aroclor-1242		43	ug/kg	UJ	7/16/97
SJS03-SB07-000	PSPCB	Aroclor-1248		43	ug/kg	UJ	7/16/97
SJS03-SB07-000	PSPCB	Aroclor-1254		43	ug/kg	UJ	7/16/97
SJS03-SB07-000	PSPCB	Aroclor-1260		43	ug/kg	UJ	7/16/97
SJS03-SB07-000	PSPCB	beta-BHC		2.2	ug/kg	UJ	7/16/97
SJS03-SB07-000	PSPCB	delta-BHC		2.2	ug/kg	UJ	7/16/97
SJS03-SB07-000	PSPCB	Dieldrin		4.3	ug/kg	UJ	7/16/97
SJS03-SB07-000	PSPCB	Endosulfan I		2.2	ug/kg	UJ	7/16/97
SJS03-SB07-000	PSPCB	Endosulfan II		4.3	ug/kg	UJ	7/16/97
SJS03-SB07-000	PSPCB	Endosulfan Sulfate		4.3	ug/kg	UJ	7/16/97
SJS03-SB07-000	PSPCB	Endrin		4.3	ug/kg	UJ	7/16/97
SJS03-SB07-000	PSPCB	Endrin Aldehyde		4.3	ug/kg	UJ	7/16/97
SJS03-SB07-000	PSPCB	Endrin Ketone		4.3	ug/kg	UJ	7/16/97
SJS03-SB07-000	PSPCB	gamma-BHC		2.2	ug/kg	UJ	7/16/97
SJS03-SB07-000	PSPCB	gamma-Chlordane		2.2	ug/kg	UJ	7/16/97
SJS03-SB07-000	PSPCB	Heptachlor		2.2	ug/kg	UJ	7/16/97
SJS03-SB07-000	PSPCB	Heptachlor Epoxide		2.2	ug/kg	UJ	7/16/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS03-SB07-000	PSPCB	Methoxychlor		22	ug/kg	UJ	7/16/97
SJS03-SB07-000	PSPCB	Toxaphene		220	ug/kg	UJ	7/16/97
SJS03-SB07-000	SVTCL	1,2,4-Trichlorobenzene		430	ug/kg	U	7/9/97
SJS03-SB07-000	SVTCL	1,2-Dichlorobenzene		430	ug/kg	U	7/9/97
SJS03-SB07-000	SVTCL	1,3-Dichlorobenzene		430	ug/kg	U	7/9/97
SJS03-SB07-000	SVTCL	1,4-Dichlorobenzene		430	ug/kg	U	7/9/97
SJS03-SB07-000	SVTCL	2,2'-oxybis(1-Chloropropane		430	ug/kg	U	7/9/97
SJS03-SB07-000	SVTCL	2,4,5-Trichlorophenol		1100	ug/kg	U	7/9/97
SJS03-SB07-000	SVTCL	2,4,6-Trichlorophenol		430	ug/kg	U	7/9/97
SJS03-SB07-000	SVTCL	2,4-Dichlorophenol		430	ug/kg	U	7/9/97
SJS03-SB07-000	SVTCL	2,4-Dimethylphenol		430	ug/kg	U	7/9/97
SJS03-SB07-000	SVTCL	2,4-Dinitrophenol		1100	ug/kg	U	7/9/97
SJS03-SB07-000	SVTCL	2,4-Dinitrotoluene		430	ug/kg	U	7/9/97
SJS03-SB07-000	SVTCL	2,6-Dinitrotoluene		430	ug/kg	U	7/9/97
SJS03-SB07-000	SVTCL	2-Chloronaphthalene		430	ug/kg	U	7/9/97
SJS03-SB07-000	SVTCL	2-Chlorophenol		430	ug/kg	U	7/9/97
SJS03-SB07-000	SVTCL	2-Methylnaphthalene		430	ug/kg	U	7/9/97
SJS03-SB07-000	SVTCL	2-Methylphenol		430	ug/kg	U	7/9/97
SJS03-SB07-000	SVTCL	2-Nitroaniline		1100	ug/kg	U	7/9/97
SJS03-SB07-000	SVTCL	2-Nitrophenol		430	ug/kg	U	7/9/97
SJS03-SB07-000	SVTCL	3,3'-Dichlorobenzidine		430	ug/kg	U	7/9/97
SJS03-SB07-000	SVTCL	3-Nitroaniline		1100	ug/kg	U	7/9/97
SJS03-SB07-000	SVTCL	4,6-Dinitro-2-Methylphenol		1100	ug/kg	U	7/9/97
SJS03-SB07-000	SVTCL	4-Bromophenyl phenylether		430	ug/kg	U	7/9/97
SJS03-SB07-000	SVTCL	4-Chloro-3-Methylphenol		430	ug/kg	U	7/9/97
SJS03-SB07-000	SVTCL	4-Chloroaniline		430	ug/kg	U	7/9/97
SJS03-SB07-000	SVTCL	4-Chlorophenyl-phenylether		430	ug/kg	U	7/9/97
SJS03-SB07-000	SVTCL	4-Methylphenol		430	ug/kg	U	7/9/97
SJS03-SB07-000	SVTCL	4-Nitroaniline		1100	ug/kg	U	7/9/97
SJS03-SB07-000	SVTCL	4-Nitrophenol		1100	ug/kg	U	7/9/97
SJS03-SB07-000	SVTCL	Acenaphthene		430	ug/kg	U	7/9/97
SJS03-SB07-000	SVTCL	Acenaphthylene		430	ug/kg	U	7/9/97
SJS03-SB07-000	SVTCL	Anthracene	55	430	ug/kg	J	7/9/97
SJS03-SB07-000	SVTCL	Benzo(a)Anthracene	220	430	ug/kg	J	7/9/97
SJS03-SB07-000	SVTCL	Benzo(a)Pyrene	140	430	ug/kg	J	7/9/97
SJS03-SB07-000	SVTCL	Benzo(b)Fluoranthene	840	430	ug/kg		7/9/97
SJS03-SB07-000	SVTCL	Benzo(g,h,i)Perylene	170	430	ug/kg	J	7/9/97
SJS03-SB07-000	SVTCL	Benzo(k)Fluoranthene	230	430	ug/kg	J	7/9/97
SJS03-SB07-000	SVTCL	Bis(2-chloroethoxy)Methane		430	ug/kg	U	7/9/97
SJS03-SB07-000	SVTCL	Bis(2-chloroethyl)Ether		430	ug/kg	U	7/9/97
SJS03-SB07-000	SVTCL	Bis(2-Ethylhexyl)Phthalate	71	320	ug/kg	B	7/9/97
SJS03-SB07-000	SVTCL	Butylbenzylphthalate		430	ug/kg	U	7/9/97
SJS03-SB07-000	SVTCL	Carbazole		430	ug/kg	U	7/9/97
SJS03-SB07-000	SVTCL	Chrysene	400	430	ug/kg	J	7/9/97
SJS03-SB07-000	SVTCL	Di-n-Butylphthalate		430	ug/kg	U	7/9/97
SJS03-SB07-000	SVTCL	Di-n-Octyl Phthalate		430	ug/kg	U	7/9/97
SJS03-SB07-000	SVTCL	Dibenz(a,h)Anthracene		430	ug/kg	U	7/9/97
SJS03-SB07-000	SVTCL	Dibenzofuran		430	ug/kg	U	7/9/97
SJS03-SB07-000	SVTCL	Diethylphthalate		430	ug/kg	U	7/9/97
SJS03-SB07-000	SVTCL	Dimethyl Phthalate		430	ug/kg	U	7/9/97
SJS03-SB07-000	SVTCL	Fluoranthene	210	430	ug/kg	J	7/9/97
SJS03-SB07-000	SVTCL	Fluorene		430	ug/kg	U	7/9/97
SJS03-SB07-000	SVTCL	Hexachlorobenzene		430	ug/kg	U	7/9/97
SJS03-SB07-000	SVTCL	Hexachlorobutadiene		430	ug/kg	U	7/9/97
SJS03-SB07-000	SVTCL	Hexachlorocyclopentadien		430	ug/kg	U	7/9/97
SJS03-SB07-000	SVTCL	Hexachloroethane		430	ug/kg	U	7/9/97
SJS03-SB07-000	SVTCL	Indeno(1,2,3-cd)Pyrene	220	430	ug/kg	J	7/9/97
SJS03-SB07-000	SVTCL	Isophorone		430	ug/kg	U	7/9/97
SJS03-SB07-000	SVTCL	N-Nitroso-Di-n-Propylamine		430	ug/kg	U	7/9/97
SJS03-SB07-000	SVTCL	N-Nitrosodiphenylamine		430	ug/kg	U	7/9/97
SJS03-SB07-000	SVTCL	Naphthalene		430	ug/kg	U	7/9/97
SJS03-SB07-000	SVTCL	Nitrobenzene		430	ug/kg	U	7/9/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS03-SB07-000	SVTCL	Pentachlorophenol		1100	ug/kg	U	7/9/97
SJS03-SB07-000	SVTCL	Phenanthrene	56	430	ug/kg	J	7/9/97
SJS03-SB07-000	SVTCL	Phenol		430	ug/kg	U	7/9/97
SJS03-SB07-000	SVTCL	Pyrene	180	430	ug/kg	J	7/9/97
SJS03-SB07-000	VCTCL	1,1,1-Trichloroethane		16	ug/kg	U	7/2/97
SJS03-SB07-000	VCTCL	1,1,2,2-Tetrachloroethane		16	ug/kg	U	7/2/97
SJS03-SB07-000	VCTCL	1,1,2-Trichloroethane		16	ug/kg	U	7/2/97
SJS03-SB07-000	VCTCL	1,1-Dichloroethane		16	ug/kg	U	7/2/97
SJS03-SB07-000	VCTCL	1,1-Dichloroethene		16	ug/kg	U	7/2/97
SJS03-SB07-000	VCTCL	1,2-Dichloroethane		16	ug/kg	U	7/2/97
SJS03-SB07-000	VCTCL	1,2-Dichloroethene (total)		16	ug/kg	U	7/2/97
SJS03-SB07-000	VCTCL	1,2-Dichloropropane		16	ug/kg	U	7/2/97
SJS03-SB07-000	VCTCL	2-Butanone		16	ug/kg	U	7/2/97
SJS03-SB07-000	VCTCL	2-Hexanone		16	ug/kg	U	7/2/97
SJS03-SB07-000	VCTCL	4-Methyl-2-Pentanone		16	ug/kg	U	7/2/97
SJS03-SB07-000	VCTCL	Acetone	50	16	ug/kg	B	7/2/97
SJS03-SB07-000	VCTCL	Benzene		16	ug/kg	U	7/2/97
SJS03-SB07-000	VCTCL	Bromodichloromethane		16	ug/kg	U	7/2/97
SJS03-SB07-000	VCTCL	Bromoform		16	ug/kg	U	7/2/97
SJS03-SB07-000	VCTCL	Bromomethane		16	ug/kg	U	7/2/97
SJS03-SB07-000	VCTCL	Carbon Disulfide		16	ug/kg	U	7/2/97
SJS03-SB07-000	VCTCL	Carbon Tetrachloride		16	ug/kg	U	7/2/97
SJS03-SB07-000	VCTCL	Chlorobenzene		16	ug/kg	U	7/2/97
SJS03-SB07-000	VCTCL	Chloroethane		16	ug/kg	U	7/2/97
SJS03-SB07-000	VCTCL	Chloroform		16	ug/kg	U	7/2/97
SJS03-SB07-000	VCTCL	Chloromethane		16	ug/kg	U	7/2/97
SJS03-SB07-000	VCTCL	cis-1,3-Dichloropropene		16	ug/kg	U	7/2/97
SJS03-SB07-000	VCTCL	Dibromochloromethane		16	ug/kg	U	7/2/97
SJS03-SB07-000	VCTCL	Ethylbenzene		16	ug/kg	U	7/2/97
SJS03-SB07-000	VCTCL	Methylene Chloride	74	16	ug/kg	B	7/2/97
SJS03-SB07-000	VCTCL	Styrene		16	ug/kg	U	7/2/97
SJS03-SB07-000	VCTCL	Tetrachloroethene		16	ug/kg	U	7/2/97
SJS03-SB07-000	VCTCL	Toluene		16	ug/kg	U	7/2/97
SJS03-SB07-000	VCTCL	Total Xylenes		16	ug/kg	U	7/2/97
SJS03-SB07-000	VCTCL	Trans-1,3-Dichloropropene		16	ug/kg	U	7/2/97
SJS03-SB07-000	VCTCL	Trichloroethene		16	ug/kg	U	7/2/97
SJS03-SB07-000	VCTCL	Vinyl Chloride		16	ug/kg	U	7/2/97
SJS03-SD01-000	CTOTC	Total Organic Carbon	4650	54.8	mg/kg		7/30/97
SJS03-SD01-000	CTOTP	Total Phosphorous (as P)	116	33.4	mg/kg		7/29/97
SJS03-SD01-000	MCYAN	Aluminum	3970	9.46	mg/kg		7/25/97
SJS03-SD01-000	MCYAN	Antimony	0.45	0.43	mg/kg	B	7/25/97
SJS03-SD01-000	MCYAN	Arsenic	16.2	0.64	mg/kg		7/25/97
SJS03-SD01-000	MCYAN	Barium	18.6	0.43	mg/kg	J	7/25/97
SJS03-SD01-000	MCYAN	Beryllium	0.4	0.21	mg/kg	J	7/25/97
SJS03-SD01-000	MCYAN	Cadmium		0.11	mg/kg	U	7/25/97
SJS03-SD01-000	MCYAN	Calcium	157	18.7	mg/kg	J	7/25/97
SJS03-SD01-000	MCYAN	Chromium	8.3	1.5	mg/kg		7/25/97
SJS03-SD01-000	MCYAN	Cobalt		1.72	mg/kg	U	7/25/97
SJS03-SD01-000	MCYAN	Copper	8.3	1.29	mg/kg		7/25/97
SJS03-SD01-000	MCYAN	Cyanide		0.55	mg/kg	U	7/22/97
SJS03-SD01-000	MCYAN	Iron	4580	3.65	mg/kg		7/25/97
SJS03-SD01-000	MCYAN	Lead	14.5	0.21	mg/kg		7/25/97
SJS03-SD01-000	MCYAN	Magnesium	365	38.91	mg/kg	J	7/25/97
SJS03-SD01-000	MCYAN	Manganese	15.7	0.43	mg/kg	K	7/25/97
SJS03-SD01-000	MCYAN	Mercury		0.05	mg/kg	U	8/1/97
SJS03-SD01-000	MCYAN	Nickel	2.3	1.5	mg/kg	B	7/25/97
SJS03-SD01-000	MCYAN	Potassium	339	47.73	mg/kg	J	7/25/97
SJS03-SD01-000	MCYAN	Selenium		0.64	mg/kg	UL	7/25/97
SJS03-SD01-000	MCYAN	Silver		0.21	mg/kg	U	7/25/97
SJS03-SD01-000	MCYAN	Sodium	71.5	12.47	mg/kg	B	7/25/97
SJS03-SD01-000	MCYAN	Thallium		0.43	mg/kg	U	7/25/97
SJS03-SD01-000	MCYAN	Vanadium	12.1	1.93	mg/kg		7/25/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS03-SD01-000	MCYAN	Zinc	21.9	1.07	mg/kg		7/25/97
SJS03-SD01-000	PSPCB	4,4'-DDD	4.2	3.5	ug/kg		8/5/97
SJS03-SD01-000	PSPCB	4,4'-DDE	10	3.5	ug/kg		8/5/97
SJS03-SD01-000	PSPCB	4,4'-DDT	7.7	3.5	ug/kg		8/5/97
SJS03-SD01-000	PSPCB	Aldrin		1.8	ug/kg	U	8/5/97
SJS03-SD01-000	PSPCB	alpha-BHC		1.8	ug/kg	U	8/5/97
SJS03-SD01-000	PSPCB	alpha-Chlordane		1.8	ug/kg	U	8/5/97
SJS03-SD01-000	PSPCB	Aroclor-1016		35	ug/kg	U	8/5/97
SJS03-SD01-000	PSPCB	Aroclor-1221		72	ug/kg	U	8/5/97
SJS03-SD01-000	PSPCB	Aroclor-1232		35	ug/kg	U	8/5/97
SJS03-SD01-000	PSPCB	Aroclor-1242		35	ug/kg	U	8/5/97
SJS03-SD01-000	PSPCB	Aroclor-1248		35	ug/kg	U	8/5/97
SJS03-SD01-000	PSPCB	Aroclor-1254		35	ug/kg	U	8/5/97
SJS03-SD01-000	PSPCB	Aroclor-1260		35	ug/kg	U	8/5/97
SJS03-SD01-000	PSPCB	beta-BHC		1.8	ug/kg	U	8/5/97
SJS03-SD01-000	PSPCB	delta-BHC		1.8	ug/kg	U	8/5/97
SJS03-SD01-000	PSPCB	Dieldrin		3.5	ug/kg	U	8/5/97
SJS03-SD01-000	PSPCB	Endosulfan I		1.8	ug/kg	U	8/5/97
SJS03-SD01-000	PSPCB	Endosulfan II		3.5	ug/kg	U	8/5/97
SJS03-SD01-000	PSPCB	Endosulfan Sulfate		3.5	ug/kg	U	8/5/97
SJS03-SD01-000	PSPCB	Endrin		3.5	ug/kg	U	8/5/97
SJS03-SD01-000	PSPCB	Endrin Aldehyde		3.5	ug/kg	U	8/5/97
SJS03-SD01-000	PSPCB	Endrin Ketone		3.5	ug/kg	U	8/5/97
SJS03-SD01-000	PSPCB	gamma-BHC		1.8	ug/kg	U	8/5/97
SJS03-SD01-000	PSPCB	gamma-Chlordane		1.8	ug/kg	U	8/5/97
SJS03-SD01-000	PSPCB	Heptachlor		1.8	ug/kg	U	8/5/97
SJS03-SD01-000	PSPCB	Heptachlor Epoxide		1.8	ug/kg	U	8/5/97
SJS03-SD01-000	PSPCB	Methoxychlor		18	ug/kg	U	8/5/97
SJS03-SD01-000	PSPCB	Toxaphene		180	ug/kg	U	8/5/97
SJS03-SD01-000	SVTCL	1,2,4-Trichlorobenzene		350	ug/kg	U	8/9/97
SJS03-SD01-000	SVTCL	1,2-Dichlorobenzene		350	ug/kg	U	8/9/97
SJS03-SD01-000	SVTCL	1,3-Dichlorobenzene		350	ug/kg	U	8/9/97
SJS03-SD01-000	SVTCL	1,4-Dichlorobenzene		350	ug/kg	U	8/9/97
SJS03-SD01-000	SVTCL	2,2'-oxybis(1-Chloropropane		350	ug/kg	U	8/9/97
SJS03-SD01-000	SVTCL	2,4,5-Trichlorophenol		890	ug/kg	U	8/9/97
SJS03-SD01-000	SVTCL	2,4,6-Trichlorophenol		350	ug/kg	U	8/9/97
SJS03-SD01-000	SVTCL	2,4-Dichlorophenol		350	ug/kg	U	8/9/97
SJS03-SD01-000	SVTCL	2,4-Dimethylphenol		350	ug/kg	U	8/9/97
SJS03-SD01-000	SVTCL	2,4-Dinitrophenol		890	ug/kg	UJ	8/9/97
SJS03-SD01-000	SVTCL	2,4-Dinitrotoluene		350	ug/kg	U	8/9/97
SJS03-SD01-000	SVTCL	2,6-Dinitrotoluene		350	ug/kg	U	8/9/97
SJS03-SD01-000	SVTCL	2-Chloronaphthalene		350	ug/kg	U	8/9/97
SJS03-SD01-000	SVTCL	2-Chlorophenol		350	ug/kg	U	8/9/97
SJS03-SD01-000	SVTCL	2-Methylnaphthalene		350	ug/kg	U	8/9/97
SJS03-SD01-000	SVTCL	2-Methylphenol		350	ug/kg	U	8/9/97
SJS03-SD01-000	SVTCL	2-Nitroaniline		890	ug/kg	U	8/9/97
SJS03-SD01-000	SVTCL	2-Nitrophenol		350	ug/kg	U	8/9/97
SJS03-SD01-000	SVTCL	3,3'-Dichlorobenzidine		350	ug/kg	U	8/9/97
SJS03-SD01-000	SVTCL	3-Nitroaniline		890	ug/kg	U	8/9/97
SJS03-SD01-000	SVTCL	4,6-Dinitro-2-Methylphenol		890	ug/kg	U	8/9/97
SJS03-SD01-000	SVTCL	4-Bromophenyl phenylether		350	ug/kg	U	8/9/97
SJS03-SD01-000	SVTCL	4-Chloro-3-Methylphenol		350	ug/kg	U	8/9/97
SJS03-SD01-000	SVTCL	4-Chloroaniline		350	ug/kg	U	8/9/97
SJS03-SD01-000	SVTCL	4-Chlorophenyl-phenylether		350	ug/kg	U	8/9/97
SJS03-SD01-000	SVTCL	4-Methylphenol		350	ug/kg	U	8/9/97
SJS03-SD01-000	SVTCL	4-Nitroaniline		890	ug/kg	U	8/9/97
SJS03-SD01-000	SVTCL	4-Nitrophenol		890	ug/kg	U	8/9/97
SJS03-SD01-000	SVTCL	Acenaphthene		350	ug/kg	U	8/9/97
SJS03-SD01-000	SVTCL	Acenaphthylene	55	350	ug/kg	J	8/9/97
SJS03-SD01-000	SVTCL	Anthracene	39	350	ug/kg	J	8/9/97
SJS03-SD01-000	SVTCL	Benzo(a)Anthracene	260	350	ug/kg	J	8/9/97
SJS03-SD01-000	SVTCL	Benzo(a)Pyrene	140	350	ug/kg	J	8/9/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS03-SD01-000	SVTCL	Benzo(b)Fluoranthene	660	350	ug/kg		8/9/97
SJS03-SD01-000	SVTCL	Benzo(g,h,i)Perylene	130	350	ug/kg	J	8/9/97
SJS03-SD01-000	SVTCL	Benzo(k)fluoranthene	210	350	ug/kg	J	8/9/97
SJS03-SD01-000	SVTCL	Bis(2-chloroethoxy)Methane		350	ug/kg	U	8/9/97
SJS03-SD01-000	SVTCL	Bis(2-chloroethyl)Ether		350	ug/kg	U	8/9/97
SJS03-SD01-000	SVTCL	Bis(2-Ethylhexyl)Phthalate	56	150	ug/kg	B	8/9/97
SJS03-SD01-000	SVTCL	Butylbenzylphthalate	55	350	ug/kg	J	8/9/97
SJS03-SD01-000	SVTCL	Carbazole		350	ug/kg	U	8/9/97
SJS03-SD01-000	SVTCL	Chrysene	420	350	ug/kg		8/9/97
SJS03-SD01-000	SVTCL	Di-n-Butylphthalate	54	350	ug/kg	B	8/9/97
SJS03-SD01-000	SVTCL	Di-n-Octyl Phthalate		350	ug/kg	U	8/9/97
SJS03-SD01-000	SVTCL	Dibenz(a,h)Anthracene		350	ug/kg	U	8/9/97
SJS03-SD01-000	SVTCL	Dibenzofuran		350	ug/kg	U	8/9/97
SJS03-SD01-000	SVTCL	Diethylphthalate		350	ug/kg	U	8/9/97
SJS03-SD01-000	SVTCL	Dimethyl Phthalate		350	ug/kg	U	8/9/97
SJS03-SD01-000	SVTCL	Fluoranthene	250	350	ug/kg	J	8/9/97
SJS03-SD01-000	SVTCL	Fluorene		350	ug/kg	U	8/9/97
SJS03-SD01-000	SVTCL	Hexachlorobenzene		350	ug/kg	U	8/9/97
SJS03-SD01-000	SVTCL	Hexachlorobutadiene		350	ug/kg	U	8/9/97
SJS03-SD01-000	SVTCL	Hexachlorocyclopentadien		350	ug/kg	UJ	8/9/97
SJS03-SD01-000	SVTCL	Hexachloroethane		350	ug/kg	U	8/9/97
SJS03-SD01-000	SVTCL	Indeno(1,2,3-cd)Pyrene	200	350	ug/kg	J	8/9/97
SJS03-SD01-000	SVTCL	Isophorone		350	ug/kg	U	8/9/97
SJS03-SD01-000	SVTCL	N-Nitroso-Di-n-Propylamine		350	ug/kg	U	8/9/97
SJS03-SD01-000	SVTCL	N-Nitrosodiphenylamine		350	ug/kg	U	8/9/97
SJS03-SD01-000	SVTCL	Naphthalene		350	ug/kg	U	8/9/97
SJS03-SD01-000	SVTCL	Nitrobenzene		350	ug/kg	U	8/9/97
SJS03-SD01-000	SVTCL	Pentachlorophenol		890	ug/kg	U	8/9/97
SJS03-SD01-000	SVTCL	Phenanthrene	76	350	ug/kg	J	8/9/97
SJS03-SD01-000	SVTCL	Phenol		350	ug/kg	U	8/9/97
SJS03-SD01-000	SVTCL	Pyrene	270	350	ug/kg	J	8/9/97
SJS03-SD01-000	VCTCL	1,1,1-Trichloroethane		11	ug/kg	U	7/19/97
SJS03-SD01-000	VCTCL	1,1,2,2-Tetrachloroethane		11	ug/kg	U	7/19/97
SJS03-SD01-000	VCTCL	1,1,2-Trichloroethane		11	ug/kg	U	7/19/97
SJS03-SD01-000	VCTCL	1,1-Dichloroethane		11	ug/kg	U	7/19/97
SJS03-SD01-000	VCTCL	1,1-Dichloroethene		11	ug/kg	U	7/19/97
SJS03-SD01-000	VCTCL	1,2-Dichloroethane		11	ug/kg	U	7/19/97
SJS03-SD01-000	VCTCL	1,2-Dichloroethene (total)		11	ug/kg	U	7/19/97
SJS03-SD01-000	VCTCL	1,2-Dichloropropane		11	ug/kg	U	7/19/97
SJS03-SD01-000	VCTCL	2-Butanone		11	ug/kg	U	7/19/97
SJS03-SD01-000	VCTCL	2-Hexanone		11	ug/kg	U	7/19/97
SJS03-SD01-000	VCTCL	4-Methyl-2-Pentanone		11	ug/kg	U	7/19/97
SJS03-SD01-000	VCTCL	Acetone		11	ug/kg	U	7/19/97
SJS03-SD01-000	VCTCL	Benzene		11	ug/kg	U	7/19/97
SJS03-SD01-000	VCTCL	Bromodichloromethane		11	ug/kg	U	7/19/97
SJS03-SD01-000	VCTCL	Bromoform		11	ug/kg	U	7/19/97
SJS03-SD01-000	VCTCL	Bromomethane		11	ug/kg	U	7/19/97
SJS03-SD01-000	VCTCL	Carbon Disulfide		11	ug/kg	U	7/19/97
SJS03-SD01-000	VCTCL	Carbon Tetrachloride		11	ug/kg	U	7/19/97
SJS03-SD01-000	VCTCL	Chlorobenzene		11	ug/kg	U	7/19/97
SJS03-SD01-000	VCTCL	Chloroethane		11	ug/kg	U	7/19/97
SJS03-SD01-000	VCTCL	Chloroform		11	ug/kg	U	7/19/97
SJS03-SD01-000	VCTCL	Chloromethane		11	ug/kg	U	7/19/97
SJS03-SD01-000	VCTCL	cis-1,3-Dichloropropene		11	ug/kg	U	7/19/97
SJS03-SD01-000	VCTCL	Dibromochloromethane		11	ug/kg	U	7/19/97
SJS03-SD01-000	VCTCL	Ethylbenzene		11	ug/kg	U	7/19/97
SJS03-SD01-000	VCTCL	Methylene Chloride	40	11	ug/kg	B	7/19/97
SJS03-SD01-000	VCTCL	Styrene		11	ug/kg	U	7/19/97
SJS03-SD01-000	VCTCL	Tetrachloroethene		11	ug/kg	U	7/19/97
SJS03-SD01-000	VCTCL	Toluene		11	ug/kg	U	7/19/97
SJS03-SD01-000	VCTCL	Total Xylenes		11	ug/kg	U	7/19/97
SJS03-SD01-000	VCTCL	Trans-1,3-Dichloropropene		11	ug/kg	U	7/19/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS03-SD01-000	VCTCL	Trichloroethene		11	ug/kg	U	7/19/97
SJS03-SD01-000	VCTCL	Vinyl Chloride		11	ug/kg	U	7/19/97
SJS03-SD02-000	CTOTC	Total Organic Carbon	67700	65.2	mg/kg		7/30/97
SJS03-SD02-000	CTOTP	Total Phosphorous (as P)		1.6	mg/kg	U	7/29/97
SJS03-SD02-000	MCYAN	Aluminum	6920	11.03	mg/kg		7/25/97
SJS03-SD02-000	MCYAN	Antimony	3.1	0.5	mg/kg	B	7/25/97
SJS03-SD02-000	MCYAN	Arsenic	8.1	0.75	mg/kg		7/25/97
SJS03-SD02-000	MCYAN	Barium	242	0.5	mg/kg		7/25/97
SJS03-SD02-000	MCYAN	Beryllium	1.1	0.25	mg/kg	J	7/25/97
SJS03-SD02-000	MCYAN	Cadmium	2.4	0.13	mg/kg		7/25/97
SJS03-SD02-000	MCYAN	Calcium	3290	21.81	mg/kg		7/25/97
SJS03-SD02-000	MCYAN	Chromium	42.4	1.76	mg/kg		7/25/97
SJS03-SD02-000	MCYAN	Cobalt	5.5	2.01	mg/kg	J	7/25/97
SJS03-SD02-000	MCYAN	Copper	118	1.5	mg/kg		7/25/97
SJS03-SD02-000	MCYAN	Cyanide		0.64	mg/kg	U	7/22/97
SJS03-SD02-000	MCYAN	Iron	18700	4.26	mg/kg		7/25/97
SJS03-SD02-000	MCYAN	Lead	603	0.25	mg/kg		7/25/97
SJS03-SD02-000	MCYAN	Magnesium	1920	45.38	mg/kg		7/25/97
SJS03-SD02-000	MCYAN	Manganese	257	0.5	mg/kg	K	7/25/97
SJS03-SD02-000	MCYAN	Mercury	0.25	0.06	mg/kg		8/1/97
SJS03-SD02-000	MCYAN	Nickel	15.4	1.76	mg/kg		7/25/97
SJS03-SD02-000	MCYAN	Potassium	1350	55.66	mg/kg		7/25/97
SJS03-SD02-000	MCYAN	Selenium		0.75	mg/kg	UL	7/25/97
SJS03-SD02-000	MCYAN	Silver	1.1	0.25	mg/kg	B	7/25/97
SJS03-SD02-000	MCYAN	Sodium	453	14.54	mg/kg	B	7/25/97
SJS03-SD02-000	MCYAN	Thallium		0.5	mg/kg	U	7/25/97
SJS03-SD02-000	MCYAN	Vanadium	32.6	2.26	mg/kg		7/25/97
SJS03-SD02-000	MCYAN	Zinc	577	1.25	mg/kg		7/25/97
SJS03-SD02-000	PSPCB	4,4'-DDD	66	4.3	ug/kg		8/5/97
SJS03-SD02-000	PSPCB	4,4'-DDE	5.1	4.3	ug/kg	J	8/5/97
SJS03-SD02-000	PSPCB	4,4'-DDT		4.3	ug/kg	U	8/5/97
SJS03-SD02-000	PSPCB	Aldrin		2.2	ug/kg	U	8/5/97
SJS03-SD02-000	PSPCB	alpha-BHC		2.2	ug/kg	U	8/5/97
SJS03-SD02-000	PSPCB	alpha-Chlordane		2.2	ug/kg	U	8/5/97
SJS03-SD02-000	PSPCB	Aroclor-1016		43	ug/kg	U	8/5/97
SJS03-SD02-000	PSPCB	Aroclor-1221		88	ug/kg	U	8/5/97
SJS03-SD02-000	PSPCB	Aroclor-1232		43	ug/kg	U	8/5/97
SJS03-SD02-000	PSPCB	Aroclor-1242		43	ug/kg	U	8/5/97
SJS03-SD02-000	PSPCB	Aroclor-1248		43	ug/kg	U	8/5/97
SJS03-SD02-000	PSPCB	Aroclor-1254		43	ug/kg	U	8/5/97
SJS03-SD02-000	PSPCB	Aroclor-1260	150	43	ug/kg		8/5/97
SJS03-SD02-000	PSPCB	beta-BHC		2.2	ug/kg	U	8/5/97
SJS03-SD02-000	PSPCB	delta-BHC		2.2	ug/kg	U	8/5/97
SJS03-SD02-000	PSPCB	Dieldrin	13	4.3	ug/kg	J	8/5/97
SJS03-SD02-000	PSPCB	Endosulfan I		2.2	ug/kg	U	8/5/97
SJS03-SD02-000	PSPCB	Endosulfan II		4.3	ug/kg	U	8/5/97
SJS03-SD02-000	PSPCB	Endosulfan Sulfate		4.3	ug/kg	U	8/5/97
SJS03-SD02-000	PSPCB	Endrin		4.3	ug/kg	U	8/5/97
SJS03-SD02-000	PSPCB	Endrin Aldehyde		4.3	ug/kg	U	8/5/97
SJS03-SD02-000	PSPCB	Endrin Ketone		4.3	ug/kg	U	8/5/97
SJS03-SD02-000	PSPCB	gamma-BHC		2.2	ug/kg	U	8/5/97
SJS03-SD02-000	PSPCB	gamma-Chlordane	3.3	2.2	ug/kg	J	8/5/97
SJS03-SD02-000	PSPCB	Heptachlor		2.2	ug/kg	U	8/5/97
SJS03-SD02-000	PSPCB	Heptachlor Epoxide		2.2	ug/kg	U	8/5/97
SJS03-SD02-000	PSPCB	Methoxychlor		22	ug/kg	U	8/5/97
SJS03-SD02-000	PSPCB	Toxaphene		220	ug/kg	U	8/5/97
SJS03-SD02-000	SVTCL	1,2,4-Trichlorobenzene		4300	ug/kg	U	8/11/97
SJS03-SD02-000	SVTCL	1,2-Dichlorobenzene		4300	ug/kg	U	8/11/97
SJS03-SD02-000	SVTCL	1,3-Dichlorobenzene		4300	ug/kg	U	8/11/97
SJS03-SD02-000	SVTCL	1,4-Dichlorobenzene		4300	ug/kg	U	8/11/97
SJS03-SD02-000	SVTCL	2,2'-oxybis(1-Chloropropane		4300	ug/kg	U	8/11/97
SJS03-SD02-000	SVTCL	2,4,5-Trichlorophenol		11000	ug/kg	U	8/11/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS03-SD02-000	SVTCL	2,4,6-Trichlorophenol		4300	ug/kg	U	8/11/97
SJS03-SD02-000	SVTCL	2,4-Dichlorophenol		4300	ug/kg	U	8/11/97
SJS03-SD02-000	SVTCL	2,4-Dimethylphenol		4300	ug/kg	U	8/11/97
SJS03-SD02-000	SVTCL	2,4-Dinitrophenol		11000	ug/kg	U	8/11/97
SJS03-SD02-000	SVTCL	2,4-Dinitrotoluene		4300	ug/kg	U	8/11/97
SJS03-SD02-000	SVTCL	2,6-Dinitrotoluene		4300	ug/kg	U	8/11/97
SJS03-SD02-000	SVTCL	2-Chloronaphthalene		4300	ug/kg	U	8/11/97
SJS03-SD02-000	SVTCL	2-Chlorophenol		4300	ug/kg	U	8/11/97
SJS03-SD02-000	SVTCL	2-Methylnaphthalene		4300	ug/kg	U	8/11/97
SJS03-SD02-000	SVTCL	2-Methylphenol		4300	ug/kg	U	8/11/97
SJS03-SD02-000	SVTCL	2-Nitroaniline		11000	ug/kg	U	8/11/97
SJS03-SD02-000	SVTCL	2-Nitrophenol		4300	ug/kg	U	8/11/97
SJS03-SD02-000	SVTCL	3,3'-Dichlorobenzidine		4300	ug/kg	U	8/11/97
SJS03-SD02-000	SVTCL	3-Nitroaniline		11000	ug/kg	U	8/11/97
SJS03-SD02-000	SVTCL	4,6-Dinitro-2-Methylphenol		11000	ug/kg	U	8/11/97
SJS03-SD02-000	SVTCL	4-Bromophenyl phenylether		4300	ug/kg	U	8/11/97
SJS03-SD02-000	SVTCL	4-Chloro-3-Methylphenol		4300	ug/kg	U	8/11/97
SJS03-SD02-000	SVTCL	4-Chloroaniline		4300	ug/kg	U	8/11/97
SJS03-SD02-000	SVTCL	4-Chlorophenyl-phenylether		4300	ug/kg	U	8/11/97
SJS03-SD02-000	SVTCL	4-Methylphenol		4300	ug/kg	U	8/11/97
SJS03-SD02-000	SVTCL	4-Nitroaniline		11000	ug/kg	U	8/11/97
SJS03-SD02-000	SVTCL	4-Nitrophenol		11000	ug/kg	U	8/11/97
SJS03-SD02-000	SVTCL	Acenaphthene		4300	ug/kg	U	8/11/97
SJS03-SD02-000	SVTCL	Acenaphthylene		4300	ug/kg	U	8/11/97
SJS03-SD02-000	SVTCL	Anthracene		4300	ug/kg	U	8/11/97
SJS03-SD02-000	SVTCL	Benzo(a)Anthracene		4300	ug/kg	U	8/11/97
SJS03-SD02-000	SVTCL	Benzo(a)Pyrene		4300	ug/kg	U	8/11/97
SJS03-SD02-000	SVTCL	Benzo(b)Fluoranthene		4300	ug/kg	U	8/11/97
SJS03-SD02-000	SVTCL	Benzo(g,h,i)Perylene		4300	ug/kg	U	8/11/97
SJS03-SD02-000	SVTCL	Benzo(k)fluoranthene		4300	ug/kg	U	8/11/97
SJS03-SD02-000	SVTCL	Bis(2-chloroethoxy)Methane		4300	ug/kg	U	8/11/97
SJS03-SD02-000	SVTCL	Bis(2-chloroethyl)Ether		4300	ug/kg	U	8/11/97
SJS03-SD02-000	SVTCL	Bis(2-Ethylhexyl)Phthalate		4300	ug/kg	U	8/11/97
SJS03-SD02-000	SVTCL	Butylbenzylphthalate		4300	ug/kg	U	8/11/97
SJS03-SD02-000	SVTCL	Carbazole		4300	ug/kg	U	8/11/97
SJS03-SD02-000	SVTCL	Chrysene		4300	ug/kg	U	8/11/97
SJS03-SD02-000	SVTCL	Di-n-Butylphthalate		4300	ug/kg	U	8/11/97
SJS03-SD02-000	SVTCL	Di-n-Octyl Phthalate		4300	ug/kg	U	8/11/97
SJS03-SD02-000	SVTCL	Dibenz(a,h)Anthracene		4300	ug/kg	U	8/11/97
SJS03-SD02-000	SVTCL	Dibenzofuran		4300	ug/kg	U	8/11/97
SJS03-SD02-000	SVTCL	Diethylphthalate		4300	ug/kg	U	8/11/97
SJS03-SD02-000	SVTCL	Dimethyl Phthalate		4300	ug/kg	U	8/11/97
SJS03-SD02-000	SVTCL	Fluoranthene		4300	ug/kg	U	8/11/97
SJS03-SD02-000	SVTCL	Fluorene		4300	ug/kg	U	8/11/97
SJS03-SD02-000	SVTCL	Hexachlorobenzene		4300	ug/kg	U	8/11/97
SJS03-SD02-000	SVTCL	Hexachlorobutadiene		4300	ug/kg	U	8/11/97
SJS03-SD02-000	SVTCL	Hexachlorocyclopentadien		4300	ug/kg	U	8/11/97
SJS03-SD02-000	SVTCL	Hexachloroethane		4300	ug/kg	U	8/11/97
SJS03-SD02-000	SVTCL	Indeno(1,2,3-cd)Pyrene		4300	ug/kg	U	8/11/97
SJS03-SD02-000	SVTCL	Isophorone		4300	ug/kg	U	8/11/97
SJS03-SD02-000	SVTCL	N-Nitroso-Di-n-Propylamine		4300	ug/kg	U	8/11/97
SJS03-SD02-000	SVTCL	N-Nitrosodiphenylamine		4300	ug/kg	U	8/11/97
SJS03-SD02-000	SVTCL	Naphthalene		4300	ug/kg	U	8/11/97
SJS03-SD02-000	SVTCL	Nitrobenzene		4300	ug/kg	U	8/11/97
SJS03-SD02-000	SVTCL	Pentachlorophenol		11000	ug/kg	U	8/11/97
SJS03-SD02-000	SVTCL	Phenanthrene		4300	ug/kg	U	8/11/97
SJS03-SD02-000	SVTCL	Phenol		4300	ug/kg	U	8/11/97
SJS03-SD02-000	SVTCL	Pyrene	440	4300	ug/kg	J	8/11/97
SJS03-SD02-000	VCTCL	1,1,1-Trichloroethane		14	ug/kg	UJ	7/21/97
SJS03-SD02-000	VCTCL	1,1,2,2-Tetrachloroethane		14	ug/kg	UJ	7/21/97
SJS03-SD02-000	VCTCL	1,1,2-Trichloroethane		14	ug/kg	UJ	7/21/97
SJS03-SD02-000	VCTCL	1,1-Dichloroethane		14	ug/kg	UJ	7/21/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS03-SD02-000	VCTCL	1,1-Dichloroethene		14	ug/kg	UJ	7/21/97
SJS03-SD02-000	VCTCL	1,2-Dichloroethane		14	ug/kg	UJ	7/21/97
SJS03-SD02-000	VCTCL	1,2-Dichloroethene (total)		14	ug/kg	UJ	7/21/97
SJS03-SD02-000	VCTCL	1,2-Dichloropropane		14	ug/kg	UJ	7/21/97
SJS03-SD02-000	VCTCL	2-Butanone		14	ug/kg	UJ	7/21/97
SJS03-SD02-000	VCTCL	2-Hexanone		14	ug/kg	UJ	7/21/97
SJS03-SD02-000	VCTCL	4-Methyl-2-Pentanone		14	ug/kg	UJ	7/21/97
SJS03-SD02-000	VCTCL	Acetone		14	ug/kg	UJ	7/21/97
SJS03-SD02-000	VCTCL	Benzene		14	ug/kg	UJ	7/21/97
SJS03-SD02-000	VCTCL	Bromodichloromethane		14	ug/kg	UJ	7/21/97
SJS03-SD02-000	VCTCL	Bromoform		14	ug/kg	UJ	7/21/97
SJS03-SD02-000	VCTCL	Bromomethane		14	ug/kg	UJ	7/21/97
SJS03-SD02-000	VCTCL	Carbon Disulfide		14	ug/kg	UJ	7/21/97
SJS03-SD02-000	VCTCL	Carbon Tetrachloride		14	ug/kg	UJ	7/21/97
SJS03-SD02-000	VCTCL	Chlorobenzene		14	ug/kg	UJ	7/21/97
SJS03-SD02-000	VCTCL	Chloroethane		14	ug/kg	UJ	7/21/97
SJS03-SD02-000	VCTCL	Chloroform		14	ug/kg	UJ	7/21/97
SJS03-SD02-000	VCTCL	Chloromethane		14	ug/kg	UJ	7/21/97
SJS03-SD02-000	VCTCL	cis-1,3-Dichloropropene		14	ug/kg	UJ	7/21/97
SJS03-SD02-000	VCTCL	Dibromochloromethane		14	ug/kg	UJ	7/21/97
SJS03-SD02-000	VCTCL	Ethylbenzene		14	ug/kg	UJ	7/21/97
SJS03-SD02-000	VCTCL	Methylene Chloride	110	14	ug/kg	J	7/21/97
SJS03-SD02-000	VCTCL	Styrene		14	ug/kg	UJ	7/21/97
SJS03-SD02-000	VCTCL	Tetrachloroethene		14	ug/kg	UJ	7/21/97
SJS03-SD02-000	VCTCL	Toluene		14	ug/kg	UJ	7/21/97
SJS03-SD02-000	VCTCL	Total Xylenes		14	ug/kg	UJ	7/21/97
SJS03-SD02-000	VCTCL	Trans-1,3-Dichloropropene		14	ug/kg	UJ	7/21/97
SJS03-SD02-000	VCTCL	Trichloroethene		14	ug/kg	UJ	7/21/97
SJS03-SD02-000	VCTCL	Vinyl Chloride		14	ug/kg	UJ	7/21/97
SJS03-SD02-000P	CTOTC	Total Organic Carbon	66300	67.7	mg/kg		7/30/97
SJS03-SD02-000P	CTOTP	Total Phosphorous (as P)	11	1.6	mg/kg		7/29/97
SJS03-SD02-000P	MCYAN	Aluminum	7130	10.01	mg/kg		7/25/97
SJS03-SD02-000P	MCYAN	Antimony	3.9	0.45	mg/kg	B	7/25/97
SJS03-SD02-000P	MCYAN	Arsenic	9.1	0.68	mg/kg		7/25/97
SJS03-SD02-000P	MCYAN	Barium	300	0.45	mg/kg		7/25/97
SJS03-SD02-000P	MCYAN	Beryllium	1.2	0.23	mg/kg		7/25/97
SJS03-SD02-000P	MCYAN	Cadmium	2.5	0.11	mg/kg		7/25/97
SJS03-SD02-000P	MCYAN	Calcium	3120	19.79	mg/kg		7/25/97
SJS03-SD02-000P	MCYAN	Chromium	63.3	1.59	mg/kg		7/25/97
SJS03-SD02-000P	MCYAN	Cobalt	5.6	1.82	mg/kg	J	7/25/97
SJS03-SD02-000P	MCYAN	Copper	126	1.36	mg/kg		7/25/97
SJS03-SD02-000P	MCYAN	Cyanide		0.67	mg/kg	U	7/22/97
SJS03-SD02-000P	MCYAN	Iron	17700	3.87	mg/kg		7/25/97
SJS03-SD02-000P	MCYAN	Lead	734	0.23	mg/kg		7/25/97
SJS03-SD02-000P	MCYAN	Magnesium	1940	41.16	mg/kg		7/25/97
SJS03-SD02-000P	MCYAN	Manganese	248	0.45	mg/kg	K	7/25/97
SJS03-SD02-000P	MCYAN	Mercury	0.27	0.07	mg/kg		8/1/97
SJS03-SD02-000P	MCYAN	Nickel	14.8	1.59	mg/kg		7/25/97
SJS03-SD02-000P	MCYAN	Potassium	1430	50.49	mg/kg		7/25/97
SJS03-SD02-000P	MCYAN	Selenium		0.68	mg/kg	UL	7/25/97
SJS03-SD02-000P	MCYAN	Silver	0.91	0.23	mg/kg	B	7/25/97
SJS03-SD02-000P	MCYAN	Sodium	440	13.19	mg/kg	B	7/25/97
SJS03-SD02-000P	MCYAN	Thallium		0.45	mg/kg	U	7/25/97
SJS03-SD02-000P	MCYAN	Vanadium	32.4	2.05	mg/kg		7/25/97
SJS03-SD02-000P	MCYAN	Zinc	577	1.14	mg/kg		7/25/97
SJS03-SD02-000P	PSPCB	4,4'-DDD	27	4.4	ug/kg	J	8/5/97
SJS03-SD02-000P	PSPCB	4,4'-DDE	6.2	4.4	ug/kg	J	8/5/97
SJS03-SD02-000P	PSPCB	4,4'-DDT		4.4	ug/kg	U	8/5/97
SJS03-SD02-000P	PSPCB	Aldrin		2.3	ug/kg	U	8/5/97
SJS03-SD02-000P	PSPCB	alpha-BHC		2.3	ug/kg	U	8/5/97
SJS03-SD02-000P	PSPCB	alpha-Chlordane		2.3	ug/kg	U	8/5/97
SJS03-SD02-000P	PSPCB	Aroclor-1016		44	ug/kg	U	8/5/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS03-SD02-000P	PSPCB	Aroclor-1221		90	ug/kg	U	8/5/97
SJS03-SD02-000P	PSPCB	Aroclor-1232		44	ug/kg	U	8/5/97
SJS03-SD02-000P	PSPCB	Aroclor-1242		44	ug/kg	U	8/5/97
SJS03-SD02-000P	PSPCB	Aroclor-1248		44	ug/kg	U	8/5/97
SJS03-SD02-000P	PSPCB	Aroclor-1254		44	ug/kg	U	8/5/97
SJS03-SD02-000P	PSPCB	Aroclor-1260	100	44	ug/kg		8/5/97
SJS03-SD02-000P	PSPCB	beta-BHC		2.3	ug/kg	U	8/5/97
SJS03-SD02-000P	PSPCB	delta-BHC		2.3	ug/kg	U	8/5/97
SJS03-SD02-000P	PSPCB	Dieldrin	9.2	4.4	ug/kg	J	8/5/97
SJS03-SD02-000P	PSPCB	Endosulfan I		2.3	ug/kg	U	8/5/97
SJS03-SD02-000P	PSPCB	Endosulfan II		4.4	ug/kg	U	8/5/97
SJS03-SD02-000P	PSPCB	Endosulfan Sulfate		4.4	ug/kg	U	8/5/97
SJS03-SD02-000P	PSPCB	Endrin		4.4	ug/kg	U	8/5/97
SJS03-SD02-000P	PSPCB	Endrin Aldehyde		4.4	ug/kg	U	8/5/97
SJS03-SD02-000P	PSPCB	Endrin Ketone		4.4	ug/kg	U	8/5/97
SJS03-SD02-000P	PSPCB	gamma-BHC		2.3	ug/kg	U	8/5/97
SJS03-SD02-000P	PSPCB	gamma-Chlordane	2.8	2.3	ug/kg	J	8/5/97
SJS03-SD02-000P	PSPCB	Heptachlor		2.3	ug/kg	U	8/5/97
SJS03-SD02-000P	PSPCB	Heptachlor Epoxide		2.3	ug/kg	U	8/5/97
SJS03-SD02-000P	PSPCB	Methoxychlor		23	ug/kg	U	8/5/97
SJS03-SD02-000P	PSPCB	Toxaphene		230	ug/kg	U	8/5/97
SJS03-SD02-000P	SVTCL	1,2,4-Trichlorobenzene		4400	ug/kg	U	8/12/97
SJS03-SD02-000P	SVTCL	1,2-Dichlorobenzene		4400	ug/kg	U	8/12/97
SJS03-SD02-000P	SVTCL	1,3-Dichlorobenzene		4400	ug/kg	U	8/12/97
SJS03-SD02-000P	SVTCL	1,4-Dichlorobenzene		4400	ug/kg	U	8/12/97
SJS03-SD02-000P	SVTCL	2,2'-oxybis(1-Chloropropane		4400	ug/kg	UJ	8/12/97
SJS03-SD02-000P	SVTCL	2,4,5-Trichlorophenol		11000	ug/kg	U	8/12/97
SJS03-SD02-000P	SVTCL	2,4,6-Trichlorophenol		4400	ug/kg	U	8/12/97
SJS03-SD02-000P	SVTCL	2,4-Dichlorophenol		4400	ug/kg	U	8/12/97
SJS03-SD02-000P	SVTCL	2,4-Dimethylphenol		4400	ug/kg	U	8/12/97
SJS03-SD02-000P	SVTCL	2,4-Dinitrophenol		11000	ug/kg	U	8/12/97
SJS03-SD02-000P	SVTCL	2,4-Dinitrotoluene		4400	ug/kg	U	8/12/97
SJS03-SD02-000P	SVTCL	2,6-Dinitrotoluene		4400	ug/kg	U	8/12/97
SJS03-SD02-000P	SVTCL	2-Chloronaphthalene		4400	ug/kg	U	8/12/97
SJS03-SD02-000P	SVTCL	2-Chlorophenol		4400	ug/kg	U	8/12/97
SJS03-SD02-000P	SVTCL	2-Methylnaphthalene		4400	ug/kg	U	8/12/97
SJS03-SD02-000P	SVTCL	2-Methylphenol		4400	ug/kg	U	8/12/97
SJS03-SD02-000P	SVTCL	2-Nitroaniline		11000	ug/kg	U	8/12/97
SJS03-SD02-000P	SVTCL	2-Nitrophenol		4400	ug/kg	U	8/12/97
SJS03-SD02-000P	SVTCL	3,3'-Dichlorobenzidine		4400	ug/kg	U	8/12/97
SJS03-SD02-000P	SVTCL	3-Nitroaniline		11000	ug/kg	U	8/12/97
SJS03-SD02-000P	SVTCL	4,6-Dinitro-2-Methylphenol		11000	ug/kg	U	8/12/97
SJS03-SD02-000P	SVTCL	4-Bromophenyl phenylether		4400	ug/kg	U	8/12/97
SJS03-SD02-000P	SVTCL	4-Chloro-3-Methylphenol		4400	ug/kg	U	8/12/97
SJS03-SD02-000P	SVTCL	4-Chloroaniline		4400	ug/kg	U	8/12/97
SJS03-SD02-000P	SVTCL	4-Chlorophenyl-phenylether		4400	ug/kg	U	8/12/97
SJS03-SD02-000P	SVTCL	4-Methylphenol		4400	ug/kg	U	8/12/97
SJS03-SD02-000P	SVTCL	4-Nitroaniline		11000	ug/kg	U	8/12/97
SJS03-SD02-000P	SVTCL	4-Nitrophenol		11000	ug/kg	U	8/12/97
SJS03-SD02-000P	SVTCL	Acenaphthene		4400	ug/kg	U	8/12/97
SJS03-SD02-000P	SVTCL	Acenaphthylene		4400	ug/kg	U	8/12/97
SJS03-SD02-000P	SVTCL	Anthracene		4400	ug/kg	U	8/12/97
SJS03-SD02-000P	SVTCL	Benzo(a)Anthracene		4400	ug/kg	U	8/12/97
SJS03-SD02-000P	SVTCL	Benzo(a)Pyrene		4400	ug/kg	U	8/12/97
SJS03-SD02-000P	SVTCL	Benzo(b)Fluoranthene		4400	ug/kg	U	8/12/97
SJS03-SD02-000P	SVTCL	Benzo(g,h,i)Perylene		4400	ug/kg	U	8/12/97
SJS03-SD02-000P	SVTCL	Benzo(k)fluoranthene	470	4400	ug/kg	J	8/12/97
SJS03-SD02-000P	SVTCL	Bis(2-chloroethoxy)Methane		4400	ug/kg	U	8/12/97
SJS03-SD02-000P	SVTCL	Bis(2-chloroethyl)Ether		4400	ug/kg	U	8/12/97
SJS03-SD02-000P	SVTCL	Bis(2-Ethylhexyl)Phthalate		4400	ug/kg	U	8/12/97
SJS03-SD02-000P	SVTCL	Butylbenzylphthalate		4400	ug/kg	U	8/12/97
SJS03-SD02-000P	SVTCL	Carbazole		4400	ug/kg	U	8/12/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS03-SD02-000P	SVTCL	Chrysene		4400	ug/kg	U	8/12/97
SJS03-SD02-000P	SVTCL	Di-n-Butylphthalate		4400	ug/kg	U	8/12/97
SJS03-SD02-000P	SVTCL	Di-n-Octyl Phthalate		4400	ug/kg	U	8/12/97
SJS03-SD02-000P	SVTCL	Dibenz(a,h)Anthracene		4400	ug/kg	U	8/12/97
SJS03-SD02-000P	SVTCL	Dibenzofuran		4400	ug/kg	U	8/12/97
SJS03-SD02-000P	SVTCL	Diethylphthalate		4400	ug/kg	U	8/12/97
SJS03-SD02-000P	SVTCL	Dimethyl Phthalate		4400	ug/kg	U	8/12/97
SJS03-SD02-000P	SVTCL	Fluoranthene		4400	ug/kg	U	8/12/97
SJS03-SD02-000P	SVTCL	Fluorene		4400	ug/kg	U	8/12/97
SJS03-SD02-000P	SVTCL	Hexachlorobenzene		4400	ug/kg	U	8/12/97
SJS03-SD02-000P	SVTCL	Hexachlorobutadiene		4400	ug/kg	U	8/12/97
SJS03-SD02-000P	SVTCL	Hexachlorocyclopentadien		4400	ug/kg	U	8/12/97
SJS03-SD02-000P	SVTCL	Hexachloroethane		4400	ug/kg	U	8/12/97
SJS03-SD02-000P	SVTCL	Indeno(1,2,3-cd)Pyrene		4400	ug/kg	U	8/12/97
SJS03-SD02-000P	SVTCL	Isophorone		4400	ug/kg	U	8/12/97
SJS03-SD02-000P	SVTCL	N-Nitroso-Di-n-Propylamine		4400	ug/kg	U	8/12/97
SJS03-SD02-000P	SVTCL	N-Nitrosodiphenylamine		4400	ug/kg	U	8/12/97
SJS03-SD02-000P	SVTCL	Naphthalene		4400	ug/kg	U	8/12/97
SJS03-SD02-000P	SVTCL	Nitrobenzene		4400	ug/kg	U	8/12/97
SJS03-SD02-000P	SVTCL	Pentachlorophenol		11000	ug/kg	U	8/12/97
SJS03-SD02-000P	SVTCL	Phenanthrene		4400	ug/kg	U	8/12/97
SJS03-SD02-000P	SVTCL	Phenol		4400	ug/kg	U	8/12/97
SJS03-SD02-000P	SVTCL	Pyrene	460	4400	ug/kg	J	8/12/97
SJS03-SD02-000P	VCTCL	1,1,1-Trichloroethane		14	ug/kg	UJ	7/26/97
SJS03-SD02-000P	VCTCL	1,1,2,2-Tetrachloroethane		14	ug/kg	UJ	7/26/97
SJS03-SD02-000P	VCTCL	1,1,2-Trichloroethane		14	ug/kg	UJ	7/26/97
SJS03-SD02-000P	VCTCL	1,1-Dichloroethane		14	ug/kg	U	7/26/97
SJS03-SD02-000P	VCTCL	1,1-Dichloroethene		14	ug/kg	U	7/26/97
SJS03-SD02-000P	VCTCL	1,2-Dichloroethane		14	ug/kg	U	7/26/97
SJS03-SD02-000P	VCTCL	1,2-Dichloroethene (total)		14	ug/kg	U	7/26/97
SJS03-SD02-000P	VCTCL	1,2-Dichloropropane		14	ug/kg	UJ	7/26/97
SJS03-SD02-000P	VCTCL	2-Butanone		14	ug/kg	U	7/26/97
SJS03-SD02-000P	VCTCL	2-Hexanone		14	ug/kg	UJ	7/26/97
SJS03-SD02-000P	VCTCL	4-Methyl-2-Pentanone		14	ug/kg	UJ	7/26/97
SJS03-SD02-000P	VCTCL	Acetone		14	ug/kg	U	7/26/97
SJS03-SD02-000P	VCTCL	Benzene		14	ug/kg	UJ	7/26/97
SJS03-SD02-000P	VCTCL	Bromodichloromethane		14	ug/kg	UJ	7/26/97
SJS03-SD02-000P	VCTCL	Bromoform		14	ug/kg	UJ	7/26/97
SJS03-SD02-000P	VCTCL	Bromomethane		14	ug/kg	U	7/26/97
SJS03-SD02-000P	VCTCL	Carbon Disulfide		14	ug/kg	U	7/26/97
SJS03-SD02-000P	VCTCL	Carbon Tetrachloride		14	ug/kg	UJ	7/26/97
SJS03-SD02-000P	VCTCL	Chlorobenzene		14	ug/kg	UJ	7/26/97
SJS03-SD02-000P	VCTCL	Chloroethane		14	ug/kg	U	7/26/97
SJS03-SD02-000P	VCTCL	Chloroform		14	ug/kg	U	7/26/97
SJS03-SD02-000P	VCTCL	Chloromethane		14	ug/kg	U	7/26/97
SJS03-SD02-000P	VCTCL	cis-1,3-Dichloropropene		14	ug/kg	UJ	7/26/97
SJS03-SD02-000P	VCTCL	Dibromochloromethane		14	ug/kg	UJ	7/26/97
SJS03-SD02-000P	VCTCL	Ethylbenzene		14	ug/kg	UJ	7/26/97
SJS03-SD02-000P	VCTCL	Methylene Chloride	100	14	ug/kg	B	7/26/97
SJS03-SD02-000P	VCTCL	Styrene		14	ug/kg	UJ	7/26/97
SJS03-SD02-000P	VCTCL	Tetrachloroethene		14	ug/kg	UJ	7/26/97
SJS03-SD02-000P	VCTCL	Toluene		14	ug/kg	UJ	7/26/97
SJS03-SD02-000P	VCTCL	Total Xylenes		14	ug/kg	UJ	7/26/97
SJS03-SD02-000P	VCTCL	Trans-1,3-Dichloropropene		14	ug/kg	UJ	7/26/97
SJS03-SD02-000P	VCTCL	Trichloroethene		14	ug/kg	UJ	7/26/97
SJS03-SD02-000P	VCTCL	Vinyl Chloride		14	ug/kg	U	7/26/97
SJS03-SD03-000	CTOTC	Total Organic Carbon	38400	81.4	mg/kg		7/30/97
SJS03-SD03-000	CTOTP	Total Phosphorous (as P)	48.4	24.5	mg/kg		7/29/97
SJS03-SD03-000	MCYAN	Aluminum	14200	14.33	mg/kg		7/25/97
SJS03-SD03-000	MCYAN	Antimony		0.65	mg/kg	UL	7/25/97
SJS03-SD03-000	MCYAN	Arsenic	3.8	0.98	mg/kg		7/25/97
SJS03-SD03-000	MCYAN	Barium	25.8	0.65	mg/kg	J	7/25/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS03-SD03-000	MCYAN	Beryllium	1.7	0.33	mg/kg		7/25/97
SJS03-SD03-000	MCYAN	Cadmium		0.16	mg/kg	U	7/25/97
SJS03-SD03-000	MCYAN	Calcium	2210	28.34	mg/kg		7/25/97
SJS03-SD03-000	MCYAN	Chromium	20.4	2.28	mg/kg		7/25/97
SJS03-SD03-000	MCYAN	Cobalt	4.8	2.61	mg/kg	J	7/25/97
SJS03-SD03-000	MCYAN	Copper	40.2	1.95	mg/kg		7/25/97
SJS03-SD03-000	MCYAN	Cyanide		0.8	mg/kg	U	7/22/97
SJS03-SD03-000	MCYAN	Iron	18200	5.54	mg/kg		7/25/97
SJS03-SD03-000	MCYAN	Lead	47.9	0.33	mg/kg		7/25/97
SJS03-SD03-000	MCYAN	Magnesium	1050	58.96	mg/kg	J	7/25/97
SJS03-SD03-000	MCYAN	Manganese	51.5	0.65	mg/kg	K	7/25/97
SJS03-SD03-000	MCYAN	Mercury	0.24	0.08	mg/kg		8/1/97
SJS03-SD03-000	MCYAN	Nickel	14	2.28	mg/kg		7/25/97
SJS03-SD03-000	MCYAN	Potassium	771	72.31	mg/kg	J	7/25/97
SJS03-SD03-000	MCYAN	Selenium		0.98	mg/kg	UL	7/25/97
SJS03-SD03-000	MCYAN	Silver	0.37	0.33	mg/kg	J	7/25/97
SJS03-SD03-000	MCYAN	Sodium	195	18.89	mg/kg	J	7/25/97
SJS03-SD03-000	MCYAN	Thallium		0.65	mg/kg	U	7/25/97
SJS03-SD03-000	MCYAN	Vanadium	31.4	2.93	mg/kg		7/25/97
SJS03-SD03-000	MCYAN	Zinc	93.4	1.63	mg/kg		7/25/97
SJS03-SD03-000	PSPCB	4,4'-DDD	60	5.3	ug/kg		8/5/97
SJS03-SD03-000	PSPCB	4,4'-DDE	78	5.3	ug/kg	J	8/5/97
SJS03-SD03-000	PSPCB	4,4'-DDT	20	5.3	ug/kg		8/5/97
SJS03-SD03-000	PSPCB	Aldrin		2.7	ug/kg	U	8/5/97
SJS03-SD03-000	PSPCB	alpha-BHC		2.7	ug/kg	U	8/5/97
SJS03-SD03-000	PSPCB	alpha-Chlordane	0.88	2.7	ug/kg	J	8/5/97
SJS03-SD03-000	PSPCB	Aroclor-1016		53	ug/kg	U	8/5/97
SJS03-SD03-000	PSPCB	Aroclor-1221		110	ug/kg	U	8/5/97
SJS03-SD03-000	PSPCB	Aroclor-1232		53	ug/kg	U	8/5/97
SJS03-SD03-000	PSPCB	Aroclor-1242		53	ug/kg	U	8/5/97
SJS03-SD03-000	PSPCB	Aroclor-1248		53	ug/kg	U	8/5/97
SJS03-SD03-000	PSPCB	Aroclor-1254		53	ug/kg	U	8/5/97
SJS03-SD03-000	PSPCB	Aroclor-1260		53	ug/kg	U	8/5/97
SJS03-SD03-000	PSPCB	beta-BHC		2.7	ug/kg	U	8/5/97
SJS03-SD03-000	PSPCB	delta-BHC		2.7	ug/kg	U	8/5/97
SJS03-SD03-000	PSPCB	Dieldrin		5.3	ug/kg	U	8/5/97
SJS03-SD03-000	PSPCB	Endosulfan I		2.7	ug/kg	U	8/5/97
SJS03-SD03-000	PSPCB	Endosulfan II		5.3	ug/kg	U	8/5/97
SJS03-SD03-000	PSPCB	Endosulfan Sulfate		5.3	ug/kg	U	8/5/97
SJS03-SD03-000	PSPCB	Endrin		5.3	ug/kg	U	8/5/97
SJS03-SD03-000	PSPCB	Endrin Aldehyde		5.3	ug/kg	U	8/5/97
SJS03-SD03-000	PSPCB	Endrin Ketone		5.3	ug/kg	U	8/5/97
SJS03-SD03-000	PSPCB	gamma-BHC		2.7	ug/kg	U	8/5/97
SJS03-SD03-000	PSPCB	gamma-Chlordane		2.7	ug/kg	U	8/5/97
SJS03-SD03-000	PSPCB	Heptachlor		2.7	ug/kg	U	8/5/97
SJS03-SD03-000	PSPCB	Heptachlor Epoxide		2.7	ug/kg	U	8/5/97
SJS03-SD03-000	PSPCB	Methoxychlor		27	ug/kg	U	8/5/97
SJS03-SD03-000	PSPCB	Toxaphene		270	ug/kg	U	8/5/97
SJS03-SD03-000	SVTCL	1,2,4-Trichlorobenzene		530	ug/kg	U	8/11/97
SJS03-SD03-000	SVTCL	1,2-Dichlorobenzene		530	ug/kg	U	8/11/97
SJS03-SD03-000	SVTCL	1,3-Dichlorobenzene		530	ug/kg	U	8/11/97
SJS03-SD03-000	SVTCL	1,4-Dichlorobenzene		530	ug/kg	U	8/11/97
SJS03-SD03-000	SVTCL	2,2'-oxybis(1-Chloropropane		530	ug/kg	U	8/11/97
SJS03-SD03-000	SVTCL	2,4,5-Trichlorophenol		1300	ug/kg	U	8/11/97
SJS03-SD03-000	SVTCL	2,4,6-Trichlorophenol		530	ug/kg	U	8/11/97
SJS03-SD03-000	SVTCL	2,4-Dichlorophenol		530	ug/kg	U	8/11/97
SJS03-SD03-000	SVTCL	2,4-Dimethylphenol		530	ug/kg	U	8/11/97
SJS03-SD03-000	SVTCL	2,4-Dinitrophenol		1300	ug/kg	U	8/11/97
SJS03-SD03-000	SVTCL	2,4-Dinitrotoluene		530	ug/kg	U	8/11/97
SJS03-SD03-000	SVTCL	2,6-Dinitrotoluene		530	ug/kg	U	8/11/97
SJS03-SD03-000	SVTCL	2-Chloronaphthalene		530	ug/kg	U	8/11/97
SJS03-SD03-000	SVTCL	2-Chlorophenol		530	ug/kg	U	8/11/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS03-SD03-000	SVTCL	2-Methylnaphthalene		530	ug/kg	U	8/11/97
SJS03-SD03-000	SVTCL	2-Methylphenol		530	ug/kg	U	8/11/97
SJS03-SD03-000	SVTCL	2-Nitroaniline		1300	ug/kg	U	8/11/97
SJS03-SD03-000	SVTCL	2-Nitrophenol		530	ug/kg	U	8/11/97
SJS03-SD03-000	SVTCL	3,3'-Dichlorobenzidine		530	ug/kg	U	8/11/97
SJS03-SD03-000	SVTCL	3-Nitroaniline		1300	ug/kg	U	8/11/97
SJS03-SD03-000	SVTCL	4,6-Dinitro-2-Methylphenol		1300	ug/kg	U	8/11/97
SJS03-SD03-000	SVTCL	4-Bromophenyl phenylether		530	ug/kg	U	8/11/97
SJS03-SD03-000	SVTCL	4-Chloro-3-Methylphenol		530	ug/kg	U	8/11/97
SJS03-SD03-000	SVTCL	4-Chloroaniline		530	ug/kg	U	8/11/97
SJS03-SD03-000	SVTCL	4-Chlorophenyl-phenylether		530	ug/kg	U	8/11/97
SJS03-SD03-000	SVTCL	4-Methylphenol		530	ug/kg	U	8/11/97
SJS03-SD03-000	SVTCL	4-Nitroaniline		1300	ug/kg	U	8/11/97
SJS03-SD03-000	SVTCL	4-Nitrophenol		1300	ug/kg	U	8/11/97
SJS03-SD03-000	SVTCL	Acenaphthene		530	ug/kg	U	8/11/97
SJS03-SD03-000	SVTCL	Acenaphthylene	66	530	ug/kg	J	8/11/97
SJS03-SD03-000	SVTCL	Anthracene	56	530	ug/kg	J	8/11/97
SJS03-SD03-000	SVTCL	Benzo(a)Anthracene	250	530	ug/kg	J	8/11/97
SJS03-SD03-000	SVTCL	Benzo(a)Pyrene	220	530	ug/kg	J	8/11/97
SJS03-SD03-000	SVTCL	Benzo(b)Fluoranthene	450	530	ug/kg	J	8/11/97
SJS03-SD03-000	SVTCL	Benzo(g,h,i)Perylene	150	530	ug/kg	J	8/11/97
SJS03-SD03-000	SVTCL	Benzo(k)fluoranthene	170	530	ug/kg	J	8/11/97
SJS03-SD03-000	SVTCL	Bis(2-chloroethoxy)Methane		530	ug/kg	U	8/11/97
SJS03-SD03-000	SVTCL	Bis(2-chloroethyl)Ether		530	ug/kg	U	8/11/97
SJS03-SD03-000	SVTCL	Bis(2-Ethylhexyl)Phthalate	88	220	ug/kg	B	8/11/97
SJS03-SD03-000	SVTCL	Butylbenzylphthalate		530	ug/kg	U	8/11/97
SJS03-SD03-000	SVTCL	Carbazole		530	ug/kg	U	8/11/97
SJS03-SD03-000	SVTCL	Chrysene	270	530	ug/kg	J	8/11/97
SJS03-SD03-000	SVTCL	Di-n-Butylphthalate		530	ug/kg	U	8/11/97
SJS03-SD03-000	SVTCL	Di-n-Octyl Phthalate		530	ug/kg	U	8/11/97
SJS03-SD03-000	SVTCL	Dibenz(a,h)Anthracene	66	530	ug/kg	J	8/11/97
SJS03-SD03-000	SVTCL	Dibenzofuran		530	ug/kg	U	8/11/97
SJS03-SD03-000	SVTCL	Diethylphthalate		530	ug/kg	U	8/11/97
SJS03-SD03-000	SVTCL	Dimethyl Phthalate		530	ug/kg	U	8/11/97
SJS03-SD03-000	SVTCL	Fluoranthene	320	530	ug/kg	J	8/11/97
SJS03-SD03-000	SVTCL	Fluorene		530	ug/kg	U	8/11/97
SJS03-SD03-000	SVTCL	Hexachlorobenzene		530	ug/kg	U	8/11/97
SJS03-SD03-000	SVTCL	Hexachlorobutadiene		530	ug/kg	U	8/11/97
SJS03-SD03-000	SVTCL	Hexachlorocyclopentadien		530	ug/kg	U	8/11/97
SJS03-SD03-000	SVTCL	Hexachloroethane		530	ug/kg	U	8/11/97
SJS03-SD03-000	SVTCL	Indeno(1,2,3-cd)Pyrene	180	530	ug/kg	J	8/11/97
SJS03-SD03-000	SVTCL	Isophorone		530	ug/kg	U	8/11/97
SJS03-SD03-000	SVTCL	N-Nitroso-Di-n-Propylamine		530	ug/kg	U	8/11/97
SJS03-SD03-000	SVTCL	N-Nitrosodiphenylamine		530	ug/kg	U	8/11/97
SJS03-SD03-000	SVTCL	Naphthalene	110	530	ug/kg	J	8/11/97
SJS03-SD03-000	SVTCL	Nitrobenzene		530	ug/kg	U	8/11/97
SJS03-SD03-000	SVTCL	Pentachlorophenol		1300	ug/kg	U	8/11/97
SJS03-SD03-000	SVTCL	Phenanthrene	120	530	ug/kg	J	8/11/97
SJS03-SD03-000	SVTCL	Phenol		530	ug/kg	U	8/11/97
SJS03-SD03-000	SVTCL	Pyrene	290	530	ug/kg	J	8/11/97
SJS03-SD03-000	VCTCL	1,1,1-Trichloroethane		24	ug/kg	UJ	7/26/97
SJS03-SD03-000	VCTCL	1,1,2,2-Tetrachloroethane		24	ug/kg	UJ	7/26/97
SJS03-SD03-000	VCTCL	1,1,2-Trichloroethane		24	ug/kg	UJ	7/26/97
SJS03-SD03-000	VCTCL	1,1-Dichloroethane		24	ug/kg	UJ	7/26/97
SJS03-SD03-000	VCTCL	1,1-Dichloroethene		24	ug/kg	UJ	7/26/97
SJS03-SD03-000	VCTCL	1,2-Dichloroethane		24	ug/kg	UJ	7/26/97
SJS03-SD03-000	VCTCL	1,2-Dichloroethene (total)		24	ug/kg	UJ	7/26/97
SJS03-SD03-000	VCTCL	1,2-Dichloropropane		24	ug/kg	UJ	7/26/97
SJS03-SD03-000	VCTCL	2-Butanone		24	ug/kg	UJ	7/26/97
SJS03-SD03-000	VCTCL	2-Hexanone		24	ug/kg	UJ	7/26/97
SJS03-SD03-000	VCTCL	4-Methyl-2-Pentanone		24	ug/kg	UJ	7/26/97
SJS03-SD03-000	VCTCL	Acetone	64	24	ug/kg	B	7/26/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS03-SD03-000	VCTCL	Benzene		24	ug/kg	UJ	7/26/97
SJS03-SD03-000	VCTCL	Bromodichloromethane		24	ug/kg	UJ	7/26/97
SJS03-SD03-000	VCTCL	Bromoform		24	ug/kg	UJ	7/26/97
SJS03-SD03-000	VCTCL	Bromomethane		24	ug/kg	UJ	7/26/97
SJS03-SD03-000	VCTCL	Carbon Disulfide		24	ug/kg	UJ	7/26/97
SJS03-SD03-000	VCTCL	Carbon Tetrachloride		24	ug/kg	UJ	7/26/97
SJS03-SD03-000	VCTCL	Chlorobenzene		24	ug/kg	UJ	7/26/97
SJS03-SD03-000	VCTCL	Chloroethane		24	ug/kg	UJ	7/26/97
SJS03-SD03-000	VCTCL	Chloroform		24	ug/kg	UJ	7/26/97
SJS03-SD03-000	VCTCL	Chloromethane		24	ug/kg	UJ	7/26/97
SJS03-SD03-000	VCTCL	cis-1,3-Dichloropropene		24	ug/kg	UJ	7/26/97
SJS03-SD03-000	VCTCL	Dibromochloromethane		24	ug/kg	UJ	7/26/97
SJS03-SD03-000	VCTCL	Ethylbenzene		24	ug/kg	UJ	7/26/97
SJS03-SD03-000	VCTCL	Methylene Chloride	66	24	ug/kg	B	7/26/97
SJS03-SD03-000	VCTCL	Styrene		24	ug/kg	UJ	7/26/97
SJS03-SD03-000	VCTCL	Tetrachloroethene		24	ug/kg	UJ	7/26/97
SJS03-SD03-000	VCTCL	Toluene		24	ug/kg	UJ	7/26/97
SJS03-SD03-000	VCTCL	Total Xylenes		24	ug/kg	UJ	7/26/97
SJS03-SD03-000	VCTCL	Trans-1,3-Dichloropropene		24	ug/kg	UJ	7/26/97
SJS03-SD03-000	VCTCL	Trichloroethene		24	ug/kg	UJ	7/26/97
SJS03-SD03-000	VCTCL	Vinyl Chloride		24	ug/kg	UJ	7/26/97
SJS03-SD06-000	CTOTC	Total Organic Carbon	37100	54.3	mg/kg	L	7/16/97
SJS03-SD06-000	CTOTP	Total Phosphorous (as P)	3.2	1.3	mg/kg		7/18/97
SJS03-SD06-000	MCYAN	Aluminum	4240	8.54	mg/kg		7/11/97
SJS03-SD06-000	MCYAN	Antimony	2.4	0.39	mg/kg	L	7/16/97
SJS03-SD06-000	MCYAN	Arsenic	4.4	0.58	mg/kg		7/16/97
SJS03-SD06-000	MCYAN	Barium	96	0.39	mg/kg		7/11/97
SJS03-SD06-000	MCYAN	Beryllium		0.19	mg/kg	U	7/11/97
SJS03-SD06-000	MCYAN	Cadmium	0.77	0.1	mg/kg	J	7/16/97
SJS03-SD06-000	MCYAN	Calcium	3970	16.89	mg/kg	J	7/11/97
SJS03-SD06-000	MCYAN	Chromium	13.7	1.36	mg/kg		7/11/97
SJS03-SD06-000	MCYAN	Cobalt	3.7	1.55	mg/kg	J	7/11/97
SJS03-SD06-000	MCYAN	Copper	50.2	1.16	mg/kg		7/11/97
SJS03-SD06-000	MCYAN	Cyanide		0.54	mg/kg	U	7/8/97
SJS03-SD06-000	MCYAN	Iron	8310	3.3	mg/kg		7/11/97
SJS03-SD06-000	MCYAN	Lead	142	0.19	mg/kg		7/16/97
SJS03-SD06-000	MCYAN	Magnesium	953	35.13	mg/kg	J	7/11/97
SJS03-SD06-000	MCYAN	Manganese	158	0.39	mg/kg		7/11/97
SJS03-SD06-000	MCYAN	Mercury	0.15	0.05	mg/kg		7/15/97
SJS03-SD06-000	MCYAN	Nickel	8.1	1.36	mg/kg		7/11/97
SJS03-SD06-000	MCYAN	Potassium	577	43.09	mg/kg	J	7/11/97
SJS03-SD06-000	MCYAN	Selenium		0.58	mg/kg	U	7/16/97
SJS03-SD06-000	MCYAN	Silver	0.48	0.19	mg/kg	B	7/16/97
SJS03-SD06-000	MCYAN	Sodium	173	11.26	mg/kg	B	7/11/97
SJS03-SD06-000	MCYAN	Thallium		0.39	mg/kg	U	7/16/97
SJS03-SD06-000	MCYAN	Vanadium	26.9	1.75	mg/kg		7/11/97
SJS03-SD06-000	MCYAN	Zinc	252	0.97	mg/kg	L	7/11/97
SJS03-SD06-000	PSPCB	4,4'-DDD		3.3	ug/kg	U	7/27/97
SJS03-SD06-000	PSPCB	4,4'-DDE	5.6	3.3	ug/kg		7/27/97
SJS03-SD06-000	PSPCB	4,4'-DDT	16	3.3	ug/kg	J	7/27/97
SJS03-SD06-000	PSPCB	Aldrin		1.7	ug/kg	U	7/27/97
SJS03-SD06-000	PSPCB	alpha-BHC		1.7	ug/kg	U	7/27/97
SJS03-SD06-000	PSPCB	alpha-Chlordane		1.7	ug/kg	U	7/27/97
SJS03-SD06-000	PSPCB	Aroclor-1016		33	ug/kg	U	7/27/97
SJS03-SD06-000	PSPCB	Aroclor-1221		67	ug/kg	U	7/27/97
SJS03-SD06-000	PSPCB	Aroclor-1232		33	ug/kg	U	7/27/97
SJS03-SD06-000	PSPCB	Aroclor-1242		33	ug/kg	U	7/27/97
SJS03-SD06-000	PSPCB	Aroclor-1248		33	ug/kg	U	7/27/97
SJS03-SD06-000	PSPCB	Aroclor-1254		33	ug/kg	U	7/27/97
SJS03-SD06-000	PSPCB	Aroclor-1260	64	33	ug/kg	J	7/27/97
SJS03-SD06-000	PSPCB	beta-BHC		1.7	ug/kg	U	7/27/97
SJS03-SD06-000	PSPCB	delta-BHC		1.7	ug/kg	U	7/27/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS03-SD06-000	PSPCB	Dieldrin	6	3.3	ug/kg	J	7/27/97
SJS03-SD06-000	PSPCB	Endosulfan I		1.7	ug/kg	U	7/27/97
SJS03-SD06-000	PSPCB	Endosulfan II		3.3	ug/kg	U	7/27/97
SJS03-SD06-000	PSPCB	Endosulfan Sulfate		3.3	ug/kg	U	7/27/97
SJS03-SD06-000	PSPCB	Endrin		3.3	ug/kg	U	7/27/97
SJS03-SD06-000	PSPCB	Endrin Aldehyde		3.3	ug/kg	U	7/27/97
SJS03-SD06-000	PSPCB	Endrin Ketone		3.3	ug/kg	U	7/27/97
SJS03-SD06-000	PSPCB	gamma-BHC		1.7	ug/kg	U	7/27/97
SJS03-SD06-000	PSPCB	gamma-Chlordane		1.7	ug/kg	U	7/27/97
SJS03-SD06-000	PSPCB	Heptachlor		1.7	ug/kg	U	7/27/97
SJS03-SD06-000	PSPCB	Heptachlor Epoxide		1.7	ug/kg	U	7/27/97
SJS03-SD06-000	PSPCB	Methoxychlor		17	ug/kg	U	7/27/97
SJS03-SD06-000	PSPCB	Toxaphene		170	ug/kg	U	7/27/97
SJS03-SD06-000	SVTCL	1,2,4-Trichlorobenzene		1600	ug/kg	U	7/21/97
SJS03-SD06-000	SVTCL	1,2-Dichlorobenzene		1600	ug/kg	U	7/21/97
SJS03-SD06-000	SVTCL	1,3-Dichlorobenzene		1600	ug/kg	U	7/21/97
SJS03-SD06-000	SVTCL	1,4-Dichlorobenzene		1600	ug/kg	U	7/21/97
SJS03-SD06-000	SVTCL	2,2'-oxybis(1-Chloropropane		1600	ug/kg	U	7/21/97
SJS03-SD06-000	SVTCL	2,4,5-Trichlorophenol		4100	ug/kg	U	7/21/97
SJS03-SD06-000	SVTCL	2,4,6-Trichlorophenol		1600	ug/kg	U	7/21/97
SJS03-SD06-000	SVTCL	2,4-Dichlorophenol		1600	ug/kg	U	7/21/97
SJS03-SD06-000	SVTCL	2,4-Dimethylphenol		1600	ug/kg	U	7/21/97
SJS03-SD06-000	SVTCL	2,4-Dinitrophenol		4100	ug/kg	U	7/21/97
SJS03-SD06-000	SVTCL	2,4-Dinitrotoluene		1600	ug/kg	U	7/21/97
SJS03-SD06-000	SVTCL	2,6-Dinitrotoluene		1600	ug/kg	U	7/21/97
SJS03-SD06-000	SVTCL	2-Chloronaphthalene		1600	ug/kg	U	7/21/97
SJS03-SD06-000	SVTCL	2-Chlorophenol		1600	ug/kg	U	7/21/97
SJS03-SD06-000	SVTCL	2-Methylnaphthalene		1600	ug/kg	U	7/21/97
SJS03-SD06-000	SVTCL	2-Methylphenol		1600	ug/kg	U	7/21/97
SJS03-SD06-000	SVTCL	2-Nitroaniline		4100	ug/kg	U	7/21/97
SJS03-SD06-000	SVTCL	2-Nitrophenol		1600	ug/kg	U	7/21/97
SJS03-SD06-000	SVTCL	3,3'-Dichlorobenzidine		1600	ug/kg	U	7/21/97
SJS03-SD06-000	SVTCL	3-Nitroaniline		4100	ug/kg	U	7/21/97
SJS03-SD06-000	SVTCL	4,6-Dinitro-2-Methylphenol		4100	ug/kg	U	7/21/97
SJS03-SD06-000	SVTCL	4-Bromophenyl phenylether		1600	ug/kg	U	7/21/97
SJS03-SD06-000	SVTCL	4-Chloro-3-Methylphenol		1600	ug/kg	U	7/21/97
SJS03-SD06-000	SVTCL	4-Chloroaniline		1600	ug/kg	U	7/21/97
SJS03-SD06-000	SVTCL	4-Chlorophenyl-phenylether		1600	ug/kg	U	7/21/97
SJS03-SD06-000	SVTCL	4-Methylphenol		1600	ug/kg	U	7/21/97
SJS03-SD06-000	SVTCL	4-Nitroaniline		4100	ug/kg	U	7/21/97
SJS03-SD06-000	SVTCL	4-Nitrophenol		4100	ug/kg	U	7/21/97
SJS03-SD06-000	SVTCL	Acenaphthene		1600	ug/kg	U	7/21/97
SJS03-SD06-000	SVTCL	Acenaphthylene		1600	ug/kg	U	7/21/97
SJS03-SD06-000	SVTCL	Anthracene		1600	ug/kg	U	7/21/97
SJS03-SD06-000	SVTCL	Benzo(a)Anthracene	180	1600	ug/kg	J	7/21/97
SJS03-SD06-000	SVTCL	Benzo(a)Pyrene		1600	ug/kg	U	7/21/97
SJS03-SD06-000	SVTCL	Benzo(b)Fluoranthene	280	1600	ug/kg	J	7/21/97
SJS03-SD06-000	SVTCL	Benzo(g,h,i)Perylene		1600	ug/kg	U	7/21/97
SJS03-SD06-000	SVTCL	Benzo(k)Fluoranthene		1600	ug/kg	U	7/21/97
SJS03-SD06-000	SVTCL	Bis(2-chloroethoxy)Methane		1600	ug/kg	U	7/21/97
SJS03-SD06-000	SVTCL	Bis(2-chloroethyl)Ether		1600	ug/kg	U	7/21/97
SJS03-SD06-000	SVTCL	Bis(2-Ethylhexyl)Phthalate		1600	ug/kg	U	7/21/97
SJS03-SD06-000	SVTCL	Butylbenzylphthalate		1600	ug/kg	U	7/21/97
SJS03-SD06-000	SVTCL	Carbazole		1600	ug/kg	U	7/21/97
SJS03-SD06-000	SVTCL	Chrysene	240	1600	ug/kg	J	7/21/97
SJS03-SD06-000	SVTCL	Di-n-Butylphthalate		1600	ug/kg	U	7/21/97
SJS03-SD06-000	SVTCL	Di-n-Octyl Phthalate		1600	ug/kg	U	7/21/97
SJS03-SD06-000	SVTCL	Dibenz(a,h)Anthracene		1600	ug/kg	U	7/21/97
SJS03-SD06-000	SVTCL	Dibenzofuran		1600	ug/kg	U	7/21/97
SJS03-SD06-000	SVTCL	Diethylphthalate	340	1600	ug/kg	J	7/21/97
SJS03-SD06-000	SVTCL	Dimethyl Phthalate		1600	ug/kg	U	7/21/97
SJS03-SD06-000	SVTCL	Fluoranthene	200	1600	ug/kg	J	7/21/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS03-SD06-000	SVTCL	Fluorene		1600	ug/kg	U	7/21/97
SJS03-SD06-000	SVTCL	Hexachlorobenzene		1600	ug/kg	U	7/21/97
SJS03-SD06-000	SVTCL	Hexachlorobutadiene		1600	ug/kg	U	7/21/97
SJS03-SD06-000	SVTCL	Hexachlorocyclopentadien		1600	ug/kg	U	7/21/97
SJS03-SD06-000	SVTCL	Hexachloroethane		1600	ug/kg	U	7/21/97
SJS03-SD06-000	SVTCL	Indeno(1,2,3-cd)Pyrene		1600	ug/kg	U	7/21/97
SJS03-SD06-000	SVTCL	Isophorone		1600	ug/kg	U	7/21/97
SJS03-SD06-000	SVTCL	N-Nitroso-Di-n-Propylamine		1600	ug/kg	U	7/21/97
SJS03-SD06-000	SVTCL	N-Nitrosodiphenylamine		1600	ug/kg	U	7/21/97
SJS03-SD06-000	SVTCL	Naphthalene		1600	ug/kg	U	7/21/97
SJS03-SD06-000	SVTCL	Nitrobenzene		1600	ug/kg	U	7/21/97
SJS03-SD06-000	SVTCL	Pentachlorophenol		4100	ug/kg	U	7/21/97
SJS03-SD06-000	SVTCL	Phenanthrene		1600	ug/kg	U	7/21/97
SJS03-SD06-000	SVTCL	Phenol		1600	ug/kg	U	7/21/97
SJS03-SD06-000	SVTCL	Pyrene	220	1600	ug/kg	J	7/21/97
SJS03-SD06-000	VCTCL	1,1,1-Trichloroethane		11	ug/kg	UJ	7/8/97
SJS03-SD06-000	VCTCL	1,1,2,2-Tetrachloroethane		11	ug/kg	UJ	7/8/97
SJS03-SD06-000	VCTCL	1,1,2-Trichloroethane		11	ug/kg	UJ	7/8/97
SJS03-SD06-000	VCTCL	1,1-Dichloroethane		11	ug/kg	U	7/8/97
SJS03-SD06-000	VCTCL	1,1-Dichloroethene		11	ug/kg	U	7/8/97
SJS03-SD06-000	VCTCL	1,2-Dichloroethane		11	ug/kg	U	7/8/97
SJS03-SD06-000	VCTCL	1,2-Dichloroethene (total)		11	ug/kg	U	7/8/97
SJS03-SD06-000	VCTCL	1,2-Dichloropropane		11	ug/kg	UJ	7/8/97
SJS03-SD06-000	VCTCL	2-Butanone		11	ug/kg	U	7/8/97
SJS03-SD06-000	VCTCL	2-Hexanone		11	ug/kg	UJ	7/8/97
SJS03-SD06-000	VCTCL	4-Methyl-2-Pentanone		11	ug/kg	UJ	7/8/97
SJS03-SD06-000	VCTCL	Acetone		11	ug/kg	U	7/8/97
SJS03-SD06-000	VCTCL	Benzene		11	ug/kg	UJ	7/8/97
SJS03-SD06-000	VCTCL	Bromodichloromethane		11	ug/kg	UJ	7/8/97
SJS03-SD06-000	VCTCL	Bromoform		11	ug/kg	UJ	7/8/97
SJS03-SD06-000	VCTCL	Bromomethane		11	ug/kg	U	7/8/97
SJS03-SD06-000	VCTCL	Carbon Disulfide		11	ug/kg	U	7/8/97
SJS03-SD06-000	VCTCL	Carbon Tetrachloride		11	ug/kg	UJ	7/8/97
SJS03-SD06-000	VCTCL	Chlorobenzene		11	ug/kg	UJ	7/8/97
SJS03-SD06-000	VCTCL	Chloroethane		11	ug/kg	U	7/8/97
SJS03-SD06-000	VCTCL	Chloroform		11	ug/kg	U	7/8/97
SJS03-SD06-000	VCTCL	Chloromethane		11	ug/kg	U	7/8/97
SJS03-SD06-000	VCTCL	cis-1,3-Dichloropropene		11	ug/kg	UJ	7/8/97
SJS03-SD06-000	VCTCL	Dibromochloromethane		11	ug/kg	UJ	7/8/97
SJS03-SD06-000	VCTCL	Ethylbenzene		11	ug/kg	UJ	7/8/97
SJS03-SD06-000	VCTCL	Methylene Chloride	100	11	ug/kg		7/8/97
SJS03-SD06-000	VCTCL	Styrene		11	ug/kg	UJ	7/8/97
SJS03-SD06-000	VCTCL	Tetrachloroethene		11	ug/kg	UJ	7/8/97
SJS03-SD06-000	VCTCL	Toluene	4	11	ug/kg	J	7/8/97
SJS03-SD06-000	VCTCL	Total Xylenes		11	ug/kg	UJ	7/8/97
SJS03-SD06-000	VCTCL	Trans-1,3-Dichloropropene		11	ug/kg	UJ	7/8/97
SJS03-SD06-000	VCTCL	Trichloroethene		11	ug/kg	UJ	7/8/97
SJS03-SD06-000	VCTCL	Vinyl Chloride		11	ug/kg	U	7/8/97
SJS03-SS01-000	CTOTP	Total Phosphorous (as P)	23	10	mg/kg		7/14/97
SJS03-SS01-000	MCYAN	Aluminum	6700	8.39	mg/kg		7/2/97
SJS03-SS01-000	MCYAN	Antimony		0.38	mg/kg	UL	7/2/97
SJS03-SS01-000	MCYAN	Arsenic	1.3	0.57	mg/kg	J	7/2/97
SJS03-SS01-000	MCYAN	Barium	45.4	0.38	mg/kg		7/2/97
SJS03-SS01-000	MCYAN	Beryllium	0.31	0.19	mg/kg	J	7/2/97
SJS03-SS01-000	MCYAN	Cadmium		0.1	mg/kg	U	7/2/97
SJS03-SS01-000	MCYAN	Calcium	3090	16.59	mg/kg		7/2/97
SJS03-SS01-000	MCYAN	Chromium	6.4	1.34	mg/kg		7/2/97
SJS03-SS01-000	MCYAN	Cobalt	7.4	1.53	mg/kg	J	7/2/97
SJS03-SS01-000	MCYAN	Copper	10.3	1.14	mg/kg		7/2/97
SJS03-SS01-000	MCYAN	Cyanide		0.5	mg/kg	U	7/2/97
SJS03-SS01-000	MCYAN	Iron	12700	3.24	mg/kg		7/2/97
SJS03-SS01-000	MCYAN	Lead	6.7	0.19	mg/kg	J	7/2/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS03-SS01-000	MCYAN	Magnesium	4690	34.52	mg/kg		7/2/97
SJS03-SS01-000	MCYAN	Manganese	274	0.38	mg/kg		7/2/97
SJS03-SS01-000	MCYAN	Mercury		0.04	mg/kg	U	6/30/97
SJS03-SS01-000	MCYAN	Nickel	7.1	1.34	mg/kg	J	7/2/97
SJS03-SS01-000	MCYAN	Potassium	4030	42.34	mg/kg		7/2/97
SJS03-SS01-000	MCYAN	Selenium		0.57	mg/kg	U	7/3/97
SJS03-SS01-000	MCYAN	Silver	0.67	0.19	mg/kg	B	7/2/97
SJS03-SS01-000	MCYAN	Sodium	77.2	11.06	mg/kg	B	7/2/97
SJS03-SS01-000	MCYAN	Thallium		0.38	mg/kg	U	7/2/97
SJS03-SS01-000	MCYAN	Vanadium	30.7	1.72	mg/kg		7/2/97
SJS03-SS01-000	MCYAN	Zinc	57	0.95	mg/kg		7/2/97
SJS03-SS01-000	PSPCB	4,4'-DDD		3.4	ug/kg	U	7/13/97
SJS03-SS01-000	PSPCB	4,4'-DDE		3.4	ug/kg	U	7/13/97
SJS03-SS01-000	PSPCB	4,4'-DDT		3.4	ug/kg	U	7/13/97
SJS03-SS01-000	PSPCB	Aldrin		1.7	ug/kg	U	7/13/97
SJS03-SS01-000	PSPCB	alpha-BHC		1.7	ug/kg	U	7/13/97
SJS03-SS01-000	PSPCB	alpha-Chlordane		1.7	ug/kg	U	7/13/97
SJS03-SS01-000	PSPCB	Aroclor-1016		34	ug/kg	U	7/13/97
SJS03-SS01-000	PSPCB	Aroclor-1221		69	ug/kg	U	7/13/97
SJS03-SS01-000	PSPCB	Aroclor-1232		34	ug/kg	U	7/13/97
SJS03-SS01-000	PSPCB	Aroclor-1242		34	ug/kg	U	7/13/97
SJS03-SS01-000	PSPCB	Aroclor-1248		34	ug/kg	U	7/13/97
SJS03-SS01-000	PSPCB	Aroclor-1254		34	ug/kg	U	7/13/97
SJS03-SS01-000	PSPCB	Aroclor-1260		34	ug/kg	U	7/13/97
SJS03-SS01-000	PSPCB	beta-BHC		1.7	ug/kg	U	7/13/97
SJS03-SS01-000	PSPCB	delta-BHC		1.7	ug/kg	U	7/13/97
SJS03-SS01-000	PSPCB	Dieldrin		3.4	ug/kg	U	7/13/97
SJS03-SS01-000	PSPCB	Endosulfan I		1.7	ug/kg	U	7/13/97
SJS03-SS01-000	PSPCB	Endosulfan II		3.4	ug/kg	U	7/13/97
SJS03-SS01-000	PSPCB	Endosulfan Sulfate		3.4	ug/kg	U	7/13/97
SJS03-SS01-000	PSPCB	Endrin		3.4	ug/kg	U	7/13/97
SJS03-SS01-000	PSPCB	Endrin Aldehyde		3.4	ug/kg	U	7/13/97
SJS03-SS01-000	PSPCB	Endrin Ketone		3.4	ug/kg	U	7/13/97
SJS03-SS01-000	PSPCB	gamma-BHC		1.7	ug/kg	U	7/13/97
SJS03-SS01-000	PSPCB	gamma-Chlordane		1.7	ug/kg	U	7/13/97
SJS03-SS01-000	PSPCB	Heptachlor		1.7	ug/kg	U	7/13/97
SJS03-SS01-000	PSPCB	Heptachlor Epoxide		1.7	ug/kg	U	7/13/97
SJS03-SS01-000	PSPCB	Methoxychlor		17	ug/kg	U	7/13/97
SJS03-SS01-000	PSPCB	Toxaphene		170	ug/kg	U	7/13/97
SJS03-SS01-000	SVTCL	1,2,4-Trichlorobenzene		340	ug/kg	UJ	7/17/97
SJS03-SS01-000	SVTCL	1,2-Dichlorobenzene		340	ug/kg	UJ	7/17/97
SJS03-SS01-000	SVTCL	1,3-Dichlorobenzene		340	ug/kg	UJ	7/17/97
SJS03-SS01-000	SVTCL	1,4-Dichlorobenzene		340	ug/kg	UJ	7/17/97
SJS03-SS01-000	SVTCL	2,2'-oxybis(1-Chloropropane		340	ug/kg	UJ	7/17/97
SJS03-SS01-000	SVTCL	2,4,5-Trichlorophenol		840	ug/kg	UJ	7/17/97
SJS03-SS01-000	SVTCL	2,4,6-Trichlorophenol		340	ug/kg	UJ	7/17/97
SJS03-SS01-000	SVTCL	2,4-Dichlorophenol		340	ug/kg	UJ	7/17/97
SJS03-SS01-000	SVTCL	2,4-Dimethylphenol		340	ug/kg	UJ	7/17/97
SJS03-SS01-000	SVTCL	2,4-Dinitrophenol		840	ug/kg	UJ	7/17/97
SJS03-SS01-000	SVTCL	2,4-Dinitrotoluene		340	ug/kg	UJ	7/17/97
SJS03-SS01-000	SVTCL	2,6-Dinitrotoluene		340	ug/kg	UJ	7/17/97
SJS03-SS01-000	SVTCL	2-Chloronaphthalene		340	ug/kg	UJ	7/17/97
SJS03-SS01-000	SVTCL	2-Chlorophenol		340	ug/kg	UJ	7/17/97
SJS03-SS01-000	SVTCL	2-Methylnaphthalene		340	ug/kg	UJ	7/17/97
SJS03-SS01-000	SVTCL	2-Methylphenol		340	ug/kg	UJ	7/17/97
SJS03-SS01-000	SVTCL	2-Nitroaniline		840	ug/kg	UJ	7/17/97
SJS03-SS01-000	SVTCL	2-Nitrophenol		340	ug/kg	UJ	7/17/97
SJS03-SS01-000	SVTCL	3,3'-Dichlorobenzidine		340	ug/kg	UJ	7/17/97
SJS03-SS01-000	SVTCL	3-Nitroaniline		840	ug/kg	UJ	7/17/97
SJS03-SS01-000	SVTCL	4,6-Dinitro-2-Methylphenol		840	ug/kg	UJ	7/17/97
SJS03-SS01-000	SVTCL	4-Bromophenyl phenylether		340	ug/kg	UJ	7/17/97
SJS03-SS01-000	SVTCL	4-Chloro-3-Methylphenol		340	ug/kg	UJ	7/17/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS03-SS01-000	SVTCL	4-Chloroaniline		340	ug/kg	UJ	7/17/97
SJS03-SS01-000	SVTCL	4-Chlorophenyl-phenylether		340	ug/kg	UJ	7/17/97
SJS03-SS01-000	SVTCL	4-Methylphenol		340	ug/kg	UJ	7/17/97
SJS03-SS01-000	SVTCL	4-Nitroaniline		840	ug/kg	UJ	7/17/97
SJS03-SS01-000	SVTCL	4-Nitrophenol		840	ug/kg	UJ	7/17/97
SJS03-SS01-000	SVTCL	Acenaphthene		340	ug/kg	UJ	7/17/97
SJS03-SS01-000	SVTCL	Acenaphthylene		340	ug/kg	UJ	7/17/97
SJS03-SS01-000	SVTCL	Anthracene		340	ug/kg	UJ	7/17/97
SJS03-SS01-000	SVTCL	Benzo(a)Anthracene		340	ug/kg	UJ	7/17/97
SJS03-SS01-000	SVTCL	Benzo(a)Pyrene		340	ug/kg	UJ	7/17/97
SJS03-SS01-000	SVTCL	Benzo(b)Fluoranthene	50	340	ug/kg	J	7/17/97
SJS03-SS01-000	SVTCL	Benzo(g,h,i)Perylene		340	ug/kg	UJ	7/17/97
SJS03-SS01-000	SVTCL	Benzo(k)Fluoranthene		340	ug/kg	UJ	7/17/97
SJS03-SS01-000	SVTCL	Bis(2-chloroethoxy)Methane		340	ug/kg	UJ	7/17/97
SJS03-SS01-000	SVTCL	Bis(2-chloroethyl)Ether		340	ug/kg	UJ	7/17/97
SJS03-SS01-000	SVTCL	Bis(2-Ethylhexyl)Phthalate	96	66	ug/kg	B	7/17/97
SJS03-SS01-000	SVTCL	Butylbenzylphthalate		340	ug/kg	UJ	7/17/97
SJS03-SS01-000	SVTCL	Carbazole		340	ug/kg	UJ	7/17/97
SJS03-SS01-000	SVTCL	Chrysene	68	340	ug/kg	J	7/17/97
SJS03-SS01-000	SVTCL	Di-n-Butylphthalate		340	ug/kg	UJ	7/17/97
SJS03-SS01-000	SVTCL	Di-n-Octyl Phthalate		340	ug/kg	UJ	7/17/97
SJS03-SS01-000	SVTCL	Dibenz(a,h)Anthracene		340	ug/kg	UJ	7/17/97
SJS03-SS01-000	SVTCL	Dibenzofuran		340	ug/kg	UJ	7/17/97
SJS03-SS01-000	SVTCL	Diethylphthalate		340	ug/kg	UJ	7/17/97
SJS03-SS01-000	SVTCL	Dimethyl Phthalate		340	ug/kg	UJ	7/17/97
SJS03-SS01-000	SVTCL	Fluoranthene		340	ug/kg	UJ	7/17/97
SJS03-SS01-000	SVTCL	Fluorene		340	ug/kg	UJ	7/17/97
SJS03-SS01-000	SVTCL	Hexachlorobenzene		340	ug/kg	UJ	7/17/97
SJS03-SS01-000	SVTCL	Hexachlorobutadiene		340	ug/kg	UJ	7/17/97
SJS03-SS01-000	SVTCL	Hexachlorocyclopentadien		340	ug/kg	UJ	7/17/97
SJS03-SS01-000	SVTCL	Hexachloroethane		340	ug/kg	UJ	7/17/97
SJS03-SS01-000	SVTCL	Indeno(1,2,3-cd)Pyrene		340	ug/kg	UJ	7/17/97
SJS03-SS01-000	SVTCL	Isophorone		340	ug/kg	UJ	7/17/97
SJS03-SS01-000	SVTCL	N-Nitroso-Di-n-Propylamine		340	ug/kg	UJ	7/17/97
SJS03-SS01-000	SVTCL	N-Nitrosodiphenylamine		340	ug/kg	UJ	7/17/97
SJS03-SS01-000	SVTCL	Naphthalene		340	ug/kg	UJ	7/17/97
SJS03-SS01-000	SVTCL	Nitrobenzene		340	ug/kg	UJ	7/17/97
SJS03-SS01-000	SVTCL	Pentachlorophenol		840	ug/kg	UJ	7/17/97
SJS03-SS01-000	SVTCL	Phenanthrene		340	ug/kg	UJ	7/17/97
SJS03-SS01-000	SVTCL	Phenol		340	ug/kg	UJ	7/17/97
SJS03-SS01-000	SVTCL	Pyrene	110	340	ug/kg	J	7/17/97
SJS03-SS01-000	VCTCL	1,1,1-Trichloroethane		10	ug/kg	U	6/30/97
SJS03-SS01-000	VCTCL	1,1,2,2-Tetrachloroethane		10	ug/kg	U	6/30/97
SJS03-SS01-000	VCTCL	1,1,2-Trichloroethane		10	ug/kg	U	6/30/97
SJS03-SS01-000	VCTCL	1,1-Dichloroethane		10	ug/kg	U	6/30/97
SJS03-SS01-000	VCTCL	1,1-Dichloroethene		10	ug/kg	U	6/30/97
SJS03-SS01-000	VCTCL	1,2-Dichloroethane		10	ug/kg	U	6/30/97
SJS03-SS01-000	VCTCL	1,2-Dichloroethene (total)		10	ug/kg	U	6/30/97
SJS03-SS01-000	VCTCL	1,2-Dichloropropane		10	ug/kg	U	6/30/97
SJS03-SS01-000	VCTCL	2-Butanone		10	ug/kg	U	6/30/97
SJS03-SS01-000	VCTCL	2-Hexanone		10	ug/kg	U	6/30/97
SJS03-SS01-000	VCTCL	4-Methyl-2-Pentanone		10	ug/kg	U	6/30/97
SJS03-SS01-000	VCTCL	Acetone	5	10	ug/kg	B	6/30/97
SJS03-SS01-000	VCTCL	Benzene		10	ug/kg	U	6/30/97
SJS03-SS01-000	VCTCL	Bromodichloromethane		10	ug/kg	U	6/30/97
SJS03-SS01-000	VCTCL	Bromoform		10	ug/kg	U	6/30/97
SJS03-SS01-000	VCTCL	Bromomethane		10	ug/kg	U	6/30/97
SJS03-SS01-000	VCTCL	Carbon Disulfide		10	ug/kg	U	6/30/97
SJS03-SS01-000	VCTCL	Carbon Tetrachloride		10	ug/kg	U	6/30/97
SJS03-SS01-000	VCTCL	Chlorobenzene		10	ug/kg	U	6/30/97
SJS03-SS01-000	VCTCL	Chloroethane		10	ug/kg	U	6/30/97
SJS03-SS01-000	VCTCL	Chloroform		10	ug/kg	U	6/30/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS03-SS01-000	VCTCL	Chloromethane		10	ug/kg	U	6/30/97
SJS03-SS01-000	VCTCL	cis-1,3-Dichloropropene		10	ug/kg	U	6/30/97
SJS03-SS01-000	VCTCL	Dibromochloromethane		10	ug/kg	U	6/30/97
SJS03-SS01-000	VCTCL	Ethylbenzene		10	ug/kg	U	6/30/97
SJS03-SS01-000	VCTCL	Methylene Chloride	15	10	ug/kg	B	6/30/97
SJS03-SS01-000	VCTCL	Styrene		10	ug/kg	U	6/30/97
SJS03-SS01-000	VCTCL	Tetrachloroethene	2	10	ug/kg	J	6/30/97
SJS03-SS01-000	VCTCL	Toluene		10	ug/kg	U	6/30/97
SJS03-SS01-000	VCTCL	Total Xylenes		10	ug/kg	U	6/30/97
SJS03-SS01-000	VCTCL	Trans-1,3-Dichloropropene		10	ug/kg	U	6/30/97
SJS03-SS01-000	VCTCL	Trichloroethene		10	ug/kg	U	6/30/97
SJS03-SS01-000	VCTCL	Vinyl Chloride		10	ug/kg	U	6/30/97
SJS03-SS02-000	CTOTP	Total Phosphorous (as P)	4	1.2	mg/kg		7/14/97
SJS03-SS02-000	MCYAN	Aluminum	3310	8.27	mg/kg		7/2/97
SJS03-SS02-000	MCYAN	Antimony		0.38	mg/kg	UL	7/2/97
SJS03-SS02-000	MCYAN	Arsenic	2.2	0.56	mg/kg		7/2/97
SJS03-SS02-000	MCYAN	Barium	14.6	0.38	mg/kg	J	7/2/97
SJS03-SS02-000	MCYAN	Beryllium		0.19	mg/kg	U	7/2/97
SJS03-SS02-000	MCYAN	Cadmium	0.47	0.09	mg/kg	J	7/2/97
SJS03-SS02-000	MCYAN	Calcium	702	16.36	mg/kg	J	7/2/97
SJS03-SS02-000	MCYAN	Chromium	6.8	1.32	mg/kg		7/2/97
SJS03-SS02-000	MCYAN	Cobalt		1.5	mg/kg	U	7/2/97
SJS03-SS02-000	MCYAN	Copper	5.3	1.13	mg/kg		7/2/97
SJS03-SS02-000	MCYAN	Cyanide		0.5	mg/kg	U	7/2/97
SJS03-SS02-000	MCYAN	Iron	3440	3.2	mg/kg		7/2/97
SJS03-SS02-000	MCYAN	Lead	11.4	0.19	mg/kg	J	7/2/97
SJS03-SS02-000	MCYAN	Magnesium	283	34.03	mg/kg	J	7/2/97
SJS03-SS02-000	MCYAN	Manganese	16	0.38	mg/kg		7/2/97
SJS03-SS02-000	MCYAN	Mercury		0.05	mg/kg	U	6/30/97
SJS03-SS02-000	MCYAN	Nickel		1.32	mg/kg	U	7/2/97
SJS03-SS02-000	MCYAN	Potassium	241	41.74	mg/kg	J	7/2/97
SJS03-SS02-000	MCYAN	Selenium		0.56	mg/kg	U	7/3/97
SJS03-SS02-000	MCYAN	Silver		0.19	mg/kg	U	7/2/97
SJS03-SS02-000	MCYAN	Sodium	43.5	10.9	mg/kg	B	7/2/97
SJS03-SS02-000	MCYAN	Thallium		0.38	mg/kg	U	7/2/97
SJS03-SS02-000	MCYAN	Vanadium	7.9	1.69	mg/kg	J	7/2/97
SJS03-SS02-000	MCYAN	Zinc	15.5	0.94	mg/kg		7/2/97
SJS03-SS02-000	PSPCB	4,4'-DDD		3.4	ug/kg	U	7/13/97
SJS03-SS02-000	PSPCB	4,4'-DDE		3.4	ug/kg	U	7/13/97
SJS03-SS02-000	PSPCB	4,4'-DDT		3.4	ug/kg	U	7/13/97
SJS03-SS02-000	PSPCB	Aldrin		1.7	ug/kg	U	7/13/97
SJS03-SS02-000	PSPCB	alpha-BHC		1.7	ug/kg	U	7/13/97
SJS03-SS02-000	PSPCB	alpha-Chlordane		1.7	ug/kg	U	7/13/97
SJS03-SS02-000	PSPCB	Aroclor-1016		34	ug/kg	U	7/13/97
SJS03-SS02-000	PSPCB	Aroclor-1221		68	ug/kg	U	7/13/97
SJS03-SS02-000	PSPCB	Aroclor-1232		34	ug/kg	U	7/13/97
SJS03-SS02-000	PSPCB	Aroclor-1242		34	ug/kg	U	7/13/97
SJS03-SS02-000	PSPCB	Aroclor-1248		34	ug/kg	U	7/13/97
SJS03-SS02-000	PSPCB	Aroclor-1254		34	ug/kg	U	7/13/97
SJS03-SS02-000	PSPCB	Aroclor-1260		34	ug/kg	U	7/13/97
SJS03-SS02-000	PSPCB	beta-BHC		1.7	ug/kg	U	7/13/97
SJS03-SS02-000	PSPCB	delta-BHC		1.7	ug/kg	U	7/13/97
SJS03-SS02-000	PSPCB	Dieldrin		3.4	ug/kg	U	7/13/97
SJS03-SS02-000	PSPCB	Endosulfan I		1.7	ug/kg	U	7/13/97
SJS03-SS02-000	PSPCB	Endosulfan II		3.4	ug/kg	U	7/13/97
SJS03-SS02-000	PSPCB	Endosulfan Sulfate		3.4	ug/kg	U	7/13/97
SJS03-SS02-000	PSPCB	Endrin		3.4	ug/kg	U	7/13/97
SJS03-SS02-000	PSPCB	Endrin Aldehyde		3.4	ug/kg	U	7/13/97
SJS03-SS02-000	PSPCB	Endrin Ketone		3.4	ug/kg	U	7/13/97
SJS03-SS02-000	PSPCB	gamma-BHC		1.7	ug/kg	U	7/13/97
SJS03-SS02-000	PSPCB	gamma-Chlordane		1.7	ug/kg	U	7/13/97
SJS03-SS02-000	PSPCB	Heptachlor		1.7	ug/kg	U	7/13/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS03-SS02-000	PSPCB	Heptachlor Epoxide		1.7	ug/kg	U	7/13/97
SJS03-SS02-000	PSPCB	Methoxychlor		17	ug/kg	U	7/13/97
SJS03-SS02-000	PSPCB	Toxaphene		170	ug/kg	U	7/13/97
SJS03-SS02-000	SVTCL	1,2,4-Trichlorobenzene		340	ug/kg	U	7/3/97
SJS03-SS02-000	SVTCL	1,2-Dichlorobenzene		340	ug/kg	U	7/3/97
SJS03-SS02-000	SVTCL	1,3-Dichlorobenzene		340	ug/kg	U	7/3/97
SJS03-SS02-000	SVTCL	1,4-Dichlorobenzene		340	ug/kg	U	7/3/97
SJS03-SS02-000	SVTCL	2,2'-oxybis(1-Chloropropane		340	ug/kg	U	7/3/97
SJS03-SS02-000	SVTCL	2,4,5-Trichlorophenol		840	ug/kg	U	7/3/97
SJS03-SS02-000	SVTCL	2,4,6-Trichlorophenol		340	ug/kg	U	7/3/97
SJS03-SS02-000	SVTCL	2,4-Dichlorophenol		340	ug/kg	U	7/3/97
SJS03-SS02-000	SVTCL	2,4-Dimethylphenol		340	ug/kg	U	7/3/97
SJS03-SS02-000	SVTCL	2,4-Dinitrophenol		840	ug/kg	U	7/3/97
SJS03-SS02-000	SVTCL	2,4-Dinitrotoluene		340	ug/kg	U	7/3/97
SJS03-SS02-000	SVTCL	2,6-Dinitrotoluene		340	ug/kg	U	7/3/97
SJS03-SS02-000	SVTCL	2-Chloronaphthalene		340	ug/kg	U	7/3/97
SJS03-SS02-000	SVTCL	2-Chlorophenol		340	ug/kg	U	7/3/97
SJS03-SS02-000	SVTCL	2-Methylnaphthalene		340	ug/kg	U	7/3/97
SJS03-SS02-000	SVTCL	2-Methylphenol		340	ug/kg	U	7/3/97
SJS03-SS02-000	SVTCL	2-Nitroaniline		840	ug/kg	U	7/3/97
SJS03-SS02-000	SVTCL	2-Nitrophenol		340	ug/kg	U	7/3/97
SJS03-SS02-000	SVTCL	3,3'-Dichlorobenzidine		340	ug/kg	U	7/3/97
SJS03-SS02-000	SVTCL	3-Nitroaniline		840	ug/kg	U	7/3/97
SJS03-SS02-000	SVTCL	4,6-Dinitro-2-Methylphenol		840	ug/kg	U	7/3/97
SJS03-SS02-000	SVTCL	4-Bromophenyl phenylether		340	ug/kg	U	7/3/97
SJS03-SS02-000	SVTCL	4-Chloro-3-Methylphenol		340	ug/kg	U	7/3/97
SJS03-SS02-000	SVTCL	4-Chloroaniline		340	ug/kg	U	7/3/97
SJS03-SS02-000	SVTCL	4-Chlorophenyl-phenylether		340	ug/kg	U	7/3/97
SJS03-SS02-000	SVTCL	4-Methylphenol		340	ug/kg	U	7/3/97
SJS03-SS02-000	SVTCL	4-Nitroaniline		840	ug/kg	U	7/3/97
SJS03-SS02-000	SVTCL	4-Nitrophenol		840	ug/kg	U	7/3/97
SJS03-SS02-000	SVTCL	Acenaphthene		340	ug/kg	U	7/3/97
SJS03-SS02-000	SVTCL	Acenaphthylene		340	ug/kg	U	7/3/97
SJS03-SS02-000	SVTCL	Anthracene		340	ug/kg	U	7/3/97
SJS03-SS02-000	SVTCL	Benzo(a)Anthracene	36	340	ug/kg	J	7/3/97
SJS03-SS02-000	SVTCL	Benzo(a)Pyrene	38	340	ug/kg	J	7/3/97
SJS03-SS02-000	SVTCL	Benzo(b)Fluoranthene	62	340	ug/kg	J	7/3/97
SJS03-SS02-000	SVTCL	Benzo(g,h,i)Perylene		340	ug/kg	U	7/3/97
SJS03-SS02-000	SVTCL	Benzo(k)Fluoranthene		340	ug/kg	U	7/3/97
SJS03-SS02-000	SVTCL	Bis(2-chloroethoxy)Methane		340	ug/kg	U	7/3/97
SJS03-SS02-000	SVTCL	Bis(2-chloroethyl)Ether		340	ug/kg	U	7/3/97
SJS03-SS02-000	SVTCL	Bis(2-Ethylhexyl)Phthalate		340	ug/kg	U	7/3/97
SJS03-SS02-000	SVTCL	Butylbenzylphthalate		340	ug/kg	U	7/3/97
SJS03-SS02-000	SVTCL	Carbazole		340	ug/kg	U	7/3/97
SJS03-SS02-000	SVTCL	Chrysene	41	340	ug/kg	J	7/3/97
SJS03-SS02-000	SVTCL	Di-n-Butylphthalate		340	ug/kg	U	7/3/97
SJS03-SS02-000	SVTCL	Di-n-Octyl Phthalate		340	ug/kg	U	7/3/97
SJS03-SS02-000	SVTCL	Dibenz(a,h)Anthracene		340	ug/kg	U	7/3/97
SJS03-SS02-000	SVTCL	Dibenzofuran		340	ug/kg	U	7/3/97
SJS03-SS02-000	SVTCL	Diethylphthalate		340	ug/kg	U	7/3/97
SJS03-SS02-000	SVTCL	Dimethyl Phthalate		340	ug/kg	U	7/3/97
SJS03-SS02-000	SVTCL	Fluoranthene	63	340	ug/kg	J	7/3/97
SJS03-SS02-000	SVTCL	Fluorene		340	ug/kg	U	7/3/97
SJS03-SS02-000	SVTCL	Hexachlorobenzene		340	ug/kg	U	7/3/97
SJS03-SS02-000	SVTCL	Hexachlorobutadiene		340	ug/kg	U	7/3/97
SJS03-SS02-000	SVTCL	Hexachlorocyclopentadien		340	ug/kg	U	7/3/97
SJS03-SS02-000	SVTCL	Hexachloroethane		340	ug/kg	U	7/3/97
SJS03-SS02-000	SVTCL	Indeno(1,2,3-cd)Pyrene		340	ug/kg	U	7/3/97
SJS03-SS02-000	SVTCL	Isophorone		340	ug/kg	U	7/3/97
SJS03-SS02-000	SVTCL	N-Nitroso-Di-n-Propylamine		340	ug/kg	U	7/3/97
SJS03-SS02-000	SVTCL	N-Nitrosodiphenylamine		340	ug/kg	U	7/3/97
SJS03-SS02-000	SVTCL	Naphthalene		340	ug/kg	U	7/3/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS03-SS02-000	SVTCL	Nitrobenzene		340	ug/kg	U	7/3/97
SJS03-SS02-000	SVTCL	Pentachlorophenol		840	ug/kg	U	7/3/97
SJS03-SS02-000	SVTCL	Phenanthrene		340	ug/kg	U	7/3/97
SJS03-SS02-000	SVTCL	Phenol		340	ug/kg	U	7/3/97
SJS03-SS02-000	SVTCL	Pyrene	54	340	ug/kg	J	7/3/97
SJS03-SS02-000	VCTCL	1,1,1-Trichloroethane		10	ug/kg	U	6/30/97
SJS03-SS02-000	VCTCL	1,1,2,2-Tetrachloroethane		10	ug/kg	U	6/30/97
SJS03-SS02-000	VCTCL	1,1,2-Trichloroethane		10	ug/kg	U	6/30/97
SJS03-SS02-000	VCTCL	1,1-Dichloroethane		10	ug/kg	U	6/30/97
SJS03-SS02-000	VCTCL	1,1-Dichloroethene		10	ug/kg	U	6/30/97
SJS03-SS02-000	VCTCL	1,2-Dichloroethane		10	ug/kg	U	6/30/97
SJS03-SS02-000	VCTCL	1,2-Dichloroethene (total)		10	ug/kg	U	6/30/97
SJS03-SS02-000	VCTCL	1,2-Dichloropropane		10	ug/kg	U	6/30/97
SJS03-SS02-000	VCTCL	2-Butanone		10	ug/kg	U	6/30/97
SJS03-SS02-000	VCTCL	2-Hexanone		10	ug/kg	U	6/30/97
SJS03-SS02-000	VCTCL	4-Methyl-2-Pentanone		10	ug/kg	U	6/30/97
SJS03-SS02-000	VCTCL	Acetone	6	10	ug/kg	B	6/30/97
SJS03-SS02-000	VCTCL	Benzene		10	ug/kg	U	6/30/97
SJS03-SS02-000	VCTCL	Bromodichloromethane		10	ug/kg	U	6/30/97
SJS03-SS02-000	VCTCL	Bromoform		10	ug/kg	U	6/30/97
SJS03-SS02-000	VCTCL	Bromomethane		10	ug/kg	U	6/30/97
SJS03-SS02-000	VCTCL	Carbon Disulfide		10	ug/kg	U	6/30/97
SJS03-SS02-000	VCTCL	Carbon Tetrachloride		10	ug/kg	U	6/30/97
SJS03-SS02-000	VCTCL	Chlorobenzene		10	ug/kg	U	6/30/97
SJS03-SS02-000	VCTCL	Chloroethane		10	ug/kg	U	6/30/97
SJS03-SS02-000	VCTCL	Chloroform		10	ug/kg	U	6/30/97
SJS03-SS02-000	VCTCL	Chloromethane		10	ug/kg	U	6/30/97
SJS03-SS02-000	VCTCL	cis-1,3-Dichloropropene		10	ug/kg	U	6/30/97
SJS03-SS02-000	VCTCL	Dibromochloromethane		10	ug/kg	U	6/30/97
SJS03-SS02-000	VCTCL	Ethylbenzene		10	ug/kg	U	6/30/97
SJS03-SS02-000	VCTCL	Methylene Chloride	9	10	ug/kg	B	6/30/97
SJS03-SS02-000	VCTCL	Styrene		10	ug/kg	U	6/30/97
SJS03-SS02-000	VCTCL	Tetrachloroethene	2	10	ug/kg	J	6/30/97
SJS03-SS02-000	VCTCL	Toluene		10	ug/kg	U	6/30/97
SJS03-SS02-000	VCTCL	Total Xylenes		10	ug/kg	U	6/30/97
SJS03-SS02-000	VCTCL	Trans-1,3-Dichloropropene		10	ug/kg	U	6/30/97
SJS03-SS02-000	VCTCL	Trichloroethene		10	ug/kg	U	6/30/97
SJS03-SS02-000	VCTCL	Vinyl Chloride		10	ug/kg	U	6/30/97
SJS03-SS03-000	CTOTP	Total Phosphorous (as P)	4.5	1.3	mg/kg		7/15/97
SJS03-SS03-000	MCYAN	Aluminum	4550	8.33	mg/kg		7/2/97
SJS03-SS03-000	MCYAN	Antimony	0.54	0.38	mg/kg	B	7/2/97
SJS03-SS03-000	MCYAN	Arsenic	4.2	0.57	mg/kg	L	7/2/97
SJS03-SS03-000	MCYAN	Barium	37	0.38	mg/kg	J	7/2/97
SJS03-SS03-000	MCYAN	Beryllium	0.29	0.19	mg/kg	J	7/2/97
SJS03-SS03-000	MCYAN	Cadmium		0.09	mg/kg	U	7/7/97
SJS03-SS03-000	MCYAN	Calcium	1440	16.46	mg/kg		7/2/97
SJS03-SS03-000	MCYAN	Chromium	9.9	1.32	mg/kg		7/2/97
SJS03-SS03-000	MCYAN	Cobalt	3.4	1.51	mg/kg	J	7/2/97
SJS03-SS03-000	MCYAN	Copper	17.1	1.14	mg/kg		7/2/97
SJS03-SS03-000	MCYAN	Cyanide		0.54	mg/kg	U	7/2/97
SJS03-SS03-000	MCYAN	Iron	9650	3.22	mg/kg		7/2/97
SJS03-SS03-000	MCYAN	Lead	37.5	0.19	mg/kg	J	7/2/97
SJS03-SS03-000	MCYAN	Magnesium	961	34.25	mg/kg	B	7/2/97
SJS03-SS03-000	MCYAN	Manganese	114	0.38	mg/kg		7/2/97
SJS03-SS03-000	MCYAN	Mercury	0.18	0.05	mg/kg		6/30/97
SJS03-SS03-000	MCYAN	Nickel	4.9	1.32	mg/kg	J	7/2/97
SJS03-SS03-000	MCYAN	Potassium	1100	42.01	mg/kg		7/2/97
SJS03-SS03-000	MCYAN	Selenium	0.57	0.57	mg/kg	UL	7/2/97
SJS03-SS03-000	MCYAN	Silver		0.19	mg/kg	U	7/2/97
SJS03-SS03-000	MCYAN	Sodium	90.7	10.98	mg/kg	B	7/2/97
SJS03-SS03-000	MCYAN	Thallium	0.69	0.38	mg/kg	J	7/2/97
SJS03-SS03-000	MCYAN	Vanadium	23.5	1.7	mg/kg		7/2/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS03-SS03-000	MCYAN	Zinc	64.6	0.95	mg/kg	L	7/2/97
SJS03-SS03-000	PSPCB	4,4'-DDD	4.6	4.3	ug/kg	J	7/16/97
SJS03-SS03-000	PSPCB	4,4'-DDE	12	4.2	ug/kg	J	7/16/97
SJS03-SS03-000	PSPCB	4,4'-DDT	13	4.3	ug/kg	J	7/16/97
SJS03-SS03-000	PSPCB	Aldrin		1.9	ug/kg	UJ	7/16/97
SJS03-SS03-000	PSPCB	alpha-BHC		1.9	ug/kg	UJ	7/16/97
SJS03-SS03-000	PSPCB	alpha-Chlordane		1.9	ug/kg	UJ	7/16/97
SJS03-SS03-000	PSPCB	Aroclor-1016		36	ug/kg	UJ	7/16/97
SJS03-SS03-000	PSPCB	Aroclor-1221		73	ug/kg	UJ	7/16/97
SJS03-SS03-000	PSPCB	Aroclor-1232		36	ug/kg	UJ	7/16/97
SJS03-SS03-000	PSPCB	Aroclor-1242		36	ug/kg	UJ	7/16/97
SJS03-SS03-000	PSPCB	Aroclor-1248		36	ug/kg	UJ	7/16/97
SJS03-SS03-000	PSPCB	Aroclor-1254		36	ug/kg	UJ	7/16/97
SJS03-SS03-000	PSPCB	Aroclor-1260		36	ug/kg	UJ	7/16/97
SJS03-SS03-000	PSPCB	beta-BHC		1.9	ug/kg	UJ	7/16/97
SJS03-SS03-000	PSPCB	delta-BHC		1.9	ug/kg	UJ	7/16/97
SJS03-SS03-000	PSPCB	Dieldrin		3.6	ug/kg	UJ	7/16/97
SJS03-SS03-000	PSPCB	Endosulfan I		1.9	ug/kg	UJ	7/16/97
SJS03-SS03-000	PSPCB	Endosulfan II		3.6	ug/kg	UJ	7/16/97
SJS03-SS03-000	PSPCB	Endosulfan Sulfate		3.6	ug/kg	UJ	7/16/97
SJS03-SS03-000	PSPCB	Endrin		3.6	ug/kg	UJ	7/16/97
SJS03-SS03-000	PSPCB	Endrin Aldehyde		3.6	ug/kg	UJ	7/16/97
SJS03-SS03-000	PSPCB	Endrin Ketone		3.6	ug/kg	UJ	7/16/97
SJS03-SS03-000	PSPCB	gamma-BHC		1.9	ug/kg	UJ	7/16/97
SJS03-SS03-000	PSPCB	gamma-Chlordane		1.9	ug/kg	UJ	7/16/97
SJS03-SS03-000	PSPCB	Heptachlor		1.9	ug/kg	UJ	7/16/97
SJS03-SS03-000	PSPCB	Heptachlor Epoxide		1.9	ug/kg	UJ	7/16/97
SJS03-SS03-000	PSPCB	Methoxychlor		19	ug/kg	UJ	7/16/97
SJS03-SS03-000	PSPCB	Toxaphene		190	ug/kg	UJ	7/16/97
SJS03-SS03-000	SVTCL	1,2,4-Trichlorobenzene		360	ug/kg	U	7/12/97
SJS03-SS03-000	SVTCL	1,2-Dichlorobenzene		360	ug/kg	U	7/12/97
SJS03-SS03-000	SVTCL	1,3-Dichlorobenzene		360	ug/kg	U	7/12/97
SJS03-SS03-000	SVTCL	1,4-Dichlorobenzene		360	ug/kg	U	7/12/97
SJS03-SS03-000	SVTCL	2,2'-oxybis(1-Chloropropane		360	ug/kg	U	7/12/97
SJS03-SS03-000	SVTCL	2,4,5-Trichlorophenol		900	ug/kg	U	7/12/97
SJS03-SS03-000	SVTCL	2,4,6-Trichlorophenol		360	ug/kg	U	7/12/97
SJS03-SS03-000	SVTCL	2,4-Dichlorophenol		360	ug/kg	U	7/12/97
SJS03-SS03-000	SVTCL	2,4-Dimethylphenol		360	ug/kg	U	7/12/97
SJS03-SS03-000	SVTCL	2,4-Dinitrophenol		900	ug/kg	U	7/12/97
SJS03-SS03-000	SVTCL	2,4-Dinitrotoluene		360	ug/kg	U	7/12/97
SJS03-SS03-000	SVTCL	2,6-Dinitrotoluene		360	ug/kg	U	7/12/97
SJS03-SS03-000	SVTCL	2-Chloronaphthalene		360	ug/kg	U	7/12/97
SJS03-SS03-000	SVTCL	2-Chlorophenol		360	ug/kg	U	7/12/97
SJS03-SS03-000	SVTCL	2-Methylnaphthalene		360	ug/kg	U	7/12/97
SJS03-SS03-000	SVTCL	2-Methylphenol		360	ug/kg	U	7/12/97
SJS03-SS03-000	SVTCL	2-Nitroaniline		900	ug/kg	U	7/12/97
SJS03-SS03-000	SVTCL	2-Nitrophenol		360	ug/kg	U	7/12/97
SJS03-SS03-000	SVTCL	3,3'-Dichlorobenzidine		360	ug/kg	U	7/12/97
SJS03-SS03-000	SVTCL	3-Nitroaniline		900	ug/kg	U	7/12/97
SJS03-SS03-000	SVTCL	4,6-Dinitro-2-Methylphenol		900	ug/kg	U	7/12/97
SJS03-SS03-000	SVTCL	4-Bromophenyl phenylether		360	ug/kg	U	7/12/97
SJS03-SS03-000	SVTCL	4-Chloro-3-Methylphenol		360	ug/kg	U	7/12/97
SJS03-SS03-000	SVTCL	4-Chloroaniline		360	ug/kg	U	7/12/97
SJS03-SS03-000	SVTCL	4-Chlorophenyl-phenylether		360	ug/kg	U	7/12/97
SJS03-SS03-000	SVTCL	4-Methylphenol		360	ug/kg	U	7/12/97
SJS03-SS03-000	SVTCL	4-Nitroaniline		900	ug/kg	U	7/12/97
SJS03-SS03-000	SVTCL	4-Nitrophenol		900	ug/kg	U	7/12/97
SJS03-SS03-000	SVTCL	Acenaphthene		360	ug/kg	U	7/12/97
SJS03-SS03-000	SVTCL	Acenaphthylene	63	360	ug/kg	J	7/12/97
SJS03-SS03-000	SVTCL	Anthracene	65	360	ug/kg	J	7/12/97
SJS03-SS03-000	SVTCL	Benzo(a)Anthracene	370	360	ug/kg		7/12/97
SJS03-SS03-000	SVTCL	Benzo(a)Pyrene	320	360	ug/kg	J	7/12/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS03-SS03-000	SVTCL	Benzo(b)Fluoranthene	670	360	ug/kg		7/12/97
SJS03-SS03-000	SVTCL	Benzo(g,h,i)Perylene	130	360	ug/kg	J	7/12/97
SJS03-SS03-000	SVTCL	Benzo(k)Fluoranthene	270	360	ug/kg	J	7/12/97
SJS03-SS03-000	SVTCL	Bis(2-chloroethoxy)Methane		360	ug/kg	U	7/12/97
SJS03-SS03-000	SVTCL	Bis(2-chloroethyl)Ether		360	ug/kg	U	7/12/97
SJS03-SS03-000	SVTCL	Bis(2-Ethylhexyl)Phthalate	70	280	ug/kg	B	7/12/97
SJS03-SS03-000	SVTCL	Butylbenzylphthalate		360	ug/kg	U	7/12/97
SJS03-SS03-000	SVTCL	Carbazole		360	ug/kg	U	7/12/97
SJS03-SS03-000	SVTCL	Chrysene	460	360	ug/kg		7/12/97
SJS03-SS03-000	SVTCL	Di-n-Butylphthalate		360	ug/kg	U	7/12/97
SJS03-SS03-000	SVTCL	Di-n-Octyl Phthalate		360	ug/kg	U	7/12/97
SJS03-SS03-000	SVTCL	Dibenz(a,h)Anthracene		360	ug/kg	U	7/12/97
SJS03-SS03-000	SVTCL	Dibenzofuran	38	360	ug/kg	J	7/12/97
SJS03-SS03-000	SVTCL	Diethylphthalate		360	ug/kg	U	7/12/97
SJS03-SS03-000	SVTCL	Dimethyl Phthalate		360	ug/kg	U	7/12/97
SJS03-SS03-000	SVTCL	Fluoranthene	610	360	ug/kg		7/12/97
SJS03-SS03-000	SVTCL	Fluorene		360	ug/kg	U	7/12/97
SJS03-SS03-000	SVTCL	Hexachlorobenzene		360	ug/kg	U	7/12/97
SJS03-SS03-000	SVTCL	Hexachlorobutadiene		360	ug/kg	U	7/12/97
SJS03-SS03-000	SVTCL	Hexachlorocyclopentadien		360	ug/kg	U	7/12/97
SJS03-SS03-000	SVTCL	Hexachloroethane		360	ug/kg	U	7/12/97
SJS03-SS03-000	SVTCL	Indeno(1,2,3-cd)Pyrene	180	360	ug/kg	J	7/12/97
SJS03-SS03-000	SVTCL	Isophorone		360	ug/kg	U	7/12/97
SJS03-SS03-000	SVTCL	N-Nitroso-Di-n-Propylamine		360	ug/kg	U	7/12/97
SJS03-SS03-000	SVTCL	N-Nitrosodiphenylamine		360	ug/kg	U	7/12/97
SJS03-SS03-000	SVTCL	Naphthalene	130	360	ug/kg	J	7/12/97
SJS03-SS03-000	SVTCL	Nitrobenzene		360	ug/kg	U	7/12/97
SJS03-SS03-000	SVTCL	Pentachlorophenol		900	ug/kg	U	7/12/97
SJS03-SS03-000	SVTCL	Phenanthrene	220	360	ug/kg	J	7/12/97
SJS03-SS03-000	SVTCL	Phenol		360	ug/kg	U	7/12/97
SJS03-SS03-000	SVTCL	Pyrene	440	360	ug/kg	J	7/12/97
SJS03-SS03-000	VCTCL	1,1,1-Trichloroethane		11	ug/kg	U	7/1/97
SJS03-SS03-000	VCTCL	1,1,2,2-Tetrachloroethane		11	ug/kg	UJ	7/1/97
SJS03-SS03-000	VCTCL	1,1,2-Trichloroethane		11	ug/kg	U	7/1/97
SJS03-SS03-000	VCTCL	1,1-Dichloroethane		11	ug/kg	U	7/1/97
SJS03-SS03-000	VCTCL	1,1-Dichloroethene		11	ug/kg	U	7/1/97
SJS03-SS03-000	VCTCL	1,2-Dichloroethane		11	ug/kg	U	7/1/97
SJS03-SS03-000	VCTCL	1,2-Dichloroethene (total)		11	ug/kg	U	7/1/97
SJS03-SS03-000	VCTCL	1,2-Dichloropropane		11	ug/kg	U	7/1/97
SJS03-SS03-000	VCTCL	2-Butanone		11	ug/kg	U	7/1/97
SJS03-SS03-000	VCTCL	2-Hexanone		11	ug/kg	UJ	7/1/97
SJS03-SS03-000	VCTCL	4-Methyl-2-Pentanone		11	ug/kg	UJ	7/1/97
SJS03-SS03-000	VCTCL	Acetone	21	11	ug/kg	B	7/1/97
SJS03-SS03-000	VCTCL	Benzene		11	ug/kg	U	7/1/97
SJS03-SS03-000	VCTCL	Bromodichloromethane		11	ug/kg	U	7/1/97
SJS03-SS03-000	VCTCL	Bromoform		11	ug/kg	U	7/1/97
SJS03-SS03-000	VCTCL	Bromomethane		11	ug/kg	U	7/1/97
SJS03-SS03-000	VCTCL	Carbon Disulfide		11	ug/kg	U	7/1/97
SJS03-SS03-000	VCTCL	Carbon Tetrachloride		11	ug/kg	U	7/1/97
SJS03-SS03-000	VCTCL	Chlorobenzene		11	ug/kg	UJ	7/1/97
SJS03-SS03-000	VCTCL	Chloroethane		11	ug/kg	U	7/1/97
SJS03-SS03-000	VCTCL	Chloroform		11	ug/kg	U	7/1/97
SJS03-SS03-000	VCTCL	Chloromethane		11	ug/kg	U	7/1/97
SJS03-SS03-000	VCTCL	cis-1,3-Dichloropropene		11	ug/kg	U	7/1/97
SJS03-SS03-000	VCTCL	Dibromochloromethane		11	ug/kg	U	7/1/97
SJS03-SS03-000	VCTCL	Ethylbenzene		11	ug/kg	UJ	7/1/97
SJS03-SS03-000	VCTCL	Methylene Chloride	130	11	ug/kg	B	7/1/97
SJS03-SS03-000	VCTCL	Styrene		11	ug/kg	UJ	7/1/97
SJS03-SS03-000	VCTCL	Tetrachloroethene		11	ug/kg	UJ	7/1/97
SJS03-SS03-000	VCTCL	Toluene		11	ug/kg	UJ	7/1/97
SJS03-SS03-000	VCTCL	Total Xylenes		11	ug/kg	UJ	7/1/97
SJS03-SS03-000	VCTCL	Trans-1,3-Dichloropropene		11	ug/kg	U	7/1/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS03-SS03-000	VCTCL	Trichloroethene		11	ug/kg	U	7/1/97
SJS03-SS03-000	VCTCL	Vinyl Chloride		11	ug/kg	U	7/1/97
SJS03-SS04-000	CTOTP	Total Phosphorous (as P)	15.7	3.6	mg/kg		7/15/97
SJS03-SS04-000	MCYAN	Aluminum	9320	9.92	mg/kg		7/2/97
SJS03-SS04-000	MCYAN	Antimony	1.4	0.45	mg/kg	B	7/2/97
SJS03-SS04-000	MCYAN	Arsenic	8.3	0.68	mg/kg	L	7/2/97
SJS03-SS04-000	MCYAN	Barium	170	0.45	mg/kg		7/2/97
SJS03-SS04-000	MCYAN	Beryllium	0.35	0.23	mg/kg	J	7/2/97
SJS03-SS04-000	MCYAN	Cadmium	0.38	0.11	mg/kg	J	7/7/97
SJS03-SS04-000	MCYAN	Calcium	6240	19.62	mg/kg		7/2/97
SJS03-SS04-000	MCYAN	Chromium	24.1	1.58	mg/kg		7/2/97
SJS03-SS04-000	MCYAN	Cobalt	5.6	1.8	mg/kg	J	7/2/97
SJS03-SS04-000	MCYAN	Copper	89.4	1.35	mg/kg		7/2/97
SJS03-SS04-000	MCYAN	Cyanide		0.57	mg/kg	U	7/2/97
SJS03-SS04-000	MCYAN	Iron	21900	3.83	mg/kg		7/2/97
SJS03-SS04-000	MCYAN	Lead	226	0.23	mg/kg	J	7/2/97
SJS03-SS04-000	MCYAN	Magnesium	2900	40.82	mg/kg		7/2/97
SJS03-SS04-000	MCYAN	Manganese	246	0.45	mg/kg		7/2/97
SJS03-SS04-000	MCYAN	Mercury	0.22	0.05	mg/kg		6/30/97
SJS03-SS04-000	MCYAN	Nickel	13	1.58	mg/kg		7/2/97
SJS03-SS04-000	MCYAN	Potassium	2090	50.07	mg/kg		7/2/97
SJS03-SS04-000	MCYAN	Selenium		0.68	mg/kg	UL	7/2/97
SJS03-SS04-000	MCYAN	Silver	1.2	0.23	mg/kg	B	7/2/97
SJS03-SS04-000	MCYAN	Sodium	473	13.08	mg/kg	J	7/2/97
SJS03-SS04-000	MCYAN	Thallium	1.8	0.45	mg/kg	J	7/2/97
SJS03-SS04-000	MCYAN	Vanadium	31.5	2.03	mg/kg		7/2/97
SJS03-SS04-000	MCYAN	Zinc	460	1.13	mg/kg	L	7/2/97
SJS03-SS04-000	PSPCB	4,4'-DDD	13	4.3	ug/kg	J	7/16/97
SJS03-SS04-000	PSPCB	4,4'-DDE	18	4.3	ug/kg		7/16/97
SJS03-SS04-000	PSPCB	4,4'-DDT	19	4.3	ug/kg	J	7/16/97
SJS03-SS04-000	PSPCB	Aldrin		1.9	ug/kg	U	7/16/97
SJS03-SS04-000	PSPCB	alpha-BHC		1.9	ug/kg	U	7/16/97
SJS03-SS04-000	PSPCB	alpha-Chlordane		1.9	ug/kg	U	7/16/97
SJS03-SS04-000	PSPCB	Aroclor-1016		36	ug/kg	U	7/16/97
SJS03-SS04-000	PSPCB	Aroclor-1221		73	ug/kg	U	7/16/97
SJS03-SS04-000	PSPCB	Aroclor-1232		36	ug/kg	U	7/16/97
SJS03-SS04-000	PSPCB	Aroclor-1242		36	ug/kg	U	7/16/97
SJS03-SS04-000	PSPCB	Aroclor-1248		36	ug/kg	U	7/16/97
SJS03-SS04-000	PSPCB	Aroclor-1254	100	43	ug/kg		7/16/97
SJS03-SS04-000	PSPCB	Aroclor-1260		36	ug/kg	U	7/16/97
SJS03-SS04-000	PSPCB	beta-BHC		1.9	ug/kg	U	7/16/97
SJS03-SS04-000	PSPCB	delta-BHC		1.9	ug/kg	U	7/16/97
SJS03-SS04-000	PSPCB	Dieldrin		3.6	ug/kg	U	7/16/97
SJS03-SS04-000	PSPCB	Endosulfan I		1.9	ug/kg	U	7/16/97
SJS03-SS04-000	PSPCB	Endosulfan II		3.6	ug/kg	U	7/16/97
SJS03-SS04-000	PSPCB	Endosulfan Sulfate		3.6	ug/kg	U	7/16/97
SJS03-SS04-000	PSPCB	Endrin		3.6	ug/kg	U	7/16/97
SJS03-SS04-000	PSPCB	Endrin Aldehyde		3.6	ug/kg	U	7/16/97
SJS03-SS04-000	PSPCB	Endrin Ketone		3.6	ug/kg	U	7/16/97
SJS03-SS04-000	PSPCB	gamma-BHC		1.9	ug/kg	U	7/16/97
SJS03-SS04-000	PSPCB	gamma-Chlordane		1.9	ug/kg	U	7/16/97
SJS03-SS04-000	PSPCB	Heptachlor		1.9	ug/kg	U	7/16/97
SJS03-SS04-000	PSPCB	Heptachlor Epoxide		1.9	ug/kg	U	7/16/97
SJS03-SS04-000	PSPCB	Methoxychlor		19	ug/kg	U	7/16/97
SJS03-SS04-000	PSPCB	Toxaphene		190	ug/kg	U	7/16/97
SJS03-SS04-000	SVTCL	1,2,4-Trichlorobenzene		360	ug/kg	U	7/10/97
SJS03-SS04-000	SVTCL	1,2-Dichlorobenzene		360	ug/kg	U	7/10/97
SJS03-SS04-000	SVTCL	1,3-Dichlorobenzene		360	ug/kg	U	7/10/97
SJS03-SS04-000	SVTCL	1,4-Dichlorobenzene		360	ug/kg	U	7/10/97
SJS03-SS04-000	SVTCL	2,2'-oxybis(1-Chloropropane		360	ug/kg	U	7/10/97
SJS03-SS04-000	SVTCL	2,4,5-Trichlorophenol		900	ug/kg	U	7/10/97
SJS03-SS04-000	SVTCL	2,4,6-Trichlorophenol		360	ug/kg	U	7/10/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS03-SS04-000	SVTCL	2,4-Dichlorophenol		360	ug/kg	U	7/10/97
SJS03-SS04-000	SVTCL	2,4-Dimethylphenol		360	ug/kg	U	7/10/97
SJS03-SS04-000	SVTCL	2,4-Dinitrophenol		900	ug/kg	U	7/10/97
SJS03-SS04-000	SVTCL	2,4-Dinitrotoluene		360	ug/kg	U	7/10/97
SJS03-SS04-000	SVTCL	2,6-Dinitrotoluene		360	ug/kg	U	7/10/97
SJS03-SS04-000	SVTCL	2-Chloronaphthalene		360	ug/kg	U	7/10/97
SJS03-SS04-000	SVTCL	2-Chlorophenol		360	ug/kg	U	7/10/97
SJS03-SS04-000	SVTCL	2-Methylnaphthalene		360	ug/kg	U	7/10/97
SJS03-SS04-000	SVTCL	2-Methylphenol		360	ug/kg	U	7/10/97
SJS03-SS04-000	SVTCL	2-Nitroaniline		900	ug/kg	U	7/10/97
SJS03-SS04-000	SVTCL	2-Nitrophenol		360	ug/kg	U	7/10/97
SJS03-SS04-000	SVTCL	3,3'-Dichlorobenzidine		360	ug/kg	U	7/10/97
SJS03-SS04-000	SVTCL	3-Nitroaniline		900	ug/kg	UJ	7/10/97
SJS03-SS04-000	SVTCL	4,6-Dinitro-2-Methylphenol		900	ug/kg	U	7/10/97
SJS03-SS04-000	SVTCL	4-Bromophenyl phenylether		360	ug/kg	U	7/10/97
SJS03-SS04-000	SVTCL	4-Chloro-3-Methylphenol		360	ug/kg	U	7/10/97
SJS03-SS04-000	SVTCL	4-Chloroaniline		360	ug/kg	U	7/10/97
SJS03-SS04-000	SVTCL	4-Chlorophenyl-phenylether		360	ug/kg	U	7/10/97
SJS03-SS04-000	SVTCL	4-Methylphenol		360	ug/kg	U	7/10/97
SJS03-SS04-000	SVTCL	4-Nitroaniline		900	ug/kg	U	7/10/97
SJS03-SS04-000	SVTCL	4-Nitrophenol		900	ug/kg	U	7/10/97
SJS03-SS04-000	SVTCL	Acenaphthene		360	ug/kg	U	7/10/97
SJS03-SS04-000	SVTCL	Acenaphthylene		360	ug/kg	U	7/10/97
SJS03-SS04-000	SVTCL	Anthracene	43	360	ug/kg	J	7/10/97
SJS03-SS04-000	SVTCL	Benzo(a)Anthracene	120	360	ug/kg	J	7/10/97
SJS03-SS04-000	SVTCL	Benzo(a)Pyrene	180	360	ug/kg	J	7/10/97
SJS03-SS04-000	SVTCL	Benzo(b)Fluoranthene	550	360	ug/kg		7/10/97
SJS03-SS04-000	SVTCL	Benzo(g,h,i)Perylene	170	360	ug/kg	J	7/10/97
SJS03-SS04-000	SVTCL	Benzo(k)Fluoranthene	170	360	ug/kg	J	7/10/97
SJS03-SS04-000	SVTCL	Bis(2-chloroethoxy)Methane		360	ug/kg	U	7/10/97
SJS03-SS04-000	SVTCL	Bis(2-chloroethyl)Ether		360	ug/kg	U	7/10/97
SJS03-SS04-000	SVTCL	Bis(2-Ethylhexyl)Phthalate	490	280	ug/kg	B	7/10/97
SJS03-SS04-000	SVTCL	Butylbenzylphthalate		360	ug/kg	U	7/10/97
SJS03-SS04-000	SVTCL	Carbazole	45	360	ug/kg	J	7/10/97
SJS03-SS04-000	SVTCL	Chrysene	280	360	ug/kg	J	7/10/97
SJS03-SS04-000	SVTCL	Di-n-Butylphthalate		360	ug/kg	U	7/10/97
SJS03-SS04-000	SVTCL	Di-n-Octyl Phthalate		360	ug/kg	U	7/10/97
SJS03-SS04-000	SVTCL	Dibenz(a,h)Anthracene		360	ug/kg	U	7/10/97
SJS03-SS04-000	SVTCL	Dibenzofuran		360	ug/kg	U	7/10/97
SJS03-SS04-000	SVTCL	Diethylphthalate		360	ug/kg	U	7/10/97
SJS03-SS04-000	SVTCL	Dimethyl Phthalate		360	ug/kg	U	7/10/97
SJS03-SS04-000	SVTCL	Fluoranthene	270	360	ug/kg	J	7/10/97
SJS03-SS04-000	SVTCL	Fluorene		360	ug/kg	U	7/10/97
SJS03-SS04-000	SVTCL	Hexachlorobenzene		360	ug/kg	U	7/10/97
SJS03-SS04-000	SVTCL	Hexachlorobutadiene		360	ug/kg	U	7/10/97
SJS03-SS04-000	SVTCL	Hexachlorocyclopentadien		360	ug/kg	U	7/10/97
SJS03-SS04-000	SVTCL	Hexachloroethane		360	ug/kg	U	7/10/97
SJS03-SS04-000	SVTCL	Indeno(1,2,3-cd)Pyrene	180	360	ug/kg	J	7/10/97
SJS03-SS04-000	SVTCL	Isophorone		360	ug/kg	U	7/10/97
SJS03-SS04-000	SVTCL	N-Nitroso-Di-n-Propylamine		360	ug/kg	U	7/10/97
SJS03-SS04-000	SVTCL	N-Nitrosodiphenylamine		360	ug/kg	U	7/10/97
SJS03-SS04-000	SVTCL	Naphthalene		360	ug/kg	U	7/10/97
SJS03-SS04-000	SVTCL	Nitrobenzene		360	ug/kg	U	7/10/97
SJS03-SS04-000	SVTCL	Pentachlorophenol		900	ug/kg	U	7/10/97
SJS03-SS04-000	SVTCL	Phenanthrene	130	360	ug/kg	J	7/10/97
SJS03-SS04-000	SVTCL	Phenol		360	ug/kg	U	7/10/97
SJS03-SS04-000	SVTCL	Pyrene	200	360	ug/kg	J	7/10/97
SJS03-SS04-000	VCTCL	1,1,1-Trichloroethane		11	ug/kg	UJ	7/1/97
SJS03-SS04-000	VCTCL	1,1,2,2-Tetrachloroethane		11	ug/kg	UJ	7/1/97
SJS03-SS04-000	VCTCL	1,1,2-Trichloroethane		11	ug/kg	UJ	7/1/97
SJS03-SS04-000	VCTCL	1,1-Dichloroethane		11	ug/kg	U	7/1/97
SJS03-SS04-000	VCTCL	1,1-Dichloroethene		11	ug/kg	U	7/1/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS03-SS04-000	VCTCL	1,2-Dichloroethane		11	ug/kg	U	7/1/97
SJS03-SS04-000	VCTCL	1,2-Dichloroethene (total)		11	ug/kg	U	7/1/97
SJS03-SS04-000	VCTCL	1,2-Dichloropropane		11	ug/kg	UJ	7/1/97
SJS03-SS04-000	VCTCL	2-Butanone		11	ug/kg	U	7/1/97
SJS03-SS04-000	VCTCL	2-Hexanone		11	ug/kg	UJ	7/1/97
SJS03-SS04-000	VCTCL	4-Methyl-2-Pentanone		11	ug/kg	UJ	7/1/97
SJS03-SS04-000	VCTCL	Acetone	6	11	ug/kg	B	7/1/97
SJS03-SS04-000	VCTCL	Benzene		11	ug/kg	UJ	7/1/97
SJS03-SS04-000	VCTCL	Bromodichloromethane		11	ug/kg	UJ	7/1/97
SJS03-SS04-000	VCTCL	Bromoform		11	ug/kg	UJ	7/1/97
SJS03-SS04-000	VCTCL	Bromomethane		11	ug/kg	U	7/1/97
SJS03-SS04-000	VCTCL	Carbon Disulfide		11	ug/kg	U	7/1/97
SJS03-SS04-000	VCTCL	Carbon Tetrachloride		11	ug/kg	UJ	7/1/97
SJS03-SS04-000	VCTCL	Chlorobenzene		11	ug/kg	UJ	7/1/97
SJS03-SS04-000	VCTCL	Chloroethane		11	ug/kg	U	7/1/97
SJS03-SS04-000	VCTCL	Chloroform		11	ug/kg	U	7/1/97
SJS03-SS04-000	VCTCL	Chloromethane		11	ug/kg	U	7/1/97
SJS03-SS04-000	VCTCL	cis-1,3-Dichloropropene		11	ug/kg	UJ	7/1/97
SJS03-SS04-000	VCTCL	Dibromochloromethane		11	ug/kg	UJ	7/1/97
SJS03-SS04-000	VCTCL	Ethylbenzene		11	ug/kg	UJ	7/1/97
SJS03-SS04-000	VCTCL	Methylene Chloride	140	11	ug/kg	B	7/1/97
SJS03-SS04-000	VCTCL	Styrene		11	ug/kg	UJ	7/1/97
SJS03-SS04-000	VCTCL	Tetrachloroethene		11	ug/kg	UJ	7/1/97
SJS03-SS04-000	VCTCL	Toluene		11	ug/kg	UJ	7/1/97
SJS03-SS04-000	VCTCL	Total Xylenes		11	ug/kg	UJ	7/1/97
SJS03-SS04-000	VCTCL	Trans-1,3-Dichloropropene		11	ug/kg	UJ	7/1/97
SJS03-SS04-000	VCTCL	Trichloroethene		11	ug/kg	UJ	7/1/97
SJS03-SS04-000	VCTCL	Vinyl Chloride		11	ug/kg	U	7/1/97
SJS03-SS05-000	CTOTP	Total Phosphorous (as P)	4.7	1.6	mg/kg		7/15/97
SJS03-SS05-000	MCYAN	Aluminum	21400	10.81	mg/kg		7/2/97
SJS03-SS05-000	MCYAN	Antimony	0.65	0.49	mg/kg	B	7/2/97
SJS03-SS05-000	MCYAN	Arsenic	13.9	0.74	mg/kg	L	7/2/97
SJS03-SS05-000	MCYAN	Barium	124	0.49	mg/kg		7/2/97
SJS03-SS05-000	MCYAN	Beryllium	0.76	0.25	mg/kg	J	7/2/97
SJS03-SS05-000	MCYAN	Cadmium		0.12	mg/kg	U	7/7/97
SJS03-SS05-000	MCYAN	Calcium	773	21.37	mg/kg	J	7/2/97
SJS03-SS05-000	MCYAN	Chromium	42.1	1.72	mg/kg		7/2/97
SJS03-SS05-000	MCYAN	Cobalt	6.7	1.97	mg/kg	J	7/2/97
SJS03-SS05-000	MCYAN	Copper	60.9	1.47	mg/kg		7/2/97
SJS03-SS05-000	MCYAN	Cyanide		0.61	mg/kg	U	7/2/97
SJS03-SS05-000	MCYAN	Iron	31600	4.18	mg/kg		7/2/97
SJS03-SS05-000	MCYAN	Lead	147	0.25	mg/kg	J	7/2/97
SJS03-SS05-000	MCYAN	Magnesium	3590	44.47	mg/kg		7/2/97
SJS03-SS05-000	MCYAN	Manganese	119	0.49	mg/kg		7/2/97
SJS03-SS05-000	MCYAN	Mercury	0.6	0.06	mg/kg		6/30/97
SJS03-SS05-000	MCYAN	Nickel	15.8	1.72	mg/kg		7/2/97
SJS03-SS05-000	MCYAN	Potassium	2590	54.54	mg/kg		7/2/97
SJS03-SS05-000	MCYAN	Selenium	0.74	0.74	mg/kg	UL	7/2/97
SJS03-SS05-000	MCYAN	Silver	1.1	0.25	mg/kg	B	7/2/97
SJS03-SS05-000	MCYAN	Sodium	233	14.25	mg/kg	B	7/2/97
SJS03-SS05-000	MCYAN	Thallium	2.5	0.49	mg/kg		7/2/97
SJS03-SS05-000	MCYAN	Vanadium	79.8	2.21	mg/kg		7/2/97
SJS03-SS05-000	MCYAN	Zinc	94.6	1.23	mg/kg	L	7/2/97
SJS03-SS05-000	PSPCB	4,4'-DDD		4.3	ug/kg	UJ	7/16/97
SJS03-SS05-000	PSPCB	4,4'-DDE		4.3	ug/kg	UJ	7/16/97
SJS03-SS05-000	PSPCB	4,4'-DDT		4.3	ug/kg	UJ	7/16/97
SJS03-SS05-000	PSPCB	Aldrin		2.2	ug/kg	UJ	7/16/97
SJS03-SS05-000	PSPCB	alpha-BHC		2.2	ug/kg	UJ	7/16/97
SJS03-SS05-000	PSPCB	alpha-Chlordane		2.2	ug/kg	UJ	7/16/97
SJS03-SS05-000	PSPCB	Aroclor-1016		43	ug/kg	UJ	7/16/97
SJS03-SS05-000	PSPCB	Aroclor-1221		88	ug/kg	UJ	7/16/97
SJS03-SS05-000	PSPCB	Aroclor-1232		43	ug/kg	UJ	7/16/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS03-SS05-000	PSPCB	Aroclor-1242		43	ug/kg	UJ	7/16/97
SJS03-SS05-000	PSPCB	Aroclor-1248		43	ug/kg	UJ	7/16/97
SJS03-SS05-000	PSPCB	Aroclor-1254		43	ug/kg	UJ	7/16/97
SJS03-SS05-000	PSPCB	Aroclor-1260		43	ug/kg	UJ	7/16/97
SJS03-SS05-000	PSPCB	beta-BHC		2.2	ug/kg	UJ	7/16/97
SJS03-SS05-000	PSPCB	delta-BHC		2.2	ug/kg	UJ	7/16/97
SJS03-SS05-000	PSPCB	Dieldrin		4.3	ug/kg	UJ	7/16/97
SJS03-SS05-000	PSPCB	Endosulfan I		2.2	ug/kg	UJ	7/16/97
SJS03-SS05-000	PSPCB	Endosulfan II		4.3	ug/kg	UJ	7/16/97
SJS03-SS05-000	PSPCB	Endosulfan Sulfate		4.3	ug/kg	UJ	7/16/97
SJS03-SS05-000	PSPCB	Endrin		4.3	ug/kg	UJ	7/16/97
SJS03-SS05-000	PSPCB	Endrin Aldehyde		4.3	ug/kg	UJ	7/16/97
SJS03-SS05-000	PSPCB	Endrin Ketone		4.3	ug/kg	UJ	7/16/97
SJS03-SS05-000	PSPCB	gamma-BHC		2.2	ug/kg	UJ	7/16/97
SJS03-SS05-000	PSPCB	gamma-Chlordane		2.2	ug/kg	UJ	7/16/97
SJS03-SS05-000	PSPCB	Heptachlor		2.2	ug/kg	UJ	7/16/97
SJS03-SS05-000	PSPCB	Heptachlor Epoxide		2.2	ug/kg	UJ	7/16/97
SJS03-SS05-000	PSPCB	Methoxychlor		22	ug/kg	UJ	7/16/97
SJS03-SS05-000	PSPCB	Toxaphene		220	ug/kg	UJ	7/16/97
SJS03-SS05-000	SVTCL	1,2,4-Trichlorobenzene		430	ug/kg	U	7/11/97
SJS03-SS05-000	SVTCL	1,2-Dichlorobenzene		430	ug/kg	U	7/11/97
SJS03-SS05-000	SVTCL	1,3-Dichlorobenzene		430	ug/kg	U	7/11/97
SJS03-SS05-000	SVTCL	1,4-Dichlorobenzene		430	ug/kg	U	7/11/97
SJS03-SS05-000	SVTCL	2,2'-oxybis(1-Chloropropane		430	ug/kg	U	7/11/97
SJS03-SS05-000	SVTCL	2,4,5-Trichlorophenol		1100	ug/kg	U	7/11/97
SJS03-SS05-000	SVTCL	2,4,6-Trichlorophenol		430	ug/kg	U	7/11/97
SJS03-SS05-000	SVTCL	2,4-Dichlorophenol		430	ug/kg	U	7/11/97
SJS03-SS05-000	SVTCL	2,4-Dimethylphenol		430	ug/kg	U	7/11/97
SJS03-SS05-000	SVTCL	2,4-Dinitrophenol		1100	ug/kg	U	7/11/97
SJS03-SS05-000	SVTCL	2,4-Dinitrotoluene		430	ug/kg	U	7/11/97
SJS03-SS05-000	SVTCL	2,6-Dinitrotoluene		430	ug/kg	U	7/11/97
SJS03-SS05-000	SVTCL	2-Chloronaphthalene		430	ug/kg	U	7/11/97
SJS03-SS05-000	SVTCL	2-Chlorophenol		430	ug/kg	U	7/11/97
SJS03-SS05-000	SVTCL	2-Methylnaphthalene		430	ug/kg	U	7/11/97
SJS03-SS05-000	SVTCL	2-Methylphenol		430	ug/kg	U	7/11/97
SJS03-SS05-000	SVTCL	2-Nitroaniline		1100	ug/kg	U	7/11/97
SJS03-SS05-000	SVTCL	2-Nitrophenol		430	ug/kg	U	7/11/97
SJS03-SS05-000	SVTCL	3,3'-Dichlorobenzidine		430	ug/kg	U	7/11/97
SJS03-SS05-000	SVTCL	3-Nitroaniline		1100	ug/kg	U	7/11/97
SJS03-SS05-000	SVTCL	4,6-Dinitro-2-Methylphenol		1100	ug/kg	U	7/11/97
SJS03-SS05-000	SVTCL	4-Bromophenyl phenylether		430	ug/kg	U	7/11/97
SJS03-SS05-000	SVTCL	4-Chloro-3-Methylphenol		430	ug/kg	U	7/11/97
SJS03-SS05-000	SVTCL	4-Chloroaniline		430	ug/kg	U	7/11/97
SJS03-SS05-000	SVTCL	4-Chlorophenyl-phenylether		430	ug/kg	U	7/11/97
SJS03-SS05-000	SVTCL	4-Methylphenol		430	ug/kg	U	7/11/97
SJS03-SS05-000	SVTCL	4-Nitroaniline		1100	ug/kg	U	7/11/97
SJS03-SS05-000	SVTCL	4-Nitrophenol		1100	ug/kg	U	7/11/97
SJS03-SS05-000	SVTCL	Acenaphthene		430	ug/kg	U	7/11/97
SJS03-SS05-000	SVTCL	Acenaphthylene	56	430	ug/kg	J	7/11/97
SJS03-SS05-000	SVTCL	Anthracene	57	430	ug/kg	J	7/11/97
SJS03-SS05-000	SVTCL	Benzo(a)Anthracene	200	430	ug/kg	J	7/11/97
SJS03-SS05-000	SVTCL	Benzo(a)Pyrene	200	430	ug/kg	J	7/11/97
SJS03-SS05-000	SVTCL	Benzo(b)Fluoranthene	850	430	ug/kg		7/11/97
SJS03-SS05-000	SVTCL	Benzo(g,h,i)Perylene	190	430	ug/kg	J	7/11/97
SJS03-SS05-000	SVTCL	Benzo(k)Fluoranthene	350	430	ug/kg	J	7/11/97
SJS03-SS05-000	SVTCL	Bis(2-chloroethoxy)Methane		430	ug/kg	U	7/11/97
SJS03-SS05-000	SVTCL	Bis(2-chloroethyl)Ether		430	ug/kg	U	7/11/97
SJS03-SS05-000	SVTCL	Bis(2-Ethylhexyl)Phthalate	66	320	ug/kg	B	7/11/97
SJS03-SS05-000	SVTCL	Butylbenzylphthalate		430	ug/kg	U	7/11/97
SJS03-SS05-000	SVTCL	Carbazole		430	ug/kg	U	7/11/97
SJS03-SS05-000	SVTCL	Chrysene	420	430	ug/kg	J	7/11/97
SJS03-SS05-000	SVTCL	Di-n-Butylphthalate		430	ug/kg	U	7/11/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS03-SS05-000	SVTCL	Di-n-Octyl Phthalate		430	ug/kg	U	7/11/97
SJS03-SS05-000	SVTCL	Dibenz(a,h)Anthracene		430	ug/kg	U	7/11/97
SJS03-SS05-000	SVTCL	Dibenzofuran		430	ug/kg	U	7/11/97
SJS03-SS05-000	SVTCL	Diethylphthalate		430	ug/kg	U	7/11/97
SJS03-SS05-000	SVTCL	Dimethyl Phthalate		430	ug/kg	U	7/11/97
SJS03-SS05-000	SVTCL	Fluoranthene	310	430	ug/kg	J	7/11/97
SJS03-SS05-000	SVTCL	Fluorene		430	ug/kg	U	7/11/97
SJS03-SS05-000	SVTCL	Hexachlorobenzene		430	ug/kg	U	7/11/97
SJS03-SS05-000	SVTCL	Hexachlorobutadiene		430	ug/kg	U	7/11/97
SJS03-SS05-000	SVTCL	Hexachlorocyclopentadien		430	ug/kg	U	7/11/97
SJS03-SS05-000	SVTCL	Hexachloroethane		430	ug/kg	U	7/11/97
SJS03-SS05-000	SVTCL	Indeno(1,2,3-cd)Pyrene	260	430	ug/kg	J	7/11/97
SJS03-SS05-000	SVTCL	Isophorone		430	ug/kg	U	7/11/97
SJS03-SS05-000	SVTCL	N-Nitroso-Di-n-Propylamine		430	ug/kg	U	7/11/97
SJS03-SS05-000	SVTCL	N-Nitrosodiphenylamine		430	ug/kg	U	7/11/97
SJS03-SS05-000	SVTCL	Naphthalene		430	ug/kg	U	7/11/97
SJS03-SS05-000	SVTCL	Nitrobenzene		430	ug/kg	U	7/11/97
SJS03-SS05-000	SVTCL	Pentachlorophenol		1100	ug/kg	U	7/11/97
SJS03-SS05-000	SVTCL	Phenanthrene	100	430	ug/kg	J	7/11/97
SJS03-SS05-000	SVTCL	Phenol		430	ug/kg	U	7/11/97
SJS03-SS05-000	SVTCL	Pyrene	200	430	ug/kg	J	7/11/97
SJS03-SS05-000	VCTCL	1,1,1-Trichloroethane		12	ug/kg	U	7/1/97
SJS03-SS05-000	VCTCL	1,1,2,2-Tetrachloroethane		12	ug/kg	UJ	7/1/97
SJS03-SS05-000	VCTCL	1,1,2-Trichloroethane		12	ug/kg	U	7/1/97
SJS03-SS05-000	VCTCL	1,1-Dichloroethane		12	ug/kg	U	7/1/97
SJS03-SS05-000	VCTCL	1,1-Dichloroethene		12	ug/kg	U	7/1/97
SJS03-SS05-000	VCTCL	1,2-Dichloroethane		12	ug/kg	U	7/1/97
SJS03-SS05-000	VCTCL	1,2-Dichloroethene (total)		12	ug/kg	U	7/1/97
SJS03-SS05-000	VCTCL	1,2-Dichloropropane		12	ug/kg	U	7/1/97
SJS03-SS05-000	VCTCL	2-Butanone		12	ug/kg	U	7/1/97
SJS03-SS05-000	VCTCL	2-Hexanone		12	ug/kg	UJ	7/1/97
SJS03-SS05-000	VCTCL	4-Methyl-2-Pentanone		12	ug/kg	UJ	7/1/97
SJS03-SS05-000	VCTCL	Acetone	4	13	ug/kg	B	7/1/97
SJS03-SS05-000	VCTCL	Benzene		12	ug/kg	U	7/1/97
SJS03-SS05-000	VCTCL	Bromodichloromethane		12	ug/kg	U	7/1/97
SJS03-SS05-000	VCTCL	Bromoform		12	ug/kg	U	7/1/97
SJS03-SS05-000	VCTCL	Bromomethane		12	ug/kg	U	7/1/97
SJS03-SS05-000	VCTCL	Carbon Disulfide		12	ug/kg	U	7/1/97
SJS03-SS05-000	VCTCL	Carbon Tetrachloride		12	ug/kg	U	7/1/97
SJS03-SS05-000	VCTCL	Chlorobenzene		12	ug/kg	UJ	7/1/97
SJS03-SS05-000	VCTCL	Chloroethane		12	ug/kg	U	7/1/97
SJS03-SS05-000	VCTCL	Chloroform		12	ug/kg	U	7/1/97
SJS03-SS05-000	VCTCL	Chloromethane		12	ug/kg	U	7/1/97
SJS03-SS05-000	VCTCL	cis-1,3-Dichloropropene		12	ug/kg	U	7/1/97
SJS03-SS05-000	VCTCL	Dibromochloromethane		12	ug/kg	U	7/1/97
SJS03-SS05-000	VCTCL	Ethylbenzene		12	ug/kg	UJ	7/1/97
SJS03-SS05-000	VCTCL	Methylene Chloride	110	13	ug/kg	B	7/1/97
SJS03-SS05-000	VCTCL	Styrene		12	ug/kg	UJ	7/1/97
SJS03-SS05-000	VCTCL	Tetrachloroethene		12	ug/kg	UJ	7/1/97
SJS03-SS05-000	VCTCL	Toluene	2	13	ug/kg	J	7/1/97
SJS03-SS05-000	VCTCL	Total Xylenes		12	ug/kg	UJ	7/1/97
SJS03-SS05-000	VCTCL	Trans-1,3-Dichloropropene		12	ug/kg	U	7/1/97
SJS03-SS05-000	VCTCL	Trichloroethene		12	ug/kg	U	7/1/97
SJS03-SS05-000	VCTCL	Vinyl Chloride		12	ug/kg	U	7/1/97
SJS03-SS06-000	CTOTP	Total Phosphorous (as P)	2.9	1.5	mg/kg		7/15/97
SJS03-SS06-000	MCYAN	Aluminum	17800	10.24	mg/kg		7/2/97
SJS03-SS06-000	MCYAN	Antimony	0.81	0.47	mg/kg	B	7/2/97
SJS03-SS06-000	MCYAN	Arsenic	12.6	0.7	mg/kg	L	7/2/97
SJS03-SS06-000	MCYAN	Barium	94.1	0.47	mg/kg		7/2/97
SJS03-SS06-000	MCYAN	Beryllium	0.51	0.23	mg/kg	J	7/2/97
SJS03-SS06-000	MCYAN	Cadmium		0.12	mg/kg	U	7/7/97
SJS03-SS06-000	MCYAN	Calcium	1700	20.25	mg/kg		7/2/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS03-SS06-000	MCYAN	Chromium	33.2	1.63	mg/kg		7/2/97
SJS03-SS06-000	MCYAN	Cobalt	6.4	1.86	mg/kg	J	7/2/97
SJS03-SS06-000	MCYAN	Copper	37.7	1.4	mg/kg		7/2/97
SJS03-SS06-000	MCYAN	Cyanide		0.62	mg/kg	U	7/2/97
SJS03-SS06-000	MCYAN	Iron	30700	3.96	mg/kg		7/2/97
SJS03-SS06-000	MCYAN	Lead	86	0.23	mg/kg	J	7/2/97
SJS03-SS06-000	MCYAN	Magnesium	3180	42.13	mg/kg		7/2/97
SJS03-SS06-000	MCYAN	Manganese	138	0.47	mg/kg		7/2/97
SJS03-SS06-000	MCYAN	Mercury	0.53	0.06	mg/kg		6/30/97
SJS03-SS06-000	MCYAN	Nickel	13	1.63	mg/kg		7/2/97
SJS03-SS06-000	MCYAN	Potassium	2950	51.68	mg/kg		7/2/97
SJS03-SS06-000	MCYAN	Selenium		0.7	mg/kg	UL	7/2/97
SJS03-SS06-000	MCYAN	Silver	0.48	0.23	mg/kg	B	7/2/97
SJS03-SS06-000	MCYAN	Sodium	238	13.5	mg/kg	B	7/2/97
SJS03-SS06-000	MCYAN	Thallium	2.2	0.47	mg/kg	B	7/2/97
SJS03-SS06-000	MCYAN	Vanadium	76.6	2.09	mg/kg		7/2/97
SJS03-SS06-000	MCYAN	Zinc	92.8	1.16	mg/kg	L	7/2/97
SJS03-SS06-000	PSPCB	4,4'-DDD	2.4	4.3	ug/kg	J	7/16/97
SJS03-SS06-000	PSPCB	4,4'-DDE	5.6	4.3	ug/kg	J	7/16/97
SJS03-SS06-000	PSPCB	4,4'-DDT	15	4.3	ug/kg	J	7/16/97
SJS03-SS06-000	PSPCB	Aldrin		2.1	ug/kg	UJ	7/16/97
SJS03-SS06-000	PSPCB	alpha-BHC		2.1	ug/kg	UJ	7/16/97
SJS03-SS06-000	PSPCB	alpha-Chlordane		2.1	ug/kg	UJ	7/16/97
SJS03-SS06-000	PSPCB	Aroclor-1016		41	ug/kg	UJ	7/16/97
SJS03-SS06-000	PSPCB	Aroclor-1221		83	ug/kg	UJ	7/16/97
SJS03-SS06-000	PSPCB	Aroclor-1232		41	ug/kg	UJ	7/16/97
SJS03-SS06-000	PSPCB	Aroclor-1242		41	ug/kg	UJ	7/16/97
SJS03-SS06-000	PSPCB	Aroclor-1248		41	ug/kg	UJ	7/16/97
SJS03-SS06-000	PSPCB	Aroclor-1254		41	ug/kg	UJ	7/16/97
SJS03-SS06-000	PSPCB	Aroclor-1260		41	ug/kg	UJ	7/16/97
SJS03-SS06-000	PSPCB	beta-BHC		2.1	ug/kg	UJ	7/16/97
SJS03-SS06-000	PSPCB	delta-BHC		2.1	ug/kg	UJ	7/16/97
SJS03-SS06-000	PSPCB	Dieldrin		4.1	ug/kg	UJ	7/16/97
SJS03-SS06-000	PSPCB	Endosulfan I		2.1	ug/kg	UJ	7/16/97
SJS03-SS06-000	PSPCB	Endosulfan II		4.1	ug/kg	UJ	7/16/97
SJS03-SS06-000	PSPCB	Endosulfan Sulfate		4.1	ug/kg	UJ	7/16/97
SJS03-SS06-000	PSPCB	Endrin		4.1	ug/kg	UJ	7/16/97
SJS03-SS06-000	PSPCB	Endrin Aldehyde		4.1	ug/kg	UJ	7/16/97
SJS03-SS06-000	PSPCB	Endrin Ketone		4.1	ug/kg	UJ	7/16/97
SJS03-SS06-000	PSPCB	gamma-BHC		2.1	ug/kg	UJ	7/16/97
SJS03-SS06-000	PSPCB	gamma-Chlordane		2.1	ug/kg	UJ	7/16/97
SJS03-SS06-000	PSPCB	Heptachlor		2.1	ug/kg	UJ	7/16/97
SJS03-SS06-000	PSPCB	Heptachlor Epoxide		2.1	ug/kg	UJ	7/16/97
SJS03-SS06-000	PSPCB	Methoxychlor		21	ug/kg	UJ	7/16/97
SJS03-SS06-000	PSPCB	Toxaphene		210	ug/kg	UJ	7/16/97
SJS03-SS06-000	SVTCL	1,2,4-Trichlorobenzene		410	ug/kg	U	7/10/97
SJS03-SS06-000	SVTCL	1,2-Dichlorobenzene		410	ug/kg	U	7/10/97
SJS03-SS06-000	SVTCL	1,3-Dichlorobenzene		410	ug/kg	U	7/10/97
SJS03-SS06-000	SVTCL	1,4-Dichlorobenzene		410	ug/kg	U	7/10/97
SJS03-SS06-000	SVTCL	2,2'-oxybis(1-Chloropropane		410	ug/kg	U	7/10/97
SJS03-SS06-000	SVTCL	2,4,5-Trichlorophenol		1000	ug/kg	U	7/10/97
SJS03-SS06-000	SVTCL	2,4,6-Trichlorophenol		410	ug/kg	U	7/10/97
SJS03-SS06-000	SVTCL	2,4-Dichlorophenol		410	ug/kg	U	7/10/97
SJS03-SS06-000	SVTCL	2,4-Dimethylphenol		410	ug/kg	U	7/10/97
SJS03-SS06-000	SVTCL	2,4-Dinitrophenol		1000	ug/kg	U	7/10/97
SJS03-SS06-000	SVTCL	2,4-Dinitrotoluene		410	ug/kg	U	7/10/97
SJS03-SS06-000	SVTCL	2,6-Dinitrotoluene		410	ug/kg	U	7/10/97
SJS03-SS06-000	SVTCL	2-Chloronaphthalene		410	ug/kg	U	7/10/97
SJS03-SS06-000	SVTCL	2-Chlorophenol		410	ug/kg	U	7/10/97
SJS03-SS06-000	SVTCL	2-Methylnaphthalene		410	ug/kg	U	7/10/97
SJS03-SS06-000	SVTCL	2-Methylphenol		410	ug/kg	U	7/10/97
SJS03-SS06-000	SVTCL	2-Nitroaniline		1000	ug/kg	U	7/10/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS03-SS06-000	SVTCL	2-Nitrophenol		410	ug/kg	U	7/10/97
SJS03-SS06-000	SVTCL	3,3'-Dichlorobenzidine		410	ug/kg	U	7/10/97
SJS03-SS06-000	SVTCL	3-Nitroaniline		1000	ug/kg	UJ	7/10/97
SJS03-SS06-000	SVTCL	4,6-Dinitro-2-Methylphenol		1000	ug/kg	U	7/10/97
SJS03-SS06-000	SVTCL	4-Bromophenyl phenylether		410	ug/kg	U	7/10/97
SJS03-SS06-000	SVTCL	4-Chloro-3-Methylphenol		410	ug/kg	U	7/10/97
SJS03-SS06-000	SVTCL	4-Chloroaniline		410	ug/kg	U	7/10/97
SJS03-SS06-000	SVTCL	4-Chlorophenyl-phenylether		410	ug/kg	U	7/10/97
SJS03-SS06-000	SVTCL	4-Methylphenol		410	ug/kg	U	7/10/97
SJS03-SS06-000	SVTCL	4-Nitroaniline		1000	ug/kg	U	7/10/97
SJS03-SS06-000	SVTCL	4-Nitrophenol		1000	ug/kg	U	7/10/97
SJS03-SS06-000	SVTCL	Acenaphthene		410	ug/kg	U	7/10/97
SJS03-SS06-000	SVTCL	Acenaphthylene	84	410	ug/kg	J	7/10/97
SJS03-SS06-000	SVTCL	Anthracene	79	410	ug/kg	J	7/10/97
SJS03-SS06-000	SVTCL	Benzo(a)Anthracene	300	410	ug/kg	J	7/10/97
SJS03-SS06-000	SVTCL	Benzo(a)Pyrene	340	410	ug/kg	J	7/10/97
SJS03-SS06-000	SVTCL	Benzo(b)Fluoranthene	1500	410	ug/kg		7/10/97
SJS03-SS06-000	SVTCL	Benzo(g,h,i)Perylene	340	410	ug/kg	J	7/10/97
SJS03-SS06-000	SVTCL	Benzo(k)Fluoranthene	400	410	ug/kg	J	7/10/97
SJS03-SS06-000	SVTCL	Bis(2-chloroethoxy)Methane		410	ug/kg	U	7/10/97
SJS03-SS06-000	SVTCL	Bis(2-chloroethyl)Ether		410	ug/kg	U	7/10/97
SJS03-SS06-000	SVTCL	Bis(2-Ethylhexyl)Phthalate	100	320	ug/kg	B	7/10/97
SJS03-SS06-000	SVTCL	Butylbenzylphthalate		410	ug/kg	U	7/10/97
SJS03-SS06-000	SVTCL	Carbazole	43	410	ug/kg	J	7/10/97
SJS03-SS06-000	SVTCL	Chrysene	690	410	ug/kg		7/10/97
SJS03-SS06-000	SVTCL	Di-n-Butylphthalate		410	ug/kg	U	7/10/97
SJS03-SS06-000	SVTCL	Di-n-Octyl Phthalate		410	ug/kg	U	7/10/97
SJS03-SS06-000	SVTCL	Dibenz(a,h)Anthracene		410	ug/kg	U	7/10/97
SJS03-SS06-000	SVTCL	Dibenzofuran		410	ug/kg	U	7/10/97
SJS03-SS06-000	SVTCL	Diethylphthalate		410	ug/kg	U	7/10/97
SJS03-SS06-000	SVTCL	Dimethyl Phthalate		410	ug/kg	U	7/10/97
SJS03-SS06-000	SVTCL	Fluoranthene	460	410	ug/kg		7/10/97
SJS03-SS06-000	SVTCL	Fluorene		410	ug/kg	U	7/10/97
SJS03-SS06-000	SVTCL	Hexachlorobenzene		410	ug/kg	U	7/10/97
SJS03-SS06-000	SVTCL	Hexachlorobutadiene		410	ug/kg	U	7/10/97
SJS03-SS06-000	SVTCL	Hexachlorocyclopentadien		410	ug/kg	U	7/10/97
SJS03-SS06-000	SVTCL	Hexachloroethane		410	ug/kg	U	7/10/97
SJS03-SS06-000	SVTCL	Indeno(1,2,3-cd)Pyrene	390	410	ug/kg	J	7/10/97
SJS03-SS06-000	SVTCL	Isophorone		410	ug/kg	U	7/10/97
SJS03-SS06-000	SVTCL	N-Nitroso-Di-n-Propylamine		410	ug/kg	U	7/10/97
SJS03-SS06-000	SVTCL	N-Nitrosodiphenylamine		410	ug/kg	U	7/10/97
SJS03-SS06-000	SVTCL	Naphthalene	55	410	ug/kg	J	7/10/97
SJS03-SS06-000	SVTCL	Nitrobenzene		410	ug/kg	U	7/10/97
SJS03-SS06-000	SVTCL	Pentachlorophenol	87	1000	ug/kg	J	7/10/97
SJS03-SS06-000	SVTCL	Phenanthrene	160	410	ug/kg	J	7/10/97
SJS03-SS06-000	SVTCL	Phenol		410	ug/kg	U	7/10/97
SJS03-SS06-000	SVTCL	Pyrene	350	410	ug/kg	J	7/10/97
SJS03-SS06-000	VCTCL	1,1,1-Trichloroethane		12	ug/kg	U	7/1/97
SJS03-SS06-000	VCTCL	1,1,2,2-Tetrachloroethane		12	ug/kg	UJ	7/1/97
SJS03-SS06-000	VCTCL	1,1,2-Trichloroethane		12	ug/kg	U	7/1/97
SJS03-SS06-000	VCTCL	1,1-Dichloroethane		12	ug/kg	U	7/1/97
SJS03-SS06-000	VCTCL	1,1-Dichloroethene		12	ug/kg	U	7/1/97
SJS03-SS06-000	VCTCL	1,2-Dichloroethane		12	ug/kg	U	7/1/97
SJS03-SS06-000	VCTCL	1,2-Dichloroethene (total)		12	ug/kg	U	7/1/97
SJS03-SS06-000	VCTCL	1,2-Dichloropropane		12	ug/kg	U	7/1/97
SJS03-SS06-000	VCTCL	2-Butanone		12	ug/kg	U	7/1/97
SJS03-SS06-000	VCTCL	2-Hexanone		12	ug/kg	UJ	7/1/97
SJS03-SS06-000	VCTCL	4-Methyl-2-Pentanone		12	ug/kg	UJ	7/1/97
SJS03-SS06-000	VCTCL	Acetone	8	12	ug/kg	B	7/1/97
SJS03-SS06-000	VCTCL	Benzene		12	ug/kg	U	7/1/97
SJS03-SS06-000	VCTCL	Bromodichloromethane		12	ug/kg	U	7/1/97
SJS03-SS06-000	VCTCL	Bromoform		12	ug/kg	U	7/1/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS03-SS06-000	IVCTCL	Bromomethane		12	ug/kg	U	7/1/97
SJS03-SS06-000	IVCTCL	Carbon Disulfide		12	ug/kg	U	7/1/97
SJS03-SS06-000	IVCTCL	Carbon Tetrachloride		12	ug/kg	U	7/1/97
SJS03-SS06-000	IVCTCL	Chlorobenzene		12	ug/kg	UJ	7/1/97
SJS03-SS06-000	IVCTCL	Chloroethane		12	ug/kg	U	7/1/97
SJS03-SS06-000	IVCTCL	Chloroform		12	ug/kg	U	7/1/97
SJS03-SS06-000	IVCTCL	Chloromethane		12	ug/kg	U	7/1/97
SJS03-SS06-000	IVCTCL	cis-1,3-Dichloropropene		12	ug/kg	U	7/1/97
SJS03-SS06-000	IVCTCL	Dibromochloromethane		12	ug/kg	U	7/1/97
SJS03-SS06-000	IVCTCL	Ethylbenzene		12	ug/kg	UJ	7/1/97
SJS03-SS06-000	IVCTCL	Methylene Chloride	100	12	ug/kg	B	7/1/97
SJS03-SS06-000	IVCTCL	Styrene		12	ug/kg	UJ	7/1/97
SJS03-SS06-000	IVCTCL	Tetrachloroethene		12	ug/kg	UJ	7/1/97
SJS03-SS06-000	IVCTCL	Toluene		12	ug/kg	UJ	7/1/97
SJS03-SS06-000	IVCTCL	Total Xylenes		12	ug/kg	UJ	7/1/97
SJS03-SS06-000	IVCTCL	Trans-1,3-Dichloropropene		12	ug/kg	U	7/1/97
SJS03-SS06-000	IVCTCL	Trichloroethene		12	ug/kg	U	7/1/97
SJS03-SS06-000	IVCTCL	Vinyl Chloride		12	ug/kg	U	7/1/97
SJS03-SS06-000P	CTOTP	Total Phosphorous (as P)	114	19	mg/kg		7/15/97
SJS03-SS06-000P	MCYAN	Aluminum	17500	10.73	mg/kg		7/2/97
SJS03-SS06-000P	MCYAN	Antimony	0.61	0.49	mg/kg	B	7/2/97
SJS03-SS06-000P	MCYAN	Arsenic	13.3	0.73	mg/kg	L	7/2/97
SJS03-SS06-000P	MCYAN	Barium	87.2	0.49	mg/kg		7/2/97
SJS03-SS06-000P	MCYAN	Beryllium	0.53	0.24	mg/kg	J	7/2/97
SJS03-SS06-000P	MCYAN	Cadmium		0.12	mg/kg	U	7/7/97
SJS03-SS06-000P	MCYAN	Calcium	1670	21.22	mg/kg		7/2/97
SJS03-SS06-000P	MCYAN	Chromium	33.9	1.71	mg/kg		7/2/97
SJS03-SS06-000P	MCYAN	Cobalt	6.5	1.95	mg/kg	J	7/2/97
SJS03-SS06-000P	MCYAN	Copper	35.8	1.46	mg/kg		7/2/97
SJS03-SS06-000P	MCYAN	Cyanide		0.62	mg/kg	U	7/2/97
SJS03-SS06-000P	MCYAN	Iron	34000	4.15	mg/kg		7/2/97
SJS03-SS06-000P	MCYAN	Lead	107	0.24	mg/kg	J	7/2/97
SJS03-SS06-000P	MCYAN	Magnesium	3340	44.15	mg/kg		7/2/97
SJS03-SS06-000P	MCYAN	Manganese	143	0.49	mg/kg		7/2/97
SJS03-SS06-000P	MCYAN	Mercury	0.35	0.06	mg/kg		6/30/97
SJS03-SS06-000P	MCYAN	Nickel	11.4	1.71	mg/kg		7/2/97
SJS03-SS06-000P	MCYAN	Potassium	3130	54.15	mg/kg		7/2/97
SJS03-SS06-000P	MCYAN	Selenium		0.73	mg/kg	UL	7/3/97
SJS03-SS06-000P	MCYAN	Silver	0.74	0.24	mg/kg	B	7/2/97
SJS03-SS06-000P	MCYAN	Sodium	240	14.15	mg/kg	B	7/2/97
SJS03-SS06-000P	MCYAN	Thallium	2.2	0.49	mg/kg	B	7/2/97
SJS03-SS06-000P	MCYAN	Vanadium	60.1	2.2	mg/kg		7/2/97
SJS03-SS06-000P	MCYAN	Zinc	94.5	1.22	mg/kg	L	7/2/97
SJS03-SS06-000P	PSPCB	4,4'-DDD	2.9	4.3	ug/kg	J	7/16/97
SJS03-SS06-000P	PSPCB	4,4'-DDE	6.4	4.3	ug/kg	J	7/16/97
SJS03-SS06-000P	PSPCB	4,4'-DDT	16	4.3	ug/kg	J	7/16/97
SJS03-SS06-000P	PSPCB	Aldrin		2.1	ug/kg	U	7/16/97
SJS03-SS06-000P	PSPCB	alpha-BHC		2.1	ug/kg	U	7/16/97
SJS03-SS06-000P	PSPCB	alpha-Chlordane		2.1	ug/kg	U	7/16/97
SJS03-SS06-000P	PSPCB	Aroclor-1016		41	ug/kg	U	7/16/97
SJS03-SS06-000P	PSPCB	Aroclor-1221		83	ug/kg	U	7/16/97
SJS03-SS06-000P	PSPCB	Aroclor-1232		41	ug/kg	U	7/16/97
SJS03-SS06-000P	PSPCB	Aroclor-1242		41	ug/kg	U	7/16/97
SJS03-SS06-000P	PSPCB	Aroclor-1248		41	ug/kg	U	7/16/97
SJS03-SS06-000P	PSPCB	Aroclor-1254		41	ug/kg	U	7/16/97
SJS03-SS06-000P	PSPCB	Aroclor-1260		41	ug/kg	U	7/16/97
SJS03-SS06-000P	PSPCB	beta-BHC		2.1	ug/kg	U	7/16/97
SJS03-SS06-000P	PSPCB	delta-BHC		2.1	ug/kg	U	7/16/97
SJS03-SS06-000P	PSPCB	Dieldrin		4.1	ug/kg	U	7/16/97
SJS03-SS06-000P	PSPCB	Endosulfan I		2.1	ug/kg	U	7/16/97
SJS03-SS06-000P	PSPCB	Endosulfan II		4.1	ug/kg	U	7/16/97
SJS03-SS06-000P	PSPCB	Endosulfan Sulfate		4.1	ug/kg	U	7/16/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS03-SS06-000P	PSPCB	Endrin		4.1	ug/kg	U	7/16/97
SJS03-SS06-000P	PSPCB	Endrin Aldehyde		4.1	ug/kg	U	7/16/97
SJS03-SS06-000P	PSPCB	Endrin Ketone		4.1	ug/kg	U	7/16/97
SJS03-SS06-000P	PSPCB	gamma-BHC		2.1	ug/kg	U	7/16/97
SJS03-SS06-000P	PSPCB	gamma-Chlordane		2.1	ug/kg	U	7/16/97
SJS03-SS06-000P	PSPCB	Heptachlor		2.1	ug/kg	U	7/16/97
SJS03-SS06-000P	PSPCB	Heptachlor Epoxide		2.1	ug/kg	U	7/16/97
SJS03-SS06-000P	PSPCB	Methoxychlor		21	ug/kg	U	7/16/97
SJS03-SS06-000P	PSPCB	Toxaphene		210	ug/kg	U	7/16/97
SJS03-SS06-000P	SVTCL	1,2,4-Trichlorobenzene		410	ug/kg	U	7/10/97
SJS03-SS06-000P	SVTCL	1,2-Dichlorobenzene		410	ug/kg	U	7/10/97
SJS03-SS06-000P	SVTCL	1,3-Dichlorobenzene		410	ug/kg	U	7/10/97
SJS03-SS06-000P	SVTCL	1,4-Dichlorobenzene		410	ug/kg	U	7/10/97
SJS03-SS06-000P	SVTCL	2,2'-oxybis(1-Chloropropane		410	ug/kg	U	7/10/97
SJS03-SS06-000P	SVTCL	2,4,5-Trichlorophenol		1000	ug/kg	U	7/10/97
SJS03-SS06-000P	SVTCL	2,4,6-Trichlorophenol		410	ug/kg	U	7/10/97
SJS03-SS06-000P	SVTCL	2,4-Dichlorophenol		410	ug/kg	U	7/10/97
SJS03-SS06-000P	SVTCL	2,4-Dimethylphenol		410	ug/kg	U	7/10/97
SJS03-SS06-000P	SVTCL	2,4-Dinitrophenol		1000	ug/kg	U	7/10/97
SJS03-SS06-000P	SVTCL	2,4-Dinitrotoluene		410	ug/kg	U	7/10/97
SJS03-SS06-000P	SVTCL	2,6-Dinitrotoluene		410	ug/kg	U	7/10/97
SJS03-SS06-000P	SVTCL	2-Chloronaphthalene		410	ug/kg	U	7/10/97
SJS03-SS06-000P	SVTCL	2-Chlorophenol		410	ug/kg	U	7/10/97
SJS03-SS06-000P	SVTCL	2-Methylnaphthalene		410	ug/kg	U	7/10/97
SJS03-SS06-000P	SVTCL	2-Methylphenol		410	ug/kg	U	7/10/97
SJS03-SS06-000P	SVTCL	2-Nitroaniline		1000	ug/kg	U	7/10/97
SJS03-SS06-000P	SVTCL	2-Nitrophenol		410	ug/kg	U	7/10/97
SJS03-SS06-000P	SVTCL	3,3'-Dichlorobenzidine		410	ug/kg	U	7/10/97
SJS03-SS06-000P	SVTCL	3-Nitroaniline		1000	ug/kg	UJ	7/10/97
SJS03-SS06-000P	SVTCL	4,6-Dinitro-2-Methylphenol		1000	ug/kg	U	7/10/97
SJS03-SS06-000P	SVTCL	4-Bromophenyl phenylether		410	ug/kg	U	7/10/97
SJS03-SS06-000P	SVTCL	4-Chloro-3-Methylphenol		410	ug/kg	U	7/10/97
SJS03-SS06-000P	SVTCL	4-Chloroaniline		410	ug/kg	U	7/10/97
SJS03-SS06-000P	SVTCL	4-Chlorophenyl-phenylether		410	ug/kg	U	7/10/97
SJS03-SS06-000P	SVTCL	4-Methylphenol		410	ug/kg	U	7/10/97
SJS03-SS06-000P	SVTCL	4-Nitroaniline		1000	ug/kg	U	7/10/97
SJS03-SS06-000P	SVTCL	4-Nitrophenol		1000	ug/kg	U	7/10/97
SJS03-SS06-000P	SVTCL	Acenaphthene		410	ug/kg	U	7/10/97
SJS03-SS06-000P	SVTCL	Acenaphthylene	86	410	ug/kg	J	7/10/97
SJS03-SS06-000P	SVTCL	Anthracene	120	410	ug/kg	J	7/10/97
SJS03-SS06-000P	SVTCL	Benzo(a)Anthracene	390	410	ug/kg	J	7/10/97
SJS03-SS06-000P	SVTCL	Benzo(a)Pyrene	350	410	ug/kg	J	7/10/97
SJS03-SS06-000P	SVTCL	Benzo(b)Fluoranthene	1500	410	ug/kg		7/10/97
SJS03-SS06-000P	SVTCL	Benzo(g,h,i)Perylene	330	410	ug/kg	J	7/10/97
SJS03-SS06-000P	SVTCL	Benzo(k)Fluoranthene	420	410	ug/kg		7/10/97
SJS03-SS06-000P	SVTCL	Bis(2-chloroethoxy)Methane		410	ug/kg	U	7/10/97
SJS03-SS06-000P	SVTCL	Bis(2-chloroethyl)Ether		410	ug/kg	U	7/10/97
SJS03-SS06-000P	SVTCL	Bis(2-Ethylhexyl)Phthalate	81	320	ug/kg	B	7/10/97
SJS03-SS06-000P	SVTCL	Butylbenzylphthalate		410	ug/kg	U	7/10/97
SJS03-SS06-000P	SVTCL	Carbazole	130	410	ug/kg	J	7/10/97
SJS03-SS06-000P	SVTCL	Chrysene	690	410	ug/kg		7/10/97
SJS03-SS06-000P	SVTCL	Di-n-Butylphthalate		410	ug/kg	U	7/10/97
SJS03-SS06-000P	SVTCL	Di-n-Octyl Phthalate		410	ug/kg	U	7/10/97
SJS03-SS06-000P	SVTCL	Dibenz(a,h)Anthracene		410	ug/kg	U	7/10/97
SJS03-SS06-000P	SVTCL	Dibenzofuran	58	410	ug/kg	J	7/10/97
SJS03-SS06-000P	SVTCL	Diethylphthalate		410	ug/kg	U	7/10/97
SJS03-SS06-000P	SVTCL	Dimethyl Phthalate		410	ug/kg	U	7/10/97
SJS03-SS06-000P	SVTCL	Fluoranthene	640	410	ug/kg		7/10/97
SJS03-SS06-000P	SVTCL	Fluorene	48	410	ug/kg	J	7/10/97
SJS03-SS06-000P	SVTCL	Hexachlorobenzene		410	ug/kg	U	7/10/97
SJS03-SS06-000P	SVTCL	Hexachlorobutadiene		410	ug/kg	U	7/10/97
SJS03-SS06-000P	SVTCL	Hexachlorocyclopentadien		410	ug/kg	U	7/10/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS03-SS06-000P	SVTCL	Hexachloroethane		410	ug/kg	U	7/10/97
SJS03-SS06-000P	SVTCL	Indeno(1,2,3-cd)Pyrene	440	410	ug/kg		7/10/97
SJS03-SS06-000P	SVTCL	Isophorone		410	ug/kg	U	7/10/97
SJS03-SS06-000P	SVTCL	N-Nitroso-Di-n-Propylamine		410	ug/kg	U	7/10/97
SJS03-SS06-000P	SVTCL	N-Nitrosodiphenylamine		410	ug/kg	U	7/10/97
SJS03-SS06-000P	SVTCL	Naphthalene	69	410	ug/kg	J	7/10/97
SJS03-SS06-000P	SVTCL	Nitrobenzene		410	ug/kg	U	7/10/97
SJS03-SS06-000P	SVTCL	Pentachlorophenol	160	1000	ug/kg	J	7/10/97
SJS03-SS06-000P	SVTCL	Phenanthrene	420	410	ug/kg	J	7/10/97
SJS03-SS06-000P	SVTCL	Phenol		410	ug/kg	U	7/10/97
SJS03-SS06-000P	SVTCL	Pyrene	560	410	ug/kg	J	7/10/97
SJS03-SS06-000P	VCTCL	1,1,1-Trichloroethane		12	ug/kg	UJ	7/2/97
SJS03-SS06-000P	VCTCL	1,1,2,2-Tetrachloroethane		12	ug/kg	UJ	7/2/97
SJS03-SS06-000P	VCTCL	1,1,2-Trichloroethane		12	ug/kg	UJ	7/2/97
SJS03-SS06-000P	VCTCL	1,1-Dichloroethane		12	ug/kg	UJ	7/2/97
SJS03-SS06-000P	VCTCL	1,1-Dichloroethene		12	ug/kg	UJ	7/2/97
SJS03-SS06-000P	VCTCL	1,2-Dichloroethane		12	ug/kg	UJ	7/2/97
SJS03-SS06-000P	VCTCL	1,2-Dichloroethene (total)		12	ug/kg	UJ	7/2/97
SJS03-SS06-000P	VCTCL	1,2-Dichloropropane		12	ug/kg	UJ	7/2/97
SJS03-SS06-000P	VCTCL	2-Butanone		12	ug/kg	UJ	7/2/97
SJS03-SS06-000P	VCTCL	2-Hexanone		12	ug/kg	UJ	7/2/97
SJS03-SS06-000P	VCTCL	4-Methyl-2-Pentanone		12	ug/kg	UJ	7/2/97
SJS03-SS06-000P	VCTCL	Acetone	77	13	ug/kg	B	7/2/97
SJS03-SS06-000P	VCTCL	Benzene		12	ug/kg	UJ	7/2/97
SJS03-SS06-000P	VCTCL	Bromodichloromethane		12	ug/kg	UJ	7/2/97
SJS03-SS06-000P	VCTCL	Bromoform		12	ug/kg	UJ	7/2/97
SJS03-SS06-000P	VCTCL	Bromomethane		12	ug/kg	UJ	7/2/97
SJS03-SS06-000P	VCTCL	Carbon Disulfide		12	ug/kg	UJ	7/2/97
SJS03-SS06-000P	VCTCL	Carbon Tetrachloride		12	ug/kg	UJ	7/2/97
SJS03-SS06-000P	VCTCL	Chlorobenzene		12	ug/kg	UJ	7/2/97
SJS03-SS06-000P	VCTCL	Chloroethane		12	ug/kg	UJ	7/2/97
SJS03-SS06-000P	VCTCL	Chloroform		12	ug/kg	UJ	7/2/97
SJS03-SS06-000P	VCTCL	Chloromethane		12	ug/kg	UJ	7/2/97
SJS03-SS06-000P	VCTCL	cis-1,3-Dichloropropene		12	ug/kg	UJ	7/2/97
SJS03-SS06-000P	VCTCL	Dibromochloromethane		12	ug/kg	UJ	7/2/97
SJS03-SS06-000P	VCTCL	Ethylbenzene		12	ug/kg	UJ	7/2/97
SJS03-SS06-000P	VCTCL	Methylene Chloride	71	13	ug/kg	B	7/2/97
SJS03-SS06-000P	VCTCL	Styrene		12	ug/kg	UJ	7/2/97
SJS03-SS06-000P	VCTCL	Tetrachloroethene		12	ug/kg	UJ	7/2/97
SJS03-SS06-000P	VCTCL	Toluene		12	ug/kg	UJ	7/2/97
SJS03-SS06-000P	VCTCL	Total Xylenes		12	ug/kg	UJ	7/2/97
SJS03-SS06-000P	VCTCL	Trans-1,3-Dichloropropene		12	ug/kg	UJ	7/2/97
SJS03-SS06-000P	VCTCL	Trichloroethene		12	ug/kg	UJ	7/2/97
SJS03-SS06-000P	VCTCL	Vinyl Chloride		12	ug/kg	UJ	7/2/97
SJS03-SS07-000	CTOTP	Total Phosphorous (as P)	7.9	1.4	mg/kg		7/15/97
SJS03-SS07-000	MCYAN	Aluminum	14000	10.46	mg/kg		7/2/97
SJS03-SS07-000	MCYAN	Antimony	1.4	0.48	mg/kg	B	7/2/97
SJS03-SS07-000	MCYAN	Arsenic	13.1	0.71	mg/kg	L	7/2/97
SJS03-SS07-000	MCYAN	Barium	211	0.48	mg/kg		7/2/97
SJS03-SS07-000	MCYAN	Beryllium	1.3	0.24	mg/kg		7/2/97
SJS03-SS07-000	MCYAN	Cadmium	0.32	0.12	mg/kg	J	7/7/97
SJS03-SS07-000	MCYAN	Calcium	4750	20.68	mg/kg		7/2/97
SJS03-SS07-000	MCYAN	Chromium	30.2	1.66	mg/kg		7/2/97
SJS03-SS07-000	MCYAN	Cobalt	6.7	1.9	mg/kg	J	7/2/97
SJS03-SS07-000	MCYAN	Copper	125	1.43	mg/kg		7/2/97
SJS03-SS07-000	MCYAN	Cyanide		0.59	mg/kg	U	7/2/97
SJS03-SS07-000	MCYAN	Iron	15600	4.04	mg/kg		7/2/97
SJS03-SS07-000	MCYAN	Lead	240	0.24	mg/kg	J	7/2/97
SJS03-SS07-000	MCYAN	Magnesium	1590	43.03	mg/kg		7/2/97
SJS03-SS07-000	MCYAN	Manganese	119	0.48	mg/kg		7/2/97
SJS03-SS07-000	MCYAN	Mercury	0.54	0.06	mg/kg		6/30/97
SJS03-SS07-000	MCYAN	Nickel	22	1.66	mg/kg		7/2/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS03-SS07-000	MCYAN	Potassium	1540	52.77	mg/kg		7/2/97
SJS03-SS07-000	MCYAN	Selenium		0.71	mg/kg	UL	7/2/97
SJS03-SS07-000	MCYAN	Silver	0.98	0.24	mg/kg	B	7/2/97
SJS03-SS07-000	MCYAN	Sodium	399	13.79	mg/kg	J	7/2/97
SJS03-SS07-000	MCYAN	Thallium	1.1	0.48	mg/kg	B	7/2/97
SJS03-SS07-000	MCYAN	Vanadium	79.4	2.14	mg/kg		7/2/97
SJS03-SS07-000	MCYAN	Zinc	253	1.19	mg/kg	L	7/2/97
SJS03-SS07-000	PSPCB	4,4'-DDD	43	4.3	ug/kg		7/16/97
SJS03-SS07-000	PSPCB	4,4'-DDE	34	4.3	ug/kg		7/16/97
SJS03-SS07-000	PSPCB	4,4'-DDT	130	4.2	ug/kg		7/17/97
SJS03-SS07-000	PSPCB	Aldrin		2	ug/kg	U	7/16/97
SJS03-SS07-000	PSPCB	alpha-BHC		2	ug/kg	U	7/16/97
SJS03-SS07-000	PSPCB	alpha-Chlordane		2	ug/kg	U	7/16/97
SJS03-SS07-000	PSPCB	Aroclor-1016		38	ug/kg	U	7/16/97
SJS03-SS07-000	PSPCB	Aroclor-1221		78	ug/kg	U	7/16/97
SJS03-SS07-000	PSPCB	Aroclor-1232		38	ug/kg	U	7/16/97
SJS03-SS07-000	PSPCB	Aroclor-1242		38	ug/kg	U	7/16/97
SJS03-SS07-000	PSPCB	Aroclor-1248		38	ug/kg	U	7/16/97
SJS03-SS07-000	PSPCB	Aroclor-1254	78	54	ug/kg		7/16/97
SJS03-SS07-000	PSPCB	Aroclor-1260		38	ug/kg	U	7/16/97
SJS03-SS07-000	PSPCB	beta-BHC		2	ug/kg	U	7/16/97
SJS03-SS07-000	PSPCB	delta-BHC		2	ug/kg	U	7/16/97
SJS03-SS07-000	PSPCB	Dieldrin	5.3	5.4	ug/kg	J	7/16/97
SJS03-SS07-000	PSPCB	Endosulfan I		2	ug/kg	U	7/16/97
SJS03-SS07-000	PSPCB	Endosulfan II		3.8	ug/kg	U	7/16/97
SJS03-SS07-000	PSPCB	Endosulfan Sulfate		3.8	ug/kg	U	7/16/97
SJS03-SS07-000	PSPCB	Endrin		3.8	ug/kg	U	7/16/97
SJS03-SS07-000	PSPCB	Endrin Aldehyde		3.8	ug/kg	U	7/16/97
SJS03-SS07-000	PSPCB	Endrin Ketone		3.8	ug/kg	U	7/16/97
SJS03-SS07-000	PSPCB	gamma-BHC		2	ug/kg	U	7/16/97
SJS03-SS07-000	PSPCB	gamma-Chlordane		2	ug/kg	U	7/16/97
SJS03-SS07-000	PSPCB	Heptachlor		2	ug/kg	U	7/16/97
SJS03-SS07-000	PSPCB	Heptachlor Epoxide		2	ug/kg	U	7/16/97
SJS03-SS07-000	PSPCB	Methoxychlor		20	ug/kg	U	7/16/97
SJS03-SS07-000	PSPCB	Toxaphene		200	ug/kg	U	7/16/97
SJS03-SS07-000	SVTCL	1,2,4-Trichlorobenzene		380	ug/kg	U	7/11/97
SJS03-SS07-000	SVTCL	1,2-Dichlorobenzene		380	ug/kg	U	7/11/97
SJS03-SS07-000	SVTCL	1,3-Dichlorobenzene		380	ug/kg	U	7/11/97
SJS03-SS07-000	SVTCL	1,4-Dichlorobenzene		380	ug/kg	U	7/11/97
SJS03-SS07-000	SVTCL	2,2'-oxybis(1-Chloropropane		380	ug/kg	U	7/11/97
SJS03-SS07-000	SVTCL	2,4,5-Trichlorophenol		960	ug/kg	U	7/11/97
SJS03-SS07-000	SVTCL	2,4,6-Trichlorophenol		380	ug/kg	U	7/11/97
SJS03-SS07-000	SVTCL	2,4-Dichlorophenol		380	ug/kg	U	7/11/97
SJS03-SS07-000	SVTCL	2,4-Dimethylphenol		380	ug/kg	U	7/11/97
SJS03-SS07-000	SVTCL	2,4-Dinitrophenol		960	ug/kg	U	7/11/97
SJS03-SS07-000	SVTCL	2,4-Dinitrotoluene		380	ug/kg	U	7/11/97
SJS03-SS07-000	SVTCL	2,6-Dinitrotoluene		380	ug/kg	U	7/11/97
SJS03-SS07-000	SVTCL	2-Chloronaphthalene		380	ug/kg	U	7/11/97
SJS03-SS07-000	SVTCL	2-Chlorophenol		380	ug/kg	U	7/11/97
SJS03-SS07-000	SVTCL	2-Methylnaphthalene		380	ug/kg	U	7/11/97
SJS03-SS07-000	SVTCL	2-Methylphenol		380	ug/kg	U	7/11/97
SJS03-SS07-000	SVTCL	2-Nitroaniline		960	ug/kg	U	7/11/97
SJS03-SS07-000	SVTCL	2-Nitrophenol		380	ug/kg	U	7/11/97
SJS03-SS07-000	SVTCL	3,3'-Dichlorobenzidine		380	ug/kg	U	7/11/97
SJS03-SS07-000	SVTCL	3-Nitroaniline		960	ug/kg	U	7/11/97
SJS03-SS07-000	SVTCL	4,6-Dinitro-2-Methylphenol		960	ug/kg	U	7/11/97
SJS03-SS07-000	SVTCL	4-Bromophenyl phenylether		380	ug/kg	U	7/11/97
SJS03-SS07-000	SVTCL	4-Chloro-3-Methylphenol		380	ug/kg	U	7/11/97
SJS03-SS07-000	SVTCL	4-Chloroaniline		380	ug/kg	U	7/11/97
SJS03-SS07-000	SVTCL	4-Chlorophenyl-phenylether		380	ug/kg	U	7/11/97
SJS03-SS07-000	SVTCL	4-Methylphenol		380	ug/kg	U	7/11/97
SJS03-SS07-000	SVTCL	4-Nitroaniline		960	ug/kg	U	7/11/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS03-SS07-000	SVTCL	4-Nitrophenol		960	ug/kg	U	7/11/97
SJS03-SS07-000	SVTCL	Acenaphthene		380	ug/kg	U	7/11/97
SJS03-SS07-000	SVTCL	Acenaphthylene	54	380	ug/kg	J	7/11/97
SJS03-SS07-000	SVTCL	Anthracene	83	380	ug/kg	J	7/11/97
SJS03-SS07-000	SVTCL	Benzo(a)Anthracene	350	380	ug/kg	J	7/11/97
SJS03-SS07-000	SVTCL	Benzo(a)Pyrene	350	380	ug/kg	J	7/11/97
SJS03-SS07-000	SVTCL	Benzo(b)Fluoranthene	1200	380	ug/kg		7/11/97
SJS03-SS07-000	SVTCL	Benzo(g,h,i)Perylene	220	380	ug/kg	J	7/11/97
SJS03-SS07-000	SVTCL	Benzo(k)Fluoranthene	460	380	ug/kg		7/11/97
SJS03-SS07-000	SVTCL	Bis(2-chloroethoxy)Methane		380	ug/kg	U	7/11/97
SJS03-SS07-000	SVTCL	Bis(2-chloroethyl)Ether		380	ug/kg	U	7/11/97
SJS03-SS07-000	SVTCL	Bis(2-Ethylhexyl)Phthalate	67	280	ug/kg	B	7/11/97
SJS03-SS07-000	SVTCL	Butylbenzylphthalate		380	ug/kg	U	7/11/97
SJS03-SS07-000	SVTCL	Carbazole		380	ug/kg	U	7/11/97
SJS03-SS07-000	SVTCL	Chrysene	730	380	ug/kg		7/11/97
SJS03-SS07-000	SVTCL	Di-n-Butylphthalate		380	ug/kg	U	7/11/97
SJS03-SS07-000	SVTCL	Di-n-Octyl Phthalate		380	ug/kg	U	7/11/97
SJS03-SS07-000	SVTCL	Dibenz(a,h)Anthracene		380	ug/kg	U	7/11/97
SJS03-SS07-000	SVTCL	Dibenzofuran		380	ug/kg	U	7/11/97
SJS03-SS07-000	SVTCL	Diethylphthalate	79	380	ug/kg	J	7/11/97
SJS03-SS07-000	SVTCL	Dimethyl Phthalate		380	ug/kg	U	7/11/97
SJS03-SS07-000	SVTCL	Fluoranthene	550	380	ug/kg		7/11/97
SJS03-SS07-000	SVTCL	Fluorene		380	ug/kg	U	7/11/97
SJS03-SS07-000	SVTCL	Hexachlorobenzene		380	ug/kg	U	7/11/97
SJS03-SS07-000	SVTCL	Hexachlorobutadiene		380	ug/kg	U	7/11/97
SJS03-SS07-000	SVTCL	Hexachlorocyclopentadien		380	ug/kg	U	7/11/97
SJS03-SS07-000	SVTCL	Hexachloroethane		380	ug/kg	U	7/11/97
SJS03-SS07-000	SVTCL	Indeno(1,2,3-cd)Pyrene	250	380	ug/kg	J	7/11/97
SJS03-SS07-000	SVTCL	Isophorone		380	ug/kg	U	7/11/97
SJS03-SS07-000	SVTCL	N-Nitroso-Di-n-Propylamine		380	ug/kg	U	7/11/97
SJS03-SS07-000	SVTCL	N-Nitrosodiphenylamine		380	ug/kg	U	7/11/97
SJS03-SS07-000	SVTCL	Naphthalene	53	380	ug/kg	J	7/11/97
SJS03-SS07-000	SVTCL	Nitrobenzene		380	ug/kg	U	7/11/97
SJS03-SS07-000	SVTCL	Pentachlorophenol		960	ug/kg	U	7/11/97
SJS03-SS07-000	SVTCL	Phenanthrene	200	380	ug/kg	J	7/11/97
SJS03-SS07-000	SVTCL	Phenol		380	ug/kg	U	7/11/97
SJS03-SS07-000	SVTCL	Pyrene	370	380	ug/kg	J	7/11/97
SJS03-SS07-000	VCTCL	1,1,1-Trichloroethane		12	ug/kg	U	7/1/97
SJS03-SS07-000	VCTCL	1,1,2,2-Tetrachloroethane		12	ug/kg	U	7/1/97
SJS03-SS07-000	VCTCL	1,1,2-Trichloroethane		12	ug/kg	U	7/1/97
SJS03-SS07-000	VCTCL	1,1-Dichloroethane		12	ug/kg	U	7/1/97
SJS03-SS07-000	VCTCL	1,1-Dichloroethene		12	ug/kg	U	7/1/97
SJS03-SS07-000	VCTCL	1,2-Dichloroethane		12	ug/kg	U	7/1/97
SJS03-SS07-000	VCTCL	1,2-Dichloroethene (total)		12	ug/kg	U	7/1/97
SJS03-SS07-000	VCTCL	1,2-Dichloropropane		12	ug/kg	U	7/1/97
SJS03-SS07-000	VCTCL	2-Butanone		12	ug/kg	U	7/1/97
SJS03-SS07-000	VCTCL	2-Hexanone		12	ug/kg	U	7/1/97
SJS03-SS07-000	VCTCL	4-Methyl-2-Pentanone		12	ug/kg	U	7/1/97
SJS03-SS07-000	VCTCL	Acetone	69	12	ug/kg	B	7/1/97
SJS03-SS07-000	VCTCL	Benzene		12	ug/kg	U	7/1/97
SJS03-SS07-000	VCTCL	Bromodichloromethane		12	ug/kg	U	7/1/97
SJS03-SS07-000	VCTCL	Bromoform		12	ug/kg	U	7/1/97
SJS03-SS07-000	VCTCL	Bromomethane		12	ug/kg	U	7/1/97
SJS03-SS07-000	VCTCL	Carbon Disulfide		12	ug/kg	U	7/1/97
SJS03-SS07-000	VCTCL	Carbon Tetrachloride		12	ug/kg	U	7/1/97
SJS03-SS07-000	VCTCL	Chlorobenzene		12	ug/kg	U	7/1/97
SJS03-SS07-000	VCTCL	Chloroethane		12	ug/kg	U	7/1/97
SJS03-SS07-000	VCTCL	Chloroform		12	ug/kg	U	7/1/97
SJS03-SS07-000	VCTCL	Chloromethane		12	ug/kg	U	7/1/97
SJS03-SS07-000	VCTCL	cis-1,3-Dichloropropene		12	ug/kg	U	7/1/97
SJS03-SS07-000	VCTCL	Dibromochloromethane		12	ug/kg	U	7/1/97
SJS03-SS07-000	VCTCL	Ethylbenzene		12	ug/kg	U	7/1/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS03-SS07-000	VCTCL	Methylene Chloride	82	12	ug/kg	B	7/1/97
SJS03-SS07-000	VCTCL	Styrene		12	ug/kg	U	7/1/97
SJS03-SS07-000	VCTCL	Tetrachloroethene		12	ug/kg	U	7/1/97
SJS03-SS07-000	VCTCL	Toluene		12	ug/kg	U	7/1/97
SJS03-SS07-000	VCTCL	Total Xylenes		12	ug/kg	U	7/1/97
SJS03-SS07-000	VCTCL	Trans-1,3-Dichloropropene		12	ug/kg	U	7/1/97
SJS03-SS07-000	VCTCL	Trichloroethene		12	ug/kg	U	7/1/97
SJS03-SS07-000	VCTCL	Vinyl Chloride		12	ug/kg	U	7/1/97
SJS04-GW1D-001	VCLOW	1,1,1-Trichloroethane		1	ug/L	U	8/5/97
SJS04-GW1D-001	VCLOW	1,1,2,2-Tetrachloroethane		1	ug/L	U	8/5/97
SJS04-GW1D-001	VCLOW	1,1,2-Trichloroethane		1	ug/L	U	8/5/97
SJS04-GW1D-001	VCLOW	1,1-Dichloroethane		1	ug/L	U	8/5/97
SJS04-GW1D-001	VCLOW	1,1-Dichloroethene		1	ug/L	U	8/5/97
SJS04-GW1D-001	VCLOW	1,2,4-Trichlorobenzene		1	ug/L	U	8/5/97
SJS04-GW1D-001	VCLOW	1,2-Dibromo-3-chloropropan		1	ug/L	U	8/5/97
SJS04-GW1D-001	VCLOW	1,2-Dibromoethane		1	ug/L	U	8/5/97
SJS04-GW1D-001	VCLOW	1,2-Dichlorobenzene		1	ug/L	U	8/5/97
SJS04-GW1D-001	VCLOW	1,2-Dichloroethane		1	ug/L	U	8/5/97
SJS04-GW1D-001	VCLOW	1,2-Dichloropropane		1	ug/L	U	8/5/97
SJS04-GW1D-001	VCLOW	1,3-Dichlorobenzene		1	ug/L	U	8/5/97
SJS04-GW1D-001	VCLOW	1,4-Dichlorobenzene		1	ug/L	U	8/5/97
SJS04-GW1D-001	VCLOW	2-Hexanone		5	ug/L	U	8/5/97
SJS04-GW1D-001	VCLOW	4-Methyl-2-Pentanone		5	ug/L	U	8/5/97
SJS04-GW1D-001	VCLOW	Acetone	14	5	ug/L	B	8/5/97
SJS04-GW1D-001	VCLOW	Benzene		1	ug/L	U	8/5/97
SJS04-GW1D-001	VCLOW	Bromochloromethane		1	ug/L	U	8/5/97
SJS04-GW1D-001	VCLOW	Bromodichloromethane		1	ug/L	U	8/5/97
SJS04-GW1D-001	VCLOW	Bromoform		1	ug/L	U	8/5/97
SJS04-GW1D-001	VCLOW	Bromomethane		1	ug/L	U	8/5/97
SJS04-GW1D-001	VCLOW	Carbon Disulfide		1	ug/L	U	8/5/97
SJS04-GW1D-001	VCLOW	Carbon Tetrachloride		1	ug/L	U	8/5/97
SJS04-GW1D-001	VCLOW	Chlorobenzene		1	ug/L	U	8/5/97
SJS04-GW1D-001	VCLOW	Chloroethane		1	ug/L	U	8/5/97
SJS04-GW1D-001	VCLOW	Chloroform	0.6	1	ug/L	J	8/5/97
SJS04-GW1D-001	VCLOW	Chloromethane		1	ug/L	U	8/5/97
SJS04-GW1D-001	VCLOW	cis-1,2-Dichloroethene		1	ug/L	U	8/5/97
SJS04-GW1D-001	VCLOW	cis-1,3-Dichloropropene		1	ug/L	U	8/5/97
SJS04-GW1D-001	VCLOW	Dibromochloromethane		1	ug/L	U	8/5/97
SJS04-GW1D-001	VCLOW	Ethylbenzene		1	ug/L	U	8/5/97
SJS04-GW1D-001	VCLOW	Methylene Chloride	4	1	ug/L	B	8/5/97
SJS04-GW1D-001	VCLOW	Styrene		1	ug/L	U	8/5/97
SJS04-GW1D-001	VCLOW	Tetrachloroethene		1	ug/L	U	8/5/97
SJS04-GW1D-001	VCLOW	Toluene		1	ug/L	U	8/5/97
SJS04-GW1D-001	VCLOW	Total Xylenes		1	ug/L	U	8/5/97
SJS04-GW1D-001	VCLOW	Trans-1,2-Dichloroethene		1	ug/L	U	8/5/97
SJS04-GW1D-001	VCLOW	trans-1,3-Dichloropropene		1	ug/L	U	8/5/97
SJS04-GW1D-001	VCLOW	Trichloroethene		1	ug/L	U	8/5/97
SJS04-GW1D-001	VCLOW	Vinyl Chloride		1	ug/L	U	8/5/97
SJS04-GW1S-001	CTOTP	Total Phosphorous (as P)	2.9	1.3	mg/L	J	7/31/97
SJS04-GW1S-001	MCYAN	Aluminum	2370	29	ug/L	K	8/1/97
SJS04-GW1S-001	MCYAN	Antimony		2	ug/L	U	8/1/97
SJS04-GW1S-001	MCYAN	Arsenic		3	ug/L	U	8/1/97
SJS04-GW1S-001	MCYAN	Barium	49.3	1	ug/L	J	8/1/97
SJS04-GW1S-001	MCYAN	Beryllium		1	ug/L	U	8/1/97
SJS04-GW1S-001	MCYAN	Cadmium		0.5	ug/L	U	8/1/97
SJS04-GW1S-001	MCYAN	Calcium	172000	46	ug/L		8/1/97
SJS04-GW1S-001	MCYAN	Chromium	23	4	ug/L	B	8/1/97
SJS04-GW1S-001	MCYAN	Cobalt		8	ug/L	U	8/1/97
SJS04-GW1S-001	MCYAN	Copper		6	ug/L	U	8/1/97
SJS04-GW1S-001	MCYAN	Cyanide		5	ug/L	U	7/25/97
SJS04-GW1S-001	MCYAN	Iron	4730	5	ug/L		8/1/97
SJS04-GW1S-001	MCYAN	Lead	1.5	1	ug/L	B	8/1/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS04-GW1S-001	MCYAN	Magnesium	282000	45	ug/L		8/1/97
SJS04-GW1S-001	MCYAN	Manganese	138	1	ug/L		8/1/97
SJS04-GW1S-001	MCYAN	Mercury	0.22	0.1	ug/L	B	8/7/97
SJS04-GW1S-001	MCYAN	Nickel		7	ug/L	U	8/1/97
SJS04-GW1S-001	MCYAN	Potassium	91300	97	ug/L		8/1/97
SJS04-GW1S-001	MCYAN	Selenium		3	ug/L	U	8/1/97
SJS04-GW1S-001	MCYAN	Silver	1.5	3	ug/L	B	8/6/97
SJS04-GW1S-001	MCYAN	Sodium	1980000	28	ug/L		8/4/97
SJS04-GW1S-001	MCYAN	Thallium		2	ug/L	U	8/1/97
SJS04-GW1S-001	MCYAN	Vanadium	14	4	ug/L	J	8/1/97
SJS04-GW1S-001	MCYAN	Zinc	44	3	ug/L	B	8/1/97
SJS04-GW1S-001	PSPCB	4,4'-DDD		0.1	ug/L	U	8/9/97
SJS04-GW1S-001	PSPCB	4,4'-DDE		0.1	ug/L	U	8/9/97
SJS04-GW1S-001	PSPCB	4,4'-DDT		0.1	ug/L	U	8/9/97
SJS04-GW1S-001	PSPCB	Aldrin		0.05	ug/L	U	8/9/97
SJS04-GW1S-001	PSPCB	alpha-BHC		0.05	ug/L	U	8/9/97
SJS04-GW1S-001	PSPCB	alpha-Chlordane		0.05	ug/L	U	8/9/97
SJS04-GW1S-001	PSPCB	Aroclor-1016		1	ug/L	U	8/9/97
SJS04-GW1S-001	PSPCB	Aroclor-1221		2	ug/L	U	8/9/97
SJS04-GW1S-001	PSPCB	Aroclor-1232		1	ug/L	U	8/9/97
SJS04-GW1S-001	PSPCB	Aroclor-1242		1	ug/L	U	8/9/97
SJS04-GW1S-001	PSPCB	Aroclor-1248		1	ug/L	U	8/9/97
SJS04-GW1S-001	PSPCB	Aroclor-1254		1	ug/L	U	8/9/97
SJS04-GW1S-001	PSPCB	Aroclor-1260		1	ug/L	U	8/9/97
SJS04-GW1S-001	PSPCB	beta-BHC		0.05	ug/L	U	8/9/97
SJS04-GW1S-001	PSPCB	delta-BHC		0.05	ug/L	U	8/9/97
SJS04-GW1S-001	PSPCB	Dieldrin		0.1	ug/L	U	8/9/97
SJS04-GW1S-001	PSPCB	Endosulfan I		0.05	ug/L	U	8/9/97
SJS04-GW1S-001	PSPCB	Endosulfan II		0.1	ug/L	U	8/9/97
SJS04-GW1S-001	PSPCB	Endosulfan Sulfate		0.1	ug/L	U	8/9/97
SJS04-GW1S-001	PSPCB	Endrin		0.1	ug/L	U	8/9/97
SJS04-GW1S-001	PSPCB	Endrin Aldehyde		0.1	ug/L	U	8/9/97
SJS04-GW1S-001	PSPCB	Endrin Ketone		0.1	ug/L	U	8/9/97
SJS04-GW1S-001	PSPCB	gamma-BHC		0.05	ug/L	U	8/9/97
SJS04-GW1S-001	PSPCB	gamma-Chlordane		0.05	ug/L	U	8/9/97
SJS04-GW1S-001	PSPCB	Heptachlor		0.05	ug/L	U	8/9/97
SJS04-GW1S-001	PSPCB	Heptachlor Epoxide		0.05	ug/L	U	8/9/97
SJS04-GW1S-001	PSPCB	Methoxychlor		0.5	ug/L	U	8/9/97
SJS04-GW1S-001	PSPCB	Toxaphene		5	ug/L	U	8/9/97
SJS04-GW1S-001	SVTCL	1,2,4-Trichlorobenzene		10	ug/L	U	7/27/97
SJS04-GW1S-001	SVTCL	1,2-Dichlorobenzene		10	ug/L	U	7/27/97
SJS04-GW1S-001	SVTCL	1,3-Dichlorobenzene		10	ug/L	U	7/27/97
SJS04-GW1S-001	SVTCL	1,4-Dichlorobenzene		10	ug/L	U	7/27/97
SJS04-GW1S-001	SVTCL	2,2'-oxybis(1-Chloropropane		10	ug/L	U	7/27/97
SJS04-GW1S-001	SVTCL	2,4,5-Trichlorophenol		25	ug/L	U	7/27/97
SJS04-GW1S-001	SVTCL	2,4,6-Trichlorophenol		10	ug/L	U	7/27/97
SJS04-GW1S-001	SVTCL	2,4-Dichlorophenol		10	ug/L	U	7/27/97
SJS04-GW1S-001	SVTCL	2,4-Dimethylphenol		10	ug/L	U	7/27/97
SJS04-GW1S-001	SVTCL	2,4-Dinitrophenol		25	ug/L	U	7/27/97
SJS04-GW1S-001	SVTCL	2,4-Dinitrotoluene		10	ug/L	U	7/27/97
SJS04-GW1S-001	SVTCL	2,6-Dinitrotoluene		10	ug/L	U	7/27/97
SJS04-GW1S-001	SVTCL	2-Chloronaphthalene		10	ug/L	U	7/27/97
SJS04-GW1S-001	SVTCL	2-Chlorophenol		10	ug/L	U	7/27/97
SJS04-GW1S-001	SVTCL	2-Methylnaphthalene		10	ug/L	U	7/27/97
SJS04-GW1S-001	SVTCL	2-Methylphenol		10	ug/L	U	7/27/97
SJS04-GW1S-001	SVTCL	2-Nitroaniline		25	ug/L	U	7/27/97
SJS04-GW1S-001	SVTCL	2-Nitrophenol		10	ug/L	U	7/27/97
SJS04-GW1S-001	SVTCL	3,3'-Dichlorobenzidine		10	ug/L	U	7/27/97
SJS04-GW1S-001	SVTCL	3-Nitroaniline		25	ug/L	U	7/27/97
SJS04-GW1S-001	SVTCL	4,6-Dinitro-2-Methylphenol		25	ug/L	U	7/27/97
SJS04-GW1S-001	SVTCL	4-Bromophenyl phenylether		10	ug/L	U	7/27/97
SJS04-GW1S-001	SVTCL	4-Chloro-3-Methylphenol		10	ug/L	U	7/27/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS04-GW1S-001	SVTCL	4-Chloroaniline		10	ug/L	U	7/27/97
SJS04-GW1S-001	SVTCL	4-Chlorophenyl-phenylether		10	ug/L	U	7/27/97
SJS04-GW1S-001	SVTCL	4-Methylphenol		10	ug/L	U	7/27/97
SJS04-GW1S-001	SVTCL	4-Nitroaniline		25	ug/L	U	7/27/97
SJS04-GW1S-001	SVTCL	4-Nitrophenol		25	ug/L	U	7/27/97
SJS04-GW1S-001	SVTCL	Acenaphthene	2	10	ug/L	J	7/27/97
SJS04-GW1S-001	SVTCL	Acenaphthylene		10	ug/L	U	7/27/97
SJS04-GW1S-001	SVTCL	Anthracene		10	ug/L	U	7/27/97
SJS04-GW1S-001	SVTCL	Benzo(a)Anthracene		10	ug/L	U	7/27/97
SJS04-GW1S-001	SVTCL	Benzo(a)Pyrene		10	ug/L	U	7/27/97
SJS04-GW1S-001	SVTCL	Benzo(b)Fluoranthene		10	ug/L	U	7/27/97
SJS04-GW1S-001	SVTCL	Benzo(g,h,i)Perylene		10	ug/L	U	7/27/97
SJS04-GW1S-001	SVTCL	Benzo(k)fluoranthene		10	ug/L	U	7/27/97
SJS04-GW1S-001	SVTCL	Bis(2-chloroethoxy)Methane		10	ug/L	U	7/27/97
SJS04-GW1S-001	SVTCL	Bis(2-chloroethyl)Ether		10	ug/L	U	7/27/97
SJS04-GW1S-001	SVTCL	Bis(2-Ethylhexyl)Phthalate		10	ug/L	U	7/27/97
SJS04-GW1S-001	SVTCL	Butylbenzylphthalate		10	ug/L	U	7/27/97
SJS04-GW1S-001	SVTCL	Carbazole		10	ug/L	U	7/27/97
SJS04-GW1S-001	SVTCL	Chrysene		10	ug/L	U	7/27/97
SJS04-GW1S-001	SVTCL	Di-n-Butylphthalate		10	ug/L	U	7/27/97
SJS04-GW1S-001	SVTCL	Di-n-Octyl Phthalate		10	ug/L	U	7/27/97
SJS04-GW1S-001	SVTCL	Dibenz(a,h)Anthracene		10	ug/L	U	7/27/97
SJS04-GW1S-001	SVTCL	Dibenzofuran		10	ug/L	U	7/27/97
SJS04-GW1S-001	SVTCL	Diethylphthalate		10	ug/L	U	7/27/97
SJS04-GW1S-001	SVTCL	Dimethyl Phthalate		10	ug/L	U	7/27/97
SJS04-GW1S-001	SVTCL	Fluoranthene		10	ug/L	U	7/27/97
SJS04-GW1S-001	SVTCL	Fluorene		10	ug/L	U	7/27/97
SJS04-GW1S-001	SVTCL	Hexachlorobenzene		10	ug/L	U	7/27/97
SJS04-GW1S-001	SVTCL	Hexachlorobutadiene		10	ug/L	U	7/27/97
SJS04-GW1S-001	SVTCL	Hexachlorocyclopentadien		10	ug/L	U	7/27/97
SJS04-GW1S-001	SVTCL	Hexachloroethane		10	ug/L	U	7/27/97
SJS04-GW1S-001	SVTCL	Indeno(1,2,3-cd)Pyrene		10	ug/L	U	7/27/97
SJS04-GW1S-001	SVTCL	Isophorone		10	ug/L	U	7/27/97
SJS04-GW1S-001	SVTCL	N-Nitroso-Di-n-Propylamine		10	ug/L	U	7/27/97
SJS04-GW1S-001	SVTCL	N-Nitrosodiphenylamine		10	ug/L	U	7/27/97
SJS04-GW1S-001	SVTCL	Naphthalene		10	ug/L	U	7/27/97
SJS04-GW1S-001	SVTCL	Nitrobenzene		10	ug/L	U	7/27/97
SJS04-GW1S-001	SVTCL	Pentachlorophenol		25	ug/L	U	7/27/97
SJS04-GW1S-001	SVTCL	Phenanthrene		10	ug/L	U	7/27/97
SJS04-GW1S-001	SVTCL	Phenol		10	ug/L	U	7/27/97
SJS04-GW1S-001	SVTCL	Pyrene		10	ug/L	U	7/27/97
SJS04-GW1S-001	VCLOW	1,1,1-Trichloroethane		1	ug/L	U	7/27/97
SJS04-GW1S-001	VCLOW	1,1,2,2-Tetrachloroethane		1	ug/L	U	7/27/97
SJS04-GW1S-001	VCLOW	1,1,2-Trichloroethane		1	ug/L	U	7/27/97
SJS04-GW1S-001	VCLOW	1,1-Dichloroethane		1	ug/L	U	7/27/97
SJS04-GW1S-001	VCLOW	1,1-Dichloroethene		1	ug/L	U	7/27/97
SJS04-GW1S-001	VCLOW	1,2,4-Trichlorobenzene		1	ug/L	U	7/27/97
SJS04-GW1S-001	VCLOW	1,2-Dibromo-3-chloropropan		1	ug/L	U	7/27/97
SJS04-GW1S-001	VCLOW	1,2-Dibromoethane		1	ug/L	U	7/27/97
SJS04-GW1S-001	VCLOW	1,2-Dichlorobenzene		1	ug/L	U	7/27/97
SJS04-GW1S-001	VCLOW	1,2-Dichloroethane		1	ug/L	U	7/27/97
SJS04-GW1S-001	VCLOW	1,2-Dichloropropane		1	ug/L	U	7/27/97
SJS04-GW1S-001	VCLOW	1,3-Dichlorobenzene		1	ug/L	U	7/27/97
SJS04-GW1S-001	VCLOW	1,4-Dichlorobenzene		1	ug/L	U	7/27/97
SJS04-GW1S-001	VCLOW	2-Butanone		5	ug/L	U	7/27/97
SJS04-GW1S-001	VCLOW	2-Hexanone		5	ug/L	U	7/27/97
SJS04-GW1S-001	VCLOW	4-Methyl-2-Pentanone		5	ug/L	U	7/27/97
SJS04-GW1S-001	VCLOW	Acetone	8	5	ug/L		7/27/97
SJS04-GW1S-001	VCLOW	Benzene		1	ug/L	U	7/27/97
SJS04-GW1S-001	VCLOW	Bromochloromethane		1	ug/L	U	7/27/97
SJS04-GW1S-001	VCLOW	Bromodichloromethane		1	ug/L	U	7/27/97
SJS04-GW1S-001	VCLOW	Bromoform		1	ug/L	U	7/27/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS04-GW1S-001	VCLOW	Bromomethane		1	ug/L	U	7/27/97
SJS04-GW1S-001	VCLOW	Carbon Disulfide	0.4	1	ug/L	J	7/27/97
SJS04-GW1S-001	VCLOW	Carbon Tetrachloride		1	ug/L	U	7/27/97
SJS04-GW1S-001	VCLOW	Chlorobenzene		1	ug/L	U	7/27/97
SJS04-GW1S-001	VCLOW	Chloroethane		1	ug/L	U	7/27/97
SJS04-GW1S-001	VCLOW	Chloroform		1	ug/L	U	7/27/97
SJS04-GW1S-001	VCLOW	Chloromethane		1	ug/L	U	7/27/97
SJS04-GW1S-001	VCLOW	cis-1,2-Dichloroethene		1	ug/L	U	7/27/97
SJS04-GW1S-001	VCLOW	cis-1,3-Dichloropropene		1	ug/L	U	7/27/97
SJS04-GW1S-001	VCLOW	Dibromochloromethane		1	ug/L	U	7/27/97
SJS04-GW1S-001	VCLOW	Ethylbenzene		1	ug/L	U	7/27/97
SJS04-GW1S-001	VCLOW	Methylene Chloride	1	1	ug/L	B	7/27/97
SJS04-GW1S-001	VCLOW	Styrene		1	ug/L	U	7/27/97
SJS04-GW1S-001	VCLOW	Tetrachloroethene		1	ug/L	U	7/27/97
SJS04-GW1S-001	VCLOW	Toluene		1	ug/L	U	7/27/97
SJS04-GW1S-001	VCLOW	Total Xylenes		1	ug/L	U	7/27/97
SJS04-GW1S-001	VCLOW	Trans-1,2-Dichloroethene		1	ug/L	U	7/27/97
SJS04-GW1S-001	VCLOW	Trans-1,3-Dichloropropene		1	ug/L	U	7/27/97
SJS04-GW1S-001	VCLOW	Trichloroethene		1	ug/L	U	7/27/97
SJS04-GW1S-001	VCLOW	Vinyl Chloride		1	ug/L	U	7/27/97
SJS04-GW1S-001F	METAL	Aluminum	275	29	ug/L	B	8/1/97
SJS04-GW1S-001F	METAL	Antimony	7.5	1	ug/L	B	8/1/97
SJS04-GW1S-001F	METAL	Arsenic		3	ug/L	U	8/1/97
SJS04-GW1S-001F	METAL	Barium	46.8	1	ug/L	J	8/1/97
SJS04-GW1S-001F	METAL	Beryllium		1	ug/L	U	8/1/97
SJS04-GW1S-001F	METAL	Cadmium		0.5	ug/L	U	8/1/97
SJS04-GW1S-001F	METAL	Calcium	182000	46	ug/L		8/1/97
SJS04-GW1S-001F	METAL	Chromium	9.6	4	ug/L	B	8/1/97
SJS04-GW1S-001F	METAL	Cobalt	11.3	3	ug/L	J	8/1/97
SJS04-GW1S-001F	METAL	Copper		6	ug/L	U	8/1/97
SJS04-GW1S-001F	METAL	Iron	1450	5	ug/L		8/1/97
SJS04-GW1S-001F	METAL	Lead		1	ug/L	U	8/1/97
SJS04-GW1S-001F	METAL	Magnesium	305000	45	ug/L		8/1/97
SJS04-GW1S-001F	METAL	Manganese	127	1	ug/L		8/1/97
SJS04-GW1S-001F	METAL	Mercury	0.19	0.1	ug/L	B	8/7/97
SJS04-GW1S-001F	METAL	Nickel		7	ug/L	U	8/1/97
SJS04-GW1S-001F	METAL	Potassium	98800	97	ug/L		8/1/97
SJS04-GW1S-001F	METAL	Selenium		3	ug/L	U	8/1/97
SJS04-GW1S-001F	METAL	Silver		1	ug/L	U	8/1/97
SJS04-GW1S-001F	METAL	Sodium	2120000	28	ug/L		8/4/97
SJS04-GW1S-001F	METAL	Thallium	2.8	2	ug/L	B	8/1/97
SJS04-GW1S-001F	METAL	Vanadium	11.5	4	ug/L	J	8/1/97
SJS04-GW1S-001F	METAL	Zinc	24	3	ug/L	B	8/1/97
SJS04-GW2S-001	CTOTP	Total Phosphorous (as P)	0.302	0.05	mg/L		7/31/97
SJS04-GW2S-001	MCYAN	Aluminum	28000	29	ug/L	J	8/11/97
SJS04-GW2S-001	MCYAN	Arsenic	14.4	3	ug/L		8/8/97
SJS04-GW2S-001	MCYAN	Barium	65.5	1	ug/L	J	8/11/97
SJS04-GW2S-001	MCYAN	Beryllium	2.5	1	ug/L	B	8/11/97
SJS04-GW2S-001	MCYAN	Cadmium		0.5	ug/L	UL	8/8/97
SJS04-GW2S-001	MCYAN	Calcium	226000	46	ug/L	J	8/11/97
SJS04-GW2S-001	MCYAN	Chromium	46	4	ug/L	J	8/11/97
SJS04-GW2S-001	MCYAN	Cobalt	12.2	3	ug/L	J	8/11/97
SJS04-GW2S-001	MCYAN	Copper	16.5	2	ug/L	B	8/11/97
SJS04-GW2S-001	MCYAN	Cyanide		5	ug/L	U	7/25/97
SJS04-GW2S-001	MCYAN	Iron	40400	5	ug/L	J	8/11/97
SJS04-GW2S-001	MCYAN	Lead	23.7	1	ug/L	L	8/8/97
SJS04-GW2S-001	MCYAN	Magnesium	52600	45	ug/L	J	8/11/97
SJS04-GW2S-001	MCYAN	Manganese	1530	1	ug/L	L	8/11/97
SJS04-GW2S-001	MCYAN	Mercury	0.35	0.1	ug/L	B	8/7/97
SJS04-GW2S-001	MCYAN	Nickel	18	4	ug/L	J	8/11/97
SJS04-GW2S-001	MCYAN	Potassium	24700	97	ug/L		8/11/97
SJS04-GW2S-001	MCYAN	Silver	400	3	ug/L		8/8/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS04-GW2S-001	MCYAN	Sodium	41200	28	ug/L	J	8/11/97
SJS04-GW2S-001	MCYAN	Thallium	3.1	2	ug/L	J	8/8/97
SJS04-GW2S-001	MCYAN	Vanadium	55.9	4	ug/L		8/11/97
SJS04-GW2S-001	MCYAN	Zinc	90.3	3	ug/L	B	8/11/97
SJS04-GW2S-001	PSPCB	4,4'-DDD		0.1	ug/L	U	8/9/97
SJS04-GW2S-001	PSPCB	4,4'-DDE		0.1	ug/L	U	8/9/97
SJS04-GW2S-001	PSPCB	4,4'-DDT		0.1	ug/L	U	8/9/97
SJS04-GW2S-001	PSPCB	Aldrin		0.05	ug/L	U	8/9/97
SJS04-GW2S-001	PSPCB	alpha-BHC		0.05	ug/L	U	8/9/97
SJS04-GW2S-001	PSPCB	alpha-Chlordane		0.05	ug/L	U	8/9/97
SJS04-GW2S-001	PSPCB	Aroclor-1016		1	ug/L	U	8/9/97
SJS04-GW2S-001	PSPCB	Aroclor-1221		2	ug/L	U	8/9/97
SJS04-GW2S-001	PSPCB	Aroclor-1232		1	ug/L	U	8/9/97
SJS04-GW2S-001	PSPCB	Aroclor-1242		1	ug/L	U	8/9/97
SJS04-GW2S-001	PSPCB	Aroclor-1248		1	ug/L	U	8/9/97
SJS04-GW2S-001	PSPCB	Aroclor-1254		1	ug/L	U	8/9/97
SJS04-GW2S-001	PSPCB	Aroclor-1260		1	ug/L	U	8/9/97
SJS04-GW2S-001	PSPCB	beta-BHC		0.05	ug/L	U	8/9/97
SJS04-GW2S-001	PSPCB	delta-BHC		0.05	ug/L	U	8/9/97
SJS04-GW2S-001	PSPCB	Dieldrin		0.1	ug/L	U	8/9/97
SJS04-GW2S-001	PSPCB	Endosulfan I		0.05	ug/L	U	8/9/97
SJS04-GW2S-001	PSPCB	Endosulfan II		0.1	ug/L	U	8/9/97
SJS04-GW2S-001	PSPCB	Endosulfan Sulfate		0.1	ug/L	U	8/9/97
SJS04-GW2S-001	PSPCB	Endrin		0.1	ug/L	U	8/9/97
SJS04-GW2S-001	PSPCB	Endrin Aldehyde		0.1	ug/L	U	8/9/97
SJS04-GW2S-001	PSPCB	Endrin Ketone		0.1	ug/L	U	8/9/97
SJS04-GW2S-001	PSPCB	gamma-BHC		0.05	ug/L	U	8/9/97
SJS04-GW2S-001	PSPCB	gamma-Chlordane		0.05	ug/L	U	8/9/97
SJS04-GW2S-001	PSPCB	Heptachlor		0.05	ug/L	U	8/9/97
SJS04-GW2S-001	PSPCB	Heptachlor Epoxide		0.05	ug/L	U	8/9/97
SJS04-GW2S-001	PSPCB	Methoxychlor		0.5	ug/L	U	8/9/97
SJS04-GW2S-001	PSPCB	Toxaphene		5	ug/L	U	8/9/97
SJS04-GW2S-001	SVTCL	1,2,4-Trichlorobenzene		10	ug/L	U	8/8/97
SJS04-GW2S-001	SVTCL	1,2-Dichlorobenzene		10	ug/L	U	8/8/97
SJS04-GW2S-001	SVTCL	1,3-Dichlorobenzene		10	ug/L	U	8/8/97
SJS04-GW2S-001	SVTCL	1,4-Dichlorobenzene		10	ug/L	U	8/8/97
SJS04-GW2S-001	SVTCL	2,2'-oxybis(1-Chloropropane		10	ug/L	U	8/8/97
SJS04-GW2S-001	SVTCL	2,4,5-Trichlorophenol		25	ug/L	U	8/8/97
SJS04-GW2S-001	SVTCL	2,4,6-Trichlorophenol		10	ug/L	U	8/8/97
SJS04-GW2S-001	SVTCL	2,4-Dichlorophenol		10	ug/L	U	8/8/97
SJS04-GW2S-001	SVTCL	2,4-Dimethylphenol		10	ug/L	U	8/8/97
SJS04-GW2S-001	SVTCL	2,4-Dinitrophenol		25	ug/L	U	8/8/97
SJS04-GW2S-001	SVTCL	2,4-Dinitrotoluene		10	ug/L	U	8/8/97
SJS04-GW2S-001	SVTCL	2,6-Dinitrotoluene		10	ug/L	U	8/8/97
SJS04-GW2S-001	SVTCL	2-Chloronaphthalene		10	ug/L	U	8/8/97
SJS04-GW2S-001	SVTCL	2-Chlorophenol		10	ug/L	U	8/8/97
SJS04-GW2S-001	SVTCL	2-Methylnaphthalene		10	ug/L	U	8/8/97
SJS04-GW2S-001	SVTCL	2-Methylphenol		10	ug/L	U	8/8/97
SJS04-GW2S-001	SVTCL	2-Nitroaniline		25	ug/L	U	8/8/97
SJS04-GW2S-001	SVTCL	2-Nitrophenol		10	ug/L	U	8/8/97
SJS04-GW2S-001	SVTCL	3,3'-Dichlorobenzidine		10	ug/L	U	8/8/97
SJS04-GW2S-001	SVTCL	3-Nitroaniline		25	ug/L	U	8/8/97
SJS04-GW2S-001	SVTCL	4,6-Dinitro-2-Methylphenol		25	ug/L	U	8/8/97
SJS04-GW2S-001	SVTCL	4-Bromophenol-phenylether		10	ug/L	U	8/8/97
SJS04-GW2S-001	SVTCL	4-Chloro-3-Methylphenol		10	ug/L	U	8/8/97
SJS04-GW2S-001	SVTCL	4-Chloroaniline		10	ug/L	U	8/8/97
SJS04-GW2S-001	SVTCL	4-Chlorophenyl-phenylether		10	ug/L	U	8/8/97
SJS04-GW2S-001	SVTCL	4-Methylphenol		10	ug/L	U	8/8/97
SJS04-GW2S-001	SVTCL	4-Nitroaniline		25	ug/L	U	8/8/97
SJS04-GW2S-001	SVTCL	4-Nitrophenol		25	ug/L	U	8/8/97
SJS04-GW2S-001	SVTCL	Acenaphthene		10	ug/L	U	8/8/97
SJS04-GW2S-001	SVTCL	Acenaphthylene		10	ug/L	U	8/8/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS04-GW2S-001	SVTCL	Anthracene		10	ug/L	U	8/8/97
SJS04-GW2S-001	SVTCL	Benzo(a)anthracene		10	ug/L	U	8/8/97
SJS04-GW2S-001	SVTCL	Benzo(a)pyrene		10	ug/L	U	8/8/97
SJS04-GW2S-001	SVTCL	Benzo(b)fluoranthene		10	ug/L	U	8/8/97
SJS04-GW2S-001	SVTCL	Benzo(g,h,i)perylene		10	ug/L	U	8/8/97
SJS04-GW2S-001	SVTCL	Benzo(k)fluoranthene		10	ug/L	U	8/8/97
SJS04-GW2S-001	SVTCL	bis(2-Chloroethoxy)methan		10	ug/L	U	8/8/97
SJS04-GW2S-001	SVTCL	bis(2-chloroethyl)ether		10	ug/L	U	8/8/97
SJS04-GW2S-001	SVTCL	bis(2-Ethylhexyl)phthalate		10	ug/L	U	8/8/97
SJS04-GW2S-001	SVTCL	Butylbenzylphthalate		10	ug/L	U	8/8/97
SJS04-GW2S-001	SVTCL	Carbazole		10	ug/L	U	8/8/97
SJS04-GW2S-001	SVTCL	Chrysene		10	ug/L	U	8/8/97
SJS04-GW2S-001	SVTCL	Di-n-butylphthalate		10	ug/L	U	8/8/97
SJS04-GW2S-001	SVTCL	Di-n-Octyl Phthalate		10	ug/L	U	8/8/97
SJS04-GW2S-001	SVTCL	Dibenzo(a,h)anthracene		10	ug/L	U	8/8/97
SJS04-GW2S-001	SVTCL	Dibenzofuran		10	ug/L	U	8/8/97
SJS04-GW2S-001	SVTCL	Diethylphthalate		10	ug/L	U	8/8/97
SJS04-GW2S-001	SVTCL	Dimethyl Phthalate		10	ug/L	U	8/8/97
SJS04-GW2S-001	SVTCL	Fluoranthene		10	ug/L	U	8/8/97
SJS04-GW2S-001	SVTCL	Fluorene		10	ug/L	U	8/8/97
SJS04-GW2S-001	SVTCL	Hexachlorobenzene		10	ug/L	U	8/8/97
SJS04-GW2S-001	SVTCL	Hexachlorobutadiene		10	ug/L	U	8/8/97
SJS04-GW2S-001	SVTCL	Hexachlorocyclopentadien		10	ug/L	U	8/8/97
SJS04-GW2S-001	SVTCL	Hexachloroethane		10	ug/L	U	8/8/97
SJS04-GW2S-001	SVTCL	Indeno(1,2,3-cd)pyrene		10	ug/L	U	8/8/97
SJS04-GW2S-001	SVTCL	Isophorone		10	ug/L	U	8/8/97
SJS04-GW2S-001	SVTCL	N-Nitroso-Di-n-Propylamine		10	ug/L	U	8/8/97
SJS04-GW2S-001	SVTCL	N-Nitrosodiphenylamine		10	ug/L	U	8/8/97
SJS04-GW2S-001	SVTCL	Naphthalene		10	ug/L	U	8/8/97
SJS04-GW2S-001	SVTCL	Nitrobenzene		10	ug/L	U	8/8/97
SJS04-GW2S-001	SVTCL	Pentachlorophenol		25	ug/L	U	8/8/97
SJS04-GW2S-001	SVTCL	Phenanthrene		10	ug/L	U	8/8/97
SJS04-GW2S-001	SVTCL	Phenol		10	ug/L	U	8/8/97
SJS04-GW2S-001	SVTCL	Pyrene		10	ug/L	U	8/8/97
SJS04-GW2S-001	VCLOW	1,1,1-Trichloroethane		1	ug/L	U	7/27/97
SJS04-GW2S-001	VCLOW	1,1,2,2-Tetrachloroethane		1	ug/L	U	7/27/97
SJS04-GW2S-001	VCLOW	1,1,2-Trichloroethane		1	ug/L	U	7/27/97
SJS04-GW2S-001	VCLOW	1,1-Dichloroethane		1	ug/L	U	7/27/97
SJS04-GW2S-001	VCLOW	1,1-Dichloroethene		1	ug/L	U	7/27/97
SJS04-GW2S-001	VCLOW	1,2,4-Trichlorobenzene		1	ug/L	U	7/27/97
SJS04-GW2S-001	VCLOW	1,2-Dibromo-3-chloropropan		1	ug/L	U	7/27/97
SJS04-GW2S-001	VCLOW	1,2-Dibromoethane		1	ug/L	U	7/27/97
SJS04-GW2S-001	VCLOW	1,2-Dichlorobenzene		1	ug/L	U	7/27/97
SJS04-GW2S-001	VCLOW	1,2-Dichloroethane		1	ug/L	U	7/27/97
SJS04-GW2S-001	VCLOW	1,2-Dichloropropane		1	ug/L	U	7/27/97
SJS04-GW2S-001	VCLOW	1,3-Dichlorobenzene		1	ug/L	U	7/27/97
SJS04-GW2S-001	VCLOW	1,4-Dichlorobenzene		1	ug/L	U	7/27/97
SJS04-GW2S-001	VCLOW	2-Hexanone		5	ug/L	U	7/27/97
SJS04-GW2S-001	VCLOW	4-Methyl-2-Pentanone		5	ug/L	U	7/27/97
SJS04-GW2S-001	VCLOW	Acetone	3	5	ug/L	B	7/27/97
SJS04-GW2S-001	VCLOW	Benzene		1	ug/L	U	7/27/97
SJS04-GW2S-001	VCLOW	Bromochloromethane		1	ug/L	U	7/27/97
SJS04-GW2S-001	VCLOW	Bromodichloromethane		1	ug/L	U	7/27/97
SJS04-GW2S-001	VCLOW	Bromoform		1	ug/L	U	7/27/97
SJS04-GW2S-001	VCLOW	Bromomethane		1	ug/L	U	7/27/97
SJS04-GW2S-001	VCLOW	Carbon Disulfide		1	ug/L	U	7/27/97
SJS04-GW2S-001	VCLOW	Carbon Tetrachloride		1	ug/L	U	7/27/97
SJS04-GW2S-001	VCLOW	Chlorobenzene		1	ug/L	U	7/27/97
SJS04-GW2S-001	VCLOW	Chloroethane		1	ug/L	U	7/27/97
SJS04-GW2S-001	VCLOW	Chloroform		1	ug/L	U	7/27/97
SJS04-GW2S-001	VCLOW	Chloromethane		1	ug/L	U	7/27/97
SJS04-GW2S-001	VCLOW	cis-1,2-Dichloroethene		1	ug/L	U	7/27/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS04-GW2S-001	VCLOW	cis-1,3-Dichloropropene		1	ug/L	U	7/27/97
SJS04-GW2S-001	VCLOW	Dibromochloromethane		1	ug/L	U	7/27/97
SJS04-GW2S-001	VCLOW	Ethylbenzene		1	ug/L	U	7/27/97
SJS04-GW2S-001	VCLOW	Methylene Chloride	0.2	1	ug/L	B	7/27/97
SJS04-GW2S-001	VCLOW	Styrene		1	ug/L	U	7/27/97
SJS04-GW2S-001	VCLOW	Tetrachloroethene		1	ug/L	U	7/27/97
SJS04-GW2S-001	VCLOW	Toluene		1	ug/L	U	7/27/97
SJS04-GW2S-001	VCLOW	Total Xylenes		1	ug/L	U	7/27/97
SJS04-GW2S-001	VCLOW	Trans-1,2-Dichloroethene		1	ug/L	U	7/27/97
SJS04-GW2S-001	VCLOW	trans-1,3-Dichloropropene		1	ug/L	U	7/27/97
SJS04-GW2S-001	VCLOW	Trichloroethene		1	ug/L	U	7/27/97
SJS04-GW2S-001	VCLOW	Vinyl Chloride		1	ug/L	U	7/27/97
SJS04-GW2S-001F	METAL	Aluminum	72.2	29	ug/L	B	8/11/97
SJS04-GW2S-001F	METAL	Antimony		2	ug/L	UL	8/13/97
SJS04-GW2S-001F	METAL	Arsenic	4.2	3	ug/L	L	8/8/97
SJS04-GW2S-001F	METAL	Barium	14.1	1	ug/L	B	8/11/97
SJS04-GW2S-001F	METAL	Beryllium	1.1	1	ug/L	B	8/11/97
SJS04-GW2S-001F	METAL	Cadmium		0.5	ug/L	UL	8/8/97
SJS04-GW2S-001F	METAL	Calcium	224000	46	ug/L	J	8/11/97
SJS04-GW2S-001F	METAL	Chromium		7	ug/L	U	8/11/97
SJS04-GW2S-001F	METAL	Cobalt		8	ug/L	U	8/11/97
SJS04-GW2S-001F	METAL	Copper		6	ug/L	U	8/11/97
SJS04-GW2S-001F	METAL	Iron	2400	5	ug/L	J	8/11/97
SJS04-GW2S-001F	METAL	Lead	4	1	ug/L	B	8/8/97
SJS04-GW2S-001F	METAL	Magnesium	51500	45	ug/L	J	8/11/97
SJS04-GW2S-001F	METAL	Manganese	1300	1	ug/L	J	8/11/97
SJS04-GW2S-001F	METAL	Mercury	0.16	0.1	ug/L	B	8/7/97
SJS04-GW2S-001F	METAL	Nickel		7	ug/L	U	8/11/97
SJS04-GW2S-001F	METAL	Potassium	24000	97	ug/L		8/11/97
SJS04-GW2S-001F	METAL	Selenium	3.3	3	ug/L	L	8/8/97
SJS04-GW2S-001F	METAL	Silver		1	ug/L	U	8/8/97
SJS04-GW2S-001F	METAL	Sodium	44300	28	ug/L	J	8/11/97
SJS04-GW2S-001F	METAL	Thallium		2	ug/L	U	8/8/97
SJS04-GW2S-001F	METAL	Vanadium		9	ug/L	U	8/11/97
SJS04-GW2S-001F	METAL	Zinc	12.7	3	ug/L	B	8/11/97
SJS04-GW3D-001	CTOTP	Total Phosphorous (as P)	0.455	0.13	mg/L		8/8/97
SJS04-GW3D-001	MCYAN	Aluminum	1340	29	ug/L		8/7/97
SJS04-GW3D-001	MCYAN	Antimony		2	ug/L	U	8/6/97
SJS04-GW3D-001	MCYAN	Arsenic	4.9	3	ug/L	J	8/6/97
SJS04-GW3D-001	MCYAN	Barium	67.3	1	ug/L	J	8/7/97
SJS04-GW3D-001	MCYAN	Beryllium		1	ug/L	U	8/7/97
SJS04-GW3D-001	MCYAN	Cadmium		0.5	ug/L	U	8/6/97
SJS04-GW3D-001	MCYAN	Calcium	70200	46	ug/L		8/7/97
SJS04-GW3D-001	MCYAN	Chromium	8.1	4	ug/L	B	8/7/97
SJS04-GW3D-001	MCYAN	Cobalt		8	ug/L	U	8/7/97
SJS04-GW3D-001	MCYAN	Copper		6	ug/L	U	8/7/97
SJS04-GW3D-001	MCYAN	Cyanide		5	ug/L	U	8/5/97
SJS04-GW3D-001	MCYAN	Iron	9120	5	ug/L	K	8/7/97
SJS04-GW3D-001	MCYAN	Lead	2.6	1	ug/L	B	8/6/97
SJS04-GW3D-001	MCYAN	Magnesium	27300	45	ug/L		8/7/97
SJS04-GW3D-001	MCYAN	Manganese	1840	1	ug/L		8/7/97
SJS04-GW3D-001	MCYAN	Mercury		0.11	ug/L	U	8/6/97
SJS04-GW3D-001	MCYAN	Nickel		7	ug/L	U	8/7/97
SJS04-GW3D-001	MCYAN	Potassium	9500	97	ug/L		8/7/97
SJS04-GW3D-001	MCYAN	Selenium		3	ug/L	U	8/6/97
SJS04-GW3D-001	MCYAN	Silver	6.3	3	ug/L	B	8/6/97
SJS04-GW3D-001	MCYAN	Sodium	112000	28	ug/L		8/7/97
SJS04-GW3D-001	MCYAN	Thallium		2	ug/L	U	8/7/97
SJS04-GW3D-001	MCYAN	Vanadium		9	ug/L	U	8/7/97
SJS04-GW3D-001	MCYAN	Zinc	16	3	ug/L	B	8/7/97
SJS04-GW3D-001	PSPCB	4,4'-DDD		0.1	ug/L	U	8/21/97
SJS04-GW3D-001	PSPCB	4,4'-DDE		0.1	ug/L	U	8/21/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS04-GW3D-001	PSPCB	4,4'-DDT		0.1	ug/L	U	8/21/97
SJS04-GW3D-001	PSPCB	Aldrin		0.05	ug/L	U	8/21/97
SJS04-GW3D-001	PSPCB	alpha-BHC		0.05	ug/L	U	8/21/97
SJS04-GW3D-001	PSPCB	alpha-Chlordane		0.05	ug/L	U	8/21/97
SJS04-GW3D-001	PSPCB	Aroclor-1016		1	ug/L	U	8/21/97
SJS04-GW3D-001	PSPCB	Aroclor-1221		2	ug/L	U	8/21/97
SJS04-GW3D-001	PSPCB	Aroclor-1232		1	ug/L	U	8/21/97
SJS04-GW3D-001	PSPCB	Aroclor-1242		1	ug/L	U	8/21/97
SJS04-GW3D-001	PSPCB	Aroclor-1248		1	ug/L	U	8/21/97
SJS04-GW3D-001	PSPCB	Aroclor-1254		1	ug/L	U	8/21/97
SJS04-GW3D-001	PSPCB	Aroclor-1260		1	ug/L	U	8/21/97
SJS04-GW3D-001	PSPCB	beta-BHC		0.05	ug/L	U	8/21/97
SJS04-GW3D-001	PSPCB	delta-BHC		0.05	ug/L	U	8/21/97
SJS04-GW3D-001	PSPCB	Dieldrin		0.1	ug/L	U	8/21/97
SJS04-GW3D-001	PSPCB	Endosulfan I		0.05	ug/L	U	8/21/97
SJS04-GW3D-001	PSPCB	Endosulfan II		0.1	ug/L	U	8/21/97
SJS04-GW3D-001	PSPCB	Endosulfan Sulfate		0.1	ug/L	U	8/21/97
SJS04-GW3D-001	PSPCB	Endrin		0.1	ug/L	U	8/21/97
SJS04-GW3D-001	PSPCB	Endrin Aldehyde		0.1	ug/L	U	8/21/97
SJS04-GW3D-001	PSPCB	Endrin Ketone		0.1	ug/L	U	8/21/97
SJS04-GW3D-001	PSPCB	gamma-BHC		0.05	ug/L	U	8/21/97
SJS04-GW3D-001	PSPCB	gamma-Chlordane		0.05	ug/L	U	8/21/97
SJS04-GW3D-001	PSPCB	Heptachlor		0.05	ug/L	U	8/21/97
SJS04-GW3D-001	PSPCB	Heptachlor Epoxide		0.05	ug/L	U	8/21/97
SJS04-GW3D-001	PSPCB	Methoxychlor		0.5	ug/L	U	8/21/97
SJS04-GW3D-001	PSPCB	Toxaphene		5	ug/L	U	8/21/97
SJS04-GW3D-001	SVTCL	1,2,4-Trichlorobenzene		10	ug/L	U	8/15/97
SJS04-GW3D-001	SVTCL	1,2-Dichlorobenzene		10	ug/L	U	8/15/97
SJS04-GW3D-001	SVTCL	1,3-Dichlorobenzene		10	ug/L	U	8/15/97
SJS04-GW3D-001	SVTCL	1,4-Dichlorobenzene		10	ug/L	U	8/15/97
SJS04-GW3D-001	SVTCL	2,2'-oxybis(1-Chloropropane		10	ug/L	U	8/15/97
SJS04-GW3D-001	SVTCL	2,4,5-Trichlorophenol		25	ug/L	U	8/15/97
SJS04-GW3D-001	SVTCL	2,4,6-Trichlorophenol		10	ug/L	U	8/15/97
SJS04-GW3D-001	SVTCL	2,4-Dichlorophenol		10	ug/L	U	8/15/97
SJS04-GW3D-001	SVTCL	2,4-Dimethylphenol		10	ug/L	U	8/15/97
SJS04-GW3D-001	SVTCL	2,4-Dinitrophenol		25	ug/L	UJ	8/15/97
SJS04-GW3D-001	SVTCL	2,4-Dinitrotoluene		10	ug/L	U	8/15/97
SJS04-GW3D-001	SVTCL	2,6-Dinitrotoluene		10	ug/L	U	8/15/97
SJS04-GW3D-001	SVTCL	2-Chloronaphthalene		10	ug/L	U	8/15/97
SJS04-GW3D-001	SVTCL	2-Chlorophenol		10	ug/L	U	8/15/97
SJS04-GW3D-001	SVTCL	2-Methylnaphthalene		10	ug/L	U	8/15/97
SJS04-GW3D-001	SVTCL	2-Methylphenol		10	ug/L	U	8/15/97
SJS04-GW3D-001	SVTCL	2-Nitroaniline		25	ug/L	U	8/15/97
SJS04-GW3D-001	SVTCL	2-Nitrophenol		10	ug/L	U	8/15/97
SJS04-GW3D-001	SVTCL	3,3'-Dichlorobenzidine		10	ug/L	U	8/15/97
SJS04-GW3D-001	SVTCL	3-Nitroaniline		25	ug/L	U	8/15/97
SJS04-GW3D-001	SVTCL	4,6-Dinitro-2-Methylphenol		25	ug/L	U	8/15/97
SJS04-GW3D-001	SVTCL	4-Bromophenol-phenylether		10	ug/L	U	8/15/97
SJS04-GW3D-001	SVTCL	4-Chloro-3-Methylphenol		10	ug/L	U	8/15/97
SJS04-GW3D-001	SVTCL	4-Chloroaniline		10	ug/L	U	8/15/97
SJS04-GW3D-001	SVTCL	4-Chlorophenyl-phenylether		10	ug/L	U	8/15/97
SJS04-GW3D-001	SVTCL	4-Methylphenol		10	ug/L	U	8/15/97
SJS04-GW3D-001	SVTCL	4-Nitroaniline		25	ug/L	U	8/15/97
SJS04-GW3D-001	SVTCL	4-Nitrophenol		25	ug/L	U	8/15/97
SJS04-GW3D-001	SVTCL	Acenaphthene		10	ug/L	U	8/15/97
SJS04-GW3D-001	SVTCL	Acenaphthylene		10	ug/L	U	8/15/97
SJS04-GW3D-001	SVTCL	Anthracene		10	ug/L	U	8/15/97
SJS04-GW3D-001	SVTCL	Benzo(a)anthracene		10	ug/L	U	8/15/97
SJS04-GW3D-001	SVTCL	Benzo(a)pyrene		10	ug/L	U	8/15/97
SJS04-GW3D-001	SVTCL	Benzo(b)fluoranthene		10	ug/L	U	8/15/97
SJS04-GW3D-001	SVTCL	Benzo(g,h,i)perylene		10	ug/L	U	8/15/97
SJS04-GW3D-001	SVTCL	Benzo(k)fluoranthene		10	ug/L	U	8/15/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS04-GW3D-001	SVTCL	bis(2-Chloroethoxy)methan		10	ug/L	U	8/15/97
SJS04-GW3D-001	SVTCL	bis(2-chloroethyl)ether		10	ug/L	U	8/15/97
SJS04-GW3D-001	SVTCL	bis(2-Ethylhexyl)phthalate		10	ug/L	U	8/15/97
SJS04-GW3D-001	SVTCL	Butylbenzylphthalate		10	ug/L	U	8/15/97
SJS04-GW3D-001	SVTCL	Carbazole		10	ug/L	U	8/15/97
SJS04-GW3D-001	SVTCL	Chrysene		10	ug/L	U	8/15/97
SJS04-GW3D-001	SVTCL	Di-n-butylphthalate		10	ug/L	U	8/15/97
SJS04-GW3D-001	SVTCL	Di-n-Octyl Phthalate		10	ug/L	U	8/15/97
SJS04-GW3D-001	SVTCL	Dibenzo(a,h)anthracene		10	ug/L	U	8/15/97
SJS04-GW3D-001	SVTCL	Dibenzofuran		10	ug/L	U	8/15/97
SJS04-GW3D-001	SVTCL	Diethylphthalate		10	ug/L	U	8/15/97
SJS04-GW3D-001	SVTCL	Dimethyl Phthalate		10	ug/L	U	8/15/97
SJS04-GW3D-001	SVTCL	Fluoranthene		10	ug/L	U	8/15/97
SJS04-GW3D-001	SVTCL	Fluorene		10	ug/L	U	8/15/97
SJS04-GW3D-001	SVTCL	Hexachlorobenzene		10	ug/L	U	8/15/97
SJS04-GW3D-001	SVTCL	Hexachlorobutadiene		10	ug/L	U	8/15/97
SJS04-GW3D-001	SVTCL	Hexachlorocyclopentadien		10	ug/L	U	8/15/97
SJS04-GW3D-001	SVTCL	Hexachloroethane		10	ug/L	U	8/15/97
SJS04-GW3D-001	SVTCL	Indeno(1,2,3-cd)pyrene		10	ug/L	U	8/15/97
SJS04-GW3D-001	SVTCL	Isophorone		10	ug/L	U	8/15/97
SJS04-GW3D-001	SVTCL	N-Nitroso-Di-n-Propylamine		10	ug/L	U	8/15/97
SJS04-GW3D-001	SVTCL	N-Nitrosodiphenylamine		10	ug/L	U	8/15/97
SJS04-GW3D-001	SVTCL	Naphthalene		10	ug/L	U	8/15/97
SJS04-GW3D-001	SVTCL	Nitrobenzene		10	ug/L	U	8/15/97
SJS04-GW3D-001	SVTCL	Pentachlorophenol		25	ug/L	U	8/15/97
SJS04-GW3D-001	SVTCL	Phenanthrene		10	ug/L	U	8/15/97
SJS04-GW3D-001	SVTCL	Phenol		10	ug/L	U	8/15/97
SJS04-GW3D-001	SVTCL	Pyrene		10	ug/L	U	8/15/97
SJS04-GW3D-001	VCLOW	1,1,1-Trichloroethane		1	ug/L	U	8/5/97
SJS04-GW3D-001	VCLOW	1,1,2,2-Tetrachloroethane		1	ug/L	U	8/5/97
SJS04-GW3D-001	VCLOW	1,1,2-Trichloroethane		1	ug/L	U	8/5/97
SJS04-GW3D-001	VCLOW	1,1-Dichloroethane		1	ug/L	U	8/5/97
SJS04-GW3D-001	VCLOW	1,1-Dichloroethene		1	ug/L	U	8/5/97
SJS04-GW3D-001	VCLOW	1,2,4-Trichlorobenzene		1	ug/L	U	8/5/97
SJS04-GW3D-001	VCLOW	1,2-Dibromo-3-chloropropan		1	ug/L	U	8/5/97
SJS04-GW3D-001	VCLOW	1,2-Dibromoethane		1	ug/L	U	8/5/97
SJS04-GW3D-001	VCLOW	1,2-Dichlorobenzene		1	ug/L	U	8/5/97
SJS04-GW3D-001	VCLOW	1,2-Dichloroethane		1	ug/L	U	8/5/97
SJS04-GW3D-001	VCLOW	1,2-Dichloropropane		1	ug/L	U	8/5/97
SJS04-GW3D-001	VCLOW	1,3-Dichlorobenzene		1	ug/L	U	8/5/97
SJS04-GW3D-001	VCLOW	1,4-Dichlorobenzene		1	ug/L	U	8/5/97
SJS04-GW3D-001	VCLOW	2-Hexanone		5	ug/L	U	8/5/97
SJS04-GW3D-001	VCLOW	4-Methyl-2-Pentanone		5	ug/L	U	8/5/97
SJS04-GW3D-001	VCLOW	Acetone		5	ug/L	U	8/5/97
SJS04-GW3D-001	VCLOW	Benzene		1	ug/L	U	8/5/97
SJS04-GW3D-001	VCLOW	Bromochloromethane		1	ug/L	U	8/5/97
SJS04-GW3D-001	VCLOW	Bromodichloromethane		1	ug/L	U	8/5/97
SJS04-GW3D-001	VCLOW	Bromoform		1	ug/L	U	8/5/97
SJS04-GW3D-001	VCLOW	Bromomethane		1	ug/L	U	8/5/97
SJS04-GW3D-001	VCLOW	Carbon Disulfide		1	ug/L	U	8/5/97
SJS04-GW3D-001	VCLOW	Carbon Tetrachloride		1	ug/L	U	8/5/97
SJS04-GW3D-001	VCLOW	Chlorobenzene		1	ug/L	U	8/5/97
SJS04-GW3D-001	VCLOW	Chloroethane		1	ug/L	U	8/5/97
SJS04-GW3D-001	VCLOW	Chloroform	8	1	ug/L		8/5/97
SJS04-GW3D-001	VCLOW	Chloromethane		1	ug/L	U	8/5/97
SJS04-GW3D-001	VCLOW	cis-1,2-Dichloroethene		1	ug/L	U	8/5/97
SJS04-GW3D-001	VCLOW	cis-1,3-Dichloropropene		1	ug/L	U	8/5/97
SJS04-GW3D-001	VCLOW	Dibromochloromethane		1	ug/L	U	8/5/97
SJS04-GW3D-001	VCLOW	Ethylbenzene		1	ug/L	U	8/5/97
SJS04-GW3D-001	VCLOW	Methylene Chloride	2	1	ug/L	B	8/5/97
SJS04-GW3D-001	VCLOW	Styrene		1	ug/L	U	8/5/97
SJS04-GW3D-001	VCLOW	Tetrachloroethene		1	ug/L	U	8/5/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS04-GW3D-001	VCLOW	Toluene		1	ug/L	U	8/5/97
SJS04-GW3D-001	VCLOW	Total Xylenes		1	ug/L	U	8/5/97
SJS04-GW3D-001	VCLOW	Trans-1,2-Dichloroethene		1	ug/L	U	8/5/97
SJS04-GW3D-001	VCLOW	trans-1,3-Dichloropropene		1	ug/L	U	8/5/97
SJS04-GW3D-001	VCLOW	Trichloroethene		1	ug/L	U	8/5/97
SJS04-GW3D-001	VCLOW	Vinyl Chloride		1	ug/L	U	8/5/97
SJS04-GW3D-001F	METAL	Aluminum		44	ug/L	U	8/7/97
SJS04-GW3D-001F	METAL	Antimony		2	ug/L	U	8/6/97
SJS04-GW3D-001F	METAL	Arsenic	5.8	3	ug/L	J	8/6/97
SJS04-GW3D-001F	METAL	Barium	61.6	1	ug/L	J	8/7/97
SJS04-GW3D-001F	METAL	Beryllium		1	ug/L	U	8/7/97
SJS04-GW3D-001F	METAL	Cadmium		0.5	ug/L	U	8/6/97
SJS04-GW3D-001F	METAL	Calcium	76200	46	ug/L		8/7/97
SJS04-GW3D-001F	METAL	Chromium		7	ug/L	U	8/7/97
SJS04-GW3D-001F	METAL	Cobalt		8	ug/L	U	8/7/97
SJS04-GW3D-001F	METAL	Copper		6	ug/L	U	8/7/97
SJS04-GW3D-001F	METAL	Iron	8300	5	ug/L		8/7/97
SJS04-GW3D-001F	METAL	Lead	1.5	1	ug/L	J	8/6/97
SJS04-GW3D-001F	METAL	Magnesium	29400	45	ug/L		8/7/97
SJS04-GW3D-001F	METAL	Manganese	2000	1	ug/L		8/7/97
SJS04-GW3D-001F	METAL	Mercury		0.13	ug/L	U	8/6/97
SJS04-GW3D-001F	METAL	Nickel		7	ug/L	U	8/7/97
SJS04-GW3D-001F	METAL	Potassium	10100	97	ug/L		8/7/97
SJS04-GW3D-001F	METAL	Selenium		3	ug/L	U	8/6/97
SJS04-GW3D-001F	METAL	Silver	5.8	3	ug/L	B	8/6/97
SJS04-GW3D-001F	METAL	Sodium	121000	28	ug/L		8/7/97
SJS04-GW3D-001F	METAL	Thallium	2.5	2	ug/L	B	8/7/97
SJS04-GW3D-001F	METAL	Vanadium		9	ug/L	U	8/7/97
SJS04-GW3D-001F	METAL	Zinc		5	ug/L	U	8/7/97
SJS04-GW3D-001FP	METAL	Aluminum		44	ug/L	U	8/7/97
SJS04-GW3D-001FP	METAL	Antimony		2	ug/L	U	8/6/97
SJS04-GW3D-001FP	METAL	Arsenic	4.1	3	ug/L	J	8/6/97
SJS04-GW3D-001FP	METAL	Barium	56.4	1	ug/L	J	8/7/97
SJS04-GW3D-001FP	METAL	Beryllium		1	ug/L	U	8/7/97
SJS04-GW3D-001FP	METAL	Cadmium		0.5	ug/L	U	8/6/97
SJS04-GW3D-001FP	METAL	Calcium	68700	46	ug/L		8/7/97
SJS04-GW3D-001FP	METAL	Chromium		7	ug/L	U	8/7/97
SJS04-GW3D-001FP	METAL	Cobalt		8	ug/L	U	8/7/97
SJS04-GW3D-001FP	METAL	Copper		6	ug/L	U	8/7/97
SJS04-GW3D-001FP	METAL	Iron	7490	5	ug/L		8/7/97
SJS04-GW3D-001FP	METAL	Lead		1	ug/L	U	8/6/97
SJS04-GW3D-001FP	METAL	Magnesium	26600	45	ug/L		8/7/97
SJS04-GW3D-001FP	METAL	Manganese	1800	1	ug/L		8/7/97
SJS04-GW3D-001FP	METAL	Mercury		0.12	ug/L	U	8/6/97
SJS04-GW3D-001FP	METAL	Nickel		7	ug/L	U	8/7/97
SJS04-GW3D-001FP	METAL	Potassium	9070	97	ug/L		8/7/97
SJS04-GW3D-001FP	METAL	Selenium		3	ug/L	U	8/6/97
SJS04-GW3D-001FP	METAL	Silver	5.4	3	ug/L	B	8/6/97
SJS04-GW3D-001FP	METAL	Sodium	109000	28	ug/L		8/7/97
SJS04-GW3D-001FP	METAL	Thallium	3.8	2	ug/L	B	8/7/97
SJS04-GW3D-001FP	METAL	Vanadium		9	ug/L	U	8/7/97
SJS04-GW3D-001FP	METAL	Zinc	9.5	3	ug/L	B	8/7/97
SJS04-GW3D-001P	CTOTP	Total Phosphorous (as P)	0.523	0.13	mg/L		8/8/97
SJS04-GW3D-001P	MCYAN	Aluminum	435	29	ug/L		8/7/97
SJS04-GW3D-001P	MCYAN	Antimony		2	ug/L	U	8/6/97
SJS04-GW3D-001P	MCYAN	Arsenic	4.7	3	ug/L	J	8/6/97
SJS04-GW3D-001P	MCYAN	Barium	61.2	1	ug/L	J	8/7/97
SJS04-GW3D-001P	MCYAN	Beryllium		1	ug/L	U	8/7/97
SJS04-GW3D-001P	MCYAN	Cadmium		0.5	ug/L	U	8/6/97
SJS04-GW3D-001P	MCYAN	Calcium	73500	46	ug/L		8/7/97
SJS04-GW3D-001P	MCYAN	Chromium		7	ug/L	U	8/7/97
SJS04-GW3D-001P	MCYAN	Cobalt		8	ug/L	U	8/7/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS04-GW3D-001P	MCYAN	Copper		6	ug/L	U	8/7/97
SJS04-GW3D-001P	MCYAN	Cyanide		5	ug/L	U	8/5/97
SJS04-GW3D-001P	MCYAN	Iron	8500	5	ug/L	K	8/7/97
SJS04-GW3D-001P	MCYAN	Lead	1.5	1	ug/L	J	8/6/97
SJS04-GW3D-001P	MCYAN	Magnesium	28300	45	ug/L		8/7/97
SJS04-GW3D-001P	MCYAN	Manganese	1900	1	ug/L		8/7/97
SJS04-GW3D-001P	MCYAN	Mercury		0.12	ug/L	U	8/6/97
SJS04-GW3D-001P	MCYAN	Nickel		7	ug/L	U	8/7/97
SJS04-GW3D-001P	MCYAN	Potassium	9790	97	ug/L		8/7/97
SJS04-GW3D-001P	MCYAN	Selenium		3	ug/L	U	8/6/97
SJS04-GW3D-001P	MCYAN	Silver	5	3	ug/L	B	8/6/97
SJS04-GW3D-001P	MCYAN	Sodium	117000	28	ug/L		8/7/97
SJS04-GW3D-001P	MCYAN	Thallium		2	ug/L	U	8/7/97
SJS04-GW3D-001P	MCYAN	Vanadium		9	ug/L	U	8/7/97
SJS04-GW3D-001P	MCYAN	Zinc	13.8	3	ug/L	B	8/7/97
SJS04-GW3D-001P	PSPCB	4,4'-DDD		0.1	ug/L	U	8/21/97
SJS04-GW3D-001P	PSPCB	4,4'-DDE		0.1	ug/L	U	8/21/97
SJS04-GW3D-001P	PSPCB	4,4'-DDT		0.1	ug/L	U	8/21/97
SJS04-GW3D-001P	PSPCB	Aldrin		0.05	ug/L	U	8/21/97
SJS04-GW3D-001P	PSPCB	alpha-BHC		0.05	ug/L	U	8/21/97
SJS04-GW3D-001P	PSPCB	alpha-Chlordane		0.05	ug/L	U	8/21/97
SJS04-GW3D-001P	PSPCB	Aroclor-1016		1	ug/L	U	8/21/97
SJS04-GW3D-001P	PSPCB	Aroclor-1221		2	ug/L	U	8/21/97
SJS04-GW3D-001P	PSPCB	Aroclor-1232		1	ug/L	U	8/21/97
SJS04-GW3D-001P	PSPCB	Aroclor-1242		1	ug/L	U	8/21/97
SJS04-GW3D-001P	PSPCB	Aroclor-1248		1	ug/L	U	8/21/97
SJS04-GW3D-001P	PSPCB	Aroclor-1254		1	ug/L	U	8/21/97
SJS04-GW3D-001P	PSPCB	Aroclor-1260		1	ug/L	U	8/21/97
SJS04-GW3D-001P	PSPCB	beta-BHC		0.05	ug/L	U	8/21/97
SJS04-GW3D-001P	PSPCB	delta-BHC		0.05	ug/L	U	8/21/97
SJS04-GW3D-001P	PSPCB	Dieldrin		0.1	ug/L	U	8/21/97
SJS04-GW3D-001P	PSPCB	Endosulfan I		0.05	ug/L	U	8/21/97
SJS04-GW3D-001P	PSPCB	Endosulfan II		0.1	ug/L	U	8/21/97
SJS04-GW3D-001P	PSPCB	Endosulfan Sulfate		0.1	ug/L	U	8/21/97
SJS04-GW3D-001P	PSPCB	Endrin		0.1	ug/L	U	8/21/97
SJS04-GW3D-001P	PSPCB	Endrin Aldehyde		0.1	ug/L	U	8/21/97
SJS04-GW3D-001P	PSPCB	Endrin Ketone		0.1	ug/L	U	8/21/97
SJS04-GW3D-001P	PSPCB	gamma-BHC		0.05	ug/L	U	8/21/97
SJS04-GW3D-001P	PSPCB	gamma-Chlordane		0.05	ug/L	U	8/21/97
SJS04-GW3D-001P	PSPCB	Heptachlor		0.05	ug/L	U	8/21/97
SJS04-GW3D-001P	PSPCB	Heptachlor Epoxide		0.05	ug/L	U	8/21/97
SJS04-GW3D-001P	PSPCB	Methoxychlor		0.5	ug/L	U	8/21/97
SJS04-GW3D-001P	PSPCB	Toxaphene		5	ug/L	U	8/21/97
SJS04-GW3D-001P	SVTCL	1,2,4-Trichlorobenzene		10	ug/L	U	8/15/97
SJS04-GW3D-001P	SVTCL	1,2-Dichlorobenzene		10	ug/L	U	8/15/97
SJS04-GW3D-001P	SVTCL	1,3-Dichlorobenzene		10	ug/L	U	8/15/97
SJS04-GW3D-001P	SVTCL	1,4-Dichlorobenzene		10	ug/L	U	8/15/97
SJS04-GW3D-001P	SVTCL	2,2'-oxybis(1-Chloropropane		10	ug/L	U	8/15/97
SJS04-GW3D-001P	SVTCL	2,4,5-Trichlorophenol		25	ug/L	U	8/15/97
SJS04-GW3D-001P	SVTCL	2,4,6-Trichlorophenol		10	ug/L	U	8/15/97
SJS04-GW3D-001P	SVTCL	2,4-Dichlorophenol		10	ug/L	U	8/15/97
SJS04-GW3D-001P	SVTCL	2,4-Dimethylphenol		10	ug/L	U	8/15/97
SJS04-GW3D-001P	SVTCL	2,4-Dinitrophenol		25	ug/L	UJ	8/15/97
SJS04-GW3D-001P	SVTCL	2,4-Dinitrotoluene		10	ug/L	U	8/15/97
SJS04-GW3D-001P	SVTCL	2,6-Dinitrotoluene		10	ug/L	U	8/15/97
SJS04-GW3D-001P	SVTCL	2-Chloronaphthalene		10	ug/L	U	8/15/97
SJS04-GW3D-001P	SVTCL	2-Chlorophenol		10	ug/L	U	8/15/97
SJS04-GW3D-001P	SVTCL	2-Methylnaphthalene		10	ug/L	U	8/15/97
SJS04-GW3D-001P	SVTCL	2-Methylphenol		10	ug/L	U	8/15/97
SJS04-GW3D-001P	SVTCL	2-Nitroaniline		25	ug/L	U	8/15/97
SJS04-GW3D-001P	SVTCL	2-Nitrophenol		10	ug/L	U	8/15/97
SJS04-GW3D-001P	SVTCL	3,3'-Dichlorobenzidine		10	ug/L	U	8/15/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS04-GW3D-001P	SVTCL	3-Nitroaniline		25	ug/L	U	8/15/97
SJS04-GW3D-001P	SVTCL	4,6-Dinitro-2-Methylphenol		25	ug/L	U	8/15/97
SJS04-GW3D-001P	SVTCL	4-Bromophenol-phenylether		10	ug/L	U	8/15/97
SJS04-GW3D-001P	SVTCL	4-Chloro-3-Methylphenol		10	ug/L	U	8/15/97
SJS04-GW3D-001P	SVTCL	4-Chloroaniline		10	ug/L	U	8/15/97
SJS04-GW3D-001P	SVTCL	4-Chlorophenyl-phenylether		10	ug/L	U	8/15/97
SJS04-GW3D-001P	SVTCL	4-Methylphenol		10	ug/L	U	8/15/97
SJS04-GW3D-001P	SVTCL	4-Nitroaniline		25	ug/L	U	8/15/97
SJS04-GW3D-001P	SVTCL	4-Nitrophenol		25	ug/L	U	8/15/97
SJS04-GW3D-001P	SVTCL	Acenaphthene		10	ug/L	U	8/15/97
SJS04-GW3D-001P	SVTCL	Acenaphthylene		10	ug/L	U	8/15/97
SJS04-GW3D-001P	SVTCL	Anthracene		10	ug/L	U	8/15/97
SJS04-GW3D-001P	SVTCL	Benzo(a)anthracene		10	ug/L	U	8/15/97
SJS04-GW3D-001P	SVTCL	Benzo(a)pyrene		10	ug/L	U	8/15/97
SJS04-GW3D-001P	SVTCL	Benzo(b)fluoranthene		10	ug/L	U	8/15/97
SJS04-GW3D-001P	SVTCL	Benzo(g,h,i)perylene		10	ug/L	U	8/15/97
SJS04-GW3D-001P	SVTCL	Benzo(k)fluoranthene		10	ug/L	U	8/15/97
SJS04-GW3D-001P	SVTCL	bis(2-Chloroethoxy)methan		10	ug/L	U	8/15/97
SJS04-GW3D-001P	SVTCL	bis(2-chloroethyl)ether		10	ug/L	U	8/15/97
SJS04-GW3D-001P	SVTCL	bis(2-Ethylhexyl)phthalate		10	ug/L	U	8/15/97
SJS04-GW3D-001P	SVTCL	Butylbenzylphthalate		10	ug/L	U	8/15/97
SJS04-GW3D-001P	SVTCL	Carbazole		10	ug/L	U	8/15/97
SJS04-GW3D-001P	SVTCL	Chrysene		10	ug/L	U	8/15/97
SJS04-GW3D-001P	SVTCL	Di-n-butylphthalate		10	ug/L	U	8/15/97
SJS04-GW3D-001P	SVTCL	Di-n-Octyl Phthalate		10	ug/L	U	8/15/97
SJS04-GW3D-001P	SVTCL	Dibenzo(a,h)anthracene		10	ug/L	U	8/15/97
SJS04-GW3D-001P	SVTCL	Dibenzofuran		10	ug/L	U	8/15/97
SJS04-GW3D-001P	SVTCL	Diethylphthalate		10	ug/L	U	8/15/97
SJS04-GW3D-001P	SVTCL	Dimethyl Phthalate		10	ug/L	U	8/15/97
SJS04-GW3D-001P	SVTCL	Fluoranthene		10	ug/L	U	8/15/97
SJS04-GW3D-001P	SVTCL	Fluorene		10	ug/L	U	8/15/97
SJS04-GW3D-001P	SVTCL	Hexachlorobenzene		10	ug/L	U	8/15/97
SJS04-GW3D-001P	SVTCL	Hexachlorobutadiene		10	ug/L	U	8/15/97
SJS04-GW3D-001P	SVTCL	Hexachlorocyclopentadien		10	ug/L	U	8/15/97
SJS04-GW3D-001P	SVTCL	Hexachloroethane		10	ug/L	U	8/15/97
SJS04-GW3D-001P	SVTCL	Indeno(1,2,3-cd)pyrene		10	ug/L	U	8/15/97
SJS04-GW3D-001P	SVTCL	Isophorone		10	ug/L	U	8/15/97
SJS04-GW3D-001P	SVTCL	N-Nitroso-Di-n-Propylamine		10	ug/L	U	8/15/97
SJS04-GW3D-001P	SVTCL	N-Nitrosodiphenylamine		10	ug/L	U	8/15/97
SJS04-GW3D-001P	SVTCL	Naphthalene		10	ug/L	U	8/15/97
SJS04-GW3D-001P	SVTCL	Nitrobenzene		10	ug/L	U	8/15/97
SJS04-GW3D-001P	SVTCL	Pentachlorophenol		25	ug/L	U	8/15/97
SJS04-GW3D-001P	SVTCL	Phenanthrene		10	ug/L	U	8/15/97
SJS04-GW3D-001P	SVTCL	Phenol		10	ug/L	U	8/15/97
SJS04-GW3D-001P	SVTCL	Pyrene		10	ug/L	U	8/15/97
SJS04-GW3D-001P	VCLOW	1,1,1-Trichloroethane		1	ug/L	U	8/5/97
SJS04-GW3D-001P	VCLOW	1,1,2,2-Tetrachloroethane		1	ug/L	U	8/5/97
SJS04-GW3D-001P	VCLOW	1,1,2-Trichloroethane		1	ug/L	U	8/5/97
SJS04-GW3D-001P	VCLOW	1,1-Dichloroethane		1	ug/L	U	8/5/97
SJS04-GW3D-001P	VCLOW	1,1-Dichloroethene		1	ug/L	U	8/5/97
SJS04-GW3D-001P	VCLOW	1,2,4-Trichlorobenzene		1	ug/L	U	8/5/97
SJS04-GW3D-001P	VCLOW	1,2-Dibromo-3-chloropropan		1	ug/L	U	8/5/97
SJS04-GW3D-001P	VCLOW	1,2-Dibromoethane		1	ug/L	U	8/5/97
SJS04-GW3D-001P	VCLOW	1,2-Dichlorobenzene		1	ug/L	U	8/5/97
SJS04-GW3D-001P	VCLOW	1,2-Dichloroethane		1	ug/L	U	8/5/97
SJS04-GW3D-001P	VCLOW	1,2-Dichloropropane		1	ug/L	U	8/5/97
SJS04-GW3D-001P	VCLOW	1,3-Dichlorobenzene		1	ug/L	U	8/5/97
SJS04-GW3D-001P	VCLOW	1,4-Dichlorobenzene		1	ug/L	U	8/5/97
SJS04-GW3D-001P	VCLOW	2-Hexanone		5	ug/L	U	8/5/97
SJS04-GW3D-001P	VCLOW	4-Methyl-2-Pentanone		5	ug/L	U	8/5/97
SJS04-GW3D-001P	VCLOW	Acetone	18	5	ug/L	B	8/5/97
SJS04-GW3D-001P	VCLOW	Benzene		1	ug/L	U	8/5/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS04-GW3D-001P	VCLOW	Bromochloromethane		1	ug/L	U	8/5/97
SJS04-GW3D-001P	VCLOW	Bromodichloromethane		1	ug/L	U	8/5/97
SJS04-GW3D-001P	VCLOW	Bromoform		1	ug/L	U	8/5/97
SJS04-GW3D-001P	VCLOW	Bromomethane		1	ug/L	U	8/5/97
SJS04-GW3D-001P	VCLOW	Carbon Disulfide		1	ug/L	U	8/5/97
SJS04-GW3D-001P	VCLOW	Carbon Tetrachloride		1	ug/L	U	8/5/97
SJS04-GW3D-001P	VCLOW	Chlorobenzene		1	ug/L	U	8/5/97
SJS04-GW3D-001P	VCLOW	Chloroethane		1	ug/L	U	8/5/97
SJS04-GW3D-001P	VCLOW	Chloroform	9	1	ug/L		8/5/97
SJS04-GW3D-001P	VCLOW	Chloromethane		1	ug/L	U	8/5/97
SJS04-GW3D-001P	VCLOW	cis-1,2-Dichloroethene		1	ug/L	U	8/5/97
SJS04-GW3D-001P	VCLOW	cis-1,3-Dichloropropene		1	ug/L	U	8/5/97
SJS04-GW3D-001P	VCLOW	Dibromochloromethane		1	ug/L	U	8/5/97
SJS04-GW3D-001P	VCLOW	Ethylbenzene		1	ug/L	U	8/5/97
SJS04-GW3D-001P	VCLOW	Methylene Chloride	3	1	ug/L	B	8/5/97
SJS04-GW3D-001P	VCLOW	Styrene		1	ug/L	U	8/5/97
SJS04-GW3D-001P	VCLOW	Tetrachloroethene		1	ug/L	U	8/5/97
SJS04-GW3D-001P	VCLOW	Toluene	0.2	1	ug/L	J	8/5/97
SJS04-GW3D-001P	VCLOW	Total Xylenes		1	ug/L	U	8/5/97
SJS04-GW3D-001P	VCLOW	Trans-1,2-Dichloroethene		1	ug/L	U	8/5/97
SJS04-GW3D-001P	VCLOW	trans-1,3-Dichloropropene		1	ug/L	U	8/5/97
SJS04-GW3D-001P	VCLOW	Trichloroethene		1	ug/L	U	8/5/97
SJS04-GW3D-001P	VCLOW	Vinyl Chloride		1	ug/L	U	8/5/97
SJS04-GW3S-001	CTOTP	Total Phosphorous (as P)	0.093	0.05	mg/L	J	7/31/97
SJS04-GW3S-001	MCYAN	Aluminum	90.9	29	ug/L	B	8/1/97
SJS04-GW3S-001	MCYAN	Antimony		2	ug/L	U	8/1/97
SJS04-GW3S-001	MCYAN	Arsenic		3	ug/L	U	8/1/97
SJS04-GW3S-001	MCYAN	Barium	424	1	ug/L		8/1/97
SJS04-GW3S-001	MCYAN	Beryllium		1	ug/L	U	8/1/97
SJS04-GW3S-001	MCYAN	Cadmium		0.5	ug/L	U	8/1/97
SJS04-GW3S-001	MCYAN	Calcium	319000	46	ug/L		8/1/97
SJS04-GW3S-001	MCYAN	Chromium	10.9	4	ug/L	B	8/1/97
SJS04-GW3S-001	MCYAN	Cobalt		8	ug/L	U	8/1/97
SJS04-GW3S-001	MCYAN	Copper		6	ug/L	U	8/1/97
SJS04-GW3S-001	MCYAN	Cyanide		5	ug/L	U	7/25/97
SJS04-GW3S-001	MCYAN	Iron	6910	5	ug/L		8/1/97
SJS04-GW3S-001	MCYAN	Lead	1.5	1	ug/L	B	8/1/97
SJS04-GW3S-001	MCYAN	Magnesium	144000	45	ug/L		8/1/97
SJS04-GW3S-001	MCYAN	Manganese	449	1	ug/L		8/1/97
SJS04-GW3S-001	MCYAN	Mercury	0.21	0.1	ug/L	B	8/7/97
SJS04-GW3S-001	MCYAN	Nickel		7	ug/L	U	8/1/97
SJS04-GW3S-001	MCYAN	Potassium	58900	97	ug/L		8/1/97
SJS04-GW3S-001	MCYAN	Selenium		3	ug/L	U	8/1/97
SJS04-GW3S-001	MCYAN	Silver		1	ug/L	U	8/1/97
SJS04-GW3S-001	MCYAN	Sodium	1170000	28	ug/L		8/4/97
SJS04-GW3S-001	MCYAN	Thallium		2	ug/L	U	8/1/97
SJS04-GW3S-001	MCYAN	Vanadium		9	ug/L	U	8/1/97
SJS04-GW3S-001	MCYAN	Zinc	37.7	3	ug/L	B	8/1/97
SJS04-GW3S-001	PSPCB	4,4'-DDD		0.1	ug/L	U	8/10/97
SJS04-GW3S-001	PSPCB	4,4'-DDE		0.1	ug/L	U	8/10/97
SJS04-GW3S-001	PSPCB	4,4'-DDT		0.1	ug/L	U	8/10/97
SJS04-GW3S-001	PSPCB	Aldrin		0.05	ug/L	U	8/10/97
SJS04-GW3S-001	PSPCB	alpha-BHC		0.05	ug/L	U	8/10/97
SJS04-GW3S-001	PSPCB	alpha-Chlordane		0.05	ug/L	U	8/10/97
SJS04-GW3S-001	PSPCB	Aroclor-1016		1	ug/L	U	8/10/97
SJS04-GW3S-001	PSPCB	Aroclor-1221		2	ug/L	U	8/10/97
SJS04-GW3S-001	PSPCB	Aroclor-1232		1	ug/L	U	8/10/97
SJS04-GW3S-001	PSPCB	Aroclor-1242		1	ug/L	U	8/10/97
SJS04-GW3S-001	PSPCB	Aroclor-1248		1	ug/L	U	8/10/97
SJS04-GW3S-001	PSPCB	Aroclor-1254		1	ug/L	U	8/10/97
SJS04-GW3S-001	PSPCB	Aroclor-1260		1	ug/L	U	8/10/97
SJS04-GW3S-001	PSPCB	beta-BHC		0.05	ug/L	U	8/10/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS04-GW3S-001	PSPCB	delta-BHC		0.05	ug/L	U	8/10/97
SJS04-GW3S-001	PSPCB	Dieldrin		0.1	ug/L	U	8/10/97
SJS04-GW3S-001	PSPCB	Endosulfan I		0.05	ug/L	U	8/10/97
SJS04-GW3S-001	PSPCB	Endosulfan II		0.1	ug/L	U	8/10/97
SJS04-GW3S-001	PSPCB	Endosulfan Sulfate		0.1	ug/L	U	8/10/97
SJS04-GW3S-001	PSPCB	Endrin		0.1	ug/L	U	8/10/97
SJS04-GW3S-001	PSPCB	Endrin Aldehyde		0.1	ug/L	U	8/10/97
SJS04-GW3S-001	PSPCB	Endrin Ketone		0.1	ug/L	U	8/10/97
SJS04-GW3S-001	PSPCB	gamma-BHC		0.05	ug/L	U	8/10/97
SJS04-GW3S-001	PSPCB	gamma-Chlordane		0.05	ug/L	U	8/10/97
SJS04-GW3S-001	PSPCB	Heptachlor		0.05	ug/L	U	8/10/97
SJS04-GW3S-001	PSPCB	Heptachlor Epoxide		0.05	ug/L	U	8/10/97
SJS04-GW3S-001	PSPCB	Methoxychlor		0.5	ug/L	U	8/10/97
SJS04-GW3S-001	PSPCB	Toxaphene		5	ug/L	U	8/10/97
SJS04-GW3S-001	SVTCL	1,2,4-Trichlorobenzene		10	ug/L	U	7/27/97
SJS04-GW3S-001	SVTCL	1,2-Dichlorobenzene		10	ug/L	U	7/27/97
SJS04-GW3S-001	SVTCL	1,3-Dichlorobenzene		10	ug/L	U	7/27/97
SJS04-GW3S-001	SVTCL	1,4-Dichlorobenzene		10	ug/L	U	7/27/97
SJS04-GW3S-001	SVTCL	2,2'-oxybis(1-Chloropropane		10	ug/L	U	7/27/97
SJS04-GW3S-001	SVTCL	2,4,5-Trichlorophenol		25	ug/L	U	7/27/97
SJS04-GW3S-001	SVTCL	2,4,6-Trichlorophenol		10	ug/L	U	7/27/97
SJS04-GW3S-001	SVTCL	2,4-Dichlorophenol		10	ug/L	U	7/27/97
SJS04-GW3S-001	SVTCL	2,4-Dimethylphenol		10	ug/L	U	7/27/97
SJS04-GW3S-001	SVTCL	2,4-Dinitrophenol		25	ug/L	U	7/27/97
SJS04-GW3S-001	SVTCL	2,4-Dinitrotoluene		10	ug/L	U	7/27/97
SJS04-GW3S-001	SVTCL	2,6-Dinitrotoluene		10	ug/L	U	7/27/97
SJS04-GW3S-001	SVTCL	2-Chloronaphthalene		10	ug/L	U	7/27/97
SJS04-GW3S-001	SVTCL	2-Chlorophenol		10	ug/L	U	7/27/97
SJS04-GW3S-001	SVTCL	2-Methylnaphthalene		10	ug/L	U	7/27/97
SJS04-GW3S-001	SVTCL	2-Methylphenol		10	ug/L	U	7/27/97
SJS04-GW3S-001	SVTCL	2-Nitroaniline		25	ug/L	U	7/27/97
SJS04-GW3S-001	SVTCL	2-Nitrophenol		10	ug/L	U	7/27/97
SJS04-GW3S-001	SVTCL	3,3'-Dichlorobenzidine		10	ug/L	U	7/27/97
SJS04-GW3S-001	SVTCL	3-Nitroaniline		25	ug/L	U	7/27/97
SJS04-GW3S-001	SVTCL	4,6-Dinitro-2-Methylphenol		25	ug/L	U	7/27/97
SJS04-GW3S-001	SVTCL	4-Bromophenyl phenylether		10	ug/L	U	7/27/97
SJS04-GW3S-001	SVTCL	4-Chloro-3-Methylphenol		10	ug/L	U	7/27/97
SJS04-GW3S-001	SVTCL	4-Chloroaniline		10	ug/L	U	7/27/97
SJS04-GW3S-001	SVTCL	4-Chlorophenyl-phenylether		10	ug/L	U	7/27/97
SJS04-GW3S-001	SVTCL	4-Methylphenol		10	ug/L	U	7/27/97
SJS04-GW3S-001	SVTCL	4-Nitroaniline		25	ug/L	U	7/27/97
SJS04-GW3S-001	SVTCL	4-Nitrophenol		25	ug/L	U	7/27/97
SJS04-GW3S-001	SVTCL	Acenaphthene		10	ug/L	U	7/27/97
SJS04-GW3S-001	SVTCL	Acenaphthylene		10	ug/L	U	7/27/97
SJS04-GW3S-001	SVTCL	Anthracene		10	ug/L	U	7/27/97
SJS04-GW3S-001	SVTCL	Benzo(a)Anthracene		10	ug/L	U	7/27/97
SJS04-GW3S-001	SVTCL	Benzo(a)Pyrene		10	ug/L	U	7/27/97
SJS04-GW3S-001	SVTCL	Benzo(b)Fluoranthene		10	ug/L	U	7/27/97
SJS04-GW3S-001	SVTCL	Benzo(g,h,i)Perylene		10	ug/L	U	7/27/97
SJS04-GW3S-001	SVTCL	Benzo(k)fluoranthene		10	ug/L	U	7/27/97
SJS04-GW3S-001	SVTCL	Bis(2-chloroethoxy)Methane		10	ug/L	U	7/27/97
SJS04-GW3S-001	SVTCL	Bis(2-chloroethyl)Ether		10	ug/L	U	7/27/97
SJS04-GW3S-001	SVTCL	Bis(2-Ethylhexyl)Phthalate		10	ug/L	U	7/27/97
SJS04-GW3S-001	SVTCL	Butylbenzylphthalate		10	ug/L	U	7/27/97
SJS04-GW3S-001	SVTCL	Carbazole		10	ug/L	U	7/27/97
SJS04-GW3S-001	SVTCL	Chrysene		10	ug/L	U	7/27/97
SJS04-GW3S-001	SVTCL	Di-n-Butylphthalate		10	ug/L	U	7/27/97
SJS04-GW3S-001	SVTCL	Di-n-Octyl Phthalate		10	ug/L	U	7/27/97
SJS04-GW3S-001	SVTCL	Dibenz(a,h)Anthracene		10	ug/L	U	7/27/97
SJS04-GW3S-001	SVTCL	Dibenzofuran		10	ug/L	U	7/27/97
SJS04-GW3S-001	SVTCL	Diethylphthalate		10	ug/L	U	7/27/97
SJS04-GW3S-001	SVTCL	Dimethyl Phthalate		10	ug/L	U	7/27/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS04-GW3S-001	SVTCL	Fluoranthene		10	ug/L	U	7/27/97
SJS04-GW3S-001	SVTCL	Fluorene		10	ug/L	U	7/27/97
SJS04-GW3S-001	SVTCL	Hexachlorobenzene		10	ug/L	U	7/27/97
SJS04-GW3S-001	SVTCL	Hexachlorobutadiene		10	ug/L	U	7/27/97
SJS04-GW3S-001	SVTCL	Hexachlorocyclopentadien		10	ug/L	U	7/27/97
SJS04-GW3S-001	SVTCL	Hexachloroethane		10	ug/L	U	7/27/97
SJS04-GW3S-001	SVTCL	Indeno(1,2,3-cd)Pyrene		10	ug/L	U	7/27/97
SJS04-GW3S-001	SVTCL	Isophorone		10	ug/L	U	7/27/97
SJS04-GW3S-001	SVTCL	N-Nitroso-Di-n-Propylamine		10	ug/L	U	7/27/97
SJS04-GW3S-001	SVTCL	N-Nitrosodiphenylamine		10	ug/L	U	7/27/97
SJS04-GW3S-001	SVTCL	Naphthalene		10	ug/L	U	7/27/97
SJS04-GW3S-001	SVTCL	Nitrobenzene		10	ug/L	U	7/27/97
SJS04-GW3S-001	SVTCL	Pentachlorophenol		25	ug/L	U	7/27/97
SJS04-GW3S-001	SVTCL	Phenanthrene		10	ug/L	U	7/27/97
SJS04-GW3S-001	SVTCL	Phenol		10	ug/L	U	7/27/97
SJS04-GW3S-001	SVTCL	Pyrene		10	ug/L	U	7/27/97
SJS04-GW3S-001	VCLOW	1,1,1-Trichloroethane		1	ug/L	U	7/27/97
SJS04-GW3S-001	VCLOW	1,1,2,2-Tetrachloroethane		1	ug/L	U	7/27/97
SJS04-GW3S-001	VCLOW	1,1,2-Trichloroethane		1	ug/L	U	7/27/97
SJS04-GW3S-001	VCLOW	1,1-Dichloroethane		1	ug/L	U	7/27/97
SJS04-GW3S-001	VCLOW	1,1-Dichloroethene		1	ug/L	U	7/27/97
SJS04-GW3S-001	VCLOW	1,2,4-Trichlorobenzene		1	ug/L	U	7/27/97
SJS04-GW3S-001	VCLOW	1,2-Dibromo-3-chloropropan		1	ug/L	U	7/27/97
SJS04-GW3S-001	VCLOW	1,2-Dibromoethane		1	ug/L	U	7/27/97
SJS04-GW3S-001	VCLOW	1,2-Dichlorobenzene		1	ug/L	U	7/27/97
SJS04-GW3S-001	VCLOW	1,2-Dichloroethane		1	ug/L	U	7/27/97
SJS04-GW3S-001	VCLOW	1,2-Dichloropropane		1	ug/L	U	7/27/97
SJS04-GW3S-001	VCLOW	1,3-Dichlorobenzene		1	ug/L	U	7/27/97
SJS04-GW3S-001	VCLOW	1,4-Dichlorobenzene		1	ug/L	U	7/27/97
SJS04-GW3S-001	VCLOW	2-Butanone		5	ug/L	U	7/27/97
SJS04-GW3S-001	VCLOW	2-Hexanone		5	ug/L	U	7/27/97
SJS04-GW3S-001	VCLOW	4-Methyl-2-Pentanone		5	ug/L	U	7/27/97
SJS04-GW3S-001	VCLOW	Acetone	12	5	ug/L		7/27/97
SJS04-GW3S-001	VCLOW	Benzene		1	ug/L	U	7/27/97
SJS04-GW3S-001	VCLOW	Bromochloromethane		1	ug/L	U	7/27/97
SJS04-GW3S-001	VCLOW	Bromodichloromethane		1	ug/L	U	7/27/97
SJS04-GW3S-001	VCLOW	Bromoform		1	ug/L	U	7/27/97
SJS04-GW3S-001	VCLOW	Bromomethane		1	ug/L	U	7/27/97
SJS04-GW3S-001	VCLOW	Carbon Disulfide		1	ug/L	U	7/27/97
SJS04-GW3S-001	VCLOW	Carbon Tetrachloride		1	ug/L	U	7/27/97
SJS04-GW3S-001	VCLOW	Chlorobenzene		1	ug/L	U	7/27/97
SJS04-GW3S-001	VCLOW	Chloroethane		1	ug/L	U	7/27/97
SJS04-GW3S-001	VCLOW	Chloroform		1	ug/L	U	7/27/97
SJS04-GW3S-001	VCLOW	Chloromethane		1	ug/L	U	7/27/97
SJS04-GW3S-001	VCLOW	cis-1,2-Dichloroethene		1	ug/L	U	7/27/97
SJS04-GW3S-001	VCLOW	cis-1,3-Dichloropropene		1	ug/L	U	7/27/97
SJS04-GW3S-001	VCLOW	Dibromochloromethane		1	ug/L	U	7/27/97
SJS04-GW3S-001	VCLOW	Ethylbenzene		1	ug/L	U	7/27/97
SJS04-GW3S-001	VCLOW	Methylene Chloride	1	1	ug/L	B	7/27/97
SJS04-GW3S-001	VCLOW	Styrene		1	ug/L	U	7/27/97
SJS04-GW3S-001	VCLOW	Tetrachloroethene		1	ug/L	U	7/27/97
SJS04-GW3S-001	VCLOW	Toluene		1	ug/L	U	7/27/97
SJS04-GW3S-001	VCLOW	Total Xylenes		1	ug/L	U	7/27/97
SJS04-GW3S-001	VCLOW	Trans-1,2-Dichloroethene		1	ug/L	U	7/27/97
SJS04-GW3S-001	VCLOW	Trans-1,3-Dichloropropene		1	ug/L	U	7/27/97
SJS04-GW3S-001	VCLOW	Trichloroethene		1	ug/L	U	7/27/97
SJS04-GW3S-001	VCLOW	Vinyl Chloride		1	ug/L	U	7/27/97
SJS04-GW3S-001F	METAL	Aluminum		44	ug/L	U	8/1/97
SJS04-GW3S-001F	METAL	Antimony		2	ug/L	U	8/1/97
SJS04-GW3S-001F	METAL	Arsenic		3	ug/L	U	8/1/97
SJS04-GW3S-001F	METAL	Barium	385	1	ug/L		8/1/97
SJS04-GW3S-001F	METAL	Beryllium		1	ug/L	U	8/1/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS04-GW3S-001F	METAL	Cadmium		0.5	ug/L	U	8/1/97
SJS04-GW3S-001F	METAL	Calcium	308000	46	ug/L		8/1/97
SJS04-GW3S-001F	METAL	Chromium		7	ug/L	U	8/1/97
SJS04-GW3S-001F	METAL	Cobalt		8	ug/L	U	8/1/97
SJS04-GW3S-001F	METAL	Copper		6	ug/L	U	8/1/97
SJS04-GW3S-001F	METAL	Iron	4300	5	ug/L		8/1/97
SJS04-GW3S-001F	METAL	Lead	1.1	1	ug/L	B	8/1/97
SJS04-GW3S-001F	METAL	Magnesium	146000	45	ug/L		8/1/97
SJS04-GW3S-001F	METAL	Manganese	437	1	ug/L		8/1/97
SJS04-GW3S-001F	METAL	Mercury	0.19	0.1	ug/L	B	8/7/97
SJS04-GW3S-001F	METAL	Nickel		7	ug/L	U	8/1/97
SJS04-GW3S-001F	METAL	Potassium	58100	97	ug/L		8/1/97
SJS04-GW3S-001F	METAL	Selenium		3	ug/L	U	8/1/97
SJS04-GW3S-001F	METAL	Silver	1.6	3	ug/L	B	8/1/97
SJS04-GW3S-001F	METAL	Sodium	1180000	28	ug/L		8/4/97
SJS04-GW3S-001F	METAL	Thallium		2	ug/L	U	8/1/97
SJS04-GW3S-001F	METAL	Vanadium		9	ug/L	U	8/1/97
SJS04-GW3S-001F	METAL	Zinc	44.8	3	ug/L	B	8/1/97
SJS04-GW4S-001	CTOTP	Total Phosphorous (as P)	1.13	0.25	mg/L	J	7/31/97
SJS04-GW4S-001	MCYAN	Aluminum	2630	29	ug/L	K	8/1/97
SJS04-GW4S-001	MCYAN	Antimony	2.8	1	ug/L	B	8/1/97
SJS04-GW4S-001	MCYAN	Arsenic	9.2	3	ug/L	J	8/1/97
SJS04-GW4S-001	MCYAN	Barium	185	1	ug/L	J	8/1/97
SJS04-GW4S-001	MCYAN	Beryllium		1	ug/L	U	8/1/97
SJS04-GW4S-001	MCYAN	Cadmium		0.5	ug/L	U	8/1/97
SJS04-GW4S-001	MCYAN	Calcium	161000	46	ug/L		8/1/97
SJS04-GW4S-001	MCYAN	Chromium	47.8	4	ug/L		8/1/97
SJS04-GW4S-001	MCYAN	Cobalt		8	ug/L	U	8/1/97
SJS04-GW4S-001	MCYAN	Copper	39.3	2	ug/L		8/1/97
SJS04-GW4S-001	MCYAN	Cyanide		5	ug/L	U	7/25/97
SJS04-GW4S-001	MCYAN	Iron	8520	5	ug/L		8/1/97
SJS04-GW4S-001	MCYAN	Lead	9.9	1	ug/L		8/6/97
SJS04-GW4S-001	MCYAN	Magnesium	310000	45	ug/L		8/1/97
SJS04-GW4S-001	MCYAN	Manganese	832	1	ug/L		8/1/97
SJS04-GW4S-001	MCYAN	Mercury	0.35	0.1	ug/L	B	8/7/97
SJS04-GW4S-001	MCYAN	Nickel	22.6	4	ug/L	J	8/1/97
SJS04-GW4S-001	MCYAN	Potassium	105000	97	ug/L		8/1/97
SJS04-GW4S-001	MCYAN	Selenium		3	ug/L	U	8/1/97
SJS04-GW4S-001	MCYAN	Silver	1	3	ug/L	B	8/1/97
SJS04-GW4S-001	MCYAN	Sodium	2210000	28	ug/L		8/4/97
SJS04-GW4S-001	MCYAN	Thallium	2.4	2	ug/L	B	8/1/97
SJS04-GW4S-001	MCYAN	Vanadium	9.2	4	ug/L	J	8/1/97
SJS04-GW4S-001	MCYAN	Zinc	177	3	ug/L		8/1/97
SJS04-GW4S-001	PSPCB	4,4'-DDD		0.1	ug/L	U	8/9/97
SJS04-GW4S-001	PSPCB	4,4'-DDE		0.1	ug/L	U	8/9/97
SJS04-GW4S-001	PSPCB	4,4'-DDT		0.1	ug/L	U	8/9/97
SJS04-GW4S-001	PSPCB	Aldrin		0.05	ug/L	U	8/9/97
SJS04-GW4S-001	PSPCB	alpha-BHC		0.05	ug/L	U	8/9/97
SJS04-GW4S-001	PSPCB	alpha-Chlordane		0.05	ug/L	U	8/9/97
SJS04-GW4S-001	PSPCB	Aroclor-1016		1	ug/L	U	8/9/97
SJS04-GW4S-001	PSPCB	Aroclor-1221		2	ug/L	U	8/9/97
SJS04-GW4S-001	PSPCB	Aroclor-1232		1	ug/L	U	8/9/97
SJS04-GW4S-001	PSPCB	Aroclor-1242		1	ug/L	U	8/9/97
SJS04-GW4S-001	PSPCB	Aroclor-1248		1	ug/L	U	8/9/97
SJS04-GW4S-001	PSPCB	Aroclor-1254		1	ug/L	U	8/9/97
SJS04-GW4S-001	PSPCB	Aroclor-1260		1	ug/L	U	8/9/97
SJS04-GW4S-001	PSPCB	beta-BHC		0.05	ug/L	U	8/9/97
SJS04-GW4S-001	PSPCB	delta-BHC		0.05	ug/L	U	8/9/97
SJS04-GW4S-001	PSPCB	Dieldrin		0.1	ug/L	U	8/9/97
SJS04-GW4S-001	PSPCB	Endosulfan I		0.05	ug/L	U	8/9/97
SJS04-GW4S-001	PSPCB	Endosulfan II		0.1	ug/L	U	8/9/97
SJS04-GW4S-001	PSPCB	Endosulfan Sulfate		0.1	ug/L	U	8/9/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS04-GW4S-001	PSPCB	Endrin		0.1	ug/L	U	8/9/97
SJS04-GW4S-001	PSPCB	Endrin Aldehyde		0.1	ug/L	U	8/9/97
SJS04-GW4S-001	PSPCB	Endrin Ketone		0.1	ug/L	U	8/9/97
SJS04-GW4S-001	PSPCB	gamma-BHC		0.05	ug/L	U	8/9/97
SJS04-GW4S-001	PSPCB	gamma-Chlordane		0.05	ug/L	U	8/9/97
SJS04-GW4S-001	PSPCB	Heptachlor		0.05	ug/L	U	8/9/97
SJS04-GW4S-001	PSPCB	Heptachlor Epoxide		0.05	ug/L	U	8/9/97
SJS04-GW4S-001	PSPCB	Methoxychlor		0.5	ug/L	U	8/9/97
SJS04-GW4S-001	PSPCB	Toxaphene		5	ug/L	U	8/9/97
SJS04-GW4S-001	SVTCL	1,2,4-Trichlorobenzene		10	ug/L	U	7/27/97
SJS04-GW4S-001	SVTCL	1,2-Dichlorobenzene		10	ug/L	U	7/27/97
SJS04-GW4S-001	SVTCL	1,3-Dichlorobenzene		10	ug/L	U	7/27/97
SJS04-GW4S-001	SVTCL	1,4-Dichlorobenzene		10	ug/L	U	7/27/97
SJS04-GW4S-001	SVTCL	2,2'-oxybis(1-Chloropropane		10	ug/L	U	7/27/97
SJS04-GW4S-001	SVTCL	2,4,5-Trichlorophenol		25	ug/L	U	7/27/97
SJS04-GW4S-001	SVTCL	2,4,6-Trichlorophenol		10	ug/L	U	7/27/97
SJS04-GW4S-001	SVTCL	2,4-Dichlorophenol		10	ug/L	U	7/27/97
SJS04-GW4S-001	SVTCL	2,4-Dimethylphenol		10	ug/L	U	7/27/97
SJS04-GW4S-001	SVTCL	2,4-Dinitrophenol		25	ug/L	U	7/27/97
SJS04-GW4S-001	SVTCL	2,4-Dinitrotoluene		10	ug/L	U	7/27/97
SJS04-GW4S-001	SVTCL	2,6-Dinitrotoluene		10	ug/L	U	7/27/97
SJS04-GW4S-001	SVTCL	2-Chloronaphthalene		10	ug/L	U	7/27/97
SJS04-GW4S-001	SVTCL	2-Chlorophenol		10	ug/L	U	7/27/97
SJS04-GW4S-001	SVTCL	2-Methylnaphthalene		10	ug/L	U	7/27/97
SJS04-GW4S-001	SVTCL	2-Methylphenol		10	ug/L	U	7/27/97
SJS04-GW4S-001	SVTCL	2-Nitroaniline		25	ug/L	U	7/27/97
SJS04-GW4S-001	SVTCL	2-Nitrophenol		10	ug/L	U	7/27/97
SJS04-GW4S-001	SVTCL	3,3'-Dichlorobenzidine		10	ug/L	U	7/27/97
SJS04-GW4S-001	SVTCL	3-Nitroaniline		25	ug/L	U	7/27/97
SJS04-GW4S-001	SVTCL	4,6-Dinitro-2-Methylphenol		25	ug/L	U	7/27/97
SJS04-GW4S-001	SVTCL	4-Bromophenyl phenylether		10	ug/L	U	7/27/97
SJS04-GW4S-001	SVTCL	4-Chloro-3-Methylphenol		10	ug/L	U	7/27/97
SJS04-GW4S-001	SVTCL	4-Chloroaniline		10	ug/L	U	7/27/97
SJS04-GW4S-001	SVTCL	4-Chlorophenyl-phenylether		10	ug/L	U	7/27/97
SJS04-GW4S-001	SVTCL	4-Methylphenol		10	ug/L	U	7/27/97
SJS04-GW4S-001	SVTCL	4-Nitroaniline		25	ug/L	U	7/27/97
SJS04-GW4S-001	SVTCL	4-Nitrophenol		25	ug/L	U	7/27/97
SJS04-GW4S-001	SVTCL	Acenaphthene		10	ug/L	U	7/27/97
SJS04-GW4S-001	SVTCL	Acenaphthylene		10	ug/L	U	7/27/97
SJS04-GW4S-001	SVTCL	Anthracene		10	ug/L	U	7/27/97
SJS04-GW4S-001	SVTCL	Benzo(a)Anthracene		10	ug/L	U	7/27/97
SJS04-GW4S-001	SVTCL	Benzo(a)Pyrene		10	ug/L	U	7/27/97
SJS04-GW4S-001	SVTCL	Benzo(b)Fluoranthene		10	ug/L	U	7/27/97
SJS04-GW4S-001	SVTCL	Benzo(g,h,i)Perylene		10	ug/L	U	7/27/97
SJS04-GW4S-001	SVTCL	Benzo(k)fluoranthene		10	ug/L	U	7/27/97
SJS04-GW4S-001	SVTCL	Bis(2-chloroethoxy)Methane		10	ug/L	U	7/27/97
SJS04-GW4S-001	SVTCL	Bis(2-chloroethyl)Ether		10	ug/L	U	7/27/97
SJS04-GW4S-001	SVTCL	Bis(2-Ethylhexyl)Phthalate		10	ug/L	U	7/27/97
SJS04-GW4S-001	SVTCL	Butylbenzylphthalate		10	ug/L	U	7/27/97
SJS04-GW4S-001	SVTCL	Carbazole		10	ug/L	U	7/27/97
SJS04-GW4S-001	SVTCL	Chrysene		10	ug/L	U	7/27/97
SJS04-GW4S-001	SVTCL	Di-n-Butylphthalate		10	ug/L	U	7/27/97
SJS04-GW4S-001	SVTCL	Di-n-Octyl Phthalate		10	ug/L	U	7/27/97
SJS04-GW4S-001	SVTCL	Dibenz(a,h)Anthracene		10	ug/L	U	7/27/97
SJS04-GW4S-001	SVTCL	Dibenzofuran		10	ug/L	U	7/27/97
SJS04-GW4S-001	SVTCL	Diethylphthalate		10	ug/L	U	7/27/97
SJS04-GW4S-001	SVTCL	Dimethyl Phthalate		10	ug/L	U	7/27/97
SJS04-GW4S-001	SVTCL	Fluoranthene		10	ug/L	U	7/27/97
SJS04-GW4S-001	SVTCL	Fluorene		10	ug/L	U	7/27/97
SJS04-GW4S-001	SVTCL	Hexachlorobenzene		10	ug/L	U	7/27/97
SJS04-GW4S-001	SVTCL	Hexachlorobutadiene		10	ug/L	U	7/27/97
SJS04-GW4S-001	SVTCL	Hexachlorocyclopentadien		10	ug/L	U	7/27/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS04-GW4S-001	SVTCL	Hexachloroethane		10	ug/L	U	7/27/97
SJS04-GW4S-001	SVTCL	Indeno(1,2,3-cd)Pyrene		10	ug/L	U	7/27/97
SJS04-GW4S-001	SVTCL	Isophorone		10	ug/L	U	7/27/97
SJS04-GW4S-001	SVTCL	N-Nitroso-Di-n-Propylamine		10	ug/L	U	7/27/97
SJS04-GW4S-001	SVTCL	N-Nitrosodiphenylamine		10	ug/L	U	7/27/97
SJS04-GW4S-001	SVTCL	Naphthalene		10	ug/L	U	7/27/97
SJS04-GW4S-001	SVTCL	Nitrobenzene		10	ug/L	U	7/27/97
SJS04-GW4S-001	SVTCL	Pentachlorophenol		25	ug/L	U	7/27/97
SJS04-GW4S-001	SVTCL	Phenanthrene		10	ug/L	U	7/27/97
SJS04-GW4S-001	SVTCL	Phenol		10	ug/L	U	7/27/97
SJS04-GW4S-001	SVTCL	Pyrene		10	ug/L	U	7/27/97
SJS04-GW4S-001	VCLOW	1,1,1-Trichloroethane		1	ug/L	U	7/27/97
SJS04-GW4S-001	VCLOW	1,1,2,2-Tetrachloroethane		1	ug/L	U	7/27/97
SJS04-GW4S-001	VCLOW	1,1,2-Trichloroethane		1	ug/L	U	7/27/97
SJS04-GW4S-001	VCLOW	1,1-Dichloroethane		1	ug/L	U	7/27/97
SJS04-GW4S-001	VCLOW	1,1-Dichloroethene		1	ug/L	U	7/27/97
SJS04-GW4S-001	VCLOW	1,2,4-Trichlorobenzene		1	ug/L	U	7/27/97
SJS04-GW4S-001	VCLOW	1,2-Dibromo-3-chloropropan		1	ug/L	U	7/27/97
SJS04-GW4S-001	VCLOW	1,2-Dibromoethane		1	ug/L	U	7/27/97
SJS04-GW4S-001	VCLOW	1,2-Dichlorobenzene		1	ug/L	U	7/27/97
SJS04-GW4S-001	VCLOW	1,2-Dichloroethane		1	ug/L	U	7/27/97
SJS04-GW4S-001	VCLOW	1,2-Dichloropropane		1	ug/L	U	7/27/97
SJS04-GW4S-001	VCLOW	1,3-Dichlorobenzene		1	ug/L	U	7/27/97
SJS04-GW4S-001	VCLOW	1,4-Dichlorobenzene		1	ug/L	U	7/27/97
SJS04-GW4S-001	VCLOW	2-Butanone		5	ug/L	U	7/27/97
SJS04-GW4S-001	VCLOW	2-Hexanone		5	ug/L	U	7/27/97
SJS04-GW4S-001	VCLOW	4-Methyl-2-Pentanone		5	ug/L	U	7/27/97
SJS04-GW4S-001	VCLOW	Acetone	6	5	ug/L		7/27/97
SJS04-GW4S-001	VCLOW	Benzene		1	ug/L	U	7/27/97
SJS04-GW4S-001	VCLOW	Bromochloromethane		1	ug/L	U	7/27/97
SJS04-GW4S-001	VCLOW	Bromodichloromethane		1	ug/L	U	7/27/97
SJS04-GW4S-001	VCLOW	Bromoform		1	ug/L	U	7/27/97
SJS04-GW4S-001	VCLOW	Bromomethane		1	ug/L	U	7/27/97
SJS04-GW4S-001	VCLOW	Carbon Disulfide		1	ug/L	U	7/27/97
SJS04-GW4S-001	VCLOW	Carbon Tetrachloride		1	ug/L	U	7/27/97
SJS04-GW4S-001	VCLOW	Chlorobenzene		1	ug/L	U	7/27/97
SJS04-GW4S-001	VCLOW	Chloroethane		1	ug/L	U	7/27/97
SJS04-GW4S-001	VCLOW	Chloroform		1	ug/L	U	7/27/97
SJS04-GW4S-001	VCLOW	Chloromethane		1	ug/L	U	7/27/97
SJS04-GW4S-001	VCLOW	cis-1,2-Dichloroethene		1	ug/L	U	7/27/97
SJS04-GW4S-001	VCLOW	cis-1,3-Dichloropropene		1	ug/L	U	7/27/97
SJS04-GW4S-001	VCLOW	Dibromochloromethane		1	ug/L	U	7/27/97
SJS04-GW4S-001	VCLOW	Ethylbenzene		1	ug/L	U	7/27/97
SJS04-GW4S-001	VCLOW	Methylene Chloride	1	1	ug/L	B	7/27/97
SJS04-GW4S-001	VCLOW	Styrene		1	ug/L	U	7/27/97
SJS04-GW4S-001	VCLOW	Tetrachloroethene		1	ug/L	U	7/27/97
SJS04-GW4S-001	VCLOW	Toluene		1	ug/L	U	7/27/97
SJS04-GW4S-001	VCLOW	Total Xylenes		1	ug/L	U	7/27/97
SJS04-GW4S-001	VCLOW	Trans-1,2-Dichloroethene		1	ug/L	U	7/27/97
SJS04-GW4S-001	VCLOW	Trans-1,3-Dichloropropene		1	ug/L	U	7/27/97
SJS04-GW4S-001	VCLOW	Trichloroethene		1	ug/L	U	7/27/97
SJS04-GW4S-001	VCLOW	Vinyl Chloride		1	ug/L	U	7/27/97
SJS04-GW4S-001F	METAL	Aluminum		44	ug/L	U	8/1/97
SJS04-GW4S-001F	METAL	Antimony		2	ug/L	U	8/1/97
SJS04-GW4S-001F	METAL	Arsenic	7	3	ug/L	J	8/1/97
SJS04-GW4S-001F	METAL	Barium	146	1	ug/L	J	8/1/97
SJS04-GW4S-001F	METAL	Beryllium		1	ug/L	U	8/1/97
SJS04-GW4S-001F	METAL	Cadmium		0.5	ug/L	U	8/1/97
SJS04-GW4S-001F	METAL	Calcium	158000	46	ug/L		8/1/97
SJS04-GW4S-001F	METAL	Chromium		7	ug/L	U	8/1/97
SJS04-GW4S-001F	METAL	Cobalt		8	ug/L	U	8/1/97
SJS04-GW4S-001F	METAL	Copper		6	ug/L	U	8/1/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS04-GW4S-001F	METAL	Iron	2920	5	ug/L		8/1/97
SJS04-GW4S-001F	METAL	Lead		1	ug/L	U	8/1/97
SJS04-GW4S-001F	METAL	Magnesium	298000	45	ug/L		8/1/97
SJS04-GW4S-001F	METAL	Manganese	758	1	ug/L		8/1/97
SJS04-GW4S-001F	METAL	Mercury	0.24	0.1	ug/L	B	8/7/97
SJS04-GW4S-001F	METAL	Nickel		7	ug/L	U	8/1/97
SJS04-GW4S-001F	METAL	Potassium	102000	97	ug/L		8/1/97
SJS04-GW4S-001F	METAL	Selenium		3	ug/L	U	8/1/97
SJS04-GW4S-001F	METAL	Silver	1	3	ug/L	B	8/1/97
SJS04-GW4S-001F	METAL	Sodium	2120000	28	ug/L		8/4/97
SJS04-GW4S-001F	METAL	Thallium		2	ug/L	U	8/1/97
SJS04-GW4S-001F	METAL	Vanadium	9.9	4	ug/L	J	8/1/97
SJS04-GW4S-001F	METAL	Zinc	44.2	3	ug/L	B	8/1/97
SJS04-SB01-002	CTOTP	Total Phosphorous (as P)	5.5	2.2	mg/kg		7/15/97
SJS04-SB01-002	MCYAN	Aluminum	18100	14.56	mg/kg		7/2/97
SJS04-SB01-002	MCYAN	Arsenic	9.9	0.99	mg/kg	L	7/2/97
SJS04-SB01-002	MCYAN	Barium	43.8	0.66	mg/kg	J	7/2/97
SJS04-SB01-002	MCYAN	Beryllium	0.41	0.33	mg/kg	B	7/2/97
SJS04-SB01-002	MCYAN	Cadmium		0.17	mg/kg	U	7/7/97
SJS04-SB01-002	MCYAN	Calcium	490	28.78	mg/kg	J	7/2/97
SJS04-SB01-002	MCYAN	Chromium	37.1	2.32	mg/kg		7/2/97
SJS04-SB01-002	MCYAN	Cobalt	6.5	2.65	mg/kg	J	7/2/97
SJS04-SB01-002	MCYAN	Copper	24.7	1.98	mg/kg		7/2/97
SJS04-SB01-002	MCYAN	Cyanide		0.87	mg/kg	U	7/2/97
SJS04-SB01-002	MCYAN	Iron	46900	5.62	mg/kg		7/2/97
SJS04-SB01-002	MCYAN	Lead	46.2	0.33	mg/kg	J	7/2/97
SJS04-SB01-002	MCYAN	Magnesium	3650	59.88	mg/kg		7/2/97
SJS04-SB01-002	MCYAN	Manganese	122	0.66	mg/kg		7/2/97
SJS04-SB01-002	MCYAN	Mercury	0.39	0.09	mg/kg		6/30/97
SJS04-SB01-002	MCYAN	Nickel	10.9	2.32	mg/kg	B	7/2/97
SJS04-SB01-002	MCYAN	Potassium	3520	73.44	mg/kg		7/2/97
SJS04-SB01-002	MCYAN	Selenium		0.99	mg/kg	UL	7/2/97
SJS04-SB01-002	MCYAN	Silver	0.63	0.33	mg/kg	B	7/2/97
SJS04-SB01-002	MCYAN	Sodium	228	19.19	mg/kg	B	7/2/97
SJS04-SB01-002	MCYAN	Thallium	3.3	0.66	mg/kg	J	7/2/97
SJS04-SB01-002	MCYAN	Vanadium	47	2.98	mg/kg		7/2/97
SJS04-SB01-002	MCYAN	Zinc	66.3	1.65	mg/kg	L	7/2/97
SJS04-SB01-002	PSPCB	4,4'-DDD		5.4	ug/kg	UJ	7/16/97
SJS04-SB01-002	PSPCB	4,4'-DDE	9.8	4.2	ug/kg	J	7/16/97
SJS04-SB01-002	PSPCB	4,4'-DDT		5.4	ug/kg	UJ	7/16/97
SJS04-SB01-002	PSPCB	Aldrin		2.8	ug/kg	UJ	7/16/97
SJS04-SB01-002	PSPCB	alpha-BHC		2.8	ug/kg	UJ	7/16/97
SJS04-SB01-002	PSPCB	alpha-Chlordane		2.8	ug/kg	UJ	7/16/97
SJS04-SB01-002	PSPCB	Aroclor-1016		54	ug/kg	UJ	7/16/97
SJS04-SB01-002	PSPCB	Aroclor-1221		110	ug/kg	UJ	7/16/97
SJS04-SB01-002	PSPCB	Aroclor-1232		54	ug/kg	UJ	7/16/97
SJS04-SB01-002	PSPCB	Aroclor-1242		54	ug/kg	UJ	7/16/97
SJS04-SB01-002	PSPCB	Aroclor-1248		54	ug/kg	UJ	7/16/97
SJS04-SB01-002	PSPCB	Aroclor-1254		54	ug/kg	UJ	7/16/97
SJS04-SB01-002	PSPCB	Aroclor-1260		54	ug/kg	UJ	7/16/97
SJS04-SB01-002	PSPCB	beta-BHC		2.8	ug/kg	UJ	7/16/97
SJS04-SB01-002	PSPCB	delta-BHC		2.8	ug/kg	UJ	7/16/97
SJS04-SB01-002	PSPCB	Dieldrin		5.4	ug/kg	UJ	7/16/97
SJS04-SB01-002	PSPCB	Endosulfan I		2.8	ug/kg	UJ	7/16/97
SJS04-SB01-002	PSPCB	Endosulfan II		5.4	ug/kg	UJ	7/16/97
SJS04-SB01-002	PSPCB	Endosulfan Sulfate		5.4	ug/kg	UJ	7/16/97
SJS04-SB01-002	PSPCB	Endrin		5.4	ug/kg	UJ	7/16/97
SJS04-SB01-002	PSPCB	Endrin Aldehyde		5.4	ug/kg	UJ	7/16/97
SJS04-SB01-002	PSPCB	Endrin Ketone		5.4	ug/kg	UJ	7/16/97
SJS04-SB01-002	PSPCB	gamma-BHC		2.8	ug/kg	UJ	7/16/97
SJS04-SB01-002	PSPCB	gamma-Chlordane		2.8	ug/kg	UJ	7/16/97
SJS04-SB01-002	PSPCB	Heptachlor		2.8	ug/kg	UJ	7/16/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS04-SB01-002	PSPCB	Heptachlor Epoxide		2.8	ug/kg	UJ	7/16/97
SJS04-SB01-002	PSPCB	Methoxychlor		28	ug/kg	UJ	7/16/97
SJS04-SB01-002	PSPCB	Toxaphene		280	ug/kg	UJ	7/16/97
SJS04-SB01-002	SVTCL	1,2,4-Trichlorobenzene		550	ug/kg	U	7/9/97
SJS04-SB01-002	SVTCL	1,2-Dichlorobenzene		550	ug/kg	U	7/9/97
SJS04-SB01-002	SVTCL	1,3-Dichlorobenzene		550	ug/kg	U	7/9/97
SJS04-SB01-002	SVTCL	1,4-Dichlorobenzene		550	ug/kg	U	7/9/97
SJS04-SB01-002	SVTCL	2,2'-oxybis(1-Chloropropane		550	ug/kg	U	7/9/97
SJS04-SB01-002	SVTCL	2,4,5-Trichlorophenol		1400	ug/kg	U	7/9/97
SJS04-SB01-002	SVTCL	2,4,6-Trichlorophenol		550	ug/kg	U	7/9/97
SJS04-SB01-002	SVTCL	2,4-Dichlorophenol		550	ug/kg	U	7/9/97
SJS04-SB01-002	SVTCL	2,4-Dimethylphenol		550	ug/kg	U	7/9/97
SJS04-SB01-002	SVTCL	2,4-Dinitrophenol		1400	ug/kg	U	7/9/97
SJS04-SB01-002	SVTCL	2,4-Dinitrotoluene		550	ug/kg	U	7/9/97
SJS04-SB01-002	SVTCL	2,6-Dinitrotoluene		550	ug/kg	U	7/9/97
SJS04-SB01-002	SVTCL	2-Chloronaphthalene		550	ug/kg	U	7/9/97
SJS04-SB01-002	SVTCL	2-Chlorophenol		550	ug/kg	U	7/9/97
SJS04-SB01-002	SVTCL	2-Methylnaphthalene		550	ug/kg	U	7/9/97
SJS04-SB01-002	SVTCL	2-Methylphenol		550	ug/kg	U	7/9/97
SJS04-SB01-002	SVTCL	2-Nitroaniline		1400	ug/kg	U	7/9/97
SJS04-SB01-002	SVTCL	2-Nitrophenol		550	ug/kg	U	7/9/97
SJS04-SB01-002	SVTCL	3,3'-Dichlorobenzidine		550	ug/kg	U	7/9/97
SJS04-SB01-002	SVTCL	3-Nitroaniline		1400	ug/kg	U	7/9/97
SJS04-SB01-002	SVTCL	4,6-Dinitro-2-Methylphenol		1400	ug/kg	U	7/9/97
SJS04-SB01-002	SVTCL	4-Bromophenyl phenylether		550	ug/kg	U	7/9/97
SJS04-SB01-002	SVTCL	4-Chloro-3-Methylphenol		550	ug/kg	U	7/9/97
SJS04-SB01-002	SVTCL	4-Chloroaniline		550	ug/kg	U	7/9/97
SJS04-SB01-002	SVTCL	4-Chlorophenyl-phenylether		550	ug/kg	U	7/9/97
SJS04-SB01-002	SVTCL	4-Methylphenol		550	ug/kg	U	7/9/97
SJS04-SB01-002	SVTCL	4-Nitroaniline		1400	ug/kg	U	7/9/97
SJS04-SB01-002	SVTCL	4-Nitrophenol		1400	ug/kg	U	7/9/97
SJS04-SB01-002	SVTCL	Acenaphthene		550	ug/kg	U	7/9/97
SJS04-SB01-002	SVTCL	Acenaphthylene		550	ug/kg	U	7/9/97
SJS04-SB01-002	SVTCL	Anthracene		550	ug/kg	U	7/9/97
SJS04-SB01-002	SVTCL	Benzo(a)Anthracene	90	550	ug/kg	J	7/9/97
SJS04-SB01-002	SVTCL	Benzo(a)Pyrene	120	550	ug/kg	J	7/9/97
SJS04-SB01-002	SVTCL	Benzo(b)Fluoranthene	500	550	ug/kg	J	7/9/97
SJS04-SB01-002	SVTCL	Benzo(g,h,i)Perylene	100	550	ug/kg	J	7/9/97
SJS04-SB01-002	SVTCL	Benzo(k)Fluoranthene	140	550	ug/kg	J	7/9/97
SJS04-SB01-002	SVTCL	Bis(2-chloroethoxy)Methane		550	ug/kg	U	7/9/97
SJS04-SB01-002	SVTCL	Bis(2-chloroethyl)Ether		550	ug/kg	U	7/9/97
SJS04-SB01-002	SVTCL	Bis(2-Ethylhexyl)Phthalate		550	ug/kg	U	7/9/97
SJS04-SB01-002	SVTCL	Butylbenzylphthalate		550	ug/kg	U	7/9/97
SJS04-SB01-002	SVTCL	Carbazole		550	ug/kg	U	7/9/97
SJS04-SB01-002	SVTCL	Chrysene	250	550	ug/kg	J	7/9/97
SJS04-SB01-002	SVTCL	Di-n-Butylphthalate		550	ug/kg	U	7/9/97
SJS04-SB01-002	SVTCL	Di-n-Octyl Phthalate		550	ug/kg	U	7/9/97
SJS04-SB01-002	SVTCL	Dibenz(a,h)Anthracene		550	ug/kg	U	7/9/97
SJS04-SB01-002	SVTCL	Dibenzofuran		550	ug/kg	U	7/9/97
SJS04-SB01-002	SVTCL	Diethylphthalate		550	ug/kg	U	7/9/97
SJS04-SB01-002	SVTCL	Dimethyl Phthalate		550	ug/kg	U	7/9/97
SJS04-SB01-002	SVTCL	Fluoranthene	100	550	ug/kg	J	7/9/97
SJS04-SB01-002	SVTCL	Fluorene		550	ug/kg	U	7/9/97
SJS04-SB01-002	SVTCL	Hexachlorobenzene		550	ug/kg	U	7/9/97
SJS04-SB01-002	SVTCL	Hexachlorobutadiene		550	ug/kg	U	7/9/97
SJS04-SB01-002	SVTCL	Hexachlorocyclopentadien		550	ug/kg	U	7/9/97
SJS04-SB01-002	SVTCL	Hexachloroethane		550	ug/kg	U	7/9/97
SJS04-SB01-002	SVTCL	Indeno(1,2,3-cd)Pyrene	120	550	ug/kg	J	7/9/97
SJS04-SB01-002	SVTCL	Isophorone		550	ug/kg	U	7/9/97
SJS04-SB01-002	SVTCL	N-Nitroso-Di-n-Propylamine		550	ug/kg	U	7/9/97
SJS04-SB01-002	SVTCL	N-Nitrosodiphenylamine		550	ug/kg	U	7/9/97
SJS04-SB01-002	SVTCL	Naphthalene		550	ug/kg	U	7/9/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS04-SB01-002	SVTCL	Nitrobenzene		550	ug/kg	U	7/9/97
SJS04-SB01-002	SVTCL	Pentachlorophenol		1400	ug/kg	U	7/9/97
SJS04-SB01-002	SVTCL	Phenanthrene		550	ug/kg	U	7/9/97
SJS04-SB01-002	SVTCL	Phenol		550	ug/kg	U	7/9/97
SJS04-SB01-002	SVTCL	Pyrene	110	550	ug/kg	J	7/9/97
SJS04-SB01-002	VCTCL	1,1,1-Trichloroethane		18	ug/kg	U	6/30/97
SJS04-SB01-002	VCTCL	1,1,2,2-Tetrachloroethane		18	ug/kg	UJ	6/30/97
SJS04-SB01-002	VCTCL	1,1,2-Trichloroethane		18	ug/kg	U	6/30/97
SJS04-SB01-002	VCTCL	1,1-Dichloroethane		18	ug/kg	U	6/30/97
SJS04-SB01-002	VCTCL	1,1-Dichloroethene		18	ug/kg	U	6/30/97
SJS04-SB01-002	VCTCL	1,2-Dichloroethane		18	ug/kg	U	6/30/97
SJS04-SB01-002	VCTCL	1,2-Dichloroethene (total)		18	ug/kg	U	6/30/97
SJS04-SB01-002	VCTCL	1,2-Dichloropropane		18	ug/kg	U	6/30/97
SJS04-SB01-002	VCTCL	2-Butanone		18	ug/kg	U	6/30/97
SJS04-SB01-002	VCTCL	2-Hexanone		18	ug/kg	UJ	6/30/97
SJS04-SB01-002	VCTCL	4-Methyl-2-Pentanone		18	ug/kg	UJ	6/30/97
SJS04-SB01-002	VCTCL	Acetone		18	ug/kg	U	6/30/97
SJS04-SB01-002	VCTCL	Benzene		18	ug/kg	U	6/30/97
SJS04-SB01-002	VCTCL	Bromodichloromethane		18	ug/kg	U	6/30/97
SJS04-SB01-002	VCTCL	Bromoform		18	ug/kg	U	6/30/97
SJS04-SB01-002	VCTCL	Bromomethane		18	ug/kg	U	6/30/97
SJS04-SB01-002	VCTCL	Carbon Disulfide		18	ug/kg	U	6/30/97
SJS04-SB01-002	VCTCL	Carbon Tetrachloride		18	ug/kg	U	6/30/97
SJS04-SB01-002	VCTCL	Chlorobenzene		18	ug/kg	UJ	6/30/97
SJS04-SB01-002	VCTCL	Chloroethane		18	ug/kg	U	6/30/97
SJS04-SB01-002	VCTCL	Chloroform		18	ug/kg	U	6/30/97
SJS04-SB01-002	VCTCL	Chloromethane		18	ug/kg	U	6/30/97
SJS04-SB01-002	VCTCL	cis-1,3-Dichloropropene		18	ug/kg	U	6/30/97
SJS04-SB01-002	VCTCL	Dibromochloromethane		18	ug/kg	U	6/30/97
SJS04-SB01-002	VCTCL	Ethylbenzene		18	ug/kg	UJ	6/30/97
SJS04-SB01-002	VCTCL	Methylene Chloride	47	18	ug/kg	B	6/30/97
SJS04-SB01-002	VCTCL	Styrene		18	ug/kg	UJ	6/30/97
SJS04-SB01-002	VCTCL	Tetrachloroethene	5	18	ug/kg	J	6/30/97
SJS04-SB01-002	VCTCL	Toluene	3	18	ug/kg	J	6/30/97
SJS04-SB01-002	VCTCL	Total Xylenes		18	ug/kg	UJ	6/30/97
SJS04-SB01-002	VCTCL	Trans-1,3-Dichloropropene		18	ug/kg	U	6/30/97
SJS04-SB01-002	VCTCL	Trichloroethene		18	ug/kg	U	6/30/97
SJS04-SB01-002	VCTCL	Vinyl Chloride		18	ug/kg	U	6/30/97
SJS04-SB02-002	CTOTP	Total Phosphorous (as P)	28.5	4.2	mg/kg		7/15/97
SJS04-SB02-002	MCYAN	Aluminum	4530	10.5	mg/kg		7/2/97
SJS04-SB02-002	MCYAN	Antimony	1.2	0.48	mg/kg	B	7/2/97
SJS04-SB02-002	MCYAN	Arsenic	23.5	0.72	mg/kg	L	7/2/97
SJS04-SB02-002	MCYAN	Barium	262	0.48	mg/kg		7/2/97
SJS04-SB02-002	MCYAN	Beryllium	1.3	0.24	mg/kg		7/2/97
SJS04-SB02-002	MCYAN	Cadmium		0.12	mg/kg	U	7/7/97
SJS04-SB02-002	MCYAN	Calcium	1100	20.77	mg/kg	J	7/2/97
SJS04-SB02-002	MCYAN	Chromium	10.6	1.67	mg/kg		7/2/97
SJS04-SB02-002	MCYAN	Cobalt	4.2	1.91	mg/kg	J	7/2/97
SJS04-SB02-002	MCYAN	Copper	105	1.43	mg/kg		7/2/97
SJS04-SB02-002	MCYAN	Cyanide		0.67	mg/kg	U	7/2/97
SJS04-SB02-002	MCYAN	Iron	10800	4.06	mg/kg		7/2/97
SJS04-SB02-002	MCYAN	Lead	77	0.24	mg/kg	J	7/2/97
SJS04-SB02-002	MCYAN	Magnesium	478	43.2	mg/kg	J	7/2/97
SJS04-SB02-002	MCYAN	Manganese	72.8	0.48	mg/kg		7/2/97
SJS04-SB02-002	MCYAN	Mercury	0.62	0.07	mg/kg		6/30/97
SJS04-SB02-002	MCYAN	Nickel	12	1.67	mg/kg	B	7/2/97
SJS04-SB02-002	MCYAN	Potassium	912	52.99	mg/kg	J	7/2/97
SJS04-SB02-002	MCYAN	Selenium	2.6	0.72	mg/kg	K	7/2/97
SJS04-SB02-002	MCYAN	Silver	0.57	0.24	mg/kg	B	7/2/97
SJS04-SB02-002	MCYAN	Sodium	315	13.84	mg/kg	B	7/2/97
SJS04-SB02-002	MCYAN	Thallium	0.68	0.48	mg/kg	J	7/2/97
SJS04-SB02-002	MCYAN	Vanadium	28	2.15	mg/kg		7/2/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS04-SB02-002	MCYAN	Zinc	135	1.19	mg/kg	L	7/2/97
SJS04-SB02-002	PSPCB	4,4'-DDD	13	4.2	ug/kg	J	7/16/97
SJS04-SB02-002	PSPCB	4,4'-DDE	3.1		ug/kg	J	7/16/97
SJS04-SB02-002	PSPCB	4,4'-DDT		3.7	ug/kg	U	7/16/97
SJS04-SB02-002	PSPCB	Aldrin		1.9	ug/kg	U	7/16/97
SJS04-SB02-002	PSPCB	alpha-BHC		1.9	ug/kg	U	7/16/97
SJS04-SB02-002	PSPCB	alpha-Chlordane		1.9	ug/kg	U	7/16/97
SJS04-SB02-002	PSPCB	Aroclor-1016		37	ug/kg	U	7/16/97
SJS04-SB02-002	PSPCB	Aroclor-1221		76	ug/kg	U	7/16/97
SJS04-SB02-002	PSPCB	Aroclor-1232		37	ug/kg	U	7/16/97
SJS04-SB02-002	PSPCB	Aroclor-1242		37	ug/kg	U	7/16/97
SJS04-SB02-002	PSPCB	Aroclor-1248		37	ug/kg	U	7/16/97
SJS04-SB02-002	PSPCB	Aroclor-1254	42	37	ug/kg		7/16/97
SJS04-SB02-002	PSPCB	Aroclor-1260		37	ug/kg	U	7/16/97
SJS04-SB02-002	PSPCB	beta-BHC		1.9	ug/kg	U	7/16/97
SJS04-SB02-002	PSPCB	delta-BHC		1.9	ug/kg	U	7/16/97
SJS04-SB02-002	PSPCB	Dieldrin		3.7	ug/kg	U	7/16/97
SJS04-SB02-002	PSPCB	Endosulfan I		1.9	ug/kg	U	7/16/97
SJS04-SB02-002	PSPCB	Endosulfan II		3.7	ug/kg	U	7/16/97
SJS04-SB02-002	PSPCB	Endosulfan Sulfate		3.7	ug/kg	U	7/16/97
SJS04-SB02-002	PSPCB	Endrin		3.7	ug/kg	U	7/16/97
SJS04-SB02-002	PSPCB	Endrin Aldehyde		3.7	ug/kg	U	7/16/97
SJS04-SB02-002	PSPCB	Endrin Ketone		3.7	ug/kg	U	7/16/97
SJS04-SB02-002	PSPCB	gamma-BHC		1.9	ug/kg	U	7/16/97
SJS04-SB02-002	PSPCB	gamma-Chlordane		1.9	ug/kg	U	7/16/97
SJS04-SB02-002	PSPCB	Heptachlor		1.9	ug/kg	U	7/16/97
SJS04-SB02-002	PSPCB	Heptachlor Epoxide		1.9	ug/kg	U	7/16/97
SJS04-SB02-002	PSPCB	Methoxychlor		19	ug/kg	U	7/16/97
SJS04-SB02-002	PSPCB	Toxaphene		190	ug/kg	U	7/16/97
SJS04-SB02-002	SVTCL	1,2,4-Trichlorobenzene		7500	ug/kg	U	7/9/97
SJS04-SB02-002	SVTCL	1,2-Dichlorobenzene		7500	ug/kg	U	7/9/97
SJS04-SB02-002	SVTCL	1,3-Dichlorobenzene		7500	ug/kg	U	7/9/97
SJS04-SB02-002	SVTCL	1,4-Dichlorobenzene		7500	ug/kg	U	7/9/97
SJS04-SB02-002	SVTCL	2,2'-oxybis(1-Chloropropane		7500	ug/kg	U	7/9/97
SJS04-SB02-002	SVTCL	2,4,5-Trichlorophenol		19000	ug/kg	U	7/9/97
SJS04-SB02-002	SVTCL	2,4,6-Trichlorophenol		7500	ug/kg	U	7/9/97
SJS04-SB02-002	SVTCL	2,4-Dichlorophenol		7500	ug/kg	U	7/9/97
SJS04-SB02-002	SVTCL	2,4-Dimethylphenol		7500	ug/kg	U	7/9/97
SJS04-SB02-002	SVTCL	2,4-Dinitrophenol		19000	ug/kg	U	7/9/97
SJS04-SB02-002	SVTCL	2,4-Dinitrotoluene		7500	ug/kg	U	7/9/97
SJS04-SB02-002	SVTCL	2,6-Dinitrotoluene		7500	ug/kg	U	7/9/97
SJS04-SB02-002	SVTCL	2-Chlorongphthalene		7500	ug/kg	U	7/9/97
SJS04-SB02-002	SVTCL	2-Chlorophenol		7500	ug/kg	U	7/9/97
SJS04-SB02-002	SVTCL	2-Methylnaphthalene		7500	ug/kg	U	7/9/97
SJS04-SB02-002	SVTCL	2-Methylphenol		7500	ug/kg	U	7/9/97
SJS04-SB02-002	SVTCL	2-Nitroaniline		19000	ug/kg	U	7/9/97
SJS04-SB02-002	SVTCL	2-Nitrophenol		7500	ug/kg	U	7/9/97
SJS04-SB02-002	SVTCL	3,3'-Dichlorobenzidine		7500	ug/kg	U	7/9/97
SJS04-SB02-002	SVTCL	3-Nitroaniline		19000	ug/kg	U	7/9/97
SJS04-SB02-002	SVTCL	4,6-Dinitro-2-Methylphenol		19000	ug/kg	U	7/9/97
SJS04-SB02-002	SVTCL	4-Bromophenyl phenylether		7500	ug/kg	U	7/9/97
SJS04-SB02-002	SVTCL	4-Chloro-3-Methylphenol		7500	ug/kg	U	7/9/97
SJS04-SB02-002	SVTCL	4-Chloroaniline		7500	ug/kg	U	7/9/97
SJS04-SB02-002	SVTCL	4-Chlorophenyl-phenylether		7500	ug/kg	U	7/9/97
SJS04-SB02-002	SVTCL	4-Methylphenol		7500	ug/kg	U	7/9/97
SJS04-SB02-002	SVTCL	4-Nitroaniline		19000	ug/kg	U	7/9/97
SJS04-SB02-002	SVTCL	4-Nitrophenol		19000	ug/kg	U	7/9/97
SJS04-SB02-002	SVTCL	Acenaphthene		7500	ug/kg	U	7/9/97
SJS04-SB02-002	SVTCL	Acenaphthylene		7500	ug/kg	U	7/9/97
SJS04-SB02-002	SVTCL	Anthracene		7500	ug/kg	U	7/9/97
SJS04-SB02-002	SVTCL	Benzo(a)Anthracene		7500	ug/kg	U	7/9/97
SJS04-SB02-002	SVTCL	Benzo(a)Pyrene		7500	ug/kg	U	7/9/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS04-SB02-002	SVTCL	Benzo(b)Fluoranthene		7500	ug/kg	U	7/9/97
SJS04-SB02-002	SVTCL	Benzo(g,h,i)Perylene		7500	ug/kg	U	7/9/97
SJS04-SB02-002	SVTCL	Benzo(k)Fluoranthene		7500	ug/kg	U	7/9/97
SJS04-SB02-002	SVTCL	Bis(2-chloroethoxy)Methane		7500	ug/kg	U	7/9/97
SJS04-SB02-002	SVTCL	Bis(2-chloroethyl)Ether		7500	ug/kg	U	7/9/97
SJS04-SB02-002	SVTCL	Bis(2-Ethylhexyl)Phthalate		7500	ug/kg	U	7/9/97
SJS04-SB02-002	SVTCL	Butylbenzylphthalate		7500	ug/kg	U	7/9/97
SJS04-SB02-002	SVTCL	Carbazole		7500	ug/kg	U	7/9/97
SJS04-SB02-002	SVTCL	Chrysene		7500	ug/kg	U	7/9/97
SJS04-SB02-002	SVTCL	Di-n-Butylphthalate		7500	ug/kg	U	7/9/97
SJS04-SB02-002	SVTCL	Di-n-Octyl Phthalate		7500	ug/kg	U	7/9/97
SJS04-SB02-002	SVTCL	Dibenz(a,h)Anthracene		7500	ug/kg	U	7/9/97
SJS04-SB02-002	SVTCL	Dibenzofuran		7500	ug/kg	U	7/9/97
SJS04-SB02-002	SVTCL	Diethylphthalate		7500	ug/kg	U	7/9/97
SJS04-SB02-002	SVTCL	Dimethyl Phthalate		7500	ug/kg	U	7/9/97
SJS04-SB02-002	SVTCL	Fluoranthene		7500	ug/kg	U	7/9/97
SJS04-SB02-002	SVTCL	Fluorene		7500	ug/kg	U	7/9/97
SJS04-SB02-002	SVTCL	Hexachlorobenzene		7500	ug/kg	U	7/9/97
SJS04-SB02-002	SVTCL	Hexachlorobutadiene		7500	ug/kg	U	7/9/97
SJS04-SB02-002	SVTCL	Hexachlorocyclopentadien		7500	ug/kg	U	7/9/97
SJS04-SB02-002	SVTCL	Hexachloroethane		7500	ug/kg	U	7/9/97
SJS04-SB02-002	SVTCL	Indeno(1,2,3-cd)Pyrene		7500	ug/kg	U	7/9/97
SJS04-SB02-002	SVTCL	Isophorone		7500	ug/kg	U	7/9/97
SJS04-SB02-002	SVTCL	N-Nitroso-Di-n-Propylamine		7500	ug/kg	U	7/9/97
SJS04-SB02-002	SVTCL	N-Nitrosodiphenylamine		7500	ug/kg	U	7/9/97
SJS04-SB02-002	SVTCL	Naphthalene		7500	ug/kg	U	7/9/97
SJS04-SB02-002	SVTCL	Nitrobenzene		7500	ug/kg	U	7/9/97
SJS04-SB02-002	SVTCL	Pentachlorophenol		19000	ug/kg	U	7/9/97
SJS04-SB02-002	SVTCL	Phenanthrene		7500	ug/kg	U	7/9/97
SJS04-SB02-002	SVTCL	Phenol		7500	ug/kg	U	7/9/97
SJS04-SB02-002	SVTCL	Pyrene		7500	ug/kg	U	7/9/97
SJS04-SB02-002	VCTCL	1,1,1-Trichloroethane		14	ug/kg	UJ	7/1/97
SJS04-SB02-002	VCTCL	1,1,2,2-Tetrachloroethane		14	ug/kg	UJ	7/1/97
SJS04-SB02-002	VCTCL	1,1,2-Trichloroethane		14	ug/kg	UJ	7/1/97
SJS04-SB02-002	VCTCL	1,1-Dichloroethane		14	ug/kg	U	7/1/97
SJS04-SB02-002	VCTCL	1,1-Dichloroethene		14	ug/kg	U	7/1/97
SJS04-SB02-002	VCTCL	1,2-Dichloroethane		14	ug/kg	U	7/1/97
SJS04-SB02-002	VCTCL	1,2-Dichloroethene (total)		14	ug/kg	U	7/1/97
SJS04-SB02-002	VCTCL	1,2-Dichloropropane		14	ug/kg	UJ	7/1/97
SJS04-SB02-002	VCTCL	2-Butanone		14	ug/kg	U	7/1/97
SJS04-SB02-002	VCTCL	2-Hexanone		14	ug/kg	UJ	7/1/97
SJS04-SB02-002	VCTCL	4-Methyl-2-Pentanone		14	ug/kg	UJ	7/1/97
SJS04-SB02-002	VCTCL	Acetone	85	14	ug/kg	B	7/1/97
SJS04-SB02-002	VCTCL	Benzene		14	ug/kg	UJ	7/1/97
SJS04-SB02-002	VCTCL	Bromodichloromethane		14	ug/kg	UJ	7/1/97
SJS04-SB02-002	VCTCL	Bromoform		14	ug/kg	UJ	7/1/97
SJS04-SB02-002	VCTCL	Bromomethane		14	ug/kg	U	7/1/97
SJS04-SB02-002	VCTCL	Carbon Disulfide		14	ug/kg	U	7/1/97
SJS04-SB02-002	VCTCL	Carbon Tetrachloride		14	ug/kg	UJ	7/1/97
SJS04-SB02-002	VCTCL	Chlorobenzene		14	ug/kg	UJ	7/1/97
SJS04-SB02-002	VCTCL	Chloroethane		14	ug/kg	U	7/1/97
SJS04-SB02-002	VCTCL	Chloroform		14	ug/kg	U	7/1/97
SJS04-SB02-002	VCTCL	Chloromethane		14	ug/kg	U	7/1/97
SJS04-SB02-002	VCTCL	cis-1,3-Dichloropropene		14	ug/kg	UJ	7/1/97
SJS04-SB02-002	VCTCL	Dibromochloromethane		14	ug/kg	UJ	7/1/97
SJS04-SB02-002	VCTCL	Ethylbenzene		14	ug/kg	UJ	7/1/97
SJS04-SB02-002	VCTCL	Methylene Chloride	120	14	ug/kg	B	7/1/97
SJS04-SB02-002	VCTCL	Styrene		14	ug/kg	UJ	7/1/97
SJS04-SB02-002	VCTCL	Tetrachloroethene	3	14	ug/kg	J	7/1/97
SJS04-SB02-002	VCTCL	Toluene		14	ug/kg	UJ	7/1/97
SJS04-SB02-002	VCTCL	Total Xylenes		14	ug/kg	UJ	7/1/97
SJS04-SB02-002	VCTCL	Trans-1,3-Dichloropropene		14	ug/kg	UJ	7/1/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS04-SB02-002	VCTCL	Trichloroethene		14	ug/kg	UJ	7/1/97
SJS04-SB02-002	VCTCL	Vinyl Chloride		14	ug/kg	U	7/1/97
SJS04-SB03-002	CTOTP	Total Phosphorous (as P)	11.2	1.6	mg/kg		7/15/97
SJS04-SB03-002	MCYAN	Aluminum	14900	10.33	mg/kg		7/2/97
SJS04-SB03-002	MCYAN	Arsenic	7.9	0.7	mg/kg	L	7/2/97
SJS04-SB03-002	MCYAN	Barium	61.9	0.47	mg/kg		7/2/97
SJS04-SB03-002	MCYAN	Beryllium	1.7	0.23	mg/kg		7/2/97
SJS04-SB03-002	MCYAN	Cadmium		0.12	mg/kg	U	7/7/97
SJS04-SB03-002	MCYAN	Calcium	21000	20.42	mg/kg		7/2/97
SJS04-SB03-002	MCYAN	Chromium	24.6	1.64	mg/kg		7/2/97
SJS04-SB03-002	MCYAN	Cobalt	13.9	1.88	mg/kg		7/2/97
SJS04-SB03-002	MCYAN	Copper	23.8	1.41	mg/kg		7/2/97
SJS04-SB03-002	MCYAN	Cyanide		0.65	mg/kg	U	7/2/97
SJS04-SB03-002	MCYAN	Iron	23200	3.99	mg/kg		7/2/97
SJS04-SB03-002	MCYAN	Lead	27.2	0.23	mg/kg	J	7/2/97
SJS04-SB03-002	MCYAN	Magnesium	2750	42.49	mg/kg		7/2/97
SJS04-SB03-002	MCYAN	Manganese	252	0.47	mg/kg		7/2/97
SJS04-SB03-002	MCYAN	Mercury	0.56	0.06	mg/kg		6/30/97
SJS04-SB03-002	MCYAN	Nickel	22.3	1.64	mg/kg		7/2/97
SJS04-SB03-002	MCYAN	Potassium	1770	52.11	mg/kg		7/2/97
SJS04-SB03-002	MCYAN	Selenium	0.7	0.7	mg/kg	UL	7/2/97
SJS04-SB03-002	MCYAN	Silver	1.2	0.23	mg/kg	B	7/2/97
SJS04-SB03-002	MCYAN	Sodium	704	13.61	mg/kg	B	7/2/97
SJS04-SB03-002	MCYAN	Thallium	2	0.47	mg/kg	J	7/2/97
SJS04-SB03-002	MCYAN	Vanadium	26.9	2.11	mg/kg		7/2/97
SJS04-SB03-002	MCYAN	Zinc	131	1.17	mg/kg	L	7/2/97
SJS04-SB03-002	PSPCB	4,4'-DDD	1.8	4.2	ug/kg	J	7/16/97
SJS04-SB03-002	PSPCB	4,4'-DDE	32	4.2	ug/kg		7/16/97
SJS04-SB03-002	PSPCB	4,4'-DDT	4.9	4.2	ug/kg	J	7/16/97
SJS04-SB03-002	PSPCB	Aldrin		1.9	ug/kg	U	7/16/97
SJS04-SB03-002	PSPCB	alpha-BHC		1.9	ug/kg	U	7/16/97
SJS04-SB03-002	PSPCB	alpha-Chlordane		1.9	ug/kg	U	7/16/97
SJS04-SB03-002	PSPCB	Aroclor-1016		37	ug/kg	U	7/16/97
SJS04-SB03-002	PSPCB	Aroclor-1221		75	ug/kg	U	7/16/97
SJS04-SB03-002	PSPCB	Aroclor-1232		37	ug/kg	U	7/16/97
SJS04-SB03-002	PSPCB	Aroclor-1242		37	ug/kg	U	7/16/97
SJS04-SB03-002	PSPCB	Aroclor-1248		37	ug/kg	U	7/16/97
SJS04-SB03-002	PSPCB	Aroclor-1254		37	ug/kg	U	7/16/97
SJS04-SB03-002	PSPCB	Aroclor-1260		37	ug/kg	U	7/16/97
SJS04-SB03-002	PSPCB	beta-BHC		1.9	ug/kg	U	7/16/97
SJS04-SB03-002	PSPCB	delta-BHC		1.9	ug/kg	U	7/16/97
SJS04-SB03-002	PSPCB	Dieldrin		3.7	ug/kg	U	7/16/97
SJS04-SB03-002	PSPCB	Endosulfan I		1.9	ug/kg	U	7/16/97
SJS04-SB03-002	PSPCB	Endosulfan II		3.7	ug/kg	U	7/16/97
SJS04-SB03-002	PSPCB	Endosulfan Sulfate		3.7	ug/kg	U	7/16/97
SJS04-SB03-002	PSPCB	Endrin		3.7	ug/kg	U	7/16/97
SJS04-SB03-002	PSPCB	Endrin Aldehyde		3.7	ug/kg	U	7/16/97
SJS04-SB03-002	PSPCB	Endrin Ketone		3.7	ug/kg	U	7/16/97
SJS04-SB03-002	PSPCB	gamma-BHC		1.9	ug/kg	U	7/16/97
SJS04-SB03-002	PSPCB	gamma-Chlordane		1.9	ug/kg	U	7/16/97
SJS04-SB03-002	PSPCB	Heptachlor		1.9	ug/kg	U	7/16/97
SJS04-SB03-002	PSPCB	Heptachlor Epoxide		1.9	ug/kg	U	7/16/97
SJS04-SB03-002	PSPCB	Methoxychlor		19	ug/kg	U	7/16/97
SJS04-SB03-002	PSPCB	Toxaphene		190	ug/kg	U	7/16/97
SJS04-SB03-002	SVTCL	1,2,4-Trichlorobenzene		400	ug/kg	U	7/9/97
SJS04-SB03-002	SVTCL	1,2-Dichlorobenzene		400	ug/kg	U	7/9/97
SJS04-SB03-002	SVTCL	1,3-Dichlorobenzene		400	ug/kg	U	7/9/97
SJS04-SB03-002	SVTCL	1,4-Dichlorobenzene		400	ug/kg	U	7/9/97
SJS04-SB03-002	SVTCL	2,2'-oxybis(1-Chloropropane		400	ug/kg	U	7/9/97
SJS04-SB03-002	SVTCL	2,4,5-Trichlorophenol		1000	ug/kg	U	7/9/97
SJS04-SB03-002	SVTCL	2,4,6-Trichlorophenol		400	ug/kg	U	7/9/97
SJS04-SB03-002	SVTCL	2,4-Dichlorophenol		400	ug/kg	U	7/9/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS04-SB03-002	SVTCL	2,4-Dimethylphenol		400	ug/kg	U	7/9/97
SJS04-SB03-002	SVTCL	2,4-Dinitrophenol		1000	ug/kg	U	7/9/97
SJS04-SB03-002	SVTCL	2,4-Dinitrotoluene		400	ug/kg	U	7/9/97
SJS04-SB03-002	SVTCL	2,6-Dinitrotoluene		400	ug/kg	U	7/9/97
SJS04-SB03-002	SVTCL	2-Chloronaphthalene		400	ug/kg	U	7/9/97
SJS04-SB03-002	SVTCL	2-Chlorophenol		400	ug/kg	U	7/9/97
SJS04-SB03-002	SVTCL	2-Methylnaphthalene		400	ug/kg	U	7/9/97
SJS04-SB03-002	SVTCL	2-Methylphenol		400	ug/kg	U	7/9/97
SJS04-SB03-002	SVTCL	2-Nitroaniline		1000	ug/kg	U	7/9/97
SJS04-SB03-002	SVTCL	2-Nitrophenol		400	ug/kg	U	7/9/97
SJS04-SB03-002	SVTCL	3,3'-Dichlorobenzidine		400	ug/kg	U	7/9/97
SJS04-SB03-002	SVTCL	3-Nitroaniline		1000	ug/kg	U	7/9/97
SJS04-SB03-002	SVTCL	4,6-Dinitro-2-Methylphenol		1000	ug/kg	U	7/9/97
SJS04-SB03-002	SVTCL	4-Bromophenyl phenylether		400	ug/kg	U	7/9/97
SJS04-SB03-002	SVTCL	4-Chloro-3-Methylphenol		400	ug/kg	U	7/9/97
SJS04-SB03-002	SVTCL	4-Chloroaniline		400	ug/kg	U	7/9/97
SJS04-SB03-002	SVTCL	4-Chlorophenyl-phenylether		400	ug/kg	U	7/9/97
SJS04-SB03-002	SVTCL	4-Methylphenol		400	ug/kg	U	7/9/97
SJS04-SB03-002	SVTCL	4-Nitroaniline		1000	ug/kg	U	7/9/97
SJS04-SB03-002	SVTCL	4-Nitrophenol		1000	ug/kg	U	7/9/97
SJS04-SB03-002	SVTCL	Acenaphthene		400	ug/kg	U	7/9/97
SJS04-SB03-002	SVTCL	Acenaphthylene		400	ug/kg	U	7/9/97
SJS04-SB03-002	SVTCL	Anthracene		400	ug/kg	U	7/9/97
SJS04-SB03-002	SVTCL	Benzo(a)Anthracene	100	400	ug/kg	J	7/9/97
SJS04-SB03-002	SVTCL	Benzo(a)Pyrene	100	400	ug/kg	J	7/9/97
SJS04-SB03-002	SVTCL	Benzo(b)Fluoranthene	240	400	ug/kg	J	7/9/97
SJS04-SB03-002	SVTCL	Benzo(g,h,i)Perylene	73	400	ug/kg	J	7/9/97
SJS04-SB03-002	SVTCL	Benzo(k)Fluoranthene	81	400	ug/kg	J	7/9/97
SJS04-SB03-002	SVTCL	Bis(2-chloroethoxy)Methane		400	ug/kg	U	7/9/97
SJS04-SB03-002	SVTCL	Bis(2-chloroethyl)Ether		400	ug/kg	U	7/9/97
SJS04-SB03-002	SVTCL	Bis(2-Ethylhexyl)Phthalate	94	320	ug/kg	B	7/9/97
SJS04-SB03-002	SVTCL	Butylbenzylphthalate		400	ug/kg	U	7/9/97
SJS04-SB03-002	SVTCL	Carbazole		400	ug/kg	U	7/9/97
SJS04-SB03-002	SVTCL	Chrysene	160	400	ug/kg	J	7/9/97
SJS04-SB03-002	SVTCL	Di-n-Butylphthalate		400	ug/kg	U	7/9/97
SJS04-SB03-002	SVTCL	Di-n-Octyl Phthalate		400	ug/kg	U	7/9/97
SJS04-SB03-002	SVTCL	Dibenz(a,h)Anthracene		400	ug/kg	U	7/9/97
SJS04-SB03-002	SVTCL	Dibenzofuran		400	ug/kg	U	7/9/97
SJS04-SB03-002	SVTCL	Diethylphthalate		400	ug/kg	U	7/9/97
SJS04-SB03-002	SVTCL	Dimethyl Phthalate		400	ug/kg	U	7/9/97
SJS04-SB03-002	SVTCL	Fluoranthene	87	400	ug/kg	J	7/9/97
SJS04-SB03-002	SVTCL	Fluorene		400	ug/kg	U	7/9/97
SJS04-SB03-002	SVTCL	Hexachlorobenzene		400	ug/kg	U	7/9/97
SJS04-SB03-002	SVTCL	Hexachlorobutadiene		400	ug/kg	U	7/9/97
SJS04-SB03-002	SVTCL	Hexachlorocyclopentadien		400	ug/kg	U	7/9/97
SJS04-SB03-002	SVTCL	Hexachloroethane		400	ug/kg	U	7/9/97
SJS04-SB03-002	SVTCL	Indeno(1,2,3-cd)Pyrene	78	400	ug/kg	J	7/9/97
SJS04-SB03-002	SVTCL	Isophorone		400	ug/kg	U	7/9/97
SJS04-SB03-002	SVTCL	N-Nitroso-Di-n-Propylamine		400	ug/kg	U	7/9/97
SJS04-SB03-002	SVTCL	N-Nitrosodiphenylamine		400	ug/kg	U	7/9/97
SJS04-SB03-002	SVTCL	Naphthalene		400	ug/kg	U	7/9/97
SJS04-SB03-002	SVTCL	Nitrobenzene		400	ug/kg	U	7/9/97
SJS04-SB03-002	SVTCL	Pentachlorophenol		1000	ug/kg	U	7/9/97
SJS04-SB03-002	SVTCL	Phenanthrene		400	ug/kg	U	7/9/97
SJS04-SB03-002	SVTCL	Phenol		400	ug/kg	U	7/9/97
SJS04-SB03-002	SVTCL	Pyrene	84	400	ug/kg	J	7/9/97
SJS04-SB03-002	VCTCL	1,1,1-Trichloroethane		12	ug/kg	U	7/1/97
SJS04-SB03-002	VCTCL	1,1,2,2-Tetrachloroethane		12	ug/kg	U	7/1/97
SJS04-SB03-002	VCTCL	1,1,2-Trichloroethane		12	ug/kg	U	7/1/97
SJS04-SB03-002	VCTCL	1,1-Dichloroethane		12	ug/kg	U	7/1/97
SJS04-SB03-002	VCTCL	1,1-Dichloroethene		12	ug/kg	U	7/1/97
SJS04-SB03-002	VCTCL	1,2-Dichloroethane		12	ug/kg	U	7/1/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS04-SB03-002	VCTCL	1,2-Dichloroethene (total)		12	ug/kg	U	7/1/97
SJS04-SB03-002	VCTCL	1,2-Dichloropropane		12	ug/kg	U	7/1/97
SJS04-SB03-002	VCTCL	2-Butanone		12	ug/kg	U	7/1/97
SJS04-SB03-002	VCTCL	2-Hexanone		12	ug/kg	U	7/1/97
SJS04-SB03-002	VCTCL	4-Methyl-2-Pentanone		12	ug/kg	U	7/1/97
SJS04-SB03-002	VCTCL	Acetone	86	13	ug/kg	B	7/1/97
SJS04-SB03-002	VCTCL	Benzene		12	ug/kg	U	7/1/97
SJS04-SB03-002	VCTCL	Bromodichloromethane		12	ug/kg	U	7/1/97
SJS04-SB03-002	VCTCL	Bromoform		12	ug/kg	U	7/1/97
SJS04-SB03-002	VCTCL	Bromomethane		12	ug/kg	U	7/1/97
SJS04-SB03-002	VCTCL	Carbon Disulfide		12	ug/kg	U	7/1/97
SJS04-SB03-002	VCTCL	Carbon Tetrachloride		12	ug/kg	U	7/1/97
SJS04-SB03-002	VCTCL	Chlorobenzene		12	ug/kg	U	7/1/97
SJS04-SB03-002	VCTCL	Chloroethane		12	ug/kg	U	7/1/97
SJS04-SB03-002	VCTCL	Chloroform		12	ug/kg	U	7/1/97
SJS04-SB03-002	VCTCL	Chloromethane		12	ug/kg	U	7/1/97
SJS04-SB03-002	VCTCL	cis-1,3-Dichloropropene		12	ug/kg	U	7/1/97
SJS04-SB03-002	VCTCL	Dibromochloromethane		12	ug/kg	U	7/1/97
SJS04-SB03-002	VCTCL	Ethylbenzene		12	ug/kg	U	7/1/97
SJS04-SB03-002	VCTCL	Methylene Chloride	110	13	ug/kg	B	7/1/97
SJS04-SB03-002	VCTCL	Styrene		12	ug/kg	U	7/1/97
SJS04-SB03-002	VCTCL	Tetrachloroethene	2	13	ug/kg	J	7/1/97
SJS04-SB03-002	VCTCL	Toluene		12	ug/kg	U	7/1/97
SJS04-SB03-002	VCTCL	Total Xylenes		12	ug/kg	U	7/1/97
SJS04-SB03-002	VCTCL	Trans-1,3-Dichloropropene		12	ug/kg	U	7/1/97
SJS04-SB03-002	VCTCL	Trichloroethene		12	ug/kg	U	7/1/97
SJS04-SB03-002	VCTCL	Vinyl Chloride		12	ug/kg	U	7/1/97
SJS04-SD01-000	CTOTC	Total Organic Carbon	26600	65.8	mg/kg		7/30/97
SJS04-SD01-000	CTOTP	Total Phosphorous (as P)	5.1	1.6	mg/kg		7/29/97
SJS04-SD01-000	MCYAN	Aluminum	20300	10.92	mg/kg		7/25/97
SJS04-SD01-000	MCYAN	Antimony	1	0.5	mg/kg	B	7/25/97
SJS04-SD01-000	MCYAN	Arsenic	3.9	0.74	mg/kg		7/25/97
SJS04-SD01-000	MCYAN	Barium	57.7	0.5	mg/kg		7/25/97
SJS04-SD01-000	MCYAN	Beryllium	3.9	0.25	mg/kg		7/25/97
SJS04-SD01-000	MCYAN	Cadmium		0.12	mg/kg	U	7/25/97
SJS04-SD01-000	MCYAN	Calcium	1500	21.6	mg/kg		7/25/97
SJS04-SD01-000	MCYAN	Chromium	21.5	1.74	mg/kg		7/25/97
SJS04-SD01-000	MCYAN	Cobalt	10.6	1.99	mg/kg	J	7/25/97
SJS04-SD01-000	MCYAN	Copper	71.1	1.49	mg/kg		7/25/97
SJS04-SD01-000	MCYAN	Cyanide		0.65	mg/kg	U	7/22/97
SJS04-SD01-000	MCYAN	Iron	56000	4.22	mg/kg		7/25/97
SJS04-SD01-000	MCYAN	Lead	92.5	0.25	mg/kg		7/25/97
SJS04-SD01-000	MCYAN	Magnesium	1650	44.94	mg/kg		7/25/97
SJS04-SD01-000	MCYAN	Manganese	178	0.5	mg/kg	K	7/25/97
SJS04-SD01-000	MCYAN	Mercury	0.65	0.07	mg/kg		8/1/97
SJS04-SD01-000	MCYAN	Nickel	20.2	1.74	mg/kg		7/25/97
SJS04-SD01-000	MCYAN	Potassium	1400	55.11	mg/kg		7/25/97
SJS04-SD01-000	MCYAN	Selenium		0.74	mg/kg	UL	7/28/97
SJS04-SD01-000	MCYAN	Silver	0.44	0.25	mg/kg	J	7/25/97
SJS04-SD01-000	MCYAN	Sodium	251	14.4	mg/kg	J	7/25/97
SJS04-SD01-000	MCYAN	Thallium		0.5	mg/kg	U	7/25/97
SJS04-SD01-000	MCYAN	Vanadium	32.1	2.23	mg/kg		7/25/97
SJS04-SD01-000	MCYAN	Zinc	270	1.24	mg/kg		7/25/97
SJS04-SD01-000	PSPCB	4,4'-DDD	220	42	ug/kg		8/6/97
SJS04-SD01-000	PSPCB	4,4'-DDE	31	4.2	ug/kg		8/5/97
SJS04-SD01-000	PSPCB	4,4'-DDT	38	4.2	ug/kg	J	8/5/97
SJS04-SD01-000	PSPCB	Aldrin		2.2	ug/kg	U	8/5/97
SJS04-SD01-000	PSPCB	alpha-BHC		2.2	ug/kg	U	8/5/97
SJS04-SD01-000	PSPCB	alpha-Chlordane		2.2	ug/kg	U	8/5/97
SJS04-SD01-000	PSPCB	Aroclor-1016		42	ug/kg	U	8/5/97
SJS04-SD01-000	PSPCB	Aroclor-1221		85	ug/kg	U	8/5/97
SJS04-SD01-000	PSPCB	Aroclor-1232		42	ug/kg	U	8/5/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS04-SD01-000	PSPCB	Aroclor-1242		42	ug/kg	U	8/5/97
SJS04-SD01-000	PSPCB	Aroclor-1248		42	ug/kg	U	8/5/97
SJS04-SD01-000	PSPCB	Aroclor-1254		42	ug/kg	U	8/5/97
SJS04-SD01-000	PSPCB	Aroclor-1260	32	42	ug/kg	J	8/5/97
SJS04-SD01-000	PSPCB	beta-BHC		2.2	ug/kg	U	8/5/97
SJS04-SD01-000	PSPCB	delta-BHC		2.2	ug/kg	U	8/5/97
SJS04-SD01-000	PSPCB	Dieldrin		4.2	ug/kg	U	8/5/97
SJS04-SD01-000	PSPCB	Endosulfan I		2.2	ug/kg	U	8/5/97
SJS04-SD01-000	PSPCB	Endosulfan II		4.2	ug/kg	U	8/5/97
SJS04-SD01-000	PSPCB	Endosulfan Sulfate		4.2	ug/kg	U	8/5/97
SJS04-SD01-000	PSPCB	Endrin		4.2	ug/kg	U	8/5/97
SJS04-SD01-000	PSPCB	Endrin Aldehyde		4.2	ug/kg	U	8/5/97
SJS04-SD01-000	PSPCB	Endrin Ketone		4.2	ug/kg	U	8/5/97
SJS04-SD01-000	PSPCB	gamma-BHC		2.2	ug/kg	U	8/5/97
SJS04-SD01-000	PSPCB	gamma-Chlordane		2.2	ug/kg	U	8/5/97
SJS04-SD01-000	PSPCB	Heptachlor		2.2	ug/kg	U	8/5/97
SJS04-SD01-000	PSPCB	Heptachlor Epoxide		2.2	ug/kg	U	8/5/97
SJS04-SD01-000	PSPCB	Methoxychlor		22	ug/kg	U	8/5/97
SJS04-SD01-000	PSPCB	Toxaphene		220	ug/kg	U	8/5/97
SJS04-SD01-000	SVTCL	1,2,4-Trichlorobenzene		420	ug/kg	U	8/10/97
SJS04-SD01-000	SVTCL	1,2-Dichlorobenzene		420	ug/kg	U	8/10/97
SJS04-SD01-000	SVTCL	1,3-Dichlorobenzene		420	ug/kg	U	8/10/97
SJS04-SD01-000	SVTCL	1,4-Dichlorobenzene		420	ug/kg	U	8/10/97
SJS04-SD01-000	SVTCL	2,2'-oxybis(1-Chloropropane		420	ug/kg	U	8/10/97
SJS04-SD01-000	SVTCL	2,4,5-Trichlorophenol		1000	ug/kg	U	8/10/97
SJS04-SD01-000	SVTCL	2,4,6-Trichlorophenol		420	ug/kg	U	8/10/97
SJS04-SD01-000	SVTCL	2,4-Dichlorophenol		420	ug/kg	U	8/10/97
SJS04-SD01-000	SVTCL	2,4-Dimethylphenol		420	ug/kg	U	8/10/97
SJS04-SD01-000	SVTCL	2,4-Dinitrophenol		1000	ug/kg	U	8/10/97
SJS04-SD01-000	SVTCL	2,4-Dinitrotoluene		420	ug/kg	U	8/10/97
SJS04-SD01-000	SVTCL	2,6-Dinitrotoluene		420	ug/kg	U	8/10/97
SJS04-SD01-000	SVTCL	2-Chloronaphthalene		420	ug/kg	U	8/10/97
SJS04-SD01-000	SVTCL	2-Chlorophenol		420	ug/kg	U	8/10/97
SJS04-SD01-000	SVTCL	2-Methylnaphthalene	48	420	ug/kg	J	8/10/97
SJS04-SD01-000	SVTCL	2-Methylphenol		420	ug/kg	U	8/10/97
SJS04-SD01-000	SVTCL	2-Nitroaniline		1000	ug/kg	U	8/10/97
SJS04-SD01-000	SVTCL	2-Nitrophenol		420	ug/kg	U	8/10/97
SJS04-SD01-000	SVTCL	3,3'-Dichlorobenzidine		420	ug/kg	UJ	8/10/97
SJS04-SD01-000	SVTCL	3-Nitroaniline		1000	ug/kg	U	8/10/97
SJS04-SD01-000	SVTCL	4,6-Dinitro-2-Methylphenol		1000	ug/kg	U	8/10/97
SJS04-SD01-000	SVTCL	4-Bromophenyl phenylether		420	ug/kg	U	8/10/97
SJS04-SD01-000	SVTCL	4-Chloro-3-Methylphenol		420	ug/kg	U	8/10/97
SJS04-SD01-000	SVTCL	4-Chloroaniline		420	ug/kg	U	8/10/97
SJS04-SD01-000	SVTCL	4-Chlorophenyl-phenylether		420	ug/kg	U	8/10/97
SJS04-SD01-000	SVTCL	4-Methylphenol		420	ug/kg	U	8/10/97
SJS04-SD01-000	SVTCL	4-Nitroaniline		1000	ug/kg	U	8/10/97
SJS04-SD01-000	SVTCL	4-Nitrophenol		1000	ug/kg	U	8/10/97
SJS04-SD01-000	SVTCL	Acenaphthene		420	ug/kg	U	8/10/97
SJS04-SD01-000	SVTCL	Acenaphthylene	53	420	ug/kg	J	8/10/97
SJS04-SD01-000	SVTCL	Anthracene	57	420	ug/kg	J	8/10/97
SJS04-SD01-000	SVTCL	Benzo(a)Anthracene	270	420	ug/kg	J	8/10/97
SJS04-SD01-000	SVTCL	Benzo(a)Pyrene	250	420	ug/kg	J	8/10/97
SJS04-SD01-000	SVTCL	Benzo(b)Fluoranthene	780	420	ug/kg		8/10/97
SJS04-SD01-000	SVTCL	Benzo(g,h,i)Perylene	110	420	ug/kg	J	8/10/97
SJS04-SD01-000	SVTCL	Benzo(k)fluoranthene	320	420	ug/kg	J	8/10/97
SJS04-SD01-000	SVTCL	Bis(2-chloroethoxy)Methane		420	ug/kg	U	8/10/97
SJS04-SD01-000	SVTCL	Bis(2-chloroethyl)Ether		420	ug/kg	U	8/10/97
SJS04-SD01-000	SVTCL	Bis(2-Ethylhexyl)Phthalate	63	160	ug/kg	B	8/10/97
SJS04-SD01-000	SVTCL	Butylbenzylphthalate		420	ug/kg	U	8/10/97
SJS04-SD01-000	SVTCL	Carbazole		420	ug/kg	U	8/10/97
SJS04-SD01-000	SVTCL	Chrysene	440	420	ug/kg		8/10/97
SJS04-SD01-000	SVTCL	Di-n-Butylphthalate	58	420	ug/kg	J	8/10/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS04-SD01-000	SVTCL	Di-n-Octyl Phthalate		420	ug/kg	U	8/10/97
SJS04-SD01-000	SVTCL	Dibenz(a,h)Anthracene		420	ug/kg	U	8/10/97
SJS04-SD01-000	SVTCL	Dibenzofuran		420	ug/kg	U	8/10/97
SJS04-SD01-000	SVTCL	Diethylphthalate		420	ug/kg	U	8/10/97
SJS04-SD01-000	SVTCL	Dimethyl Phthalate		420	ug/kg	U	8/10/97
SJS04-SD01-000	SVTCL	Fluoranthene	320	420	ug/kg	J	8/10/97
SJS04-SD01-000	SVTCL	Fluorene		420	ug/kg	U	8/10/97
SJS04-SD01-000	SVTCL	Hexachlorobenzene		420	ug/kg	U	8/10/97
SJS04-SD01-000	SVTCL	Hexachlorobutadiene		420	ug/kg	U	8/10/97
SJS04-SD01-000	SVTCL	Hexachlorocyclopentadien		420	ug/kg	U	8/10/97
SJS04-SD01-000	SVTCL	Hexachloroethane		420	ug/kg	U	8/10/97
SJS04-SD01-000	SVTCL	Indeno(1,2,3-cd)Pyrene	170	420	ug/kg	J	8/10/97
SJS04-SD01-000	SVTCL	Isophorone		420	ug/kg	U	8/10/97
SJS04-SD01-000	SVTCL	N-Nitroso-Di-n-Propylamine		420	ug/kg	U	8/10/97
SJS04-SD01-000	SVTCL	N-Nitrosodiphenylamine		420	ug/kg	U	8/10/97
SJS04-SD01-000	SVTCL	Naphthalene	58	420	ug/kg	J	8/10/97
SJS04-SD01-000	SVTCL	Nitrobenzene		420	ug/kg	U	8/10/97
SJS04-SD01-000	SVTCL	Pentachlorophenol		1000	ug/kg	U	8/10/97
SJS04-SD01-000	SVTCL	Phenanthrene	140	420	ug/kg	J	8/10/97
SJS04-SD01-000	SVTCL	Phenol		420	ug/kg	U	8/10/97
SJS04-SD01-000	SVTCL	Pyrene	270	420	ug/kg	J	8/10/97
SJS04-SD01-000	VCTCL	1,1,1-Trichloroethane		13	ug/kg	UJ	7/26/97
SJS04-SD01-000	VCTCL	1,1,2,2-Tetrachloroethane		13	ug/kg	UJ	7/26/97
SJS04-SD01-000	VCTCL	1,1,2-Trichloroethane		13	ug/kg	UJ	7/26/97
SJS04-SD01-000	VCTCL	1,1-Dichloroethane		13	ug/kg	UJ	7/26/97
SJS04-SD01-000	VCTCL	1,1-Dichloroethene		13	ug/kg	UJ	7/26/97
SJS04-SD01-000	VCTCL	1,2-Dichloroethane		13	ug/kg	UJ	7/26/97
SJS04-SD01-000	VCTCL	1,2-Dichloroethene (total)		13	ug/kg	UJ	7/26/97
SJS04-SD01-000	VCTCL	1,2-Dichloropropane		13	ug/kg	UJ	7/26/97
SJS04-SD01-000	VCTCL	2-Butanone		13	ug/kg	UJ	7/26/97
SJS04-SD01-000	VCTCL	2-Hexanone		13	ug/kg	UJ	7/26/97
SJS04-SD01-000	VCTCL	4-Methyl-2-Pentanone		13	ug/kg	UJ	7/26/97
SJS04-SD01-000	VCTCL	Acetone		13	ug/kg	UJ	7/26/97
SJS04-SD01-000	VCTCL	Benzene		13	ug/kg	UJ	7/26/97
SJS04-SD01-000	VCTCL	Bromodichloromethane		13	ug/kg	UJ	7/26/97
SJS04-SD01-000	VCTCL	Bromoform		13	ug/kg	UJ	7/26/97
SJS04-SD01-000	VCTCL	Bromomethane		13	ug/kg	UJ	7/26/97
SJS04-SD01-000	VCTCL	Carbon Disulfide		13	ug/kg	UJ	7/26/97
SJS04-SD01-000	VCTCL	Carbon Tetrachloride		13	ug/kg	UJ	7/26/97
SJS04-SD01-000	VCTCL	Chlorobenzene		13	ug/kg	UJ	7/26/97
SJS04-SD01-000	VCTCL	Chloroethane		13	ug/kg	UJ	7/26/97
SJS04-SD01-000	VCTCL	Chloroform		13	ug/kg	UJ	7/26/97
SJS04-SD01-000	VCTCL	Chloromethane		13	ug/kg	UJ	7/26/97
SJS04-SD01-000	VCTCL	cis-1,3-Dichloropropene		13	ug/kg	UJ	7/26/97
SJS04-SD01-000	VCTCL	Dibromochloromethane		13	ug/kg	UJ	7/26/97
SJS04-SD01-000	VCTCL	Ethylbenzene		13	ug/kg	UJ	7/26/97
SJS04-SD01-000	VCTCL	Methylene Chloride	57	13	ug/kg	B	7/26/97
SJS04-SD01-000	VCTCL	Styrene		13	ug/kg	UJ	7/26/97
SJS04-SD01-000	VCTCL	Tetrachloroethene		13	ug/kg	UJ	7/26/97
SJS04-SD01-000	VCTCL	Toluene		13	ug/kg	UJ	7/26/97
SJS04-SD01-000	VCTCL	Total Xylenes		13	ug/kg	UJ	7/26/97
SJS04-SD01-000	VCTCL	Trans-1,3-Dichloropropene		13	ug/kg	UJ	7/26/97
SJS04-SD01-000	VCTCL	Trichloroethene		13	ug/kg	UJ	7/26/97
SJS04-SD01-000	VCTCL	Vinyl Chloride		13	ug/kg	UJ	7/26/97
SJS04-SD02-000	CTOTC	Total Organic Carbon	28400	64.2	mg/kg	L	7/16/97
SJS04-SD02-000	CTOTP	Total Phosphorous (as P)	4.8	1.6	mg/kg		7/18/97
SJS04-SD02-000	MCYAN	Aluminum	7350	8.76	mg/kg		7/11/97
SJS04-SD02-000	MCYAN	Antimony	2.1	0.4	mg/kg	L	7/16/97
SJS04-SD02-000	MCYAN	Arsenic	9.7	0.6	mg/kg		7/16/97
SJS04-SD02-000	MCYAN	Barium	63.2	0.4	mg/kg		7/11/97
SJS04-SD02-000	MCYAN	Beryllium	0.5	0.2	mg/kg	J	7/11/97
SJS04-SD02-000	MCYAN	Cadmium	0.26	0.1	mg/kg	J	7/16/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS04-SD02-000	IMCYAN	Calcium	8790	17.31	mg/kg	J	7/11/97
SJS04-SD02-000	IMCYAN	Chromium	21.3	1.39	mg/kg		7/11/97
SJS04-SD02-000	IMCYAN	Cobalt	6.3	1.59	mg/kg	J	7/11/97
SJS04-SD02-000	IMCYAN	Copper	191	1.19	mg/kg		7/11/97
SJS04-SD02-000	IMCYAN	Cyanide		0.63	mg/kg	U	7/8/97
SJS04-SD02-000	IMCYAN	Iron	10500	3.38	mg/kg		7/11/97
SJS04-SD02-000	IMCYAN	Lead	155	0.2	mg/kg		7/16/97
SJS04-SD02-000	IMCYAN	Magnesium	1220	36.02	mg/kg	J	7/11/97
SJS04-SD02-000	IMCYAN	Manganese	75.2	0.4	mg/kg		7/11/97
SJS04-SD02-000	IMCYAN	Mercury	2.1	0.06	mg/kg		7/15/97
SJS04-SD02-000	IMCYAN	Nickel	17.6	1.39	mg/kg		7/11/97
SJS04-SD02-000	IMCYAN	Potassium	779	44.18	mg/kg	J	7/11/97
SJS04-SD02-000	IMCYAN	Selenium		0.6	mg/kg	U	7/16/97
SJS04-SD02-000	IMCYAN	Silver	0.47	0.2	mg/kg	B	7/16/97
SJS04-SD02-000	IMCYAN	Sodium	202	11.54	mg/kg	B	7/11/97
SJS04-SD02-000	IMCYAN	Thallium	0.46	0.4	mg/kg	J	7/16/97
SJS04-SD02-000	IMCYAN	Vanadium	36.5	1.79	mg/kg		7/11/97
SJS04-SD02-000	IMCYAN	Zinc	457	1	mg/kg	L	7/11/97
SJS04-SD02-000	PSPCB	4,4'-DDD	4.9	4	ug/kg		7/27/97
SJS04-SD02-000	PSPCB	4,4'-DDE	18	4	ug/kg		7/27/97
SJS04-SD02-000	PSPCB	4,4'-DDT	8.2	4	ug/kg	J	7/27/97
SJS04-SD02-000	PSPCB	Aldrin		2.1	ug/kg	U	7/27/97
SJS04-SD02-000	PSPCB	alpha-BHC		2.1	ug/kg	U	7/27/97
SJS04-SD02-000	PSPCB	alpha-Chlordane		2.1	ug/kg	U	7/27/97
SJS04-SD02-000	PSPCB	Aroclor-1016		40	ug/kg	U	7/27/97
SJS04-SD02-000	PSPCB	Aroclor-1221		82	ug/kg	U	7/27/97
SJS04-SD02-000	PSPCB	Aroclor-1232		40	ug/kg	U	7/27/97
SJS04-SD02-000	PSPCB	Aroclor-1242		40	ug/kg	U	7/27/97
SJS04-SD02-000	PSPCB	Aroclor-1248		40	ug/kg	U	7/27/97
SJS04-SD02-000	PSPCB	Aroclor-1254		40	ug/kg	U	7/27/97
SJS04-SD02-000	PSPCB	Aroclor-1260	90	40	ug/kg	J	7/27/97
SJS04-SD02-000	PSPCB	beta-BHC		2.1	ug/kg	U	7/27/97
SJS04-SD02-000	PSPCB	delta-BHC		2.1	ug/kg	U	7/27/97
SJS04-SD02-000	PSPCB	Dieldrin	23	4	ug/kg		7/27/97
SJS04-SD02-000	PSPCB	Endosulfan I		2.1	ug/kg	U	7/27/97
SJS04-SD02-000	PSPCB	Endosulfan II		4	ug/kg	U	7/27/97
SJS04-SD02-000	PSPCB	Endosulfan Sulfate		4	ug/kg	U	7/27/97
SJS04-SD02-000	PSPCB	Endrin		4	ug/kg	U	7/27/97
SJS04-SD02-000	PSPCB	Endrin Aldehyde		4	ug/kg	U	7/27/97
SJS04-SD02-000	PSPCB	Endrin Ketone		4	ug/kg	U	7/27/97
SJS04-SD02-000	PSPCB	gamma-BHC		2.1	ug/kg	U	7/27/97
SJS04-SD02-000	PSPCB	gamma-Chlordane		2.1	ug/kg	U	7/27/97
SJS04-SD02-000	PSPCB	Heptachlor		2.1	ug/kg	U	7/27/97
SJS04-SD02-000	PSPCB	Heptachlor Epoxide		2.1	ug/kg	U	7/27/97
SJS04-SD02-000	PSPCB	Methoxychlor		21	ug/kg	U	7/27/97
SJS04-SD02-000	PSPCB	Toxaphene		210	ug/kg	U	7/27/97
SJS04-SD02-000	SVTCL	1,2,4-Trichlorobenzene		2000	ug/kg	U	7/21/97
SJS04-SD02-000	SVTCL	1,2-Dichlorobenzene		2000	ug/kg	U	7/21/97
SJS04-SD02-000	SVTCL	1,3-Dichlorobenzene		2000	ug/kg	U	7/21/97
SJS04-SD02-000	SVTCL	1,4-Dichlorobenzene		2000	ug/kg	U	7/21/97
SJS04-SD02-000	SVTCL	2,2'-oxybis(1-Chloropropane		2000	ug/kg	U	7/21/97
SJS04-SD02-000	SVTCL	2,4,5-Trichlorophenol		5100	ug/kg	U	7/21/97
SJS04-SD02-000	SVTCL	2,4,6-Trichlorophenol		2000	ug/kg	U	7/21/97
SJS04-SD02-000	SVTCL	2,4-Dichlorophenol		2000	ug/kg	U	7/21/97
SJS04-SD02-000	SVTCL	2,4-Dimethylphenol		2000	ug/kg	U	7/21/97
SJS04-SD02-000	SVTCL	2,4-Dinitrophenol		5100	ug/kg	U	7/21/97
SJS04-SD02-000	SVTCL	2,4-Dinitrotoluene		2000	ug/kg	U	7/21/97
SJS04-SD02-000	SVTCL	2,6-Dinitrotoluene		2000	ug/kg	U	7/21/97
SJS04-SD02-000	SVTCL	2-Chloronaphthalene		2000	ug/kg	U	7/21/97
SJS04-SD02-000	SVTCL	2-Chlorophenol		2000	ug/kg	U	7/21/97
SJS04-SD02-000	SVTCL	2-Methylnaphthalene		2000	ug/kg	U	7/21/97
SJS04-SD02-000	SVTCL	2-Methylphenol		2000	ug/kg	U	7/21/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS04-SD02-000	SVTCL	2-Nitroaniline		5100	ug/kg	U	7/21/97
SJS04-SD02-000	SVTCL	2-Nitrophenol		2000	ug/kg	U	7/21/97
SJS04-SD02-000	SVTCL	3,3'-Dichlorobenzidine		2000	ug/kg	U	7/21/97
SJS04-SD02-000	SVTCL	3-Nitroaniline		5100	ug/kg	U	7/21/97
SJS04-SD02-000	SVTCL	4,6-Dinitro-2-Methylphenol		5100	ug/kg	U	7/21/97
SJS04-SD02-000	SVTCL	4-Bromophenyl phenylether		2000	ug/kg	U	7/21/97
SJS04-SD02-000	SVTCL	4-Chloro-3-Methylphenol		2000	ug/kg	U	7/21/97
SJS04-SD02-000	SVTCL	4-Chloroaniline		2000	ug/kg	U	7/21/97
SJS04-SD02-000	SVTCL	4-Chlorophenyl-phenylether		2000	ug/kg	U	7/21/97
SJS04-SD02-000	SVTCL	4-Methylphenol		2000	ug/kg	U	7/21/97
SJS04-SD02-000	SVTCL	4-Nitroaniline		5100	ug/kg	U	7/21/97
SJS04-SD02-000	SVTCL	4-Nitrophenol		5100	ug/kg	U	7/21/97
SJS04-SD02-000	SVTCL	Acenaphthene		2000	ug/kg	U	7/21/97
SJS04-SD02-000	SVTCL	Acenaphthylene		2000	ug/kg	U	7/21/97
SJS04-SD02-000	SVTCL	Anthracene		2000	ug/kg	U	7/21/97
SJS04-SD02-000	SVTCL	Benzo(a)Anthracene	370	2000	ug/kg	J	7/21/97
SJS04-SD02-000	SVTCL	Benzo(a)Pyrene	360	2000	ug/kg	J	7/21/97
SJS04-SD02-000	SVTCL	Benzo(b)Fluoranthene	490	2000	ug/kg	J	7/21/97
SJS04-SD02-000	SVTCL	Benzo(g,h,i)Perylene	240	2000	ug/kg	J	7/21/97
SJS04-SD02-000	SVTCL	Benzo(k)Fluoranthene	200	2000	ug/kg	J	7/21/97
SJS04-SD02-000	SVTCL	Bis(2-chloroethoxy)Methane		2000	ug/kg	U	7/21/97
SJS04-SD02-000	SVTCL	Bis(2-chloroethyl)Ether		2000	ug/kg	U	7/21/97
SJS04-SD02-000	SVTCL	Bis(2-Ethylhexyl)Phthalate	960	2000	ug/kg	B	7/21/97
SJS04-SD02-000	SVTCL	Butylbenzylphthalate		2000	ug/kg	U	7/21/97
SJS04-SD02-000	SVTCL	Carbazole		2000	ug/kg	U	7/21/97
SJS04-SD02-000	SVTCL	Chrysene	440	2000	ug/kg	J	7/21/97
SJS04-SD02-000	SVTCL	Di-n-Butylphthalate		2000	ug/kg	U	7/21/97
SJS04-SD02-000	SVTCL	Di-n-Octyl Phthalate		2000	ug/kg	U	7/21/97
SJS04-SD02-000	SVTCL	Dibenz(a,h)Anthracene		2000	ug/kg	U	7/21/97
SJS04-SD02-000	SVTCL	Dibenzofuran		2000	ug/kg	U	7/21/97
SJS04-SD02-000	SVTCL	Diethylphthalate	300	2000	ug/kg	J	7/21/97
SJS04-SD02-000	SVTCL	Dimethyl Phthalate		2000	ug/kg	U	7/21/97
SJS04-SD02-000	SVTCL	Fluoranthene	710	2000	ug/kg	J	7/21/97
SJS04-SD02-000	SVTCL	Fluorene		2000	ug/kg	U	7/21/97
SJS04-SD02-000	SVTCL	Hexachlorobenzene		2000	ug/kg	U	7/21/97
SJS04-SD02-000	SVTCL	Hexachlorobutadiene		2000	ug/kg	U	7/21/97
SJS04-SD02-000	SVTCL	Hexachlorocyclopentadien		2000	ug/kg	U	7/21/97
SJS04-SD02-000	SVTCL	Hexachloroethane		2000	ug/kg	U	7/21/97
SJS04-SD02-000	SVTCL	Indeno(1,2,3-cd)Pyrene	230	2000	ug/kg	J	7/21/97
SJS04-SD02-000	SVTCL	Isophorone		2000	ug/kg	U	7/21/97
SJS04-SD02-000	SVTCL	N-Nitroso-Di-n-Propylamine		2000	ug/kg	U	7/21/97
SJS04-SD02-000	SVTCL	N-Nitrosodiphenylamine		2000	ug/kg	U	7/21/97
SJS04-SD02-000	SVTCL	Naphthalene		2000	ug/kg	U	7/21/97
SJS04-SD02-000	SVTCL	Nitrobenzene		2000	ug/kg	U	7/21/97
SJS04-SD02-000	SVTCL	Pentachlorophenol		5100	ug/kg	U	7/21/97
SJS04-SD02-000	SVTCL	Phenanthrene	400	2000	ug/kg	J	7/21/97
SJS04-SD02-000	SVTCL	Phenol		2000	ug/kg	U	7/21/97
SJS04-SD02-000	SVTCL	Pyrene	790	2000	ug/kg	J	7/21/97
SJS04-SD02-000	VCTCL	1,1,1-Trichloroethane		10	ug/kg	U	7/8/97
SJS04-SD02-000	VCTCL	1,1,2,2-Tetrachloroethane		10	ug/kg	U	7/8/97
SJS04-SD02-000	VCTCL	1,1,2-Trichloroethane		10	ug/kg	U	7/8/97
SJS04-SD02-000	VCTCL	1,1-Dichloroethane		10	ug/kg	U	7/8/97
SJS04-SD02-000	VCTCL	1,1-Dichloroethene		10	ug/kg	U	7/8/97
SJS04-SD02-000	VCTCL	1,2-Dichloroethane		10	ug/kg	U	7/8/97
SJS04-SD02-000	VCTCL	1,2-Dichloroethene (total)		10	ug/kg	U	7/8/97
SJS04-SD02-000	VCTCL	1,2-Dichloropropane		10	ug/kg	U	7/8/97
SJS04-SD02-000	VCTCL	2-Butanone		10	ug/kg	U	7/8/97
SJS04-SD02-000	VCTCL	2-Hexanone		10	ug/kg	U	7/8/97
SJS04-SD02-000	VCTCL	4-Methyl-2-Pentanone		10	ug/kg	U	7/8/97
SJS04-SD02-000	VCTCL	Acetone	7	10	ug/kg	J	7/8/97
SJS04-SD02-000	VCTCL	Benzene		10	ug/kg	U	7/8/97
SJS04-SD02-000	VCTCL	Bromodichloromethane		10	ug/kg	U	7/8/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS04-SD02-000	VCTCL	Bromoform		10	ug/kg	U	7/8/97
SJS04-SD02-000	VCTCL	Bromomethane		10	ug/kg	U	7/8/97
SJS04-SD02-000	VCTCL	Carbon Disulfide		10	ug/kg	U	7/8/97
SJS04-SD02-000	VCTCL	Carbon Tetrachloride		10	ug/kg	U	7/8/97
SJS04-SD02-000	VCTCL	Chlorobenzene		10	ug/kg	U	7/8/97
SJS04-SD02-000	VCTCL	Chloroethane		10	ug/kg	U	7/8/97
SJS04-SD02-000	VCTCL	Chloroform		10	ug/kg	U	7/8/97
SJS04-SD02-000	VCTCL	Chloromethane		10	ug/kg	U	7/8/97
SJS04-SD02-000	VCTCL	cis-1,3-Dichloropropene		10	ug/kg	U	7/8/97
SJS04-SD02-000	VCTCL	Dibromochloromethane		10	ug/kg	U	7/8/97
SJS04-SD02-000	VCTCL	Ethylbenzene		10	ug/kg	U	7/8/97
SJS04-SD02-000	VCTCL	Methylene Chloride	39	10	ug/kg	B	7/8/97
SJS04-SD02-000	VCTCL	Styrene		10	ug/kg	U	7/8/97
SJS04-SD02-000	VCTCL	Tetrachloroethene		10	ug/kg	U	7/8/97
SJS04-SD02-000	VCTCL	Toluene		10	ug/kg	U	7/8/97
SJS04-SD02-000	VCTCL	Total Xylenes		10	ug/kg	U	7/8/97
SJS04-SD02-000	VCTCL	Trans-1,3-Dichloropropene		10	ug/kg	U	7/8/97
SJS04-SD02-000	VCTCL	Trichloroethene		10	ug/kg	U	7/8/97
SJS04-SD02-000	VCTCL	Vinyl Chloride		10	ug/kg	U	7/8/97
SJS04-SD03-000	CTOTC	Total Organic Carbon	159000	84.2	mg/kg		7/30/97
SJS04-SD03-000	CTOTP	Total Phosphorous (as P)	8.3	2	mg/kg		7/29/97
SJS04-SD03-000	MCYAN	Aluminum	10000	13.11	mg/kg		7/25/97
SJS04-SD03-000	MCYAN	Antimony	1.9	0.6	mg/kg	B	7/25/97
SJS04-SD03-000	MCYAN	Arsenic	33.1	0.89	mg/kg		7/25/97
SJS04-SD03-000	MCYAN	Barium	185	0.6	mg/kg		7/25/97
SJS04-SD03-000	MCYAN	Beryllium	1.3	0.3	mg/kg	J	7/25/97
SJS04-SD03-000	MCYAN	Cadmium	0.84	0.15	mg/kg	J	7/25/97
SJS04-SD03-000	MCYAN	Calcium	18300	25.92	mg/kg		7/25/97
SJS04-SD03-000	MCYAN	Chromium	31	2.09	mg/kg		7/25/97
SJS04-SD03-000	MCYAN	Cobalt	23.3	2.38	mg/kg		7/25/97
SJS04-SD03-000	MCYAN	Copper	387	1.79	mg/kg		7/25/97
SJS04-SD03-000	MCYAN	Cyanide		0.84	mg/kg	U	7/22/97
SJS04-SD03-000	MCYAN	Iron	17900	5.07	mg/kg		7/25/97
SJS04-SD03-000	MCYAN	Lead	441	0.3	mg/kg		7/25/97
SJS04-SD03-000	MCYAN	Magnesium	1970	53.93	mg/kg		7/25/97
SJS04-SD03-000	MCYAN	Manganese	877	0.6	mg/kg	K	7/25/97
SJS04-SD03-000	MCYAN	Mercury	6.4	0.08	mg/kg		8/1/97
SJS04-SD03-000	MCYAN	Nickel	43.9	2.09	mg/kg		7/25/97
SJS04-SD03-000	MCYAN	Potassium	1280	66.15	mg/kg	J	7/25/97
SJS04-SD03-000	MCYAN	Selenium		0.89	mg/kg	UL	7/25/97
SJS04-SD03-000	MCYAN	Silver	1	0.3	mg/kg	J	7/25/97
SJS04-SD03-000	MCYAN	Sodium	239	17.28	mg/kg	J	7/25/97
SJS04-SD03-000	MCYAN	Thallium		0.6	mg/kg	U	7/25/97
SJS04-SD03-000	MCYAN	Vanadium	88.5	2.68	mg/kg		7/25/97
SJS04-SD03-000	MCYAN	Zinc	624	1.49	mg/kg		7/25/97
SJS04-SD03-000	PSPCB	4,4'-DDD		5.7	ug/kg	U	8/5/97
SJS04-SD03-000	PSPCB	4,4'-DDE	6.8	5.7	ug/kg	J	8/5/97
SJS04-SD03-000	PSPCB	4,4'-DDT		5.7	ug/kg	U	8/5/97
SJS04-SD03-000	PSPCB	Aldrin		2.9	ug/kg	U	8/5/97
SJS04-SD03-000	PSPCB	alpha-BHC		2.9	ug/kg	U	8/5/97
SJS04-SD03-000	PSPCB	alpha-Chlordane		2.9	ug/kg	U	8/5/97
SJS04-SD03-000	PSPCB	Aroclor-1016		57	ug/kg	U	8/5/97
SJS04-SD03-000	PSPCB	Aroclor-1221		120	ug/kg	U	8/5/97
SJS04-SD03-000	PSPCB	Aroclor-1232		57	ug/kg	U	8/5/97
SJS04-SD03-000	PSPCB	Aroclor-1242		57	ug/kg	U	8/5/97
SJS04-SD03-000	PSPCB	Aroclor-1248		57	ug/kg	U	8/5/97
SJS04-SD03-000	PSPCB	Aroclor-1254		57	ug/kg	U	8/5/97
SJS04-SD03-000	PSPCB	Aroclor-1260	72	57	ug/kg		8/5/97
SJS04-SD03-000	PSPCB	beta-BHC		2.9	ug/kg	U	8/5/97
SJS04-SD03-000	PSPCB	delta-BHC		2.9	ug/kg	U	8/5/97
SJS04-SD03-000	PSPCB	Dieldrin	6	5.7	ug/kg	J	8/5/97
SJS04-SD03-000	PSPCB	Endosulfan I		2.9	ug/kg	U	8/5/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS04-SD03-000	PSPCB	Endosulfan II		5.7	ug/kg	U	8/5/97
SJS04-SD03-000	PSPCB	Endosulfan Sulfate		5.7	ug/kg	U	8/5/97
SJS04-SD03-000	PSPCB	Endrin		5.7	ug/kg	U	8/5/97
SJS04-SD03-000	PSPCB	Endrin Aldehyde		5.7	ug/kg	U	8/5/97
SJS04-SD03-000	PSPCB	Endrin Ketone		5.7	ug/kg	U	8/5/97
SJS04-SD03-000	PSPCB	gamma-BHC		2.9	ug/kg	U	8/5/97
SJS04-SD03-000	PSPCB	gamma-Chlordane		2.9	ug/kg	U	8/5/97
SJS04-SD03-000	PSPCB	Heptachlor		2.9	ug/kg	U	8/5/97
SJS04-SD03-000	PSPCB	Heptachlor Epoxide		2.9	ug/kg	U	8/5/97
SJS04-SD03-000	PSPCB	Methoxychlor		29	ug/kg	U	8/5/97
SJS04-SD03-000	PSPCB	Toxaphene		290	ug/kg	U	8/5/97
SJS04-SD03-000	SVTCL	1,2,4-Trichlorobenzene		570	ug/kg	U	8/10/97
SJS04-SD03-000	SVTCL	1,2-Dichlorobenzene		570	ug/kg	U	8/10/97
SJS04-SD03-000	SVTCL	1,3-Dichlorobenzene		570	ug/kg	U	8/10/97
SJS04-SD03-000	SVTCL	1,4-Dichlorobenzene		570	ug/kg	U	8/10/97
SJS04-SD03-000	SVTCL	2,2'-oxybis(1-Chloropropane		570	ug/kg	U	8/10/97
SJS04-SD03-000	SVTCL	2,4,5-Trichlorophenol		1400	ug/kg	U	8/10/97
SJS04-SD03-000	SVTCL	2,4,6-Trichlorophenol		570	ug/kg	U	8/10/97
SJS04-SD03-000	SVTCL	2,4-Dichlorophenol		570	ug/kg	U	8/10/97
SJS04-SD03-000	SVTCL	2,4-Dimethylphenol		570	ug/kg	U	8/10/97
SJS04-SD03-000	SVTCL	2,4-Dinitrophenol		1400	ug/kg	U	8/10/97
SJS04-SD03-000	SVTCL	2,4-Dinitrotoluene		570	ug/kg	U	8/10/97
SJS04-SD03-000	SVTCL	2,6-Dinitrotoluene		570	ug/kg	U	8/10/97
SJS04-SD03-000	SVTCL	2-Chloronaphthalene		570	ug/kg	U	8/10/97
SJS04-SD03-000	SVTCL	2-Chlorophenol		570	ug/kg	U	8/10/97
SJS04-SD03-000	SVTCL	2-Methylnaphthalene	140	570	ug/kg	J	8/10/97
SJS04-SD03-000	SVTCL	2-Methylphenol		570	ug/kg	U	8/10/97
SJS04-SD03-000	SVTCL	2-Nitroaniline		1400	ug/kg	U	8/10/97
SJS04-SD03-000	SVTCL	2-Nitrophenol		570	ug/kg	U	8/10/97
SJS04-SD03-000	SVTCL	3,3'-Dichlorobenzidine		570	ug/kg	UJ	8/10/97
SJS04-SD03-000	SVTCL	3-Nitroaniline		1400	ug/kg	U	8/10/97
SJS04-SD03-000	SVTCL	4,6-Dinitro-2-Methylphenol		1400	ug/kg	U	8/10/97
SJS04-SD03-000	SVTCL	4-Bromophenyl phenylether		570	ug/kg	U	8/10/97
SJS04-SD03-000	SVTCL	4-Chloro-3-Methylphenol		570	ug/kg	U	8/10/97
SJS04-SD03-000	SVTCL	4-Chloroaniline		570	ug/kg	U	8/10/97
SJS04-SD03-000	SVTCL	4-Chlorophenyl-phenylether		570	ug/kg	U	8/10/97
SJS04-SD03-000	SVTCL	4-Methylphenol		570	ug/kg	U	8/10/97
SJS04-SD03-000	SVTCL	4-Nitroaniline		1400	ug/kg	U	8/10/97
SJS04-SD03-000	SVTCL	4-Nitrophenol		1400	ug/kg	U	8/10/97
SJS04-SD03-000	SVTCL	Acenaphthene		570	ug/kg	U	8/10/97
SJS04-SD03-000	SVTCL	Acenaphthylene		570	ug/kg	U	8/10/97
SJS04-SD03-000	SVTCL	Anthracene		570	ug/kg	U	8/10/97
SJS04-SD03-000	SVTCL	Benzo(a)Anthracene	200	570	ug/kg	J	8/10/97
SJS04-SD03-000	SVTCL	Benzo(a)Pyrene	210	570	ug/kg	J	8/10/97
SJS04-SD03-000	SVTCL	Benzo(b)Fluoranthene	300	570	ug/kg	J	8/10/97
SJS04-SD03-000	SVTCL	Benzo(g,h,i)Perylene	83	570	ug/kg	J	8/10/97
SJS04-SD03-000	SVTCL	Benzo(k)fluoranthene	290	570	ug/kg	J	8/10/97
SJS04-SD03-000	SVTCL	Bis(2-chloroethoxy)Methane		570	ug/kg	U	8/10/97
SJS04-SD03-000	SVTCL	Bis(2-chloroethyl)Ether		570	ug/kg	U	8/10/97
SJS04-SD03-000	SVTCL	Bis(2-Ethylhexyl)Phthalate	300	220	ug/kg	B	8/10/97
SJS04-SD03-000	SVTCL	Butylbenzylphthalate		570	ug/kg	U	8/10/97
SJS04-SD03-000	SVTCL	Carbazole		570	ug/kg	U	8/10/97
SJS04-SD03-000	SVTCL	Chrysene	290	570	ug/kg	J	8/10/97
SJS04-SD03-000	SVTCL	Di-n-Butylphthalate	67	570	ug/kg	J	8/10/97
SJS04-SD03-000	SVTCL	Di-n-Octyl Phthalate		570	ug/kg	U	8/10/97
SJS04-SD03-000	SVTCL	Dibenz(a,h)Anthracene		570	ug/kg	U	8/10/97
SJS04-SD03-000	SVTCL	Dibenzofuran	63	570	ug/kg	J	8/10/97
SJS04-SD03-000	SVTCL	Diethylphthalate		570	ug/kg	U	8/10/97
SJS04-SD03-000	SVTCL	Dimethyl Phthalate		570	ug/kg	U	8/10/97
SJS04-SD03-000	SVTCL	Fluoranthene	370	570	ug/kg	J	8/10/97
SJS04-SD03-000	SVTCL	Fluorene		570	ug/kg	U	8/10/97
SJS04-SD03-000	SVTCL	Hexachlorobenzene		570	ug/kg	U	8/10/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS04-SD03-000	SVTCL	Hexachlorobutadiene		570	ug/kg	U	8/10/97
SJS04-SD03-000	SVTCL	Hexachlorocyclopentadien		570	ug/kg	U	8/10/97
SJS04-SD03-000	SVTCL	Hexachloroethane		570	ug/kg	U	8/10/97
SJS04-SD03-000	SVTCL	Indeno(1,2,3-cd)Pyrene	85	570	ug/kg	J	8/10/97
SJS04-SD03-000	SVTCL	Isophorone		570	ug/kg	U	8/10/97
SJS04-SD03-000	SVTCL	N-Nitroso-Di-n-Propylamine		570	ug/kg	U	8/10/97
SJS04-SD03-000	SVTCL	N-Nitrosodiphenylamine		570	ug/kg	U	8/10/97
SJS04-SD03-000	SVTCL	Naphthalene	100	570	ug/kg	J	8/10/97
SJS04-SD03-000	SVTCL	Nitrobenzene		570	ug/kg	U	8/10/97
SJS04-SD03-000	SVTCL	Pentachlorophenol		1400	ug/kg	U	8/10/97
SJS04-SD03-000	SVTCL	Phenanthrene	270	570	ug/kg	J	8/10/97
SJS04-SD03-000	SVTCL	Phenol		570	ug/kg	U	8/10/97
SJS04-SD03-000	SVTCL	Pyrene	370	570	ug/kg	J	8/10/97
SJS04-SD03-000	VCTCL	1,1,1-Trichloroethane		13	ug/kg	UJ	7/25/97
SJS04-SD03-000	VCTCL	1,1,2,2-Tetrachloroethane		13	ug/kg	UJ	7/25/97
SJS04-SD03-000	VCTCL	1,1,2-Trichloroethane		13	ug/kg	UJ	7/25/97
SJS04-SD03-000	VCTCL	1,1-Dichloroethane		13	ug/kg	U	7/25/97
SJS04-SD03-000	VCTCL	1,1-Dichloroethene		13	ug/kg	U	7/25/97
SJS04-SD03-000	VCTCL	1,2-Dichloroethane		13	ug/kg	U	7/25/97
SJS04-SD03-000	VCTCL	1,2-Dichloroethene (total)		13	ug/kg	U	7/25/97
SJS04-SD03-000	VCTCL	1,2-Dichloropropane		13	ug/kg	UJ	7/25/97
SJS04-SD03-000	VCTCL	2-Butanone		13	ug/kg	U	7/25/97
SJS04-SD03-000	VCTCL	2-Hexanone		13	ug/kg	UJ	7/25/97
SJS04-SD03-000	VCTCL	4-Methyl-2-Pentanone		13	ug/kg	UJ	7/25/97
SJS04-SD03-000	VCTCL	Acetone		13	ug/kg	UJ	7/25/97
SJS04-SD03-000	VCTCL	Benzene		13	ug/kg	UJ	7/25/97
SJS04-SD03-000	VCTCL	Bromodichloromethane		13	ug/kg	UJ	7/25/97
SJS04-SD03-000	VCTCL	Bromoform		13	ug/kg	UJ	7/25/97
SJS04-SD03-000	VCTCL	Bromomethane		13	ug/kg	U	7/25/97
SJS04-SD03-000	VCTCL	Carbon Disulfide		13	ug/kg	U	7/25/97
SJS04-SD03-000	VCTCL	Carbon Tetrachloride		13	ug/kg	UJ	7/25/97
SJS04-SD03-000	VCTCL	Chlorobenzene		13	ug/kg	UJ	7/25/97
SJS04-SD03-000	VCTCL	Chloroethane		13	ug/kg	U	7/25/97
SJS04-SD03-000	VCTCL	Chloroform		13	ug/kg	U	7/25/97
SJS04-SD03-000	VCTCL	Chloromethane		13	ug/kg	U	7/25/97
SJS04-SD03-000	VCTCL	cis-1,3-Dichloropropene		13	ug/kg	UJ	7/25/97
SJS04-SD03-000	VCTCL	Dibromochloromethane		13	ug/kg	UJ	7/25/97
SJS04-SD03-000	VCTCL	Ethylbenzene		13	ug/kg	UJ	7/25/97
SJS04-SD03-000	VCTCL	Methylene Chloride	200	13	ug/kg	B	7/25/97
SJS04-SD03-000	VCTCL	Styrene		13	ug/kg	UJ	7/25/97
SJS04-SD03-000	VCTCL	Tetrachloroethene		13	ug/kg	UJ	7/25/97
SJS04-SD03-000	VCTCL	Toluene		13	ug/kg	UJ	7/25/97
SJS04-SD03-000	VCTCL	Total Xylenes		13	ug/kg	UJ	7/25/97
SJS04-SD03-000	VCTCL	Trans-1,3-Dichloropropene		13	ug/kg	UJ	7/25/97
SJS04-SD03-000	VCTCL	Trichloroethene		13	ug/kg	UJ	7/25/97
SJS04-SD03-000	VCTCL	Vinyl Chloride		13	ug/kg	U	7/25/97
SJS04-SD04-000	CTOTC	Total Organic Carbon	48300	169	mg/kg		7/30/97
SJS04-SD04-000	CTOTP	Total Phosphorous (as P)	28	4.1	mg/kg		7/29/97
SJS04-SD04-000	MCYAN	Aluminum	22100	29.44	mg/kg		7/25/97
SJS04-SD04-000	MCYAN	Antimony	1.9	1.34	mg/kg	B	7/25/97
SJS04-SD04-000	MCYAN	Arsenic	16.3	2.01	mg/kg		7/25/97
SJS04-SD04-000	MCYAN	Barium	79.2	1.34	mg/kg	J	7/25/97
SJS04-SD04-000	MCYAN	Beryllium	2.7	0.67	mg/kg	J	7/25/97
SJS04-SD04-000	MCYAN	Cadmium		0.33	mg/kg	U	7/25/97
SJS04-SD04-000	MCYAN	Calcium	4390	58.2	mg/kg		7/25/97
SJS04-SD04-000	MCYAN	Chromium	38.8	4.68	mg/kg		7/25/97
SJS04-SD04-000	MCYAN	Cobalt	22.5	5.35	mg/kg	J	7/25/97
SJS04-SD04-000	MCYAN	Copper	73	4.01	mg/kg		7/25/97
SJS04-SD04-000	MCYAN	Cyanide		1.7	mg/kg	U	7/22/97
SJS04-SD04-000	MCYAN	Iron	48600	11.37	mg/kg		7/25/97
SJS04-SD04-000	MCYAN	Lead	426	0.67	mg/kg		7/25/97
SJS04-SD04-000	MCYAN	Magnesium	6740	121.09	mg/kg		7/25/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS04-SD04-000	MCYAN	Manganese	364	1.34	mg/kg	K	7/25/97
SJS04-SD04-000	MCYAN	Mercury	0.4	0.15	mg/kg		8/1/97
SJS04-SD04-000	MCYAN	Nickel	34.9	4.68	mg/kg		7/25/97
SJS04-SD04-000	MCYAN	Potassium	3850	148.51	mg/kg		7/25/97
SJS04-SD04-000	MCYAN	Selenium		2.01	mg/kg	UL	7/25/97
SJS04-SD04-000	MCYAN	Silver	0.79	0.67	mg/kg	J	7/25/97
SJS04-SD04-000	MCYAN	Sodium	11800	38.8	mg/kg	B	7/25/97
SJS04-SD04-000	MCYAN	Thallium		1.34	mg/kg	U	7/25/97
SJS04-SD04-000	MCYAN	Vanadium	57	6.02	mg/kg		7/25/97
SJS04-SD04-000	MCYAN	Zinc	438	3.34	mg/kg		7/25/97
SJS04-SD04-000	PSPCB	4,4'-DDD	5.7	5.6	ug/kg	J	8/5/97
SJS04-SD04-000	PSPCB	4,4'-DDE	6.3	5.6	ug/kg	J	8/5/97
SJS04-SD04-000	PSPCB	4,4'-DDT		5.6	ug/kg	U	8/5/97
SJS04-SD04-000	PSPCB	Aldrin		2.9	ug/kg	U	8/5/97
SJS04-SD04-000	PSPCB	alpha-BHC		2.9	ug/kg	U	8/5/97
SJS04-SD04-000	PSPCB	alpha-Chlordane		2.9	ug/kg	U	8/5/97
SJS04-SD04-000	PSPCB	Aroclor-1016		56	ug/kg	U	8/5/97
SJS04-SD04-000	PSPCB	Aroclor-1221		110	ug/kg	U	8/5/97
SJS04-SD04-000	PSPCB	Aroclor-1232		56	ug/kg	U	8/5/97
SJS04-SD04-000	PSPCB	Aroclor-1242		56	ug/kg	U	8/5/97
SJS04-SD04-000	PSPCB	Aroclor-1248		56	ug/kg	U	8/5/97
SJS04-SD04-000	PSPCB	Aroclor-1254		56	ug/kg	U	8/5/97
SJS04-SD04-000	PSPCB	Aroclor-1260	31	56	ug/kg	J	8/5/97
SJS04-SD04-000	PSPCB	beta-BHC		2.9	ug/kg	U	8/5/97
SJS04-SD04-000	PSPCB	delta-BHC		2.9	ug/kg	U	8/5/97
SJS04-SD04-000	PSPCB	Dieldrin		5.6	ug/kg	U	8/5/97
SJS04-SD04-000	PSPCB	Endosulfan I		2.9	ug/kg	U	8/5/97
SJS04-SD04-000	PSPCB	Endosulfan II		5.6	ug/kg	U	8/5/97
SJS04-SD04-000	PSPCB	Endosulfan Sulfate		5.6	ug/kg	U	8/5/97
SJS04-SD04-000	PSPCB	Endrin		5.6	ug/kg	U	8/5/97
SJS04-SD04-000	PSPCB	Endrin Aldehyde		5.6	ug/kg	U	8/5/97
SJS04-SD04-000	PSPCB	Endrin Ketone		5.6	ug/kg	U	8/5/97
SJS04-SD04-000	PSPCB	gamma-BHC		2.9	ug/kg	U	8/5/97
SJS04-SD04-000	PSPCB	gamma-Chlordane		2.9	ug/kg	U	8/5/97
SJS04-SD04-000	PSPCB	Heptachlor		2.9	ug/kg	U	8/5/97
SJS04-SD04-000	PSPCB	Heptachlor Epoxide		2.9	ug/kg	U	8/5/97
SJS04-SD04-000	PSPCB	Methoxychlor		29	ug/kg	U	8/5/97
SJS04-SD04-000	PSPCB	Toxaphene		290	ug/kg	U	8/5/97
SJS04-SD04-000	SVTCL	1,2,4-Trichlorobenzene		570	ug/kg	U	8/10/97
SJS04-SD04-000	SVTCL	1,2-Dichlorobenzene		570	ug/kg	U	8/10/97
SJS04-SD04-000	SVTCL	1,3-Dichlorobenzene		570	ug/kg	U	8/10/97
SJS04-SD04-000	SVTCL	1,4-Dichlorobenzene		570	ug/kg	U	8/10/97
SJS04-SD04-000	SVTCL	2,2'-oxybis(1-Chloropropane		570	ug/kg	U	8/10/97
SJS04-SD04-000	SVTCL	2,4,5-Trichlorophenol		1400	ug/kg	U	8/10/97
SJS04-SD04-000	SVTCL	2,4,6-Trichlorophenol		570	ug/kg	U	8/10/97
SJS04-SD04-000	SVTCL	2,4-Dichlorophenol		570	ug/kg	U	8/10/97
SJS04-SD04-000	SVTCL	2,4-Dimethylphenol		570	ug/kg	U	8/10/97
SJS04-SD04-000	SVTCL	2,4-Dinitrophenol		1400	ug/kg	U	8/10/97
SJS04-SD04-000	SVTCL	2,4-Dinitrotoluene		570	ug/kg	U	8/10/97
SJS04-SD04-000	SVTCL	2,6-Dinitrotoluene		570	ug/kg	U	8/10/97
SJS04-SD04-000	SVTCL	2-Chloronaphthalene		570	ug/kg	U	8/10/97
SJS04-SD04-000	SVTCL	2-Chlorophenol		570	ug/kg	U	8/10/97
SJS04-SD04-000	SVTCL	2-Methylnaphthalene		570	ug/kg	U	8/10/97
SJS04-SD04-000	SVTCL	2-Methylphenol		570	ug/kg	U	8/10/97
SJS04-SD04-000	SVTCL	2-Nitroaniline		1400	ug/kg	U	8/10/97
SJS04-SD04-000	SVTCL	2-Nitrophenol		570	ug/kg	U	8/10/97
SJS04-SD04-000	SVTCL	3,3'-Dichlorobenzidine		570	ug/kg	UJ	8/10/97
SJS04-SD04-000	SVTCL	3-Nitroaniline		1400	ug/kg	U	8/10/97
SJS04-SD04-000	SVTCL	4,6-Dinitro-2-Methylphenol		1400	ug/kg	U	8/10/97
SJS04-SD04-000	SVTCL	4-Bromophenyl phenylether		570	ug/kg	U	8/10/97
SJS04-SD04-000	SVTCL	4-Chloro-3-Methylphenol		570	ug/kg	U	8/10/97
SJS04-SD04-000	SVTCL	4-Chloroaniline		570	ug/kg	U	8/10/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS04-SD04-000	SVTCL	4-Chlorophenyl-phenylether		570	ug/kg	U	8/10/97
SJS04-SD04-000	SVTCL	4-Methylphenol		570	ug/kg	U	8/10/97
SJS04-SD04-000	SVTCL	4-Nitroaniline		1400	ug/kg	U	8/10/97
SJS04-SD04-000	SVTCL	4-Nitrophenol		1400	ug/kg	U	8/10/97
SJS04-SD04-000	SVTCL	Acenaphthene		570	ug/kg	U	8/10/97
SJS04-SD04-000	SVTCL	Acenaphthylene	70	570	ug/kg	J	8/10/97
SJS04-SD04-000	SVTCL	Anthracene	200	570	ug/kg	J	8/10/97
SJS04-SD04-000	SVTCL	Benzo(a)Anthracene	1300	570	ug/kg		8/10/97
SJS04-SD04-000	SVTCL	Benzo(a)Pyrene	1200	570	ug/kg		8/10/97
SJS04-SD04-000	SVTCL	Benzo(b)Fluoranthene	1900	570	ug/kg		8/10/97
SJS04-SD04-000	SVTCL	Benzo(g,h,i)Perylene	290	570	ug/kg	J	8/10/97
SJS04-SD04-000	SVTCL	Benzo(k)fluoranthene	1100	570	ug/kg		8/10/97
SJS04-SD04-000	SVTCL	Bis(2-chloroethoxy)Methane		570	ug/kg	U	8/10/97
SJS04-SD04-000	SVTCL	Bis(2-chloroethyl)Ether		570	ug/kg	U	8/10/97
SJS04-SD04-000	SVTCL	Bis(2-Ethylhexyl)Phthalate	160	220	ug/kg	B	8/10/97
SJS04-SD04-000	SVTCL	Butylbenzylphthalate	58	570	ug/kg	J	8/10/97
SJS04-SD04-000	SVTCL	Carbazole		570	ug/kg	U	8/10/97
SJS04-SD04-000	SVTCL	Chrysene	1200	570	ug/kg		8/10/97
SJS04-SD04-000	SVTCL	Di-n-Butylphthalate		570	ug/kg	U	8/10/97
SJS04-SD04-000	SVTCL	Di-n-Octyl Phthalate		570	ug/kg	U	8/10/97
SJS04-SD04-000	SVTCL	Dibenz(a,h)Anthracene	150	570	ug/kg	J	8/10/97
SJS04-SD04-000	SVTCL	Dibenzofuran		570	ug/kg	U	8/10/97
SJS04-SD04-000	SVTCL	Diethylphthalate		570	ug/kg	U	8/10/97
SJS04-SD04-000	SVTCL	Dimethyl Phthalate		570	ug/kg	U	8/10/97
SJS04-SD04-000	SVTCL	Fluoranthene	2800	570	ug/kg		8/10/97
SJS04-SD04-000	SVTCL	Fluorene		570	ug/kg	U	8/10/97
SJS04-SD04-000	SVTCL	Hexachlorobenzene		570	ug/kg	U	8/10/97
SJS04-SD04-000	SVTCL	Hexachlorobutadiene		570	ug/kg	U	8/10/97
SJS04-SD04-000	SVTCL	Hexachlorocyclopentadien		570	ug/kg	U	8/10/97
SJS04-SD04-000	SVTCL	Hexachloroethane		570	ug/kg	U	8/10/97
SJS04-SD04-000	SVTCL	Indeno(1,2,3-cd)Pyrene	370	570	ug/kg	J	8/10/97
SJS04-SD04-000	SVTCL	Isophorone		570	ug/kg	U	8/10/97
SJS04-SD04-000	SVTCL	N-Nitroso-Di-n-Propylamine		570	ug/kg	U	8/10/97
SJS04-SD04-000	SVTCL	N-Nitrosodiphenylamine		570	ug/kg	U	8/10/97
SJS04-SD04-000	SVTCL	Naphthalene	100	570	ug/kg	J	8/10/97
SJS04-SD04-000	SVTCL	Nitrobenzene		570	ug/kg	U	8/10/97
SJS04-SD04-000	SVTCL	Pentachlorophenol		1400	ug/kg	U	8/10/97
SJS04-SD04-000	SVTCL	Phenanthrene	160	570	ug/kg	J	8/10/97
SJS04-SD04-000	SVTCL	Phenol		570	ug/kg	U	8/10/97
SJS04-SD04-000	SVTCL	Pyrene	2800	570	ug/kg		8/10/97
SJS04-SD04-000	VCTCL	1,1,1-Trichloroethane		31	ug/kg	U	7/19/97
SJS04-SD04-000	VCTCL	1,1,2,2-Tetrachloroethane		31	ug/kg	U	7/19/97
SJS04-SD04-000	VCTCL	1,1,2-Trichloroethane		31	ug/kg	U	7/19/97
SJS04-SD04-000	VCTCL	1,1-Dichloroethane		31	ug/kg	U	7/19/97
SJS04-SD04-000	VCTCL	1,1-Dichloroethene		31	ug/kg	U	7/19/97
SJS04-SD04-000	VCTCL	1,2-Dichloroethane		31	ug/kg	U	7/19/97
SJS04-SD04-000	VCTCL	1,2-Dichloroethene (total)		31	ug/kg	U	7/19/97
SJS04-SD04-000	VCTCL	1,2-Dichloropropane		31	ug/kg	U	7/19/97
SJS04-SD04-000	VCTCL	2-Butanone		31	ug/kg	U	7/19/97
SJS04-SD04-000	VCTCL	2-Hexanone		31	ug/kg	U	7/19/97
SJS04-SD04-000	VCTCL	4-Methyl-2-Pentanone		31	ug/kg	U	7/19/97
SJS04-SD04-000	VCTCL	Acetone	140	31	ug/kg		7/19/97
SJS04-SD04-000	VCTCL	Benzene		31	ug/kg	U	7/19/97
SJS04-SD04-000	VCTCL	Bromodichloromethane		31	ug/kg	U	7/19/97
SJS04-SD04-000	VCTCL	Bromoform		31	ug/kg	U	7/19/97
SJS04-SD04-000	VCTCL	Bromomethane		31	ug/kg	U	7/19/97
SJS04-SD04-000	VCTCL	Carbon Disulfide	19	31	ug/kg	J	7/19/97
SJS04-SD04-000	VCTCL	Carbon Tetrachloride		31	ug/kg	U	7/19/97
SJS04-SD04-000	VCTCL	Chlorobenzene		31	ug/kg	U	7/19/97
SJS04-SD04-000	VCTCL	Chloroethane		31	ug/kg	U	7/19/97
SJS04-SD04-000	VCTCL	Chloroform		31	ug/kg	U	7/19/97
SJS04-SD04-000	VCTCL	Chloromethane		31	ug/kg	U	7/19/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS04-SD04-000	VCTCL	cis-1,3-Dichloropropene		31	ug/kg	U	7/19/97
SJS04-SD04-000	VCTCL	Dibromochloromethane		31	ug/kg	U	7/19/97
SJS04-SD04-000	VCTCL	Ethylbenzene		31	ug/kg	U	7/19/97
SJS04-SD04-000	VCTCL	Methylene Chloride	64	31	ug/kg	B	7/19/97
SJS04-SD04-000	VCTCL	Styrene		31	ug/kg	U	7/19/97
SJS04-SD04-000	VCTCL	Tetrachloroethene		31	ug/kg	U	7/19/97
SJS04-SD04-000	VCTCL	Toluene		31	ug/kg	U	7/19/97
SJS04-SD04-000	VCTCL	Total Xylenes		31	ug/kg	U	7/19/97
SJS04-SD04-000	VCTCL	Trans-1,3-Dichloropropene		31	ug/kg	U	7/19/97
SJS04-SD04-000	VCTCL	Trichloroethene		31	ug/kg	U	7/19/97
SJS04-SD04-000	VCTCL	Vinyl Chloride		31	ug/kg	U	7/19/97
SJS04-SS01-000	CTOTP	Total Phosphorous (as P)	2.7	1.5	mg/kg		7/17/97
SJS04-SS01-000	MCYAN	Aluminum	17800	9.56	mg/kg		7/8/97
SJS04-SS01-000	MCYAN	Arsenic	17.4	0.65	mg/kg	K	7/8/97
SJS04-SS01-000	MCYAN	Barium	148	0.43	mg/kg		7/8/97
SJS04-SS01-000	MCYAN	Beryllium	0.86	0.22	mg/kg	J	7/8/97
SJS04-SS01-000	MCYAN	Cadmium		0.11	mg/kg	U	7/8/97
SJS04-SS01-000	MCYAN	Calcium	516	18.9	mg/kg	J	7/8/97
SJS04-SS01-000	MCYAN	Chromium	36.8	1.52	mg/kg		7/8/97
SJS04-SS01-000	MCYAN	Cobalt	4.5	1.74	mg/kg	J	7/8/97
SJS04-SS01-000	MCYAN	Copper	74.8	1.3	mg/kg		7/8/97
SJS04-SS01-000	MCYAN	Cyanide		0.63	mg/kg	U	7/8/97
SJS04-SS01-000	MCYAN	Iron	31300	3.69	mg/kg		7/8/97
SJS04-SS01-000	MCYAN	Lead	120	0.22	mg/kg		7/8/97
SJS04-SS01-000	MCYAN	Magnesium	2630	39.31	mg/kg		7/8/97
SJS04-SS01-000	MCYAN	Manganese	88.5	0.43	mg/kg	K	7/8/97
SJS04-SS01-000	MCYAN	Mercury	0.96	0.06	mg/kg	L	7/10/97
SJS04-SS01-000	MCYAN	Nickel	10.9	1.52	mg/kg		7/8/97
SJS04-SS01-000	MCYAN	Potassium	2480	48.22	mg/kg		7/8/97
SJS04-SS01-000	MCYAN	Selenium		0.65	mg/kg	U	7/8/97
SJS04-SS01-000	MCYAN	Silver	1.1	0.22	mg/kg	B	7/8/97
SJS04-SS01-000	MCYAN	Sodium	270	12.6	mg/kg	J	7/8/97
SJS04-SS01-000	MCYAN	Thallium	3.4	0.43	mg/kg		7/8/97
SJS04-SS01-000	MCYAN	Vanadium	75	1.95	mg/kg		7/8/97
SJS04-SS01-000	MCYAN	Zinc	76.2	1.09	mg/kg		7/8/97
SJS04-SS01-000	PSPCB	4,4'-DDD		4.5	ug/kg	U	7/23/97
SJS04-SS01-000	PSPCB	4,4'-DDE	4.8	4.5	ug/kg	J	7/23/97
SJS04-SS01-000	PSPCB	4,4'-DDT	11	4.5	ug/kg	J	7/23/97
SJS04-SS01-000	PSPCB	Aldrin		2.3	ug/kg	U	7/23/97
SJS04-SS01-000	PSPCB	alpha-BHC		2.3	ug/kg	U	7/23/97
SJS04-SS01-000	PSPCB	alpha-Chlordane		2.3	ug/kg	U	7/23/97
SJS04-SS01-000	PSPCB	Aroclor-1016		45	ug/kg	U	7/23/97
SJS04-SS01-000	PSPCB	Aroclor-1221		92	ug/kg	U	7/23/97
SJS04-SS01-000	PSPCB	Aroclor-1232		45	ug/kg	U	7/23/97
SJS04-SS01-000	PSPCB	Aroclor-1242		45	ug/kg	U	7/23/97
SJS04-SS01-000	PSPCB	Aroclor-1248		45	ug/kg	U	7/23/97
SJS04-SS01-000	PSPCB	Aroclor-1254		45	ug/kg	U	7/23/97
SJS04-SS01-000	PSPCB	Aroclor-1260		45	ug/kg	U	7/23/97
SJS04-SS01-000	PSPCB	beta-BHC		2.3	ug/kg	U	7/23/97
SJS04-SS01-000	PSPCB	delta-BHC		2.3	ug/kg	U	7/23/97
SJS04-SS01-000	PSPCB	Dieldrin		4.5	ug/kg	U	7/23/97
SJS04-SS01-000	PSPCB	Endosulfan I		2.3	ug/kg	U	7/23/97
SJS04-SS01-000	PSPCB	Endosulfan II		4.5	ug/kg	U	7/23/97
SJS04-SS01-000	PSPCB	Endosulfan Sulfate		4.5	ug/kg	U	7/23/97
SJS04-SS01-000	PSPCB	Endrin		4.5	ug/kg	U	7/23/97
SJS04-SS01-000	PSPCB	Endrin Aldehyde		4.5	ug/kg	U	7/23/97
SJS04-SS01-000	PSPCB	Endrin Ketone		4.5	ug/kg	U	7/23/97
SJS04-SS01-000	PSPCB	gamma-BHC		2.3	ug/kg	U	7/23/97
SJS04-SS01-000	PSPCB	gamma-Chlordane		2.3	ug/kg	U	7/23/97
SJS04-SS01-000	PSPCB	Heptachlor		2.3	ug/kg	U	7/23/97
SJS04-SS01-000	PSPCB	Heptachlor Epoxide		2.3	ug/kg	U	7/23/97
SJS04-SS01-000	PSPCB	Methoxychlor		23	ug/kg	U	7/23/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS04-SS01-000	PSPCB	Toxaphene		230	ug/kg	U	7/23/97
SJS04-SS01-000	SVTCL	1,2,4-Trichlorobenzene		450	ug/kg	U	7/20/97
SJS04-SS01-000	SVTCL	1,2-Dichlorobenzene		450	ug/kg	U	7/20/97
SJS04-SS01-000	SVTCL	1,3-Dichlorobenzene		450	ug/kg	U	7/20/97
SJS04-SS01-000	SVTCL	1,4-Dichlorobenzene		450	ug/kg	U	7/20/97
SJS04-SS01-000	SVTCL	2,2'-oxybis(1-Chloropropane		450	ug/kg	U	7/20/97
SJS04-SS01-000	SVTCL	2,4,5-Trichlorophenol		1100	ug/kg	U	7/20/97
SJS04-SS01-000	SVTCL	2,4,6-Trichlorophenol		450	ug/kg	U	7/20/97
SJS04-SS01-000	SVTCL	2,4-Dichlorophenol		450	ug/kg	U	7/20/97
SJS04-SS01-000	SVTCL	2,4-Dimethylphenol		450	ug/kg	U	7/20/97
SJS04-SS01-000	SVTCL	2,4-Dinitrophenol		1100	ug/kg	UJ	7/20/97
SJS04-SS01-000	SVTCL	2,4-Dinitrotoluene		450	ug/kg	U	7/20/97
SJS04-SS01-000	SVTCL	2,6-Dinitrotoluene		450	ug/kg	U	7/20/97
SJS04-SS01-000	SVTCL	2-Chloronaphthalene		450	ug/kg	U	7/20/97
SJS04-SS01-000	SVTCL	2-Chlorophenol		450	ug/kg	U	7/20/97
SJS04-SS01-000	SVTCL	2-Methylnaphthalene		450	ug/kg	U	7/20/97
SJS04-SS01-000	SVTCL	2-Methylphenol		450	ug/kg	U	7/20/97
SJS04-SS01-000	SVTCL	2-Nitroaniline		1100	ug/kg	U	7/20/97
SJS04-SS01-000	SVTCL	2-Nitrophenol		450	ug/kg	U	7/20/97
SJS04-SS01-000	SVTCL	3,3'-Dichlorobenzidine		450	ug/kg	U	7/20/97
SJS04-SS01-000	SVTCL	3-Nitroaniline		1100	ug/kg	U	7/20/97
SJS04-SS01-000	SVTCL	4,6-Dinitro-2-Methylphenol		1100	ug/kg	U	7/20/97
SJS04-SS01-000	SVTCL	4-Bromophenyl phenylether		450	ug/kg	U	7/20/97
SJS04-SS01-000	SVTCL	4-Chloro-3-Methylphenol		450	ug/kg	U	7/20/97
SJS04-SS01-000	SVTCL	4-Chloroaniline		450	ug/kg	U	7/20/97
SJS04-SS01-000	SVTCL	4-Chlorophenyl-phenylether		450	ug/kg	U	7/20/97
SJS04-SS01-000	SVTCL	4-Methylphenol		450	ug/kg	U	7/20/97
SJS04-SS01-000	SVTCL	4-Nitroaniline		1100	ug/kg	U	7/20/97
SJS04-SS01-000	SVTCL	4-Nitrophenol		1100	ug/kg	U	7/20/97
SJS04-SS01-000	SVTCL	Acenaphthene		450	ug/kg	U	7/20/97
SJS04-SS01-000	SVTCL	Acenaphthylene	89	450	ug/kg	J	7/20/97
SJS04-SS01-000	SVTCL	Anthracene	95	450	ug/kg	J	7/20/97
SJS04-SS01-000	SVTCL	Benzo(a)Anthracene	460	450	ug/kg		7/20/97
SJS04-SS01-000	SVTCL	Benzo(a)Pyrene	310	450	ug/kg	J	7/20/97
SJS04-SS01-000	SVTCL	Benzo(b)Fluoranthene	1700	450	ug/kg		7/20/97
SJS04-SS01-000	SVTCL	Benzo(g,h,i)Perylene	390	450	ug/kg	J	7/20/97
SJS04-SS01-000	SVTCL	Benzo(k)Fluoranthene	820	450	ug/kg		7/20/97
SJS04-SS01-000	SVTCL	Bis(2-chloroethoxy)Methane		450	ug/kg	U	7/20/97
SJS04-SS01-000	SVTCL	Bis(2-chloroethyl)Ether		450	ug/kg	U	7/20/97
SJS04-SS01-000	SVTCL	Bis(2-Ethylhexyl)Phthalate	130	450	ug/kg	B	7/20/97
SJS04-SS01-000	SVTCL	Butylbenzylphthalate		450	ug/kg	U	7/20/97
SJS04-SS01-000	SVTCL	Carbazole		450	ug/kg	U	7/20/97
SJS04-SS01-000	SVTCL	Chrysene	1000	450	ug/kg		7/20/97
SJS04-SS01-000	SVTCL	Di-n-Butylphthalate		450	ug/kg	U	7/20/97
SJS04-SS01-000	SVTCL	Di-n-Octyl Phthalate		450	ug/kg	U	7/20/97
SJS04-SS01-000	SVTCL	Dibenz(a,h)Anthracene	250	450	ug/kg	J	7/20/97
SJS04-SS01-000	SVTCL	Dibenzofuran	47	450	ug/kg	J	7/20/97
SJS04-SS01-000	SVTCL	Diethylphthalate		450	ug/kg	U	7/20/97
SJS04-SS01-000	SVTCL	Dimethyl Phthalate		450	ug/kg	U	7/20/97
SJS04-SS01-000	SVTCL	Fluoranthene	500	450	ug/kg		7/20/97
SJS04-SS01-000	SVTCL	Fluorene		450	ug/kg	U	7/20/97
SJS04-SS01-000	SVTCL	Hexachlorobenzene		450	ug/kg	U	7/20/97
SJS04-SS01-000	SVTCL	Hexachlorobutadiene		450	ug/kg	U	7/20/97
SJS04-SS01-000	SVTCL	Hexachlorocyclopentadien		450	ug/kg	U	7/20/97
SJS04-SS01-000	SVTCL	Hexachloroethane		450	ug/kg	U	7/20/97
SJS04-SS01-000	SVTCL	Indeno(1,2,3-cd)Pyrene	560	450	ug/kg		7/20/97
SJS04-SS01-000	SVTCL	Isophorone		450	ug/kg	U	7/20/97
SJS04-SS01-000	SVTCL	N-Nitroso-Di-n-Propylamine		450	ug/kg	U	7/20/97
SJS04-SS01-000	SVTCL	N-Nitrosodiphenylamine		450	ug/kg	U	7/20/97
SJS04-SS01-000	SVTCL	Naphthalene	83	450	ug/kg	J	7/20/97
SJS04-SS01-000	SVTCL	Nitrobenzene		450	ug/kg	U	7/20/97
SJS04-SS01-000	SVTCL	Pentachlorophenol		1100	ug/kg	U	7/20/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS04-SS01-000	SVTCL	Phenanthrene	160	450	ug/kg	J	7/20/97
SJS04-SS01-000	SVTCL	Phenol		450	ug/kg	U	7/20/97
SJS04-SS01-000	SVTCL	Pyrene	590	450	ug/kg		7/20/97
SJS04-SS01-000	VCTCL	1,1,1-Trichloroethane		13	ug/kg	UJ	7/9/97
SJS04-SS01-000	VCTCL	1,1,2,2-Tetrachloroethane		13	ug/kg	UJ	7/9/97
SJS04-SS01-000	VCTCL	1,1,2-Trichloroethane		13	ug/kg	UJ	7/9/97
SJS04-SS01-000	VCTCL	1,1-Dichloroethane		13	ug/kg	U	7/9/97
SJS04-SS01-000	VCTCL	1,1-Dichloroethene		13	ug/kg	U	7/9/97
SJS04-SS01-000	VCTCL	1,2-Dichloroethane		13	ug/kg	U	7/9/97
SJS04-SS01-000	VCTCL	1,2-Dichloroethene (total)		13	ug/kg	U	7/9/97
SJS04-SS01-000	VCTCL	1,2-Dichloropropane		13	ug/kg	UJ	7/9/97
SJS04-SS01-000	VCTCL	2-Butanone		13	ug/kg	U	7/9/97
SJS04-SS01-000	VCTCL	2-Hexanone		13	ug/kg	UJ	7/9/97
SJS04-SS01-000	VCTCL	4-Methyl-2-Pentanone		13	ug/kg	UJ	7/9/97
SJS04-SS01-000	VCTCL	Acetone		13	ug/kg	U	7/9/97
SJS04-SS01-000	VCTCL	Benzene		13	ug/kg	UJ	7/9/97
SJS04-SS01-000	VCTCL	Bromodichloromethane		13	ug/kg	UJ	7/9/97
SJS04-SS01-000	VCTCL	Bromoform		13	ug/kg	UJ	7/9/97
SJS04-SS01-000	VCTCL	Bromomethane		13	ug/kg	U	7/9/97
SJS04-SS01-000	VCTCL	Carbon Disulfide		13	ug/kg	U	7/9/97
SJS04-SS01-000	VCTCL	Carbon Tetrachloride		13	ug/kg	UJ	7/9/97
SJS04-SS01-000	VCTCL	Chlorobenzene		13	ug/kg	UJ	7/9/97
SJS04-SS01-000	VCTCL	Chloroethane		13	ug/kg	U	7/9/97
SJS04-SS01-000	VCTCL	Chloroform		13	ug/kg	U	7/9/97
SJS04-SS01-000	VCTCL	Chloromethane		13	ug/kg	U	7/9/97
SJS04-SS01-000	VCTCL	cis-1,3-Dichloropropene		13	ug/kg	UJ	7/9/97
SJS04-SS01-000	VCTCL	Dibromochloromethane		13	ug/kg	UJ	7/9/97
SJS04-SS01-000	VCTCL	Ethylbenzene		13	ug/kg	UJ	7/9/97
SJS04-SS01-000	VCTCL	Methylene Chloride	62	13	ug/kg	B	7/9/97
SJS04-SS01-000	VCTCL	Styrene		13	ug/kg	UJ	7/9/97
SJS04-SS01-000	VCTCL	Tetrachloroethene		13	ug/kg	UJ	7/9/97
SJS04-SS01-000	VCTCL	Toluene		13	ug/kg	UJ	7/9/97
SJS04-SS01-000	VCTCL	Total Xylenes		13	ug/kg	UJ	7/9/97
SJS04-SS01-000	VCTCL	Trans-1,3-Dichloropropene		13	ug/kg	UJ	7/9/97
SJS04-SS01-000	VCTCL	Trichloroethene		13	ug/kg	UJ	7/9/97
SJS04-SS01-000	VCTCL	Vinyl Chloride		13	ug/kg	U	7/9/97
SJS04-SS02-000	CTOTP	Total Phosphorous (as P)	5.3	1.3	mg/kg		7/17/97
SJS04-SS02-000	MCYAN	Aluminum	4550	8.15	mg/kg		7/8/97
SJS04-SS02-000	MCYAN	Antimony	1.3	0.37	mg/kg	L	7/8/97
SJS04-SS02-000	MCYAN	Arsenic	2.5	0.56	mg/kg	K	7/8/97
SJS04-SS02-000	MCYAN	Barium	105	0.37	mg/kg		7/8/97
SJS04-SS02-000	MCYAN	Beryllium	0.9	0.19	mg/kg	J	7/8/97
SJS04-SS02-000	MCYAN	Cadmium		0.09	mg/kg	U	7/8/97
SJS04-SS02-000	MCYAN	Calcium	3410	16.11	mg/kg	J	7/8/97
SJS04-SS02-000	MCYAN	Chromium	19.7	1.3	mg/kg		7/8/97
SJS04-SS02-000	MCYAN	Cobalt	7.9	1.48	mg/kg	J	7/8/97
SJS04-SS02-000	MCYAN	Copper	165	1.11	mg/kg		7/8/97
SJS04-SS02-000	MCYAN	Cyanide		0.5	mg/kg	U	7/8/97
SJS04-SS02-000	MCYAN	Iron	11900	3.15	mg/kg		7/8/97
SJS04-SS02-000	MCYAN	Lead	179	0.19	mg/kg		7/8/97
SJS04-SS02-000	MCYAN	Magnesium	1810	33.52	mg/kg		7/8/97
SJS04-SS02-000	MCYAN	Manganese	173	0.37	mg/kg	K	7/8/97
SJS04-SS02-000	MCYAN	Mercury	0.3	0.04	mg/kg	L	7/10/97
SJS04-SS02-000	MCYAN	Nickel	22.3	1.3	mg/kg		7/8/97
SJS04-SS02-000	MCYAN	Potassium	974	41.11	mg/kg		7/8/97
SJS04-SS02-000	MCYAN	Selenium		0.56	mg/kg	U	7/8/97
SJS04-SS02-000	MCYAN	Silver	1	0.19	mg/kg	B	7/8/97
SJS04-SS02-000	MCYAN	Sodium	140	10.74	mg/kg	B	7/8/97
SJS04-SS02-000	MCYAN	Thallium	0.89	0.37	mg/kg	J	7/8/97
SJS04-SS02-000	MCYAN	Vanadium	23	1.67	mg/kg		7/8/97
SJS04-SS02-000	MCYAN	Zinc	607	0.93	mg/kg		7/8/97
SJS04-SS02-000	PSPCB	4,4'-DDD		3.3	ug/kg	U	7/23/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS04-SS02-000	PSPCB	4,4'-DDE		3.3	ug/kg	U	7/23/97
SJS04-SS02-000	PSPCB	4,4'-DDT		3.3	ug/kg	U	7/23/97
SJS04-SS02-000	PSPCB	Aldrin		1.7	ug/kg	U	7/23/97
SJS04-SS02-000	PSPCB	alpha-BHC		1.7	ug/kg	U	7/23/97
SJS04-SS02-000	PSPCB	alpha-Chlordane		1.7	ug/kg	U	7/23/97
SJS04-SS02-000	PSPCB	Aroclor-1016		33	ug/kg	U	7/23/97
SJS04-SS02-000	PSPCB	Aroclor-1221		67	ug/kg	U	7/23/97
SJS04-SS02-000	PSPCB	Aroclor-1232		33	ug/kg	U	7/23/97
SJS04-SS02-000	PSPCB	Aroclor-1242		33	ug/kg	U	7/23/97
SJS04-SS02-000	PSPCB	Aroclor-1248		33	ug/kg	U	7/23/97
SJS04-SS02-000	PSPCB	Aroclor-1254		33	ug/kg	U	7/23/97
SJS04-SS02-000	PSPCB	Aroclor-1260		33	ug/kg	U	7/23/97
SJS04-SS02-000	PSPCB	beta-BHC		1.7	ug/kg	U	7/23/97
SJS04-SS02-000	PSPCB	delta-BHC		1.7	ug/kg	U	7/23/97
SJS04-SS02-000	PSPCB	Dieldrin		3.3	ug/kg	U	7/23/97
SJS04-SS02-000	PSPCB	Endosulfan I		1.7	ug/kg	U	7/23/97
SJS04-SS02-000	PSPCB	Endosulfan II		3.3	ug/kg	U	7/23/97
SJS04-SS02-000	PSPCB	Endosulfan Sulfate		3.3	ug/kg	U	7/23/97
SJS04-SS02-000	PSPCB	Endrin		3.3	ug/kg	U	7/23/97
SJS04-SS02-000	PSPCB	Endrin Aldehyde		3.3	ug/kg	U	7/23/97
SJS04-SS02-000	PSPCB	Endrin Ketone		3.3	ug/kg	U	7/23/97
SJS04-SS02-000	PSPCB	gamma-BHC		1.7	ug/kg	U	7/23/97
SJS04-SS02-000	PSPCB	gamma-Chlordane		1.7	ug/kg	U	7/23/97
SJS04-SS02-000	PSPCB	Heptachlor		1.7	ug/kg	U	7/23/97
SJS04-SS02-000	PSPCB	Heptachlor Epoxide		1.7	ug/kg	U	7/23/97
SJS04-SS02-000	PSPCB	Methoxychlor		17	ug/kg	U	7/23/97
SJS04-SS02-000	PSPCB	Toxaphene		170	ug/kg	U	7/23/97
SJS04-SS02-000	SVTCL	1,2,4-Trichlorobenzene		340	ug/kg	U	7/21/97
SJS04-SS02-000	SVTCL	1,2-Dichlorobenzene		340	ug/kg	U	7/21/97
SJS04-SS02-000	SVTCL	1,3-Dichlorobenzene		340	ug/kg	U	7/21/97
SJS04-SS02-000	SVTCL	1,4-Dichlorobenzene		340	ug/kg	U	7/21/97
SJS04-SS02-000	SVTCL	2,2'-oxybis(1-Chloropropane		340	ug/kg	U	7/21/97
SJS04-SS02-000	SVTCL	2,4,5-Trichlorophenol		840	ug/kg	U	7/21/97
SJS04-SS02-000	SVTCL	2,4,6-Trichlorophenol		340	ug/kg	U	7/21/97
SJS04-SS02-000	SVTCL	2,4-Dichlorophenol		340	ug/kg	U	7/21/97
SJS04-SS02-000	SVTCL	2,4-Dimethylphenol		340	ug/kg	U	7/21/97
SJS04-SS02-000	SVTCL	2,4-Dinitrophenol		840	ug/kg	U	7/21/97
SJS04-SS02-000	SVTCL	2,4-Dinitrotoluene		340	ug/kg	U	7/21/97
SJS04-SS02-000	SVTCL	2,6-Dinitrotoluene		340	ug/kg	U	7/21/97
SJS04-SS02-000	SVTCL	2-Chloronaphthalene		340	ug/kg	U	7/21/97
SJS04-SS02-000	SVTCL	2-Chlorophenol		340	ug/kg	U	7/21/97
SJS04-SS02-000	SVTCL	2-Methylnaphthalene		340	ug/kg	U	7/21/97
SJS04-SS02-000	SVTCL	2-Methylphenol		340	ug/kg	U	7/21/97
SJS04-SS02-000	SVTCL	2-Nitroaniline		840	ug/kg	U	7/21/97
SJS04-SS02-000	SVTCL	2-Nitrophenol		340	ug/kg	U	7/21/97
SJS04-SS02-000	SVTCL	3,3'-Dichlorobenzidine		340	ug/kg	U	7/21/97
SJS04-SS02-000	SVTCL	3-Nitroaniline		840	ug/kg	U	7/21/97
SJS04-SS02-000	SVTCL	4,6-Dinitro-2-Methylphenol		840	ug/kg	U	7/21/97
SJS04-SS02-000	SVTCL	4-Bromophenyl phenylether		340	ug/kg	U	7/21/97
SJS04-SS02-000	SVTCL	4-Chloro-3-Methylphenol		340	ug/kg	U	7/21/97
SJS04-SS02-000	SVTCL	4-Chloroaniline		340	ug/kg	U	7/21/97
SJS04-SS02-000	SVTCL	4-Chlorophenyl-phenylether		340	ug/kg	U	7/21/97
SJS04-SS02-000	SVTCL	4-Methylphenol		340	ug/kg	U	7/21/97
SJS04-SS02-000	SVTCL	4-Nitroaniline		840	ug/kg	U	7/21/97
SJS04-SS02-000	SVTCL	4-Nitrophenol		840	ug/kg	U	7/21/97
SJS04-SS02-000	SVTCL	Acenaphthene		340	ug/kg	U	7/21/97
SJS04-SS02-000	SVTCL	Acenaphthylene		340	ug/kg	U	7/21/97
SJS04-SS02-000	SVTCL	Anthracene		340	ug/kg	U	7/21/97
SJS04-SS02-000	SVTCL	Benzo(a)Anthracene	39	340	ug/kg	J	7/21/97
SJS04-SS02-000	SVTCL	Benzo(a)Pyrene	35	340	ug/kg	J	7/21/97
SJS04-SS02-000	SVTCL	Benzo(b)Fluoranthene	79	340	ug/kg	J	7/21/97
SJS04-SS02-000	SVTCL	Benzo(g,h,i)Perylene	55	340	ug/kg	J	7/21/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS04-SS02-000	SVTCL	Benzo(k)Fluoranthene	37	340	ug/kg	J	7/21/97
SJS04-SS02-000	SVTCL	Bis(2-chloroethoxy)Methane		340	ug/kg	U	7/21/97
SJS04-SS02-000	SVTCL	Bis(2-chloroethyl)Ether		340	ug/kg	U	7/21/97
SJS04-SS02-000	SVTCL	Bis(2-Ethylhexyl)Phthalate	260	340	ug/kg	B	7/21/97
SJS04-SS02-000	SVTCL	Butylbenzylphthalate		340	ug/kg	U	7/21/97
SJS04-SS02-000	SVTCL	Carbazole		340	ug/kg	U	7/21/97
SJS04-SS02-000	SVTCL	Chrysene	39	340	ug/kg	J	7/21/97
SJS04-SS02-000	SVTCL	Di-n-Butylphthalate		340	ug/kg	U	7/21/97
SJS04-SS02-000	SVTCL	Di-n-Octyl Phthalate		340	ug/kg	U	7/21/97
SJS04-SS02-000	SVTCL	Dibenz(a,h)Anthracene		340	ug/kg	U	7/21/97
SJS04-SS02-000	SVTCL	Dibenzofuran		340	ug/kg	U	7/21/97
SJS04-SS02-000	SVTCL	Diethylphthalate		340	ug/kg	U	7/21/97
SJS04-SS02-000	SVTCL	Dimethyl Phthalate		340	ug/kg	U	7/21/97
SJS04-SS02-000	SVTCL	Fluoranthene	49	340	ug/kg	J	7/21/97
SJS04-SS02-000	SVTCL	Fluorene		340	ug/kg	U	7/21/97
SJS04-SS02-000	SVTCL	Hexachlorobenzene		340	ug/kg	U	7/21/97
SJS04-SS02-000	SVTCL	Hexachlorobutadiene		340	ug/kg	U	7/21/97
SJS04-SS02-000	SVTCL	Hexachlorocyclopentadien		340	ug/kg	U	7/21/97
SJS04-SS02-000	SVTCL	Hexachloroethane		340	ug/kg	U	7/21/97
SJS04-SS02-000	SVTCL	Indeno(1,2,3-cd)Pyrene	46	340	ug/kg	J	7/21/97
SJS04-SS02-000	SVTCL	Isophorone		340	ug/kg	U	7/21/97
SJS04-SS02-000	SVTCL	N-Nitroso-Di-n-Propylamine		340	ug/kg	U	7/21/97
SJS04-SS02-000	SVTCL	N-Nitrosodiphenylamine		340	ug/kg	U	7/21/97
SJS04-SS02-000	SVTCL	Naphthalene		340	ug/kg	U	7/21/97
SJS04-SS02-000	SVTCL	Nitrobenzene		340	ug/kg	U	7/21/97
SJS04-SS02-000	SVTCL	Pentachlorophenol		840	ug/kg	U	7/21/97
SJS04-SS02-000	SVTCL	Phenanthrene		340	ug/kg	U	7/21/97
SJS04-SS02-000	SVTCL	Phenol		340	ug/kg	U	7/21/97
SJS04-SS02-000	SVTCL	Pyrene	56	340	ug/kg	J	7/21/97
SJS04-SS02-000	VCTCL	1,1,1-Trichloroethane		16	ug/kg	U	7/10/97
SJS04-SS02-000	VCTCL	1,1,2,2-Tetrachloroethane		16	ug/kg	UJ	7/10/97
SJS04-SS02-000	VCTCL	1,1,2-Trichloroethane		16	ug/kg	U	7/10/97
SJS04-SS02-000	VCTCL	1,1-Dichloroethane		16	ug/kg	U	7/10/97
SJS04-SS02-000	VCTCL	1,1-Dichloroethene		16	ug/kg	U	7/10/97
SJS04-SS02-000	VCTCL	1,2-Dichloroethane		16	ug/kg	U	7/10/97
SJS04-SS02-000	VCTCL	1,2-Dichloroethene (total)		16	ug/kg	U	7/10/97
SJS04-SS02-000	VCTCL	1,2-Dichloropropane		16	ug/kg	U	7/10/97
SJS04-SS02-000	VCTCL	2-Butanone		16	ug/kg	U	7/10/97
SJS04-SS02-000	VCTCL	2-Hexanone		16	ug/kg	UJ	7/10/97
SJS04-SS02-000	VCTCL	4-Methyl-2-Pentanone		16	ug/kg	UJ	7/10/97
SJS04-SS02-000	VCTCL	Acetone		16	ug/kg	U	7/10/97
SJS04-SS02-000	VCTCL	Benzene		16	ug/kg	U	7/10/97
SJS04-SS02-000	VCTCL	Bromodichloromethane		16	ug/kg	U	7/10/97
SJS04-SS02-000	VCTCL	Bromoform		16	ug/kg	U	7/10/97
SJS04-SS02-000	VCTCL	Bromomethane		16	ug/kg	U	7/10/97
SJS04-SS02-000	VCTCL	Carbon Disulfide		16	ug/kg	U	7/10/97
SJS04-SS02-000	VCTCL	Carbon Tetrachloride		16	ug/kg	U	7/10/97
SJS04-SS02-000	VCTCL	Chlorobenzene		16	ug/kg	UJ	7/10/97
SJS04-SS02-000	VCTCL	Chloroethane		16	ug/kg	U	7/10/97
SJS04-SS02-000	VCTCL	Chloroform		16	ug/kg	U	7/10/97
SJS04-SS02-000	VCTCL	Chloromethane		16	ug/kg	U	7/10/97
SJS04-SS02-000	VCTCL	cis-1,3-Dichloropropene		16	ug/kg	U	7/10/97
SJS04-SS02-000	VCTCL	Dibromochloromethane		16	ug/kg	U	7/10/97
SJS04-SS02-000	VCTCL	Ethylbenzene		16	ug/kg	UJ	7/10/97
SJS04-SS02-000	VCTCL	Methylene Chloride	110	16	ug/kg	B	7/10/97
SJS04-SS02-000	VCTCL	Styrene		16	ug/kg	UJ	7/10/97
SJS04-SS02-000	VCTCL	Tetrachloroethene		16	ug/kg	UJ	7/10/97
SJS04-SS02-000	VCTCL	Toluene		16	ug/kg	UJ	7/10/97
SJS04-SS02-000	VCTCL	Total Xylenes		16	ug/kg	UJ	7/10/97
SJS04-SS02-000	VCTCL	Trans-1,3-Dichloropropene		16	ug/kg	U	7/10/97
SJS04-SS02-000	VCTCL	Trichloroethene		16	ug/kg	U	7/10/97
SJS04-SS02-000	VCTCL	Vinyl Chloride		16	ug/kg	U	7/10/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS04-SS03-000	CTOTP	Total Phosphorous (as P)	5.9	1.3	mg/kg		7/17/97
SJS04-SS03-000	IMCYAN	Aluminum	4300	8.51	mg/kg		7/8/97
SJS04-SS03-000	IMCYAN	Antimony	1.9	0.39	mg/kg	L	7/8/97
SJS04-SS03-000	IMCYAN	Arsenic	2.3	0.58	mg/kg	K	7/8/97
SJS04-SS03-000	IMCYAN	Barium	84.2	0.39	mg/kg		7/8/97
SJS04-SS03-000	IMCYAN	Beryllium	1.1	0.19	mg/kg		7/8/97
SJS04-SS03-000	IMCYAN	Cadmium		0.1	mg/kg	U	7/8/97
SJS04-SS03-000	IMCYAN	Calcium	1280	16.84	mg/kg	J	7/8/97
SJS04-SS03-000	IMCYAN	Chromium	17.7	1.35	mg/kg		7/8/97
SJS04-SS03-000	IMCYAN	Cobalt	6.5	1.55	mg/kg	J	7/8/97
SJS04-SS03-000	IMCYAN	Copper	117	1.16	mg/kg		7/8/97
SJS04-SS03-000	IMCYAN	Cyanide		0.51	mg/kg	U	7/8/97
SJS04-SS03-000	IMCYAN	Iron	11800	3.29	mg/kg		7/8/97
SJS04-SS03-000	IMCYAN	Lead	198	0.19	mg/kg		7/8/97
SJS04-SS03-000	IMCYAN	Magnesium	1430	35.03	mg/kg		7/8/97
SJS04-SS03-000	IMCYAN	Manganese	159	0.39	mg/kg	K	7/8/97
SJS04-SS03-000	IMCYAN	Mercury	0.28	0.04	mg/kg	L	7/10/97
SJS04-SS03-000	IMCYAN	Nickel	17.3	1.35	mg/kg		7/8/97
SJS04-SS03-000	IMCYAN	Potassium	723	42.96	mg/kg	J	7/8/97
SJS04-SS03-000	IMCYAN	Selenium		0.58	mg/kg	U	7/8/97
SJS04-SS03-000	IMCYAN	Silver		0.19	mg/kg	U	7/8/97
SJS04-SS03-000	IMCYAN	Sodium	380	11.22	mg/kg	J	7/8/97
SJS04-SS03-000	IMCYAN	Thallium	0.5	0.39	mg/kg	J	7/8/97
SJS04-SS03-000	IMCYAN	Vanadium	31	1.74	mg/kg		7/8/97
SJS04-SS03-000	IMCYAN	Zinc	577	0.97	mg/kg		7/8/97
SJS04-SS03-000	PSPCB	4,4'-DDD	3.8	3.3	ug/kg	J	7/23/97
SJS04-SS03-000	PSPCB	4,4'-DDE		3.3	ug/kg	U	7/23/97
SJS04-SS03-000	PSPCB	4,4'-DDT	14	3.3	ug/kg	J	7/23/97
SJS04-SS03-000	PSPCB	Aldrin		1.7	ug/kg	U	7/23/97
SJS04-SS03-000	PSPCB	alpha-BHC		1.7	ug/kg	U	7/23/97
SJS04-SS03-000	PSPCB	alpha-Chlordane		1.7	ug/kg	U	7/23/97
SJS04-SS03-000	PSPCB	Aroclor-1016		33	ug/kg	U	7/23/97
SJS04-SS03-000	PSPCB	Aroclor-1221		68	ug/kg	U	7/23/97
SJS04-SS03-000	PSPCB	Aroclor-1232		33	ug/kg	U	7/23/97
SJS04-SS03-000	PSPCB	Aroclor-1242		33	ug/kg	U	7/23/97
SJS04-SS03-000	PSPCB	Aroclor-1248		33	ug/kg	U	7/23/97
SJS04-SS03-000	PSPCB	Aroclor-1254		33	ug/kg	U	7/23/97
SJS04-SS03-000	PSPCB	Aroclor-1260		33	ug/kg	U	7/23/97
SJS04-SS03-000	PSPCB	beta-BHC		1.7	ug/kg	U	7/23/97
SJS04-SS03-000	PSPCB	delta-BHC		1.7	ug/kg	U	7/23/97
SJS04-SS03-000	PSPCB	Dieldrin		3.3	ug/kg	U	7/23/97
SJS04-SS03-000	PSPCB	Endosulfan I		1.7	ug/kg	U	7/23/97
SJS04-SS03-000	PSPCB	Endosulfan II		3.3	ug/kg	U	7/23/97
SJS04-SS03-000	PSPCB	Endosulfan Sulfate		3.3	ug/kg	U	7/23/97
SJS04-SS03-000	PSPCB	Endrin		3.3	ug/kg	U	7/23/97
SJS04-SS03-000	PSPCB	Endrin Aldehyde		3.3	ug/kg	U	7/23/97
SJS04-SS03-000	PSPCB	Endrin Ketone		3.3	ug/kg	U	7/23/97
SJS04-SS03-000	PSPCB	gamma-BHC		1.7	ug/kg	U	7/23/97
SJS04-SS03-000	PSPCB	gamma-Chlordane		1.7	ug/kg	U	7/23/97
SJS04-SS03-000	PSPCB	Heptachlor		1.7	ug/kg	U	7/23/97
SJS04-SS03-000	PSPCB	Heptachlor Epoxide		1.7	ug/kg	U	7/23/97
SJS04-SS03-000	PSPCB	Methoxychlor		17	ug/kg	U	7/23/97
SJS04-SS03-000	PSPCB	Toxaphene		170	ug/kg	U	7/23/97
SJS04-SS03-000	SVTCL	1,2,4-Trichlorobenzene		1700	ug/kg	U	7/20/97
SJS04-SS03-000	SVTCL	1,2-Dichlorobenzene		1700	ug/kg	U	7/20/97
SJS04-SS03-000	SVTCL	1,3-Dichlorobenzene		1700	ug/kg	U	7/20/97
SJS04-SS03-000	SVTCL	1,4-Dichlorobenzene		1700	ug/kg	U	7/20/97
SJS04-SS03-000	SVTCL	2,2'-oxybis(1-Chloropropane		1700	ug/kg	U	7/20/97
SJS04-SS03-000	SVTCL	2,4,5-Trichlorophenol		4200	ug/kg	U	7/20/97
SJS04-SS03-000	SVTCL	2,4,6-Trichlorophenol		1700	ug/kg	U	7/20/97
SJS04-SS03-000	SVTCL	2,4-Dichlorophenol		1700	ug/kg	U	7/20/97
SJS04-SS03-000	SVTCL	2,4-Dimethylphenol		1700	ug/kg	U	7/20/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS04-SS03-000	SVTCL	2,4-Dinitrophenol		4200	ug/kg	UJ	7/20/97
SJS04-SS03-000	SVTCL	2,4-Dinitrotoluene		1700	ug/kg	U	7/20/97
SJS04-SS03-000	SVTCL	2,6-Dinitrotoluene		1700	ug/kg	U	7/20/97
SJS04-SS03-000	SVTCL	2-Chloronaphthalene		1700	ug/kg	U	7/20/97
SJS04-SS03-000	SVTCL	2-Chlorophenol		1700	ug/kg	U	7/20/97
SJS04-SS03-000	SVTCL	2-Methylnaphthalene		1700	ug/kg	U	7/20/97
SJS04-SS03-000	SVTCL	2-Methylphenol		1700	ug/kg	U	7/20/97
SJS04-SS03-000	SVTCL	2-Nitroaniline		4200	ug/kg	U	7/20/97
SJS04-SS03-000	SVTCL	2-Nitrophenol		1700	ug/kg	U	7/20/97
SJS04-SS03-000	SVTCL	3,3'-Dichlorobenzidine		1700	ug/kg	U	7/20/97
SJS04-SS03-000	SVTCL	3-Nitroaniline		4200	ug/kg	U	7/20/97
SJS04-SS03-000	SVTCL	4,6-Dinitro-2-Methylphenol		4200	ug/kg	U	7/20/97
SJS04-SS03-000	SVTCL	4-Bromophenyl phenylether		1700	ug/kg	U	7/20/97
SJS04-SS03-000	SVTCL	4-Chloro-3-Methylphenol		1700	ug/kg	U	7/20/97
SJS04-SS03-000	SVTCL	4-Chloroaniline		1700	ug/kg	U	7/20/97
SJS04-SS03-000	SVTCL	4-Chlorophenyl-phenylether		1700	ug/kg	U	7/20/97
SJS04-SS03-000	SVTCL	4-Methylphenol		1700	ug/kg	U	7/20/97
SJS04-SS03-000	SVTCL	4-Nitroaniline		4200	ug/kg	U	7/20/97
SJS04-SS03-000	SVTCL	4-Nitrophenol		4200	ug/kg	U	7/20/97
SJS04-SS03-000	SVTCL	Acenaphthene		1700	ug/kg	U	7/20/97
SJS04-SS03-000	SVTCL	Acenaphthylene		1700	ug/kg	U	7/20/97
SJS04-SS03-000	SVTCL	Anthracene		1700	ug/kg	U	7/20/97
SJS04-SS03-000	SVTCL	Benzo(a)Anthracene	450	1700	ug/kg	J	7/20/97
SJS04-SS03-000	SVTCL	Benzo(a)Pyrene	390	1700	ug/kg	J	7/20/97
SJS04-SS03-000	SVTCL	Benzo(b)Fluoranthene	430	1700	ug/kg	J	7/20/97
SJS04-SS03-000	SVTCL	Benzo(g,h,i)Perylene	270	1700	ug/kg	J	7/20/97
SJS04-SS03-000	SVTCL	Benzo(k)Fluoranthene	460	1700	ug/kg	J	7/20/97
SJS04-SS03-000	SVTCL	Bis(2-chloroethoxy)Methane		1700	ug/kg	U	7/20/97
SJS04-SS03-000	SVTCL	Bis(2-chloroethyl)Ether		1700	ug/kg	U	7/20/97
SJS04-SS03-000	SVTCL	Bis(2-Ethylhexyl)Phthalate		1700	ug/kg	U	7/20/97
SJS04-SS03-000	SVTCL	Butylbenzylphthalate		1700	ug/kg	U	7/20/97
SJS04-SS03-000	SVTCL	Carbazole		1700	ug/kg	U	7/20/97
SJS04-SS03-000	SVTCL	Chrysene	510	1700	ug/kg	J	7/20/97
SJS04-SS03-000	SVTCL	Di-n-Butylphthalate		1700	ug/kg	U	7/20/97
SJS04-SS03-000	SVTCL	Di-n-Octyl Phthalate		1700	ug/kg	U	7/20/97
SJS04-SS03-000	SVTCL	Dibenz(a,h)Anthracene		1700	ug/kg	U	7/20/97
SJS04-SS03-000	SVTCL	Dibenzofuran		1700	ug/kg	U	7/20/97
SJS04-SS03-000	SVTCL	Diethylphthalate		1700	ug/kg	U	7/20/97
SJS04-SS03-000	SVTCL	Dimethyl Phthalate		1700	ug/kg	U	7/20/97
SJS04-SS03-000	SVTCL	Fluoranthene	1000	1700	ug/kg	J	7/20/97
SJS04-SS03-000	SVTCL	Fluorene		1700	ug/kg	U	7/20/97
SJS04-SS03-000	SVTCL	Hexachlorobenzene		1700	ug/kg	U	7/20/97
SJS04-SS03-000	SVTCL	Hexachlorobutadiene		1700	ug/kg	U	7/20/97
SJS04-SS03-000	SVTCL	Hexachlorocyclopentadien		1700	ug/kg	U	7/20/97
SJS04-SS03-000	SVTCL	Hexachloroethane		1700	ug/kg	U	7/20/97
SJS04-SS03-000	SVTCL	Indeno(1,2,3-cd)Pyrene	280	1700	ug/kg	J	7/20/97
SJS04-SS03-000	SVTCL	Isophorone		1700	ug/kg	U	7/20/97
SJS04-SS03-000	SVTCL	N-Nitroso-Di-n-Propylamine		1700	ug/kg	U	7/20/97
SJS04-SS03-000	SVTCL	N-Nitrosodiphenylamine		1700	ug/kg	U	7/20/97
SJS04-SS03-000	SVTCL	Naphthalene		1700	ug/kg	U	7/20/97
SJS04-SS03-000	SVTCL	Nitrobenzene		1700	ug/kg	U	7/20/97
SJS04-SS03-000	SVTCL	Pentachlorophenol		4200	ug/kg	U	7/20/97
SJS04-SS03-000	SVTCL	Phenanthrene	870	1700	ug/kg	J	7/20/97
SJS04-SS03-000	SVTCL	Phenol		1700	ug/kg	U	7/20/97
SJS04-SS03-000	SVTCL	Pyrene	1300	1700	ug/kg	J	7/20/97
SJS04-SS03-000	VCTCL	1,1,1-Trichloroethane		10	ug/kg	U	7/8/97
SJS04-SS03-000	VCTCL	1,1,2,2-Tetrachloroethane		10	ug/kg	UJ	7/8/97
SJS04-SS03-000	VCTCL	1,1,2-Trichloroethane		10	ug/kg	U	7/8/97
SJS04-SS03-000	VCTCL	1,1-Dichloroethane		10	ug/kg	U	7/8/97
SJS04-SS03-000	VCTCL	1,1-Dichloroethene		10	ug/kg	U	7/8/97
SJS04-SS03-000	VCTCL	1,2-Dichloroethane		10	ug/kg	U	7/8/97
SJS04-SS03-000	VCTCL	1,2-Dichloroethene (total)		10	ug/kg	U	7/8/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS04-SS03-000	VCTCL	1,2-Dichloropropane		10	ug/kg	U	7/8/97
SJS04-SS03-000	VCTCL	2-Butanone		10	ug/kg	U	7/8/97
SJS04-SS03-000	VCTCL	2-Hexanone		10	ug/kg	UJ	7/8/97
SJS04-SS03-000	VCTCL	4-Methyl-2-Pentanone	2	10	ug/kg	J	7/8/97
SJS04-SS03-000	VCTCL	Acetone	8	10	ug/kg	J	7/8/97
SJS04-SS03-000	VCTCL	Benzene		10	ug/kg	U	7/8/97
SJS04-SS03-000	VCTCL	Bromodichloromethane		10	ug/kg	U	7/8/97
SJS04-SS03-000	VCTCL	Bromoform		10	ug/kg	U	7/8/97
SJS04-SS03-000	VCTCL	Bromomethane		10	ug/kg	U	7/8/97
SJS04-SS03-000	VCTCL	Carbon Disulfide		10	ug/kg	U	7/8/97
SJS04-SS03-000	VCTCL	Carbon Tetrachloride		10	ug/kg	U	7/8/97
SJS04-SS03-000	VCTCL	Chlorobenzene		10	ug/kg	UJ	7/8/97
SJS04-SS03-000	VCTCL	Chloroethane		10	ug/kg	U	7/8/97
SJS04-SS03-000	VCTCL	Chloroform		10	ug/kg	U	7/8/97
SJS04-SS03-000	VCTCL	Chloromethane		10	ug/kg	U	7/8/97
SJS04-SS03-000	VCTCL	cis-1,3-Dichloropropene		10	ug/kg	U	7/8/97
SJS04-SS03-000	VCTCL	Dibromochloromethane		10	ug/kg	U	7/8/97
SJS04-SS03-000	VCTCL	Ethylbenzene		10	ug/kg	UJ	7/8/97
SJS04-SS03-000	VCTCL	Methylene Chloride	24	10	ug/kg	B	7/8/97
SJS04-SS03-000	VCTCL	Styrene		10	ug/kg	UJ	7/8/97
SJS04-SS03-000	VCTCL	Tetrachloroethene		10	ug/kg	UJ	7/8/97
SJS04-SS03-000	VCTCL	Toluene		10	ug/kg	UJ	7/8/97
SJS04-SS03-000	VCTCL	Total Xylenes		10	ug/kg	UJ	7/8/97
SJS04-SS03-000	VCTCL	Trans-1,3-Dichloropropene		10	ug/kg	U	7/8/97
SJS04-SS03-000	VCTCL	Trichloroethene		10	ug/kg	U	7/8/97
SJS04-SS03-000	VCTCL	Vinyl Chloride		10	ug/kg	U	7/8/97
SJS04-SS04-000	CTOTP	Total Phosphorous (as P)	6.1	1.3	mg/kg		7/18/97
SJS04-SS04-000	MCYAN	Aluminum	6720	7	mg/kg		7/11/97
SJS04-SS04-000	MCYAN	Antimony	0.67	0.32	mg/kg	J	7/16/97
SJS04-SS04-000	MCYAN	Arsenic	10.9	0.48	mg/kg		7/16/97
SJS04-SS04-000	MCYAN	Barium	74.6	0.32	mg/kg		7/11/97
SJS04-SS04-000	MCYAN	Beryllium	0.75	0.16	mg/kg	J	7/11/97
SJS04-SS04-000	MCYAN	Cadmium	0.3	0.08	mg/kg	J	7/16/97
SJS04-SS04-000	MCYAN	Calcium	2840	13.84	mg/kg		7/11/97
SJS04-SS04-000	MCYAN	Chromium	36.2	1.11	mg/kg		7/11/97
SJS04-SS04-000	MCYAN	Cobalt	5.2	1.27	mg/kg	J	7/11/97
SJS04-SS04-000	MCYAN	Copper	280	0.95	mg/kg		7/11/97
SJS04-SS04-000	MCYAN	Cyanide		0.5	mg/kg	U	7/8/97
SJS04-SS04-000	MCYAN	Iron	13800	2.7	mg/kg		7/11/97
SJS04-SS04-000	MCYAN	Lead	158	0.16	mg/kg		7/16/97
SJS04-SS04-000	MCYAN	Magnesium	976	28.8	mg/kg		7/11/97
SJS04-SS04-000	MCYAN	Manganese	101	0.32	mg/kg		7/11/97
SJS04-SS04-000	MCYAN	Mercury	0.84	0.04	mg/kg		7/15/97
SJS04-SS04-000	MCYAN	Nickel	109	1.11	mg/kg		7/11/97
SJS04-SS04-000	MCYAN	Potassium	954	35.32	mg/kg		7/11/97
SJS04-SS04-000	MCYAN	Selenium		0.48	mg/kg	U	7/16/97
SJS04-SS04-000	MCYAN	Silver	0.8	0.16	mg/kg	B	7/16/97
SJS04-SS04-000	MCYAN	Sodium	135	9.23	mg/kg	B	7/11/97
SJS04-SS04-000	MCYAN	Thallium	1.2	0.32	mg/kg	B	7/16/97
SJS04-SS04-000	MCYAN	Vanadium	354	1.43	mg/kg		7/11/97
SJS04-SS04-000	MCYAN	Zinc	353	0.8	mg/kg		7/11/97
SJS04-SS04-000	PSPCB	4,4'-DDD		3.3	ug/kg	U	7/28/97
SJS04-SS04-000	PSPCB	4,4'-DDE	3.5	3.3	ug/kg		7/28/97
SJS04-SS04-000	PSPCB	4,4'-DDT	6.1	3.3	ug/kg	J	7/28/97
SJS04-SS04-000	PSPCB	Aldrin		1.7	ug/kg	U	7/28/97
SJS04-SS04-000	PSPCB	alpha-BHC		1.7	ug/kg	U	7/28/97
SJS04-SS04-000	PSPCB	alpha-Chlordane		1.7	ug/kg	U	7/28/97
SJS04-SS04-000	PSPCB	Aroclor-1016		33	ug/kg	U	7/28/97
SJS04-SS04-000	PSPCB	Aroclor-1221		68	ug/kg	U	7/28/97
SJS04-SS04-000	PSPCB	Aroclor-1232		33	ug/kg	U	7/28/97
SJS04-SS04-000	PSPCB	Aroclor-1242		33	ug/kg	U	7/28/97
SJS04-SS04-000	PSPCB	Aroclor-1248		33	ug/kg	U	7/28/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS04-SS04-000	PSPCB	Aroclor-1254		33	ug/kg	U	7/28/97
SJS04-SS04-000	PSPCB	Aroclor-1260	22	33	ug/kg	J	7/28/97
SJS04-SS04-000	PSPCB	beta-BHC		1.7	ug/kg	U	7/28/97
SJS04-SS04-000	PSPCB	delta-BHC		1.7	ug/kg	U	7/28/97
SJS04-SS04-000	PSPCB	Dieldrin	3.4	3.3	ug/kg	J	7/28/97
SJS04-SS04-000	PSPCB	Endosulfan I		1.7	ug/kg	U	7/28/97
SJS04-SS04-000	PSPCB	Endosulfan II		3.3	ug/kg	U	7/28/97
SJS04-SS04-000	PSPCB	Endosulfan Sulfate		3.3	ug/kg	U	7/28/97
SJS04-SS04-000	PSPCB	Endrin		3.3	ug/kg	U	7/28/97
SJS04-SS04-000	PSPCB	Endrin Aldehyde		3.3	ug/kg	U	7/28/97
SJS04-SS04-000	PSPCB	Endrin Ketone		3.3	ug/kg	U	7/28/97
SJS04-SS04-000	PSPCB	gamma-BHC		1.7	ug/kg	U	7/28/97
SJS04-SS04-000	PSPCB	gamma-Chlordane		1.7	ug/kg	U	7/28/97
SJS04-SS04-000	PSPCB	Heptachlor		1.7	ug/kg	U	7/28/97
SJS04-SS04-000	PSPCB	Heptachlor Epoxide		1.7	ug/kg	U	7/28/97
SJS04-SS04-000	PSPCB	Methoxychlor		17	ug/kg	U	7/28/97
SJS04-SS04-000	PSPCB	Toxaphene		170	ug/kg	U	7/28/97
SJS04-SS04-000	SVTCL	1,2,4-Trichlorobenzene		1700	ug/kg	U	7/23/97
SJS04-SS04-000	SVTCL	1,2-Dichlorobenzene		1700	ug/kg	U	7/23/97
SJS04-SS04-000	SVTCL	1,3-Dichlorobenzene		1700	ug/kg	U	7/23/97
SJS04-SS04-000	SVTCL	1,4-Dichlorobenzene		1700	ug/kg	U	7/23/97
SJS04-SS04-000	SVTCL	2,2'-oxybis(1-Chloropropane		1700	ug/kg	U	7/23/97
SJS04-SS04-000	SVTCL	2,4,5-Trichlorophenol		4200	ug/kg	U	7/23/97
SJS04-SS04-000	SVTCL	2,4,6-Trichlorophenol		1700	ug/kg	U	7/23/97
SJS04-SS04-000	SVTCL	2,4-Dichlorophenol		1700	ug/kg	U	7/23/97
SJS04-SS04-000	SVTCL	2,4-Dimethylphenol		1700	ug/kg	U	7/23/97
SJS04-SS04-000	SVTCL	2,4-Dinitrophenol		4200	ug/kg	U	7/23/97
SJS04-SS04-000	SVTCL	2,4-Dinitrotoluene		1700	ug/kg	U	7/23/97
SJS04-SS04-000	SVTCL	2,6-Dinitrotoluene		1700	ug/kg	U	7/23/97
SJS04-SS04-000	SVTCL	2-Chloronaphthalene		1700	ug/kg	U	7/23/97
SJS04-SS04-000	SVTCL	2-Chlorophenol		1700	ug/kg	U	7/23/97
SJS04-SS04-000	SVTCL	2-Methylnaphthalene		1700	ug/kg	U	7/23/97
SJS04-SS04-000	SVTCL	2-Methylphenol		1700	ug/kg	U	7/23/97
SJS04-SS04-000	SVTCL	2-Nitroaniline		4200	ug/kg	U	7/23/97
SJS04-SS04-000	SVTCL	2-Nitrophenol		1700	ug/kg	U	7/23/97
SJS04-SS04-000	SVTCL	3,3'-Dichlorobenzidine		1700	ug/kg	U	7/23/97
SJS04-SS04-000	SVTCL	3-Nitroaniline		4200	ug/kg	U	7/23/97
SJS04-SS04-000	SVTCL	4,6-Dinitro-2-Methylphenol		4200	ug/kg	U	7/23/97
SJS04-SS04-000	SVTCL	4-Bromophenyl phenylether		1700	ug/kg	U	7/23/97
SJS04-SS04-000	SVTCL	4-Chloro-3-Methylphenol		1700	ug/kg	U	7/23/97
SJS04-SS04-000	SVTCL	4-Chloroaniline		1700	ug/kg	U	7/23/97
SJS04-SS04-000	SVTCL	4-Chlorophenyl-phenylether		1700	ug/kg	U	7/23/97
SJS04-SS04-000	SVTCL	4-Methylphenol		1700	ug/kg	U	7/23/97
SJS04-SS04-000	SVTCL	4-Nitroaniline		4200	ug/kg	U	7/23/97
SJS04-SS04-000	SVTCL	4-Nitrophenol		4200	ug/kg	U	7/23/97
SJS04-SS04-000	SVTCL	Acenaphthene		1700	ug/kg	U	7/23/97
SJS04-SS04-000	SVTCL	Acenaphthylene		1700	ug/kg	U	7/23/97
SJS04-SS04-000	SVTCL	Anthracene		1700	ug/kg	U	7/23/97
SJS04-SS04-000	SVTCL	Benzo(a)Anthracene	260	1700	ug/kg	J	7/23/97
SJS04-SS04-000	SVTCL	Benzo(a)Pyrene	250	1700	ug/kg	J	7/23/97
SJS04-SS04-000	SVTCL	Benzo(b)Fluoranthene	390	1700	ug/kg	J	7/23/97
SJS04-SS04-000	SVTCL	Benzo(g,h,i)Perylene		1700	ug/kg	UJ	7/23/97
SJS04-SS04-000	SVTCL	Benzo(k)Fluoranthene		1700	ug/kg	UJ	7/23/97
SJS04-SS04-000	SVTCL	Bis(2-chloroethoxy)Methane		1700	ug/kg	U	7/23/97
SJS04-SS04-000	SVTCL	Bis(2-chloroethyl)Ether		1700	ug/kg	U	7/23/97
SJS04-SS04-000	SVTCL	Bis(2-Ethylhexyl)Phthalate		1700	ug/kg	U	7/23/97
SJS04-SS04-000	SVTCL	Butylbenzylphthalate		1700	ug/kg	U	7/23/97
SJS04-SS04-000	SVTCL	Carbazole		1700	ug/kg	U	7/23/97
SJS04-SS04-000	SVTCL	Chrysene	230	1700	ug/kg	J	7/23/97
SJS04-SS04-000	SVTCL	Di-n-Butylphthalate		1700	ug/kg	U	7/23/97
SJS04-SS04-000	SVTCL	Di-n-Octyl Phthalate		1700	ug/kg	UJ	7/23/97
SJS04-SS04-000	SVTCL	Dibenz(a,h)Anthracene		1700	ug/kg	UJ	7/23/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS04-SS04-000	SVTCL	Dibenzofuran		1700	ug/kg	U	7/23/97
SJS04-SS04-000	SVTCL	Diethylphthalate		1700	ug/kg	U	7/23/97
SJS04-SS04-000	SVTCL	Dimethyl Phthalate		1700	ug/kg	U	7/23/97
SJS04-SS04-000	SVTCL	Fluoranthene	470	1700	ug/kg	J	7/23/97
SJS04-SS04-000	SVTCL	Fluorene		1700	ug/kg	U	7/23/97
SJS04-SS04-000	SVTCL	Hexachlorobenzene		1700	ug/kg	U	7/23/97
SJS04-SS04-000	SVTCL	Hexachlorobutadiene		1700	ug/kg	U	7/23/97
SJS04-SS04-000	SVTCL	Hexachlorocyclopentadien		1700	ug/kg	U	7/23/97
SJS04-SS04-000	SVTCL	Hexachloroethane		1700	ug/kg	U	7/23/97
SJS04-SS04-000	SVTCL	Indeno(1,2,3-cd)Pyrene		1700	ug/kg	UJ	7/23/97
SJS04-SS04-000	SVTCL	Isophorone		1700	ug/kg	U	7/23/97
SJS04-SS04-000	SVTCL	N-Nitroso-Di-n-Propylamine		1700	ug/kg	U	7/23/97
SJS04-SS04-000	SVTCL	N-Nitrosodiphenylamine		1700	ug/kg	U	7/23/97
SJS04-SS04-000	SVTCL	Naphthalene		1700	ug/kg	U	7/23/97
SJS04-SS04-000	SVTCL	Nitrobenzene		1700	ug/kg	U	7/23/97
SJS04-SS04-000	SVTCL	Pentachlorophenol		4200	ug/kg	U	7/23/97
SJS04-SS04-000	SVTCL	Phenanthrene	280	1700	ug/kg	J	7/23/97
SJS04-SS04-000	SVTCL	Phenol		1700	ug/kg	U	7/23/97
SJS04-SS04-000	SVTCL	Pyrene	490	1700	ug/kg	J	7/23/97
SJS04-SS04-000	VCTCL	1,1,1-Trichloroethane		10	ug/kg	U	7/8/97
SJS04-SS04-000	VCTCL	1,1,2,2-Tetrachloroethane		10	ug/kg	UJ	7/8/97
SJS04-SS04-000	VCTCL	1,1,2-Trichloroethane		10	ug/kg	U	7/8/97
SJS04-SS04-000	VCTCL	1,1-Dichloroethane		10	ug/kg	U	7/8/97
SJS04-SS04-000	VCTCL	1,1-Dichloroethene		10	ug/kg	U	7/8/97
SJS04-SS04-000	VCTCL	1,2-Dichloroethane		10	ug/kg	U	7/8/97
SJS04-SS04-000	VCTCL	1,2-Dichloroethene (total)		10	ug/kg	U	7/8/97
SJS04-SS04-000	VCTCL	1,2-Dichloropropane		10	ug/kg	U	7/8/97
SJS04-SS04-000	VCTCL	2-Butanone	28	10	ug/kg		7/8/97
SJS04-SS04-000	VCTCL	2-Hexanone		10	ug/kg	UJ	7/8/97
SJS04-SS04-000	VCTCL	4-Methyl-2-Pentanone		10	ug/kg	UJ	7/8/97
SJS04-SS04-000	VCTCL	Acetone	8	10	ug/kg	J	7/8/97
SJS04-SS04-000	VCTCL	Benzene		10	ug/kg	U	7/8/97
SJS04-SS04-000	VCTCL	Bromodichloromethane		10	ug/kg	U	7/8/97
SJS04-SS04-000	VCTCL	Bromoform		10	ug/kg	U	7/8/97
SJS04-SS04-000	VCTCL	Bromomethane		10	ug/kg	U	7/8/97
SJS04-SS04-000	VCTCL	Carbon Disulfide		10	ug/kg	U	7/8/97
SJS04-SS04-000	VCTCL	Carbon Tetrachloride		10	ug/kg	U	7/8/97
SJS04-SS04-000	VCTCL	Chlorobenzene		10	ug/kg	UJ	7/8/97
SJS04-SS04-000	VCTCL	Chloroethane		10	ug/kg	U	7/8/97
SJS04-SS04-000	VCTCL	Chloroform		10	ug/kg	U	7/8/97
SJS04-SS04-000	VCTCL	Chloromethane		10	ug/kg	U	7/8/97
SJS04-SS04-000	VCTCL	cis-1,3-Dichloropropene		10	ug/kg	U	7/8/97
SJS04-SS04-000	VCTCL	Dibromochloromethane		10	ug/kg	U	7/8/97
SJS04-SS04-000	VCTCL	Ethylbenzene		10	ug/kg	UJ	7/8/97
SJS04-SS04-000	VCTCL	Methylene Chloride	29	10	ug/kg	B	7/8/97
SJS04-SS04-000	VCTCL	Styrene		10	ug/kg	UJ	7/8/97
SJS04-SS04-000	VCTCL	Tetrachloroethene		10	ug/kg	UJ	7/8/97
SJS04-SS04-000	VCTCL	Toluene		10	ug/kg	UJ	7/8/97
SJS04-SS04-000	VCTCL	Total Xylenes		10	ug/kg	UJ	7/8/97
SJS04-SS04-000	VCTCL	Trans-1,3-Dichloropropene		10	ug/kg	U	7/8/97
SJS04-SS04-000	VCTCL	Trichloroethene		10	ug/kg	U	7/8/97
SJS04-SS04-000	VCTCL	Vinyl Chloride		10	ug/kg	U	7/8/97
SJS04-SS05-000	CTOTP	Total Phosphorous (as P)	3	1.3	mg/kg		7/18/97
SJS04-SS05-000	MCYAN	Aluminum	6370	6.63	mg/kg		7/11/97
SJS04-SS05-000	MCYAN	Antimony	4.7	0.3	mg/kg	J	7/16/97
SJS04-SS05-000	MCYAN	Arsenic	6.5	0.45	mg/kg		7/16/97
SJS04-SS05-000	MCYAN	Barium	79.3	0.3	mg/kg		7/11/97
SJS04-SS05-000	MCYAN	Beryllium	0.26	0.15	mg/kg	J	7/11/97
SJS04-SS05-000	MCYAN	Cadmium		0.08	mg/kg	U	7/16/97
SJS04-SS05-000	MCYAN	Calcium	11500	13.1	mg/kg		7/11/97
SJS04-SS05-000	MCYAN	Chromium	323	1.05	mg/kg		7/11/97
SJS04-SS05-000	MCYAN	Cobalt	9.6	1.2	mg/kg		7/11/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS04-SS05-000	MCYAN	Copper	596	0.9	mg/kg		7/11/97
SJS04-SS05-000	MCYAN	Cyanide		0.5	mg/kg	U	7/8/97
SJS04-SS05-000	MCYAN	Iron	29500	2.56	mg/kg		7/11/97
SJS04-SS05-000	MCYAN	Lead	219	0.15	mg/kg		7/16/97
SJS04-SS05-000	MCYAN	Magnesium	1460	27.26	mg/kg		7/11/97
SJS04-SS05-000	MCYAN	Manganese	352	0.3	mg/kg		7/11/97
SJS04-SS05-000	MCYAN	Mercury	1	0.05	mg/kg		7/15/97
SJS04-SS05-000	MCYAN	Nickel	413	1.05	mg/kg		7/11/97
SJS04-SS05-000	MCYAN	Potassium	1010	33.44	mg/kg		7/11/97
SJS04-SS05-000	MCYAN	Selenium		0.45	mg/kg	U	7/16/97
SJS04-SS05-000	MCYAN	Silver	1.6	0.15	mg/kg		7/16/97
SJS04-SS05-000	MCYAN	Sodium	135	8.74	mg/kg	B	7/11/97
SJS04-SS05-000	MCYAN	Thallium	1.6	0.3	mg/kg	B	7/16/97
SJS04-SS05-000	MCYAN	Vanadium	32.8	1.36	mg/kg		7/11/97
SJS04-SS05-000	MCYAN	Zinc	338	0.75	mg/kg		7/11/97
SJS04-SS05-000	PSPCB	4,4'-DDD	13	21	ug/kg	J	7/27/97
SJS04-SS05-000	PSPCB	4,4'-DDE	37	21	ug/kg		7/27/97
SJS04-SS05-000	PSPCB	4,4'-DDT	40	21	ug/kg	J	7/27/97
SJS04-SS05-000	PSPCB	Aldrin		11	ug/kg	U	7/27/97
SJS04-SS05-000	PSPCB	alpha-BHC		11	ug/kg	U	7/27/97
SJS04-SS05-000	PSPCB	alpha-Chlordane	12	11	ug/kg	J	7/27/97
SJS04-SS05-000	PSPCB	Aroclor-1016		210	ug/kg	U	7/27/97
SJS04-SS05-000	PSPCB	Aroclor-1221		420	ug/kg	U	7/27/97
SJS04-SS05-000	PSPCB	Aroclor-1232		210	ug/kg	U	7/27/97
SJS04-SS05-000	PSPCB	Aroclor-1242		210	ug/kg	U	7/27/97
SJS04-SS05-000	PSPCB	Aroclor-1248		210	ug/kg	U	7/27/97
SJS04-SS05-000	PSPCB	Aroclor-1254		210	ug/kg	U	7/27/97
SJS04-SS05-000	PSPCB	Aroclor-1260	170	210	ug/kg	J	7/27/97
SJS04-SS05-000	PSPCB	beta-BHC		11	ug/kg	U	7/27/97
SJS04-SS05-000	PSPCB	delta-BHC		11	ug/kg	U	7/27/97
SJS04-SS05-000	PSPCB	Dieldrin	32	21	ug/kg	J	7/27/97
SJS04-SS05-000	PSPCB	Endosulfan I		11	ug/kg	U	7/27/97
SJS04-SS05-000	PSPCB	Endosulfan II		21	ug/kg	U	7/27/97
SJS04-SS05-000	PSPCB	Endosulfan Sulfate		21	ug/kg	U	7/27/97
SJS04-SS05-000	PSPCB	Endrin		21	ug/kg	U	7/27/97
SJS04-SS05-000	PSPCB	Endrin Aldehyde		21	ug/kg	U	7/27/97
SJS04-SS05-000	PSPCB	Endrin Ketone		21	ug/kg	U	7/27/97
SJS04-SS05-000	PSPCB	gamma-BHC		11	ug/kg	U	7/27/97
SJS04-SS05-000	PSPCB	gamma-Chlordane	11	11	ug/kg	J	7/27/97
SJS04-SS05-000	PSPCB	Heptachlor		11	ug/kg	U	7/27/97
SJS04-SS05-000	PSPCB	Heptachlor Epoxide		11	ug/kg	U	7/27/97
SJS04-SS05-000	PSPCB	Methoxychlor		110	ug/kg	U	7/27/97
SJS04-SS05-000	PSPCB	Toxaphene		1100	ug/kg	U	7/27/97
SJS04-SS05-000	SVTCL	1,2,4-Trichlorobenzene		2100	ug/kg	U	7/22/97
SJS04-SS05-000	SVTCL	1,2-Dichlorobenzene		2100	ug/kg	U	7/22/97
SJS04-SS05-000	SVTCL	1,3-Dichlorobenzene		2100	ug/kg	U	7/22/97
SJS04-SS05-000	SVTCL	1,4-Dichlorobenzene		2100	ug/kg	U	7/22/97
SJS04-SS05-000	SVTCL	2,2'-oxybis(1-Chloropropane		2100	ug/kg	U	7/22/97
SJS04-SS05-000	SVTCL	2,4,5-Trichlorophenol		5200	ug/kg	U	7/22/97
SJS04-SS05-000	SVTCL	2,4,6-Trichlorophenol		2100	ug/kg	U	7/22/97
SJS04-SS05-000	SVTCL	2,4-Dichlorophenol		2100	ug/kg	U	7/22/97
SJS04-SS05-000	SVTCL	2,4-Dimethylphenol		2100	ug/kg	U	7/22/97
SJS04-SS05-000	SVTCL	2,4-Dinitrophenol		5200	ug/kg	U	7/22/97
SJS04-SS05-000	SVTCL	2,4-Dinitrotoluene		2100	ug/kg	U	7/22/97
SJS04-SS05-000	SVTCL	2,6-Dinitrotoluene		2100	ug/kg	U	7/22/97
SJS04-SS05-000	SVTCL	2-Chloronaphthalene		2100	ug/kg	U	7/22/97
SJS04-SS05-000	SVTCL	2-Chlorophenol		2100	ug/kg	U	7/22/97
SJS04-SS05-000	SVTCL	2-Methylnaphthalene		2100	ug/kg	U	7/22/97
SJS04-SS05-000	SVTCL	2-Methylphenol		2100	ug/kg	U	7/22/97
SJS04-SS05-000	SVTCL	2-Nitroaniline		5200	ug/kg	U	7/22/97
SJS04-SS05-000	SVTCL	2-Nitrophenol		2100	ug/kg	U	7/22/97
SJS04-SS05-000	SVTCL	3,3'-Dichlorobenzidine		2100	ug/kg	U	7/22/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS04-SS05-000	SVTCL	3-Nitroaniline		5200	ug/kg	U	7/22/97
SJS04-SS05-000	SVTCL	4,6-Dinitro-2-Methylphenol		5200	ug/kg	U	7/22/97
SJS04-SS05-000	SVTCL	4-Bromophenyl phenylether		2100	ug/kg	U	7/22/97
SJS04-SS05-000	SVTCL	4-Chloro-3-Methylphenol		2100	ug/kg	U	7/22/97
SJS04-SS05-000	SVTCL	4-Chloroaniline		2100	ug/kg	U	7/22/97
SJS04-SS05-000	SVTCL	4-Chlorophenyl-phenylether		2100	ug/kg	U	7/22/97
SJS04-SS05-000	SVTCL	4-Methylphenol		2100	ug/kg	U	7/22/97
SJS04-SS05-000	SVTCL	4-Nitroaniline		5200	ug/kg	U	7/22/97
SJS04-SS05-000	SVTCL	4-Nitrophenol		5200	ug/kg	U	7/22/97
SJS04-SS05-000	SVTCL	Acenaphthene		2100	ug/kg	U	7/22/97
SJS04-SS05-000	SVTCL	Acenaphthylene		2100	ug/kg	U	7/22/97
SJS04-SS05-000	SVTCL	Anthracene		2100	ug/kg	U	7/22/97
SJS04-SS05-000	SVTCL	Benzo(a)Anthracene	1400	2100	ug/kg	J	7/22/97
SJS04-SS05-000	SVTCL	Benzo(a)Pyrene	1300	2100	ug/kg	J	7/22/97
SJS04-SS05-000	SVTCL	Benzo(b)Fluoranthene	1900	2100	ug/kg	J	7/22/97
SJS04-SS05-000	SVTCL	Benzo(g,h,i)Perylene	770	2100	ug/kg	J	7/22/97
SJS04-SS05-000	SVTCL	Benzo(k)Fluoranthene	770	2100	ug/kg	J	7/22/97
SJS04-SS05-000	SVTCL	Bis(2-chloroethoxy)Methane		2100	ug/kg	U	7/22/97
SJS04-SS05-000	SVTCL	Bis(2-chloroethyl)Ether		2100	ug/kg	U	7/22/97
SJS04-SS05-000	SVTCL	Bis(2-Ethylhexyl)Phthalate	260	2100	ug/kg	B	7/22/97
SJS04-SS05-000	SVTCL	Butylbenzylphthalate		2100	ug/kg	U	7/22/97
SJS04-SS05-000	SVTCL	Carbazole	300	2100	ug/kg	J	7/22/97
SJS04-SS05-000	SVTCL	Chrysene	1800	2100	ug/kg	J	7/22/97
SJS04-SS05-000	SVTCL	Di-n-Butylphthalate		2100	ug/kg	U	7/22/97
SJS04-SS05-000	SVTCL	Di-n-Octyl Phthalate		2100	ug/kg	U	7/22/97
SJS04-SS05-000	SVTCL	Dibenz(a,h)Anthracene		2100	ug/kg	U	7/22/97
SJS04-SS05-000	SVTCL	Dibenzofuran		2100	ug/kg	U	7/22/97
SJS04-SS05-000	SVTCL	Diethylphthalate		2100	ug/kg	U	7/22/97
SJS04-SS05-000	SVTCL	Dimethyl Phthalate		2100	ug/kg	U	7/22/97
SJS04-SS05-000	SVTCL	Fluoranthene	3300	2100	ug/kg		7/22/97
SJS04-SS05-000	SVTCL	Fluorene		2100	ug/kg	U	7/22/97
SJS04-SS05-000	SVTCL	Hexachlorobenzene		2100	ug/kg	U	7/22/97
SJS04-SS05-000	SVTCL	Hexachlorobutadiene		2100	ug/kg	U	7/22/97
SJS04-SS05-000	SVTCL	Hexachlorocyclopentadien		2100	ug/kg	U	7/22/97
SJS04-SS05-000	SVTCL	Hexachloroethane		2100	ug/kg	U	7/22/97
SJS04-SS05-000	SVTCL	Indeno(1,2,3-cd)Pyrene	750	2100	ug/kg	J	7/22/97
SJS04-SS05-000	SVTCL	Isophorone		2100	ug/kg	U	7/22/97
SJS04-SS05-000	SVTCL	N-Nitroso-Di-n-Propylamine		2100	ug/kg	U	7/22/97
SJS04-SS05-000	SVTCL	N-Nitrosodiphenylamine		2100	ug/kg	U	7/22/97
SJS04-SS05-000	SVTCL	Naphthalene		2100	ug/kg	U	7/22/97
SJS04-SS05-000	SVTCL	Nitrobenzene		2100	ug/kg	U	7/22/97
SJS04-SS05-000	SVTCL	Pentachlorophenol		5200	ug/kg	U	7/22/97
SJS04-SS05-000	SVTCL	Phenanthrene	2200	2100	ug/kg		7/22/97
SJS04-SS05-000	SVTCL	Phenol		2100	ug/kg	U	7/22/97
SJS04-SS05-000	SVTCL	Pyrene	3100	2100	ug/kg		7/22/97
SJS04-SS05-000	VCTCL	1,1,1-Trichloroethane		10	ug/kg	U	7/8/97
SJS04-SS05-000	VCTCL	1,1,2,2-Tetrachloroethane		10	ug/kg	U	7/8/97
SJS04-SS05-000	VCTCL	1,1,2-Trichloroethane		10	ug/kg	U	7/8/97
SJS04-SS05-000	VCTCL	1,1-Dichloroethane		10	ug/kg	U	7/8/97
SJS04-SS05-000	VCTCL	1,1-Dichloroethene		10	ug/kg	U	7/8/97
SJS04-SS05-000	VCTCL	1,2-Dichloroethane		10	ug/kg	U	7/8/97
SJS04-SS05-000	VCTCL	1,2-Dichloroethene (total)		10	ug/kg	U	7/8/97
SJS04-SS05-000	VCTCL	1,2-Dichloropropane		10	ug/kg	U	7/8/97
SJS04-SS05-000	VCTCL	2-Butanone		10	ug/kg	U	7/8/97
SJS04-SS05-000	VCTCL	2-Hexanone		10	ug/kg	U	7/8/97
SJS04-SS05-000	VCTCL	4-Methyl-2-Pentanone		10	ug/kg	U	7/8/97
SJS04-SS05-000	VCTCL	Acetone		10	ug/kg	U	7/8/97
SJS04-SS05-000	VCTCL	Benzene		10	ug/kg	U	7/8/97
SJS04-SS05-000	VCTCL	Bromodichloromethane		10	ug/kg	U	7/8/97
SJS04-SS05-000	VCTCL	Bromoform		10	ug/kg	U	7/8/97
SJS04-SS05-000	VCTCL	Bromomethane		10	ug/kg	U	7/8/97
SJS04-SS05-000	VCTCL	Carbon Disulfide		10	ug/kg	U	7/8/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS04-SS05-000	VCTCL	Carbon Tetrachloride		10	ug/kg	U	7/8/97
SJS04-SS05-000	VCTCL	Chlorobenzene		10	ug/kg	U	7/8/97
SJS04-SS05-000	VCTCL	Chloroethane		10	ug/kg	U	7/8/97
SJS04-SS05-000	VCTCL	Chloroform		10	ug/kg	U	7/8/97
SJS04-SS05-000	VCTCL	Chloromethane		10	ug/kg	U	7/8/97
SJS04-SS05-000	VCTCL	cis-1,3-Dichloropropene		10	ug/kg	U	7/8/97
SJS04-SS05-000	VCTCL	Dibromochloromethane		10	ug/kg	U	7/8/97
SJS04-SS05-000	VCTCL	Ethylbenzene		10	ug/kg	U	7/8/97
SJS04-SS05-000	VCTCL	Methylene Chloride	19	10	ug/kg	B	7/8/97
SJS04-SS05-000	VCTCL	Styrene		10	ug/kg	U	7/8/97
SJS04-SS05-000	VCTCL	Tetrachloroethene		10	ug/kg	U	7/8/97
SJS04-SS05-000	VCTCL	Toluene		10	ug/kg	U	7/8/97
SJS04-SS05-000	VCTCL	Total Xylenes		10	ug/kg	U	7/8/97
SJS04-SS05-000	VCTCL	Trans-1,3-Dichloropropene		10	ug/kg	U	7/8/97
SJS04-SS05-000	VCTCL	Trichloroethene		10	ug/kg	U	7/8/97
SJS04-SS05-000	VCTCL	Vinyl Chloride		10	ug/kg	U	7/8/97
SJS04-SS05-000P	CTOTP	Total Phosphorous (as P)	1.4	1.2	mg/kg		7/18/97
SJS04-SS05-000P	MCYAN	Aluminum	4640	8.44	mg/kg		7/11/97
SJS04-SS05-000P	MCYAN	Antimony	9.1	0.38	mg/kg	J	7/16/97
SJS04-SS05-000P	MCYAN	Arsenic	7.1	0.58	mg/kg		7/16/97
SJS04-SS05-000P	MCYAN	Barium	91.7	0.38	mg/kg		7/11/97
SJS04-SS05-000P	MCYAN	Beryllium	0.28	0.19	mg/kg	J	7/11/97
SJS04-SS05-000P	MCYAN	Cadmium	0.17	0.1	mg/kg	J	7/16/97
SJS04-SS05-000P	MCYAN	Calcium	6300	16.69	mg/kg		7/11/97
SJS04-SS05-000P	MCYAN	Chromium	680	1.34	mg/kg		7/11/97
SJS04-SS05-000P	MCYAN	Cobalt	10.6	1.53	mg/kg		7/11/97
SJS04-SS05-000P	MCYAN	Copper	324	1.15	mg/kg		7/11/97
SJS04-SS05-000P	MCYAN	Cyanide		0.5	mg/kg	U	7/8/97
SJS04-SS05-000P	MCYAN	Iron	24700	3.26	mg/kg		7/11/97
SJS04-SS05-000P	MCYAN	Lead	243	0.19	mg/kg		7/16/97
SJS04-SS05-000P	MCYAN	Magnesium	1340	34.72	mg/kg		7/11/97
SJS04-SS05-000P	MCYAN	Manganese	349	0.38	mg/kg		7/11/97
SJS04-SS05-000P	MCYAN	Mercury	1.1	0.05	mg/kg		7/15/97
SJS04-SS05-000P	MCYAN	Nickel	546	1.34	mg/kg		7/11/97
SJS04-SS05-000P	MCYAN	Potassium	824	42.58	mg/kg	J	7/11/97
SJS04-SS05-000P	MCYAN	Selenium		0.58	mg/kg	U	7/16/97
SJS04-SS05-000P	MCYAN	Silver	1	0.19	mg/kg	B	7/16/97
SJS04-SS05-000P	MCYAN	Sodium	98	11.13	mg/kg	B	7/11/97
SJS04-SS05-000P	MCYAN	Thallium	1.6	0.38	mg/kg	B	7/16/97
SJS04-SS05-000P	MCYAN	Vanadium	31.7	1.73	mg/kg		7/11/97
SJS04-SS05-000P	MCYAN	Zinc	336	0.96	mg/kg		7/11/97
SJS04-SS05-000P	PSPCB	4,4'-DDD	15	21	ug/kg	J	7/27/97
SJS04-SS05-000P	PSPCB	4,4'-DDE	32	21	ug/kg		7/27/97
SJS04-SS05-000P	PSPCB	4,4'-DDT	32	21	ug/kg	J	7/27/97
SJS04-SS05-000P	PSPCB	Aldrin		11	ug/kg	U	7/27/97
SJS04-SS05-000P	PSPCB	alpha-BHC		11	ug/kg	U	7/27/97
SJS04-SS05-000P	PSPCB	alpha-Chlordane	10	11	ug/kg	J	7/27/97
SJS04-SS05-000P	PSPCB	Aroclor-1016		210	ug/kg	U	7/27/97
SJS04-SS05-000P	PSPCB	Aroclor-1221		430	ug/kg	U	7/27/97
SJS04-SS05-000P	PSPCB	Aroclor-1232		210	ug/kg	U	7/27/97
SJS04-SS05-000P	PSPCB	Aroclor-1242		210	ug/kg	U	7/27/97
SJS04-SS05-000P	PSPCB	Aroclor-1248		210	ug/kg	U	7/27/97
SJS04-SS05-000P	PSPCB	Aroclor-1254		210	ug/kg	U	7/27/97
SJS04-SS05-000P	PSPCB	Aroclor-1260	200	210	ug/kg	J	7/27/97
SJS04-SS05-000P	PSPCB	beta-BHC		11	ug/kg	U	7/27/97
SJS04-SS05-000P	PSPCB	delta-BHC		11	ug/kg	U	7/27/97
SJS04-SS05-000P	PSPCB	Dieldrin	29	21	ug/kg	J	7/27/97
SJS04-SS05-000P	PSPCB	Endosulfan I		11	ug/kg	U	7/27/97
SJS04-SS05-000P	PSPCB	Endosulfan II		21	ug/kg	U	7/27/97
SJS04-SS05-000P	PSPCB	Endosulfan Sulfate		21	ug/kg	U	7/27/97
SJS04-SS05-000P	PSPCB	Endrin		21	ug/kg	U	7/27/97
SJS04-SS05-000P	PSPCB	Endrin Aldehyde		21	ug/kg	U	7/27/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS04-SS05-000P	PSPCB	Endrin Ketone		21	ug/kg	U	7/27/97
SJS04-SS05-000P	PSPCB	gamma-BHC		11	ug/kg	U	7/27/97
SJS04-SS05-000P	PSPCB	gamma-Chlordane	10	11	ug/kg	J	7/27/97
SJS04-SS05-000P	PSPCB	Heptachlor		11	ug/kg	U	7/27/97
SJS04-SS05-000P	PSPCB	Heptachlor Epoxide		11	ug/kg	U	7/27/97
SJS04-SS05-000P	PSPCB	Methoxychlor		110	ug/kg	U	7/27/97
SJS04-SS05-000P	PSPCB	Toxaphene		1100	ug/kg	U	7/27/97
SJS04-SS05-000P	SVTCL	1,2,4-Trichlorobenzene		2100	ug/kg	U	7/22/97
SJS04-SS05-000P	SVTCL	1,2-Dichlorobenzene		2100	ug/kg	U	7/22/97
SJS04-SS05-000P	SVTCL	1,3-Dichlorobenzene		2100	ug/kg	U	7/22/97
SJS04-SS05-000P	SVTCL	1,4-Dichlorobenzene		2100	ug/kg	U	7/22/97
SJS04-SS05-000P	SVTCL	2,2'-oxybis(1-Chloropropane		2100	ug/kg	U	7/22/97
SJS04-SS05-000P	SVTCL	2,4,5-Trichlorophenol		5400	ug/kg	U	7/22/97
SJS04-SS05-000P	SVTCL	2,4,6-Trichlorophenol		2100	ug/kg	U	7/22/97
SJS04-SS05-000P	SVTCL	2,4-Dichlorophenol		2100	ug/kg	U	7/22/97
SJS04-SS05-000P	SVTCL	2,4-Dimethylphenol		2100	ug/kg	U	7/22/97
SJS04-SS05-000P	SVTCL	2,4-Dinitrophenol		5400	ug/kg	U	7/22/97
SJS04-SS05-000P	SVTCL	2,4-Dinitrotoluene		2100	ug/kg	U	7/22/97
SJS04-SS05-000P	SVTCL	2,6-Dinitrotoluene		2100	ug/kg	U	7/22/97
SJS04-SS05-000P	SVTCL	2-Chloronaphthalene		2100	ug/kg	U	7/22/97
SJS04-SS05-000P	SVTCL	2-Chlorophenol		2100	ug/kg	U	7/22/97
SJS04-SS05-000P	SVTCL	2-Methylnaphthalene		2100	ug/kg	U	7/22/97
SJS04-SS05-000P	SVTCL	2-Methylphenol		2100	ug/kg	U	7/22/97
SJS04-SS05-000P	SVTCL	2-Nitroaniline		5400	ug/kg	U	7/22/97
SJS04-SS05-000P	SVTCL	2-Nitrophenol		2100	ug/kg	U	7/22/97
SJS04-SS05-000P	SVTCL	3,3'-Dichlorobenzidine		2100	ug/kg	U	7/22/97
SJS04-SS05-000P	SVTCL	3-Nitroaniline		5400	ug/kg	U	7/22/97
SJS04-SS05-000P	SVTCL	4,6-Dinitro-2-Methylphenol		5400	ug/kg	U	7/22/97
SJS04-SS05-000P	SVTCL	4-Bromophenyl phenylether		2100	ug/kg	U	7/22/97
SJS04-SS05-000P	SVTCL	4-Chloro-3-Methylphenol		2100	ug/kg	U	7/22/97
SJS04-SS05-000P	SVTCL	4-Chloroaniline		2100	ug/kg	U	7/22/97
SJS04-SS05-000P	SVTCL	4-Chlorophenyl-phenylether		2100	ug/kg	U	7/22/97
SJS04-SS05-000P	SVTCL	4-Methylphenol		2100	ug/kg	U	7/22/97
SJS04-SS05-000P	SVTCL	4-Nitroaniline		5400	ug/kg	U	7/22/97
SJS04-SS05-000P	SVTCL	4-Nitrophenol		5400	ug/kg	U	7/22/97
SJS04-SS05-000P	SVTCL	Acenaphthene		2100	ug/kg	U	7/22/97
SJS04-SS05-000P	SVTCL	Acenaphthylene		2100	ug/kg	U	7/22/97
SJS04-SS05-000P	SVTCL	Anthracene		2100	ug/kg	U	7/22/97
SJS04-SS05-000P	SVTCL	Benzo(a)Anthracene	790	2100	ug/kg	J	7/22/97
SJS04-SS05-000P	SVTCL	Benzo(a)Pyrene	780	2100	ug/kg	J	7/22/97
SJS04-SS05-000P	SVTCL	Benzo(b)Fluoranthene	1100	2100	ug/kg	J	7/22/97
SJS04-SS05-000P	SVTCL	Benzo(g,h,i)Perylene	570	2100	ug/kg	J	7/22/97
SJS04-SS05-000P	SVTCL	Benzo(k)Fluoranthene	500	2100	ug/kg	J	7/22/97
SJS04-SS05-000P	SVTCL	Bis(2-chloroethoxy)Methane		2100	ug/kg	U	7/22/97
SJS04-SS05-000P	SVTCL	Bis(2-chloroethyl)Ether		2100	ug/kg	U	7/22/97
SJS04-SS05-000P	SVTCL	Bis(2-Ethylhexyl)Phthalate	250	2100	ug/kg	B	7/22/97
SJS04-SS05-000P	SVTCL	Butylbenzylphthalate		2100	ug/kg	U	7/22/97
SJS04-SS05-000P	SVTCL	Carbazole		2100	ug/kg	U	7/22/97
SJS04-SS05-000P	SVTCL	Chrysene	940	2100	ug/kg	J	7/22/97
SJS04-SS05-000P	SVTCL	Di-n-Butylphthalate		2100	ug/kg	U	7/22/97
SJS04-SS05-000P	SVTCL	Di-n-Octyl Phthalate		2100	ug/kg	U	7/22/97
SJS04-SS05-000P	SVTCL	Dibenz(a,h)Anthracene		2100	ug/kg	U	7/22/97
SJS04-SS05-000P	SVTCL	Dibenzofuran		2100	ug/kg	U	7/22/97
SJS04-SS05-000P	SVTCL	Diethylphthalate		2100	ug/kg	U	7/22/97
SJS04-SS05-000P	SVTCL	Dimethyl Phthalate		2100	ug/kg	U	7/22/97
SJS04-SS05-000P	SVTCL	Fluoranthene	1300	2100	ug/kg	J	7/22/97
SJS04-SS05-000P	SVTCL	Fluorene		2100	ug/kg	U	7/22/97
SJS04-SS05-000P	SVTCL	Hexachlorobenzene		2100	ug/kg	U	7/22/97
SJS04-SS05-000P	SVTCL	Hexachlorobutadiene		2100	ug/kg	U	7/22/97
SJS04-SS05-000P	SVTCL	Hexachlorocyclopentadien		2100	ug/kg	U	7/22/97
SJS04-SS05-000P	SVTCL	Hexachloroethane		2100	ug/kg	U	7/22/97
SJS04-SS05-000P	SVTCL	Indeno(1,2,3-cd)Pyrene	510	2100	ug/kg	J	7/22/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS04-SS05-000P	SVTCL	Isophorone		2100	ug/kg	U	7/22/97
SJS04-SS05-000P	SVTCL	N-Nitroso-Di-n-Propylamine		2100	ug/kg	U	7/22/97
SJS04-SS05-000P	SVTCL	N-Nitrosodiphenylamine		2100	ug/kg	U	7/22/97
SJS04-SS05-000P	SVTCL	Naphthalene		2100	ug/kg	U	7/22/97
SJS04-SS05-000P	SVTCL	Nitrobenzene		2100	ug/kg	U	7/22/97
SJS04-SS05-000P	SVTCL	Pentachlorophenol		5400	ug/kg	U	7/22/97
SJS04-SS05-000P	SVTCL	Phenanthrene	870	2100	ug/kg	J	7/22/97
SJS04-SS05-000P	SVTCL	Phenol		2100	ug/kg	U	7/22/97
SJS04-SS05-000P	SVTCL	Pyrene	1400	2100	ug/kg	J	7/22/97
SJS04-SS05-000P	VCTCL	1,1,1-Trichloroethane		10	ug/kg	U	7/8/97
SJS04-SS05-000P	VCTCL	1,1,2,2-Tetrachloroethane		10	ug/kg	U	7/8/97
SJS04-SS05-000P	VCTCL	1,1,2-Trichloroethane		10	ug/kg	U	7/8/97
SJS04-SS05-000P	VCTCL	1,1-Dichloroethane		10	ug/kg	U	7/8/97
SJS04-SS05-000P	VCTCL	1,1-Dichloroethene		10	ug/kg	U	7/8/97
SJS04-SS05-000P	VCTCL	1,2-Dichloroethane		10	ug/kg	U	7/8/97
SJS04-SS05-000P	VCTCL	1,2-Dichloroethene (total)		10	ug/kg	U	7/8/97
SJS04-SS05-000P	VCTCL	1,2-Dichloropropane		10	ug/kg	U	7/8/97
SJS04-SS05-000P	VCTCL	2-Butanone	11	10	ug/kg		7/8/97
SJS04-SS05-000P	VCTCL	2-Hexanone		10	ug/kg	U	7/8/97
SJS04-SS05-000P	VCTCL	4-Methyl-2-Pentanone		10	ug/kg	U	7/8/97
SJS04-SS05-000P	VCTCL	Acetone	9	10	ug/kg	J	7/8/97
SJS04-SS05-000P	VCTCL	Benzene		10	ug/kg	U	7/8/97
SJS04-SS05-000P	VCTCL	Bromodichloromethane		10	ug/kg	U	7/8/97
SJS04-SS05-000P	VCTCL	Bromoform		10	ug/kg	U	7/8/97
SJS04-SS05-000P	VCTCL	Bromomethane		10	ug/kg	U	7/8/97
SJS04-SS05-000P	VCTCL	Carbon Disulfide		10	ug/kg	U	7/8/97
SJS04-SS05-000P	VCTCL	Carbon Tetrachloride		10	ug/kg	U	7/8/97
SJS04-SS05-000P	VCTCL	Chlorobenzene		10	ug/kg	U	7/8/97
SJS04-SS05-000P	VCTCL	Chloroethane		10	ug/kg	U	7/8/97
SJS04-SS05-000P	VCTCL	Chloroform		10	ug/kg	U	7/8/97
SJS04-SS05-000P	VCTCL	Chloromethane		10	ug/kg	U	7/8/97
SJS04-SS05-000P	VCTCL	cis-1,3-Dichloropropene		10	ug/kg	U	7/8/97
SJS04-SS05-000P	VCTCL	Dibromochloromethane		10	ug/kg	U	7/8/97
SJS04-SS05-000P	VCTCL	Ethylbenzene		10	ug/kg	U	7/8/97
SJS04-SS05-000P	VCTCL	Methylene Chloride	30	10	ug/kg	B	7/8/97
SJS04-SS05-000P	VCTCL	Styrene		10	ug/kg	U	7/8/97
SJS04-SS05-000P	VCTCL	Tetrachloroethene		10	ug/kg	U	7/8/97
SJS04-SS05-000P	VCTCL	Toluene		10	ug/kg	U	7/8/97
SJS04-SS05-000P	VCTCL	Total Xylenes		10	ug/kg	U	7/8/97
SJS04-SS05-000P	VCTCL	Trans-1,3-Dichloropropene		10	ug/kg	U	7/8/97
SJS04-SS05-000P	VCTCL	Trichloroethene		10	ug/kg	U	7/8/97
SJS04-SS05-000P	VCTCL	Vinyl Chloride		10	ug/kg	U	7/8/97
SJS04-SS06-000	CTOTP	Total Phosphorous (as P)	6.4	1.3	mg/kg		7/18/97
SJS04-SS06-000	MCYAN	Aluminum	3910	7.65	mg/kg		7/11/97
SJS04-SS06-000	MCYAN	Antimony	0.92	0.35	mg/kg	J	7/16/97
SJS04-SS06-000	MCYAN	Arsenic	4.9	0.52	mg/kg		7/16/97
SJS04-SS06-000	MCYAN	Barium	70.8	0.35	mg/kg		7/11/97
SJS04-SS06-000	MCYAN	Beryllium		0.17	mg/kg	U	7/11/97
SJS04-SS06-000	MCYAN	Cadmium	0.27	0.09	mg/kg	J	7/16/97
SJS04-SS06-000	MCYAN	Calcium	4120	15.13	mg/kg		7/11/97
SJS04-SS06-000	MCYAN	Chromium	36.1	1.22	mg/kg		7/11/97
SJS04-SS06-000	MCYAN	Cobalt	3.6	1.39	mg/kg	J	7/11/97
SJS04-SS06-000	MCYAN	Copper	130	1.04	mg/kg		7/11/97
SJS04-SS06-000	MCYAN	Cyanide		0.5	mg/kg	U	7/8/97
SJS04-SS06-000	MCYAN	Iron	11800	2.96	mg/kg		7/11/97
SJS04-SS06-000	MCYAN	Lead	197	0.17	mg/kg		7/16/97
SJS04-SS06-000	MCYAN	Magnesium	1200	31.48	mg/kg		7/11/97
SJS04-SS06-000	MCYAN	Manganese	139	0.35	mg/kg		7/11/97
SJS04-SS06-000	MCYAN	Mercury	1.3	0.05	mg/kg		7/15/97
SJS04-SS06-000	MCYAN	Nickel	41.2	1.22	mg/kg		7/11/97
SJS04-SS06-000	MCYAN	Potassium	879	38.61	mg/kg		7/11/97
SJS04-SS06-000	MCYAN	Selenium		0.52	mg/kg	U	7/16/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS04-SS06-000	MCYAN	Silver	0.53	0.17	mg/kg	B	7/16/97
SJS04-SS06-000	MCYAN	Sodium	68.6	10.09	mg/kg	B	7/11/97
SJS04-SS06-000	MCYAN	Thallium	0.75	0.35	mg/kg	B	7/16/97
SJS04-SS06-000	MCYAN	Vanadium	30	1.57	mg/kg		7/11/97
SJS04-SS06-000	MCYAN	Zinc	267	0.87	mg/kg		7/11/97
SJS04-SS06-000	PSPCB	4,4'-DDD	7.7	4	ug/kg	J	7/28/97
SJS04-SS06-000	PSPCB	4,4'-DDE		4	ug/kg	U	7/28/97
SJS04-SS06-000	PSPCB	4,4'-DDT	22	4	ug/kg	J	7/28/97
SJS04-SS06-000	PSPCB	Aldrin		2	ug/kg	U	7/28/97
SJS04-SS06-000	PSPCB	alpha-BHC		2	ug/kg	U	7/28/97
SJS04-SS06-000	PSPCB	alpha-Chlordane	7.4	2	ug/kg	J	7/28/97
SJS04-SS06-000	PSPCB	Aroclor-1016		40	ug/kg	U	7/28/97
SJS04-SS06-000	PSPCB	Aroclor-1221		81	ug/kg	U	7/28/97
SJS04-SS06-000	PSPCB	Aroclor-1232		40	ug/kg	U	7/28/97
SJS04-SS06-000	PSPCB	Aroclor-1242		40	ug/kg	U	7/28/97
SJS04-SS06-000	PSPCB	Aroclor-1248		40	ug/kg	U	7/28/97
SJS04-SS06-000	PSPCB	Aroclor-1254		40	ug/kg	U	7/28/97
SJS04-SS06-000	PSPCB	Aroclor-1260	50	40	ug/kg	J	7/28/97
SJS04-SS06-000	PSPCB	beta-BHC		2	ug/kg	U	7/28/97
SJS04-SS06-000	PSPCB	delta-BHC		2	ug/kg	U	7/28/97
SJS04-SS06-000	PSPCB	Dieldrin	9.3	4	ug/kg	J	7/28/97
SJS04-SS06-000	PSPCB	Endosulfan I		2	ug/kg	U	7/28/97
SJS04-SS06-000	PSPCB	Endosulfan II		4	ug/kg	U	7/28/97
SJS04-SS06-000	PSPCB	Endosulfan Sulfate		4	ug/kg	U	7/28/97
SJS04-SS06-000	PSPCB	Endrin		4	ug/kg	U	7/28/97
SJS04-SS06-000	PSPCB	Endrin Aldehyde		4	ug/kg	U	7/28/97
SJS04-SS06-000	PSPCB	Endrin Ketone		4	ug/kg	U	7/28/97
SJS04-SS06-000	PSPCB	gamma-BHC		2	ug/kg	U	7/28/97
SJS04-SS06-000	PSPCB	gamma-Chlordane	4.5	2	ug/kg	J	7/28/97
SJS04-SS06-000	PSPCB	Heptachlor		2	ug/kg	U	7/28/97
SJS04-SS06-000	PSPCB	Heptachlor Epoxide		2	ug/kg	U	7/28/97
SJS04-SS06-000	PSPCB	Methoxychlor		20	ug/kg	U	7/28/97
SJS04-SS06-000	PSPCB	Toxaphene		200	ug/kg	U	7/28/97
SJS04-SS06-000	SVTCL	1,2,4-Trichlorobenzene		40000	ug/kg	U	7/24/97
SJS04-SS06-000	SVTCL	1,2-Dichlorobenzene		40000	ug/kg	U	7/24/97
SJS04-SS06-000	SVTCL	1,3-Dichlorobenzene		40000	ug/kg	U	7/24/97
SJS04-SS06-000	SVTCL	1,4-Dichlorobenzene		40000	ug/kg	U	7/24/97
SJS04-SS06-000	SVTCL	2,2'-oxybis(1-Chloropropane		40000	ug/kg	U	7/24/97
SJS04-SS06-000	SVTCL	2,4,5-Trichlorophenol		100000	ug/kg	U	7/24/97
SJS04-SS06-000	SVTCL	2,4,6-Trichlorophenol		40000	ug/kg	U	7/24/97
SJS04-SS06-000	SVTCL	2,4-Dichlorophenol		40000	ug/kg	U	7/24/97
SJS04-SS06-000	SVTCL	2,4-Dimethylphenol		40000	ug/kg	U	7/24/97
SJS04-SS06-000	SVTCL	2,4-Dinitrophenol		100000	ug/kg	U	7/24/97
SJS04-SS06-000	SVTCL	2,4-Dinitrotoluene		40000	ug/kg	U	7/24/97
SJS04-SS06-000	SVTCL	2,6-Dinitrotoluene		40000	ug/kg	U	7/24/97
SJS04-SS06-000	SVTCL	2-Chloronaphthalene		40000	ug/kg	U	7/24/97
SJS04-SS06-000	SVTCL	2-Chlorophenol		40000	ug/kg	U	7/24/97
SJS04-SS06-000	SVTCL	2-Methylnaphthalene		40000	ug/kg	U	7/24/97
SJS04-SS06-000	SVTCL	2-Methylphenol		40000	ug/kg	U	7/24/97
SJS04-SS06-000	SVTCL	2-Nitroaniline		100000	ug/kg	U	7/24/97
SJS04-SS06-000	SVTCL	2-Nitrophenol		40000	ug/kg	U	7/24/97
SJS04-SS06-000	SVTCL	3,3'-Dichlorobenzidine		40000	ug/kg	U	7/24/97
SJS04-SS06-000	SVTCL	3-Nitroaniline		100000	ug/kg	U	7/24/97
SJS04-SS06-000	SVTCL	4,6-Dinitro-2-Methylphenol		100000	ug/kg	U	7/24/97
SJS04-SS06-000	SVTCL	4-Bromophenyl phenylether		40000	ug/kg	U	7/24/97
SJS04-SS06-000	SVTCL	4-Chloro-3-Methylphenol		40000	ug/kg	U	7/24/97
SJS04-SS06-000	SVTCL	4-Chloroaniline		40000	ug/kg	U	7/24/97
SJS04-SS06-000	SVTCL	4-Chlorophenyl-phenylether		40000	ug/kg	U	7/24/97
SJS04-SS06-000	SVTCL	4-Methylphenol		40000	ug/kg	U	7/24/97
SJS04-SS06-000	SVTCL	4-Nitroaniline		100000	ug/kg	U	7/24/97
SJS04-SS06-000	SVTCL	4-Nitrophenol		100000	ug/kg	U	7/24/97
SJS04-SS06-000	SVTCL	Acenaphthene		40000	ug/kg	U	7/24/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS04-SS06-000	SVTCL	Acenaphthylene		40000	ug/kg	U	7/24/97
SJS04-SS06-000	SVTCL	Anthracene		40000	ug/kg	U	7/24/97
SJS04-SS06-000	SVTCL	Benzo(a)Anthracene		40000	ug/kg	U	7/24/97
SJS04-SS06-000	SVTCL	Benzo(a)Pyrene		40000	ug/kg	U	7/24/97
SJS04-SS06-000	SVTCL	Benzo(b)Fluoranthene		40000	ug/kg	U	7/24/97
SJS04-SS06-000	SVTCL	Benzo(g,h,i)Perylene		40000	ug/kg	U	7/24/97
SJS04-SS06-000	SVTCL	Benzo(k)Fluoranthene		40000	ug/kg	U	7/24/97
SJS04-SS06-000	SVTCL	Bis(2-chloroethoxy)Methane		40000	ug/kg	U	7/24/97
SJS04-SS06-000	SVTCL	Bis(2-chloroethyl)Ether		40000	ug/kg	U	7/24/97
SJS04-SS06-000	SVTCL	Bis(2-Ethylhexyl)Phthalate	150000	40000	ug/kg	B	7/24/97
SJS04-SS06-000	SVTCL	Butylbenzylphthalate		40000	ug/kg	U	7/24/97
SJS04-SS06-000	SVTCL	Carbazole		40000	ug/kg	U	7/24/97
SJS04-SS06-000	SVTCL	Chrysene		40000	ug/kg	U	7/24/97
SJS04-SS06-000	SVTCL	Di-n-Butylphthalate		40000	ug/kg	U	7/24/97
SJS04-SS06-000	SVTCL	Di-n-Octyl Phthalate		40000	ug/kg	U	7/24/97
SJS04-SS06-000	SVTCL	Dibenz(a,h)Anthracene		40000	ug/kg	U	7/24/97
SJS04-SS06-000	SVTCL	Dibenzofuran		40000	ug/kg	U	7/24/97
SJS04-SS06-000	SVTCL	Diethylphthalate		40000	ug/kg	U	7/24/97
SJS04-SS06-000	SVTCL	Dimethyl Phthalate		40000	ug/kg	U	7/24/97
SJS04-SS06-000	SVTCL	Fluoranthene		40000	ug/kg	U	7/24/97
SJS04-SS06-000	SVTCL	Fluorene		40000	ug/kg	U	7/24/97
SJS04-SS06-000	SVTCL	Hexachlorobenzene		40000	ug/kg	U	7/24/97
SJS04-SS06-000	SVTCL	Hexachlorobutadiene		40000	ug/kg	U	7/24/97
SJS04-SS06-000	SVTCL	Hexachlorocyclopentadien		40000	ug/kg	U	7/24/97
SJS04-SS06-000	SVTCL	Hexachloroethane		40000	ug/kg	U	7/24/97
SJS04-SS06-000	SVTCL	Indeno(1,2,3-cd)Pyrene		40000	ug/kg	U	7/24/97
SJS04-SS06-000	SVTCL	Isophorone		40000	ug/kg	U	7/24/97
SJS04-SS06-000	SVTCL	N-Nitroso-Di-n-Propylamine		40000	ug/kg	U	7/24/97
SJS04-SS06-000	SVTCL	N-Nitrosodiphenylamine		40000	ug/kg	U	7/24/97
SJS04-SS06-000	SVTCL	Naphthalene		40000	ug/kg	U	7/24/97
SJS04-SS06-000	SVTCL	Nitrobenzene		40000	ug/kg	U	7/24/97
SJS04-SS06-000	SVTCL	Pentachlorophenol		100000	ug/kg	U	7/24/97
SJS04-SS06-000	SVTCL	Phenanthrene		40000	ug/kg	U	7/24/97
SJS04-SS06-000	SVTCL	Phenol		40000	ug/kg	U	7/24/97
SJS04-SS06-000	SVTCL	Pyrene		40000	ug/kg	U	7/24/97
SJS04-SS06-000	VCTCL	1,1,1-Trichloroethane		10	ug/kg	U	7/8/97
SJS04-SS06-000	VCTCL	1,1,2,2-Tetrachloroethane		10	ug/kg	U	7/8/97
SJS04-SS06-000	VCTCL	1,1,2-Trichloroethane		10	ug/kg	U	7/8/97
SJS04-SS06-000	VCTCL	1,1-Dichloroethane		10	ug/kg	U	7/8/97
SJS04-SS06-000	VCTCL	1,1-Dichloroethene		10	ug/kg	U	7/8/97
SJS04-SS06-000	VCTCL	1,2-Dichloroethane		10	ug/kg	U	7/8/97
SJS04-SS06-000	VCTCL	1,2-Dichloroethene (total)		10	ug/kg	U	7/8/97
SJS04-SS06-000	VCTCL	1,2-Dichloropropane		10	ug/kg	U	7/8/97
SJS04-SS06-000	VCTCL	2-Butanone		10	ug/kg	U	7/8/97
SJS04-SS06-000	VCTCL	2-Hexanone		10	ug/kg	U	7/8/97
SJS04-SS06-000	VCTCL	4-Methyl-2-Pentanone		10	ug/kg	U	7/8/97
SJS04-SS06-000	VCTCL	Acetone	11	10	ug/kg	J	7/8/97
SJS04-SS06-000	VCTCL	Benzene		10	ug/kg	U	7/8/97
SJS04-SS06-000	VCTCL	Bromodichloromethane		10	ug/kg	U	7/8/97
SJS04-SS06-000	VCTCL	Bromoform		10	ug/kg	U	7/8/97
SJS04-SS06-000	VCTCL	Bromomethane		10	ug/kg	U	7/8/97
SJS04-SS06-000	VCTCL	Carbon Disulfide		10	ug/kg	U	7/8/97
SJS04-SS06-000	VCTCL	Carbon Tetrachloride		10	ug/kg	U	7/8/97
SJS04-SS06-000	VCTCL	Chlorobenzene		10	ug/kg	U	7/8/97
SJS04-SS06-000	VCTCL	Chloroethane		10	ug/kg	U	7/8/97
SJS04-SS06-000	VCTCL	Chloroform		10	ug/kg	U	7/8/97
SJS04-SS06-000	VCTCL	Chloromethane		10	ug/kg	U	7/8/97
SJS04-SS06-000	VCTCL	cis-1,3-Dichloropropene		10	ug/kg	U	7/8/97
SJS04-SS06-000	VCTCL	Dibromochloromethane		10	ug/kg	U	7/8/97
SJS04-SS06-000	VCTCL	Ethylbenzene		10	ug/kg	U	7/8/97
SJS04-SS06-000	VCTCL	Methylene Chloride	48	10	ug/kg	B	7/8/97
SJS04-SS06-000	VCTCL	Styrene		10	ug/kg	U	7/8/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS04-SS06-000	VCTCL	Tetrachloroethene		10	ug/kg	U	7/8/97
SJS04-SS06-000	VCTCL	Toluene	1	10	ug/kg	J	7/8/97
SJS04-SS06-000	VCTCL	Total Xylenes		10	ug/kg	U	7/8/97
SJS04-SS06-000	VCTCL	Trans-1,3-Dichloropropene		10	ug/kg	U	7/8/97
SJS04-SS06-000	VCTCL	Trichloroethene		10	ug/kg	U	7/8/97
SJS04-SS06-000	VCTCL	Vinyl Chloride		10	ug/kg	U	7/8/97
SJS04-SS07-000	CTOTP	Total Phosphorous (as P)	11.8	1.2	mg/kg		7/18/97
SJS04-SS07-000	MCYAN	Aluminum	6550	6.75	mg/kg		7/11/97
SJS04-SS07-000	MCYAN	Antimony		0.31	mg/kg	U	7/16/97
SJS04-SS07-000	MCYAN	Arsenic	1.9	0.46	mg/kg		7/16/97
SJS04-SS07-000	MCYAN	Barium	19.4	0.31	mg/kg	J	7/11/97
SJS04-SS07-000	MCYAN	Beryllium		0.15	mg/kg	U	7/11/97
SJS04-SS07-000	MCYAN	Cadmium	0.09	0.08	mg/kg	J	7/16/97
SJS04-SS07-000	MCYAN	Calcium	998	13.35	mg/kg		7/11/97
SJS04-SS07-000	MCYAN	Chromium	7.2	1.07	mg/kg		7/11/97
SJS04-SS07-000	MCYAN	Cobalt		1.23	mg/kg	U	7/11/97
SJS04-SS07-000	MCYAN	Copper	7	0.92	mg/kg		7/11/97
SJS04-SS07-000	MCYAN	Cyanide		0.51	mg/kg	U	7/8/97
SJS04-SS07-000	MCYAN	Iron	2920	2.61	mg/kg		7/11/97
SJS04-SS07-000	MCYAN	Lead	19.4	0.15	mg/kg		7/16/97
SJS04-SS07-000	MCYAN	Magnesium	744	27.77	mg/kg	J	7/11/97
SJS04-SS07-000	MCYAN	Manganese	38.6	0.31	mg/kg		7/11/97
SJS04-SS07-000	MCYAN	Mercury	0.06	0.05	mg/kg	J	7/15/97
SJS04-SS07-000	MCYAN	Nickel	3.7	1.07	mg/kg	J	7/11/97
SJS04-SS07-000	MCYAN	Potassium	393	34.06	mg/kg	J	7/11/97
SJS04-SS07-000	MCYAN	Selenium		0.46	mg/kg	U	7/16/97
SJS04-SS07-000	MCYAN	Silver	0.29	0.15	mg/kg	B	7/16/97
SJS04-SS07-000	MCYAN	Sodium	49.4	8.9	mg/kg	B	7/11/97
SJS04-SS07-000	MCYAN	Thallium		0.31	mg/kg	U	7/16/97
SJS04-SS07-000	MCYAN	Vanadium	11.2	1.38	mg/kg		7/11/97
SJS04-SS07-000	MCYAN	Zinc	26.4	0.77	mg/kg		7/11/97
SJS04-SS07-000	PSPCB	4,4'-DDD		3.4	ug/kg	U	7/27/97
SJS04-SS07-000	PSPCB	4,4'-DDE		3.4	ug/kg	U	7/27/97
SJS04-SS07-000	PSPCB	4,4'-DDT		3.4	ug/kg	U	7/27/97
SJS04-SS07-000	PSPCB	Aldrin		1.7	ug/kg	U	7/27/97
SJS04-SS07-000	PSPCB	alpha-BHC		1.7	ug/kg	U	7/27/97
SJS04-SS07-000	PSPCB	alpha-Chlordane		1.7	ug/kg	U	7/27/97
SJS04-SS07-000	PSPCB	Aroclor-1016		34	ug/kg	U	7/27/97
SJS04-SS07-000	PSPCB	Aroclor-1221		69	ug/kg	U	7/27/97
SJS04-SS07-000	PSPCB	Aroclor-1232		34	ug/kg	U	7/27/97
SJS04-SS07-000	PSPCB	Aroclor-1242		34	ug/kg	U	7/27/97
SJS04-SS07-000	PSPCB	Aroclor-1248		34	ug/kg	U	7/27/97
SJS04-SS07-000	PSPCB	Aroclor-1254		34	ug/kg	U	7/27/97
SJS04-SS07-000	PSPCB	Aroclor-1260		34	ug/kg	U	7/27/97
SJS04-SS07-000	PSPCB	beta-BHC		1.7	ug/kg	U	7/27/97
SJS04-SS07-000	PSPCB	delta-BHC		1.7	ug/kg	U	7/27/97
SJS04-SS07-000	PSPCB	Dieldrin		3.4	ug/kg	U	7/27/97
SJS04-SS07-000	PSPCB	Endosulfan I		1.7	ug/kg	U	7/27/97
SJS04-SS07-000	PSPCB	Endosulfan II		3.4	ug/kg	U	7/27/97
SJS04-SS07-000	PSPCB	Endosulfan Sulfate		3.4	ug/kg	U	7/27/97
SJS04-SS07-000	PSPCB	Endrin		3.4	ug/kg	U	7/27/97
SJS04-SS07-000	PSPCB	Endrin Aldehyde		3.4	ug/kg	U	7/27/97
SJS04-SS07-000	PSPCB	Endrin Ketone		3.4	ug/kg	U	7/27/97
SJS04-SS07-000	PSPCB	gamma-BHC		1.7	ug/kg	U	7/27/97
SJS04-SS07-000	PSPCB	gamma-Chlordane		1.7	ug/kg	U	7/27/97
SJS04-SS07-000	PSPCB	Heptachlor		1.7	ug/kg	U	7/27/97
SJS04-SS07-000	PSPCB	Heptachlor Epoxide		1.7	ug/kg	U	7/27/97
SJS04-SS07-000	PSPCB	Methoxychlor		17	ug/kg	U	7/27/97
SJS04-SS07-000	PSPCB	Toxaphene		170	ug/kg	U	7/27/97
SJS04-SS07-000	SVTCL	1,2,4-Trichlorobenzene		340	ug/kg	U	7/23/97
SJS04-SS07-000	SVTCL	1,2-Dichlorobenzene		340	ug/kg	U	7/23/97
SJS04-SS07-000	SVTCL	1,3-Dichlorobenzene		340	ug/kg	U	7/23/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS04-SS07-000	SVTCL	1,4-Dichlorobenzene		340	ug/kg	U	7/23/97
SJS04-SS07-000	SVTCL	2,2'-oxybis(1-Chloropropane		340	ug/kg	U	7/23/97
SJS04-SS07-000	SVTCL	2,4,5-Trichlorophenol		850	ug/kg	U	7/23/97
SJS04-SS07-000	SVTCL	2,4,6-Trichlorophenol		340	ug/kg	U	7/23/97
SJS04-SS07-000	SVTCL	2,4-Dichlorophenol		340	ug/kg	U	7/23/97
SJS04-SS07-000	SVTCL	2,4-Dimethylphenol		340	ug/kg	U	7/23/97
SJS04-SS07-000	SVTCL	2,4-Dinitrophenol		850	ug/kg	U	7/23/97
SJS04-SS07-000	SVTCL	2,4-Dinitrotoluene		340	ug/kg	U	7/23/97
SJS04-SS07-000	SVTCL	2,6-Dinitrotoluene		340	ug/kg	U	7/23/97
SJS04-SS07-000	SVTCL	2-Chloronaphthalene		340	ug/kg	U	7/23/97
SJS04-SS07-000	SVTCL	2-Chlorophenol		340	ug/kg	U	7/23/97
SJS04-SS07-000	SVTCL	2-Methylnaphthalene		340	ug/kg	U	7/23/97
SJS04-SS07-000	SVTCL	2-Methylphenol		340	ug/kg	U	7/23/97
SJS04-SS07-000	SVTCL	2-Nitroaniline		850	ug/kg	U	7/23/97
SJS04-SS07-000	SVTCL	2-Nitrophenol		340	ug/kg	U	7/23/97
SJS04-SS07-000	SVTCL	3,3'-Dichlorobenzidine		340	ug/kg	U	7/23/97
SJS04-SS07-000	SVTCL	3-Nitroaniline		850	ug/kg	U	7/23/97
SJS04-SS07-000	SVTCL	4,6-Dinitro-2-Methylphenol		850	ug/kg	U	7/23/97
SJS04-SS07-000	SVTCL	4-Bromophenyl phenylether		340	ug/kg	U	7/23/97
SJS04-SS07-000	SVTCL	4-Chloro-3-Methylphenol		340	ug/kg	U	7/23/97
SJS04-SS07-000	SVTCL	4-Chloroaniline		340	ug/kg	U	7/23/97
SJS04-SS07-000	SVTCL	4-Chlorophenyl-phenylether		340	ug/kg	U	7/23/97
SJS04-SS07-000	SVTCL	4-Methylphenol		340	ug/kg	U	7/23/97
SJS04-SS07-000	SVTCL	4-Nitroaniline		850	ug/kg	U	7/23/97
SJS04-SS07-000	SVTCL	4-Nitrophenol		850	ug/kg	U	7/23/97
SJS04-SS07-000	SVTCL	Acenaphthene	54	340	ug/kg	J	7/23/97
SJS04-SS07-000	SVTCL	Acenaphthylene		340	ug/kg	U	7/23/97
SJS04-SS07-000	SVTCL	Anthracene	74	340	ug/kg	J	7/23/97
SJS04-SS07-000	SVTCL	Benzo(a)Anthracene	180	340	ug/kg	J	7/23/97
SJS04-SS07-000	SVTCL	Benzo(a)Pyrene	170	340	ug/kg	J	7/23/97
SJS04-SS07-000	SVTCL	Benzo(b)Fluoranthene	350	340	ug/kg		7/23/97
SJS04-SS07-000	SVTCL	Benzo(g,h,i)Perylene	100	340	ug/kg	J	7/23/97
SJS04-SS07-000	SVTCL	Benzo(k)Fluoranthene	120	340	ug/kg	J	7/23/97
SJS04-SS07-000	SVTCL	Bis(2-chloroethoxy)Methane		340	ug/kg	U	7/23/97
SJS04-SS07-000	SVTCL	Bis(2-chloroethyl)Ether		340	ug/kg	U	7/23/97
SJS04-SS07-000	SVTCL	Bis(2-Ethylhexyl)Phthalate	1600	340	ug/kg	B	7/23/97
SJS04-SS07-000	SVTCL	Butylbenzylphthalate	35	340	ug/kg	J	7/23/97
SJS04-SS07-000	SVTCL	Carbazole	53	340	ug/kg	J	7/23/97
SJS04-SS07-000	SVTCL	Chrysene	170	340	ug/kg	J	7/23/97
SJS04-SS07-000	SVTCL	Di-n-Butylphthalate		340	ug/kg	U	7/23/97
SJS04-SS07-000	SVTCL	Di-n-Octyl Phthalate		340	ug/kg	U	7/23/97
SJS04-SS07-000	SVTCL	Dibenz(a,h)Anthracene		340	ug/kg	U	7/23/97
SJS04-SS07-000	SVTCL	Dibenzofuran		340	ug/kg	U	7/23/97
SJS04-SS07-000	SVTCL	Diethylphthalate		340	ug/kg	U	7/23/97
SJS04-SS07-000	SVTCL	Dimethyl Phthalate		340	ug/kg	U	7/23/97
SJS04-SS07-000	SVTCL	Fluoranthene	420	340	ug/kg		7/23/97
SJS04-SS07-000	SVTCL	Fluorene	47	340	ug/kg	J	7/23/97
SJS04-SS07-000	SVTCL	Hexachlorobenzene		340	ug/kg	U	7/23/97
SJS04-SS07-000	SVTCL	Hexachlorobutadiene		340	ug/kg	U	7/23/97
SJS04-SS07-000	SVTCL	Hexachlorocyclopentadien		340	ug/kg	U	7/23/97
SJS04-SS07-000	SVTCL	Hexachloroethane		340	ug/kg	U	7/23/97
SJS04-SS07-000	SVTCL	Indeno(1,2,3-cd)Pyrene	100	340	ug/kg	J	7/23/97
SJS04-SS07-000	SVTCL	Isophorone		340	ug/kg	U	7/23/97
SJS04-SS07-000	SVTCL	N-Nitroso-Di-n-Propylamine		340	ug/kg	U	7/23/97
SJS04-SS07-000	SVTCL	N-Nitrosodiphenylamine		340	ug/kg	U	7/23/97
SJS04-SS07-000	SVTCL	Naphthalene		340	ug/kg	U	7/23/97
SJS04-SS07-000	SVTCL	Nitrobenzene		340	ug/kg	U	7/23/97
SJS04-SS07-000	SVTCL	Pentachlorophenol		850	ug/kg	U	7/23/97
SJS04-SS07-000	SVTCL	Phenanthrene	390	340	ug/kg		7/23/97
SJS04-SS07-000	SVTCL	Phenol		340	ug/kg	U	7/23/97
SJS04-SS07-000	SVTCL	Pyrene	340	340	ug/kg		7/23/97
SJS04-SS07-000	VCTCL	1,1,1-Trichloroethane		10	ug/kg	U	7/8/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS04-SS07-000	VCTCL	1,1,2,2-Tetrachloroethane		10	ug/kg	U	7/8/97
SJS04-SS07-000	VCTCL	1,1,2-Trichloroethane		10	ug/kg	U	7/8/97
SJS04-SS07-000	VCTCL	1,1-Dichloroethane		10	ug/kg	U	7/8/97
SJS04-SS07-000	VCTCL	1,1-Dichloroethene		10	ug/kg	U	7/8/97
SJS04-SS07-000	VCTCL	1,2-Dichloroethane		10	ug/kg	U	7/8/97
SJS04-SS07-000	VCTCL	1,2-Dichloroethene (total)		10	ug/kg	U	7/8/97
SJS04-SS07-000	VCTCL	1,2-Dichloropropane		10	ug/kg	U	7/8/97
SJS04-SS07-000	VCTCL	2-Butanone		10	ug/kg	U	7/8/97
SJS04-SS07-000	VCTCL	2-Hexanone		10	ug/kg	U	7/8/97
SJS04-SS07-000	VCTCL	4-Methyl-2-Pentanone		10	ug/kg	U	7/8/97
SJS04-SS07-000	VCTCL	Acetone	14	10	ug/kg	J	7/8/97
SJS04-SS07-000	VCTCL	Benzene		10	ug/kg	U	7/8/97
SJS04-SS07-000	VCTCL	Bromodichloromethane		10	ug/kg	U	7/8/97
SJS04-SS07-000	VCTCL	Bromoform		10	ug/kg	U	7/8/97
SJS04-SS07-000	VCTCL	Bromomethane		10	ug/kg	U	7/8/97
SJS04-SS07-000	VCTCL	Carbon Disulfide		10	ug/kg	U	7/8/97
SJS04-SS07-000	VCTCL	Carbon Tetrachloride		10	ug/kg	U	7/8/97
SJS04-SS07-000	VCTCL	Chlorobenzene		10	ug/kg	U	7/8/97
SJS04-SS07-000	VCTCL	Chloroethane		10	ug/kg	U	7/8/97
SJS04-SS07-000	VCTCL	Chloroform		10	ug/kg	U	7/8/97
SJS04-SS07-000	VCTCL	Chloromethane		10	ug/kg	U	7/8/97
SJS04-SS07-000	VCTCL	cis-1,3-Dichloropropene		10	ug/kg	U	7/8/97
SJS04-SS07-000	VCTCL	Dibromochloromethane		10	ug/kg	U	7/8/97
SJS04-SS07-000	VCTCL	Ethylbenzene		10	ug/kg	U	7/8/97
SJS04-SS07-000	VCTCL	Methylene Chloride	28	10	ug/kg	B	7/8/97
SJS04-SS07-000	VCTCL	Styrene		10	ug/kg	U	7/8/97
SJS04-SS07-000	VCTCL	Tetrachloroethene		10	ug/kg	U	7/8/97
SJS04-SS07-000	VCTCL	Toluene		10	ug/kg	U	7/8/97
SJS04-SS07-000	VCTCL	Total Xylenes		10	ug/kg	U	7/8/97
SJS04-SS07-000	VCTCL	Trans-1,3-Dichloropropene		10	ug/kg	U	7/8/97
SJS04-SS07-000	VCTCL	Trichloroethene		10	ug/kg	U	7/8/97
SJS04-SS07-000	VCTCL	Vinyl Chloride		10	ug/kg	U	7/8/97
SJS04-SS08-000	CTOTP	Total Phosphorous (as P)	2.3	1.3	mg/kg		7/18/97
SJS04-SS08-000	MCYAN	Aluminum	4990	7.93	mg/kg		7/11/97
SJS04-SS08-000	MCYAN	Antimony	2.3	0.36	mg/kg	J	7/16/97
SJS04-SS08-000	MCYAN	Arsenic	5.3	0.54	mg/kg		7/16/97
SJS04-SS08-000	MCYAN	Barium	63	0.36	mg/kg		7/11/97
SJS04-SS08-000	MCYAN	Beryllium		0.18	mg/kg	U	7/11/97
SJS04-SS08-000	MCYAN	Cadmium	0.88	0.09	mg/kg	J	7/16/97
SJS04-SS08-000	MCYAN	Calcium	4210	15.67	mg/kg		7/11/97
SJS04-SS08-000	MCYAN	Chromium	52.4	1.26	mg/kg		7/11/97
SJS04-SS08-000	MCYAN	Cobalt	3.9	1.44	mg/kg	J	7/11/97
SJS04-SS08-000	MCYAN	Copper	500	1.08	mg/kg		7/11/97
SJS04-SS08-000	MCYAN	Cyanide		0.52	mg/kg	U	7/8/97
SJS04-SS08-000	MCYAN	Iron	13600	3.06	mg/kg		7/11/97
SJS04-SS08-000	MCYAN	Lead	264	0.18	mg/kg		7/16/97
SJS04-SS08-000	MCYAN	Magnesium	1160	32.61	mg/kg		7/11/97
SJS04-SS08-000	MCYAN	Manganese	132	0.36	mg/kg		7/11/97
SJS04-SS08-000	MCYAN	Mercury	0.97	0.05	mg/kg		7/15/97
SJS04-SS08-000	MCYAN	Nickel	150	1.26	mg/kg		7/11/97
SJS04-SS08-000	MCYAN	Potassium	752	40	mg/kg	J	7/11/97
SJS04-SS08-000	MCYAN	Selenium		0.54	mg/kg	U	7/16/97
SJS04-SS08-000	MCYAN	Silver	0.41	0.18	mg/kg	B	7/16/97
SJS04-SS08-000	MCYAN	Sodium	74.6	10.45	mg/kg	B	7/11/97
SJS04-SS08-000	MCYAN	Thallium	1.1	0.36	mg/kg	B	7/16/97
SJS04-SS08-000	MCYAN	Vanadium	125	1.62	mg/kg		7/11/97
SJS04-SS08-000	MCYAN	Zinc	433	0.9	mg/kg		7/11/97
SJS04-SS08-000	PSPCB	4,4'-DDD		17	ug/kg	U	7/27/97
SJS04-SS08-000	PSPCB	4,4'-DDE		17	ug/kg	U	7/27/97
SJS04-SS08-000	PSPCB	4,4'-DDT	17	17	ug/kg	J	7/27/97
SJS04-SS08-000	PSPCB	Aldrin		9	ug/kg	U	7/27/97
SJS04-SS08-000	PSPCB	alpha-BHC		9	ug/kg	U	7/27/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS04-SS08-000	PSPCB	alpha-Chlordane	42	9	ug/kg		7/27/97
SJS04-SS08-000	PSPCB	Aroclor-1016		170	ug/kg	U	7/27/97
SJS04-SS08-000	PSPCB	Aroclor-1221		350	ug/kg	U	7/27/97
SJS04-SS08-000	PSPCB	Aroclor-1232		170	ug/kg	U	7/27/97
SJS04-SS08-000	PSPCB	Aroclor-1242		170	ug/kg	U	7/27/97
SJS04-SS08-000	PSPCB	Aroclor-1248		170	ug/kg	U	7/27/97
SJS04-SS08-000	PSPCB	Aroclor-1254		170	ug/kg	U	7/27/97
SJS04-SS08-000	PSPCB	Aroclor-1260	6300	1700	ug/kg		7/27/97
SJS04-SS08-000	PSPCB	beta-BHC		9	ug/kg	U	7/27/97
SJS04-SS08-000	PSPCB	delta-BHC		9	ug/kg	U	7/27/97
SJS04-SS08-000	PSPCB	Dieldrin	72	17	ug/kg	J	7/27/97
SJS04-SS08-000	PSPCB	Endosulfan I		9	ug/kg	U	7/27/97
SJS04-SS08-000	PSPCB	Endosulfan II		17	ug/kg	U	7/27/97
SJS04-SS08-000	PSPCB	Endosulfan Sulfate		17	ug/kg	U	7/27/97
SJS04-SS08-000	PSPCB	Endrin		17	ug/kg	U	7/27/97
SJS04-SS08-000	PSPCB	Endrin Aldehyde	160	17	ug/kg	J	7/27/97
SJS04-SS08-000	PSPCB	Endrin Ketone	83	17	ug/kg	J	7/27/97
SJS04-SS08-000	PSPCB	gamma-BHC		9	ug/kg	U	7/27/97
SJS04-SS08-000	PSPCB	gamma-Chlordane	33	9	ug/kg		7/27/97
SJS04-SS08-000	PSPCB	Heptachlor		9	ug/kg	U	7/27/97
SJS04-SS08-000	PSPCB	Heptachlor Epoxide		9	ug/kg	U	7/27/97
SJS04-SS08-000	PSPCB	Methoxychlor		90	ug/kg	U	7/27/97
SJS04-SS08-000	PSPCB	Toxaphene		900	ug/kg	U	7/27/97
SJS04-SS08-000	SVTCL	1,2,4-Trichlorobenzene		1700	ug/kg	U	7/21/97
SJS04-SS08-000	SVTCL	1,2-Dichlorobenzene		1700	ug/kg	U	7/21/97
SJS04-SS08-000	SVTCL	1,3-Dichlorobenzene		1700	ug/kg	U	7/21/97
SJS04-SS08-000	SVTCL	1,4-Dichlorobenzene		1700	ug/kg	U	7/21/97
SJS04-SS08-000	SVTCL	2,2'-oxybis(1-Chloropropane		1700	ug/kg	U	7/21/97
SJS04-SS08-000	SVTCL	2,4,5-Trichlorophenol		4400	ug/kg	U	7/21/97
SJS04-SS08-000	SVTCL	2,4,6-Trichlorophenol		1700	ug/kg	U	7/21/97
SJS04-SS08-000	SVTCL	2,4-Dichlorophenol		1700	ug/kg	U	7/21/97
SJS04-SS08-000	SVTCL	2,4-Dimethylphenol		1700	ug/kg	U	7/21/97
SJS04-SS08-000	SVTCL	2,4-Dinitrotoluene		1700	ug/kg	U	7/21/97
SJS04-SS08-000	SVTCL	2,6-Dinitrotoluene		1700	ug/kg	U	7/21/97
SJS04-SS08-000	SVTCL	2-Chloronaphthalene		1700	ug/kg	U	7/21/97
SJS04-SS08-000	SVTCL	2-Chlorophenol		1700	ug/kg	U	7/21/97
SJS04-SS08-000	SVTCL	2-Methylnaphthalene		1700	ug/kg	U	7/21/97
SJS04-SS08-000	SVTCL	2-Methylphenol		1700	ug/kg	U	7/21/97
SJS04-SS08-000	SVTCL	2-Nitroaniline		4400	ug/kg	U	7/21/97
SJS04-SS08-000	SVTCL	2-Nitrophenol		1700	ug/kg	U	7/21/97
SJS04-SS08-000	SVTCL	3,3'-Dichlorobenzidine		1700	ug/kg	U	7/21/97
SJS04-SS08-000	SVTCL	3-Nitroaniline		4400	ug/kg	U	7/21/97
SJS04-SS08-000	SVTCL	4,6-Dinitro-2-Methylphenol		4400	ug/kg	U	7/21/97
SJS04-SS08-000	SVTCL	4-Bromophenyl phenylether		1700	ug/kg	U	7/21/97
SJS04-SS08-000	SVTCL	4-Chloro-3-Methylphenol		1700	ug/kg	U	7/21/97
SJS04-SS08-000	SVTCL	4-Chloroaniline		1700	ug/kg	U	7/21/97
SJS04-SS08-000	SVTCL	4-Chlorophenyl-phenylether		1700	ug/kg	U	7/21/97
SJS04-SS08-000	SVTCL	4-Methylphenol		1700	ug/kg	U	7/21/97
SJS04-SS08-000	SVTCL	4-Nitroaniline		4400	ug/kg	U	7/21/97
SJS04-SS08-000	SVTCL	4-Nitrophenol		4400	ug/kg	U	7/21/97
SJS04-SS08-000	SVTCL	Acenaphthene		1700	ug/kg	U	7/21/97
SJS04-SS08-000	SVTCL	Acenaphthylene		1700	ug/kg	U	7/21/97
SJS04-SS08-000	SVTCL	Anthracene	200	1700	ug/kg	J	7/21/97
SJS04-SS08-000	SVTCL	Benzo(a)Anthracene	1100	1700	ug/kg	J	7/21/97
SJS04-SS08-000	SVTCL	Benzo(a)Pyrene	870	1700	ug/kg	J	7/21/97
SJS04-SS08-000	SVTCL	Benzo(b)Fluoranthene	1100	1700	ug/kg	J	7/21/97
SJS04-SS08-000	SVTCL	Benzo(g,h,i)Perylene	590	1700	ug/kg	J	7/21/97
SJS04-SS08-000	SVTCL	Benzo(k)Fluoranthene	390	1700	ug/kg	J	7/21/97
SJS04-SS08-000	SVTCL	Bis(2-chloroethoxy)Methane		1700	ug/kg	U	7/21/97
SJS04-SS08-000	SVTCL	Bis(2-chloroethyl)Ether		1700	ug/kg	U	7/21/97
SJS04-SS08-000	SVTCL	Bis(2-Ethylhexyl)Phthalate		1700	ug/kg	U	7/21/97
SJS04-SS08-000	SVTCL	Butylbenzylphthalate		1700	ug/kg	U	7/21/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS04-SS08-000	SVTCL	Carbazole		1700	ug/kg	U	7/21/97
SJS04-SS08-000	SVTCL	Chrysene	1200	1700	ug/kg	J	7/21/97
SJS04-SS08-000	SVTCL	Di-n-Butylphthalate		1700	ug/kg	U	7/21/97
SJS04-SS08-000	SVTCL	Di-n-Octyl Phthalate		1700	ug/kg	U	7/21/97
SJS04-SS08-000	SVTCL	Dibenz(a,h)Anthracene		1700	ug/kg	U	7/21/97
SJS04-SS08-000	SVTCL	Dibenzofuran		1700	ug/kg	U	7/21/97
SJS04-SS08-000	SVTCL	Diethylphthalate	610	1700	ug/kg	J	7/21/97
SJS04-SS08-000	SVTCL	Dimethyl Phthalate		1700	ug/kg	U	7/21/97
SJS04-SS08-000	SVTCL	Fluoranthene	2000	1700	ug/kg		7/21/97
SJS04-SS08-000	SVTCL	Fluorene		1700	ug/kg	U	7/21/97
SJS04-SS08-000	SVTCL	Hexachlorobenzene		1700	ug/kg	U	7/21/97
SJS04-SS08-000	SVTCL	Hexachlorobutadiene		1700	ug/kg	U	7/21/97
SJS04-SS08-000	SVTCL	Hexachlorocyclopentadien		1700	ug/kg	U	7/21/97
SJS04-SS08-000	SVTCL	Hexachloroethane		1700	ug/kg	U	7/21/97
SJS04-SS08-000	SVTCL	Indeno(1,2,3-cd)Pyrene	480	1700	ug/kg	J	7/21/97
SJS04-SS08-000	SVTCL	Isophorone		1700	ug/kg	U	7/21/97
SJS04-SS08-000	SVTCL	N-Nitroso-Di-n-Propylamine		1700	ug/kg	U	7/21/97
SJS04-SS08-000	SVTCL	N-Nitrosodiphenylamine		1700	ug/kg	U	7/21/97
SJS04-SS08-000	SVTCL	Naphthalene		1700	ug/kg	U	7/21/97
SJS04-SS08-000	SVTCL	Nitrobenzene		1700	ug/kg	U	7/21/97
SJS04-SS08-000	SVTCL	Pentachlorophenol		4400	ug/kg	U	7/21/97
SJS04-SS08-000	SVTCL	Phenanthrene	1200	1700	ug/kg	J	7/21/97
SJS04-SS08-000	SVTCL	Phenol		1700	ug/kg	U	7/21/97
SJS04-SS08-000	SVTCL	Pyrene		1700	ug/kg	U	7/21/97
SJS04-SS08-000	VCTCL	1,1,1-Trichloroethane		11	ug/kg	U	7/8/97
SJS04-SS08-000	VCTCL	1,1,2,2-Tetrachloroethane		11	ug/kg	UJ	7/8/97
SJS04-SS08-000	VCTCL	1,1,2-Trichloroethane		11	ug/kg	U	7/8/97
SJS04-SS08-000	VCTCL	1,1-Dichloroethane		11	ug/kg	U	7/8/97
SJS04-SS08-000	VCTCL	1,1-Dichloroethene		11	ug/kg	U	7/8/97
SJS04-SS08-000	VCTCL	1,2-Dichloroethane		11	ug/kg	U	7/8/97
SJS04-SS08-000	VCTCL	1,2-Dichloroethene (total)		11	ug/kg	U	7/8/97
SJS04-SS08-000	VCTCL	1,2-Dichloropropane		11	ug/kg	U	7/8/97
SJS04-SS08-000	VCTCL	2-Butanone		11	ug/kg	U	7/8/97
SJS04-SS08-000	VCTCL	2-Hexanone		11	ug/kg	UJ	7/8/97
SJS04-SS08-000	VCTCL	4-Methyl-2-Pentanone		11	ug/kg	UJ	7/8/97
SJS04-SS08-000	VCTCL	Acetone	79	11	ug/kg	J	7/8/97
SJS04-SS08-000	VCTCL	Benzene		11	ug/kg	U	7/8/97
SJS04-SS08-000	VCTCL	Bromodichloromethane		11	ug/kg	U	7/8/97
SJS04-SS08-000	VCTCL	Bromoform		11	ug/kg	U	7/8/97
SJS04-SS08-000	VCTCL	Bromomethane		11	ug/kg	U	7/8/97
SJS04-SS08-000	VCTCL	Carbon Disulfide		11	ug/kg	U	7/8/97
SJS04-SS08-000	VCTCL	Carbon Tetrachloride		11	ug/kg	U	7/8/97
SJS04-SS08-000	VCTCL	Chlorobenzene		11	ug/kg	UJ	7/8/97
SJS04-SS08-000	VCTCL	Chloroethane		11	ug/kg	U	7/8/97
SJS04-SS08-000	VCTCL	Chloroform		11	ug/kg	U	7/8/97
SJS04-SS08-000	VCTCL	Chloromethane		11	ug/kg	U	7/8/97
SJS04-SS08-000	VCTCL	cis-1,3-Dichloropropene		11	ug/kg	U	7/8/97
SJS04-SS08-000	VCTCL	Dibromochloromethane		11	ug/kg	U	7/8/97
SJS04-SS08-000	VCTCL	Ethylbenzene		11	ug/kg	UJ	7/8/97
SJS04-SS08-000	VCTCL	Methylene Chloride	48	11	ug/kg	B	7/8/97
SJS04-SS08-000	VCTCL	Styrene		11	ug/kg	UJ	7/8/97
SJS04-SS08-000	VCTCL	Tetrachloroethene		11	ug/kg	UJ	7/8/97
SJS04-SS08-000	VCTCL	Toluene		11	ug/kg	UJ	7/8/97
SJS04-SS08-000	VCTCL	Total Xylenes		11	ug/kg	UJ	7/8/97
SJS04-SS08-000	VCTCL	Trans-1,3-Dichloropropene		11	ug/kg	U	7/8/97
SJS04-SS08-000	VCTCL	Trichloroethene		11	ug/kg	U	7/8/97
SJS04-SS08-000	VCTCL	Vinyl Chloride		11	ug/kg	U	7/8/97
SJS04-SS09-000	CTOTP	Total Phosphorous (as P)	6	1.3	mg/kg		7/18/97
SJS04-SS09-000	MCYAN	Aluminum	5510	7.4	mg/kg		7/11/97
SJS04-SS09-000	MCYAN	Antimony	0.79	0.34	mg/kg	J	7/16/97
SJS04-SS09-000	MCYAN	Arsenic	3.7	0.5	mg/kg		7/16/97
SJS04-SS09-000	MCYAN	Barium	55.5	0.34	mg/kg		7/11/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS04-SS09-000	IMCYAN	Beryllium	0.19	0.17	mg/kg	J	7/11/97
SJS04-SS09-000	IMCYAN	Cadmium	0.42	0.08	mg/kg	J	7/16/97
SJS04-SS09-000	IMCYAN	Calcium	2710	14.63	mg/kg		7/11/97
SJS04-SS09-000	IMCYAN	Chromium	33.3	1.18	mg/kg		7/11/97
SJS04-SS09-000	IMCYAN	Cobalt	3.4	1.35	mg/kg	J	7/11/97
SJS04-SS09-000	IMCYAN	Copper	192	1.01	mg/kg		7/11/97
SJS04-SS09-000	IMCYAN	Cyanide		0.52	mg/kg	U	7/8/97
SJS04-SS09-000	IMCYAN	Iron	15800	2.86	mg/kg		7/11/97
SJS04-SS09-000	IMCYAN	Lead	181	0.17	mg/kg		7/16/97
SJS04-SS09-000	IMCYAN	Magnesium	1030	30.44	mg/kg		7/11/97
SJS04-SS09-000	IMCYAN	Manganese	136	0.34	mg/kg		7/11/97
SJS04-SS09-000	IMCYAN	Mercury	0.52	0.05	mg/kg		7/15/97
SJS04-SS09-000	IMCYAN	Nickel	25.2	1.18	mg/kg		7/11/97
SJS04-SS09-000	IMCYAN	Potassium	791	37.34	mg/kg		7/11/97
SJS04-SS09-000	IMCYAN	Selenium		0.5	mg/kg	U	7/16/97
SJS04-SS09-000	IMCYAN	Silver	0.45	0.17	mg/kg	B	7/16/97
SJS04-SS09-000	IMCYAN	Sodium	79.6	9.75	mg/kg	B	7/11/97
SJS04-SS09-000	IMCYAN	Thallium	0.66	0.34	mg/kg	B	7/16/97
SJS04-SS09-000	IMCYAN	Vanadium	60.3	1.51	mg/kg		7/11/97
SJS04-SS09-000	IMCYAN	Zinc	269	0.84	mg/kg		7/11/97
SJS04-SS09-000	PSPCB	4,4'-DDD	4.3	3.4	ug/kg	J	7/28/97
SJS04-SS09-000	PSPCB	4,4'-DDE	9.8	3.4	ug/kg	J	7/28/97
SJS04-SS09-000	PSPCB	4,4'-DDT	21	3.4	ug/kg	J	7/28/97
SJS04-SS09-000	PSPCB	Aldrin		1.7	ug/kg	U	7/28/97
SJS04-SS09-000	PSPCB	alpha-BHC		1.7	ug/kg	U	7/28/97
SJS04-SS09-000	PSPCB	alpha-Chlordane	3.6	1.7	ug/kg	J	7/28/97
SJS04-SS09-000	PSPCB	Aroclor-1016		34	ug/kg	U	7/28/97
SJS04-SS09-000	PSPCB	Aroclor-1221		69	ug/kg	U	7/28/97
SJS04-SS09-000	PSPCB	Aroclor-1232		34	ug/kg	U	7/28/97
SJS04-SS09-000	PSPCB	Aroclor-1242		34	ug/kg	U	7/28/97
SJS04-SS09-000	PSPCB	Aroclor-1248		34	ug/kg	U	7/28/97
SJS04-SS09-000	PSPCB	Aroclor-1254		34	ug/kg	U	7/28/97
SJS04-SS09-000	PSPCB	Aroclor-1260	37	34	ug/kg	J	7/28/97
SJS04-SS09-000	PSPCB	beta-BHC		1.7	ug/kg	U	7/28/97
SJS04-SS09-000	PSPCB	delta-BHC		1.7	ug/kg	U	7/28/97
SJS04-SS09-000	PSPCB	Dieldrin	6.4	3.4	ug/kg	J	7/28/97
SJS04-SS09-000	PSPCB	Endosulfan I		1.7	ug/kg	U	7/28/97
SJS04-SS09-000	PSPCB	Endosulfan II		3.4	ug/kg	U	7/28/97
SJS04-SS09-000	PSPCB	Endosulfan Sulfate		3.4	ug/kg	U	7/28/97
SJS04-SS09-000	PSPCB	Endrin		3.4	ug/kg	U	7/28/97
SJS04-SS09-000	PSPCB	Endrin Aldehyde		3.4	ug/kg	U	7/28/97
SJS04-SS09-000	PSPCB	Endrin Ketone		3.4	ug/kg	U	7/28/97
SJS04-SS09-000	PSPCB	gamma-BHC		1.7	ug/kg	U	7/28/97
SJS04-SS09-000	PSPCB	gamma-Chlordane	2.3	1.7	ug/kg	J	7/28/97
SJS04-SS09-000	PSPCB	Heptachlor		1.7	ug/kg	U	7/28/97
SJS04-SS09-000	PSPCB	Heptachlor Epoxide		1.7	ug/kg	U	7/28/97
SJS04-SS09-000	PSPCB	Methoxychlor		17	ug/kg	U	7/28/97
SJS04-SS09-000	PSPCB	Toxaphene		170	ug/kg	U	7/28/97
SJS04-SS09-000	SVTCL	1,2,4-Trichlorobenzene		1700	ug/kg	U	7/21/97
SJS04-SS09-000	SVTCL	1,2-Dichlorobenzene		1700	ug/kg	U	7/21/97
SJS04-SS09-000	SVTCL	1,3-Dichlorobenzene		1700	ug/kg	U	7/21/97
SJS04-SS09-000	SVTCL	1,4-Dichlorobenzene		1700	ug/kg	U	7/21/97
SJS04-SS09-000	SVTCL	2,2'-oxybis(1-Chloropropane		1700	ug/kg	U	7/21/97
SJS04-SS09-000	SVTCL	2,4,5-Trichlorophenol		4300	ug/kg	U	7/21/97
SJS04-SS09-000	SVTCL	2,4,6-Trichlorophenol		1700	ug/kg	U	7/21/97
SJS04-SS09-000	SVTCL	2,4-Dichlorophenol		1700	ug/kg	U	7/21/97
SJS04-SS09-000	SVTCL	2,4-Dimethylphenol		1700	ug/kg	U	7/21/97
SJS04-SS09-000	SVTCL	2,4-Dinitrotoluene		1700	ug/kg	U	7/21/97
SJS04-SS09-000	SVTCL	2,6-Dinitrotoluene		1700	ug/kg	U	7/21/97
SJS04-SS09-000	SVTCL	2-Chloronaphthalene		1700	ug/kg	U	7/21/97
SJS04-SS09-000	SVTCL	2-Chlorophenol		1700	ug/kg	U	7/21/97
SJS04-SS09-000	SVTCL	2-Methylnaphthalene		1700	ug/kg	U	7/21/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS04-SS09-000	SVTCL	2-Methylphenol		1700	ug/kg	U	7/21/97
SJS04-SS09-000	SVTCL	2-Nitroaniline		4300	ug/kg	U	7/21/97
SJS04-SS09-000	SVTCL	2-Nitrophenol		1700	ug/kg	U	7/21/97
SJS04-SS09-000	SVTCL	3,3'-Dichlorobenzidine		1700	ug/kg	U	7/21/97
SJS04-SS09-000	SVTCL	3-Nitroaniline		4300	ug/kg	U	7/21/97
SJS04-SS09-000	SVTCL	4,6-Dinitro-2-Methylphenol		4300	ug/kg	U	7/21/97
SJS04-SS09-000	SVTCL	4-Bromophenyl phenylether		1700	ug/kg	U	7/21/97
SJS04-SS09-000	SVTCL	4-Chloro-3-Methylphenol		1700	ug/kg	U	7/21/97
SJS04-SS09-000	SVTCL	4-Chloroaniline		1700	ug/kg	U	7/21/97
SJS04-SS09-000	SVTCL	4-Chlorophenyl-phenylether		1700	ug/kg	U	7/21/97
SJS04-SS09-000	SVTCL	4-Methylphenol		1700	ug/kg	U	7/21/97
SJS04-SS09-000	SVTCL	4-Nitroaniline		4300	ug/kg	U	7/21/97
SJS04-SS09-000	SVTCL	4-Nitrophenol		4300	ug/kg	U	7/21/97
SJS04-SS09-000	SVTCL	Acenaphthene		1700	ug/kg	U	7/21/97
SJS04-SS09-000	SVTCL	Acenaphthylene		1700	ug/kg	U	7/21/97
SJS04-SS09-000	SVTCL	Anthracene		1700	ug/kg	U	7/21/97
SJS04-SS09-000	SVTCL	Benzo(a)Anthracene	380	1700	ug/kg	J	7/21/97
SJS04-SS09-000	SVTCL	Benzo(a)Pyrene	270	1700	ug/kg	J	7/21/97
SJS04-SS09-000	SVTCL	Benzo(b)Fluoranthene	380	1700	ug/kg	J	7/21/97
SJS04-SS09-000	SVTCL	Benzo(g,h,i)Perylene	230	1700	ug/kg	J	7/21/97
SJS04-SS09-000	SVTCL	Benzo(k)Fluoranthene	230	1700	ug/kg	J	7/21/97
SJS04-SS09-000	SVTCL	Bis(2-chloroethoxy)Methane		1700	ug/kg	U	7/21/97
SJS04-SS09-000	SVTCL	Bis(2-chloroethyl)Ether		1700	ug/kg	U	7/21/97
SJS04-SS09-000	SVTCL	Bis(2-Ethylhexyl)Phthalate		1700	ug/kg	U	7/21/97
SJS04-SS09-000	SVTCL	Butylbenzylphthalate		1700	ug/kg	U	7/21/97
SJS04-SS09-000	SVTCL	Carbazole		1700	ug/kg	U	7/21/97
SJS04-SS09-000	SVTCL	Chrysene	440	1700	ug/kg	J	7/21/97
SJS04-SS09-000	SVTCL	Di-n-Butylphthalate		1700	ug/kg	U	7/21/97
SJS04-SS09-000	SVTCL	Di-n-Octyl Phthalate		1700	ug/kg	U	7/21/97
SJS04-SS09-000	SVTCL	Dibenz(a,h)Anthracene		1700	ug/kg	U	7/21/97
SJS04-SS09-000	SVTCL	Dibenzofuran		1700	ug/kg	U	7/21/97
SJS04-SS09-000	SVTCL	Diethylphthalate	620	1700	ug/kg	J	7/21/97
SJS04-SS09-000	SVTCL	Dimethyl Phthalate		1700	ug/kg	U	7/21/97
SJS04-SS09-000	SVTCL	Fluoranthene	620	1700	ug/kg	J	7/21/97
SJS04-SS09-000	SVTCL	Fluorene		1700	ug/kg	U	7/21/97
SJS04-SS09-000	SVTCL	Hexachlorobenzene		1700	ug/kg	U	7/21/97
SJS04-SS09-000	SVTCL	Hexachlorobutadiene		1700	ug/kg	U	7/21/97
SJS04-SS09-000	SVTCL	Hexachlorocyclopentadien		1700	ug/kg	U	7/21/97
SJS04-SS09-000	SVTCL	Hexachloroethane		1700	ug/kg	U	7/21/97
SJS04-SS09-000	SVTCL	Indeno(1,2,3-cd)Pyrene	190	1700	ug/kg	J	7/21/97
SJS04-SS09-000	SVTCL	Isophorone		1700	ug/kg	U	7/21/97
SJS04-SS09-000	SVTCL	N-Nitroso-Di-n-Propylamine		1700	ug/kg	U	7/21/97
SJS04-SS09-000	SVTCL	N-Nitrosodiphenylamine		1700	ug/kg	U	7/21/97
SJS04-SS09-000	SVTCL	Naphthalene		1700	ug/kg	U	7/21/97
SJS04-SS09-000	SVTCL	Nitrobenzene		1700	ug/kg	U	7/21/97
SJS04-SS09-000	SVTCL	Pentachlorophenol		4300	ug/kg	U	7/21/97
SJS04-SS09-000	SVTCL	Phenanthrene	340	1700	ug/kg	J	7/21/97
SJS04-SS09-000	SVTCL	Phenol		1700	ug/kg	U	7/21/97
SJS04-SS09-000	SVTCL	Pyrene	750	1700	ug/kg	J	7/21/97
SJS04-SS09-000	VCTCL	1,1,1-Trichloroethane		10	ug/kg	U	7/8/97
SJS04-SS09-000	VCTCL	1,1,2,2-Tetrachloroethane		10	ug/kg	U	7/8/97
SJS04-SS09-000	VCTCL	1,1,2-Trichloroethane		10	ug/kg	U	7/8/97
SJS04-SS09-000	VCTCL	1,1-Dichloroethane		10	ug/kg	U	7/8/97
SJS04-SS09-000	VCTCL	1,1-Dichloroethene		10	ug/kg	U	7/8/97
SJS04-SS09-000	VCTCL	1,2-Dichloroethane		10	ug/kg	U	7/8/97
SJS04-SS09-000	VCTCL	1,2-Dichloroethene (total)		10	ug/kg	U	7/8/97
SJS04-SS09-000	VCTCL	1,2-Dichloropropane		10	ug/kg	U	7/8/97
SJS04-SS09-000	VCTCL	2-Butanone		10	ug/kg	U	7/8/97
SJS04-SS09-000	VCTCL	2-Hexanone		10	ug/kg	U	7/8/97
SJS04-SS09-000	VCTCL	4-Methyl-2-Pentanone		10	ug/kg	U	7/8/97
SJS04-SS09-000	VCTCL	Acetone		10	ug/kg	U	7/8/97
SJS04-SS09-000	VCTCL	Benzene		10	ug/kg	U	7/8/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS04-SS09-000	VCTCL	Bromodichloromethane		10	ug/kg	U	7/8/97
SJS04-SS09-000	VCTCL	Bromoform		10	ug/kg	U	7/8/97
SJS04-SS09-000	VCTCL	Bromomethane		10	ug/kg	U	7/8/97
SJS04-SS09-000	VCTCL	Carbon Disulfide		10	ug/kg	U	7/8/97
SJS04-SS09-000	VCTCL	Carbon Tetrachloride		10	ug/kg	U	7/8/97
SJS04-SS09-000	VCTCL	Chlorobenzene		10	ug/kg	U	7/8/97
SJS04-SS09-000	VCTCL	Chloroethane		10	ug/kg	U	7/8/97
SJS04-SS09-000	VCTCL	Chloroform		10	ug/kg	U	7/8/97
SJS04-SS09-000	VCTCL	Chloromethane		10	ug/kg	U	7/8/97
SJS04-SS09-000	VCTCL	cis-1,3-Dichloropropene		10	ug/kg	U	7/8/97
SJS04-SS09-000	VCTCL	Dibromochloromethane		10	ug/kg	U	7/8/97
SJS04-SS09-000	VCTCL	Ethylbenzene		10	ug/kg	U	7/8/97
SJS04-SS09-000	VCTCL	Methylene Chloride	29	10	ug/kg	B	7/8/97
SJS04-SS09-000	VCTCL	Styrene		10	ug/kg	U	7/8/97
SJS04-SS09-000	VCTCL	Tetrachloroethene		10	ug/kg	U	7/8/97
SJS04-SS09-000	VCTCL	Toluene		10	ug/kg	U	7/8/97
SJS04-SS09-000	VCTCL	Total Xylenes		10	ug/kg	U	7/8/97
SJS04-SS09-000	VCTCL	Trans-1,3-Dichloropropene		10	ug/kg	U	7/8/97
SJS04-SS09-000	VCTCL	Trichloroethene		10	ug/kg	U	7/8/97
SJS04-SS09-000	VCTCL	Vinyl Chloride		10	ug/kg	U	7/8/97
SJS04-SS10-000	CTOTP	Total Phosphorous (as P)	2.6	1.3	mg/kg		7/18/97
SJS04-SS10-000	MCYAN	Aluminum	7010	7.22	mg/kg		7/11/97
SJS04-SS10-000	MCYAN	Antimony	2.4	0.33	mg/kg	J	7/16/97
SJS04-SS10-000	MCYAN	Arsenic	3.6	0.49	mg/kg		7/16/97
SJS04-SS10-000	MCYAN	Barium	58.5	0.33	mg/kg		7/11/97
SJS04-SS10-000	MCYAN	Beryllium	0.23	0.16	mg/kg	J	7/11/97
SJS04-SS10-000	MCYAN	Cadmium	0.08	0.08	mg/kg	J	7/16/97
SJS04-SS10-000	MCYAN	Calcium	4700	14.28	mg/kg		7/11/97
SJS04-SS10-000	MCYAN	Chromium	16.5	1.15	mg/kg		7/11/97
SJS04-SS10-000	MCYAN	Cobalt	4.9	1.31	mg/kg	J	7/11/97
SJS04-SS10-000	MCYAN	Copper	85.6	0.98	mg/kg		7/11/97
SJS04-SS10-000	MCYAN	Cyanide		0.51	mg/kg	U	7/8/97
SJS04-SS10-000	MCYAN	Iron	14300	2.79	mg/kg		7/11/97
SJS04-SS10-000	MCYAN	Lead	196	0.16	mg/kg		7/16/97
SJS04-SS10-000	MCYAN	Magnesium	1200	29.7	mg/kg		7/11/97
SJS04-SS10-000	MCYAN	Manganese	103	0.33	mg/kg		7/11/97
SJS04-SS10-000	MCYAN	Mercury	0.35	0.05	mg/kg		7/15/97
SJS04-SS10-000	MCYAN	Nickel	12.3	1.15	mg/kg		7/11/97
SJS04-SS10-000	MCYAN	Potassium	884	36.43	mg/kg		7/11/97
SJS04-SS10-000	MCYAN	Selenium		0.49	mg/kg	U	7/16/97
SJS04-SS10-000	MCYAN	Silver	0.62	0.16	mg/kg	B	7/16/97
SJS04-SS10-000	MCYAN	Sodium	71.9	9.52	mg/kg	B	7/11/97
SJS04-SS10-000	MCYAN	Thallium	0.83	0.33	mg/kg	B	7/16/97
SJS04-SS10-000	MCYAN	Vanadium	27.3	1.48	mg/kg		7/11/97
SJS04-SS10-000	MCYAN	Zinc	350	0.82	mg/kg		7/11/97
SJS04-SS10-000	PSPCB	4,4'-DDD		3.3	ug/kg	U	7/28/97
SJS04-SS10-000	PSPCB	4,4'-DDE	7.5	3.3	ug/kg	J	7/28/97
SJS04-SS10-000	PSPCB	4,4'-DDT	22	3.3	ug/kg	J	7/28/97
SJS04-SS10-000	PSPCB	Aldrin		1.7	ug/kg	U	7/28/97
SJS04-SS10-000	PSPCB	alpha-BHC		1.7	ug/kg	U	7/28/97
SJS04-SS10-000	PSPCB	alpha-Chlordane		1.7	ug/kg	U	7/28/97
SJS04-SS10-000	PSPCB	Aroclor-1016		33	ug/kg	U	7/28/97
SJS04-SS10-000	PSPCB	Aroclor-1221		68	ug/kg	U	7/28/97
SJS04-SS10-000	PSPCB	Aroclor-1232		33	ug/kg	U	7/28/97
SJS04-SS10-000	PSPCB	Aroclor-1242		33	ug/kg	U	7/28/97
SJS04-SS10-000	PSPCB	Aroclor-1248		33	ug/kg	U	7/28/97
SJS04-SS10-000	PSPCB	Aroclor-1254		33	ug/kg	U	7/28/97
SJS04-SS10-000	PSPCB	Aroclor-1260		33	ug/kg	U	7/28/97
SJS04-SS10-000	PSPCB	beta-BHC		1.7	ug/kg	U	7/28/97
SJS04-SS10-000	PSPCB	delta-BHC		1.7	ug/kg	U	7/28/97
SJS04-SS10-000	PSPCB	Dieldrin	11	3.3	ug/kg		7/28/97
SJS04-SS10-000	PSPCB	Endosulfan I		1.7	ug/kg	U	7/28/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS04-SW04-000	VCTCL	Chlorobenzene		10	ug/L	U	7/26/97
SJS04-SW04-000	VCTCL	Chloroethane		10	ug/L	U	7/26/97
SJS04-SW04-000	VCTCL	Chloroform		10	ug/L	U	7/26/97
SJS04-SW04-000	VCTCL	Chloromethane		10	ug/L	U	7/26/97
SJS04-SW04-000	VCTCL	cis-1,3-Dichloropropene		10	ug/L	U	7/26/97
SJS04-SW04-000	VCTCL	Dibromochloromethane		10	ug/L	U	7/26/97
SJS04-SW04-000	VCTCL	Ethylbenzene		10	ug/L	U	7/26/97
SJS04-SW04-000	VCTCL	Methylene Chloride	6	10	ug/L	B	7/26/97
SJS04-SW04-000	VCTCL	Styrene		10	ug/L	U	7/26/97
SJS04-SW04-000	VCTCL	Tetrachloroethene		10	ug/L	U	7/26/97
SJS04-SW04-000	VCTCL	Toluene		10	ug/L	U	7/26/97
SJS04-SW04-000	VCTCL	Total Xylenes		10	ug/L	U	7/26/97
SJS04-SW04-000	VCTCL	Trans-1,3-Dichloropropene		10	ug/L	U	7/26/97
SJS04-SW04-000	VCTCL	Trichloroethene		10	ug/L	U	7/26/97
SJS04-SW04-000	VCTCL	Vinyl Chloride		10	ug/L	U	7/26/97
SJS04-SW04-000P	CALKY	Alkalinity	490	2	mg/L		7/21/97
SJS04-SW04-000P	CHARD	Hardness	3140	2	mg/L		7/22/97
SJS04-SW04-000P	CHBOD	Biological Oxygen Demand	23	5	mg/L		7/21/97
SJS04-SW04-000P	CHCOD	Chemical Oxygen Demand	495	5	mg/L		7/24/97
SJS04-SW04-000P	CTDSS	Total Dissolved Solids	17800	10	mg/L		7/22/97
SJS04-SW04-000P	CTOTP	Total Phosphorous (as P)	0.21	0.05	mg/L		7/29/97
SJS04-SW04-000P	CTSSS	Total Suspended Solids	2580	5	mg/L		7/22/97
SJS04-SW04-000P	MCYAN	Aluminum	50000	29	ug/L		7/22/97
SJS04-SW04-000P	MCYAN	Antimony	3.7	1	ug/L	J	7/21/97
SJS04-SW04-000P	MCYAN	Arsenic	26.6	3	ug/L		7/25/97
SJS04-SW04-000P	MCYAN	Barium	312	1	ug/L		7/22/97
SJS04-SW04-000P	MCYAN	Beryllium	6.8	1	ug/L		7/22/97
SJS04-SW04-000P	MCYAN	Cadmium		0.5	ug/L	U	7/21/97
SJS04-SW04-000P	MCYAN	Calcium	272000	46	ug/L		7/22/97
SJS04-SW04-000P	MCYAN	Chromium	63.1	4	ug/L		7/22/97
SJS04-SW04-000P	MCYAN	Cobalt	43.9	3	ug/L	J	7/22/97
SJS04-SW04-000P	MCYAN	Copper	179	2	ug/L		7/22/97
SJS04-SW04-000P	MCYAN	Cyanide		5	ug/L	U	7/22/97
SJS04-SW04-000P	MCYAN	Iron	93100	5	ug/L		7/22/97
SJS04-SW04-000P	MCYAN	Lead	822	1	ug/L		7/21/97
SJS04-SW04-000P	MCYAN	Magnesium	598000	45	ug/L		7/22/97
SJS04-SW04-000P	MCYAN	Manganese	1870	1	ug/L		7/22/97
SJS04-SW04-000P	MCYAN	Mercury	1.2	0.1	ug/L		7/29/97
SJS04-SW04-000P	MCYAN	Nickel	64	4	ug/L		7/22/97
SJS04-SW04-000P	MCYAN	Potassium	211000	97	ug/L		7/22/97
SJS04-SW04-000P	MCYAN	Selenium		6	ug/L	U	7/21/97
SJS04-SW04-000P	MCYAN	Silver		1	ug/L	U	7/21/97
SJS04-SW04-000P	MCYAN	Sodium	5070000	28	ug/L		7/23/97
SJS04-SW04-000P	MCYAN	Thallium		2	ug/L	U	7/21/97
SJS04-SW04-000P	MCYAN	Vanadium	117	4	ug/L		7/22/97
SJS04-SW04-000P	MCYAN	Zinc	1160	3	ug/L		7/22/97
SJS04-SW04-000P	PSPCB	4,4'-DDD		0.1	ug/L	U	8/6/97
SJS04-SW04-000P	PSPCB	4,4'-DDE		0.1	ug/L	U	8/6/97
SJS04-SW04-000P	PSPCB	4,4'-DDT		0.1	ug/L	U	8/6/97
SJS04-SW04-000P	PSPCB	Aldrin		0.05	ug/L	U	8/6/97
SJS04-SW04-000P	PSPCB	alpha-BHC		0.05	ug/L	U	8/6/97
SJS04-SW04-000P	PSPCB	alpha-Chlordane		0.05	ug/L	U	8/6/97
SJS04-SW04-000P	PSPCB	Aroclor-1016		1	ug/L	U	8/6/97
SJS04-SW04-000P	PSPCB	Aroclor-1221		2	ug/L	U	8/6/97
SJS04-SW04-000P	PSPCB	Aroclor-1232		1	ug/L	U	8/6/97
SJS04-SW04-000P	PSPCB	Aroclor-1242		1	ug/L	U	8/6/97
SJS04-SW04-000P	PSPCB	Aroclor-1248		1	ug/L	U	8/6/97
SJS04-SW04-000P	PSPCB	Aroclor-1254		1	ug/L	U	8/6/97
SJS04-SW04-000P	PSPCB	Aroclor-1260		1	ug/L	U	8/6/97
SJS04-SW04-000P	PSPCB	beta-BHC		0.05	ug/L	U	8/6/97
SJS04-SW04-000P	PSPCB	delta-BHC		0.05	ug/L	U	8/6/97
SJS04-SW04-000P	PSPCB	Dieldrin		0.1	ug/L	U	8/6/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS04-SW04-000P	PSPCB	Endosulfan I		0.05	ug/L	U	8/6/97
SJS04-SW04-000P	PSPCB	Endosulfan II		0.1	ug/L	U	8/6/97
SJS04-SW04-000P	PSPCB	Endosulfan Sulfate		0.1	ug/L	U	8/6/97
SJS04-SW04-000P	PSPCB	Endrin		0.1	ug/L	U	8/6/97
SJS04-SW04-000P	PSPCB	Endrin Aldehyde		0.1	ug/L	U	8/6/97
SJS04-SW04-000P	PSPCB	Endrin Ketone		0.1	ug/L	U	8/6/97
SJS04-SW04-000P	PSPCB	gamma-BHC		0.05	ug/L	U	8/6/97
SJS04-SW04-000P	PSPCB	gamma-Chlordane		0.05	ug/L	U	8/6/97
SJS04-SW04-000P	PSPCB	Heptachlor		0.05	ug/L	U	8/6/97
SJS04-SW04-000P	PSPCB	Heptachlor Epoxide		0.05	ug/L	U	8/6/97
SJS04-SW04-000P	PSPCB	Methoxychlor		0.5	ug/L	U	8/6/97
SJS04-SW04-000P	PSPCB	Toxaphene		5	ug/L	U	8/6/97
SJS04-SW04-000P	SVTCL	1,2,4-Trichlorobenzene		10	ug/L	U	7/25/97
SJS04-SW04-000P	SVTCL	1,2-Dichlorobenzene		10	ug/L	U	7/25/97
SJS04-SW04-000P	SVTCL	1,3-Dichlorobenzene		10	ug/L	U	7/25/97
SJS04-SW04-000P	SVTCL	1,4-Dichlorobenzene		10	ug/L	U	7/25/97
SJS04-SW04-000P	SVTCL	2,2'-oxybis(1-Chloropropane		10	ug/L	U	7/25/97
SJS04-SW04-000P	SVTCL	2,4,5-Trichlorophenol		25	ug/L	U	7/25/97
SJS04-SW04-000P	SVTCL	2,4,6-Trichlorophenol		10	ug/L	U	7/25/97
SJS04-SW04-000P	SVTCL	2,4-Dichlorophenol		10	ug/L	U	7/25/97
SJS04-SW04-000P	SVTCL	2,4-Dimethylphenol		10	ug/L	U	7/25/97
SJS04-SW04-000P	SVTCL	2,4-Dinitrophenol		25	ug/L	U	7/25/97
SJS04-SW04-000P	SVTCL	2,4-Dinitrotoluene		10	ug/L	U	7/25/97
SJS04-SW04-000P	SVTCL	2,6-Dinitrotoluene		10	ug/L	U	7/25/97
SJS04-SW04-000P	SVTCL	2-Chloronaphthalene		10	ug/L	U	7/25/97
SJS04-SW04-000P	SVTCL	2-Chlorophenol		10	ug/L	U	7/25/97
SJS04-SW04-000P	SVTCL	2-Methylnaphthalene		10	ug/L	U	7/25/97
SJS04-SW04-000P	SVTCL	2-Methylphenol		10	ug/L	U	7/25/97
SJS04-SW04-000P	SVTCL	2-Nitroaniline		25	ug/L	U	7/25/97
SJS04-SW04-000P	SVTCL	2-Nitrophenol		10	ug/L	U	7/25/97
SJS04-SW04-000P	SVTCL	3,3'-Dichlorobenzidine		10	ug/L	U	7/25/97
SJS04-SW04-000P	SVTCL	3-Nitroaniline		25	ug/L	U	7/25/97
SJS04-SW04-000P	SVTCL	4,6-Dinitro-2-Methylphenol		25	ug/L	U	7/25/97
SJS04-SW04-000P	SVTCL	4-Bromophenyl phenylether		10	ug/L	U	7/25/97
SJS04-SW04-000P	SVTCL	4-Chloro-3-Methylphenol		10	ug/L	U	7/25/97
SJS04-SW04-000P	SVTCL	4-Chloroaniline		10	ug/L	U	7/25/97
SJS04-SW04-000P	SVTCL	4-Chlorophenyl-phenylether		10	ug/L	U	7/25/97
SJS04-SW04-000P	SVTCL	4-Methylphenol		10	ug/L	U	7/25/97
SJS04-SW04-000P	SVTCL	4-Nitroaniline		25	ug/L	U	7/25/97
SJS04-SW04-000P	SVTCL	4-Nitrophenol		25	ug/L	U	7/25/97
SJS04-SW04-000P	SVTCL	Acenaphthene		10	ug/L	U	7/25/97
SJS04-SW04-000P	SVTCL	Acenaphthylene		10	ug/L	U	7/25/97
SJS04-SW04-000P	SVTCL	Anthracene		10	ug/L	U	7/25/97
SJS04-SW04-000P	SVTCL	Benzo(a)Anthracene		10	ug/L	U	7/25/97
SJS04-SW04-000P	SVTCL	Benzo(a)Pyrene		10	ug/L	U	7/25/97
SJS04-SW04-000P	SVTCL	Benzo(b)Fluoranthene		10	ug/L	U	7/25/97
SJS04-SW04-000P	SVTCL	Benzo(g,h,i)Perylene		10	ug/L	U	7/25/97
SJS04-SW04-000P	SVTCL	Benzo(k)fluoranthene		10	ug/L	U	7/25/97
SJS04-SW04-000P	SVTCL	Bis(2-chloroethoxy)Methane		10	ug/L	U	7/25/97
SJS04-SW04-000P	SVTCL	Bis(2-chloroethyl)Ether		10	ug/L	U	7/25/97
SJS04-SW04-000P	SVTCL	Bis(2-Ethylhexyl)Phthalate		10	ug/L	U	7/25/97
SJS04-SW04-000P	SVTCL	Butylbenzylphthalate		10	ug/L	U	7/25/97
SJS04-SW04-000P	SVTCL	Carbazole		10	ug/L	U	7/25/97
SJS04-SW04-000P	SVTCL	Chrysene		10	ug/L	U	7/25/97
SJS04-SW04-000P	SVTCL	Di-n-Butylphthalate		10	ug/L	U	7/25/97
SJS04-SW04-000P	SVTCL	Di-n-Octyl Phthalate		10	ug/L	U	7/25/97
SJS04-SW04-000P	SVTCL	Dibenz(a,h)Anthracene		10	ug/L	U	7/25/97
SJS04-SW04-000P	SVTCL	Dibenzofuran		10	ug/L	U	7/25/97
SJS04-SW04-000P	SVTCL	Diethylphthalate		10	ug/L	U	7/25/97
SJS04-SW04-000P	SVTCL	Dimethyl Phthalate		10	ug/L	U	7/25/97
SJS04-SW04-000P	SVTCL	Fluoranthene		10	ug/L	U	7/25/97
SJS04-SW04-000P	SVTCL	Fluorene		10	ug/L	U	7/25/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS04-SW04-000P	SVTCL	Hexachlorobenzene		10	ug/L	U	7/25/97
SJS04-SW04-000P	SVTCL	Hexachlorobutadiene		10	ug/L	U	7/25/97
SJS04-SW04-000P	SVTCL	Hexachlorocyclopentadien		10	ug/L	U	7/25/97
SJS04-SW04-000P	SVTCL	Hexachloroethane		10	ug/L	U	7/25/97
SJS04-SW04-000P	SVTCL	Indeno(1,2,3-cd)Pyrene		10	ug/L	U	7/25/97
SJS04-SW04-000P	SVTCL	Isophorone		10	ug/L	U	7/25/97
SJS04-SW04-000P	SVTCL	N-Nitroso-Di-n-Propylamine		10	ug/L	U	7/25/97
SJS04-SW04-000P	SVTCL	N-Nitrosodiphenylamine		10	ug/L	U	7/25/97
SJS04-SW04-000P	SVTCL	Naphthalene		10	ug/L	U	7/25/97
SJS04-SW04-000P	SVTCL	Nitrobenzene		10	ug/L	U	7/25/97
SJS04-SW04-000P	SVTCL	Pentachlorophenol		25	ug/L	U	7/25/97
SJS04-SW04-000P	SVTCL	Phenanthrene		10	ug/L	U	7/25/97
SJS04-SW04-000P	SVTCL	Phenol		10	ug/L	U	7/25/97
SJS04-SW04-000P	SVTCL	Pyrene		10	ug/L	U	7/25/97
SJS04-SW04-000P	VCTCL	1,1,1-Trichloroethane		10	ug/L	U	7/26/97
SJS04-SW04-000P	VCTCL	1,1,2,2-Tetrachloroethane		10	ug/L	U	7/26/97
SJS04-SW04-000P	VCTCL	1,1,2-Trichloroethane		10	ug/L	U	7/26/97
SJS04-SW04-000P	VCTCL	1,1-Dichloroethane		10	ug/L	U	7/26/97
SJS04-SW04-000P	VCTCL	1,1-Dichloroethene		10	ug/L	U	7/26/97
SJS04-SW04-000P	VCTCL	1,2-Dichloroethane		10	ug/L	U	7/26/97
SJS04-SW04-000P	VCTCL	1,2-Dichloroethene (total)		10	ug/L	U	7/26/97
SJS04-SW04-000P	VCTCL	1,2-Dichloropropane		10	ug/L	U	7/26/97
SJS04-SW04-000P	VCTCL	2-Butanone		10	ug/L	U	7/26/97
SJS04-SW04-000P	VCTCL	2-Hexanone		10	ug/L	U	7/26/97
SJS04-SW04-000P	VCTCL	4-Methyl-2-Pentanone		10	ug/L	U	7/26/97
SJS04-SW04-000P	VCTCL	Acetone		10	ug/L	UJ	7/26/97
SJS04-SW04-000P	VCTCL	Benzene		10	ug/L	U	7/26/97
SJS04-SW04-000P	VCTCL	Bromodichloromethane		10	ug/L	U	7/26/97
SJS04-SW04-000P	VCTCL	Bromoform		10	ug/L	U	7/26/97
SJS04-SW04-000P	VCTCL	Bromomethane		10	ug/L	U	7/26/97
SJS04-SW04-000P	VCTCL	Carbon Disulfide		10	ug/L	U	7/26/97
SJS04-SW04-000P	VCTCL	Carbon Tetrachloride		10	ug/L	U	7/26/97
SJS04-SW04-000P	VCTCL	Chlorobenzene		10	ug/L	U	7/26/97
SJS04-SW04-000P	VCTCL	Chloroethane		10	ug/L	U	7/26/97
SJS04-SW04-000P	VCTCL	Chloroform		10	ug/L	U	7/26/97
SJS04-SW04-000P	VCTCL	Chloromethane		10	ug/L	U	7/26/97
SJS04-SW04-000P	VCTCL	cis-1,3-Dichloropropene		10	ug/L	U	7/26/97
SJS04-SW04-000P	VCTCL	Dibromochloromethane		10	ug/L	U	7/26/97
SJS04-SW04-000P	VCTCL	Ethylbenzene		10	ug/L	U	7/26/97
SJS04-SW04-000P	VCTCL	Methylene Chloride	6	10	ug/L	B	7/26/97
SJS04-SW04-000P	VCTCL	Styrene		10	ug/L	U	7/26/97
SJS04-SW04-000P	VCTCL	Tetrachloroethene		10	ug/L	U	7/26/97
SJS04-SW04-000P	VCTCL	Toluene		10	ug/L	U	7/26/97
SJS04-SW04-000P	VCTCL	Total Xylenes		10	ug/L	U	7/26/97
SJS04-SW04-000P	VCTCL	Trans-1,3-Dichloropropene		10	ug/L	U	7/26/97
SJS04-SW04-000P	VCTCL	Trichloroethene		10	ug/L	U	7/26/97
SJS04-SW04-000P	VCTCL	Vinyl Chloride		10	ug/L	U	7/26/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS03-GW1D-002	CTOTP	Total Phosphorous (as P)	0.56	0.13	mg/L		11/17/97
SJS03-GW1D-002	IMCYAN	Aluminum	48.4	29	ug/L	B	11/26/97
SJS03-GW1D-002	IMCYAN	Antimony		1.7	ug/L	U	11/18/97
SJS03-GW1D-002	IMCYAN	Arsenic		3.2	ug/L	U	11/18/97
SJS03-GW1D-002	IMCYAN	Barium	21.7	1	ug/L	J	11/26/97
SJS03-GW1D-002	IMCYAN	Beryllium		0.58	ug/L	U	11/26/97
SJS03-GW1D-002	IMCYAN	Cadmium		0.4	ug/L	U	11/18/97
SJS03-GW1D-002	IMCYAN	Calcium	49500	46	ug/L		11/26/97
SJS03-GW1D-002	IMCYAN	Chromium		4.6	ug/L	U	11/26/97
SJS03-GW1D-002	IMCYAN	Cobalt		6	ug/L	U	11/26/97
SJS03-GW1D-002	IMCYAN	Copper		5.8	ug/L	U	11/26/97
SJS03-GW1D-002	IMCYAN	Cyanide		5	ug/L	U	11/12/97
SJS03-GW1D-002	IMCYAN	Iron	170	5	ug/L	B	11/26/97
SJS03-GW1D-002	IMCYAN	Lead	1.8	1	ug/L	J	11/18/97
SJS03-GW1D-002	IMCYAN	Magnesium	12700	45	ug/L		11/26/97
SJS03-GW1D-002	IMCYAN	Manganese	45.6	1	ug/L		11/26/97
SJS03-GW1D-002	IMCYAN	Mercury		0.13	ug/L	U	11/19/97
SJS03-GW1D-002	IMCYAN	Nickel		6.3	ug/L	U	11/26/97
SJS03-GW1D-002	IMCYAN	Potassium	15400	97	ug/L		11/26/97
SJS03-GW1D-002	IMCYAN	Selenium		3.3	ug/L	U	11/18/97
SJS03-GW1D-002	IMCYAN	Silver		1.1	ug/L	U	11/18/97
SJS03-GW1D-002	IMCYAN	Sodium	43300	28	ug/L		11/26/97
SJS03-GW1D-002	IMCYAN	Thallium	2.5	2	ug/L	B	11/19/97
SJS03-GW1D-002	IMCYAN	Vanadium		6.8	ug/L	U	11/26/97
SJS03-GW1D-002	IMCYAN	Zinc	10.9	3	ug/L	B	11/26/97
SJS03-GW1D-002	PSPCB	4,4'-DDD		0.1	ug/L	U	11/20/97
SJS03-GW1D-002	PSPCB	4,4'-DDE		0.1	ug/L	U	11/20/97
SJS03-GW1D-002	PSPCB	4,4'-DDT		0.1	ug/L	U	11/20/97
SJS03-GW1D-002	PSPCB	Aldrin		0.05	ug/L	U	11/20/97
SJS03-GW1D-002	PSPCB	alpha-BHC		0.05	ug/L	U	11/20/97
SJS03-GW1D-002	PSPCB	alpha-Chlordane		0.05	ug/L	U	11/20/97
SJS03-GW1D-002	PSPCB	Aroclor-1016		1	ug/L	U	11/20/97
SJS03-GW1D-002	PSPCB	Aroclor-1221		2	ug/L	U	11/20/97
SJS03-GW1D-002	PSPCB	Aroclor-1232		1	ug/L	U	11/20/97
SJS03-GW1D-002	PSPCB	Aroclor-1242		1	ug/L	U	11/20/97
SJS03-GW1D-002	PSPCB	Aroclor-1248		1	ug/L	U	11/20/97
SJS03-GW1D-002	PSPCB	Aroclor-1254		1	ug/L	U	11/20/97
SJS03-GW1D-002	PSPCB	Aroclor-1260		1	ug/L	U	11/20/97
SJS03-GW1D-002	PSPCB	beta-BHC		0.05	ug/L	U	11/20/97
SJS03-GW1D-002	PSPCB	delta-BHC		0.05	ug/L	U	11/20/97
SJS03-GW1D-002	PSPCB	Dieldrin		0.1	ug/L	U	11/20/97
SJS03-GW1D-002	PSPCB	Endosulfan I		0.05	ug/L	U	11/20/97
SJS03-GW1D-002	PSPCB	Endosulfan II		0.1	ug/L	U	11/20/97
SJS03-GW1D-002	PSPCB	Endosulfan Sulfate		0.1	ug/L	U	11/20/97
SJS03-GW1D-002	PSPCB	Endrin		0.1	ug/L	U	11/20/97
SJS03-GW1D-002	PSPCB	Endrin Aldehyde		0.1	ug/L	U	11/20/97
SJS03-GW1D-002	PSPCB	Endrin Ketone		0.1	ug/L	U	11/20/97
SJS03-GW1D-002	PSPCB	gamma-BHC		0.05	ug/L	U	11/20/97
SJS03-GW1D-002	PSPCB	gamma-Chlordane		0.05	ug/L	U	11/20/97
SJS03-GW1D-002	PSPCB	Heptachlor		0.05	ug/L	U	11/20/97
SJS03-GW1D-002	PSPCB	Heptachlor Epoxide		0.05	ug/L	U	11/20/97
SJS03-GW1D-002	PSPCB	Methoxychlor		0.5	ug/L	U	11/20/97
SJS03-GW1D-002	PSPCB	Toxaphene		5	ug/L	U	11/20/97
SJS03-GW1D-002	SVTCL	1,2,4-Trichlorobenzene		10	ug/L	U	11/19/97
SJS03-GW1D-002	SVTCL	1,2-Dichlorobenzene		10	ug/L	U	11/19/97
SJS03-GW1D-002	SVTCL	1,3-Dichlorobenzene		10	ug/L	U	11/19/97
SJS03-GW1D-002	SVTCL	1,4-Dichlorobenzene		10	ug/L	U	11/19/97
SJS03-GW1D-002	SVTCL	2,2'-oxybis(1-Chloropropan		10	ug/L	U	11/19/97
SJS03-GW1D-002	SVTCL	2,4,5-Trichlorophenol		25	ug/L	U	11/19/97
SJS03-GW1D-002	SVTCL	2,4,6-Trichlorophenol		10	ug/L	U	11/19/97
SJS03-GW1D-002	SVTCL	2,4-Dichlorophenol		10	ug/L	U	11/19/97
SJS03-GW1D-002	SVTCL	2,4-Dimethylphenol		10	ug/L	U	11/19/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS03-GW1D-002	SVTCL	2,4-Dinitrophenol		25	ug/L	U	11/19/97
SJS03-GW1D-002	SVTCL	2,4-Dinitrotoluene		10	ug/L	U	11/19/97
SJS03-GW1D-002	SVTCL	2,6-Dinitrotoluene		10	ug/L	U	11/19/97
SJS03-GW1D-002	SVTCL	2-Chloronaphthalene		10	ug/L	U	11/19/97
SJS03-GW1D-002	SVTCL	2-Chlorophenol		10	ug/L	U	11/19/97
SJS03-GW1D-002	SVTCL	2-Methylnaphthalene		10	ug/L	U	11/19/97
SJS03-GW1D-002	SVTCL	2-Methylphenol		10	ug/L	U	11/19/97
SJS03-GW1D-002	SVTCL	2-Nitroaniline		25	ug/L	U	11/19/97
SJS03-GW1D-002	SVTCL	2-Nitrophenol		10	ug/L	U	11/19/97
SJS03-GW1D-002	SVTCL	3,3'-Dichlorobenzidine		10	ug/L	U	11/19/97
SJS03-GW1D-002	SVTCL	3-Nitroaniline		25	ug/L	U	11/19/97
SJS03-GW1D-002	SVTCL	4,6-Dinitro-2-Methylphenol		25	ug/L	U	11/19/97
SJS03-GW1D-002	SVTCL	4-Bromophenol-phenyleth		10	ug/L	U	11/19/97
SJS03-GW1D-002	SVTCL	4-Chloro-3-Methylphenol		10	ug/L	U	11/19/97
SJS03-GW1D-002	SVTCL	4-Chloroaniline		10	ug/L	U	11/19/97
SJS03-GW1D-002	SVTCL	4-Chlorophenyl-phenyleth		10	ug/L	U	11/19/97
SJS03-GW1D-002	SVTCL	4-Methylphenol		10	ug/L	U	11/19/97
SJS03-GW1D-002	SVTCL	4-Nitroaniline		25	ug/L	U	11/19/97
SJS03-GW1D-002	SVTCL	4-Nitrophenol		25	ug/L	U	11/19/97
SJS03-GW1D-002	SVTCL	Acenaphthene		10	ug/L	U	11/19/97
SJS03-GW1D-002	SVTCL	Acenaphthylene		10	ug/L	U	11/19/97
SJS03-GW1D-002	SVTCL	Anthracene		10	ug/L	U	11/19/97
SJS03-GW1D-002	SVTCL	Benzo(a)anthracene		10	ug/L	U	11/19/97
SJS03-GW1D-002	SVTCL	Benzo(a)pyrene		10	ug/L	U	11/19/97
SJS03-GW1D-002	SVTCL	Benzo(b)fluoranthene		10	ug/L	U	11/19/97
SJS03-GW1D-002	SVTCL	Benzo(g,h,i)perylene		10	ug/L	U	11/19/97
SJS03-GW1D-002	SVTCL	Benzo(k)fluoranthene		10	ug/L	U	11/19/97
SJS03-GW1D-002	SVTCL	bis(2-Chloroethoxy)metha		10	ug/L	U	11/19/97
SJS03-GW1D-002	SVTCL	bis(2-chloroethyl)ether		10	ug/L	U	11/19/97
SJS03-GW1D-002	SVTCL	bis(2-Ethylhexyl)phthalate	3	10	ug/L	J	11/19/97
SJS03-GW1D-002	SVTCL	Butylbenzylphthalate		10	ug/L	U	11/19/97
SJS03-GW1D-002	SVTCL	Carbazole		10	ug/L	U	11/19/97
SJS03-GW1D-002	SVTCL	Chrysene		10	ug/L	U	11/19/97
SJS03-GW1D-002	SVTCL	Di-n-butylphthalate		10	ug/L	U	11/19/97
SJS03-GW1D-002	SVTCL	Di-n-Octyl Phthalate		10	ug/L	U	11/19/97
SJS03-GW1D-002	SVTCL	Dibenzo(a,h)anthracene		10	ug/L	U	11/19/97
SJS03-GW1D-002	SVTCL	Dibenzofuran		10	ug/L	U	11/19/97
SJS03-GW1D-002	SVTCL	Diethylphthalate		10	ug/L	U	11/19/97
SJS03-GW1D-002	SVTCL	Dimethyl Phthalate		10	ug/L	U	11/19/97
SJS03-GW1D-002	SVTCL	Fluoranthene		10	ug/L	U	11/19/97
SJS03-GW1D-002	SVTCL	Fluorene		10	ug/L	U	11/19/97
SJS03-GW1D-002	SVTCL	Hexachlorobenzene		10	ug/L	U	11/19/97
SJS03-GW1D-002	SVTCL	Hexachlorobutadiene		10	ug/L	U	11/19/97
SJS03-GW1D-002	SVTCL	Hexachlorocyclopentadie		10	ug/L	U	11/19/97
SJS03-GW1D-002	SVTCL	Hexachloroethane		10	ug/L	U	11/19/97
SJS03-GW1D-002	SVTCL	Indeno(1,2,3-cd)pyrene		10	ug/L	U	11/19/97
SJS03-GW1D-002	SVTCL	Isophorone		10	ug/L	U	11/19/97
SJS03-GW1D-002	SVTCL	N-Nitroso-Di-n-Propylamine		10	ug/L	U	11/19/97
SJS03-GW1D-002	SVTCL	N-Nitrosodiphenylamine		10	ug/L	U	11/19/97
SJS03-GW1D-002	SVTCL	Naphthalene		10	ug/L	U	11/19/97
SJS03-GW1D-002	SVTCL	Nitrobenzene		10	ug/L	U	11/19/97
SJS03-GW1D-002	SVTCL	Pentachlorophenol		25	ug/L	U	11/19/97
SJS03-GW1D-002	SVTCL	Phenanthrene		10	ug/L	U	11/19/97
SJS03-GW1D-002	SVTCL	Phenol		10	ug/L	U	11/19/97
SJS03-GW1D-002	SVTCL	Pyrene		10	ug/L	U	11/19/97
SJS03-GW1D-002	VCLOW	1,1,1-Trichloroethane		1	ug/L	U	11/11/97
SJS03-GW1D-002	VCLOW	1,1,2,2-Tetrachloroethane		1	ug/L	U	11/11/97
SJS03-GW1D-002	VCLOW	1,1,2-Trichloroethane		1	ug/L	U	11/11/97
SJS03-GW1D-002	VCLOW	1,1-Dichloroethane		1	ug/L	U	11/11/97
SJS03-GW1D-002	VCLOW	1,1-Dichloroethene		1	ug/L	U	11/11/97
SJS03-GW1D-002	VCLOW	1,2,4-Trichlorobenzene		1	ug/L	U	11/11/97
SJS03-GW1D-002	VCLOW	1,2-Dibromo-3-chloropropa		1	ug/L	U	11/11/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS03-GW1D-002	VCLOW	1,2-Dibromoethane		1	ug/L	U	11/11/97
SJS03-GW1D-002	VCLOW	1,2-Dichlorobenzene		1	ug/L	U	11/11/97
SJS03-GW1D-002	VCLOW	1,2-Dichloroethane		1	ug/L	U	11/11/97
SJS03-GW1D-002	VCLOW	1,2-Dichloropropane		1	ug/L	U	11/11/97
SJS03-GW1D-002	VCLOW	1,3-Dichlorobenzene		1	ug/L	U	11/11/97
SJS03-GW1D-002	VCLOW	1,4-Dichlorobenzene		1	ug/L	U	11/11/97
SJS03-GW1D-002	VCLOW	2-Hexanone		5	ug/L	U	11/11/97
SJS03-GW1D-002	VCLOW	4-Methyl-2-Pentanone		5	ug/L	U	11/11/97
SJS03-GW1D-002	VCLOW	Acetone	20	5	ug/L	B	11/11/97
SJS03-GW1D-002	VCLOW	Benzene		1	ug/L	U	11/11/97
SJS03-GW1D-002	VCLOW	Bromochloromethane		1	ug/L	U	11/11/97
SJS03-GW1D-002	VCLOW	Bromodichloromethane		1	ug/L	U	11/11/97
SJS03-GW1D-002	VCLOW	Bromoform		1	ug/L	U	11/11/97
SJS03-GW1D-002	VCLOW	Bromomethane		1	ug/L	U	11/11/97
SJS03-GW1D-002	VCLOW	Carbon Disulfide	0.3	1	ug/L	J	11/11/97
SJS03-GW1D-002	VCLOW	Carbon Tetrachloride		1	ug/L	U	11/11/97
SJS03-GW1D-002	VCLOW	Chlorobenzene		1	ug/L	U	11/11/97
SJS03-GW1D-002	VCLOW	Chloroethane		1	ug/L	U	11/11/97
SJS03-GW1D-002	VCLOW	Chloroform		1	ug/L	U	11/11/97
SJS03-GW1D-002	VCLOW	Chloromethane		1	ug/L	U	11/11/97
SJS03-GW1D-002	VCLOW	cis-1,2-Dichloroethene		1	ug/L	U	11/11/97
SJS03-GW1D-002	VCLOW	cis-1,3-Dichloropropene		1	ug/L	U	11/11/97
SJS03-GW1D-002	VCLOW	Dibromochloromethane		1	ug/L	U	11/11/97
SJS03-GW1D-002	VCLOW	Ethylbenzene		1	ug/L	U	11/11/97
SJS03-GW1D-002	VCLOW	Methylene Chloride	3	2	ug/L	B	11/11/97
SJS03-GW1D-002	VCLOW	Styrene		1	ug/L	U	11/11/97
SJS03-GW1D-002	VCLOW	Tetrachloroethene		1	ug/L	U	11/11/97
SJS03-GW1D-002	VCLOW	Toluene		1	ug/L	U	11/11/97
SJS03-GW1D-002	VCLOW	Total Xylenes		1	ug/L	U	11/11/97
SJS03-GW1D-002	VCLOW	Trans-1,2-Dichloroethene		1	ug/L	U	11/11/97
SJS03-GW1D-002	VCLOW	trans-1,3-Dichloropropene		1	ug/L	U	11/11/97
SJS03-GW1D-002	VCLOW	Trichloroethene		1	ug/L	U	11/11/97
SJS03-GW1D-002	VCLOW	Vinyl Chloride		1	ug/L	U	11/11/97
SJS03-GW1D-002F	METAL	Aluminum	42.3	29	ug/L	B	11/26/97
SJS03-GW1D-002F	METAL	Antimony		1.7	ug/L	U	11/18/97
SJS03-GW1D-002F	METAL	Arsenic		3.2	ug/L	U	11/18/97
SJS03-GW1D-002F	METAL	Barium	20.8	1	ug/L	J	11/26/97
SJS03-GW1D-002F	METAL	Beryllium		0.58	ug/L	U	11/26/97
SJS03-GW1D-002F	METAL	Cadmium		0.4	ug/L	U	11/18/97
SJS03-GW1D-002F	METAL	Calcium	51100	46	ug/L		11/26/97
SJS03-GW1D-002F	METAL	Chromium		4.6	ug/L	U	11/26/97
SJS03-GW1D-002F	METAL	Cobalt		6	ug/L	U	11/26/97
SJS03-GW1D-002F	METAL	Copper		5.8	ug/L	U	11/26/97
SJS03-GW1D-002F	METAL	Iron	130	5	ug/L	B	11/26/97
SJS03-GW1D-002F	METAL	Lead		1.3	ug/L	U	11/18/97
SJS03-GW1D-002F	METAL	Magnesium	13200	45	ug/L		11/26/97
SJS03-GW1D-002F	METAL	Manganese	46.4	1	ug/L		11/26/97
SJS03-GW1D-002F	METAL	Mercury		0.12	ug/L	U	11/19/97
SJS03-GW1D-002F	METAL	Nickel		6.3	ug/L	U	11/26/97
SJS03-GW1D-002F	METAL	Potassium	15100	97	ug/L		11/26/97
SJS03-GW1D-002F	METAL	Selenium		3.3	ug/L	U	11/18/97
SJS03-GW1D-002F	METAL	Silver		1.1	ug/L	U	11/18/97
SJS03-GW1D-002F	METAL	Sodium	44800	28	ug/L		11/26/97
SJS03-GW1D-002F	METAL	Thallium		1.5	ug/L	U	11/19/97
SJS03-GW1D-002F	METAL	Vanadium		6.8	ug/L	U	11/26/97
SJS03-GW1D-002F	METAL	Zinc	5.7	3	ug/L	B	11/26/97
SJS03-GW1S-002	CTOTP	Total Phosphorous (as P)	0.56	0.13	mg/L		11/17/97
SJS03-GW1S-002	MCYAN	Aluminum	1710	29	ug/L		11/26/97
SJS03-GW1S-002	MCYAN	Antimony	2.3	1	ug/L	J	11/18/97
SJS03-GW1S-002	MCYAN	Arsenic		3.2	ug/L	U	11/18/97
SJS03-GW1S-002	MCYAN	Barium	31.1	1	ug/L	J	11/26/97
SJS03-GW1S-002	MCYAN	Beryllium	0.76	1	ug/L	J	11/26/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS03-GW1S-002	MCYAN	Cadmium		0.4	ug/L	U	11/18/97
SJS03-GW1S-002	MCYAN	Calcium	92000	46	ug/L		11/26/97
SJS03-GW1S-002	MCYAN	Chromium	12	4	ug/L	B	11/26/97
SJS03-GW1S-002	MCYAN	Cobalt	8.8	3	ug/L	J	11/26/97
SJS03-GW1S-002	MCYAN	Copper	6.3	2	ug/L	J	11/26/97
SJS03-GW1S-002	MCYAN	Cyanide		5	ug/L	U	11/12/97
SJS03-GW1S-002	MCYAN	Iron	26200	5	ug/L		11/26/97
SJS03-GW1S-002	MCYAN	Lead	3.5	1	ug/L		11/18/97
SJS03-GW1S-002	MCYAN	Magnesium	34800	45	ug/L		11/26/97
SJS03-GW1S-002	MCYAN	Manganese	1720	1	ug/L		11/26/97
SJS03-GW1S-002	MCYAN	Mercury		0.12	ug/L	U	11/19/97
SJS03-GW1S-002	MCYAN	Nickel	14.5	4	ug/L	J	11/26/97
SJS03-GW1S-002	MCYAN	Potassium	26600	97	ug/L		11/26/97
SJS03-GW1S-002	MCYAN	Selenium		3.3	ug/L	U	11/18/97
SJS03-GW1S-002	MCYAN	Silver		1.1	ug/L	U	11/18/97
SJS03-GW1S-002	MCYAN	Sodium	122000	28	ug/L		11/26/97
SJS03-GW1S-002	MCYAN	Thallium	3.1	2	ug/L	B	11/19/97
SJS03-GW1S-002	MCYAN	Vanadium	12.2	4	ug/L	J	11/26/97
SJS03-GW1S-002	MCYAN	Zinc	55.2	3	ug/L	B	11/26/97
SJS03-GW1S-002	PSPCB	4,4'-DDD		0.1	ug/L	U	11/20/97
SJS03-GW1S-002	PSPCB	4,4'-DDE		0.1	ug/L	U	11/20/97
SJS03-GW1S-002	PSPCB	4,4'-DDT		0.1	ug/L	U	11/20/97
SJS03-GW1S-002	PSPCB	Aldrin		0.05	ug/L	U	11/20/97
SJS03-GW1S-002	PSPCB	alpha-BHC		0.05	ug/L	U	11/20/97
SJS03-GW1S-002	PSPCB	alpha-Chlordane		0.05	ug/L	U	11/20/97
SJS03-GW1S-002	PSPCB	Aroclor-1016		1	ug/L	U	11/20/97
SJS03-GW1S-002	PSPCB	Aroclor-1221		2	ug/L	U	11/20/97
SJS03-GW1S-002	PSPCB	Aroclor-1232		1	ug/L	U	11/20/97
SJS03-GW1S-002	PSPCB	Aroclor-1242		1	ug/L	U	11/20/97
SJS03-GW1S-002	PSPCB	Aroclor-1248		1	ug/L	U	11/20/97
SJS03-GW1S-002	PSPCB	Aroclor-1254		1	ug/L	U	11/20/97
SJS03-GW1S-002	PSPCB	Aroclor-1260		1	ug/L	U	11/20/97
SJS03-GW1S-002	PSPCB	beta-BHC		0.05	ug/L	U	11/20/97
SJS03-GW1S-002	PSPCB	delta-BHC		0.05	ug/L	U	11/20/97
SJS03-GW1S-002	PSPCB	Dieldrin		0.1	ug/L	U	11/20/97
SJS03-GW1S-002	PSPCB	Endosulfan I		0.05	ug/L	U	11/20/97
SJS03-GW1S-002	PSPCB	Endosulfan II		0.1	ug/L	U	11/20/97
SJS03-GW1S-002	PSPCB	Endosulfan Sulfate		0.1	ug/L	U	11/20/97
SJS03-GW1S-002	PSPCB	Endrin		0.1	ug/L	U	11/20/97
SJS03-GW1S-002	PSPCB	Endrin Aldehyde		0.1	ug/L	U	11/20/97
SJS03-GW1S-002	PSPCB	Endrin Ketone		0.1	ug/L	U	11/20/97
SJS03-GW1S-002	PSPCB	gamma-BHC		0.05	ug/L	U	11/20/97
SJS03-GW1S-002	PSPCB	gamma-Chlordane		0.05	ug/L	U	11/20/97
SJS03-GW1S-002	PSPCB	Heptachlor		0.05	ug/L	U	11/20/97
SJS03-GW1S-002	PSPCB	Heptachlor Epoxide		0.05	ug/L	U	11/20/97
SJS03-GW1S-002	PSPCB	Methoxychlor		0.5	ug/L	U	11/20/97
SJS03-GW1S-002	PSPCB	Toxaphene		5	ug/L	U	11/20/97
SJS03-GW1S-002	SVTCL	1,2,4-Trichlorobenzene		10	ug/L	U	11/19/97
SJS03-GW1S-002	SVTCL	1,2-Dichlorobenzene		10	ug/L	U	11/19/97
SJS03-GW1S-002	SVTCL	1,3-Dichlorobenzene		10	ug/L	U	11/19/97
SJS03-GW1S-002	SVTCL	1,4-Dichlorobenzene		10	ug/L	U	11/19/97
SJS03-GW1S-002	SVTCL	2,2'-oxybis(1-Chloropropan		10	ug/L	U	11/19/97
SJS03-GW1S-002	SVTCL	2,4,5-Trichlorophenol		25	ug/L	U	11/19/97
SJS03-GW1S-002	SVTCL	2,4,6-Trichlorophenol		10	ug/L	U	11/19/97
SJS03-GW1S-002	SVTCL	2,4-Dichlorophenol		10	ug/L	U	11/19/97
SJS03-GW1S-002	SVTCL	2,4-Dimethylphenol		10	ug/L	U	11/19/97
SJS03-GW1S-002	SVTCL	2,4-Dinitrophenol		25	ug/L	U	11/19/97
SJS03-GW1S-002	SVTCL	2,4-Dinitrotoluene		10	ug/L	U	11/19/97
SJS03-GW1S-002	SVTCL	2,6-Dinitrotoluene		10	ug/L	U	11/19/97
SJS03-GW1S-002	SVTCL	2-Chloronaphthalene		10	ug/L	U	11/19/97
SJS03-GW1S-002	SVTCL	2-Chlorophenol		10	ug/L	U	11/19/97
SJS03-GW1S-002	SVTCL	2-Methylnaphthalene		10	ug/L	U	11/19/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS03-GW1S-002	SVTCL	2-Methylphenol		10	ug/L	U	11/19/97
SJS03-GW1S-002	SVTCL	2-Nitroaniline		25	ug/L	U	11/19/97
SJS03-GW1S-002	SVTCL	2-Nitrophenol		10	ug/L	U	11/19/97
SJS03-GW1S-002	SVTCL	3,3'-Dichlorobenzidine		10	ug/L	U	11/19/97
SJS03-GW1S-002	SVTCL	3-Nitroaniline		25	ug/L	U	11/19/97
SJS03-GW1S-002	SVTCL	4,6-Dinitro-2-Methylphenol		25	ug/L	U	11/19/97
SJS03-GW1S-002	SVTCL	4-Bromophenol-phenyleth		10	ug/L	U	11/19/97
SJS03-GW1S-002	SVTCL	4-Chloro-3-Methylphenol		10	ug/L	U	11/19/97
SJS03-GW1S-002	SVTCL	4-Chloroaniline		10	ug/L	U	11/19/97
SJS03-GW1S-002	SVTCL	4-Chlorophenyl-phenyleth		10	ug/L	U	11/19/97
SJS03-GW1S-002	SVTCL	4-Methylphenol		10	ug/L	U	11/19/97
SJS03-GW1S-002	SVTCL	4-Nitroaniline		25	ug/L	U	11/19/97
SJS03-GW1S-002	SVTCL	4-Nitrophenol		25	ug/L	U	11/19/97
SJS03-GW1S-002	SVTCL	Acenaphthene	4	10	ug/L	J	11/19/97
SJS03-GW1S-002	SVTCL	Acenaphthylene		10	ug/L	U	11/19/97
SJS03-GW1S-002	SVTCL	Anthracene		10	ug/L	U	11/19/97
SJS03-GW1S-002	SVTCL	Benzo(a)anthracene		10	ug/L	U	11/19/97
SJS03-GW1S-002	SVTCL	Benzo(a)pyrene		10	ug/L	U	11/19/97
SJS03-GW1S-002	SVTCL	Benzo(b)fluoranthene		10	ug/L	U	11/19/97
SJS03-GW1S-002	SVTCL	Benzo(g,h,i)perylene		10	ug/L	U	11/19/97
SJS03-GW1S-002	SVTCL	Benzo(k)fluoranthene		10	ug/L	U	11/19/97
SJS03-GW1S-002	SVTCL	bis(2-Chloroethoxy)metha		10	ug/L	U	11/19/97
SJS03-GW1S-002	SVTCL	bis(2-chloroethyl)ether		10	ug/L	U	11/19/97
SJS03-GW1S-002	SVTCL	bis(2-Ethylhexyl)phthalate		10	ug/L	U	11/19/97
SJS03-GW1S-002	SVTCL	Butylbenzylphthalate		10	ug/L	U	11/19/97
SJS03-GW1S-002	SVTCL	Carbazole		10	ug/L	U	11/19/97
SJS03-GW1S-002	SVTCL	Chrysene		10	ug/L	U	11/19/97
SJS03-GW1S-002	SVTCL	Di-n-butylphthalate		10	ug/L	U	11/19/97
SJS03-GW1S-002	SVTCL	Di-n-Octyl Phthalate		10	ug/L	U	11/19/97
SJS03-GW1S-002	SVTCL	Dibenzo(a,h)anthracene		10	ug/L	U	11/19/97
SJS03-GW1S-002	SVTCL	Dibenzofuran	1	10	ug/L	J	11/19/97
SJS03-GW1S-002	SVTCL	Diethylphthalate		10	ug/L	U	11/19/97
SJS03-GW1S-002	SVTCL	Dimethyl Phthalate		10	ug/L	U	11/19/97
SJS03-GW1S-002	SVTCL	Fluoranthene	1	10	ug/L	J	11/19/97
SJS03-GW1S-002	SVTCL	Fluorene		10	ug/L	U	11/19/97
SJS03-GW1S-002	SVTCL	Hexachlorobenzene		10	ug/L	U	11/19/97
SJS03-GW1S-002	SVTCL	Hexachlorobutadiene		10	ug/L	U	11/19/97
SJS03-GW1S-002	SVTCL	Hexachlorocyclopentadie		10	ug/L	U	11/19/97
SJS03-GW1S-002	SVTCL	Hexachloroethane		10	ug/L	U	11/19/97
SJS03-GW1S-002	SVTCL	Indeno(1,2,3-cd)pyrene		10	ug/L	U	11/19/97
SJS03-GW1S-002	SVTCL	Isophorone		10	ug/L	U	11/19/97
SJS03-GW1S-002	SVTCL	N-Nitroso-Di-n-Propylamine		10	ug/L	U	11/19/97
SJS03-GW1S-002	SVTCL	N-Nitrosodiphenylamine		10	ug/L	U	11/19/97
SJS03-GW1S-002	SVTCL	Naphthalene		10	ug/L	U	11/19/97
SJS03-GW1S-002	SVTCL	Nitrobenzene		10	ug/L	U	11/19/97
SJS03-GW1S-002	SVTCL	Pentachlorophenol		25	ug/L	U	11/19/97
SJS03-GW1S-002	SVTCL	Phenanthrene		10	ug/L	U	11/19/97
SJS03-GW1S-002	SVTCL	Phenol		10	ug/L	U	11/19/97
SJS03-GW1S-002	SVTCL	Pyrene		10	ug/L	U	11/19/97
SJS03-GW1S-002	VCLOW	1,1,1-Trichloroethane		1	ug/L	U	11/11/97
SJS03-GW1S-002	VCLOW	1,1,2,2-Tetrachloroethane		1	ug/L	U	11/11/97
SJS03-GW1S-002	VCLOW	1,1,2-Trichloroethane		1	ug/L	U	11/11/97
SJS03-GW1S-002	VCLOW	1,1-Dichloroethane		1	ug/L	U	11/11/97
SJS03-GW1S-002	VCLOW	1,1-Dichloroethene		1	ug/L	U	11/11/97
SJS03-GW1S-002	VCLOW	1,2,4-Trichlorobenzene		1	ug/L	U	11/11/97
SJS03-GW1S-002	VCLOW	1,2-Dibromo-3-chloropropa		1	ug/L	U	11/11/97
SJS03-GW1S-002	VCLOW	1,2-Dibromoethane		1	ug/L	U	11/11/97
SJS03-GW1S-002	VCLOW	1,2-Dichlorobenzene		1	ug/L	U	11/11/97
SJS03-GW1S-002	VCLOW	1,2-Dichloroethane		1	ug/L	U	11/11/97
SJS03-GW1S-002	VCLOW	1,2-Dichloropropane		1	ug/L	U	11/11/97
SJS03-GW1S-002	VCLOW	1,3-Dichlorobenzene		1	ug/L	U	11/11/97
SJS03-GW1S-002	VCLOW	1,4-Dichlorobenzene		1	ug/L	U	11/11/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS03-GW1S-002	VCLOW	2-Hexanone		5	ug/L	U	11/11/97
SJS03-GW1S-002	VCLOW	4-Methyl-2-Pentanone		5	ug/L	U	11/11/97
SJS03-GW1S-002	VCLOW	Benzene		1	ug/L	U	11/11/97
SJS03-GW1S-002	VCLOW	Bromochloromethane		1	ug/L	U	11/11/97
SJS03-GW1S-002	VCLOW	Bromodichloromethane		1	ug/L	U	11/11/97
SJS03-GW1S-002	VCLOW	Bromoform		1	ug/L	U	11/11/97
SJS03-GW1S-002	VCLOW	Bromomethane		1	ug/L	U	11/11/97
SJS03-GW1S-002	VCLOW	Carbon Disulfide		1	ug/L	U	11/11/97
SJS03-GW1S-002	VCLOW	Carbon Tetrachloride		1	ug/L	U	11/11/97
SJS03-GW1S-002	VCLOW	Chlorobenzene		1	ug/L	U	11/11/97
SJS03-GW1S-002	VCLOW	Chloroethane		1	ug/L	U	11/11/97
SJS03-GW1S-002	VCLOW	Chloroform		1	ug/L	U	11/11/97
SJS03-GW1S-002	VCLOW	Chloromethane		1	ug/L	U	11/11/97
SJS03-GW1S-002	VCLOW	cis-1,2-Dichloroethene		1	ug/L	U	11/11/97
SJS03-GW1S-002	VCLOW	cis-1,3-Dichloropropene		1	ug/L	U	11/11/97
SJS03-GW1S-002	VCLOW	Dibromochloromethane		1	ug/L	U	11/11/97
SJS03-GW1S-002	VCLOW	Ethylbenzene		1	ug/L	U	11/11/97
SJS03-GW1S-002	VCLOW	Methylene Chloride	2	2	ug/L	B	11/11/97
SJS03-GW1S-002	VCLOW	Styrene		1	ug/L	U	11/11/97
SJS03-GW1S-002	VCLOW	Tetrachloroethene		1	ug/L	U	11/11/97
SJS03-GW1S-002	VCLOW	Toluene		1	ug/L	U	11/11/97
SJS03-GW1S-002	VCLOW	Total Xylenes		1	ug/L	U	11/11/97
SJS03-GW1S-002	VCLOW	Trans-1,2-Dichloroethene		1	ug/L	U	11/11/97
SJS03-GW1S-002	VCLOW	trans-1,3-Dichloropropene		1	ug/L	U	11/11/97
SJS03-GW1S-002	VCLOW	Trichloroethene		1	ug/L	U	11/11/97
SJS03-GW1S-002	VCLOW	Vinyl Chloride		1	ug/L	U	11/11/97
SJS03-GW1S-002F	METAL	Aluminum	64.2	29	ug/L	B	11/26/97
SJS03-GW1S-002F	METAL	Antimony	3.8	1	ug/L	J	11/18/97
SJS03-GW1S-002F	METAL	Arsenic		3.2	ug/L	U	11/18/97
SJS03-GW1S-002F	METAL	Barium	26	1	ug/L	J	11/26/97
SJS03-GW1S-002F	METAL	Beryllium		0.58	ug/L	U	11/26/97
SJS03-GW1S-002F	METAL	Cadmium		0.4	ug/L	U	11/18/97
SJS03-GW1S-002F	METAL	Calcium	93500	46	ug/L		11/26/97
SJS03-GW1S-002F	METAL	Chromium	5.8	4	ug/L	J	11/26/97
SJS03-GW1S-002F	METAL	Cobalt	7.7	3	ug/L	J	11/26/97
SJS03-GW1S-002F	METAL	Copper		5.8	ug/L	U	11/26/97
SJS03-GW1S-002F	METAL	Iron	24900	5	ug/L		11/26/97
SJS03-GW1S-002F	METAL	Lead	1.9	1	ug/L	B	11/18/97
SJS03-GW1S-002F	METAL	Magnesium	35400	45	ug/L		11/26/97
SJS03-GW1S-002F	METAL	Manganese	1750	1	ug/L		11/26/97
SJS03-GW1S-002F	METAL	Mercury		0.13	ug/L	U	11/19/97
SJS03-GW1S-002F	METAL	Nickel	8.3	4	ug/L	B	11/26/97
SJS03-GW1S-002F	METAL	Potassium	27000	97	ug/L		11/26/97
SJS03-GW1S-002F	METAL	Selenium		3.3	ug/L	U	11/18/97
SJS03-GW1S-002F	METAL	Silver	1.5	3	ug/L	B	11/18/97
SJS03-GW1S-002F	METAL	Sodium	125000	28	ug/L		11/26/97
SJS03-GW1S-002F	METAL	Thallium	2.5	2	ug/L	B	11/19/97
SJS03-GW1S-002F	METAL	Vanadium	7.1	4	ug/L	J	11/26/97
SJS03-GW1S-002F	METAL	Zinc	49.7	3	ug/L	B	11/26/97
SJS03-GW2D-002	CTOTP	Total Phosphorous (as P)	1.17	0.25	mg/L		11/14/97
SJS03-GW2D-002	MCYAN	Aluminum		38.1	ug/L	U	11/25/97
SJS03-GW2D-002	MCYAN	Antimony		1.7	ug/L	U	11/13/97
SJS03-GW2D-002	MCYAN	Arsenic		3.2	ug/L	U	11/13/97
SJS03-GW2D-002	MCYAN	Barium	49.1	1	ug/L	J	11/25/97
SJS03-GW2D-002	MCYAN	Beryllium		0.58	ug/L	U	11/25/97
SJS03-GW2D-002	MCYAN	Cadmium		0.4	ug/L	U	11/13/97
SJS03-GW2D-002	MCYAN	Calcium	95200	46	ug/L		11/25/97
SJS03-GW2D-002	MCYAN	Chromium		4.6	ug/L	U	11/25/97
SJS03-GW2D-002	MCYAN	Cobalt		6	ug/L	U	11/25/97
SJS03-GW2D-002	MCYAN	Copper		5.8	ug/L	U	11/25/97
SJS03-GW2D-002	MCYAN	Cyanide		5	ug/L	U	11/7/97
SJS03-GW2D-002	MCYAN	Iron	272	5	ug/L		11/25/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS03-GW2D-002	MCYAN	Lead		1.3	ug/L	U	11/13/97
SJS03-GW2D-002	MCYAN	Magnesium	37100	45	ug/L		11/25/97
SJS03-GW2D-002	MCYAN	Manganese	354	1	ug/L		11/25/97
SJS03-GW2D-002	MCYAN	Mercury		0.13	ug/L	U	11/13/97
SJS03-GW2D-002	MCYAN	Nickel		6.3	ug/L	U	11/25/97
SJS03-GW2D-002	MCYAN	Potassium	16000	97	ug/L		11/25/97
SJS03-GW2D-002	MCYAN	Selenium		3.3	ug/L	U	11/13/97
SJS03-GW2D-002	MCYAN	Silver	1.2	3	ug/L	J	11/13/97
SJS03-GW2D-002	MCYAN	Sodium	34500	28	ug/L		11/25/97
SJS03-GW2D-002	MCYAN	Thallium	1.5	2	ug/L	B	11/13/97
SJS03-GW2D-002	MCYAN	Vanadium		6.8	ug/L	U	11/25/97
SJS03-GW2D-002	MCYAN	Zinc	9	3	ug/L	B	11/25/97
SJS03-GW2D-002	PSPCB	4,4'-DDD		0.1	ug/L	U	11/21/97
SJS03-GW2D-002	PSPCB	4,4'-DDE		0.1	ug/L	U	11/21/97
SJS03-GW2D-002	PSPCB	4,4'-DDT		0.1	ug/L	U	11/21/97
SJS03-GW2D-002	PSPCB	Aldrin		0.05	ug/L	U	11/21/97
SJS03-GW2D-002	PSPCB	alpha-BHC		0.05	ug/L	U	11/21/97
SJS03-GW2D-002	PSPCB	alpha-Chlordane		0.05	ug/L	U	11/21/97
SJS03-GW2D-002	PSPCB	Aroclor-1016		1	ug/L	U	11/21/97
SJS03-GW2D-002	PSPCB	Aroclor-1221		2	ug/L	U	11/21/97
SJS03-GW2D-002	PSPCB	Aroclor-1232		1	ug/L	U	11/21/97
SJS03-GW2D-002	PSPCB	Aroclor-1242		1	ug/L	U	11/21/97
SJS03-GW2D-002	PSPCB	Aroclor-1248		1	ug/L	U	11/21/97
SJS03-GW2D-002	PSPCB	Aroclor-1254		1	ug/L	U	11/21/97
SJS03-GW2D-002	PSPCB	Aroclor-1260		1	ug/L	U	11/21/97
SJS03-GW2D-002	PSPCB	beta-BHC		0.05	ug/L	U	11/21/97
SJS03-GW2D-002	PSPCB	delta-BHC		0.05	ug/L	U	11/21/97
SJS03-GW2D-002	PSPCB	Dieldrin		0.1	ug/L	U	11/21/97
SJS03-GW2D-002	PSPCB	Endosulfan I		0.05	ug/L	U	11/21/97
SJS03-GW2D-002	PSPCB	Endosulfan II		0.1	ug/L	U	11/21/97
SJS03-GW2D-002	PSPCB	Endosulfan Sulfate		0.1	ug/L	U	11/21/97
SJS03-GW2D-002	PSPCB	Endrin		0.1	ug/L	U	11/21/97
SJS03-GW2D-002	PSPCB	Endrin Aldehyde		0.1	ug/L	U	11/21/97
SJS03-GW2D-002	PSPCB	Endrin Ketone		0.1	ug/L	U	11/21/97
SJS03-GW2D-002	PSPCB	gamma-BHC		0.05	ug/L	U	11/21/97
SJS03-GW2D-002	PSPCB	gamma-Chlordane		0.05	ug/L	U	11/21/97
SJS03-GW2D-002	PSPCB	Heptachlor		0.05	ug/L	U	11/21/97
SJS03-GW2D-002	PSPCB	Heptachlor Epoxide		0.05	ug/L	U	11/21/97
SJS03-GW2D-002	PSPCB	Methoxychlor		0.5	ug/L	U	11/21/97
SJS03-GW2D-002	PSPCB	Toxaphene		5	ug/L	U	11/21/97
SJS03-GW2D-002	SVTCL	1,2,4-Trichlorobenzene		10	ug/L	U	11/15/97
SJS03-GW2D-002	SVTCL	1,2-Dichlorobenzene		10	ug/L	U	11/15/97
SJS03-GW2D-002	SVTCL	1,3-Dichlorobenzene		10	ug/L	U	11/15/97
SJS03-GW2D-002	SVTCL	1,4-Dichlorobenzene		10	ug/L	U	11/15/97
SJS03-GW2D-002	SVTCL	2,2'-oxybis(1-Chloropropan		10	ug/L	U	11/15/97
SJS03-GW2D-002	SVTCL	2,4,5-Trichlorophenol		25	ug/L	U	11/15/97
SJS03-GW2D-002	SVTCL	2,4,6-Trichlorophenol		10	ug/L	U	11/15/97
SJS03-GW2D-002	SVTCL	2,4-Dichlorophenol		10	ug/L	U	11/15/97
SJS03-GW2D-002	SVTCL	2,4-Dimethylphenol		10	ug/L	U	11/15/97
SJS03-GW2D-002	SVTCL	2,4-Dinitrophenol		25	ug/L	U	11/15/97
SJS03-GW2D-002	SVTCL	2,4-Dinitrotoluene		10	ug/L	U	11/15/97
SJS03-GW2D-002	SVTCL	2,6-Dinitrotoluene		10	ug/L	U	11/15/97
SJS03-GW2D-002	SVTCL	2-Chloronaphthalene		10	ug/L	U	11/15/97
SJS03-GW2D-002	SVTCL	2-Chlorophenol		10	ug/L	U	11/15/97
SJS03-GW2D-002	SVTCL	2-Methylnaphthalene		10	ug/L	U	11/15/97
SJS03-GW2D-002	SVTCL	2-Methylphenol		10	ug/L	U	11/15/97
SJS03-GW2D-002	SVTCL	2-Nitroaniline		25	ug/L	U	11/15/97
SJS03-GW2D-002	SVTCL	2-Nitrophenol		10	ug/L	U	11/15/97
SJS03-GW2D-002	SVTCL	3,3'-Dichlorobenzidine		10	ug/L	U	11/15/97
SJS03-GW2D-002	SVTCL	3-Nitroaniline		25	ug/L	U	11/15/97
SJS03-GW2D-002	SVTCL	4,6-Dinitro-2-Methylphenol		25	ug/L	U	11/15/97
SJS03-GW2D-002	SVTCL	4-Bromophenol-phenyleth		10	ug/L	U	11/15/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS03-GW2D-002	SVTCL	4-Chloro-3-Methylphenol		10	ug/L	U	11/15/97
SJS03-GW2D-002	SVTCL	4-Chloroaniline		10	ug/L	U	11/15/97
SJS03-GW2D-002	SVTCL	4-Chlorophenyl-phenyleth		10	ug/L	U	11/15/97
SJS03-GW2D-002	SVTCL	4-Methylphenol		10	ug/L	U	11/15/97
SJS03-GW2D-002	SVTCL	4-Nitroaniline		25	ug/L	U	11/15/97
SJS03-GW2D-002	SVTCL	4-Nitrophenol		25	ug/L	U	11/15/97
SJS03-GW2D-002	SVTCL	Acenaphthene		10	ug/L	U	11/15/97
SJS03-GW2D-002	SVTCL	Acenaphthylene		10	ug/L	U	11/15/97
SJS03-GW2D-002	SVTCL	Anthracene		10	ug/L	U	11/15/97
SJS03-GW2D-002	SVTCL	Benzo(a)anthracene		10	ug/L	U	11/15/97
SJS03-GW2D-002	SVTCL	Benzo(a)pyrene		10	ug/L	U	11/15/97
SJS03-GW2D-002	SVTCL	Benzo(b)fluoranthene		10	ug/L	U	11/15/97
SJS03-GW2D-002	SVTCL	Benzo(g,h,i)perylene		10	ug/L	U	11/15/97
SJS03-GW2D-002	SVTCL	Benzo(k)fluoranthene		10	ug/L	U	11/15/97
SJS03-GW2D-002	SVTCL	bis(2-Chloroethoxy)metha		10	ug/L	U	11/15/97
SJS03-GW2D-002	SVTCL	bis(2-chloroethyl)ether		10	ug/L	U	11/15/97
SJS03-GW2D-002	SVTCL	bis(2-Ethylhexyl)phthalate		10	ug/L	U	11/15/97
SJS03-GW2D-002	SVTCL	Butylbenzylphthalate		10	ug/L	U	11/15/97
SJS03-GW2D-002	SVTCL	Carbazole		10	ug/L	U	11/15/97
SJS03-GW2D-002	SVTCL	Chrysene		10	ug/L	U	11/15/97
SJS03-GW2D-002	SVTCL	Di-n-butylphthalate		10	ug/L	U	11/15/97
SJS03-GW2D-002	SVTCL	Di-n-Octyl Phthalate		10	ug/L	U	11/15/97
SJS03-GW2D-002	SVTCL	Dibenzo(a,h)anthracene		10	ug/L	U	11/15/97
SJS03-GW2D-002	SVTCL	Dibenzofuran		10	ug/L	U	11/15/97
SJS03-GW2D-002	SVTCL	Diethylphthalate		10	ug/L	U	11/15/97
SJS03-GW2D-002	SVTCL	Dimethyl Phthalate		10	ug/L	U	11/15/97
SJS03-GW2D-002	SVTCL	Fluoranthene		10	ug/L	U	11/15/97
SJS03-GW2D-002	SVTCL	Fluorene		10	ug/L	U	11/15/97
SJS03-GW2D-002	SVTCL	Hexachlorobenzene		10	ug/L	U	11/15/97
SJS03-GW2D-002	SVTCL	Hexachlorobutadiene		10	ug/L	U	11/15/97
SJS03-GW2D-002	SVTCL	Hexachlorocyclopentadie		10	ug/L	U	11/15/97
SJS03-GW2D-002	SVTCL	Hexachloroethane		10	ug/L	U	11/15/97
SJS03-GW2D-002	SVTCL	Indeno(1,2,3-cd)pyrene		10	ug/L	U	11/15/97
SJS03-GW2D-002	SVTCL	Isophorone		10	ug/L	U	11/15/97
SJS03-GW2D-002	SVTCL	N-Nitroso-Di-n-Propylamine		10	ug/L	U	11/15/97
SJS03-GW2D-002	SVTCL	N-Nitrosodiphenylamine		10	ug/L	U	11/15/97
SJS03-GW2D-002	SVTCL	Naphthalene		10	ug/L	U	11/15/97
SJS03-GW2D-002	SVTCL	Nitrobenzene		10	ug/L	U	11/15/97
SJS03-GW2D-002	SVTCL	Pentachlorophenol		25	ug/L	U	11/15/97
SJS03-GW2D-002	SVTCL	Phenanthrene		10	ug/L	U	11/15/97
SJS03-GW2D-002	SVTCL	Phenol		10	ug/L	U	11/15/97
SJS03-GW2D-002	SVTCL	Pyrene		10	ug/L	U	11/15/97
SJS03-GW2D-002	VCLOW	1,1,1-Trichloroethane		1	ug/L	U	11/10/97
SJS03-GW2D-002	VCLOW	1,1,2,2-Tetrachloroethane		1	ug/L	U	11/10/97
SJS03-GW2D-002	VCLOW	1,1,2-Trichloroethane		1	ug/L	U	11/10/97
SJS03-GW2D-002	VCLOW	1,1-Dichloroethane		1	ug/L	U	11/10/97
SJS03-GW2D-002	VCLOW	1,1-Dichloroethene		1	ug/L	U	11/10/97
SJS03-GW2D-002	VCLOW	1,2,4-Trichlorobenzene		1	ug/L	U	11/10/97
SJS03-GW2D-002	VCLOW	1,2-Dibromo-3-chloropropa		1	ug/L	U	11/10/97
SJS03-GW2D-002	VCLOW	1,2-Dibromoethane		1	ug/L	U	11/10/97
SJS03-GW2D-002	VCLOW	1,2-Dichlorobenzene		1	ug/L	U	11/10/97
SJS03-GW2D-002	VCLOW	1,2-Dichloroethane		1	ug/L	U	11/10/97
SJS03-GW2D-002	VCLOW	1,2-Dichloropropane		1	ug/L	U	11/10/97
SJS03-GW2D-002	VCLOW	1,3-Dichlorobenzene		1	ug/L	U	11/10/97
SJS03-GW2D-002	VCLOW	1,4-Dichlorobenzene		1	ug/L	U	11/10/97
SJS03-GW2D-002	VCLOW	2-Hexanone		5	ug/L	U	11/10/97
SJS03-GW2D-002	VCLOW	4-Methyl-2-Pentanone		5	ug/L	U	11/10/97
SJS03-GW2D-002	VCLOW	Acetone		5	ug/L	U	11/10/97
SJS03-GW2D-002	VCLOW	Benzene		1	ug/L	U	11/10/97
SJS03-GW2D-002	VCLOW	Bromochloromethane		1	ug/L	U	11/10/97
SJS03-GW2D-002	VCLOW	Bromodichloromethane		1	ug/L	U	11/10/97
SJS03-GW2D-002	VCLOW	Bromoform		1	ug/L	U	11/10/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS03-GW2D-002	VCLOW	Bromomethane		1	ug/L	U	11/10/97
SJS03-GW2D-002	VCLOW	Carbon Disulfide		1	ug/L	U	11/10/97
SJS03-GW2D-002	VCLOW	Carbon Tetrachloride		1	ug/L	U	11/10/97
SJS03-GW2D-002	VCLOW	Chlorobenzene		1	ug/L	U	11/10/97
SJS03-GW2D-002	VCLOW	Chloroethane		1	ug/L	U	11/10/97
SJS03-GW2D-002	VCLOW	Chloroform		1	ug/L	U	11/10/97
SJS03-GW2D-002	VCLOW	Chloromethane		1	ug/L	U	11/10/97
SJS03-GW2D-002	VCLOW	cis-1,2-Dichloroethene		1	ug/L	U	11/10/97
SJS03-GW2D-002	VCLOW	cis-1,3-Dichloropropene		1	ug/L	U	11/10/97
SJS03-GW2D-002	VCLOW	Dibromochloromethane		1	ug/L	U	11/10/97
SJS03-GW2D-002	VCLOW	Ethylbenzene		1	ug/L	U	11/10/97
SJS03-GW2D-002	VCLOW	Methylene Chloride	3	2	ug/L	B	11/10/97
SJS03-GW2D-002	VCLOW	Styrene		1	ug/L	U	11/10/97
SJS03-GW2D-002	VCLOW	Tetrachloroethene		1	ug/L	U	11/10/97
SJS03-GW2D-002	VCLOW	Toluene		1	ug/L	U	11/10/97
SJS03-GW2D-002	VCLOW	Total Xylenes		1	ug/L	U	11/10/97
SJS03-GW2D-002	VCLOW	Trans-1,2-Dichloroethene		1	ug/L	U	11/10/97
SJS03-GW2D-002	VCLOW	trans-1,3-Dichloropropene		1	ug/L	U	11/10/97
SJS03-GW2D-002	VCLOW	Trichloroethene		1	ug/L	U	11/10/97
SJS03-GW2D-002	VCLOW	Vinyl Chloride		1	ug/L	U	11/10/97
SJS03-GW2D-002F	METAL	Aluminum		38.1	ug/L	U	11/25/97
SJS03-GW2D-002F	METAL	Antimony		1.7	ug/L	U	11/13/97
SJS03-GW2D-002F	METAL	Arsenic		3.2	ug/L	U	11/13/97
SJS03-GW2D-002F	METAL	Barium	53.7	1	ug/L	J	11/25/97
SJS03-GW2D-002F	METAL	Beryllium		0.58	ug/L	U	11/25/97
SJS03-GW2D-002F	METAL	Cadmium		0.4	ug/L	U	11/13/97
SJS03-GW2D-002F	METAL	Calcium	103000	46	ug/L		11/25/97
SJS03-GW2D-002F	METAL	Chromium		4.6	ug/L	U	11/25/97
SJS03-GW2D-002F	METAL	Cobalt		6	ug/L	U	11/25/97
SJS03-GW2D-002F	METAL	Copper		5.8	ug/L	U	11/25/97
SJS03-GW2D-002F	METAL	Iron	276	5	ug/L		11/25/97
SJS03-GW2D-002F	METAL	Lead		1.3	ug/L	U	11/13/97
SJS03-GW2D-002F	METAL	Magnesium	40900	45	ug/L		11/25/97
SJS03-GW2D-002F	METAL	Manganese	385	1	ug/L		11/25/97
SJS03-GW2D-002F	METAL	Mercury		0.13	ug/L	U	11/13/97
SJS03-GW2D-002F	METAL	Nickel		6.3	ug/L	U	11/25/97
SJS03-GW2D-002F	METAL	Potassium	17600	97	ug/L		11/25/97
SJS03-GW2D-002F	METAL	Selenium		3.3	ug/L	U	11/13/97
SJS03-GW2D-002F	METAL	Silver	3.1	3	ug/L	B	11/13/97
SJS03-GW2D-002F	METAL	Sodium	37800	28	ug/L		11/25/97
SJS03-GW2D-002F	METAL	Thallium	1.9	2	ug/L	B	11/13/97
SJS03-GW2D-002F	METAL	Vanadium		6.8	ug/L	U	11/25/97
SJS03-GW2D-002F	METAL	Zinc	18.5	3	ug/L	B	11/25/97
SJS03-GW2S-002	CTOTP	Total Phosphorous (as P)	0.241	0.05	mg/L		11/14/97
SJS03-GW2S-002	MCYAN	Aluminum	7660	29	ug/L		11/25/97
SJS03-GW2S-002	MCYAN	Antimony		1.7	ug/L	U	11/13/97
SJS03-GW2S-002	MCYAN	Arsenic	3.4	3	ug/L	J	11/13/97
SJS03-GW2S-002	MCYAN	Barium	24.7	1	ug/L	J	11/25/97
SJS03-GW2S-002	MCYAN	Beryllium	4	1	ug/L	J	11/25/97
SJS03-GW2S-002	MCYAN	Cadmium		0.4	ug/L	U	11/13/97
SJS03-GW2S-002	MCYAN	Calcium	488000	46	ug/L		11/25/97
SJS03-GW2S-002	MCYAN	Chromium		4.6	ug/L	U	11/25/97
SJS03-GW2S-002	MCYAN	Cobalt	59.7	3	ug/L		11/25/97
SJS03-GW2S-002	MCYAN	Copper		5.8	ug/L	U	11/25/97
SJS03-GW2S-002	MCYAN	Cyanide		5	ug/L	U	11/7/97
SJS03-GW2S-002	MCYAN	Iron	19400	5	ug/L		11/25/97
SJS03-GW2S-002	MCYAN	Lead		1.3	ug/L	U	11/13/97
SJS03-GW2S-002	MCYAN	Magnesium	168000	45	ug/L		11/25/97
SJS03-GW2S-002	MCYAN	Manganese	5330	1	ug/L		11/25/97
SJS03-GW2S-002	MCYAN	Mercury		0.13	ug/L	U	11/13/97
SJS03-GW2S-002	MCYAN	Nickel	84.8	4	ug/L		11/25/97
SJS03-GW2S-002	MCYAN	Potassium	25100	97	ug/L		11/25/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS03-GW2S-002	MCYAN	Selenium	3.3	3	ug/L	K	11/13/97
SJS03-GW2S-002	MCYAN	Silver		1.1	ug/L	U	11/13/97
SJS03-GW2S-002	MCYAN	Sodium	298000	28	ug/L		11/25/97
SJS03-GW2S-002	MCYAN	Thallium		1.5	ug/L	U	11/13/97
SJS03-GW2S-002	MCYAN	Vanadium		6.8	ug/L	U	11/25/97
SJS03-GW2S-002	MCYAN	Zinc	397	3	ug/L		11/25/97
SJS03-GW2S-002	PSPCB	4,4'-DDD		0.1	ug/L	U	11/21/97
SJS03-GW2S-002	PSPCB	4,4'-DDE		0.1	ug/L	U	11/21/97
SJS03-GW2S-002	PSPCB	4,4'-DDT		0.1	ug/L	U	11/21/97
SJS03-GW2S-002	PSPCB	Aldrin		0.05	ug/L	U	11/21/97
SJS03-GW2S-002	PSPCB	alpha-BHC		0.05	ug/L	U	11/21/97
SJS03-GW2S-002	PSPCB	alpha-Chlordane		0.05	ug/L	U	11/21/97
SJS03-GW2S-002	PSPCB	Aroclor-1016		1	ug/L	U	11/21/97
SJS03-GW2S-002	PSPCB	Aroclor-1221		2	ug/L	U	11/21/97
SJS03-GW2S-002	PSPCB	Aroclor-1232		1	ug/L	U	11/21/97
SJS03-GW2S-002	PSPCB	Aroclor-1242		1	ug/L	U	11/21/97
SJS03-GW2S-002	PSPCB	Aroclor-1248		1	ug/L	U	11/21/97
SJS03-GW2S-002	PSPCB	Aroclor-1254		1	ug/L	U	11/21/97
SJS03-GW2S-002	PSPCB	Aroclor-1260		1	ug/L	U	11/21/97
SJS03-GW2S-002	PSPCB	beta-BHC		0.05	ug/L	U	11/21/97
SJS03-GW2S-002	PSPCB	delta-BHC		0.05	ug/L	U	11/21/97
SJS03-GW2S-002	PSPCB	Dieldrin		0.1	ug/L	U	11/21/97
SJS03-GW2S-002	PSPCB	Endosulfan I		0.05	ug/L	U	11/21/97
SJS03-GW2S-002	PSPCB	Endosulfan II		0.1	ug/L	U	11/21/97
SJS03-GW2S-002	PSPCB	Endosulfan Sulfate		0.1	ug/L	U	11/21/97
SJS03-GW2S-002	PSPCB	Endrin		0.1	ug/L	U	11/21/97
SJS03-GW2S-002	PSPCB	Endrin Aldehyde		0.1	ug/L	U	11/21/97
SJS03-GW2S-002	PSPCB	Endrin Ketone		0.1	ug/L	U	11/21/97
SJS03-GW2S-002	PSPCB	gamma-BHC		0.05	ug/L	U	11/21/97
SJS03-GW2S-002	PSPCB	gamma-Chlordane		0.05	ug/L	U	11/21/97
SJS03-GW2S-002	PSPCB	Heptachlor		0.05	ug/L	U	11/21/97
SJS03-GW2S-002	PSPCB	Heptachlor Epoxide		0.05	ug/L	U	11/21/97
SJS03-GW2S-002	PSPCB	Methoxychlor		0.5	ug/L	U	11/21/97
SJS03-GW2S-002	PSPCB	Toxaphene		5	ug/L	U	11/21/97
SJS03-GW2S-002	SVTCL	1,2,4-Trichlorobenzene		10	ug/L	U	11/14/97
SJS03-GW2S-002	SVTCL	1,2-Dichlorobenzene		10	ug/L	U	11/14/97
SJS03-GW2S-002	SVTCL	1,3-Dichlorobenzene		10	ug/L	U	11/14/97
SJS03-GW2S-002	SVTCL	1,4-Dichlorobenzene		10	ug/L	U	11/14/97
SJS03-GW2S-002	SVTCL	2,2'-oxybis(1-Chloropropan		10	ug/L	U	11/14/97
SJS03-GW2S-002	SVTCL	2,4,5-Trichlorophenol		25	ug/L	U	11/14/97
SJS03-GW2S-002	SVTCL	2,4,6-Trichlorophenol		10	ug/L	U	11/14/97
SJS03-GW2S-002	SVTCL	2,4-Dichlorophenol		10	ug/L	U	11/14/97
SJS03-GW2S-002	SVTCL	2,4-Dimethylphenol		10	ug/L	U	11/14/97
SJS03-GW2S-002	SVTCL	2,4-Dinitrophenol		25	ug/L	U	11/14/97
SJS03-GW2S-002	SVTCL	2,4-Dinitrotoluene		10	ug/L	U	11/14/97
SJS03-GW2S-002	SVTCL	2,6-Dinitrotoluene		10	ug/L	U	11/14/97
SJS03-GW2S-002	SVTCL	2-Chloronaphthalene		10	ug/L	U	11/14/97
SJS03-GW2S-002	SVTCL	2-Chlorophenol		10	ug/L	U	11/14/97
SJS03-GW2S-002	SVTCL	2-Methylnaphthalene		10	ug/L	U	11/14/97
SJS03-GW2S-002	SVTCL	2-Methylphenol		10	ug/L	U	11/14/97
SJS03-GW2S-002	SVTCL	2-Nitroaniline		25	ug/L	U	11/14/97
SJS03-GW2S-002	SVTCL	2-Nitrophenol		10	ug/L	U	11/14/97
SJS03-GW2S-002	SVTCL	3,3'-Dichlorobenzidine		10	ug/L	U	11/14/97
SJS03-GW2S-002	SVTCL	3-Nitroaniline		25	ug/L	U	11/14/97
SJS03-GW2S-002	SVTCL	4,6-Dinitro-2-Methylphenol		25	ug/L	U	11/14/97
SJS03-GW2S-002	SVTCL	4-Bromophenol-phenyleth		10	ug/L	U	11/14/97
SJS03-GW2S-002	SVTCL	4-Chloro-3-Methylphenol		10	ug/L	U	11/14/97
SJS03-GW2S-002	SVTCL	4-Chloroaniline		10	ug/L	U	11/14/97
SJS03-GW2S-002	SVTCL	4-Chlorophenyl-phenyleth		10	ug/L	U	11/14/97
SJS03-GW2S-002	SVTCL	4-Methylphenol		10	ug/L	U	11/14/97
SJS03-GW2S-002	SVTCL	4-Nitroaniline		25	ug/L	U	11/14/97
SJS03-GW2S-002	SVTCL	4-Nitrophenol		25	ug/L	U	11/14/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS03-GW2S-002	SVTCL	Acenaphthene		10	ug/L	U	11/14/97
SJS03-GW2S-002	SVTCL	Acenaphthylene		10	ug/L	U	11/14/97
SJS03-GW2S-002	SVTCL	Anthracene		10	ug/L	U	11/14/97
SJS03-GW2S-002	SVTCL	Benzo(a)anthracene		10	ug/L	U	11/14/97
SJS03-GW2S-002	SVTCL	Benzo(a)pyrene		10	ug/L	U	11/14/97
SJS03-GW2S-002	SVTCL	Benzo(b)fluoranthene		10	ug/L	U	11/14/97
SJS03-GW2S-002	SVTCL	Benzo(g,h,i)perylene		10	ug/L	U	11/14/97
SJS03-GW2S-002	SVTCL	Benzo(k)fluoranthene		10	ug/L	U	11/14/97
SJS03-GW2S-002	SVTCL	bis(2-Chloroethoxy)metha		10	ug/L	U	11/14/97
SJS03-GW2S-002	SVTCL	bis(2-chloroethyl)ether		10	ug/L	U	11/14/97
SJS03-GW2S-002	SVTCL	bis(2-Ethylhexyl)phthalate		10	ug/L	U	11/14/97
SJS03-GW2S-002	SVTCL	Butylbenzylphthalate		10	ug/L	U	11/14/97
SJS03-GW2S-002	SVTCL	Carbazole		10	ug/L	U	11/14/97
SJS03-GW2S-002	SVTCL	Chrysene		10	ug/L	U	11/14/97
SJS03-GW2S-002	SVTCL	Di-n-butylphthalate		10	ug/L	U	11/14/97
SJS03-GW2S-002	SVTCL	Di-n-Octyl Phthalate		10	ug/L	U	11/14/97
SJS03-GW2S-002	SVTCL	Dibenzo(a,h)anthracene		10	ug/L	U	11/14/97
SJS03-GW2S-002	SVTCL	Dibenzofuran		10	ug/L	U	11/14/97
SJS03-GW2S-002	SVTCL	Diethylphthalate		10	ug/L	U	11/14/97
SJS03-GW2S-002	SVTCL	Dimethyl Phthalate		10	ug/L	U	11/14/97
SJS03-GW2S-002	SVTCL	Fluoranthene		10	ug/L	U	11/14/97
SJS03-GW2S-002	SVTCL	Fluorene		10	ug/L	U	11/14/97
SJS03-GW2S-002	SVTCL	Hexachlorobenzene		10	ug/L	U	11/14/97
SJS03-GW2S-002	SVTCL	Hexachlorobutadiene		10	ug/L	U	11/14/97
SJS03-GW2S-002	SVTCL	Hexachlorocyclopentadie		10	ug/L	U	11/14/97
SJS03-GW2S-002	SVTCL	Hexachloroethane		10	ug/L	U	11/14/97
SJS03-GW2S-002	SVTCL	Indeno(1,2,3-cd)pyrene		10	ug/L	U	11/14/97
SJS03-GW2S-002	SVTCL	Isophorone		10	ug/L	U	11/14/97
SJS03-GW2S-002	SVTCL	N-Nitroso-Di-n-Propylamine		10	ug/L	U	11/14/97
SJS03-GW2S-002	SVTCL	N-Nitrosodiphenylamine		10	ug/L	U	11/14/97
SJS03-GW2S-002	SVTCL	Naphthalene		10	ug/L	U	11/14/97
SJS03-GW2S-002	SVTCL	Nitrobenzene		10	ug/L	U	11/14/97
SJS03-GW2S-002	SVTCL	Pentachlorophenol		25	ug/L	U	11/14/97
SJS03-GW2S-002	SVTCL	Phenanthrene		10	ug/L	U	11/14/97
SJS03-GW2S-002	SVTCL	Phenol		10	ug/L	U	11/14/97
SJS03-GW2S-002	SVTCL	Pyrene		10	ug/L	U	11/14/97
SJS03-GW2S-002	VCLOW	1,1,1-Trichloroethane		1	ug/L	U	11/10/97
SJS03-GW2S-002	VCLOW	1,1,2,2-Tetrachloroethane		1	ug/L	U	11/10/97
SJS03-GW2S-002	VCLOW	1,1,2-Trichloroethane		1	ug/L	U	11/10/97
SJS03-GW2S-002	VCLOW	1,1-Dichloroethane		1	ug/L	U	11/10/97
SJS03-GW2S-002	VCLOW	1,1-Dichloroethene		1	ug/L	U	11/10/97
SJS03-GW2S-002	VCLOW	1,2,4-Trichlorobenzene		1	ug/L	U	11/10/97
SJS03-GW2S-002	VCLOW	1,2-Dibromo-3-chloropropa		1	ug/L	U	11/10/97
SJS03-GW2S-002	VCLOW	1,2-Dibromoethane		1	ug/L	U	11/10/97
SJS03-GW2S-002	VCLOW	1,2-Dichlorobenzene		1	ug/L	U	11/10/97
SJS03-GW2S-002	VCLOW	1,2-Dichloroethane		1	ug/L	U	11/10/97
SJS03-GW2S-002	VCLOW	1,2-Dichloropropane		1	ug/L	U	11/10/97
SJS03-GW2S-002	VCLOW	1,3-Dichlorobenzene		1	ug/L	U	11/10/97
SJS03-GW2S-002	VCLOW	1,4-Dichlorobenzene		1	ug/L	U	11/10/97
SJS03-GW2S-002	VCLOW	2-Hexanone		5	ug/L	U	11/10/97
SJS03-GW2S-002	VCLOW	4-Methyl-2-Pentanone		5	ug/L	U	11/10/97
SJS03-GW2S-002	VCLOW	Acetone		5	ug/L	U	11/10/97
SJS03-GW2S-002	VCLOW	Benzene		1	ug/L	U	11/10/97
SJS03-GW2S-002	VCLOW	Bromochloromethane		1	ug/L	U	11/10/97
SJS03-GW2S-002	VCLOW	Bromodichloromethane		1	ug/L	U	11/10/97
SJS03-GW2S-002	VCLOW	Bromoform		1	ug/L	U	11/10/97
SJS03-GW2S-002	VCLOW	Bromomethane		1	ug/L	U	11/10/97
SJS03-GW2S-002	VCLOW	Carbon Disulfide		1	ug/L	U	11/10/97
SJS03-GW2S-002	VCLOW	Carbon Tetrachloride		1	ug/L	U	11/10/97
SJS03-GW2S-002	VCLOW	Chlorobenzene		1	ug/L	U	11/10/97
SJS03-GW2S-002	VCLOW	Chloroethane		1	ug/L	U	11/10/97
SJS03-GW2S-002	VCLOW	Chloroform		1	ug/L	U	11/10/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS03-GW2S-002	VCLOW	Chloromethane		1	ug/L	U	11/10/97
SJS03-GW2S-002	VCLOW	cis-1,2-Dichloroethene		1	ug/L	U	11/10/97
SJS03-GW2S-002	VCLOW	cis-1,3-Dichloropropene		1	ug/L	U	11/10/97
SJS03-GW2S-002	VCLOW	Dibromochloromethane		1	ug/L	U	11/10/97
SJS03-GW2S-002	VCLOW	Ethylbenzene		1	ug/L	U	11/10/97
SJS03-GW2S-002	VCLOW	Methylene Chloride	2	2	ug/L	B	11/10/97
SJS03-GW2S-002	VCLOW	Styrene		1	ug/L	U	11/10/97
SJS03-GW2S-002	VCLOW	Tetrachloroethene		1	ug/L	U	11/10/97
SJS03-GW2S-002	VCLOW	Toluene		1	ug/L	U	11/10/97
SJS03-GW2S-002	VCLOW	Total Xylenes		1	ug/L	U	11/10/97
SJS03-GW2S-002	VCLOW	Trans-1,2-Dichloroethene		1	ug/L	U	11/10/97
SJS03-GW2S-002	VCLOW	trans-1,3-Dichloropropene		1	ug/L	U	11/10/97
SJS03-GW2S-002	VCLOW	Trichloroethene		1	ug/L	U	11/10/97
SJS03-GW2S-002	VCLOW	Vinyl Chloride		1	ug/L	U	11/10/97
SJS03-GW2S-002F	METAL	Aluminum	807	29	ug/L		11/25/97
SJS03-GW2S-002F	METAL	Antimony		1.7	ug/L	U	11/13/97
SJS03-GW2S-002F	METAL	Arsenic		3.2	ug/L	U	11/13/97
SJS03-GW2S-002F	METAL	Barium	25	1	ug/L	J	11/25/97
SJS03-GW2S-002F	METAL	Beryllium	1.9	1	ug/L	J	11/25/97
SJS03-GW2S-002F	METAL	Cadmium	0.49	0.3	ug/L	J	11/13/97
SJS03-GW2S-002F	METAL	Calcium	524000	46	ug/L		11/25/97
SJS03-GW2S-002F	METAL	Chromium		4.6	ug/L	U	11/25/97
SJS03-GW2S-002F	METAL	Cobalt	63	3	ug/L		11/25/97
SJS03-GW2S-002F	METAL	Copper		5.8	ug/L	U	11/25/97
SJS03-GW2S-002F	METAL	Iron	20000	5	ug/L		11/25/97
SJS03-GW2S-002F	METAL	Lead	1.4	1	ug/L	J	11/13/97
SJS03-GW2S-002F	METAL	Magnesium	183000	45	ug/L		11/25/97
SJS03-GW2S-002F	METAL	Manganese	5710	1	ug/L		11/25/97
SJS03-GW2S-002F	METAL	Mercury		0.13	ug/L	U	11/13/97
SJS03-GW2S-002F	METAL	Nickel	88.1	4	ug/L		11/25/97
SJS03-GW2S-002F	METAL	Potassium	27100	97	ug/L		11/25/97
SJS03-GW2S-002F	METAL	Selenium	4.3	3	ug/L	J	11/13/97
SJS03-GW2S-002F	METAL	Silver		1.1	ug/L	U	11/13/97
SJS03-GW2S-002F	METAL	Sodium	307000	28	ug/L		11/26/97
SJS03-GW2S-002F	METAL	Thallium		1.5	ug/L	U	11/13/97
SJS03-GW2S-002F	METAL	Vanadium		6.8	ug/L	U	11/25/97
SJS03-GW2S-002F	METAL	Zinc	497	3	ug/L		11/25/97
SJS03-GW3S-002	CTOTP	Total Phosphorous (as P)	0.78	0.25	mg/L		11/14/97
SJS03-GW3S-002	MCYAN	Aluminum		38.1	ug/L	U	11/25/97
SJS03-GW3S-002	MCYAN	Antimony		1.7	ug/L	U	11/13/97
SJS03-GW3S-002	MCYAN	Arsenic		3.2	ug/L	U	11/13/97
SJS03-GW3S-002	MCYAN	Barium	16.1	1	ug/L	J	11/25/97
SJS03-GW3S-002	MCYAN	Beryllium	0.96	1	ug/L	J	11/25/97
SJS03-GW3S-002	MCYAN	Cadmium		0.4	ug/L	U	11/13/97
SJS03-GW3S-002	MCYAN	Calcium	367000	46	ug/L		11/25/97
SJS03-GW3S-002	MCYAN	Chromium		4.6	ug/L	U	11/25/97
SJS03-GW3S-002	MCYAN	Cobalt		6	ug/L	U	11/25/97
SJS03-GW3S-002	MCYAN	Copper		5.8	ug/L	U	11/25/97
SJS03-GW3S-002	MCYAN	Cyanide		5	ug/L	U	11/7/97
SJS03-GW3S-002	MCYAN	Iron	45000	5	ug/L		11/25/97
SJS03-GW3S-002	MCYAN	Lead	1.7	1	ug/L	J	11/13/97
SJS03-GW3S-002	MCYAN	Magnesium	33600	45	ug/L		11/25/97
SJS03-GW3S-002	MCYAN	Manganese	2960	1	ug/L		11/25/97
SJS03-GW3S-002	MCYAN	Mercury		0.16	ug/L	U	11/13/97
SJS03-GW3S-002	MCYAN	Nickel		6.3	ug/L	U	11/25/97
SJS03-GW3S-002	MCYAN	Potassium	23000	97	ug/L		11/25/97
SJS03-GW3S-002	MCYAN	Selenium		3.3	ug/L	U	11/13/97
SJS03-GW3S-002	MCYAN	Silver	1.3	3	ug/L	J	11/13/97
SJS03-GW3S-002	MCYAN	Sodium	39400	28	ug/L		11/25/97
SJS03-GW3S-002	MCYAN	Thallium		1.5	ug/L	U	11/13/97
SJS03-GW3S-002	MCYAN	Vanadium		6.8	ug/L	U	11/25/97
SJS03-GW3S-002	MCYAN	Zinc	15.5	3	ug/L	B	11/25/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS03-GW3S-002	PSPCB	4,4'-DDD		0.1	ug/L	U	11/21/97
SJS03-GW3S-002	PSPCB	4,4'-DDE		0.1	ug/L	U	11/21/97
SJS03-GW3S-002	PSPCB	4,4'-DDT		0.1	ug/L	U	11/21/97
SJS03-GW3S-002	PSPCB	Aldrin		0.05	ug/L	U	11/21/97
SJS03-GW3S-002	PSPCB	alpha-BHC		0.05	ug/L	U	11/21/97
SJS03-GW3S-002	PSPCB	alpha-Chlordane		0.05	ug/L	U	11/21/97
SJS03-GW3S-002	PSPCB	Aroclor-1016		1	ug/L	U	11/21/97
SJS03-GW3S-002	PSPCB	Aroclor-1221		2	ug/L	U	11/21/97
SJS03-GW3S-002	PSPCB	Aroclor-1232		1	ug/L	U	11/21/97
SJS03-GW3S-002	PSPCB	Aroclor-1242		1	ug/L	U	11/21/97
SJS03-GW3S-002	PSPCB	Aroclor-1248		1	ug/L	U	11/21/97
SJS03-GW3S-002	PSPCB	Aroclor-1254		1	ug/L	U	11/21/97
SJS03-GW3S-002	PSPCB	Aroclor-1260		1	ug/L	U	11/21/97
SJS03-GW3S-002	PSPCB	beta-BHC		0.05	ug/L	U	11/21/97
SJS03-GW3S-002	PSPCB	delta-BHC		0.05	ug/L	U	11/21/97
SJS03-GW3S-002	PSPCB	Dieldrin		0.1	ug/L	U	11/21/97
SJS03-GW3S-002	PSPCB	Endosulfan I		0.05	ug/L	U	11/21/97
SJS03-GW3S-002	PSPCB	Endosulfan II		0.1	ug/L	U	11/21/97
SJS03-GW3S-002	PSPCB	Endosulfan Sulfate		0.1	ug/L	U	11/21/97
SJS03-GW3S-002	PSPCB	Endrin		0.1	ug/L	U	11/21/97
SJS03-GW3S-002	PSPCB	Endrin Aldehyde		0.1	ug/L	U	11/21/97
SJS03-GW3S-002	PSPCB	Endrin Ketone		0.1	ug/L	U	11/21/97
SJS03-GW3S-002	PSPCB	gamma-BHC		0.05	ug/L	U	11/21/97
SJS03-GW3S-002	PSPCB	gamma-Chlordane		0.05	ug/L	U	11/21/97
SJS03-GW3S-002	PSPCB	Heptachlor		0.05	ug/L	U	11/21/97
SJS03-GW3S-002	PSPCB	Heptachlor Epoxide		0.05	ug/L	U	11/21/97
SJS03-GW3S-002	PSPCB	Methoxychlor		0.5	ug/L	U	11/21/97
SJS03-GW3S-002	PSPCB	Toxaphene		5	ug/L	U	11/21/97
SJS03-GW3S-002	SVTCL	1,2,4-Trichlorobenzene		10	ug/L	U	11/18/97
SJS03-GW3S-002	SVTCL	1,2-Dichlorobenzene		10	ug/L	U	11/18/97
SJS03-GW3S-002	SVTCL	1,3-Dichlorobenzene		10	ug/L	U	11/18/97
SJS03-GW3S-002	SVTCL	1,4-Dichlorobenzene		10	ug/L	U	11/18/97
SJS03-GW3S-002	SVTCL	2,2'-oxybis(1-Chloropropan		10	ug/L	U	11/18/97
SJS03-GW3S-002	SVTCL	2,4,5-Trichlorophenol		25	ug/L	U	11/18/97
SJS03-GW3S-002	SVTCL	2,4,6-Trichlorophenol		10	ug/L	U	11/18/97
SJS03-GW3S-002	SVTCL	2,4-Dichlorophenol		10	ug/L	U	11/18/97
SJS03-GW3S-002	SVTCL	2,4-Dimethylphenol		10	ug/L	U	11/18/97
SJS03-GW3S-002	SVTCL	2,4-Dinitrophenol		25	ug/L	U	11/18/97
SJS03-GW3S-002	SVTCL	2,4-Dinitrotoluene		10	ug/L	U	11/18/97
SJS03-GW3S-002	SVTCL	2,6-Dinitrotoluene		10	ug/L	U	11/18/97
SJS03-GW3S-002	SVTCL	2-Chloronaphthalene		10	ug/L	U	11/18/97
SJS03-GW3S-002	SVTCL	2-Chlorophenol		10	ug/L	U	11/18/97
SJS03-GW3S-002	SVTCL	2-Methylnaphthalene		10	ug/L	U	11/18/97
SJS03-GW3S-002	SVTCL	2-Methylphenol		10	ug/L	U	11/18/97
SJS03-GW3S-002	SVTCL	2-Nitroaniline		25	ug/L	U	11/18/97
SJS03-GW3S-002	SVTCL	2-Nitrophenol		10	ug/L	U	11/18/97
SJS03-GW3S-002	SVTCL	3,3'-Dichlorobenzidine		10	ug/L	U	11/18/97
SJS03-GW3S-002	SVTCL	3-Nitroaniline		25	ug/L	U	11/18/97
SJS03-GW3S-002	SVTCL	4,6-Dinitro-2-Methylphenol		25	ug/L	U	11/18/97
SJS03-GW3S-002	SVTCL	4-Bromophenol-phenyleth		10	ug/L	U	11/18/97
SJS03-GW3S-002	SVTCL	4-Chloro-3-Methylphenol		10	ug/L	U	11/18/97
SJS03-GW3S-002	SVTCL	4-Chloroaniline		10	ug/L	U	11/18/97
SJS03-GW3S-002	SVTCL	4-Chlorophenyl-phenyleth		10	ug/L	U	11/18/97
SJS03-GW3S-002	SVTCL	4-Methylphenol		10	ug/L	U	11/18/97
SJS03-GW3S-002	SVTCL	4-Nitroaniline		25	ug/L	U	11/18/97
SJS03-GW3S-002	SVTCL	4-Nitrophenol		25	ug/L	U	11/18/97
SJS03-GW3S-002	SVTCL	Acenaphthene	7	10	ug/L	J	11/18/97
SJS03-GW3S-002	SVTCL	Acenaphthylene		10	ug/L	U	11/18/97
SJS03-GW3S-002	SVTCL	Anthracene		10	ug/L	U	11/18/97
SJS03-GW3S-002	SVTCL	Benzo(a)anthracene		10	ug/L	U	11/18/97
SJS03-GW3S-002	SVTCL	Benzo(a)pyrene		10	ug/L	U	11/18/97
SJS03-GW3S-002	SVTCL	Benzo(b)fluoranthene		10	ug/L	U	11/18/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS03-GW3S-002	SVTCL	Benzo(g,h,i)perylene		10	ug/L	U	11/18/97
SJS03-GW3S-002	SVTCL	Benzo(k)fluoranthene		10	ug/L	U	11/18/97
SJS03-GW3S-002	SVTCL	bis(2-Chloroethoxy)metha		10	ug/L	U	11/18/97
SJS03-GW3S-002	SVTCL	bis(2-chloroethyl)ether		10	ug/L	U	11/18/97
SJS03-GW3S-002	SVTCL	bis(2-Ethylhexyl)phthalate		10	ug/L	U	11/18/97
SJS03-GW3S-002	SVTCL	Butylbenzylphthalate		10	ug/L	U	11/18/97
SJS03-GW3S-002	SVTCL	Carbazole		10	ug/L	U	11/18/97
SJS03-GW3S-002	SVTCL	Chrysene		10	ug/L	U	11/18/97
SJS03-GW3S-002	SVTCL	Di-n-butylphthalate		10	ug/L	U	11/18/97
SJS03-GW3S-002	SVTCL	Di-n-Octyl Phthalate		10	ug/L	U	11/18/97
SJS03-GW3S-002	SVTCL	Dibenzo(a,h)anthracene		10	ug/L	U	11/18/97
SJS03-GW3S-002	SVTCL	Dibenzofuran		10	ug/L	U	11/18/97
SJS03-GW3S-002	SVTCL	Diethylphthalate		10	ug/L	U	11/18/97
SJS03-GW3S-002	SVTCL	Dimethyl Phthalate		10	ug/L	U	11/18/97
SJS03-GW3S-002	SVTCL	Fluoranthene		10	ug/L	U	11/18/97
SJS03-GW3S-002	SVTCL	Fluorene		10	ug/L	U	11/18/97
SJS03-GW3S-002	SVTCL	Hexachlorobenzene		10	ug/L	U	11/18/97
SJS03-GW3S-002	SVTCL	Hexachlorobutadiene		10	ug/L	U	11/18/97
SJS03-GW3S-002	SVTCL	Hexachlorocyclopentadie		10	ug/L	U	11/18/97
SJS03-GW3S-002	SVTCL	Hexachloroethane		10	ug/L	U	11/18/97
SJS03-GW3S-002	SVTCL	Indeno(1,2,3-cd)pyrene		10	ug/L	U	11/18/97
SJS03-GW3S-002	SVTCL	Isophorone		10	ug/L	U	11/18/97
SJS03-GW3S-002	SVTCL	N-Nitroso-Di-n-Propylamine		10	ug/L	U	11/18/97
SJS03-GW3S-002	SVTCL	N-Nitrosodiphenylamine		10	ug/L	U	11/18/97
SJS03-GW3S-002	SVTCL	Naphthalene		10	ug/L	U	11/18/97
SJS03-GW3S-002	SVTCL	Nitrobenzene		10	ug/L	U	11/18/97
SJS03-GW3S-002	SVTCL	Pentachlorophenol		25	ug/L	U	11/18/97
SJS03-GW3S-002	SVTCL	Phenanthrene		10	ug/L	U	11/18/97
SJS03-GW3S-002	SVTCL	Phenol		10	ug/L	U	11/18/97
SJS03-GW3S-002	SVTCL	Pyrene		10	ug/L	U	11/18/97
SJS03-GW3S-002	VCLOW	1,1,1-Trichloroethane		1	ug/L	U	11/10/97
SJS03-GW3S-002	VCLOW	1,1,2,2-Tetrachloroethane		1	ug/L	U	11/10/97
SJS03-GW3S-002	VCLOW	1,1,2-Trichloroethane		1	ug/L	U	11/10/97
SJS03-GW3S-002	VCLOW	1,1-Dichloroethane		1	ug/L	U	11/10/97
SJS03-GW3S-002	VCLOW	1,1-Dichloroethene		1	ug/L	U	11/10/97
SJS03-GW3S-002	VCLOW	1,2,4-Trichlorobenzene		1	ug/L	U	11/10/97
SJS03-GW3S-002	VCLOW	1,2-Dibromo-3-chloropropa		1	ug/L	U	11/10/97
SJS03-GW3S-002	VCLOW	1,2-Dibromoethane		1	ug/L	U	11/10/97
SJS03-GW3S-002	VCLOW	1,2-Dichlorobenzene		1	ug/L	U	11/10/97
SJS03-GW3S-002	VCLOW	1,2-Dichloroethane		1	ug/L	U	11/10/97
SJS03-GW3S-002	VCLOW	1,2-Dichloropropane		1	ug/L	U	11/10/97
SJS03-GW3S-002	VCLOW	1,3-Dichlorobenzene		1	ug/L	U	11/10/97
SJS03-GW3S-002	VCLOW	1,4-Dichlorobenzene		1	ug/L	U	11/10/97
SJS03-GW3S-002	VCLOW	2-Hexanone		5	ug/L	U	11/10/97
SJS03-GW3S-002	VCLOW	4-Methyl-2-Pentanone		5	ug/L	U	11/10/97
SJS03-GW3S-002	VCLOW	Acetone	10	5	ug/L		11/10/97
SJS03-GW3S-002	VCLOW	Benzene		1	ug/L	U	11/10/97
SJS03-GW3S-002	VCLOW	Bromochloromethane		1	ug/L	U	11/10/97
SJS03-GW3S-002	VCLOW	Bromodichloromethane		1	ug/L	U	11/10/97
SJS03-GW3S-002	VCLOW	Bromoform		1	ug/L	U	11/10/97
SJS03-GW3S-002	VCLOW	Bromomethane		1	ug/L	U	11/10/97
SJS03-GW3S-002	VCLOW	Carbon Disulfide		1	ug/L	U	11/10/97
SJS03-GW3S-002	VCLOW	Carbon Tetrachloride		1	ug/L	U	11/10/97
SJS03-GW3S-002	VCLOW	Chlorobenzene		1	ug/L	U	11/10/97
SJS03-GW3S-002	VCLOW	Chloroethane		1	ug/L	U	11/10/97
SJS03-GW3S-002	VCLOW	Chloroform		1	ug/L	U	11/10/97
SJS03-GW3S-002	VCLOW	Chloromethane		1	ug/L	U	11/10/97
SJS03-GW3S-002	VCLOW	cis-1,2-Dichloroethene		1	ug/L	U	11/10/97
SJS03-GW3S-002	VCLOW	cis-1,3-Dichloropropene		1	ug/L	U	11/10/97
SJS03-GW3S-002	VCLOW	Dibromochloromethane		1	ug/L	U	11/10/97
SJS03-GW3S-002	VCLOW	Ethylbenzene		1	ug/L	U	11/10/97
SJS03-GW3S-002	VCLOW	Methylene Chloride	3	2	ug/L	B	11/10/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS03-GW3S-002	VCLOW	Styrene		1	ug/L	U	11/10/97
SJS03-GW3S-002	VCLOW	Tetrachloroethene		1	ug/L	U	11/10/97
SJS03-GW3S-002	VCLOW	Toluene		1	ug/L	U	11/10/97
SJS03-GW3S-002	VCLOW	Total Xylenes		1	ug/L	U	11/10/97
SJS03-GW3S-002	VCLOW	Trans-1,2-Dichloroethene		1	ug/L	U	11/10/97
SJS03-GW3S-002	VCLOW	trans-1,3-Dichloropropene		1	ug/L	U	11/10/97
SJS03-GW3S-002	VCLOW	Trichloroethene		1	ug/L	U	11/10/97
SJS03-GW3S-002	VCLOW	Vinyl Chloride		1	ug/L	U	11/10/97
SJS03-GW3S-002F	METAL	Aluminum		38.1	ug/L	U	11/25/97
SJS03-GW3S-002F	METAL	Antimony		1.7	ug/L	U	11/13/97
SJS03-GW3S-002F	METAL	Arsenic		3.2	ug/L	U	11/13/97
SJS03-GW3S-002F	METAL	Barium	14.9	1	ug/L	J	11/25/97
SJS03-GW3S-002F	METAL	Beryllium		0.58	ug/L	U	11/25/97
SJS03-GW3S-002F	METAL	Cadmium		0.4	ug/L	U	11/13/97
SJS03-GW3S-002F	METAL	Calcium	340000	46	ug/L		11/25/97
SJS03-GW3S-002F	METAL	Chromium		4.6	ug/L	U	11/25/97
SJS03-GW3S-002F	METAL	Cobalt		6	ug/L	U	11/25/97
SJS03-GW3S-002F	METAL	Copper		5.8	ug/L	U	11/25/97
SJS03-GW3S-002F	METAL	Iron	42200	5	ug/L		11/25/97
SJS03-GW3S-002F	METAL	Lead		1.3	ug/L	U	11/13/97
SJS03-GW3S-002F	METAL	Magnesium	31900	45	ug/L		11/25/97
SJS03-GW3S-002F	METAL	Manganese	2760	1	ug/L		11/25/97
SJS03-GW3S-002F	METAL	Mercury		0.12	ug/L	U	11/13/97
SJS03-GW3S-002F	METAL	Nickel		6.3	ug/L	U	11/25/97
SJS03-GW3S-002F	METAL	Potassium	21400	97	ug/L		11/25/97
SJS03-GW3S-002F	METAL	Selenium		3.3	ug/L	U	11/13/97
SJS03-GW3S-002F	METAL	Silver	2	3	ug/L	B	11/13/97
SJS03-GW3S-002F	METAL	Sodium	38700	28	ug/L		11/25/97
SJS03-GW3S-002F	METAL	Thallium		1.5	ug/L	U	11/13/97
SJS03-GW3S-002F	METAL	Vanadium		6.8	ug/L	U	11/25/97
SJS03-GW3S-002F	METAL	Zinc	24.4	3	ug/L	B	11/25/97
SJS03-GW4S-002	CTOTP	Total Phosphorous (as P)	0.47	0.13	mg/L		11/14/97
SJS03-GW4S-002	MCYAN	Aluminum	56.8	29	ug/L	J	11/25/97
SJS03-GW4S-002	MCYAN	Antimony		1.7	ug/L	U	11/13/97
SJS03-GW4S-002	MCYAN	Arsenic		3.2	ug/L	U	11/13/97
SJS03-GW4S-002	MCYAN	Barium	20.7	1	ug/L	J	11/25/97
SJS03-GW4S-002	MCYAN	Beryllium	0.96	1	ug/L	J	11/25/97
SJS03-GW4S-002	MCYAN	Cadmium		0.4	ug/L	U	11/13/97
SJS03-GW4S-002	MCYAN	Calcium	130000	46	ug/L		11/25/97
SJS03-GW4S-002	MCYAN	Chromium		4.6	ug/L	U	11/25/97
SJS03-GW4S-002	MCYAN	Cobalt	38.5	3	ug/L	J	11/25/97
SJS03-GW4S-002	MCYAN	Copper		5.8	ug/L	U	11/25/97
SJS03-GW4S-002	MCYAN	Cyanide		5	ug/L	U	11/7/97
SJS03-GW4S-002	MCYAN	Iron	20100	5	ug/L		11/25/97
SJS03-GW4S-002	MCYAN	Lead	1.4	1	ug/L	J	11/13/97
SJS03-GW4S-002	MCYAN	Magnesium	48900	45	ug/L		11/25/97
SJS03-GW4S-002	MCYAN	Manganese	1320	1	ug/L		11/25/97
SJS03-GW4S-002	MCYAN	Mercury		0.13	ug/L	U	11/13/97
SJS03-GW4S-002	MCYAN	Nickel	46.1	4	ug/L		11/25/97
SJS03-GW4S-002	MCYAN	Potassium	28200	97	ug/L		11/25/97
SJS03-GW4S-002	MCYAN	Selenium		3.3	ug/L	U	11/13/97
SJS03-GW4S-002	MCYAN	Silver	1.7	3	ug/L	J	11/13/97
SJS03-GW4S-002	MCYAN	Sodium	155000	28	ug/L		11/25/97
SJS03-GW4S-002	MCYAN	Thallium		1.5	ug/L	U	11/13/97
SJS03-GW4S-002	MCYAN	Vanadium		6.8	ug/L	U	11/25/97
SJS03-GW4S-002	MCYAN	Zinc	327	3	ug/L		11/25/97
SJS03-GW4S-002	PSPCB	4,4'-DDD		0.1	ug/L	U	11/21/97
SJS03-GW4S-002	PSPCB	4,4'-DDE		0.1	ug/L	U	11/21/97
SJS03-GW4S-002	PSPCB	4,4'-DDT		0.1	ug/L	U	11/21/97
SJS03-GW4S-002	PSPCB	Aldrin		0.05	ug/L	U	11/21/97
SJS03-GW4S-002	PSPCB	alpha-BHC		0.05	ug/L	U	11/21/97
SJS03-GW4S-002	PSPCB	alpha-Chlordane		0.05	ug/L	U	11/21/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS03-GW4S-002	PSPCB	Aroclor-1016		1	ug/L	U	11/21/97
SJS03-GW4S-002	PSPCB	Aroclor-1221		2	ug/L	U	11/21/97
SJS03-GW4S-002	PSPCB	Aroclor-1232		1	ug/L	U	11/21/97
SJS03-GW4S-002	PSPCB	Aroclor-1242		1	ug/L	U	11/21/97
SJS03-GW4S-002	PSPCB	Aroclor-1248		1	ug/L	U	11/21/97
SJS03-GW4S-002	PSPCB	Aroclor-1254		1	ug/L	U	11/21/97
SJS03-GW4S-002	PSPCB	Aroclor-1260		1	ug/L	U	11/21/97
SJS03-GW4S-002	PSPCB	beta-BHC		0.05	ug/L	U	11/21/97
SJS03-GW4S-002	PSPCB	delta-BHC		0.05	ug/L	U	11/21/97
SJS03-GW4S-002	PSPCB	Dieldrin		0.1	ug/L	U	11/21/97
SJS03-GW4S-002	PSPCB	Endosulfan I		0.05	ug/L	U	11/21/97
SJS03-GW4S-002	PSPCB	Endosulfan II		0.1	ug/L	U	11/21/97
SJS03-GW4S-002	PSPCB	Endosulfan Sulfate		0.1	ug/L	U	11/21/97
SJS03-GW4S-002	PSPCB	Endrin		0.1	ug/L	U	11/21/97
SJS03-GW4S-002	PSPCB	Endrin Aldehyde		0.1	ug/L	U	11/21/97
SJS03-GW4S-002	PSPCB	Endrin Ketone		0.1	ug/L	U	11/21/97
SJS03-GW4S-002	PSPCB	gamma-BHC		0.05	ug/L	U	11/21/97
SJS03-GW4S-002	PSPCB	gamma-Chlordane		0.05	ug/L	U	11/21/97
SJS03-GW4S-002	PSPCB	Heptachlor		0.05	ug/L	U	11/21/97
SJS03-GW4S-002	PSPCB	Heptachlor Epoxide		0.05	ug/L	U	11/21/97
SJS03-GW4S-002	PSPCB	Methoxychlor		0.5	ug/L	U	11/21/97
SJS03-GW4S-002	PSPCB	Toxaphene		5	ug/L	U	11/21/97
SJS03-GW4S-002	SVTCL	1,2,4-Trichlorobenzene		10	ug/L	U	11/14/97
SJS03-GW4S-002	SVTCL	1,2-Dichlorobenzene		10	ug/L	U	11/14/97
SJS03-GW4S-002	SVTCL	1,3-Dichlorobenzene		10	ug/L	U	11/14/97
SJS03-GW4S-002	SVTCL	1,4-Dichlorobenzene		10	ug/L	U	11/14/97
SJS03-GW4S-002	SVTCL	2,2'-oxybis(1-Chloropropan		10	ug/L	U	11/14/97
SJS03-GW4S-002	SVTCL	2,4,5-Trichlorophenol		25	ug/L	U	11/14/97
SJS03-GW4S-002	SVTCL	2,4,6-Trichlorophenol		10	ug/L	U	11/14/97
SJS03-GW4S-002	SVTCL	2,4-Dichlorophenol		10	ug/L	U	11/14/97
SJS03-GW4S-002	SVTCL	2,4-Dimethylphenol		10	ug/L	U	11/14/97
SJS03-GW4S-002	SVTCL	2,4-Dinitrophenol		25	ug/L	U	11/14/97
SJS03-GW4S-002	SVTCL	2,4-Dinitrotoluene		10	ug/L	U	11/14/97
SJS03-GW4S-002	SVTCL	2,6-Dinitrotoluene		10	ug/L	U	11/14/97
SJS03-GW4S-002	SVTCL	2-Chloronaphthalene		10	ug/L	U	11/14/97
SJS03-GW4S-002	SVTCL	2-Chlorophenol		10	ug/L	U	11/14/97
SJS03-GW4S-002	SVTCL	2-Methylnaphthalene		10	ug/L	U	11/14/97
SJS03-GW4S-002	SVTCL	2-Methylphenol		10	ug/L	U	11/14/97
SJS03-GW4S-002	SVTCL	2-Nitroaniline		25	ug/L	U	11/14/97
SJS03-GW4S-002	SVTCL	2-Nitrophenol		10	ug/L	U	11/14/97
SJS03-GW4S-002	SVTCL	3,3'-Dichlorobenzidine		10	ug/L	U	11/14/97
SJS03-GW4S-002	SVTCL	3-Nitroaniline		25	ug/L	U	11/14/97
SJS03-GW4S-002	SVTCL	4,6-Dinitro-2-Methylphenol		25	ug/L	U	11/14/97
SJS03-GW4S-002	SVTCL	4-Bromophenol-phenyleth		10	ug/L	U	11/14/97
SJS03-GW4S-002	SVTCL	4-Chloro-3-Methylphenol		10	ug/L	U	11/14/97
SJS03-GW4S-002	SVTCL	4-Chloroaniline		10	ug/L	U	11/14/97
SJS03-GW4S-002	SVTCL	4-Chlorophenyl-phenyleth		10	ug/L	U	11/14/97
SJS03-GW4S-002	SVTCL	4-Methylphenol		10	ug/L	U	11/14/97
SJS03-GW4S-002	SVTCL	4-Nitroaniline		25	ug/L	U	11/14/97
SJS03-GW4S-002	SVTCL	4-Nitrophenol		25	ug/L	U	11/14/97
SJS03-GW4S-002	SVTCL	Acenaphthene		10	ug/L	U	11/14/97
SJS03-GW4S-002	SVTCL	Acenaphthylene		10	ug/L	U	11/14/97
SJS03-GW4S-002	SVTCL	Anthracene		10	ug/L	U	11/14/97
SJS03-GW4S-002	SVTCL	Benzo(a)anthracene		10	ug/L	U	11/14/97
SJS03-GW4S-002	SVTCL	Benzo(a)pyrene		10	ug/L	U	11/14/97
SJS03-GW4S-002	SVTCL	Benzo(b)fluoranthene		10	ug/L	U	11/14/97
SJS03-GW4S-002	SVTCL	Benzo(g,h,i)perylene		10	ug/L	U	11/14/97
SJS03-GW4S-002	SVTCL	Benzo(k)fluoranthene		10	ug/L	U	11/14/97
SJS03-GW4S-002	SVTCL	bis(2-Chloroethoxy)metha		10	ug/L	U	11/14/97
SJS03-GW4S-002	SVTCL	bis(2-chloroethyl)ether		10	ug/L	U	11/14/97
SJS03-GW4S-002	SVTCL	bis(2-Ethylhexyl)phthalate	14	10	ug/L	B	11/14/97
SJS03-GW4S-002	SVTCL	Butylbenzylphthalate		10	ug/L	U	11/14/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS03-GW4S-002	SVTCL	Carbazole		10	ug/L	U	11/14/97
SJS03-GW4S-002	SVTCL	Chrysene		10	ug/L	U	11/14/97
SJS03-GW4S-002	SVTCL	Di-n-butylphthalate		10	ug/L	U	11/14/97
SJS03-GW4S-002	SVTCL	Di-n-Octyl Phthalate		10	ug/L	U	11/14/97
SJS03-GW4S-002	SVTCL	Dibenzo(a,h)anthracene		10	ug/L	U	11/14/97
SJS03-GW4S-002	SVTCL	Dibenzofuran		10	ug/L	U	11/14/97
SJS03-GW4S-002	SVTCL	Diethylphthalate		10	ug/L	U	11/14/97
SJS03-GW4S-002	SVTCL	Dimethyl Phthalate		10	ug/L	U	11/14/97
SJS03-GW4S-002	SVTCL	Fluoranthene		10	ug/L	U	11/14/97
SJS03-GW4S-002	SVTCL	Fluorene		10	ug/L	U	11/14/97
SJS03-GW4S-002	SVTCL	Hexachlorobenzene		10	ug/L	U	11/14/97
SJS03-GW4S-002	SVTCL	Hexachlorobutadiene		10	ug/L	U	11/14/97
SJS03-GW4S-002	SVTCL	Hexachlorocyclopentadie		10	ug/L	U	11/14/97
SJS03-GW4S-002	SVTCL	Hexachloroethane		10	ug/L	U	11/14/97
SJS03-GW4S-002	SVTCL	Indeno(1,2,3-cd)pyrene		10	ug/L	U	11/14/97
SJS03-GW4S-002	SVTCL	Isophorone		10	ug/L	U	11/14/97
SJS03-GW4S-002	SVTCL	N-Nitroso-Di-n-Propylamine		10	ug/L	U	11/14/97
SJS03-GW4S-002	SVTCL	N-Nitrosodiphenylamine		10	ug/L	U	11/14/97
SJS03-GW4S-002	SVTCL	Naphthalene		10	ug/L	U	11/14/97
SJS03-GW4S-002	SVTCL	Nitrobenzene		10	ug/L	U	11/14/97
SJS03-GW4S-002	SVTCL	Pentachlorophenol		25	ug/L	U	11/14/97
SJS03-GW4S-002	SVTCL	Phenanthrene		10	ug/L	U	11/14/97
SJS03-GW4S-002	SVTCL	Phenol		10	ug/L	U	11/14/97
SJS03-GW4S-002	SVTCL	Pyrene		10	ug/L	U	11/14/97
SJS03-GW4S-002	VCLOW	1,1,1-Trichloroethane		1	ug/L	U	11/10/97
SJS03-GW4S-002	VCLOW	1,1,2,2-Tetrachloroethane		1	ug/L	U	11/10/97
SJS03-GW4S-002	VCLOW	1,1,2-Trichloroethane		1	ug/L	U	11/10/97
SJS03-GW4S-002	VCLOW	1,1-Dichloroethane		1	ug/L	U	11/10/97
SJS03-GW4S-002	VCLOW	1,1-Dichloroethene		1	ug/L	U	11/10/97
SJS03-GW4S-002	VCLOW	1,2,4-Trichlorobenzene		1	ug/L	U	11/10/97
SJS03-GW4S-002	VCLOW	1,2-Dibromo-3-chloropropa		1	ug/L	U	11/10/97
SJS03-GW4S-002	VCLOW	1,2-Dibromoethane		1	ug/L	U	11/10/97
SJS03-GW4S-002	VCLOW	1,2-Dichlorobenzene		1	ug/L	U	11/10/97
SJS03-GW4S-002	VCLOW	1,2-Dichloroethane		1	ug/L	U	11/10/97
SJS03-GW4S-002	VCLOW	1,2-Dichloropropane		1	ug/L	U	11/10/97
SJS03-GW4S-002	VCLOW	1,3-Dichlorobenzene		1	ug/L	U	11/10/97
SJS03-GW4S-002	VCLOW	1,4-Dichlorobenzene		1	ug/L	U	11/10/97
SJS03-GW4S-002	VCLOW	2-Hexanone		5	ug/L	U	11/10/97
SJS03-GW4S-002	VCLOW	4-Methyl-2-Pentanone		5	ug/L	U	11/10/97
SJS03-GW4S-002	VCLOW	Acetone		5	ug/L	U	11/10/97
SJS03-GW4S-002	VCLOW	Benzene		1	ug/L	U	11/10/97
SJS03-GW4S-002	VCLOW	Bromochloromethane		1	ug/L	U	11/10/97
SJS03-GW4S-002	VCLOW	Bromodichloromethane		1	ug/L	U	11/10/97
SJS03-GW4S-002	VCLOW	Bromoform		1	ug/L	U	11/10/97
SJS03-GW4S-002	VCLOW	Bromomethane		1	ug/L	U	11/10/97
SJS03-GW4S-002	VCLOW	Carbon Disulfide		1	ug/L	U	11/10/97
SJS03-GW4S-002	VCLOW	Carbon Tetrachloride		1	ug/L	U	11/10/97
SJS03-GW4S-002	VCLOW	Chlorobenzene		1	ug/L	U	11/10/97
SJS03-GW4S-002	VCLOW	Chloroethane		1	ug/L	U	11/10/97
SJS03-GW4S-002	VCLOW	Chloroform		1	ug/L	U	11/10/97
SJS03-GW4S-002	VCLOW	Chloromethane		1	ug/L	U	11/10/97
SJS03-GW4S-002	VCLOW	cis-1,2-Dichloroethene		1	ug/L	U	11/10/97
SJS03-GW4S-002	VCLOW	cis-1,3-Dichloropropene		1	ug/L	U	11/10/97
SJS03-GW4S-002	VCLOW	Dibromochloromethane		1	ug/L	U	11/10/97
SJS03-GW4S-002	VCLOW	Ethylbenzene		1	ug/L	U	11/10/97
SJS03-GW4S-002	VCLOW	Methylene Chloride	3	2	ug/L	B	11/10/97
SJS03-GW4S-002	VCLOW	Styrene		1	ug/L	U	11/10/97
SJS03-GW4S-002	VCLOW	Tetrachloroethene		1	ug/L	U	11/10/97
SJS03-GW4S-002	VCLOW	Toluene		1	ug/L	U	11/10/97
SJS03-GW4S-002	VCLOW	Total Xylenes		1	ug/L	U	11/10/97
SJS03-GW4S-002	VCLOW	Trans-1,2-Dichloroethene		1	ug/L	U	11/10/97
SJS03-GW4S-002	VCLOW	trans-1,3-Dichloropropene		1	ug/L	U	11/10/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS03-GW4S-002	VCLOW	Trichloroethene		1	ug/L	U	11/10/97
SJS03-GW4S-002	VCLOW	Vinyl Chloride		1	ug/L	U	11/10/97
SJS03-GW4S-002F	METAL	Aluminum		38.1	ug/L	U	11/25/97
SJS03-GW4S-002F	METAL	Antimony		1.7	ug/L	U	11/13/97
SJS03-GW4S-002F	METAL	Arsenic		3.2	ug/L	U	11/13/97
SJS03-GW4S-002F	METAL	Barium	23.6	1	ug/L	J	11/25/97
SJS03-GW4S-002F	METAL	Beryllium	1.2	1	ug/L	J	11/25/97
SJS03-GW4S-002F	METAL	Cadmium		0.4	ug/L	U	11/13/97
SJS03-GW4S-002F	METAL	Calcium	139000	46	ug/L		11/25/97
SJS03-GW4S-002F	METAL	Chromium		4.6	ug/L	U	11/25/97
SJS03-GW4S-002F	METAL	Cobalt	42.9	3	ug/L	J	11/25/97
SJS03-GW4S-002F	METAL	Copper		5.8	ug/L	U	11/25/97
SJS03-GW4S-002F	METAL	Iron	21400	5	ug/L		11/25/97
SJS03-GW4S-002F	METAL	Lead		1.3	ug/L	U	11/13/97
SJS03-GW4S-002F	METAL	Magnesium	52500	45	ug/L		11/25/97
SJS03-GW4S-002F	METAL	Manganese	1420	1	ug/L		11/25/97
SJS03-GW4S-002F	METAL	Mercury		0.13	ug/L	U	11/13/97
SJS03-GW4S-002F	METAL	Nickel	50.5	4	ug/L		11/25/97
SJS03-GW4S-002F	METAL	Potassium	30300	97	ug/L		11/25/97
SJS03-GW4S-002F	METAL	Selenium		3.3	ug/L	U	11/13/97
SJS03-GW4S-002F	METAL	Silver	1.6	3	ug/L	B	11/13/97
SJS03-GW4S-002F	METAL	Sodium	168000	28	ug/L		11/25/97
SJS03-GW4S-002F	METAL	Thallium	1.5	2	ug/L	B	11/13/97
SJS03-GW4S-002F	METAL	Vanadium		6.8	ug/L	U	11/25/97
SJS03-GW4S-002F	METAL	Zinc	325	3	ug/L		11/25/97
SJS03-GW4S-002FP	METAL	Aluminum		38.1	ug/L	U	11/25/97
SJS03-GW4S-002FP	METAL	Antimony		1.7	ug/L	U	11/13/97
SJS03-GW4S-002FP	METAL	Arsenic		3.2	ug/L	U	11/13/97
SJS03-GW4S-002FP	METAL	Barium	22.1	1	ug/L	J	11/25/97
SJS03-GW4S-002FP	METAL	Beryllium	1.2	1	ug/L	J	11/25/97
SJS03-GW4S-002FP	METAL	Cadmium		0.4	ug/L	U	11/13/97
SJS03-GW4S-002FP	METAL	Calcium	133000	46	ug/L		11/25/97
SJS03-GW4S-002FP	METAL	Chromium		4.6	ug/L	U	11/25/97
SJS03-GW4S-002FP	METAL	Cobalt	41.8	3	ug/L	J	11/25/97
SJS03-GW4S-002FP	METAL	Copper		5.8	ug/L	U	11/25/97
SJS03-GW4S-002FP	METAL	Iron	20700	5	ug/L		11/25/97
SJS03-GW4S-002FP	METAL	Lead		1.3	ug/L	U	11/13/97
SJS03-GW4S-002FP	METAL	Magnesium	50600	45	ug/L		11/25/97
SJS03-GW4S-002FP	METAL	Manganese	1370	1	ug/L		11/25/97
SJS03-GW4S-002FP	METAL	Mercury		0.13	ug/L	U	11/13/97
SJS03-GW4S-002FP	METAL	Nickel	45.7	4	ug/L		11/25/97
SJS03-GW4S-002FP	METAL	Potassium	29000	97	ug/L		11/25/97
SJS03-GW4S-002FP	METAL	Selenium		3.3	ug/L	U	11/13/97
SJS03-GW4S-002FP	METAL	Silver	2.7	3	ug/L	B	11/13/97
SJS03-GW4S-002FP	METAL	Sodium	161000	28	ug/L		11/25/97
SJS03-GW4S-002FP	METAL	Thallium		1.5	ug/L	U	11/13/97
SJS03-GW4S-002FP	METAL	Vanadium		6.8	ug/L	U	11/25/97
SJS03-GW4S-002FP	METAL	Zinc	311	3	ug/L		11/25/97
SJS03-GW4S-002P	CTOTP	Total Phosphorous (as P)	0.45	0.25	mg/L		11/14/97
SJS03-GW4S-002P	MCYAN	Aluminum		38.1	ug/L	U	11/25/97
SJS03-GW4S-002P	MCYAN	Antimony		1.7	ug/L	U	11/13/97
SJS03-GW4S-002P	MCYAN	Arsenic		3.2	ug/L	U	11/13/97
SJS03-GW4S-002P	MCYAN	Barium	20.7	1	ug/L	J	11/25/97
SJS03-GW4S-002P	MCYAN	Beryllium	1.2	1	ug/L	J	11/25/97
SJS03-GW4S-002P	MCYAN	Cadmium		0.4	ug/L	U	11/13/97
SJS03-GW4S-002P	MCYAN	Calcium	129000	46	ug/L		11/25/97
SJS03-GW4S-002P	MCYAN	Chromium		4.6	ug/L	U	11/25/97
SJS03-GW4S-002P	MCYAN	Cobalt	36.8	3	ug/L	J	11/25/97
SJS03-GW4S-002P	MCYAN	Copper		5.8	ug/L	U	11/25/97
SJS03-GW4S-002P	MCYAN	Cyanide		5	ug/L	U	11/7/97
SJS03-GW4S-002P	MCYAN	Iron	20000	5	ug/L		11/25/97
SJS03-GW4S-002P	MCYAN	Lead		1.3	ug/L	U	11/13/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS03-GW4S-002P	MCYAN	Magnesium	48700	45	ug/L		11/25/97
SJS03-GW4S-002P	MCYAN	Manganese	1320	1	ug/L		11/25/97
SJS03-GW4S-002P	MCYAN	Mercury		0.13	ug/L	U	11/13/97
SJS03-GW4S-002P	MCYAN	Nickel	43.1	4	ug/L		11/25/97
SJS03-GW4S-002P	MCYAN	Potassium	27800	97	ug/L		11/25/97
SJS03-GW4S-002P	MCYAN	Selenium		3.3	ug/L	U	11/13/97
SJS03-GW4S-002P	MCYAN	Silver	2	3	ug/L	J	11/13/97
SJS03-GW4S-002P	MCYAN	Sodium	154000	28	ug/L		11/25/97
SJS03-GW4S-002P	MCYAN	Thallium		1.5	ug/L	U	11/13/97
SJS03-GW4S-002P	MCYAN	Vanadium		6.8	ug/L	U	11/25/97
SJS03-GW4S-002P	MCYAN	Zinc	327	3	ug/L		11/25/97
SJS03-GW4S-002P	PSPCB	4,4'-DDD		0.1	ug/L	U	11/21/97
SJS03-GW4S-002P	PSPCB	4,4'-DDE		0.1	ug/L	U	11/21/97
SJS03-GW4S-002P	PSPCB	4,4'-DDT		0.1	ug/L	U	11/21/97
SJS03-GW4S-002P	PSPCB	Aldrin		0.05	ug/L	U	11/21/97
SJS03-GW4S-002P	PSPCB	alpha-BHC		0.05	ug/L	U	11/21/97
SJS03-GW4S-002P	PSPCB	alpha-Chlordane		0.05	ug/L	U	11/21/97
SJS03-GW4S-002P	PSPCB	Aroclor-1016		1	ug/L	U	11/21/97
SJS03-GW4S-002P	PSPCB	Aroclor-1221		2	ug/L	U	11/21/97
SJS03-GW4S-002P	PSPCB	Aroclor-1232		1	ug/L	U	11/21/97
SJS03-GW4S-002P	PSPCB	Aroclor-1242		1	ug/L	U	11/21/97
SJS03-GW4S-002P	PSPCB	Aroclor-1248		1	ug/L	U	11/21/97
SJS03-GW4S-002P	PSPCB	Aroclor-1254		1	ug/L	U	11/21/97
SJS03-GW4S-002P	PSPCB	Aroclor-1260		1	ug/L	U	11/21/97
SJS03-GW4S-002P	PSPCB	beta-BHC		0.05	ug/L	U	11/21/97
SJS03-GW4S-002P	PSPCB	delta-BHC		0.05	ug/L	U	11/21/97
SJS03-GW4S-002P	PSPCB	Dieldrin		0.1	ug/L	U	11/21/97
SJS03-GW4S-002P	PSPCB	Endosulfan I		0.05	ug/L	U	11/21/97
SJS03-GW4S-002P	PSPCB	Endosulfan II		0.1	ug/L	U	11/21/97
SJS03-GW4S-002P	PSPCB	Endosulfan Sulfate		0.1	ug/L	U	11/21/97
SJS03-GW4S-002P	PSPCB	Endrin		0.1	ug/L	U	11/21/97
SJS03-GW4S-002P	PSPCB	Endrin Aldehyde		0.1	ug/L	U	11/21/97
SJS03-GW4S-002P	PSPCB	Endrin Ketone		0.1	ug/L	U	11/21/97
SJS03-GW4S-002P	PSPCB	gamma-BHC		0.05	ug/L	U	11/21/97
SJS03-GW4S-002P	PSPCB	gamma-Chlordane		0.05	ug/L	U	11/21/97
SJS03-GW4S-002P	PSPCB	Heptachlor		0.05	ug/L	U	11/21/97
SJS03-GW4S-002P	PSPCB	Heptachlor Epoxide		0.05	ug/L	U	11/21/97
SJS03-GW4S-002P	PSPCB	Methoxychlor		0.5	ug/L	U	11/21/97
SJS03-GW4S-002P	PSPCB	Toxaphene		5	ug/L	U	11/21/97
SJS03-GW4S-002P	SVTCL	1,2,4-Trichlorobenzene		10	ug/L	U	11/14/97
SJS03-GW4S-002P	SVTCL	1,2-Dichlorobenzene		10	ug/L	U	11/14/97
SJS03-GW4S-002P	SVTCL	1,3-Dichlorobenzene		10	ug/L	U	11/14/97
SJS03-GW4S-002P	SVTCL	1,4-Dichlorobenzene		10	ug/L	U	11/14/97
SJS03-GW4S-002P	SVTCL	2,2'-oxybis(1-Chloropropan		10	ug/L	U	11/14/97
SJS03-GW4S-002P	SVTCL	2,4,5-Trichlorophenol		25	ug/L	U	11/14/97
SJS03-GW4S-002P	SVTCL	2,4,6-Trichlorophenol		10	ug/L	U	11/14/97
SJS03-GW4S-002P	SVTCL	2,4-Dichlorophenol		10	ug/L	U	11/14/97
SJS03-GW4S-002P	SVTCL	2,4-Dimethylphenol		10	ug/L	U	11/14/97
SJS03-GW4S-002P	SVTCL	2,4-Dinitrophenol		25	ug/L	U	11/14/97
SJS03-GW4S-002P	SVTCL	2,4-Dinitrotoluene		10	ug/L	U	11/14/97
SJS03-GW4S-002P	SVTCL	2,6-Dinitrotoluene		10	ug/L	U	11/14/97
SJS03-GW4S-002P	SVTCL	2-Chloronaphthalene		10	ug/L	U	11/14/97
SJS03-GW4S-002P	SVTCL	2-Chlorophenol		10	ug/L	U	11/14/97
SJS03-GW4S-002P	SVTCL	2-Methylnaphthalene		10	ug/L	U	11/14/97
SJS03-GW4S-002P	SVTCL	2-Methylphenol		10	ug/L	U	11/14/97
SJS03-GW4S-002P	SVTCL	2-Nitroaniline		25	ug/L	U	11/14/97
SJS03-GW4S-002P	SVTCL	2-Nitrophenol		10	ug/L	U	11/14/97
SJS03-GW4S-002P	SVTCL	3,3'-Dichlorobenzidine		10	ug/L	U	11/14/97
SJS03-GW4S-002P	SVTCL	3-Nitroaniline		25	ug/L	U	11/14/97
SJS03-GW4S-002P	SVTCL	4,6-Dinitro-2-Methylphenol		25	ug/L	U	11/14/97
SJS03-GW4S-002P	SVTCL	4-Bromophenol-phenyleth		10	ug/L	U	11/14/97
SJS03-GW4S-002P	SVTCL	4-Chloro-3-Methylphenol		10	ug/L	U	11/14/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS03-GW4S-002P	SVTCL	4-Chloroaniline		10	ug/L	U	11/14/97
SJS03-GW4S-002P	SVTCL	4-Chlorophenyl-phenyleth		10	ug/L	U	11/14/97
SJS03-GW4S-002P	SVTCL	4-Methylphenol		10	ug/L	U	11/14/97
SJS03-GW4S-002P	SVTCL	4-Nitroaniline		25	ug/L	U	11/14/97
SJS03-GW4S-002P	SVTCL	4-Nitrophenol		25	ug/L	U	11/14/97
SJS03-GW4S-002P	SVTCL	Acenaphthene		10	ug/L	U	11/14/97
SJS03-GW4S-002P	SVTCL	Acenaphthylene		10	ug/L	U	11/14/97
SJS03-GW4S-002P	SVTCL	Anthracene		10	ug/L	U	11/14/97
SJS03-GW4S-002P	SVTCL	Benzo(a)anthracene		10	ug/L	U	11/14/97
SJS03-GW4S-002P	SVTCL	Benzo(a)pyrene		10	ug/L	U	11/14/97
SJS03-GW4S-002P	SVTCL	Benzo(b)fluoranthene		10	ug/L	U	11/14/97
SJS03-GW4S-002P	SVTCL	Benzo(g,h,i)perylene		10	ug/L	U	11/14/97
SJS03-GW4S-002P	SVTCL	Benzo(k)fluoranthene		10	ug/L	U	11/14/97
SJS03-GW4S-002P	SVTCL	bis(2-Chloroethoxy)metha		10	ug/L	U	11/14/97
SJS03-GW4S-002P	SVTCL	bis(2-chloroethyl)ether		10	ug/L	U	11/14/97
SJS03-GW4S-002P	SVTCL	bis(2-Ethylhexyl)phthalate	7	10	ug/L	B	11/14/97
SJS03-GW4S-002P	SVTCL	Butylbenzylphthalate		10	ug/L	U	11/14/97
SJS03-GW4S-002P	SVTCL	Carbazole		10	ug/L	U	11/14/97
SJS03-GW4S-002P	SVTCL	Chrysene		10	ug/L	U	11/14/97
SJS03-GW4S-002P	SVTCL	Di-n-butylphthalate		10	ug/L	U	11/14/97
SJS03-GW4S-002P	SVTCL	Di-n-Octyl Phthalate		10	ug/L	U	11/14/97
SJS03-GW4S-002P	SVTCL	Dibenzo(a,h)anthracene		10	ug/L	U	11/14/97
SJS03-GW4S-002P	SVTCL	Dibenzofuran		10	ug/L	U	11/14/97
SJS03-GW4S-002P	SVTCL	Diethylphthalate		10	ug/L	U	11/14/97
SJS03-GW4S-002P	SVTCL	Dimethyl Phthalate		10	ug/L	U	11/14/97
SJS03-GW4S-002P	SVTCL	Fluoranthene		10	ug/L	U	11/14/97
SJS03-GW4S-002P	SVTCL	Fluorene		10	ug/L	U	11/14/97
SJS03-GW4S-002P	SVTCL	Hexachlorobenzene		10	ug/L	U	11/14/97
SJS03-GW4S-002P	SVTCL	Hexachlorobutadiene		10	ug/L	U	11/14/97
SJS03-GW4S-002P	SVTCL	Hexachlorocyclopentadie		10	ug/L	U	11/14/97
SJS03-GW4S-002P	SVTCL	Hexachloroethane		10	ug/L	U	11/14/97
SJS03-GW4S-002P	SVTCL	Indeno(1,2,3-cd)pyrene		10	ug/L	U	11/14/97
SJS03-GW4S-002P	SVTCL	Isophorone		10	ug/L	U	11/14/97
SJS03-GW4S-002P	SVTCL	N-Nitroso-Di-n-Propylamine		10	ug/L	U	11/14/97
SJS03-GW4S-002P	SVTCL	N-Nitrosodiphenylamine		10	ug/L	U	11/14/97
SJS03-GW4S-002P	SVTCL	Naphthalene		10	ug/L	U	11/14/97
SJS03-GW4S-002P	SVTCL	Nitrobenzene		10	ug/L	U	11/14/97
SJS03-GW4S-002P	SVTCL	Pentachlorophenol		25	ug/L	U	11/14/97
SJS03-GW4S-002P	SVTCL	Phenanthrene		10	ug/L	U	11/14/97
SJS03-GW4S-002P	SVTCL	Phenol		10	ug/L	U	11/14/97
SJS03-GW4S-002P	SVTCL	Pyrene		10	ug/L	U	11/14/97
SJS03-GW4S-002P	VCLOW	1,1,1-Trichloroethane		1	ug/L	U	11/10/97
SJS03-GW4S-002P	VCLOW	1,1,2,2-Tetrachloroethane		1	ug/L	U	11/10/97
SJS03-GW4S-002P	VCLOW	1,1,2-Trichloroethane		1	ug/L	U	11/10/97
SJS03-GW4S-002P	VCLOW	1,1-Dichloroethane		1	ug/L	U	11/10/97
SJS03-GW4S-002P	VCLOW	1,1-Dichloroethene		1	ug/L	U	11/10/97
SJS03-GW4S-002P	VCLOW	1,2,4-Trichlorobenzene		1	ug/L	U	11/10/97
SJS03-GW4S-002P	VCLOW	1,2-Dibromo-3-chloropropa		1	ug/L	U	11/10/97
SJS03-GW4S-002P	VCLOW	1,2-Dibromoethane		1	ug/L	U	11/10/97
SJS03-GW4S-002P	VCLOW	1,2-Dichlorobenzene		1	ug/L	U	11/10/97
SJS03-GW4S-002P	VCLOW	1,2-Dichloroethane		1	ug/L	U	11/10/97
SJS03-GW4S-002P	VCLOW	1,2-Dichloropropane		1	ug/L	U	11/10/97
SJS03-GW4S-002P	VCLOW	1,3-Dichlorobenzene		1	ug/L	U	11/10/97
SJS03-GW4S-002P	VCLOW	1,4-Dichlorobenzene		1	ug/L	U	11/10/97
SJS03-GW4S-002P	VCLOW	2-Hexanone		5	ug/L	U	11/10/97
SJS03-GW4S-002P	VCLOW	4-Methyl-2-Pentanone		5	ug/L	U	11/10/97
SJS03-GW4S-002P	VCLOW	Acetone		5	ug/L	U	11/10/97
SJS03-GW4S-002P	VCLOW	Benzene		1	ug/L	U	11/10/97
SJS03-GW4S-002P	VCLOW	Bromochloromethane		1	ug/L	U	11/10/97
SJS03-GW4S-002P	VCLOW	Bromodichloromethane		1	ug/L	U	11/10/97
SJS03-GW4S-002P	VCLOW	Bromoform		1	ug/L	U	11/10/97
SJS03-GW4S-002P	VCLOW	Bromomethane		1	ug/L	U	11/10/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS03-GW4S-002P	VCLOW	Carbon Disulfide		1	ug/L	U	11/10/97
SJS03-GW4S-002P	VCLOW	Carbon Tetrachloride		1	ug/L	U	11/10/97
SJS03-GW4S-002P	VCLOW	Chlorobenzene		1	ug/L	U	11/10/97
SJS03-GW4S-002P	VCLOW	Chloroethane		1	ug/L	U	11/10/97
SJS03-GW4S-002P	VCLOW	Chloroform		1	ug/L	U	11/10/97
SJS03-GW4S-002P	VCLOW	Chloromethane		1	ug/L	U	11/10/97
SJS03-GW4S-002P	VCLOW	cis-1,2-Dichloroethene		1	ug/L	U	11/10/97
SJS03-GW4S-002P	VCLOW	cis-1,3-Dichloropropene		1	ug/L	U	11/10/97
SJS03-GW4S-002P	VCLOW	Dibromochloromethane		1	ug/L	U	11/10/97
SJS03-GW4S-002P	VCLOW	Ethylbenzene		1	ug/L	U	11/10/97
SJS03-GW4S-002P	VCLOW	Methylene Chloride	2	2	ug/L	B	11/10/97
SJS03-GW4S-002P	VCLOW	Styrene		1	ug/L	U	11/10/97
SJS03-GW4S-002P	VCLOW	Tetrachloroethene		1	ug/L	U	11/10/97
SJS03-GW4S-002P	VCLOW	Toluene		1	ug/L	U	11/10/97
SJS03-GW4S-002P	VCLOW	Total Xylenes		1	ug/L	U	11/10/97
SJS03-GW4S-002P	VCLOW	Trans-1,2-Dichloroethene		1	ug/L	U	11/10/97
SJS03-GW4S-002P	VCLOW	trans-1,3-Dichloropropene		1	ug/L	U	11/10/97
SJS03-GW4S-002P	VCLOW	Trichloroethene		1	ug/L	U	11/10/97
SJS03-GW4S-002P	VCLOW	Vinyl Chloride		1	ug/L	U	11/10/97
SJS04-GW1D-002	CTOTP	Total Phosphorous (as P)	0.397	0.05	mg/L		11/13/97
SJS04-GW1D-002	MCYAN	Aluminum	39.2	29	ug/L	B	11/24/97
SJS04-GW1D-002	MCYAN	Antimony		1.7	ug/L	U	11/17/97
SJS04-GW1D-002	MCYAN	Arsenic		3.2	ug/L	U	11/17/97
SJS04-GW1D-002	MCYAN	Barium	404	1	ug/L		11/24/97
SJS04-GW1D-002	MCYAN	Beryllium	0.77	1	ug/L	B	11/24/97
SJS04-GW1D-002	MCYAN	Cadmium		0.4	ug/L	U	11/17/97
SJS04-GW1D-002	MCYAN	Calcium	218000	46	ug/L		11/24/97
SJS04-GW1D-002	MCYAN	Chromium	5	4	ug/L	L	11/24/97
SJS04-GW1D-002	MCYAN	Cobalt		6	ug/L	U	11/24/97
SJS04-GW1D-002	MCYAN	Copper		5.8	ug/L	UL	11/24/97
SJS04-GW1D-002	MCYAN	Cyanide		5	ug/L	U	11/7/97
SJS04-GW1D-002	MCYAN	Iron	38100	5	ug/L		11/24/97
SJS04-GW1D-002	MCYAN	Lead		1.3	ug/L	U	11/17/97
SJS04-GW1D-002	MCYAN	Magnesium	115000	45	ug/L		11/24/97
SJS04-GW1D-002	MCYAN	Manganese	8880	1	ug/L		11/24/97
SJS04-GW1D-002	MCYAN	Mercury		0.13	ug/L	U	11/13/97
SJS04-GW1D-002	MCYAN	Nickel		6.3	ug/L	U	11/24/97
SJS04-GW1D-002	MCYAN	Potassium	24900	97	ug/L		11/24/97
SJS04-GW1D-002	MCYAN	Selenium		3.3	ug/L	U	11/17/97
SJS04-GW1D-002	MCYAN	Silver	3	3	ug/L	B	11/17/97
SJS04-GW1D-002	MCYAN	Sodium	495000	28	ug/L		11/26/97
SJS04-GW1D-002	MCYAN	Thallium		1.5	ug/L	U	11/17/97
SJS04-GW1D-002	MCYAN	Vanadium		6.8	ug/L	U	11/24/97
SJS04-GW1D-002	MCYAN	Zinc	10.1	3	ug/L	B	11/24/97
SJS04-GW1D-002	PSPCB	4,4'-DDD		0.1	ug/L	U	11/21/97
SJS04-GW1D-002	PSPCB	4,4'-DDE		0.1	ug/L	U	11/21/97
SJS04-GW1D-002	PSPCB	4,4'-DDT		0.1	ug/L	U	11/21/97
SJS04-GW1D-002	PSPCB	Aldrin		0.05	ug/L	U	11/21/97
SJS04-GW1D-002	PSPCB	alpha-BHC		0.05	ug/L	U	11/21/97
SJS04-GW1D-002	PSPCB	alpha-Chlordane		0.05	ug/L	U	11/21/97
SJS04-GW1D-002	PSPCB	Aroclor-1016		1	ug/L	U	11/21/97
SJS04-GW1D-002	PSPCB	Aroclor-1221		2	ug/L	U	11/21/97
SJS04-GW1D-002	PSPCB	Aroclor-1232		1	ug/L	U	11/21/97
SJS04-GW1D-002	PSPCB	Aroclor-1242		1	ug/L	U	11/21/97
SJS04-GW1D-002	PSPCB	Aroclor-1248		1	ug/L	U	11/21/97
SJS04-GW1D-002	PSPCB	Aroclor-1254		1	ug/L	U	11/21/97
SJS04-GW1D-002	PSPCB	Aroclor-1260		1	ug/L	U	11/21/97
SJS04-GW1D-002	PSPCB	beta-BHC		0.05	ug/L	U	11/21/97
SJS04-GW1D-002	PSPCB	delta-BHC		0.05	ug/L	U	11/21/97
SJS04-GW1D-002	PSPCB	Dieldrin		0.1	ug/L	U	11/21/97
SJS04-GW1D-002	PSPCB	Endosulfan I		0.05	ug/L	U	11/21/97
SJS04-GW1D-002	PSPCB	Endosulfan II		0.1	ug/L	U	11/21/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS04-GW1D-002	PSPCB	Endosulfan Sulfate		0.1	ug/L	U	11/21/97
SJS04-GW1D-002	PSPCB	Endrin		0.1	ug/L	U	11/21/97
SJS04-GW1D-002	PSPCB	Endrin Aldehyde		0.1	ug/L	U	11/21/97
SJS04-GW1D-002	PSPCB	Endrin Ketone		0.1	ug/L	U	11/21/97
SJS04-GW1D-002	PSPCB	gamma-BHC		0.05	ug/L	U	11/21/97
SJS04-GW1D-002	PSPCB	gamma-Chlordane		0.05	ug/L	U	11/21/97
SJS04-GW1D-002	PSPCB	Heptachlor		0.05	ug/L	U	11/21/97
SJS04-GW1D-002	PSPCB	Heptachlor Epoxide		0.05	ug/L	U	11/21/97
SJS04-GW1D-002	PSPCB	Methoxychlor		0.5	ug/L	U	11/21/97
SJS04-GW1D-002	PSPCB	Toxaphene		5	ug/L	U	11/21/97
SJS04-GW1D-002	SVTCL	1,2,4-Trichlorobenzene		10	ug/L	U	11/14/97
SJS04-GW1D-002	SVTCL	1,2-Dichlorobenzene		10	ug/L	U	11/14/97
SJS04-GW1D-002	SVTCL	1,3-Dichlorobenzene		10	ug/L	U	11/14/97
SJS04-GW1D-002	SVTCL	1,4-Dichlorobenzene		10	ug/L	U	11/14/97
SJS04-GW1D-002	SVTCL	2,2'-oxybis(1-Chloropropan		10	ug/L	U	11/14/97
SJS04-GW1D-002	SVTCL	2,4,5-Trichlorophenol		25	ug/L	U	11/14/97
SJS04-GW1D-002	SVTCL	2,4,6-Trichlorophenol		10	ug/L	U	11/14/97
SJS04-GW1D-002	SVTCL	2,4-Dichlorophenol		10	ug/L	U	11/14/97
SJS04-GW1D-002	SVTCL	2,4-Dimethylphenol		10	ug/L	U	11/14/97
SJS04-GW1D-002	SVTCL	2,4-Dinitrophenol		25	ug/L	U	11/14/97
SJS04-GW1D-002	SVTCL	2,4-Dinitrotoluene		10	ug/L	U	11/14/97
SJS04-GW1D-002	SVTCL	2,6-Dinitrotoluene		10	ug/L	U	11/14/97
SJS04-GW1D-002	SVTCL	2-Chloronaphthalene		10	ug/L	U	11/14/97
SJS04-GW1D-002	SVTCL	2-Chlorophenol		10	ug/L	U	11/14/97
SJS04-GW1D-002	SVTCL	2-Methylnaphthalene		10	ug/L	U	11/14/97
SJS04-GW1D-002	SVTCL	2-Methylphenol		10	ug/L	U	11/14/97
SJS04-GW1D-002	SVTCL	2-Nitroaniline		25	ug/L	U	11/14/97
SJS04-GW1D-002	SVTCL	2-Nitrophenol		10	ug/L	U	11/14/97
SJS04-GW1D-002	SVTCL	3,3'-Dichlorobenzidine		10	ug/L	U	11/14/97
SJS04-GW1D-002	SVTCL	3-Nitroaniline		25	ug/L	U	11/14/97
SJS04-GW1D-002	SVTCL	4,6-Dinitro-2-Methylphenol		25	ug/L	U	11/14/97
SJS04-GW1D-002	SVTCL	4-Bromophenol-phenyleth		10	ug/L	U	11/14/97
SJS04-GW1D-002	SVTCL	4-Chloro-3-Methylphenol		10	ug/L	U	11/14/97
SJS04-GW1D-002	SVTCL	4-Chloroaniline		10	ug/L	U	11/14/97
SJS04-GW1D-002	SVTCL	4-Chlorophenyl-phenyleth		10	ug/L	U	11/14/97
SJS04-GW1D-002	SVTCL	4-Methylphenol		10	ug/L	U	11/14/97
SJS04-GW1D-002	SVTCL	4-Nitroaniline		25	ug/L	U	11/14/97
SJS04-GW1D-002	SVTCL	4-Nitrophenol		25	ug/L	U	11/14/97
SJS04-GW1D-002	SVTCL	Acenaphthene		10	ug/L	U	11/14/97
SJS04-GW1D-002	SVTCL	Acenaphthylene		10	ug/L	U	11/14/97
SJS04-GW1D-002	SVTCL	Anthracene		10	ug/L	U	11/14/97
SJS04-GW1D-002	SVTCL	Benzo(a)anthracene		10	ug/L	U	11/14/97
SJS04-GW1D-002	SVTCL	Benzo(a)pyrene		10	ug/L	U	11/14/97
SJS04-GW1D-002	SVTCL	Benzo(b)fluoranthene		10	ug/L	U	11/14/97
SJS04-GW1D-002	SVTCL	Benzo(g,h,i)perylene		10	ug/L	U	11/14/97
SJS04-GW1D-002	SVTCL	Benzo(k)fluoranthene		10	ug/L	U	11/14/97
SJS04-GW1D-002	SVTCL	bis(2-Chloroethoxy)metha		10	ug/L	U	11/14/97
SJS04-GW1D-002	SVTCL	bis(2-chloroethyl)ether		10	ug/L	U	11/14/97
SJS04-GW1D-002	SVTCL	bis(2-Ethylhexyl)phthalate		10	ug/L	U	11/14/97
SJS04-GW1D-002	SVTCL	Butylbenzylphthalate		10	ug/L	U	11/14/97
SJS04-GW1D-002	SVTCL	Carbazole		10	ug/L	U	11/14/97
SJS04-GW1D-002	SVTCL	Chrysene		10	ug/L	U	11/14/97
SJS04-GW1D-002	SVTCL	Di-n-butylphthalate		10	ug/L	U	11/14/97
SJS04-GW1D-002	SVTCL	Di-n-Octyl Phthalate		10	ug/L	U	11/14/97
SJS04-GW1D-002	SVTCL	Dibenzo(a,h)anthracene		10	ug/L	U	11/14/97
SJS04-GW1D-002	SVTCL	Dibenzofuran		10	ug/L	U	11/14/97
SJS04-GW1D-002	SVTCL	Diethylphthalate		10	ug/L	U	11/14/97
SJS04-GW1D-002	SVTCL	Dimethyl Phthalate		10	ug/L	U	11/14/97
SJS04-GW1D-002	SVTCL	Fluoranthene		10	ug/L	U	11/14/97
SJS04-GW1D-002	SVTCL	Fluorene		10	ug/L	U	11/14/97
SJS04-GW1D-002	SVTCL	Hexachlorobenzene		10	ug/L	U	11/14/97
SJS04-GW1D-002	SVTCL	Hexachlorobutadiene		10	ug/L	U	11/14/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS04-GW1D-002	SVTCL	Hexachlorocyclopentadie		10	ug/L	U	11/14/97
SJS04-GW1D-002	SVTCL	Hexachloroethane		10	ug/L	U	11/14/97
SJS04-GW1D-002	SVTCL	Indeno(1,2,3-cd)pyrene		10	ug/L	U	11/14/97
SJS04-GW1D-002	SVTCL	Isophorone		10	ug/L	U	11/14/97
SJS04-GW1D-002	SVTCL	N-Nitroso-Di-n-Propylamine		10	ug/L	U	11/14/97
SJS04-GW1D-002	SVTCL	N-Nitrosodiphenylamine		10	ug/L	U	11/14/97
SJS04-GW1D-002	SVTCL	Naphthalene		10	ug/L	U	11/14/97
SJS04-GW1D-002	SVTCL	Nitrobenzene		10	ug/L	U	11/14/97
SJS04-GW1D-002	SVTCL	Pentachlorophenol		25	ug/L	U	11/14/97
SJS04-GW1D-002	SVTCL	Phenanthrene		10	ug/L	U	11/14/97
SJS04-GW1D-002	SVTCL	Phenol		10	ug/L	U	11/14/97
SJS04-GW1D-002	SVTCL	Pyrene		10	ug/L	U	11/14/97
SJS04-GW1D-002	VCLOW	1,1,1-Trichloroethane		1	ug/L	U	11/9/97
SJS04-GW1D-002	VCLOW	1,1,2,2-Tetrachloroethane		1	ug/L	U	11/9/97
SJS04-GW1D-002	VCLOW	1,1,2-Trichloroethane		1	ug/L	U	11/9/97
SJS04-GW1D-002	VCLOW	1,1-Dichloroethane		1	ug/L	U	11/9/97
SJS04-GW1D-002	VCLOW	1,1-Dichloroethene		1	ug/L	U	11/9/97
SJS04-GW1D-002	VCLOW	1,2,4-Trichlorobenzene		1	ug/L	U	11/9/97
SJS04-GW1D-002	VCLOW	1,2-Dibromo-3-chloropropa		1	ug/L	U	11/9/97
SJS04-GW1D-002	VCLOW	1,2-Dibromoethane		1	ug/L	U	11/9/97
SJS04-GW1D-002	VCLOW	1,2-Dichlorobenzene		1	ug/L	U	11/9/97
SJS04-GW1D-002	VCLOW	1,2-Dichloroethane		1	ug/L	U	11/9/97
SJS04-GW1D-002	VCLOW	1,2-Dichloropropane		1	ug/L	U	11/9/97
SJS04-GW1D-002	VCLOW	1,3-Dichlorobenzene		1	ug/L	U	11/9/97
SJS04-GW1D-002	VCLOW	1,4-Dichlorobenzene		1	ug/L	U	11/9/97
SJS04-GW1D-002	VCLOW	2-Hexanone		5	ug/L	U	11/9/97
SJS04-GW1D-002	VCLOW	4-Methyl-2-Pentanone		5	ug/L	U	11/9/97
SJS04-GW1D-002	VCLOW	Benzene		1	ug/L	U	11/9/97
SJS04-GW1D-002	VCLOW	Bromochloromethane		1	ug/L	U	11/9/97
SJS04-GW1D-002	VCLOW	Bromodichloromethane		1	ug/L	U	11/9/97
SJS04-GW1D-002	VCLOW	Bromoform		1	ug/L	U	11/9/97
SJS04-GW1D-002	VCLOW	Bromomethane		1	ug/L	U	11/9/97
SJS04-GW1D-002	VCLOW	Carbon Disulfide	0.3	1	ug/L	J	11/9/97
SJS04-GW1D-002	VCLOW	Carbon Tetrachloride		1	ug/L	U	11/9/97
SJS04-GW1D-002	VCLOW	Chlorobenzene		1	ug/L	U	11/9/97
SJS04-GW1D-002	VCLOW	Chloroethane		1	ug/L	U	11/9/97
SJS04-GW1D-002	VCLOW	Chloroform		1	ug/L	U	11/9/97
SJS04-GW1D-002	VCLOW	Chloromethane		1	ug/L	U	11/9/97
SJS04-GW1D-002	VCLOW	cis-1,2-Dichloroethene		1	ug/L	U	11/9/97
SJS04-GW1D-002	VCLOW	cis-1,3-Dichloropropene		1	ug/L	U	11/9/97
SJS04-GW1D-002	VCLOW	Dibromochloromethane		1	ug/L	U	11/9/97
SJS04-GW1D-002	VCLOW	Ethylbenzene		1	ug/L	U	11/9/97
SJS04-GW1D-002	VCLOW	Methylene Chloride	2	1	ug/L	B	11/9/97
SJS04-GW1D-002	VCLOW	Styrene		1	ug/L	U	11/9/97
SJS04-GW1D-002	VCLOW	Tetrachloroethene		1	ug/L	U	11/9/97
SJS04-GW1D-002	VCLOW	Toluene		1	ug/L	U	11/9/97
SJS04-GW1D-002	VCLOW	Total Xylenes		1	ug/L	U	11/9/97
SJS04-GW1D-002	VCLOW	Trans-1,2-Dichloroethene		1	ug/L	U	11/9/97
SJS04-GW1D-002	VCLOW	trans-1,3-Dichloropropene		1	ug/L	U	11/9/97
SJS04-GW1D-002	VCLOW	Trichloroethene		1	ug/L	U	11/9/97
SJS04-GW1D-002	VCLOW	Vinyl Chloride		1	ug/L	U	11/9/97
SJS04-GW1D-002F	METAL	Aluminum		38.1	ug/L	U	11/24/97
SJS04-GW1D-002F	METAL	Antimony		1.7	ug/L	U	11/17/97
SJS04-GW1D-002F	METAL	Arsenic		3.2	ug/L	U	11/17/97
SJS04-GW1D-002F	METAL	Barium	391	1	ug/L		11/24/97
SJS04-GW1D-002F	METAL	Beryllium	0.77	1	ug/L	B	11/24/97
SJS04-GW1D-002F	METAL	Cadmium		0.4	ug/L	U	11/17/97
SJS04-GW1D-002F	METAL	Calcium	210000	46	ug/L		11/24/97
SJS04-GW1D-002F	METAL	Chromium		4.6	ug/L	UL	11/24/97
SJS04-GW1D-002F	METAL	Cobalt		6	ug/L	U	11/24/97
SJS04-GW1D-002F	METAL	Copper		5.8	ug/L	UL	11/24/97
SJS04-GW1D-002F	METAL	Iron	36400	5	ug/L		11/24/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS04-GW1D-002F	METAL	Lead	1.3	1	ug/L	J	11/17/97
SJS04-GW1D-002F	METAL	Magnesium	111000	45	ug/L		11/24/97
SJS04-GW1D-002F	METAL	Manganese	8530	1	ug/L		11/24/97
SJS04-GW1D-002F	METAL	Mercury		0.13	ug/L	U	11/13/97
SJS04-GW1D-002F	METAL	Nickel		6.3	ug/L	U	11/24/97
SJS04-GW1D-002F	METAL	Potassium	24600	97	ug/L		11/24/97
SJS04-GW1D-002F	METAL	Selenium		3.3	ug/L	U	11/17/97
SJS04-GW1D-002F	METAL	Silver	4.3	3	ug/L	J	11/17/97
SJS04-GW1D-002F	METAL	Sodium	481000	28	ug/L		11/26/97
SJS04-GW1D-002F	METAL	Thallium		1.5	ug/L	U	11/17/97
SJS04-GW1D-002F	METAL	Vanadium		6.8	ug/L	U	11/24/97
SJS04-GW1D-002F	METAL	Zinc	8.7	3	ug/L	B	11/24/97
SJS04-GW1S-002	CTOTP	Total Phosphorous (as P)	0.307	0.05	mg/L		11/13/97
SJS04-GW1S-002	MCYAN	Aluminum	349	29	ug/L		11/24/97
SJS04-GW1S-002	MCYAN	Antimony		1.7	ug/L	U	11/17/97
SJS04-GW1S-002	MCYAN	Arsenic		3.2	ug/L	U	11/17/97
SJS04-GW1S-002	MCYAN	Barium	22.4	1	ug/L	B	11/24/97
SJS04-GW1S-002	MCYAN	Beryllium	0.77	1	ug/L	B	11/24/97
SJS04-GW1S-002	MCYAN	Cadmium		0.4	ug/L	U	11/17/97
SJS04-GW1S-002	MCYAN	Calcium	116000	46	ug/L		11/24/97
SJS04-GW1S-002	MCYAN	Chromium		4.6	ug/L	UL	11/24/97
SJS04-GW1S-002	MCYAN	Cobalt	20	3	ug/L	J	11/24/97
SJS04-GW1S-002	MCYAN	Copper		5.8	ug/L	UL	11/24/97
SJS04-GW1S-002	MCYAN	Cyanide		5	ug/L	U	11/7/97
SJS04-GW1S-002	MCYAN	Iron	84000	5	ug/L		11/24/97
SJS04-GW1S-002	MCYAN	Lead	2.6	1	ug/L	J	11/17/97
SJS04-GW1S-002	MCYAN	Magnesium	115000	45	ug/L		11/24/97
SJS04-GW1S-002	MCYAN	Manganese	3590	1	ug/L		11/24/97
SJS04-GW1S-002	MCYAN	Mercury		0.13	ug/L	U	11/13/97
SJS04-GW1S-002	MCYAN	Nickel	28.3	4	ug/L	J	11/24/97
SJS04-GW1S-002	MCYAN	Potassium	43800	97	ug/L		11/24/97
SJS04-GW1S-002	MCYAN	Selenium		3.3	ug/L	U	11/17/97
SJS04-GW1S-002	MCYAN	Silver	3.6	3	ug/L	B	11/17/97
SJS04-GW1S-002	MCYAN	Sodium	274000	28	ug/L		11/24/97
SJS04-GW1S-002	MCYAN	Thallium		1.5	ug/L	U	11/17/97
SJS04-GW1S-002	MCYAN	Vanadium		6.8	ug/L	U	11/24/97
SJS04-GW1S-002	MCYAN	Zinc	19.7	3	ug/L	B	11/24/97
SJS04-GW1S-002	PSPCB	4,4'-DDD		0.1	ug/L	U	11/20/97
SJS04-GW1S-002	PSPCB	4,4'-DDE		0.1	ug/L	U	11/20/97
SJS04-GW1S-002	PSPCB	4,4'-DDT		0.1	ug/L	U	11/20/97
SJS04-GW1S-002	PSPCB	Aldrin		0.05	ug/L	U	11/20/97
SJS04-GW1S-002	PSPCB	alpha-BHC		0.05	ug/L	U	11/20/97
SJS04-GW1S-002	PSPCB	alpha-Chlordane		0.05	ug/L	U	11/20/97
SJS04-GW1S-002	PSPCB	Aroclor-1016		1	ug/L	U	11/20/97
SJS04-GW1S-002	PSPCB	Aroclor-1221		2	ug/L	U	11/20/97
SJS04-GW1S-002	PSPCB	Aroclor-1232		1	ug/L	U	11/20/97
SJS04-GW1S-002	PSPCB	Aroclor-1242		1	ug/L	U	11/20/97
SJS04-GW1S-002	PSPCB	Aroclor-1248		1	ug/L	U	11/20/97
SJS04-GW1S-002	PSPCB	Aroclor-1254		1	ug/L	U	11/20/97
SJS04-GW1S-002	PSPCB	Aroclor-1260		1	ug/L	U	11/20/97
SJS04-GW1S-002	PSPCB	beta-BHC		0.05	ug/L	U	11/20/97
SJS04-GW1S-002	PSPCB	delta-BHC		0.05	ug/L	U	11/20/97
SJS04-GW1S-002	PSPCB	Dieldrin		0.1	ug/L	U	11/20/97
SJS04-GW1S-002	PSPCB	Endosulfan I		0.05	ug/L	U	11/20/97
SJS04-GW1S-002	PSPCB	Endosulfan II		0.1	ug/L	U	11/20/97
SJS04-GW1S-002	PSPCB	Endosulfan Sulfate		0.1	ug/L	U	11/20/97
SJS04-GW1S-002	PSPCB	Endrin		0.1	ug/L	U	11/20/97
SJS04-GW1S-002	PSPCB	Endrin Aldehyde		0.1	ug/L	U	11/20/97
SJS04-GW1S-002	PSPCB	Endrin Ketone		0.1	ug/L	U	11/20/97
SJS04-GW1S-002	PSPCB	gamma-BHC		0.05	ug/L	U	11/20/97
SJS04-GW1S-002	PSPCB	gamma-Chlordane		0.05	ug/L	U	11/20/97
SJS04-GW1S-002	PSPCB	Heptachlor		0.05	ug/L	U	11/20/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS04-GW1S-002	PSPCB	Heptachlor Epoxide		0.05	ug/L	U	11/20/97
SJS04-GW1S-002	PSPCB	Methoxychlor		0.5	ug/L	U	11/20/97
SJS04-GW1S-002	PSPCB	Toxaphene		5	ug/L	U	11/20/97
SJS04-GW1S-002	SVTCL	1,2,4-Trichlorobenzene		10	ug/L	U	11/16/97
SJS04-GW1S-002	SVTCL	1,2-Dichlorobenzene		10	ug/L	U	11/16/97
SJS04-GW1S-002	SVTCL	1,3-Dichlorobenzene		10	ug/L	U	11/16/97
SJS04-GW1S-002	SVTCL	1,4-Dichlorobenzene		10	ug/L	U	11/16/97
SJS04-GW1S-002	SVTCL	2,2'-oxybis(1-Chloropropan		10	ug/L	U	11/16/97
SJS04-GW1S-002	SVTCL	2,4,5-Trichlorophenol		25	ug/L	U	11/16/97
SJS04-GW1S-002	SVTCL	2,4,6-Trichlorophenol		10	ug/L	U	11/16/97
SJS04-GW1S-002	SVTCL	2,4-Dichlorophenol		10	ug/L	U	11/16/97
SJS04-GW1S-002	SVTCL	2,4-Dimethylphenol		10	ug/L	U	11/16/97
SJS04-GW1S-002	SVTCL	2,4-Dinitrophenol		25	ug/L	U	11/16/97
SJS04-GW1S-002	SVTCL	2,4-Dinitrotoluene		10	ug/L	U	11/16/97
SJS04-GW1S-002	SVTCL	2,6-Dinitrotoluene		10	ug/L	U	11/16/97
SJS04-GW1S-002	SVTCL	2-Chloronaphthalene		10	ug/L	U	11/16/97
SJS04-GW1S-002	SVTCL	2-Chlorophenol		10	ug/L	U	11/16/97
SJS04-GW1S-002	SVTCL	2-Methylnaphthalene		10	ug/L	U	11/16/97
SJS04-GW1S-002	SVTCL	2-Methylphenol		10	ug/L	U	11/16/97
SJS04-GW1S-002	SVTCL	2-Nitroaniline		25	ug/L	U	11/16/97
SJS04-GW1S-002	SVTCL	2-Nitrophenol		10	ug/L	U	11/16/97
SJS04-GW1S-002	SVTCL	3,3'-Dichlorobenzidine		10	ug/L	U	11/16/97
SJS04-GW1S-002	SVTCL	3-Nitroaniline		25	ug/L	U	11/16/97
SJS04-GW1S-002	SVTCL	4,6-Dinitro-2-Methylphenol		25	ug/L	U	11/16/97
SJS04-GW1S-002	SVTCL	4-Bromophenol-phenyleth		10	ug/L	U	11/16/97
SJS04-GW1S-002	SVTCL	4-Chloro-3-Methylphenol		10	ug/L	U	11/16/97
SJS04-GW1S-002	SVTCL	4-Chloroaniline		10	ug/L	U	11/16/97
SJS04-GW1S-002	SVTCL	4-Chlorophenyl-phenyleth		10	ug/L	U	11/16/97
SJS04-GW1S-002	SVTCL	4-Methylphenol		10	ug/L	U	11/16/97
SJS04-GW1S-002	SVTCL	4-Nitroaniline		25	ug/L	U	11/16/97
SJS04-GW1S-002	SVTCL	4-Nitrophenol		25	ug/L	U	11/16/97
SJS04-GW1S-002	SVTCL	Acenaphthene	5	10	ug/L	J	11/16/97
SJS04-GW1S-002	SVTCL	Acenaphthylene		10	ug/L	U	11/16/97
SJS04-GW1S-002	SVTCL	Anthracene		10	ug/L	U	11/16/97
SJS04-GW1S-002	SVTCL	Benzo(a)anthracene		10	ug/L	U	11/16/97
SJS04-GW1S-002	SVTCL	Benzo(a)pyrene		10	ug/L	U	11/16/97
SJS04-GW1S-002	SVTCL	Benzo(b)fluoranthene		10	ug/L	U	11/16/97
SJS04-GW1S-002	SVTCL	Benzo(g,h,i)perylene		10	ug/L	U	11/16/97
SJS04-GW1S-002	SVTCL	Benzo(k)fluoranthene		10	ug/L	U	11/16/97
SJS04-GW1S-002	SVTCL	bis(2-Chloroethoxy)metha		10	ug/L	U	11/16/97
SJS04-GW1S-002	SVTCL	bis(2-chloroethyl)ether		10	ug/L	U	11/16/97
SJS04-GW1S-002	SVTCL	bis(2-Ethylhexyl)phthalate		10	ug/L	U	11/16/97
SJS04-GW1S-002	SVTCL	Butylbenzylphthalate		10	ug/L	U	11/16/97
SJS04-GW1S-002	SVTCL	Carbazole		10	ug/L	U	11/16/97
SJS04-GW1S-002	SVTCL	Chrysene		10	ug/L	U	11/16/97
SJS04-GW1S-002	SVTCL	Di-n-butylphthalate		10	ug/L	U	11/16/97
SJS04-GW1S-002	SVTCL	Di-n-Octyl Phthalate		10	ug/L	U	11/16/97
SJS04-GW1S-002	SVTCL	Dibenzo(a,h)anthracene		10	ug/L	U	11/16/97
SJS04-GW1S-002	SVTCL	Dibenzofuran	2	10	ug/L	J	11/16/97
SJS04-GW1S-002	SVTCL	Diethylphthalate		10	ug/L	U	11/16/97
SJS04-GW1S-002	SVTCL	Dimethyl Phthalate		10	ug/L	U	11/16/97
SJS04-GW1S-002	SVTCL	Fluoranthene		10	ug/L	U	11/16/97
SJS04-GW1S-002	SVTCL	Fluorene		10	ug/L	U	11/16/97
SJS04-GW1S-002	SVTCL	Hexachlorobenzene		10	ug/L	U	11/16/97
SJS04-GW1S-002	SVTCL	Hexachlorobutadiene		10	ug/L	U	11/16/97
SJS04-GW1S-002	SVTCL	Hexachlorocyclopentadie		10	ug/L	U	11/16/97
SJS04-GW1S-002	SVTCL	Hexachloroethane		10	ug/L	U	11/16/97
SJS04-GW1S-002	SVTCL	Indeno(1,2,3-cd)pyrene		10	ug/L	U	11/16/97
SJS04-GW1S-002	SVTCL	Isophorone		10	ug/L	U	11/16/97
SJS04-GW1S-002	SVTCL	N-Nitroso-Di-n-Propylamine		10	ug/L	U	11/16/97
SJS04-GW1S-002	SVTCL	N-Nitrosodiphenylamine		10	ug/L	U	11/16/97
SJS04-GW1S-002	SVTCL	Naphthalene		10	ug/L	U	11/16/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS04-GW1S-002	SVTCL	Nitrobenzene		10	ug/L	U	11/16/97
SJS04-GW1S-002	SVTCL	Pentachlorophenol		25	ug/L	U	11/16/97
SJS04-GW1S-002	SVTCL	Phenanthrene		10	ug/L	U	11/16/97
SJS04-GW1S-002	SVTCL	Phenol		10	ug/L	U	11/16/97
SJS04-GW1S-002	SVTCL	Pyrene		10	ug/L	U	11/16/97
SJS04-GW1S-002	VCLOW	1,1,1-Trichloroethane		1	ug/L	U	11/9/97
SJS04-GW1S-002	VCLOW	1,1,2,2-Tetrachloroethane		1	ug/L	U	11/9/97
SJS04-GW1S-002	VCLOW	1,1,2-Trichloroethane		1	ug/L	U	11/9/97
SJS04-GW1S-002	VCLOW	1,1-Dichloroethane		1	ug/L	U	11/9/97
SJS04-GW1S-002	VCLOW	1,1-Dichloroethene		1	ug/L	U	11/9/97
SJS04-GW1S-002	VCLOW	1,2,4-Trichlorobenzene		1	ug/L	U	11/9/97
SJS04-GW1S-002	VCLOW	1,2-Dibromo-3-chloropropa		1	ug/L	U	11/9/97
SJS04-GW1S-002	VCLOW	1,2-Dibromoethane		1	ug/L	U	11/9/97
SJS04-GW1S-002	VCLOW	1,2-Dichlorobenzene		1	ug/L	U	11/9/97
SJS04-GW1S-002	VCLOW	1,2-Dichloroethane		1	ug/L	U	11/9/97
SJS04-GW1S-002	VCLOW	1,2-Dichloropropane		1	ug/L	U	11/9/97
SJS04-GW1S-002	VCLOW	1,3-Dichlorobenzene		1	ug/L	U	11/9/97
SJS04-GW1S-002	VCLOW	1,4-Dichlorobenzene		1	ug/L	U	11/9/97
SJS04-GW1S-002	VCLOW	2-Hexanone		5	ug/L	U	11/9/97
SJS04-GW1S-002	VCLOW	4-Methyl-2-Pentanone		5	ug/L	U	11/9/97
SJS04-GW1S-002	VCLOW	Benzene		1	ug/L	U	11/9/97
SJS04-GW1S-002	VCLOW	Bromochloromethane		1	ug/L	U	11/9/97
SJS04-GW1S-002	VCLOW	Bromodichloromethane		1	ug/L	U	11/9/97
SJS04-GW1S-002	VCLOW	Bromoform		1	ug/L	U	11/9/97
SJS04-GW1S-002	VCLOW	Bromomethane		1	ug/L	U	11/9/97
SJS04-GW1S-002	VCLOW	Carbon Disulfide		1	ug/L	U	11/9/97
SJS04-GW1S-002	VCLOW	Carbon Tetrachloride		1	ug/L	U	11/9/97
SJS04-GW1S-002	VCLOW	Chlorobenzene		1	ug/L	U	11/9/97
SJS04-GW1S-002	VCLOW	Chloroethane		1	ug/L	U	11/9/97
SJS04-GW1S-002	VCLOW	Chloroform		1	ug/L	U	11/9/97
SJS04-GW1S-002	VCLOW	Chloromethane		1	ug/L	U	11/9/97
SJS04-GW1S-002	VCLOW	cis-1,2-Dichloroethene		1	ug/L	U	11/9/97
SJS04-GW1S-002	VCLOW	cis-1,3-Dichloropropene		1	ug/L	U	11/9/97
SJS04-GW1S-002	VCLOW	Dibromochloromethane		1	ug/L	U	11/9/97
SJS04-GW1S-002	VCLOW	Ethylbenzene		1	ug/L	U	11/9/97
SJS04-GW1S-002	VCLOW	Methylene Chloride	2	1	ug/L	B	11/9/97
SJS04-GW1S-002	VCLOW	Styrene		1	ug/L	U	11/9/97
SJS04-GW1S-002	VCLOW	Tetrachloroethene		1	ug/L	U	11/9/97
SJS04-GW1S-002	VCLOW	Toluene		1	ug/L	U	11/9/97
SJS04-GW1S-002	VCLOW	Total Xylenes		1	ug/L	U	11/9/97
SJS04-GW1S-002	VCLOW	Trans-1,2-Dichloroethene		1	ug/L	U	11/9/97
SJS04-GW1S-002	VCLOW	trans-1,3-Dichloropropene		1	ug/L	U	11/9/97
SJS04-GW1S-002	VCLOW	Trichloroethene		1	ug/L	U	11/9/97
SJS04-GW1S-002	VCLOW	Vinyl Chloride		1	ug/L	U	11/9/97
SJS04-GW1S-002F	METAL	Aluminum		38.1	ug/L	U	11/24/97
SJS04-GW1S-002F	METAL	Antimony		1.7	ug/L	U	11/17/97
SJS04-GW1S-002F	METAL	Arsenic		3.2	ug/L	U	11/17/97
SJS04-GW1S-002F	METAL	Barium	23.6	1	ug/L	B	11/24/97
SJS04-GW1S-002F	METAL	Beryllium	0.77	1	ug/L	B	11/24/97
SJS04-GW1S-002F	METAL	Cadmium		0.4	ug/L	U	11/17/97
SJS04-GW1S-002F	METAL	Calcium	133000	46	ug/L		11/24/97
SJS04-GW1S-002F	METAL	Chromium		4.6	ug/L	UL	11/24/97
SJS04-GW1S-002F	METAL	Cobalt	17.7	3	ug/L	J	11/24/97
SJS04-GW1S-002F	METAL	Copper		5.8	ug/L	UL	11/24/97
SJS04-GW1S-002F	METAL	Iron	88800	5	ug/L		11/24/97
SJS04-GW1S-002F	METAL	Lead	3	1	ug/L		11/17/97
SJS04-GW1S-002F	METAL	Magnesium	130000	45	ug/L		11/24/97
SJS04-GW1S-002F	METAL	Manganese	3760	1	ug/L		11/24/97
SJS04-GW1S-002F	METAL	Mercury		0.12	ug/L	U	11/13/97
SJS04-GW1S-002F	METAL	Nickel	26.1	4	ug/L	J	11/24/97
SJS04-GW1S-002F	METAL	Potassium	49500	97	ug/L		11/24/97
SJS04-GW1S-002F	METAL	Selenium		6.6	ug/L	U	11/17/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS04-GW1S-002F	METAL	Silver	3.7	3	ug/L	J	11/17/97
SJS04-GW1S-002F	METAL	Sodium	316000	28	ug/L		11/26/97
SJS04-GW1S-002F	METAL	Thallium	2.1	2	ug/L	K	11/17/97
SJS04-GW1S-002F	METAL	Vanadium		6.8	ug/L	U	11/24/97
SJS04-GW1S-002F	METAL	Zinc	9.6	3	ug/L	B	11/24/97
SJS04-GW2S-002	CTOTP	Total Phosphorous (as P)	0.076	0.05	mg/L		11/14/97
SJS04-GW2S-002	MCYAN	Aluminum	2900	29	ug/L		11/25/97
SJS04-GW2S-002	MCYAN	Antimony		1.7	ug/L	U	11/13/97
SJS04-GW2S-002	MCYAN	Arsenic		3.2	ug/L	U	11/13/97
SJS04-GW2S-002	MCYAN	Barium	33	1	ug/L	J	11/25/97
SJS04-GW2S-002	MCYAN	Beryllium	3.3	1	ug/L	J	11/25/97
SJS04-GW2S-002	MCYAN	Cadmium	2.1	0.3	ug/L	J	11/13/97
SJS04-GW2S-002	MCYAN	Calcium	375000	46	ug/L		11/25/97
SJS04-GW2S-002	MCYAN	Chromium		4.6	ug/L	U	11/25/97
SJS04-GW2S-002	MCYAN	Cobalt	88.7	3	ug/L		11/25/97
SJS04-GW2S-002	MCYAN	Copper	8.7	2	ug/L	J	11/25/97
SJS04-GW2S-002	MCYAN	Cyanide		5	ug/L	U	11/7/97
SJS04-GW2S-002	MCYAN	Iron	6490	5	ug/L		11/25/97
SJS04-GW2S-002	MCYAN	Lead		1.3	ug/L	U	11/13/97
SJS04-GW2S-002	MCYAN	Magnesium	83900	45	ug/L		11/25/97
SJS04-GW2S-002	MCYAN	Manganese	3180	1	ug/L		11/25/97
SJS04-GW2S-002	MCYAN	Mercury		0.13	ug/L	U	11/13/97
SJS04-GW2S-002	MCYAN	Nickel	110	4	ug/L		11/25/97
SJS04-GW2S-002	MCYAN	Potassium	22500	97	ug/L		11/25/97
SJS04-GW2S-002	MCYAN	Selenium		3.3	ug/L	U	11/13/97
SJS04-GW2S-002	MCYAN	Silver	1.5	3	ug/L	J	11/13/97
SJS04-GW2S-002	MCYAN	Sodium	43400	28	ug/L		11/25/97
SJS04-GW2S-002	MCYAN	Thallium		1.5	ug/L	U	11/13/97
SJS04-GW2S-002	MCYAN	Vanadium		6.8	ug/L	U	11/25/97
SJS04-GW2S-002	MCYAN	Zinc	542	3	ug/L		11/25/97
SJS04-GW2S-002	PSPCB	4,4'-DDD		0.1	ug/L	U	11/21/97
SJS04-GW2S-002	PSPCB	4,4'-DDE		0.1	ug/L	U	11/21/97
SJS04-GW2S-002	PSPCB	4,4'-DDT		0.1	ug/L	U	11/21/97
SJS04-GW2S-002	PSPCB	Aldrin		0.05	ug/L	U	11/21/97
SJS04-GW2S-002	PSPCB	alpha-BHC		0.05	ug/L	U	11/21/97
SJS04-GW2S-002	PSPCB	alpha-Chlordane		0.05	ug/L	U	11/21/97
SJS04-GW2S-002	PSPCB	Aroclor-1016		1	ug/L	U	11/21/97
SJS04-GW2S-002	PSPCB	Aroclor-1221		2	ug/L	U	11/21/97
SJS04-GW2S-002	PSPCB	Aroclor-1232		1	ug/L	U	11/21/97
SJS04-GW2S-002	PSPCB	Aroclor-1242		1	ug/L	U	11/21/97
SJS04-GW2S-002	PSPCB	Aroclor-1248		1	ug/L	U	11/21/97
SJS04-GW2S-002	PSPCB	Aroclor-1254		1	ug/L	U	11/21/97
SJS04-GW2S-002	PSPCB	Aroclor-1260		1	ug/L	U	11/21/97
SJS04-GW2S-002	PSPCB	beta-BHC		0.05	ug/L	U	11/21/97
SJS04-GW2S-002	PSPCB	delta-BHC		0.05	ug/L	U	11/21/97
SJS04-GW2S-002	PSPCB	Dieldrin		0.1	ug/L	U	11/21/97
SJS04-GW2S-002	PSPCB	Endosulfan I		0.05	ug/L	U	11/21/97
SJS04-GW2S-002	PSPCB	Endosulfan II		0.1	ug/L	U	11/21/97
SJS04-GW2S-002	PSPCB	Endosulfan Sulfate		0.1	ug/L	U	11/21/97
SJS04-GW2S-002	PSPCB	Endrin		0.1	ug/L	U	11/21/97
SJS04-GW2S-002	PSPCB	Endrin Aldehyde		0.1	ug/L	U	11/21/97
SJS04-GW2S-002	PSPCB	Endrin Ketone		0.1	ug/L	U	11/21/97
SJS04-GW2S-002	PSPCB	gamma-BHC		0.05	ug/L	U	11/21/97
SJS04-GW2S-002	PSPCB	gamma-Chlordane		0.05	ug/L	U	11/21/97
SJS04-GW2S-002	PSPCB	Heptachlor		0.05	ug/L	U	11/21/97
SJS04-GW2S-002	PSPCB	Heptachlor Epoxide		0.05	ug/L	U	11/21/97
SJS04-GW2S-002	PSPCB	Methoxychlor		0.5	ug/L	U	11/21/97
SJS04-GW2S-002	PSPCB	Toxaphene		5	ug/L	U	11/21/97
SJS04-GW2S-002	SVTCL	1,2,4-Trichlorobenzene		10	ug/L	U	11/14/97
SJS04-GW2S-002	SVTCL	1,2-Dichlorobenzene		10	ug/L	U	11/14/97
SJS04-GW2S-002	SVTCL	1,3-Dichlorobenzene		10	ug/L	U	11/14/97
SJS04-GW2S-002	SVTCL	1,4-Dichlorobenzene		10	ug/L	U	11/14/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS04-GW2S-002	SVTCL	2,2'-oxybis(1-Chloropropan		10	ug/L	U	11/14/97
SJS04-GW2S-002	SVTCL	2,4,5-Trichlorophenol		25	ug/L	U	11/14/97
SJS04-GW2S-002	SVTCL	2,4,6-Trichlorophenol		10	ug/L	U	11/14/97
SJS04-GW2S-002	SVTCL	2,4-Dichlorophenol		10	ug/L	U	11/14/97
SJS04-GW2S-002	SVTCL	2,4-Dimethylphenol		10	ug/L	U	11/14/97
SJS04-GW2S-002	SVTCL	2,4-Dinitrophenol		25	ug/L	U	11/14/97
SJS04-GW2S-002	SVTCL	2,4-Dinitrotoluene		10	ug/L	U	11/14/97
SJS04-GW2S-002	SVTCL	2,6-Dinitrotoluene		10	ug/L	U	11/14/97
SJS04-GW2S-002	SVTCL	2-Chloronaphthalene		10	ug/L	U	11/14/97
SJS04-GW2S-002	SVTCL	2-Chlorophenol		10	ug/L	U	11/14/97
SJS04-GW2S-002	SVTCL	2-Methylnaphthalene		10	ug/L	U	11/14/97
SJS04-GW2S-002	SVTCL	2-Methylphenol		10	ug/L	U	11/14/97
SJS04-GW2S-002	SVTCL	2-Nitroaniline		25	ug/L	U	11/14/97
SJS04-GW2S-002	SVTCL	2-Nitrophenol		10	ug/L	U	11/14/97
SJS04-GW2S-002	SVTCL	3,3'-Dichlorobenzidine		10	ug/L	U	11/14/97
SJS04-GW2S-002	SVTCL	3-Nitroaniline		25	ug/L	U	11/14/97
SJS04-GW2S-002	SVTCL	4,6-Dinitro-2-Methylphenol		25	ug/L	U	11/14/97
SJS04-GW2S-002	SVTCL	4-Bromophenol-phenyleth		10	ug/L	U	11/14/97
SJS04-GW2S-002	SVTCL	4-Chloro-3-Methylphenol		10	ug/L	U	11/14/97
SJS04-GW2S-002	SVTCL	4-Chloroaniline		10	ug/L	U	11/14/97
SJS04-GW2S-002	SVTCL	4-Chlorophenyl-phenyleth		10	ug/L	U	11/14/97
SJS04-GW2S-002	SVTCL	4-Methylphenol		10	ug/L	U	11/14/97
SJS04-GW2S-002	SVTCL	4-Nitroaniline		25	ug/L	U	11/14/97
SJS04-GW2S-002	SVTCL	4-Nitrophenol		25	ug/L	U	11/14/97
SJS04-GW2S-002	SVTCL	Acenaphthene		10	ug/L	U	11/14/97
SJS04-GW2S-002	SVTCL	Acenaphthylene		10	ug/L	U	11/14/97
SJS04-GW2S-002	SVTCL	Anthracene		10	ug/L	U	11/14/97
SJS04-GW2S-002	SVTCL	Benzo(a)anthracene		10	ug/L	U	11/14/97
SJS04-GW2S-002	SVTCL	Benzo(a)pyrene		10	ug/L	U	11/14/97
SJS04-GW2S-002	SVTCL	Benzo(b)fluoranthene		10	ug/L	U	11/14/97
SJS04-GW2S-002	SVTCL	Benzo(g,h,i)perylene		10	ug/L	U	11/14/97
SJS04-GW2S-002	SVTCL	Benzo(k)fluoranthene		10	ug/L	U	11/14/97
SJS04-GW2S-002	SVTCL	bis(2-Chloroethoxy)metha		10	ug/L	U	11/14/97
SJS04-GW2S-002	SVTCL	bis(2-chloroethyl)ether		10	ug/L	U	11/14/97
SJS04-GW2S-002	SVTCL	bis(2-Ethylhexyl)phthalate		10	ug/L	U	11/14/97
SJS04-GW2S-002	SVTCL	Butylbenzylphthalate		10	ug/L	U	11/14/97
SJS04-GW2S-002	SVTCL	Carbazole		10	ug/L	U	11/14/97
SJS04-GW2S-002	SVTCL	Chrysene		10	ug/L	U	11/14/97
SJS04-GW2S-002	SVTCL	Di-n-butylphthalate		10	ug/L	U	11/14/97
SJS04-GW2S-002	SVTCL	Di-n-Octyl Phthalate		10	ug/L	U	11/14/97
SJS04-GW2S-002	SVTCL	Dibenzo(a,h)anthracene		10	ug/L	U	11/14/97
SJS04-GW2S-002	SVTCL	Dibenzofuran		10	ug/L	U	11/14/97
SJS04-GW2S-002	SVTCL	Diethylphthalate		10	ug/L	U	11/14/97
SJS04-GW2S-002	SVTCL	Dimethyl Phthalate		10	ug/L	U	11/14/97
SJS04-GW2S-002	SVTCL	Fluoranthene		10	ug/L	U	11/14/97
SJS04-GW2S-002	SVTCL	Fluorene		10	ug/L	U	11/14/97
SJS04-GW2S-002	SVTCL	Hexachlorobenzene		10	ug/L	U	11/14/97
SJS04-GW2S-002	SVTCL	Hexachlorobutadiene		10	ug/L	U	11/14/97
SJS04-GW2S-002	SVTCL	Hexachlorocyclopentadie		10	ug/L	U	11/14/97
SJS04-GW2S-002	SVTCL	Hexachloroethane		10	ug/L	U	11/14/97
SJS04-GW2S-002	SVTCL	Indeno(1,2,3-cd)pyrene		10	ug/L	U	11/14/97
SJS04-GW2S-002	SVTCL	Isophorone		10	ug/L	U	11/14/97
SJS04-GW2S-002	SVTCL	N-Nitroso-Di-n-Propylamine		10	ug/L	U	11/14/97
SJS04-GW2S-002	SVTCL	N-Nitrosodiphenylamine		10	ug/L	U	11/14/97
SJS04-GW2S-002	SVTCL	Naphthalene		10	ug/L	U	11/14/97
SJS04-GW2S-002	SVTCL	Nitrobenzene		10	ug/L	U	11/14/97
SJS04-GW2S-002	SVTCL	Pentachlorophenol		25	ug/L	U	11/14/97
SJS04-GW2S-002	SVTCL	Phenanthrene		10	ug/L	U	11/14/97
SJS04-GW2S-002	SVTCL	Phenol		10	ug/L	U	11/14/97
SJS04-GW2S-002	SVTCL	Pyrene		10	ug/L	U	11/14/97
SJS04-GW2S-002	VCLOW	1,1,1-Trichloroethane		1	ug/L	U	11/10/97
SJS04-GW2S-002	VCLOW	1,1,2,2-Tetrachloroethane		1	ug/L	U	11/10/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS04-GW2S-002	VCLOW	1,1,2-Trichloroethane		1	ug/L	U	11/10/97
SJS04-GW2S-002	VCLOW	1,1-Dichloroethane		1	ug/L	U	11/10/97
SJS04-GW2S-002	VCLOW	1,1-Dichloroethene		1	ug/L	U	11/10/97
SJS04-GW2S-002	VCLOW	1,2,4-Trichlorobenzene		1	ug/L	U	11/10/97
SJS04-GW2S-002	VCLOW	1,2-Dibromo-3-chloropropa		1	ug/L	U	11/10/97
SJS04-GW2S-002	VCLOW	1,2-Dibromoethane		1	ug/L	U	11/10/97
SJS04-GW2S-002	VCLOW	1,2-Dichlorobenzene		1	ug/L	U	11/10/97
SJS04-GW2S-002	VCLOW	1,2-Dichloroethane		1	ug/L	U	11/10/97
SJS04-GW2S-002	VCLOW	1,2-Dichloropropane		1	ug/L	U	11/10/97
SJS04-GW2S-002	VCLOW	1,3-Dichlorobenzene		1	ug/L	U	11/10/97
SJS04-GW2S-002	VCLOW	1,4-Dichlorobenzene		1	ug/L	U	11/10/97
SJS04-GW2S-002	VCLOW	2-Hexanone		5	ug/L	U	11/10/97
SJS04-GW2S-002	VCLOW	4-Methyl-2-Pentanone		5	ug/L	U	11/10/97
SJS04-GW2S-002	VCLOW	Acetone		5	ug/L	U	11/10/97
SJS04-GW2S-002	VCLOW	Benzene		1	ug/L	U	11/10/97
SJS04-GW2S-002	VCLOW	Bromochloromethane		1	ug/L	U	11/10/97
SJS04-GW2S-002	VCLOW	Bromodichloromethane		1	ug/L	U	11/10/97
SJS04-GW2S-002	VCLOW	Bromoform		1	ug/L	U	11/10/97
SJS04-GW2S-002	VCLOW	Bromomethane		1	ug/L	U	11/10/97
SJS04-GW2S-002	VCLOW	Carbon Disulfide		1	ug/L	U	11/10/97
SJS04-GW2S-002	VCLOW	Carbon Tetrachloride		1	ug/L	U	11/10/97
SJS04-GW2S-002	VCLOW	Chlorobenzene		1	ug/L	U	11/10/97
SJS04-GW2S-002	VCLOW	Chloroethane		1	ug/L	U	11/10/97
SJS04-GW2S-002	VCLOW	Chloroform		1	ug/L	U	11/10/97
SJS04-GW2S-002	VCLOW	Chloromethane		1	ug/L	U	11/10/97
SJS04-GW2S-002	VCLOW	cis-1,2-Dichloroethene		1	ug/L	U	11/10/97
SJS04-GW2S-002	VCLOW	cis-1,3-Dichloropropene		1	ug/L	U	11/10/97
SJS04-GW2S-002	VCLOW	Dibromochloromethane		1	ug/L	U	11/10/97
SJS04-GW2S-002	VCLOW	Ethylbenzene		1	ug/L	U	11/10/97
SJS04-GW2S-002	VCLOW	Methylene Chloride	3	2	ug/L		11/10/97
SJS04-GW2S-002	VCLOW	Styrene		1	ug/L	U	11/10/97
SJS04-GW2S-002	VCLOW	Tetrachloroethene		1	ug/L	U	11/10/97
SJS04-GW2S-002	VCLOW	Toluene		1	ug/L	U	11/10/97
SJS04-GW2S-002	VCLOW	Total Xylenes		1	ug/L	U	11/10/97
SJS04-GW2S-002	VCLOW	Trans-1,2-Dichloroethene		1	ug/L	U	11/10/97
SJS04-GW2S-002	VCLOW	trans-1,3-Dichloropropene		1	ug/L	U	11/10/97
SJS04-GW2S-002	VCLOW	Trichloroethene		1	ug/L	U	11/10/97
SJS04-GW2S-002	VCLOW	Vinyl Chloride		1	ug/L	U	11/10/97
SJS04-GW2S-002F	METAL	Aluminum	2500	29	ug/L		11/25/97
SJS04-GW2S-002F	METAL	Antimony		1.7	ug/L	U	11/13/97
SJS04-GW2S-002F	METAL	Arsenic		3.2	ug/L	U	11/13/97
SJS04-GW2S-002F	METAL	Barium	34.5	1	ug/L	J	11/25/97
SJS04-GW2S-002F	METAL	Beryllium	3.5	1	ug/L	J	11/25/97
SJS04-GW2S-002F	METAL	Cadmium	2.3	0.3	ug/L	J	11/13/97
SJS04-GW2S-002F	METAL	Calcium	393000	46	ug/L		11/25/97
SJS04-GW2S-002F	METAL	Chromium		4.6	ug/L	U	11/25/97
SJS04-GW2S-002F	METAL	Cobalt	92.6	3	ug/L		11/25/97
SJS04-GW2S-002F	METAL	Copper	8.7	2	ug/L	B	11/25/97
SJS04-GW2S-002F	METAL	Iron	6830	5	ug/L		11/25/97
SJS04-GW2S-002F	METAL	Lead	1.5	1	ug/L	J	11/13/97
SJS04-GW2S-002F	METAL	Magnesium	88500	45	ug/L		11/25/97
SJS04-GW2S-002F	METAL	Manganese	3410	1	ug/L		11/25/97
SJS04-GW2S-002F	METAL	Mercury		0.13	ug/L	U	11/13/97
SJS04-GW2S-002F	METAL	Nickel	110	4	ug/L		11/25/97
SJS04-GW2S-002F	METAL	Potassium	24100	97	ug/L		11/25/97
SJS04-GW2S-002F	METAL	Selenium		3.3	ug/L	U	11/13/97
SJS04-GW2S-002F	METAL	Silver		1.1	ug/L	U	11/13/97
SJS04-GW2S-002F	METAL	Sodium	45500	28	ug/L		11/25/97
SJS04-GW2S-002F	METAL	Thallium		1.5	ug/L	U	11/13/97
SJS04-GW2S-002F	METAL	Vanadium		6.8	ug/L	U	11/25/97
SJS04-GW2S-002F	METAL	Zinc	566	3	ug/L		11/25/97
SJS04-GW3D-002	CTOTP	Total Phosphorous (as P)	0.6	0.13	mg/L		11/13/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS04-GW3D-002	MCYAN	Aluminum		38.1	ug/L	U	11/24/97
SJS04-GW3D-002	MCYAN	Antimony		1.7	ug/L	U	11/17/97
SJS04-GW3D-002	MCYAN	Arsenic	3.8	3	ug/L	J	11/17/97
SJS04-GW3D-002	MCYAN	Barium	56.5	1	ug/L	J	11/24/97
SJS04-GW3D-002	MCYAN	Beryllium	0.77	1	ug/L	B	11/24/97
SJS04-GW3D-002	MCYAN	Cadmium		0.4	ug/L	U	11/17/97
SJS04-GW3D-002	MCYAN	Calcium	80000	46	ug/L		11/24/97
SJS04-GW3D-002	MCYAN	Chromium		4.6	ug/L	UL	11/24/97
SJS04-GW3D-002	MCYAN	Cobalt		6	ug/L	U	11/24/97
SJS04-GW3D-002	MCYAN	Copper		5.8	ug/L	UL	11/24/97
SJS04-GW3D-002	MCYAN	Cyanide		5	ug/L	U	11/7/97
SJS04-GW3D-002	MCYAN	Iron	11800	5	ug/L		11/24/97
SJS04-GW3D-002	MCYAN	Lead		1.3	ug/L	U	11/17/97
SJS04-GW3D-002	MCYAN	Magnesium	32300	45	ug/L		11/24/97
SJS04-GW3D-002	MCYAN	Manganese	2300	1	ug/L		11/24/97
SJS04-GW3D-002	MCYAN	Mercury		0.13	ug/L	U	11/13/97
SJS04-GW3D-002	MCYAN	Nickel		6.3	ug/L	U	11/24/97
SJS04-GW3D-002	MCYAN	Potassium	10000	97	ug/L		11/24/97
SJS04-GW3D-002	MCYAN	Selenium		3.3	ug/L	U	11/17/97
SJS04-GW3D-002	MCYAN	Silver	2.6	3	ug/L	B	11/17/97
SJS04-GW3D-002	MCYAN	Sodium	125000	28	ug/L		11/24/97
SJS04-GW3D-002	MCYAN	Thallium		1.5	ug/L	U	11/17/97
SJS04-GW3D-002	MCYAN	Vanadium		6.8	ug/L	U	11/24/97
SJS04-GW3D-002	MCYAN	Zinc	18.6	3	ug/L	B	11/24/97
SJS04-GW3D-002	PSPCB	4,4'-DDD		0.1	ug/L	U	11/20/97
SJS04-GW3D-002	PSPCB	4,4'-DDE		0.1	ug/L	U	11/20/97
SJS04-GW3D-002	PSPCB	4,4'-DDT		0.1	ug/L	U	11/20/97
SJS04-GW3D-002	PSPCB	Aldrin		0.05	ug/L	U	11/20/97
SJS04-GW3D-002	PSPCB	alpha-BHC		0.05	ug/L	U	11/20/97
SJS04-GW3D-002	PSPCB	alpha-Chlordane		0.05	ug/L	U	11/20/97
SJS04-GW3D-002	PSPCB	Aroclor-1016		1	ug/L	U	11/20/97
SJS04-GW3D-002	PSPCB	Aroclor-1221		2	ug/L	U	11/20/97
SJS04-GW3D-002	PSPCB	Aroclor-1232		1	ug/L	U	11/20/97
SJS04-GW3D-002	PSPCB	Aroclor-1242		1	ug/L	U	11/20/97
SJS04-GW3D-002	PSPCB	Aroclor-1248		1	ug/L	U	11/20/97
SJS04-GW3D-002	PSPCB	Aroclor-1254		1	ug/L	U	11/20/97
SJS04-GW3D-002	PSPCB	Aroclor-1260		1	ug/L	U	11/20/97
SJS04-GW3D-002	PSPCB	beta-BHC		0.05	ug/L	U	11/20/97
SJS04-GW3D-002	PSPCB	delta-BHC		0.05	ug/L	U	11/20/97
SJS04-GW3D-002	PSPCB	Dieldrin		0.1	ug/L	U	11/20/97
SJS04-GW3D-002	PSPCB	Endosulfan I		0.05	ug/L	U	11/20/97
SJS04-GW3D-002	PSPCB	Endosulfan II		0.1	ug/L	U	11/20/97
SJS04-GW3D-002	PSPCB	Endosulfan Sulfate		0.1	ug/L	U	11/20/97
SJS04-GW3D-002	PSPCB	Endrin		0.1	ug/L	U	11/20/97
SJS04-GW3D-002	PSPCB	Endrin Aldehyde		0.1	ug/L	U	11/20/97
SJS04-GW3D-002	PSPCB	Endrin Ketone		0.1	ug/L	U	11/20/97
SJS04-GW3D-002	PSPCB	gamma-BHC		0.05	ug/L	U	11/20/97
SJS04-GW3D-002	PSPCB	gamma-Chlordane		0.05	ug/L	U	11/20/97
SJS04-GW3D-002	PSPCB	Heptachlor		0.05	ug/L	U	11/20/97
SJS04-GW3D-002	PSPCB	Heptachlor Epoxide		0.05	ug/L	U	11/20/97
SJS04-GW3D-002	PSPCB	Methoxychlor		0.5	ug/L	U	11/20/97
SJS04-GW3D-002	PSPCB	Toxaphene		5	ug/L	U	11/20/97
SJS04-GW3D-002	SVTCL	1,2,4-Trichlorobenzene		10	ug/L	U	11/14/97
SJS04-GW3D-002	SVTCL	1,2-Dichlorobenzene		10	ug/L	U	11/14/97
SJS04-GW3D-002	SVTCL	1,3-Dichlorobenzene		10	ug/L	U	11/14/97
SJS04-GW3D-002	SVTCL	1,4-Dichlorobenzene		10	ug/L	U	11/14/97
SJS04-GW3D-002	SVTCL	2,2'-oxybis(1-Chloropropan		10	ug/L	U	11/14/97
SJS04-GW3D-002	SVTCL	2,4,5-Trichlorophenol		25	ug/L	U	11/14/97
SJS04-GW3D-002	SVTCL	2,4,6-Trichlorophenol		10	ug/L	U	11/14/97
SJS04-GW3D-002	SVTCL	2,4-Dichlorophenol		10	ug/L	U	11/14/97
SJS04-GW3D-002	SVTCL	2,4-Dimethylphenol		10	ug/L	U	11/14/97
SJS04-GW3D-002	SVTCL	2,4-Dinitrophenol		25	ug/L	U	11/14/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS04-GW3D-002	SVTCL	2,4-Dinitrotoluene		10	ug/L	U	11/14/97
SJS04-GW3D-002	SVTCL	2,6-Dinitrotoluene		10	ug/L	U	11/14/97
SJS04-GW3D-002	SVTCL	2-Chloronaphthalene		10	ug/L	U	11/14/97
SJS04-GW3D-002	SVTCL	2-Chlorophenol		10	ug/L	U	11/14/97
SJS04-GW3D-002	SVTCL	2-Methylnaphthalene		10	ug/L	U	11/14/97
SJS04-GW3D-002	SVTCL	2-Methylphenol		10	ug/L	U	11/14/97
SJS04-GW3D-002	SVTCL	2-Nitroaniline		25	ug/L	U	11/14/97
SJS04-GW3D-002	SVTCL	2-Nitrophenol		10	ug/L	U	11/14/97
SJS04-GW3D-002	SVTCL	3,3'-Dichlorobenzidine		10	ug/L	U	11/14/97
SJS04-GW3D-002	SVTCL	3-Nitroaniline		25	ug/L	U	11/14/97
SJS04-GW3D-002	SVTCL	4,6-Dinitro-2-Methylphenol		25	ug/L	U	11/14/97
SJS04-GW3D-002	SVTCL	4-Bromophenol-phenyleth		10	ug/L	U	11/14/97
SJS04-GW3D-002	SVTCL	4-Chloro-3-Methylphenol		10	ug/L	U	11/14/97
SJS04-GW3D-002	SVTCL	4-Chloroaniline		10	ug/L	U	11/14/97
SJS04-GW3D-002	SVTCL	4-Chlorophenyl-phenyleth		10	ug/L	U	11/14/97
SJS04-GW3D-002	SVTCL	4-Methylphenol		10	ug/L	U	11/14/97
SJS04-GW3D-002	SVTCL	4-Nitroaniline		25	ug/L	U	11/14/97
SJS04-GW3D-002	SVTCL	4-Nitrophenol		25	ug/L	U	11/14/97
SJS04-GW3D-002	SVTCL	Acenaphthene		10	ug/L	U	11/14/97
SJS04-GW3D-002	SVTCL	Acenaphthylene		10	ug/L	U	11/14/97
SJS04-GW3D-002	SVTCL	Anthracene		10	ug/L	U	11/14/97
SJS04-GW3D-002	SVTCL	Benzo(a)anthracene		10	ug/L	U	11/14/97
SJS04-GW3D-002	SVTCL	Benzo(a)pyrene		10	ug/L	U	11/14/97
SJS04-GW3D-002	SVTCL	Benzo(b)fluoranthene		10	ug/L	U	11/14/97
SJS04-GW3D-002	SVTCL	Benzo(g,h,i)perylene		10	ug/L	U	11/14/97
SJS04-GW3D-002	SVTCL	Benzo(k)fluoranthene		10	ug/L	U	11/14/97
SJS04-GW3D-002	SVTCL	bis(2-Chloroethoxy)metha		10	ug/L	U	11/14/97
SJS04-GW3D-002	SVTCL	bis(2-chloroethyl)ether		10	ug/L	U	11/14/97
SJS04-GW3D-002	SVTCL	bis(2-Ethylhexyl)phthalate	5	7	ug/L	J	11/14/97
SJS04-GW3D-002	SVTCL	Butylbenzylphthalate		10	ug/L	U	11/14/97
SJS04-GW3D-002	SVTCL	Carbazole		10	ug/L	U	11/14/97
SJS04-GW3D-002	SVTCL	Chrysene		10	ug/L	U	11/14/97
SJS04-GW3D-002	SVTCL	Di-n-butylphthalate		10	ug/L	U	11/14/97
SJS04-GW3D-002	SVTCL	Di-n-Octyl Phthalate		10	ug/L	U	11/14/97
SJS04-GW3D-002	SVTCL	Dibenzo(a,h)anthracene		10	ug/L	U	11/14/97
SJS04-GW3D-002	SVTCL	Dibenzofuran		10	ug/L	U	11/14/97
SJS04-GW3D-002	SVTCL	Diethylphthalate		10	ug/L	U	11/14/97
SJS04-GW3D-002	SVTCL	Dimethyl Phthalate		10	ug/L	U	11/14/97
SJS04-GW3D-002	SVTCL	Fluoranthene		10	ug/L	U	11/14/97
SJS04-GW3D-002	SVTCL	Fluorene		10	ug/L	U	11/14/97
SJS04-GW3D-002	SVTCL	Hexachlorobenzene		10	ug/L	U	11/14/97
SJS04-GW3D-002	SVTCL	Hexachlorobutadiene		10	ug/L	U	11/14/97
SJS04-GW3D-002	SVTCL	Hexachlorocyclopentadie		10	ug/L	U	11/14/97
SJS04-GW3D-002	SVTCL	Hexachloroethane		10	ug/L	U	11/14/97
SJS04-GW3D-002	SVTCL	Indeno(1,2,3-cd)pyrene		10	ug/L	U	11/14/97
SJS04-GW3D-002	SVTCL	Isophorone		10	ug/L	U	11/14/97
SJS04-GW3D-002	SVTCL	N-Nitroso-Di-n-Propylamine		10	ug/L	U	11/14/97
SJS04-GW3D-002	SVTCL	N-Nitrosodiphenylamine		10	ug/L	U	11/14/97
SJS04-GW3D-002	SVTCL	Naphthalene		10	ug/L	U	11/14/97
SJS04-GW3D-002	SVTCL	Nitrobenzene		10	ug/L	U	11/14/97
SJS04-GW3D-002	SVTCL	Pentachlorophenol		25	ug/L	U	11/14/97
SJS04-GW3D-002	SVTCL	Phenanthrene		10	ug/L	U	11/14/97
SJS04-GW3D-002	SVTCL	Phenol		10	ug/L	U	11/14/97
SJS04-GW3D-002	SVTCL	Pyrene		10	ug/L	U	11/14/97
SJS04-GW3D-002	VCLOW	1,1,1-Trichloroethane		1	ug/L	U	11/9/97
SJS04-GW3D-002	VCLOW	1,1,2,2-Tetrachloroethane		1	ug/L	U	11/9/97
SJS04-GW3D-002	VCLOW	1,1,2-Trichloroethane		1	ug/L	U	11/9/97
SJS04-GW3D-002	VCLOW	1,1-Dichloroethane		1	ug/L	U	11/9/97
SJS04-GW3D-002	VCLOW	1,1-Dichloroethene		1	ug/L	U	11/9/97
SJS04-GW3D-002	VCLOW	1,2,4-Trichlorobenzene		1	ug/L	U	11/9/97
SJS04-GW3D-002	VCLOW	1,2-Dibromo-3-chloropropa		1	ug/L	U	11/9/97
SJS04-GW3D-002	VCLOW	1,2-Dibromoethane		1	ug/L	U	11/9/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS04-GW3D-002	VCLOW	1,2-Dichlorobenzene		1	ug/L	U	11/9/97
SJS04-GW3D-002	VCLOW	1,2-Dichloroethane		1	ug/L	U	11/9/97
SJS04-GW3D-002	VCLOW	1,2-Dichloropropane		1	ug/L	U	11/9/97
SJS04-GW3D-002	VCLOW	1,3-Dichlorobenzene		1	ug/L	U	11/9/97
SJS04-GW3D-002	VCLOW	1,4-Dichlorobenzene		1	ug/L	U	11/9/97
SJS04-GW3D-002	VCLOW	2-Hexanone		5	ug/L	U	11/9/97
SJS04-GW3D-002	VCLOW	4-Methyl-2-Pentanone		5	ug/L	U	11/9/97
SJS04-GW3D-002	VCLOW	Benzene		1	ug/L	U	11/9/97
SJS04-GW3D-002	VCLOW	Bromochloromethane		1	ug/L	U	11/9/97
SJS04-GW3D-002	VCLOW	Bromodichloromethane		1	ug/L	U	11/9/97
SJS04-GW3D-002	VCLOW	Bromoform		1	ug/L	U	11/9/97
SJS04-GW3D-002	VCLOW	Bromomethane		1	ug/L	U	11/9/97
SJS04-GW3D-002	VCLOW	Carbon Disulfide		1	ug/L	U	11/9/97
SJS04-GW3D-002	VCLOW	Carbon Tetrachloride		1	ug/L	U	11/9/97
SJS04-GW3D-002	VCLOW	Chlorobenzene		1	ug/L	U	11/9/97
SJS04-GW3D-002	VCLOW	Chloroethane		1	ug/L	U	11/9/97
SJS04-GW3D-002	VCLOW	Chloroform		1	ug/L	U	11/9/97
SJS04-GW3D-002	VCLOW	Chloromethane		1	ug/L	U	11/9/97
SJS04-GW3D-002	VCLOW	cis-1,2-Dichloroethene		1	ug/L	U	11/9/97
SJS04-GW3D-002	VCLOW	cis-1,3-Dichloropropene		1	ug/L	U	11/9/97
SJS04-GW3D-002	VCLOW	Dibromochloromethane		1	ug/L	U	11/9/97
SJS04-GW3D-002	VCLOW	Ethylbenzene		1	ug/L	U	11/9/97
SJS04-GW3D-002	VCLOW	Methylene Chloride	2	1	ug/L	B	11/9/97
SJS04-GW3D-002	VCLOW	Styrene		1	ug/L	U	11/9/97
SJS04-GW3D-002	VCLOW	Tetrachloroethene		1	ug/L	U	11/9/97
SJS04-GW3D-002	VCLOW	Toluene		1	ug/L	U	11/9/97
SJS04-GW3D-002	VCLOW	Total Xylenes		1	ug/L	U	11/9/97
SJS04-GW3D-002	VCLOW	Trans-1,2-Dichloroethene		1	ug/L	U	11/9/97
SJS04-GW3D-002	VCLOW	trans-1,3-Dichloropropene		1	ug/L	U	11/9/97
SJS04-GW3D-002	VCLOW	Trichloroethene		1	ug/L	U	11/9/97
SJS04-GW3D-002	VCLOW	Vinyl Chloride		1	ug/L	U	11/9/97
SJS04-GW3D-002F	METAL	Aluminum		38.1	ug/L	U	11/24/97
SJS04-GW3D-002F	METAL	Antimony		1.7	ug/L	U	11/17/97
SJS04-GW3D-002F	METAL	Arsenic		3.2	ug/L	U	11/17/97
SJS04-GW3D-002F	METAL	Barium	57.1	1	ug/L	J	11/24/97
SJS04-GW3D-002F	METAL	Beryllium	0.77	1	ug/L	B	11/24/97
SJS04-GW3D-002F	METAL	Cadmium		0.4	ug/L	U	11/17/97
SJS04-GW3D-002F	METAL	Calcium	75500	46	ug/L		11/24/97
SJS04-GW3D-002F	METAL	Chromium		4.6	ug/L	UL	11/24/97
SJS04-GW3D-002F	METAL	Cobalt		6	ug/L	U	11/24/97
SJS04-GW3D-002F	METAL	Copper		5.8	ug/L	UL	11/24/97
SJS04-GW3D-002F	METAL	Iron	11100	5	ug/L		11/24/97
SJS04-GW3D-002F	METAL	Lead		1.3	ug/L	U	11/17/97
SJS04-GW3D-002F	METAL	Magnesium	30300	45	ug/L		11/24/97
SJS04-GW3D-002F	METAL	Manganese	2170	1	ug/L		11/24/97
SJS04-GW3D-002F	METAL	Mercury		0.13	ug/L	U	11/13/97
SJS04-GW3D-002F	METAL	Nickel		6.3	ug/L	U	11/24/97
SJS04-GW3D-002F	METAL	Potassium	9380	97	ug/L		11/24/97
SJS04-GW3D-002F	METAL	Selenium		3.3	ug/L	U	11/17/97
SJS04-GW3D-002F	METAL	Silver	1.6	3	ug/L	J	11/17/97
SJS04-GW3D-002F	METAL	Sodium	117000	28	ug/L		11/24/97
SJS04-GW3D-002F	METAL	Thallium		1.5	ug/L	U	11/17/97
SJS04-GW3D-002F	METAL	Vanadium		6.8	ug/L	U	11/24/97
SJS04-GW3D-002F	METAL	Zinc	6.4	3	ug/L	B	11/24/97
SJS04-GW3D-002FP	METAL	Aluminum		38.1	ug/L	U	11/24/97
SJS04-GW3D-002FP	METAL	Antimony		1.7	ug/L	U	11/17/97
SJS04-GW3D-002FP	METAL	Arsenic	3.4	3	ug/L	J	11/17/97
SJS04-GW3D-002FP	METAL	Barium	55.1	1	ug/L	J	11/24/97
SJS04-GW3D-002FP	METAL	Beryllium		0.58	ug/L	U	11/24/97
SJS04-GW3D-002FP	METAL	Cadmium		0.4	ug/L	U	11/17/97
SJS04-GW3D-002FP	METAL	Calcium	79800	46	ug/L		11/24/97
SJS04-GW3D-002FP	METAL	Chromium		4.6	ug/L	UL	11/24/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS04-GW3D-002FP	METAL	Cobalt		6	ug/L	U	11/24/97
SJS04-GW3D-002FP	METAL	Copper		5.8	ug/L	UL	11/24/97
SJS04-GW3D-002FP	METAL	Iron	11600	5	ug/L		11/24/97
SJS04-GW3D-002FP	METAL	Lead		1.3	ug/L	U	11/17/97
SJS04-GW3D-002FP	METAL	Magnesium	32000	45	ug/L		11/24/97
SJS04-GW3D-002FP	METAL	Manganese	2280	1	ug/L		11/24/97
SJS04-GW3D-002FP	METAL	Mercury		0.13	ug/L	U	11/13/97
SJS04-GW3D-002FP	METAL	Nickel		6.3	ug/L	U	11/24/97
SJS04-GW3D-002FP	METAL	Potassium	9760	97	ug/L		11/24/97
SJS04-GW3D-002FP	METAL	Selenium		3.3	ug/L	U	11/17/97
SJS04-GW3D-002FP	METAL	Silver	2.3	3	ug/L	J	11/17/97
SJS04-GW3D-002FP	METAL	Sodium	124000	28	ug/L		11/24/97
SJS04-GW3D-002FP	METAL	Thallium		1.5	ug/L	U	11/17/97
SJS04-GW3D-002FP	METAL	Vanadium		6.8	ug/L	U	11/24/97
SJS04-GW3D-002FP	METAL	Zinc		3.9	ug/L	UL	11/24/97
SJS04-GW3D-002P	CTOTP	Total Phosphorous (as P)	0.69	0.13	mg/L		11/13/97
SJS04-GW3D-002P	MCYAN	Aluminum		38.1	ug/L	U	11/24/97
SJS04-GW3D-002P	MCYAN	Antimony		1.7	ug/L	U	11/17/97
SJS04-GW3D-002P	MCYAN	Arsenic		3.2	ug/L	U	11/17/97
SJS04-GW3D-002P	MCYAN	Barium	65	1	ug/L	J	11/24/97
SJS04-GW3D-002P	MCYAN	Beryllium	0.58	1	ug/L	B	11/24/97
SJS04-GW3D-002P	MCYAN	Cadmium		0.4	ug/L	U	11/17/97
SJS04-GW3D-002P	MCYAN	Calcium	86400	46	ug/L		11/24/97
SJS04-GW3D-002P	MCYAN	Chromium		4.6	ug/L	UL	11/24/97
SJS04-GW3D-002P	MCYAN	Cobalt		6	ug/L	U	11/24/97
SJS04-GW3D-002P	MCYAN	Copper		5.8	ug/L	UL	11/24/97
SJS04-GW3D-002P	MCYAN	Cyanide		5	ug/L	U	11/7/97
SJS04-GW3D-002P	MCYAN	Iron	12700	5	ug/L		11/24/97
SJS04-GW3D-002P	MCYAN	Lead		1.3	ug/L	U	11/17/97
SJS04-GW3D-002P	MCYAN	Magnesium	34600	45	ug/L		11/24/97
SJS04-GW3D-002P	MCYAN	Manganese	2490	1	ug/L		11/24/97
SJS04-GW3D-002P	MCYAN	Mercury		0.13	ug/L	U	11/13/97
SJS04-GW3D-002P	MCYAN	Nickel		6.3	ug/L	U	11/24/97
SJS04-GW3D-002P	MCYAN	Potassium	10600	97	ug/L		11/24/97
SJS04-GW3D-002P	MCYAN	Selenium		3.3	ug/L	U	11/17/97
SJS04-GW3D-002P	MCYAN	Silver	2.5	3	ug/L	B	11/17/97
SJS04-GW3D-002P	MCYAN	Sodium	134000	28	ug/L		11/24/97
SJS04-GW3D-002P	MCYAN	Thallium		1.5	ug/L	U	11/17/97
SJS04-GW3D-002P	MCYAN	Vanadium		6.8	ug/L	U	11/24/97
SJS04-GW3D-002P	MCYAN	Zinc	5.6	3	ug/L	B	11/24/97
SJS04-GW3D-002P	PSPCB	4,4'-DDD		0.1	ug/L	U	11/20/97
SJS04-GW3D-002P	PSPCB	4,4'-DDE		0.1	ug/L	U	11/20/97
SJS04-GW3D-002P	PSPCB	4,4'-DDT		0.1	ug/L	U	11/20/97
SJS04-GW3D-002P	PSPCB	Aldrin		0.05	ug/L	U	11/20/97
SJS04-GW3D-002P	PSPCB	alpha-BHC		0.05	ug/L	U	11/20/97
SJS04-GW3D-002P	PSPCB	alpha-Chlordane		0.05	ug/L	U	11/20/97
SJS04-GW3D-002P	PSPCB	Aroclor-1016		1	ug/L	U	11/20/97
SJS04-GW3D-002P	PSPCB	Aroclor-1221		2	ug/L	U	11/20/97
SJS04-GW3D-002P	PSPCB	Aroclor-1232		1	ug/L	U	11/20/97
SJS04-GW3D-002P	PSPCB	Aroclor-1242		1	ug/L	U	11/20/97
SJS04-GW3D-002P	PSPCB	Aroclor-1248		1	ug/L	U	11/20/97
SJS04-GW3D-002P	PSPCB	Aroclor-1254		1	ug/L	U	11/20/97
SJS04-GW3D-002P	PSPCB	Aroclor-1260		1	ug/L	U	11/20/97
SJS04-GW3D-002P	PSPCB	beta-BHC		0.05	ug/L	U	11/20/97
SJS04-GW3D-002P	PSPCB	delta-BHC		0.05	ug/L	U	11/20/97
SJS04-GW3D-002P	PSPCB	Dieldrin		0.1	ug/L	U	11/20/97
SJS04-GW3D-002P	PSPCB	Endosulfan I		0.05	ug/L	U	11/20/97
SJS04-GW3D-002P	PSPCB	Endosulfan II		0.1	ug/L	U	11/20/97
SJS04-GW3D-002P	PSPCB	Endosulfan Sulfate		0.1	ug/L	U	11/20/97
SJS04-GW3D-002P	PSPCB	Endrin		0.1	ug/L	U	11/20/97
SJS04-GW3D-002P	PSPCB	Endrin Aldehyde		0.1	ug/L	U	11/20/97
SJS04-GW3D-002P	PSPCB	Endrin Ketone		0.1	ug/L	U	11/20/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS04-GW3D-002P	PSPCB	gamma-BHC		0.05	ug/L	U	11/20/97
SJS04-GW3D-002P	PSPCB	gamma-Chlordane		0.05	ug/L	U	11/20/97
SJS04-GW3D-002P	PSPCB	Heptachlor		0.05	ug/L	U	11/20/97
SJS04-GW3D-002P	PSPCB	Heptachlor Epoxide		0.05	ug/L	U	11/20/97
SJS04-GW3D-002P	PSPCB	Methoxychlor		0.5	ug/L	U	11/20/97
SJS04-GW3D-002P	PSPCB	Toxaphene		5	ug/L	U	11/20/97
SJS04-GW3D-002P	SVTCL	1,2,4-Trichlorobenzene		10	ug/L	U	11/14/97
SJS04-GW3D-002P	SVTCL	1,2-Dichlorobenzene		10	ug/L	U	11/14/97
SJS04-GW3D-002P	SVTCL	1,3-Dichlorobenzene		10	ug/L	U	11/14/97
SJS04-GW3D-002P	SVTCL	1,4-Dichlorobenzene		10	ug/L	U	11/14/97
SJS04-GW3D-002P	SVTCL	2,2'-oxybis(1-Chloropropan		10	ug/L	U	11/14/97
SJS04-GW3D-002P	SVTCL	2,4,5-Trichlorophenol		25	ug/L	U	11/14/97
SJS04-GW3D-002P	SVTCL	2,4,6-Trichlorophenol		10	ug/L	U	11/14/97
SJS04-GW3D-002P	SVTCL	2,4-Dichlorophenol		10	ug/L	U	11/14/97
SJS04-GW3D-002P	SVTCL	2,4-Dimethylphenol		10	ug/L	U	11/14/97
SJS04-GW3D-002P	SVTCL	2,4-Dinitrophenol		25	ug/L	U	11/14/97
SJS04-GW3D-002P	SVTCL	2,4-Dinitrotoluene		10	ug/L	U	11/14/97
SJS04-GW3D-002P	SVTCL	2,6-Dinitrotoluene		10	ug/L	U	11/14/97
SJS04-GW3D-002P	SVTCL	2-Chloronaphthalene		10	ug/L	U	11/14/97
SJS04-GW3D-002P	SVTCL	2-Chlorophenol		10	ug/L	U	11/14/97
SJS04-GW3D-002P	SVTCL	2-Methylnaphthalene		10	ug/L	U	11/14/97
SJS04-GW3D-002P	SVTCL	2-Methylphenol		10	ug/L	U	11/14/97
SJS04-GW3D-002P	SVTCL	2-Nitroaniline		25	ug/L	U	11/14/97
SJS04-GW3D-002P	SVTCL	2-Nitrophenol		10	ug/L	U	11/14/97
SJS04-GW3D-002P	SVTCL	3,3'-Dichlorobenzidine		10	ug/L	U	11/14/97
SJS04-GW3D-002P	SVTCL	3-Nitroaniline		25	ug/L	U	11/14/97
SJS04-GW3D-002P	SVTCL	4,6-Dinitro-2-Methylphenol		25	ug/L	U	11/14/97
SJS04-GW3D-002P	SVTCL	4-Bromophenol-phenyleth		10	ug/L	U	11/14/97
SJS04-GW3D-002P	SVTCL	4-Chloro-3-Methylphenol		10	ug/L	U	11/14/97
SJS04-GW3D-002P	SVTCL	4-Chloroaniline		10	ug/L	U	11/14/97
SJS04-GW3D-002P	SVTCL	4-Chlorophenyl-phenyleth		10	ug/L	U	11/14/97
SJS04-GW3D-002P	SVTCL	4-Methylphenol		10	ug/L	U	11/14/97
SJS04-GW3D-002P	SVTCL	4-Nitroaniline		25	ug/L	U	11/14/97
SJS04-GW3D-002P	SVTCL	4-Nitrophenol		25	ug/L	U	11/14/97
SJS04-GW3D-002P	SVTCL	Acenaphthene		10	ug/L	U	11/14/97
SJS04-GW3D-002P	SVTCL	Acenaphthylene		10	ug/L	U	11/14/97
SJS04-GW3D-002P	SVTCL	Anthracene		10	ug/L	U	11/14/97
SJS04-GW3D-002P	SVTCL	Benzo(a)anthracene		10	ug/L	U	11/14/97
SJS04-GW3D-002P	SVTCL	Benzo(a)pyrene		10	ug/L	U	11/14/97
SJS04-GW3D-002P	SVTCL	Benzo(b)fluoranthene		10	ug/L	U	11/14/97
SJS04-GW3D-002P	SVTCL	Benzo(g,h,i)perylene		10	ug/L	U	11/14/97
SJS04-GW3D-002P	SVTCL	Benzo(k)fluoranthene		10	ug/L	U	11/14/97
SJS04-GW3D-002P	SVTCL	bis(2-Chloroethoxy)metha		10	ug/L	U	11/14/97
SJS04-GW3D-002P	SVTCL	bis(2-chloroethyl)ether		10	ug/L	U	11/14/97
SJS04-GW3D-002P	SVTCL	bis(2-Ethylhexyl)phthalate		10	ug/L	U	11/14/97
SJS04-GW3D-002P	SVTCL	Butylbenzylphthalate		10	ug/L	U	11/14/97
SJS04-GW3D-002P	SVTCL	Carbazole		10	ug/L	U	11/14/97
SJS04-GW3D-002P	SVTCL	Chrysene		10	ug/L	U	11/14/97
SJS04-GW3D-002P	SVTCL	Di-n-butylphthalate		10	ug/L	U	11/14/97
SJS04-GW3D-002P	SVTCL	Di-n-Octyl Phthalate		10	ug/L	U	11/14/97
SJS04-GW3D-002P	SVTCL	Dibenzo(a,h)anthracene		10	ug/L	U	11/14/97
SJS04-GW3D-002P	SVTCL	Dibenzofuran		10	ug/L	U	11/14/97
SJS04-GW3D-002P	SVTCL	Diethylphthalate		10	ug/L	U	11/14/97
SJS04-GW3D-002P	SVTCL	Dimethyl Phthalate		10	ug/L	U	11/14/97
SJS04-GW3D-002P	SVTCL	Fluoranthene		10	ug/L	U	11/14/97
SJS04-GW3D-002P	SVTCL	Fluorene		10	ug/L	U	11/14/97
SJS04-GW3D-002P	SVTCL	Hexachlorobenzene		10	ug/L	U	11/14/97
SJS04-GW3D-002P	SVTCL	Hexachlorobutadiene		10	ug/L	U	11/14/97
SJS04-GW3D-002P	SVTCL	Hexachlorocyclopentadie		10	ug/L	U	11/14/97
SJS04-GW3D-002P	SVTCL	Hexachloroethane		10	ug/L	U	11/14/97
SJS04-GW3D-002P	SVTCL	Indeno(1,2,3-cd)pyrene		10	ug/L	U	11/14/97
SJS04-GW3D-002P	SVTCL	Isophorone		10	ug/L	U	11/14/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS04-GW3D-002P	SVTCL	N-Nitroso-Di-n-Propylamine		10	ug/L	U	11/14/97
SJS04-GW3D-002P	SVTCL	N-Nitrosodiphenylamine		10	ug/L	U	11/14/97
SJS04-GW3D-002P	SVTCL	Naphthalene		10	ug/L	U	11/14/97
SJS04-GW3D-002P	SVTCL	Nitrobenzene		10	ug/L	U	11/14/97
SJS04-GW3D-002P	SVTCL	Pentachlorophenol		25	ug/L	U	11/14/97
SJS04-GW3D-002P	SVTCL	Phenanthrene		10	ug/L	U	11/14/97
SJS04-GW3D-002P	SVTCL	Phenol		10	ug/L	U	11/14/97
SJS04-GW3D-002P	SVTCL	Pyrene		10	ug/L	U	11/14/97
SJS04-GW3D-002P	VCLOW	1,1,1-Trichloroethane		1	ug/L	U	11/9/97
SJS04-GW3D-002P	VCLOW	1,1,2,2-Tetrachloroethane		1	ug/L	U	11/9/97
SJS04-GW3D-002P	VCLOW	1,1,2-Trichloroethane		1	ug/L	U	11/9/97
SJS04-GW3D-002P	VCLOW	1,1-Dichloroethane		1	ug/L	U	11/9/97
SJS04-GW3D-002P	VCLOW	1,1-Dichloroethene		1	ug/L	U	11/9/97
SJS04-GW3D-002P	VCLOW	1,2,4-Trichlorobenzene		1	ug/L	U	11/9/97
SJS04-GW3D-002P	VCLOW	1,2-Dibromo-3-chloropropa		1	ug/L	U	11/9/97
SJS04-GW3D-002P	VCLOW	1,2-Dibromoethane		1	ug/L	U	11/9/97
SJS04-GW3D-002P	VCLOW	1,2-Dichlorobenzene		1	ug/L	U	11/9/97
SJS04-GW3D-002P	VCLOW	1,2-Dichloroethane		1	ug/L	U	11/9/97
SJS04-GW3D-002P	VCLOW	1,2-Dichloropropane		1	ug/L	U	11/9/97
SJS04-GW3D-002P	VCLOW	1,3-Dichlorobenzene		1	ug/L	U	11/9/97
SJS04-GW3D-002P	VCLOW	1,4-Dichlorobenzene		1	ug/L	U	11/9/97
SJS04-GW3D-002P	VCLOW	2-Hexanone		5	ug/L	U	11/9/97
SJS04-GW3D-002P	VCLOW	4-Methyl-2-Pentanone		5	ug/L	U	11/9/97
SJS04-GW3D-002P	VCLOW	Benzene		1	ug/L	U	11/9/97
SJS04-GW3D-002P	VCLOW	Bromochloromethane		1	ug/L	U	11/9/97
SJS04-GW3D-002P	VCLOW	Bromodichloromethane		1	ug/L	U	11/9/97
SJS04-GW3D-002P	VCLOW	Bromoform		1	ug/L	U	11/9/97
SJS04-GW3D-002P	VCLOW	Bromomethane		1	ug/L	U	11/9/97
SJS04-GW3D-002P	VCLOW	Carbon Disulfide		1	ug/L	U	11/9/97
SJS04-GW3D-002P	VCLOW	Carbon Tetrachloride		1	ug/L	U	11/9/97
SJS04-GW3D-002P	VCLOW	Chlorobenzene		1	ug/L	U	11/9/97
SJS04-GW3D-002P	VCLOW	Chloroethane		1	ug/L	U	11/9/97
SJS04-GW3D-002P	VCLOW	Chloroform		1	ug/L	U	11/9/97
SJS04-GW3D-002P	VCLOW	Chloromethane		1	ug/L	U	11/9/97
SJS04-GW3D-002P	VCLOW	cis-1,2-Dichloroethene		1	ug/L	U	11/9/97
SJS04-GW3D-002P	VCLOW	cis-1,3-Dichloropropene		1	ug/L	U	11/9/97
SJS04-GW3D-002P	VCLOW	Dibromochloromethane		1	ug/L	U	11/9/97
SJS04-GW3D-002P	VCLOW	Ethylbenzene		1	ug/L	U	11/9/97
SJS04-GW3D-002P	VCLOW	Methylene Chloride	2	1	ug/L	B	11/9/97
SJS04-GW3D-002P	VCLOW	Styrene		1	ug/L	U	11/9/97
SJS04-GW3D-002P	VCLOW	Tetrachloroethene		1	ug/L	U	11/9/97
SJS04-GW3D-002P	VCLOW	Toluene		1	ug/L	U	11/9/97
SJS04-GW3D-002P	VCLOW	Total Xylenes		1	ug/L	U	11/9/97
SJS04-GW3D-002P	VCLOW	Trans-1,2-Dichloroethene		1	ug/L	U	11/9/97
SJS04-GW3D-002P	VCLOW	trans-1,3-Dichloropropene		1	ug/L	U	11/9/97
SJS04-GW3D-002P	VCLOW	Trichloroethene		1	ug/L	U	11/9/97
SJS04-GW3D-002P	VCLOW	Vinyl Chloride		1	ug/L	U	11/9/97
SJS04-GW3S-002	CTOTP	Total Phosphorous (as P)	0.107	0.05	mg/L		11/13/97
SJS04-GW3S-002	MCYAN	Aluminum	115	29	ug/L	B	11/24/97
SJS04-GW3S-002	MCYAN	Antimony	4.7	1	ug/L	B	11/17/97
SJS04-GW3S-002	MCYAN	Arsenic		3.2	ug/L	U	11/17/97
SJS04-GW3S-002	MCYAN	Barium	59.6	1	ug/L	J	11/24/97
SJS04-GW3S-002	MCYAN	Beryllium	0.77	1	ug/L	B	11/24/97
SJS04-GW3S-002	MCYAN	Cadmium	6.1	0.3	ug/L	K	11/17/97
SJS04-GW3S-002	MCYAN	Calcium	96500	46	ug/L		11/24/97
SJS04-GW3S-002	MCYAN	Chromium	6.1	4	ug/L	L	11/24/97
SJS04-GW3S-002	MCYAN	Cobalt		6	ug/L	U	11/24/97
SJS04-GW3S-002	MCYAN	Copper	25.2	2	ug/L	L	11/24/97
SJS04-GW3S-002	MCYAN	Cyanide		5	ug/L	U	11/7/97
SJS04-GW3S-002	MCYAN	Iron	339	5	ug/L		11/24/97
SJS04-GW3S-002	MCYAN	Lead	2.3	1	ug/L	J	11/17/97
SJS04-GW3S-002	MCYAN	Magnesium	37300	45	ug/L		11/24/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS04-GW3S-002	MCYAN	Manganese	46.7	1	ug/L	B	12/1/97
SJS04-GW3S-002	MCYAN	Mercury		0.16	ug/L	U	11/13/97
SJS04-GW3S-002	MCYAN	Nickel		6.3	ug/L	U	11/24/97
SJS04-GW3S-002	MCYAN	Potassium	25500	97	ug/L		11/24/97
SJS04-GW3S-002	MCYAN	Selenium		3.3	ug/L	U	11/17/97
SJS04-GW3S-002	MCYAN	Silver	3.8	3	ug/L	B	11/17/97
SJS04-GW3S-002	MCYAN	Sodium	235000	28	ug/L		11/24/97
SJS04-GW3S-002	MCYAN	Thallium		1.5	ug/L	U	11/17/97
SJS04-GW3S-002	MCYAN	Vanadium		6.8	ug/L	U	11/24/97
SJS04-GW3S-002	MCYAN	Zinc	105	3	ug/L	B	11/24/97
SJS04-GW3S-002	PSPCB	4,4'-DDD		0.1	ug/L	U	11/20/97
SJS04-GW3S-002	PSPCB	4,4'-DDE		0.1	ug/L	U	11/20/97
SJS04-GW3S-002	PSPCB	4,4'-DDT		0.1	ug/L	U	11/20/97
SJS04-GW3S-002	PSPCB	Aldrin		0.05	ug/L	U	11/20/97
SJS04-GW3S-002	PSPCB	alpha-BHC		0.05	ug/L	U	11/20/97
SJS04-GW3S-002	PSPCB	alpha-Chlordane		0.05	ug/L	U	11/20/97
SJS04-GW3S-002	PSPCB	Aroclor-1016		1	ug/L	U	11/20/97
SJS04-GW3S-002	PSPCB	Aroclor-1221		2	ug/L	U	11/20/97
SJS04-GW3S-002	PSPCB	Aroclor-1232		1	ug/L	U	11/20/97
SJS04-GW3S-002	PSPCB	Aroclor-1242		1	ug/L	U	11/20/97
SJS04-GW3S-002	PSPCB	Aroclor-1248		1	ug/L	U	11/20/97
SJS04-GW3S-002	PSPCB	Aroclor-1254		1	ug/L	U	11/20/97
SJS04-GW3S-002	PSPCB	Aroclor-1260		1	ug/L	U	11/20/97
SJS04-GW3S-002	PSPCB	beta-BHC		0.05	ug/L	U	11/20/97
SJS04-GW3S-002	PSPCB	delta-BHC		0.05	ug/L	U	11/20/97
SJS04-GW3S-002	PSPCB	Dieldrin		0.1	ug/L	U	11/20/97
SJS04-GW3S-002	PSPCB	Endosulfan I		0.05	ug/L	U	11/20/97
SJS04-GW3S-002	PSPCB	Endosulfan II		0.1	ug/L	U	11/20/97
SJS04-GW3S-002	PSPCB	Endosulfan Sulfate		0.1	ug/L	U	11/20/97
SJS04-GW3S-002	PSPCB	Endrin		0.1	ug/L	U	11/20/97
SJS04-GW3S-002	PSPCB	Endrin Aldehyde		0.1	ug/L	U	11/20/97
SJS04-GW3S-002	PSPCB	Endrin Ketone		0.1	ug/L	U	11/20/97
SJS04-GW3S-002	PSPCB	gamma-BHC		0.05	ug/L	U	11/20/97
SJS04-GW3S-002	PSPCB	gamma-Chlordane		0.05	ug/L	U	11/20/97
SJS04-GW3S-002	PSPCB	Heptachlor		0.05	ug/L	U	11/20/97
SJS04-GW3S-002	PSPCB	Heptachlor Epoxide		0.05	ug/L	U	11/20/97
SJS04-GW3S-002	PSPCB	Methoxychlor		0.5	ug/L	U	11/20/97
SJS04-GW3S-002	PSPCB	Toxaphene		5	ug/L	U	11/20/97
SJS04-GW3S-002	SVTCL	1,2,4-Trichlorobenzene		10	ug/L	U	11/13/97
SJS04-GW3S-002	SVTCL	1,2-Dichlorobenzene		10	ug/L	U	11/13/97
SJS04-GW3S-002	SVTCL	1,3-Dichlorobenzene		10	ug/L	U	11/13/97
SJS04-GW3S-002	SVTCL	1,4-Dichlorobenzene		10	ug/L	U	11/13/97
SJS04-GW3S-002	SVTCL	2,2'-oxybis(1-Chloropropan		10	ug/L	U	11/13/97
SJS04-GW3S-002	SVTCL	2,4,5-Trichlorophenol		25	ug/L	U	11/13/97
SJS04-GW3S-002	SVTCL	2,4,6-Trichlorophenol		10	ug/L	U	11/13/97
SJS04-GW3S-002	SVTCL	2,4-Dichlorophenol		10	ug/L	U	11/13/97
SJS04-GW3S-002	SVTCL	2,4-Dimethylphenol		10	ug/L	U	11/13/97
SJS04-GW3S-002	SVTCL	2,4-Dinitrophenol		25	ug/L	UJ	11/13/97
SJS04-GW3S-002	SVTCL	2,4-Dinitrotoluene		10	ug/L	U	11/13/97
SJS04-GW3S-002	SVTCL	2,6-Dinitrotoluene		10	ug/L	U	11/13/97
SJS04-GW3S-002	SVTCL	2-Chloronaphthalene		10	ug/L	U	11/13/97
SJS04-GW3S-002	SVTCL	2-Chlorophenol		10	ug/L	U	11/13/97
SJS04-GW3S-002	SVTCL	2-Methylnaphthalene		10	ug/L	U	11/13/97
SJS04-GW3S-002	SVTCL	2-Methylphenol		10	ug/L	U	11/13/97
SJS04-GW3S-002	SVTCL	2-Nitroaniline		25	ug/L	U	11/13/97
SJS04-GW3S-002	SVTCL	2-Nitrophenol		10	ug/L	U	11/13/97
SJS04-GW3S-002	SVTCL	3,3'-Dichlorobenzidine		10	ug/L	U	11/13/97
SJS04-GW3S-002	SVTCL	3-Nitroaniline		25	ug/L	UJ	11/13/97
SJS04-GW3S-002	SVTCL	4,6-Dinitro-2-Methylphenol		25	ug/L	U	11/13/97
SJS04-GW3S-002	SVTCL	4-Bromophenol-phenyleth		10	ug/L	U	11/13/97
SJS04-GW3S-002	SVTCL	4-Chloro-3-Methylphenol		10	ug/L	U	11/13/97
SJS04-GW3S-002	SVTCL	4-Chloroaniline		10	ug/L	U	11/13/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS04-GW3S-002	SVTCL	4-Chlorophenyl-phenyleth		10	ug/L	U	11/13/97
SJS04-GW3S-002	SVTCL	4-Methylphenol		10	ug/L	U	11/13/97
SJS04-GW3S-002	SVTCL	4-Nitroaniline		25	ug/L	UJ	11/13/97
SJS04-GW3S-002	SVTCL	4-Nitrophenol		25	ug/L	U	11/13/97
SJS04-GW3S-002	SVTCL	Acenaphthene		10	ug/L	U	11/13/97
SJS04-GW3S-002	SVTCL	Acenaphthylene		10	ug/L	U	11/13/97
SJS04-GW3S-002	SVTCL	Anthracene		10	ug/L	U	11/13/97
SJS04-GW3S-002	SVTCL	Benzo(a)anthracene		10	ug/L	U	11/13/97
SJS04-GW3S-002	SVTCL	Benzo(a)pyrene		10	ug/L	U	11/13/97
SJS04-GW3S-002	SVTCL	Benzo(b)fluoranthene		10	ug/L	U	11/13/97
SJS04-GW3S-002	SVTCL	Benzo(g,h,i)perylene		10	ug/L	U	11/13/97
SJS04-GW3S-002	SVTCL	Benzo(k)fluoranthene		10	ug/L	U	11/13/97
SJS04-GW3S-002	SVTCL	bis(2-Chloroethoxy)metha		10	ug/L	U	11/13/97
SJS04-GW3S-002	SVTCL	bis(2-chloroethyl)ether		10	ug/L	U	11/13/97
SJS04-GW3S-002	SVTCL	bis(2-Ethylhexyl)phthalate	13	7	ug/L		11/13/97
SJS04-GW3S-002	SVTCL	Butylbenzylphthalate		10	ug/L	U	11/13/97
SJS04-GW3S-002	SVTCL	Carbazole		10	ug/L	UJ	11/13/97
SJS04-GW3S-002	SVTCL	Chrysene		10	ug/L	U	11/13/97
SJS04-GW3S-002	SVTCL	Di-n-butylphthalate		10	ug/L	U	11/13/97
SJS04-GW3S-002	SVTCL	Di-n-Octyl Phthalate		10	ug/L	U	11/13/97
SJS04-GW3S-002	SVTCL	Dibenzo(a,h)anthracene		10	ug/L	U	11/13/97
SJS04-GW3S-002	SVTCL	Dibenzofuran		10	ug/L	U	11/13/97
SJS04-GW3S-002	SVTCL	Diethylphthalate	2	10	ug/L	B	11/13/97
SJS04-GW3S-002	SVTCL	Dimethyl Phthalate		10	ug/L	U	11/13/97
SJS04-GW3S-002	SVTCL	Fluoranthene		10	ug/L	U	11/13/97
SJS04-GW3S-002	SVTCL	Fluorene		10	ug/L	U	11/13/97
SJS04-GW3S-002	SVTCL	Hexachlorobenzene		10	ug/L	U	11/13/97
SJS04-GW3S-002	SVTCL	Hexachlorobutadiene		10	ug/L	U	11/13/97
SJS04-GW3S-002	SVTCL	Hexachlorocyclopentadie		10	ug/L	U	11/13/97
SJS04-GW3S-002	SVTCL	Hexachloroethane		10	ug/L	U	11/13/97
SJS04-GW3S-002	SVTCL	Indeno(1,2,3-cd)pyrene		10	ug/L	U	11/13/97
SJS04-GW3S-002	SVTCL	Isophorone		10	ug/L	U	11/13/97
SJS04-GW3S-002	SVTCL	N-Nitroso-Di-n-Propylamine		10	ug/L	U	11/13/97
SJS04-GW3S-002	SVTCL	N-Nitrosodiphenylamine		10	ug/L	U	11/13/97
SJS04-GW3S-002	SVTCL	Naphthalene		10	ug/L	U	11/13/97
SJS04-GW3S-002	SVTCL	Nitrobenzene		10	ug/L	U	11/13/97
SJS04-GW3S-002	SVTCL	Pentachlorophenol		25	ug/L	U	11/13/97
SJS04-GW3S-002	SVTCL	Phenanthrene		10	ug/L	U	11/13/97
SJS04-GW3S-002	SVTCL	Phenol		10	ug/L	U	11/13/97
SJS04-GW3S-002	SVTCL	Pyrene		10	ug/L	U	11/13/97
SJS04-GW3S-002	VCLOW	1,1,1-Trichloroethane		1	ug/L	U	11/9/97
SJS04-GW3S-002	VCLOW	1,1,2,2-Tetrachloroethane		1	ug/L	U	11/9/97
SJS04-GW3S-002	VCLOW	1,1,2-Trichloroethane		1	ug/L	U	11/9/97
SJS04-GW3S-002	VCLOW	1,1-Dichloroethane		1	ug/L	U	11/9/97
SJS04-GW3S-002	VCLOW	1,1-Dichloroethene		1	ug/L	U	11/9/97
SJS04-GW3S-002	VCLOW	1,2,4-Trichlorobenzene		1	ug/L	U	11/9/97
SJS04-GW3S-002	VCLOW	1,2-Dibromo-3-chloropropa		1	ug/L	U	11/9/97
SJS04-GW3S-002	VCLOW	1,2-Dibromoethane		1	ug/L	U	11/9/97
SJS04-GW3S-002	VCLOW	1,2-Dichlorobenzene		1	ug/L	U	11/9/97
SJS04-GW3S-002	VCLOW	1,2-Dichloroethane		1	ug/L	U	11/9/97
SJS04-GW3S-002	VCLOW	1,2-Dichloropropane		1	ug/L	U	11/9/97
SJS04-GW3S-002	VCLOW	1,3-Dichlorobenzene		1	ug/L	U	11/9/97
SJS04-GW3S-002	VCLOW	1,4-Dichlorobenzene		1	ug/L	U	11/9/97
SJS04-GW3S-002	VCLOW	2-Hexanone		5	ug/L	U	11/9/97
SJS04-GW3S-002	VCLOW	4-Methyl-2-Pentanone		5	ug/L	U	11/9/97
SJS04-GW3S-002	VCLOW	Acetone	17	5	ug/L	B	11/9/97
SJS04-GW3S-002	VCLOW	Benzene		1	ug/L	U	11/9/97
SJS04-GW3S-002	VCLOW	Bromochloromethane		1	ug/L	U	11/9/97
SJS04-GW3S-002	VCLOW	Bromodichloromethane		1	ug/L	U	11/9/97
SJS04-GW3S-002	VCLOW	Bromoform		1	ug/L	U	11/9/97
SJS04-GW3S-002	VCLOW	Bromomethane		1	ug/L	U	11/9/97
SJS04-GW3S-002	VCLOW	Carbon Disulfide		1	ug/L	U	11/9/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS04-GW3S-002	VCLOW	Carbon Tetrachloride		1	ug/L	U	11/9/97
SJS04-GW3S-002	VCLOW	Chlorobenzene		1	ug/L	U	11/9/97
SJS04-GW3S-002	VCLOW	Chloroethane		1	ug/L	U	11/9/97
SJS04-GW3S-002	VCLOW	Chloroform		1	ug/L	U	11/9/97
SJS04-GW3S-002	VCLOW	Chloromethane		1	ug/L	U	11/9/97
SJS04-GW3S-002	VCLOW	cis-1,2-Dichloroethene		1	ug/L	U	11/9/97
SJS04-GW3S-002	VCLOW	cis-1,3-Dichloropropene		1	ug/L	U	11/9/97
SJS04-GW3S-002	VCLOW	Dibromochloromethane		1	ug/L	U	11/9/97
SJS04-GW3S-002	VCLOW	Ethylbenzene		1	ug/L	U	11/9/97
SJS04-GW3S-002	VCLOW	Methylene Chloride	2	1	ug/L	B	11/9/97
SJS04-GW3S-002	VCLOW	Styrene		1	ug/L	U	11/9/97
SJS04-GW3S-002	VCLOW	Tetrachloroethene		1	ug/L	U	11/9/97
SJS04-GW3S-002	VCLOW	Toluene		1	ug/L	U	11/9/97
SJS04-GW3S-002	VCLOW	Total Xylenes		1	ug/L	U	11/9/97
SJS04-GW3S-002	VCLOW	Trans-1,2-Dichloroethene		1	ug/L	U	11/9/97
SJS04-GW3S-002	VCLOW	trans-1,3-Dichloropropene		1	ug/L	U	11/9/97
SJS04-GW3S-002	VCLOW	Trichloroethene		1	ug/L	U	11/9/97
SJS04-GW3S-002	VCLOW	Vinyl Chloride		1	ug/L	U	11/9/97
SJS04-GW3S-002F	METAL	Aluminum		38.1	ug/L	U	11/24/97
SJS04-GW3S-002F	METAL	Antimony	5	1	ug/L	K	11/17/97
SJS04-GW3S-002F	METAL	Arsenic		3.2	ug/L	U	11/17/97
SJS04-GW3S-002F	METAL	Barium	55.1	1	ug/L	J	11/24/97
SJS04-GW3S-002F	METAL	Beryllium		0.58	ug/L	U	11/24/97
SJS04-GW3S-002F	METAL	Cadmium	5.7	0.3	ug/L	K	11/17/97
SJS04-GW3S-002F	METAL	Calcium	91000	46	ug/L		11/24/97
SJS04-GW3S-002F	METAL	Chromium		4.6	ug/L	UL	11/24/97
SJS04-GW3S-002F	METAL	Cobalt		6	ug/L	U	11/24/97
SJS04-GW3S-002F	METAL	Copper	10	2	ug/L	L	11/24/97
SJS04-GW3S-002F	METAL	Iron	211	5	ug/L	B	11/24/97
SJS04-GW3S-002F	METAL	Lead		1.3	ug/L	U	11/17/97
SJS04-GW3S-002F	METAL	Magnesium	34300	45	ug/L		11/24/97
SJS04-GW3S-002F	METAL	Manganese	40.1	1	ug/L		12/1/97
SJS04-GW3S-002F	METAL	Mercury		0.13	ug/L	U	11/13/97
SJS04-GW3S-002F	METAL	Nickel		6.3	ug/L	U	11/24/97
SJS04-GW3S-002F	METAL	Potassium	24000	97	ug/L		11/24/97
SJS04-GW3S-002F	METAL	Selenium		3.3	ug/L	U	11/17/97
SJS04-GW3S-002F	METAL	Silver	3.2	3	ug/L	J	11/17/97
SJS04-GW3S-002F	METAL	Sodium	215000	28	ug/L		11/24/97
SJS04-GW3S-002F	METAL	Thallium		1.5	ug/L	U	11/17/97
SJS04-GW3S-002F	METAL	Vanadium	8	4	ug/L	J	11/24/97
SJS04-GW3S-002F	METAL	Zinc	87.8	3	ug/L		11/24/97
SJS04-GW4S-002	CTOTP	Total Phosphorous (as P)	0.59	0.25	mg/L		11/14/97
SJS04-GW4S-002	MCYAN	Aluminum	179	29	ug/L	J	11/25/97
SJS04-GW4S-002	MCYAN	Antimony		1.7	ug/L	U	11/13/97
SJS04-GW4S-002	MCYAN	Arsenic	11	3	ug/L		11/13/97
SJS04-GW4S-002	MCYAN	Barium	488	1	ug/L		11/25/97
SJS04-GW4S-002	MCYAN	Beryllium		0.58	ug/L	U	11/25/97
SJS04-GW4S-002	MCYAN	Cadmium		0.4	ug/L	U	11/13/97
SJS04-GW4S-002	MCYAN	Calcium	157000	46	ug/L		11/25/97
SJS04-GW4S-002	MCYAN	Chromium		4.6	ug/L	U	11/25/97
SJS04-GW4S-002	MCYAN	Cobalt		6	ug/L	U	11/25/97
SJS04-GW4S-002	MCYAN	Copper	6.8	2	ug/L	B	11/25/97
SJS04-GW4S-002	MCYAN	Cyanide		5	ug/L	U	11/7/97
SJS04-GW4S-002	MCYAN	Iron	27200	5	ug/L		11/25/97
SJS04-GW4S-002	MCYAN	Lead	3.2	1	ug/L		11/13/97
SJS04-GW4S-002	MCYAN	Magnesium	91900	45	ug/L		11/25/97
SJS04-GW4S-002	MCYAN	Manganese	438	1	ug/L		11/25/97
SJS04-GW4S-002	MCYAN	Mercury		0.13	ug/L	U	11/13/97
SJS04-GW4S-002	MCYAN	Nickel		6.3	ug/L	U	11/25/97
SJS04-GW4S-002	MCYAN	Potassium	44300	97	ug/L		11/25/97
SJS04-GW4S-002	MCYAN	Selenium		3.3	ug/L	U	11/13/97
SJS04-GW4S-002	MCYAN	Silver	3.2	3	ug/L	J	11/13/97

ple ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
4S-[illegible]	IMCYAN	Sodium	361000	28	ug/L		11/26/97
[illegible]	IMCYAN	Thallium	2.2	2	ug/L	B	11/13/97
4[illegible]02	IMCYAN	Vanadium		6.8	ug/L	U	11/25/97
4S-002	IMCYAN	Zinc	31.5	3	ug/L	B	11/25/97
4S-002	IPSPCB	4,4'-DDD		0.1	ug/L	U	11/21/97
4S-002	IPSPCB	4,4'-DDE		0.1	ug/L	U	11/21/97
4S-002	IPSPCB	4,4'-DDT		0.1	ug/L	U	11/21/97
4S-002	IPSPCB	Aldrin		0.05	ug/L	U	11/21/97
4S-002	IPSPCB	alpha-BHC		0.05	ug/L	U	11/21/97
4S-002	IPSPCB	alpha-Chlordane		0.05	ug/L	U	11/21/97
4S-002	IPSPCB	Aroclor-1016		1	ug/L	U	11/21/97
4S-002	IPSPCB	Aroclor-1221		2	ug/L	U	11/21/97
4S-002	IPSPCB	Aroclor-1232		1	ug/L	U	11/21/97
4S-002	IPSPCB	Aroclor-1242		1	ug/L	U	11/21/97
4S-002	IPSPCB	Aroclor-1248		1	ug/L	U	11/21/97
4S-002	IPSPCB	Aroclor-1254		1	ug/L	U	11/21/97
4S-002	IPSPCB	Aroclor-1260		1	ug/L	U	11/21/97
4S-002	IPSPCB	beta-BHC		0.05	ug/L	U	11/21/97
4S-002	IPSPCB	delta-BHC		0.05	ug/L	U	11/21/97
4S-002	IPSPCB	Dieldrin		0.1	ug/L	U	11/21/97
4S-002	IPSPCB	Endosulfan I		0.05	ug/L	U	11/21/97
4S-002	IPSPCB	Endosulfan II		0.1	ug/L	U	11/21/97
4S-002	IPSPCB	Endosulfan Sulfate		0.1	ug/L	U	11/21/97
4S-002	IPSPCB	Endrin		0.1	ug/L	U	11/21/97
4S-002	IPSPCB	Endrin Aldehyde		0.1	ug/L	U	11/21/97
4S-002	IPSPCB	Endrin Ketone		0.1	ug/L	U	11/21/97
4S-002	IPSPCB	gamma-BHC		0.05	ug/L	U	11/21/97
4S-002	IPSPCB	gamma-Chlordane		0.05	ug/L	U	11/21/97
4S-002	IPSPCB	Heptachlor		0.05	ug/L	U	11/21/97
4S-002	IPSPCB	Heptachlor Epoxide		0.05	ug/L	U	11/21/97
[illegible]	IPSPCB	Methoxychlor		0.5	ug/L	U	11/21/97
[illegible]2	IPSPCB	Toxaphene		5	ug/L	U	11/21/97
4S-002	ISVTCL	1,2,4-Trichlorobenzene		10	ug/L	U	11/14/97
4S-002	ISVTCL	1,2-Dichlorobenzene		10	ug/L	U	11/14/97
4S-002	ISVTCL	1,3-Dichlorobenzene		10	ug/L	U	11/14/97
4S-002	ISVTCL	1,4-Dichlorobenzene		10	ug/L	U	11/14/97
4S-002	ISVTCL	2,2'-oxybis(1-Chloropropan		10	ug/L	U	11/14/97
4S-002	ISVTCL	2,4,5-Trichlorophenol		25	ug/L	U	11/14/97
4S-002	ISVTCL	2,4,6-Trichlorophenol		10	ug/L	U	11/14/97
4S-002	ISVTCL	2,4-Dichlorophenol		10	ug/L	U	11/14/97
4S-002	ISVTCL	2,4-Dimethylphenol		10	ug/L	U	11/14/97
W4S-002	ISVTCL	2,4-Dinitrophenol		25	ug/L	U	11/14/97
W4S-002	ISVTCL	2,4-Dinitrotoluene		10	ug/L	U	11/14/97
W4S-002	ISVTCL	2,6-Dinitrotoluene		10	ug/L	U	11/14/97
W4S-002	ISVTCL	2-Chloronaphthalene		10	ug/L	U	11/14/97
W4S-002	ISVTCL	2-Chlorophenol		10	ug/L	U	11/14/97
W4S-002	ISVTCL	2-Methylnaphthalene		10	ug/L	U	11/14/97
W4S-002	ISVTCL	2-Methylphenol		10	ug/L	U	11/14/97
W4S-002	ISVTCL	2-Nitroaniline		25	ug/L	U	11/14/97
W4S-002	ISVTCL	2-Nitrophenol		10	ug/L	U	11/14/97
W4S-002	ISVTCL	3,3'-Dichlorobenzidine		10	ug/L	U	11/14/97
W4S-002	ISVTCL	3-Nitroaniline		25	ug/L	U	11/14/97
W4S-002	ISVTCL	4,6-Dinitro-2-Methylphenol		25	ug/L	U	11/14/97
W4S-002	ISVTCL	4-Bromophenol-phenyleth		10	ug/L	U	11/14/97
W4S-002	ISVTCL	4-Chloro-3-Methylphenol		10	ug/L	U	11/14/97
W4S-002	ISVTCL	4-Chloroaniline		10	ug/L	U	11/14/97
W4S-002	ISVTCL	4-Chlorophenyl-phenyleth		10	ug/L	U	11/14/97
W4S-002	ISVTCL	4-Methylphenol		10	ug/L	U	11/14/97
W4S-002	ISVTCL	4-Nitroaniline		25	ug/L	U	11/14/97
W4S-002	ISVTCL	4-Nitrophenol		25	ug/L	U	11/14/97
[illegible]2	ISVTCL	Acenaphthene		10	ug/L	U	11/14/97
[illegible]002	ISVTCL	Acenaphthylene		10	ug/L	U	11/14/97

APPENDIX G

Risk Assessment Assumptions Documents and Teleconference Minutes

Introduction

The human health and ecological risk assumptions for the Remedial Investigation and Feasibility Study (RI/FS) of Landfill B (Site 2), Landfill C (Site 3), Landfill D (Site 4), and the Burning Grounds (Site 5) at the St. Juliens Creek Annex, in Chesapeake, Virginia are documented below. The risk assessment assumptions are preceded by a description of the site and a summery of recently completed field investigations activities. Additional detail regarding site background and field investigation activities are documented in the following documents: *Final Work Plan, Landfill B (Site 2) and the Burning Grounds (Site 5), Remedial Investigation and Feasibility Study* and *Final Work Plan, Landfill C (Site 3) and Landfill D (Site 4), Remedial Investigation and Feasibility Study.* The risk assessment for Sites 2, 3, 4, and 5 will proceed upon review and approval of the risk assessment assumptions by the Navy and regulatory agencies. Figures and tables referenced in the text are located at the end of this document.

Site Descriptions

Site 2 is an inactive unlined landfill located at the corner of Saint Juliens Drive and Craddock Street in the southwestern section of the facility (Figure 3-1). Burning and incineration of refuse was conducted at the landfill. Refuse disposed at Site 2 included garbage, acids, waste ordnance, and blast grit from ship repair operations. Presently, the landfill is grass covered with heavy brush located in the southwestern part of the site. The eastern part of the site is water covered and appears to drain into St. Julien's Creek to the south. The site is bounded to the north by a drainage ditch and to the east by Building 130 and the building's adjacent area. The drainage ditch appears to empty into the eastern (water covered) portion of the landfill.

Site 3 is adjacent to the northeastern corner of the St. Julien's Creek Annex property boundary and covers approximately 10 acres. The area was originally a mudflat where refuse was dumped and allowed to burn; the ash was then used to fill in the area. Refuse disposed of at Site 3 included solvents, acids, bases, and mixed municipal waste. Two pits reportedly used for disposal of oils and oily sludge's, as well as for periodic burning, were also located at Site 3. At the present time, the landfill is grass covered with no visible signs of debris or refuse. A communication and/or radar facility is located in the northeastern area of the landfill. The downgradient direction of the site appears to be toward Site 4 and Blow's Creek.

Site 4 covers an estimated 5 acres approximately 300 feet south of Site 3. While in operation, the site was an unlined trench and fill landfill. Refuse disposed of at Site 4 included drums of unknown wastes and polychlorinated biphenyls (PCBs). The site is characterized by raised surface features and areas which lack vegetation. A brush line borders the northern edge of the landfill with brush also extending beyond the western and southern edges. Metal and concrete debris piles are dispersed throughout the site.

Site 5 is located off of Craddock Street in the northern part of the facility. Wastes disposed at the burning grounds included ordnance materials such as black powder, smokeless powder, explosive D, Composition A-3, tetryl, TNT, and fuses. Non-ordnance materials included carbon tetrachloride, trichloroethylene (TCE), paint sludges, pesticides, and various types of refuse. In 1977, the surface area was burned with straw, diced, and burned again, in an effort to decontaminate the soil.

Remedial Investigation Data Collection

A summary of recently completed RI field investigation tasks is documented below. Laboratory results from soil, groundwater, surface water, and sediment samples have been validated and will be included in the human health and ecological risk assessments.

Monitoring Well Installation and Sampling

Three shallow and two deep monitoring wells were installed and sampled at both Site 2 and Site 5, while four shallow and two deep monitoring wells were installed at both Site 3 and site 4. Shallow monitoring wells were designed to sample the uppermost saturated zone encountered, while the deep monitoring wells was designed to sample groundwater in the Yorktown Aquifer. Where they are installed, deep monitoring wells are paired with shallow wells in order to provide an indication of the vertical profile of groundwater quality and indication of the vertical groundwater flow direction. At each site, one deep and one shallow monitoring well were installed at upgradient locations.

All monitoring wells are constructed of nominal 2-inch diameter PVC well riser and 10-slot, 10-ft long screen. Details of well construction are provided in the Sampling and Analysis Plan (SAP).

All monitoring wells were developed by surging with a surge block assembly and pumping the wells with a submersible pump. Wells were developed until water quality parameters (pH, conductivity, temperature and turbidity) had stabilized.

All wells were sampled in July, 1997 using a decontaminated submersible pump, and clean tubing. Samples were analyzed for TCL organic constituents, TAL metals (filtered and unfiltered), and total phosphorus. Two samples were selected, using field screening techniques for TNT, for nitramine analysis.

Surface Soil Sampling

Surface soil samples were collected at all sites using a stainless steel spoon and bowl following protocols described in the work plan. The objective of the surface soil sampling was to obtain analytical data for use in the human health risk assessment. Samples were analyzed for TCL organic constituents, TAL metals, and total phosphorous. One sample was selected, using field screening techniques for TNT, for nitramine analysis.

Subsurface Soil Sampling

The investigations at Sites 2 through 5 included the collection of subsurface soil samples for chemical analysis. Samples collected for chemical analysis were obtained using a truck-mounted, hydraulic, direct push technology (DPT) probe. Soil samples were collected using a 4-ft long by 2-inch outside diameter (O.D.) sample barrel equipped with acetate liners. The objective of the soil sampling was to collect soil from just above the water table.

One sample at each site was collected as a composite sample from ground surface to four feet. These samples were analyzed for total organic carbon and were collected specifically for ecological risk assessment purposes.

A total of five subsurface soil samples were collected from Site 2. The sampling locations were selected to include one upgradient location as well as samples located around the perimeter of the pond. Samples were analyzed for TCL organic constituents, TAL metals, and total phosphorus. One sample was selected, using field screening techniques for TNT, for nitramine analysis.

A total of seven subsurface soil samples were collected from Site 3. The sampling locations were selected to include one upgradient location, as well as samples throughout the landfilled area. Samples were analyzed for TCL organic constituents, TAL metals, and total phosphorus.

Subsurface soil sampling with the DPT probe was conducted at three locations at Site 4. One location was selected as an upgradient location. The other two samples were collected along the down gradient edge of the landfill adjacent to the patrol road. Samples could not be collected on the landfill due to the density of concrete and other rubble within the landfill. Samples were analyzed for TCL organic constituents, TAL metals, and total phosphorus.

Subsurface soil sampling with the DPT probe was conducted at three distinct areas at Site 5: the burning grounds, the caged pit area, and a former drop tower. One location was selected as an upgradient location. Samples were analyzed for TCL organic constituents, TAL metals, and total phosphorus. One sample was selected, using a field screening technique for TNT, for nitramine analysis. Additionally, five subsurface samples were selected for dioxin analysis at Site 5.

Surface Water and Sediment Sampling

Three sediment and two surface water samples were proposed for both Site 2 and Site 5. Due to dry conditions, only one surface water sample, from Site 2, was collected. Sediment samples were collected with stainless steel bowls and spoons. The surface water sample was collected directly into the sample jar. Sediment and surface water samples were analyzed for TCL organic constituents, TAL metals, total phosphorous, total organic carbon and nitramine.

Four sediment samples were proposed for both Sites 3 and 4. Additionally, four surface water samples were proposed for Site 3 and 3 surface water samples were proposed for Site 4. Due to dry conditions, only one surface water sample, from Site 4, was collected. Sediment samples were collected with stainless steel bowls and spoons. The surface water sample was collected directly into the sample jar. Sediment and surface water samples were analyzed for TCL organic constituents, TAL metals, total phosphorous, and total organic carbon.

Human Health and Ecological Risk Assessment Assumptions

The baseline human health and ecological risk assumptions are contained in the text below and Tables 1 and 2.

RI Baseline Human Health Risk Assessment (BLRA)

A BLRA will be performed for Sites 2, 3, 4, and 5 to assess the potential human health risks posed by the site. The risk assessment will evaluate the potential effects of existing site contamination on both current and potential future exposed populations. Future risks will be based on current site conditions, assuming no additional remedial action is conducted at the site. Although the future use of the site is expected to remain industrial, both residential and

industrial scenarios will be evaluated. Federal and state applicable or relevant and appropriate requirements (ARARs) will be identified and compared with the RI data under this task.

The risk assessment will be completed in accordance with EPA's *Risk Assessment Guidance for Superfund (RAGS), Volume I - Human Health Evaluation Manual (Part A),* dated December 1989, *RAGS* Parts B and C dated December 1989. The exposure factors in RAGS have been superseded by OSWER Directive 9285.6-03, *Human Health Evaluation Manual, Supplemental Guidance: Standard Default Exposure Factors,* dated March 1991. EPA Region III risk assessment guidance will also be followed, which includes technical documents such as "Assessing Dermal Exposure From Soil," dated December 1995, and "Use of Monte Carlo Simulation in Risk Assessments," dated February 1994. Dermal permeability coefficients will be taken from *EPA's Interim Guidance for Dermal Exposure Assessment,* dated January 1992. Other required exposure factors may be taken from *Exposure Factors Handbook* (EPA, 1989) and the American Industrial Health Council's *Exposure Factors Sourcebook* (AIHC, May 1994). The risk assessment will contain the following major components:

- Data evaluation and identification of contaminants of potential concern
- Exposure assessment
- Toxicity assessment
- Risk characterization
- Uncertainty analysis

Contaminants of Potential Concern

The first step of the risk assessment will be to select contaminants of potential concern (COPC). The selection criteria in EPA Region III's *Selecting Exposure Routes and Contaminants of Concern by Risk-Based Screening*, January 1993, will be followed to determine which chemicals will be evaluated quantitatively. This methodology includes evaluating data quality, reducing the data set using risk-based concentrations (based on a target cancer risk of 1×10^{-6} and a target hazard index of 0.1), and further reducing the data set according to frequency of detection, and evaluation as human nutrients. Since a background study has not yet been performed at St. Julien's Creek Annex, no comparison of site contaminant levels to background can be performed as part of the COPC screening.

The available data set includes data collected during this investigation as well as data collected as part of the *Relative Risk Ranking System Data Collection Report, St. Julien's Creek Annex to the Norfolk Naval Base, Chesapeake, Virginia* dated April 23, 1996 (Relative Risk data). Data collected during the RI will be evaluated quantitatively. Relative Risk data will be evaluated in a qualitative fashion only.

Upgradient samples were collected from sediment, surface soil, subsurface soil, shallow groundwater and deep groundwater at each site. As upgradient contaminant levels do not represent site-related conditions, upgradient samples will not be considered in the BLRA.

Exposure Assessment

The second step of the risk assessment will be to identify actual or potential exposure pathways and to determine the probable magnitude of human exposure. Only plausible and complete pathways will be carried through the exposure-quantification section to the risk characterization. A complete pathway contains a source of chemical release, a medium for environmental transport, a point of contact with the contaminated medium, and an exposure

route at the point of contact. The pathways that are anticipated to be complete at Sites 2 through 5 are those listed in Table 1.

Quantification of exposure involves determining the exposure concentration and exposure parameters. The sources that will be consulted for the exposure parameters are discussed above. Table 2 summarizes the exposure parameters for use in the human health risk assessment. The exposure concentrations will be calculated for each scenario. The 95 percent upper confidence limit of the mean (95UCL) will be used as the exposure concentration for soil. The 95UCL calculation depends on the distribution of the data. A W-test will be used to determine if the data are lognormally or normally distributed. If the 95UCL is greater than the maximum detected concentration, the maximum detected concentration will be used as the exposure concentration. The exposure concentration for groundwater will be the concentration of each constituent detected in the well or group of wells that are the most contaminated or are located in the center of the plume.

For calculating the exposure concentrations for the risk assessment, the following data-handling methodology will be used. When a primary sample and a duplicate sample are collected, the maximum concentration will be used as the sample concentration. Half the sample quantitation limit (SQL) or sample detection limit (DL) will be used for cases where no detectable contaminant quantities were found in that specific sample, but the contaminant was detected in that medium for that group of samples. Data that have been qualified with a "J" (estimated value), "K" (biased high), or "L" (biased low) will be treated as unqualified detected concentrations. Data qualified with an "R" (rejected) will not be used for risk assessment and will not be included in the total count of samples analyzed for a constituent. The assumption will be that the blank-related concentration of a constituent qualified with a "B" is the SQL.

Toxicity Assessment

The next step of the risk assessment is the toxicity assessment. The primary source of toxicological data to be used in the analysis will be EPA's Integrated Risk Information System (IRIS) database. If toxicological data for a particular constituent are not available in IRIS, EPA's *Health Effects Assessment Summary Tables* (HEAST) will be consulted. This section will include a brief discussion of the toxicological characteristics of the major site contaminants and the quantitative approach used to assess the potential effects of the carcinogenic and noncarcinogenic effects on human health.

Risk Characterization

Risk characterization is the next step in the baseline human health risk assessment. It combines the results of the exposure assessment with the critical toxicity values in the appropriate media for each COPC. For quantitative risk estimation from carcinogenic chemicals, excess lifetime cancer risks will be estimated. Potential risks from noncarcinogenic chemicals will be presented using the hazard index approach. If estimated risks approach the EPA threshold values, a Monte Carlo risk analysis will be performed according to EPA Region III technical guidance.

Uncertainty

The last section will be a discussion of uncertainty that provides the limits and assumptions for the results of the risk characterization. The discussion will include a qualitative sensitivity analysis of the exposure assumptions.

Results

The results of the BLRA will be documented in the RI report. The risk assessment will be used to help determine whether remediation is necessary and to help develop preliminary remediation goals for the media of concern.

TABLE 1
Site 2, Site 3, Site 4, and Site 5
St. Juliens Creek Annex
Summary of Samples Collected by Media

	Groundwater	Surface Soil	Subsurface Soil	Sediment	Surface Water
Site 2	5	10	5	3	1
Site 3	6	7	7	4	NA
Site 4	6	10	3	4	1
Site 5	5	9	15	3	NA

TABLE 2
Site 2, Site 3, Site 4, and Site 5
St. Juliens Creek Annex
Summary of Exposure Pathways and Potentially Exposed Populations

Scenario Timeframe	Land use	Receptor Population	Medium	Receptor Age	Exposure Rout	Evaluate Scenario?
Current	Industrial	Trespasser	Surface Soil	Adult	Dermal	Yes
					Ingestion	Yes
					Inhalation	No
			Sediment	Adult	Dermal	Yes
					Ingestion	Yes
					Inhalation	No
			Surface Water	Adult	Dermal	Yes
					Ingestion	No
					Inhalation	No
			Groundwater	Adult	Dermal	No
					Ingestion	No
					Inhalation	No
		Worker (Site Worker)	Surface Soil	Adult	Dermal	Yes
					Ingestion	Yes
					Inhalation	No
			Sediment	Adult	Dermal	Yes
					Ingestion	Yes
					Inhalation	No
			Surface Water	Adult	Dermal	Yes
					Ingestion	No
					Inhalation	No
			Groundwater	Adult	Dermal	Yes
					Ingestion	Yes
					Inhalation	Yes
Future	Residential	Homeowner	Surface Soil	Adult/Child	Dermal	Yes
					Ingestion	Yes
					Inhalation	No
			Sediment	Adult/Child	Dermal	Yes
					Ingestion	Yes
					Inhalation	No
			Surface Water	Adult/Child	Dermal	Yes
					Ingestion	No
					Inhalation	No
			Groundwater	Adult/Child	Dermal	Yes
					Ingestion	Yes
					Inhalation	Adult: Yes, Child: No
	Industrial	Worker (Construction Worker)	Surface/Subsurface Soil	Adult	Dermal	Yes
					Ingestion	Yes
					Inhalation	No
			Sediment	Adult	Dermal	Yes
					Ingestion	Yes
					Inhalation	No
			Surface Water	Adult	Dermal	Yes
					Ingestion	No
					Inhalation	No
			Groundwater	Adult	Dermal	Yes
					Ingestion	Yes
					Inhalation	Yes
		Trespasser	Surface Soil	Adult	Dermal	Yes
					Ingestion	Yes
					Inhalation	No
			Sediment	Adult	Dermal	Yes
					Ingestion	Yes
					Inhalation	Yes
			Surface Water	Adult	Dermal	Yes
					Ingestion	No
					Inhalation	No
			Groundwater	Adult	Dermal	No
					Ingestion	No
					Inhalation	No

Table 3
Exposure Assumptions
St.Juliens Creek Annex
Site 2, Site 3, Site 4, and Site 5

Exposure Parameters	Current						Future														
	Surface Soil		Sediment		Surface Water		Surface Soil				Sediment				Surface Water				Groundwater		
	Adult Tresspasser	Adult Worker	Adult Tresspasser	Adult Worker	Adult Tresspasser	Adult Worker	Adult Tresspasser	Adult Worker	Adult Resident	Child Resident	Adult Tresspasser	Adult Worker	Adult Resident	Child Resident	Adult Tresspasser	Adult Worker	Adult Resident	Child Resident	Adult Resident	Adult Worker	Child Resident
Body weight (kilograms)	70[a]	70[a]	70[a]	70[a]	70[a]	70[a]	70[a]	70[a]	70[a]	15[a]	70[a]	70[a]	70[a]	15[a]	70[a]	70[a]	70[a]	15[a]	70[a]	70[a]	15[a]
Exposure time (hours/event)	NA	NA	NA	NA	1[b]	8[a]	NA	NA	NA	NA	NA	NA	NA	NA	1[b]	8[a]	2.6[c]	2.6[c]	0.2[c]	8[a]	0.2[c]
Exposure frequency (days or events/year)	52[b]	250[a]	52[b]	250[a]	52[b]	250[a]	52[b]	250[a]	350[a]	350[a]	52[b]	250[a]	350[a]	350[a]	52[b]	250[a]	350[a]	350[a]	350[a]	250[a]	350[a]
Exposure duration (years)	30[a]	25[a]	30[a]	25[a]	30[a]	25[a]	30[a]	25[a]	24[a]	6[a]	30[a]	25[a]	24[a]	6[a]	30[a]	25[a]	24[a]	6[a]	24[a]	25[a]	6[a]
Ingestion rate (liters/day)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2[a]	1[a]	2[a]
Ingestion rate (mg/day)	100[a]	100[a]	100[a]	100[a]	NA	NA	100[a]	100[a]	100[a]	200[a]	100[a]	100[a]	100[a]	200[a]	NA	NA	NA	NA	NA	NA	NA
Inhalation rate (m^3/hour)	NA	NA	NA	NA	NA	NA	NA	NA	NA	2[d]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Inhalation rate (m^3/day)	20[a]	20[a]	20[a]	20[a]	NA	NA	20[a]	20[a]	20[a]	NA	20[a]	20[a]	20[a]	NA	NA	NA	NA	NA	20[a]	20[a]	NA
Volatilization rate (m^3/kg)	NA	Calc[e]	NA	Calc[e]	NA	NA	NA	Calc[e]	NA	NA	NA	Calc[e]	NA	NA	NA	NA	NA	NA	NA	NA	NA
Particulate emission factor (m^3/kg)	NA	1.32E+09[e]	NA	1.32E+09[e]	NA	NA	NA	1.32E+09[e]	NA	NA	NA	1.32E+09[e]	NA	NA	NA	NA	NA	NA	NA	NA	NA
Skin surface area (cm^2/event)	5,800[f]	5,300[f]	5,800[f]	5,300[f]	5,800[f]	5,300[f]	5,800[f]	5,300[f]	5,800[f]	2,650[f]	5,800[f]	5,300[f]	5,800[f]	2,650[f]	5,800[f]	5,300[f]	5,800[f]	2,650[f]	5,800[f]	5,300[f]	2,650[f]

[a] USEPA. Technical Memorandum, Human Health Evaluation Manual, Supplemental Guidance: "Standard Default Exposure Factors". March 25, 1991.

[b] Assumed spend one hour one day a week at site.

[c] Derived from: USEPA. Risk Assessment Guidance for Superfund, Volume 1, Human Health Evaluation Manual (Part A).

[d] USEPA Exposure Factors Handbook. EPA/600/8-89/043. July 1989. Assumed moderate activity.

[e] USEPA. Soil Screening Guidance: User's Guide. EPA/540/R-96/018. April 1996. Volatilization rate will be calculated from this guidance for soil exposure.

[f] USEPA. Dermal Exposure Assessment: Principles and Applications. Interim Final. January 1992. Trespasser skin surface area includes hands, forearms, lower legs, neck, and head (25% of total surface area). Assume child is between six and seven years of age. Worker skin surface area includes head, hands, forearms, and lower legs.

[g] Profesional judgement.

St. Juliens Creek Risk Assessment Assumptions Document for Sites 2, 3, 4, and 5 Conference Call
November 20, 1997
Meeting Summary

Participants:

Navy-LANTDIV	Randy Jackson, Sherri Eng
Virginia Department of Environmental Quality	Devlin Harris, Pat McMurray
Gannet-Fleming (EPA Risk Assessor Consultant)	Jill Gaito
CH2M Hill	Mike Tilchin, Ronnie Warren
CDM Federal	Dave Schroeder, Susan Insetta Spielberger, Lynne France, James Romig

The purpose of the conference call was to discuss the Risk Assessment Assumptions Document prepared by CDM Federal. The conference call was held form 10:00 to 11:15. Prior to the call a copy of the Risk Assessment Assumptions Document and a copy of the conference call agenda were distributed to all participants. As the Risk Assessment Assumptions Document will not be resubmitted, these meeting minutes provide agreed upon changes to the Assumptions Document and should be used in conjunction with the Assumptions Document.

Site Descriptions/ Remedial Investigation Data Collection

Pat McMurray noted that samples were collected for dioxin analysis from only one site (Site 5). Dave Schroeder responded that the frequency of dioxin sample collection had been previously agreed upon at a meeting between Dave, Randy Jackson , Devlin Harris, and Rob Thomson (U.S. EPA). The rationale for collecting dioxin samples only from Site 5 was that there was evidence of burning of chlorinated compounds at this site. Pat also asked why only subsurface soil samples were analyzed for dioxin. Dave replied that the original ground surface of the burning grounds is below the current ground surface at Site 5. Subsurface soil samples were collected in an attempt to sample the original surface soil of Site 5.

Jill Gaito noted that only two surface water samples had been collected as part of the remedial investigation (RI). She asked if there were any plans to collect additional samples from site surface waters during non-dry conditions. Dave stated that there were currently no plans to collect additional surface water samples, however additional sampling may be considered after the RI report has been completed.

Jill also noted that oily wastes are believed to have been disposed at Site 3 and wondered if there were any plans to collect samples for total petroleum hydrocarbon (TPH) analysis. Dave responded that collection of samples for TPH analysis was in the original scope of work for the Site 3 investigation. However, it was decided in the meeting referenced in paragraph one of this section that TPH samples would not be collected at Site 3.

Jill noted that the sizes of Sites 2 and 5 were not provided in the Site Descriptions section of the Risk Assessment Assumptions Document. Jill also asked if Site 5 is grass covered. Dave responded that Site 5 is mostly covered with a mixture of gravel and soil. He also stated that the actual size of Site 5 is difficult to discern. Lynne France estimated the size of Site 2 to be approximately one acre. Dave and Randy Jackson also stated that more detailed site descriptions as well as site maps will be included in the RI report. The risk assessment will be a part of the RI document.

Sherri Eng noted that field screening for TNT was conducted and asked if there was analytical data for other explosives. Dave confirmed that field screening for TNT was conducted for "hot spot" identification only and that there was analytical data available for various explosives. Sherri also noted that listed wastes were detected at Site 5 and stressed that caution should be used when disposing of investigation-derived wastes from this area.

Randy Jackson noted that the site description of Site 4 in the Risk Assessment Assumptions Document is potentially misleading. The description states that drums of "unknown wastes and polychlorinated biphenyls (PCBs)" were disposed at the site. Randy felt that this implied that drums containing pure PCBs were disposed at the site. In reality, PCB wastes disposed at the site consisted of ballasts for fluorescent lights.

Human Health Risk Assumptions

COPC Selection

The contaminant of potential concern (COPC) selection methodology described in the Risk Assessment Assumptions Document specifies considering frequency of detection for data set reduction. Pat emphasized a cautious approach when using this technique. Susan Insetta Spielberger explained that it is likely that the small number of samples collected will preclude frequency of detection from being an issue in COPC selection. Susan also noted that the COPC selection protocols described in Norfolk Naval Base Consensus Agreement #6A (Parts 1 through 6) will be followed.

Exposure Assessment

Pat asked whether maximum and average exposure point concentrations will be used with upper bound or upper bound and average exposure assumptions. Susan indicated that maximum and average exposure point concentrations will be used with upper bound exposure assumptions.

Jill asked if EPA's new adult lead exposure model would be used as part of this risk assessment. All parties agreed that the IEUBK model will be used to assess lead exposure in children and the new EPA lead exposure model will be used to assess lead exposure in adolescents and adults. Ronnie Warren indicated that she had used the adult lead model, which addresses lead exposure from soil exposure only. Ronnie will send CDM Federal a copy of the adult lead model.

Jill also noted that the Foster and Chrotowski Shower Model should be used to evaluate exposure to volatile organic compounds while showering for adults only. It is assumed that children do not shower.

Randy provided a comment from Tim Reisch (Navy - COMNAVBASE - Activity Coordinator) regarding the proposed future land use at St. Juliens Creek. The Risk Assessment Assumptions Document states that the future use of the site is expected to remain industrial. Tim noted that there is a possibility that the sight may be converted to commercial use at some point in the future. Susan responded by saying that the future use scenario will consider residential land use, which is more conservative than commercial use.

Jill noted that in Table 2 of the Risk Assessment Assumptions Document, inhalation of sediment was considered as an exposure pathway for future trespassers, but was not considered as an exposure pathway for any other receptor populations. Susan and James Romig stated that the selection of the sediment inhalation pathway for future trespassers was made in error and that this pathway would not be considered in the risk assessment.

CDM initiated a discussion regarding the consideration of the soil to air pathway. Pat suggested screening for COPCs at all sites using the RBC soil to air screening values. If any COPCs are identified, exposure calculations should be performed. The subsurface soil to air pathway will be evaluated to account for construction worker exposure.

Jill initiated a discussion regarding the potential for swimming in surface water bodies at the St. Juliens Creek Annex. Randy stated that he did not believe the water bodies were swimmable. CDM will provide the rationale for not considering the swimmer as a receptor in the uncertainties section of the risk assessment.

Pat provided a few revisions to the ingestion rates presented in Table 3 of the Risk Assessment Assumptions Document. She stated that 50 mg/day should be used for a worker performing non-intrusive activities and 480 mg/day should be used for construction workers. CDM will confirm that the 100 mg/day used for other adults is correct.

Jill noted that Table 2 contained several adult residential exposure parameters that Gannet's subcontractor could not verify. CDM will check these values and contact Jill if clarification is necessary.

Pat also stated the 8 hour/event exposure time proposed for the adult worker for groundwater seemed to high. She suggested reducing the exposure time to 1 hour/day for this receptor for the deep aquifer. Pat also noted that the 8 hour/event exposure time to surface water for the adult worker seemed excessive.

Ronnie Warren stated that skin surface area presented in Table 3 for an adult resident exposed to groundwater seems low. She stated that the actual value should represent the surface area of an entire adult body since the exposure will occur during showering. The actual value is closer to 20,000 cm^2 than the 5,800 proposed.

Pat suggested that a groundwater exposure scenario for an excavation worker should be added. All parties agreed that the deep aquifer should be considered for this scenario.

Following this comment, CDM initiated a discussion on the water supply for the City of Chesapeake, Virginia. Randy stated that Chesapeake buys some of its water from the City of Norfolk and does have some use of the deep aquifer. Pat stated that water from the shallow aquifer is not drinkable. Randy will obtain documentation regarding the future water supply for the City of Chesapeake.

CDM initiated a discussion regarding the types of site workers that should be considered in this risk assessment. Pat suggested that two types of workers are needed for on-site consideration: a short-term (construction) type, and a long-term (groundskeeper) type. Offsite workers to possibly be considered for exposure include car washers and agricultural workers. The inclusion of these workers in the risk assessment will be determined based on contaminant migration potential.

Pat noted that Table 2 does not consider a food chain or surface water ingestion scenario. She requested that the rationale for not evaluating these two pathways be included in the risk assessment. Pat also stated that in cases where current and future scenarios are identical, it is not necessary to evaluate both scenarios.

Uncertainties

Sherri requested that the non-inclusion of a quantitative screening of metals versus background values be discussed in the uncertainties section. Randy added that a background study is being initiated at the Slag Pile Site, but will probably not be completed in time for consideration in the risk assessment document.

Discussion of Remaining Issues on CDM's Conference Call Agenda

CDM asked if there were Consensus Agreements other than #6A (Parts 1 through 6) and #6B. Devlin stated that a Consensus Agreement #6C has been completed. This Consensus Agreement pertains to the evaluation of groundwater exposures. Since the Consensus Agreements were written specifically for Norfolk Naval Base any deviations that develop when being applied to St. Juliens shall be defended in the risk assessment.

CDM asked if the Navy considered the trespasser a recreational receptor. Sherri stated that the recreational receptor at St. Juliens is a trespasser. Sherri also requested that the rationale for combining the trespasser and recreational receptor be provided in the uncertainties section of the risk assessment.

Lynne France stated that during RI field activities, children were noted in the vicinity of the site. As a result, adults, children, and adolescents will all be considered as potential trespassers.

CDM asked if surface soil contaminant concentrations should be compared to Soil Screening Levels (SSLs) protective of transfer from soil to groundwater as described in Consensus Agreement #6.A.1. Pat and Devlin both stated that given the fact that shallow groundwater at St. Juliens is close to the ground surface, SSLs should be compared to surface soil contaminant concentrations.

CDM asked if it is necessary to perform a Monte Carlo evaluation on the data. All parties agreed that a Monte Carlo simulation is not needed for this risk assessment.

CDM asked if percentage of total risk calculations are required for this risk assessment. Pat stated that the calculations are not needed as long as the risk drivers are clearly identified in the conclusion of the risk assessment.

Rob Thomson requested that CDM utilize the recently developed standard risk tables in this risk assessment. All parties agreed that the standard risk tables will be used in this risk assessment.

Action Items

- **CDM will provide EPA's recently developed standard risk tables to Gannet-Fleming.**
- **The Navy will provide CDM with any documentation regarding the future water supply of Chesapeake, VA.**
- **CH2M Hill will provide CDM with Consensus Agreement #6.C., and Gannet-Fleming with all Consensus Agreements.**
- **CH2M Hill will provide CDM with EPA's adult lead exposure model.**

APPENDIX H

Consensus Agreements

NAVAL BASE NORFOLK PARTNERSHIP
HUMAN HEALTH RISK ASSESSMENT
CONSENSUS AGREEMENT #6.A

TOPIC: Methodology Used for the Identification of Chemicals of Potential Concern

SUMMARY AND BASIS OF AGREEMENT:

The identification of Chemicals of Potential Concern (COPCs) is the first component, following data evaluation, in all human health risk assessments. For sites at Naval Base Norfolk, COPC selection shall be completed separately for each environmental medium and area of concern (if applicable) using analytical data obtained during sampling and analyitical investigations. The analytical data to be used to select COPCs in risk assessments for Naval Base Norfolk will always undergo formal third party data validation in accordance with the most recent publications of USEPA's National Functional Guidelines, in order to determine data quality and usability.

Prior to continuing summarization and discussions of the basis of this agreement, it should be noted here that the acronym *COPC* should not be confused with the acronym *COC* (which will appear later in text). The former is an acronym for the term used in Naval Base Norfolk risk assessments; the latter acronym is used in discussing USEPA Region III-established COC (contaminants of concern) screening levels, which is used as a COPC selection criterion in Naval Base Norfolk risk assessments. USEPA Region III COC screening values will be discussed in later text.

The methodology used to identify COPCs for sites at Naval Base Norfolk, which is not completely described in available regulatory guidance documents, is discussed in this consensus agreement as a hierarchal application system of selection criteria, i.e., a system consisting of distinct, hierarchal levels of selection criteria designated as (in order of significance): *Primary Criteria, Secondary Criteria and Re-Inclusion Criteria.* The application of all appropriate criteria will always be agreed upon, prior to the commencement of any risk assessment, among the Tier 1 members of the Norfolk Naval Base partnership and involved parties of risk assessment/toxicology personnel. The consensus agreements in this series describes the agreed-upon COPC identification methodology that has been adopted for sites at the Naval Base. The first of these agreements describes this COPC identification methodology in terms of the hierarchal levels of selection criteria. It should be noted that this methodology applies only to individual chemical constituents, and does not apply to the evaluation of parameters such as TPH, TOC, TOX, etc. Adopted approaches and procedures to be followed in all human health risk assessments for special-circumstances related to this overall topic, which warrant further individual consideration, are presented in the following sub-agreements:

- Consensus Agreement #6.A.1: Hierarchy of COPC Selection Criteria
- Consensus Agreement #6.A.2: Derivation of Updated Region III Risk-Based COC Screening Values
- Consensus Agreement #6.A.3: Application of Residential versus Industrial Region III Risk-Based Soil COC Screening Values
- Consensus Agreement #6.A.4: Derivation of Human Health Risk-Based COPC Selection Criteria for Chemicals Detected in Sediment Samples

NAVAL BASE NORFOLK PARTNERSHIP
HUMAN HEALTH RISK ASSESSMENT
CONSENSUS AGREEMENT #6.A
(Continued)

- Consensus Agreement #6.A.5: Elimination of Essential Nutrient Inorganics from Consideration as COPCs
- Consensus Agreement #6.A.6: Evaluation of Lead as a COPC in Soil, Groundwater and Sediment

SIGNATORIES TO THE AGREEMENT:

We the undersigned have reached the above agreement on this 7th day of August 1997.

[illegible]
Deulin Harris
Randy M Jackson
[illegible]
Harry S. Harbold
[illegible]

NAVAL BASE NORFOLK PARTNERSHIP
HUMAN HEALTH RISK ASSESSMENT
CONSENSUS AGREEMENT #6.A.1

TOPIC: Hierarchy of Chemicals of Potential Concern (COPC) Selection Criteria

SUMMARY AND BASIS OF AGREEMENT:

A hierarchal application system of selection criteria, i.e., a system consisting of distinct, hierarchal levels of selection criteria designated as (in order of significance): *Primary Criteria, Secondary Criteria and Re-Inclusion Criteria* is the first COPC identification methodology. As previously noted in consensus agreement #6.A, this methodology applies only to individual chemical constituents, and does not apply to the evaluation of parameters such as TPH, TOC, TOX, etc.

Primary Selection Criteria:

Since Naval Base Norfolk is located in the Commonwealth of Virginia, all environmental investigations and activities are conducted in accordance with guidance established by USEPA Region III (Region III) and the Commonwealth of Virginia Department of Environmental Quality (VADEQ). Therefore, the primary selection criteria to be used for identifying COPCs in environmental media being investigated at sites at Naval Base Norfolk will be the comparative analyses described in the following technical guidance, and updates, established by Region III: Selecting Exposure Routes and Contaminants of Concern, by Risk-Based Screening (SCCRBS), dated January 1993. This guidance document, which also serves as the accepted guidance recommended by VADEQ, establishes the primary COPC selection criteria as a direct comparison of maximum site-measured concentrations with Region III-derived risk-based COC (contaminants of concern) screening levels. Region III COC screening levels have been established for soil, tap water, ambient air, and fish consumption, and must be updated periodically to reflect the on-going changes in USEPA's toxicological database. The derivation of updated COC screening concentrations, which is not described in current Region III guidance, is discussed in Consensus Agreement No. 6.A.2. Other primary selection criteria have been designated for surface water and sediment media, as discussed later in this agreement. At least one exceedence of a primary comparison criterion by a site-measured chemical concentration will result in the identification of that chemical as a COPC for that environmental medium.

Region III COC screening values have been established to be health protective against both direct and indirect contact exposures to contaminated environmental media. At a minimum, it is agreed that all human health risk assessments conducted for sites at Naval Base Norfolk will consider direct contact exposures to environmental media on concern. When identifying COPCs based on direct contact exposures, it is agreed that the Region III COC screening values derived for soil, tap water, (regardless of classification), ambient air, and fish will be compared to site-measured concentrations in the manner descrined in the following items.

- Region III soil COC screening values established for industrial and/or residential land use will be compared to surface and subsurface soil data (please refer to Consensus Agreement No. 6.A.3 for use of the most appropriate values based on land use considerations).

- Region III COC screening values established for tap water will be applied to the selection of groundwater COPCs, regardless of groundwater depth or classification.

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- Region III COC screening values established for ambient air will be applied to site-measured or predicted concentrations of airborne chemicals (volatilized or particulate).

- Region III COC screening values established for fish will be compared to site-measured concentrations detected in fish tissue (data for edible fillets are considered for human consumption; whereas, data for non-edible whole body portions are not considered applicable for evaluating human consumption).

The 1993 technical SCCRBS guidance makes no provisions for identifying COPCs in surface water and sediment, and no risk-based COC screening values have been promulgated by Region III for these media. Therefore, the following items present the primary level criteria that are to be applied to the identification of COPCs in surface water and sediment.

- It shall be agreed upon, prior to the commencement of risk assessment activities, that any of the following may be used for identifying COPCs in surface water: 1) the most recent Federal Ambient Water Quality Criteria, (AWQCs) i.e., those protective of humans consuming water and organisms and those protective of humans consuming organisms only; 2) most recent Virginia Water Quality Standards, i.e., those protective of public water supplies and those protective of all other surface waters, will be compared to site-measured surface water concentrations; and, 3) any of the equations presented in USEPA's Risk Assessment Guidance for Superfund, Part A, Interim Final, dated December 1989, that are determined to be appropriate,e.g., ingestion of, and/or dermal contact with surface water while swimming. If the surface water is used as a public water supply (i.e., is a potable drinking water source), then the tap water COC screening levels will be used for comparison with maximum detected surface water concentrations. However, it should be noted that those values derived to target a cancer risk level of 1×10^{-6} will drive the the COPC selection for surface water. The following items should be considered in applying these criteria to any surface water risk assessment.

    - USEPA's Water Quality Standards Handbook, Chapter 3.1.3, dated September 1993 (EPA-823-B-93-002) recommends the periodic updating of Federal AWQCs by States, as toxicity data are updated, and presents the equations and exposure assumptions that can be used to update Federal AWQCs. However, since AWQCs are not enforceable standards, but only guidelines, it will be agreed, prior to the commencement of the risk assessment task, as to whether USEPA's established human health criteria or criteria that are newly derived by the risk assessor, will be used to evaluate human exposures to surface water. However, if all criteria are to be newly derived by the risk assessor, then the incorporation (or non-incorporation) of site-specific modifications to the equations (e.g., removal of fish ingestion terms if no fish or organisms are living in an intermittant stream) and/or exposure assumptions will be also be discussed and agreed upon prior to the commencement of risk assessment activities.

    - Regulations by The State Water Control Board of the Commonwealth of Virginia, i.e., Water Quality Standards (VR 680-21-00), promulgated in May 1992, also allows for

site-specific modifications to numerical water quality standards (WQSs). These regulations might be considered as an alternative to using the non-site-specific, established WQSs; however, the procedures for any demonstration for a site-specific WQS are restricted to a reevaluation of the bioconcentration or bioaccumulation properties of the pollutant.

- If the established Federal and State human health AWQCs and WQSs are used, the absence of an established numerical value for any constituent can be addressed by the derivation of a value by the risk assessor. However the new value must be derived using the same equations and exposure assumption used to derive the published values.

- Human health risk-based sediment screening criteria, derived specifically for Norfolk Naval Base, by the risk assessor, using the agreed-upon equations and exposure assumptions discussed in Consensus Agreement No. 6.A.4, will be compared directly to site-measured sediment concentrations.

Region III has also established risk-based concentrations, referred to as soil screening levels (SSLs), that consider indirect contact exposures to soil via air and groundwater. The Region III derivations of these criteria are currently based on the following USEPA proposed document: Soil Screening Guidance. December 1994. Office of Solid Waste and Emergency Response (available from the NTIS as document numbers 9355.4-1, PB95-965530, or EPA540/R-94/105). Recently, a 1996 version of this document has been released; however, it is agreed that the most recent versions of this document will always serve as the basis for the Region III SSLs to be used in risk assessments conducted for sites at Naval Base Norfolk. The SSLs are risk-based values that are derived using the same exposure assumptions as COC screening values, plus additional assumptions necessary for inter-media extrapolation. Although SSLs may be more applicable to the Feasibility Study (FS) process, as well as fate and transport assessments, they may be applied to the risk assessment process when indirect exposures to soil via air and groundwater exposure pathways are being considered. The SSLs will be compared to site-measured soil concentrations in the following manner (regardless of residential or industrial land use):

- SSLs protective of transfers from soil to air will be compared to site-measured surface soil concentrations in all human health risk assessments, since the inhalation of fugitive dusts emanating from soil is considered in virtually all risk assessments, provided there is little to no vegative cover or pavement. SSLs protective of transfers from soil to air will be compared to subsurface soil concentrations when a future excavation scenario is being evaluated in the risk assessment.

- SSLs protective of transfers from soil to groundwater will be compared to site-measured surface and/or subsurface soil concentrations, provided the measured depths to groundwater indicate that the groundwater is close to the ground surface (i.e., shallow), and/or soil-to-groundwater modeling is being done as part of the risk assessment. SSLs protective of transfers from soil to groundwater will be compared to site-measured subsurface soil concentrations only (and not surface soil concentrations) when the measured depths to groundwater indicate that the groundwater is far below the ground surface (i.e., deep).

Secondary Selection Criteria:

In conjunction with concentration comparisons with the primary criteria previously described, other applicable secondary selection criteria will also be considered in identifying COPCs for sites at Naval Base Norfolk. The USEPA-approved application of these criteria will be conducted in accordance with the procedures outlined in USEPA's Risk Assessment Guidance for Superfund (RAGS), Volume I, Human Health Evaluation Manual (Part A), Interim Final, dated December 1989. Secondary COPC selection criteria to be applied at sites at Norfolk Naval Base include the following items.

- A comparison of sample concentrations to concentrations detected in trip, field and laboratory blanks, to ensure that only site-related contaminants were evaluated in the quantitative estimation of human health effects. This, however, is conducted during third party data validation, in accordance with the most recent updates of USEPA's National Functional Guidelines (as discussed in the first paragraph of this agreement). The risk assessor will be aware of constituents detected in these blanks, especially those impacting the results of the risk assessment.

- Concentrations of those chemicals detected in groundwater samples for which no primary risk-based criteria are available will be compared directly to the most recent Federal Safe Drinking Water Act MCLs and action levels (excluding secondary MCLs) and/or Commonwealth of Virginia PMCLs. Athough MCLs and PMCLs are not completely risk based (since they take into account technical and economic feasibility) and are more appropriately used in the FS for determining cleanup levels, their use in the COPC selection process adds an extra degree of health conservatism.

- The history of past and present site-related activities.

- Those inorganic constituents considered to be naturally abundant, non-site related essential nutrients will automatically be screened from further consideration as COPCs for evaluation in the human health risk assessment, per the agreed-upon items contained in Consensus Agreement 6.A.5.

Re-inclusion Criteria:

Chemicals initially screened from consideration as COPCs, based on application of the primary and secondary criteria discussed above, will be re-included as COPCs for quantitative evaluation in the human health risk assessment based on the re-inclusion criteria presented in the following items.

- A chemical that was detected at concentrations below the corresponding primary criterion may be re-included as a COPC if that chemical is considered a Class A carcinogen (human carcinogen).

- A chemical that was detected in the environmental medium of interest at concentrations below the corresponding primary criterion and/or was detected at a frequency of less than five percent, may be re-included as a COPC if that chemical was retained as a COPC in one or more other investigated media; and, an analysis of environmental migration pathways indicates that a complete migration pathway(s) exists between or among those other media and the medium of interest.

NAVAL BASE NORFOLK PARTNERSHIP
HUMAN HEALTH RISK ASSESSMENT
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(Continued)

- A site-related toxic chemical that persists in the environment and exhibits the tendency to bioaccumulate will be further considered for re-inclusion as a COPC in the risk assessment.

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NAVAL BASE NORFOLK PARTNERSHIP
HUMAN HEALTH RISK ASSESSMENT
CONSENSUS AGREEMENT #6.A.2

TOPIC: Derivation of Updated Region III Risk-Based COC Screening Values

SUMMARY AND BASIS OF AGREEMENT:

The initial 1993 Region III technical guidance document entitled: Selecting Exposure Routes and Contaminants of Concern, by Risk-Based Screening (SCCRBS), as well as a subsequent document, dated March 1994, included a table of COC screening concentrations. However, since the 1994 document, there have been no further publications of COC screening concentrations. Although there have been no further Region III publications of COC screening concentrations, the guidance requiring the use of this has not changed; therefore, updated values must be derived to reflect the on-going changes in USEPA's toxicological database.

Subsequent publications of the table (i.e., Risk-Based Concentrations [RBCs] Tables) have targeted an ICR of 1×10^{-6}, but an HQ of 1.0, rather than 0.1. However, the RBCs are derived using the equations and USEPA promulgated default exposure assumptions that were used to derive the original set of COC screening concentrations. Therefore, COC values updated per changes in USEPA's toxicological database will be obtained by the risk assessor by using the carcinogenic RBCs presented in the most recent Region III RBC Tables, along with values representing the quotients resulting from dividing the accompanying noncarcinogenic RBCs by a factor of 10 (so as to target and HQ of 0.1). However, it should be noted that in lieu of regular updates of the Region III RBC Tables, the risk assessor is responsible for ensuring that all COC screening values used in any risk assessment reflect the most recent and reliable toxicological data available. The most recent and reliable toxicological data are to be acquired from the USEPA-accepted sources presented in, and in a manner consistent with Consensus Agreement #6.F (Toxicity Criteria).

SIGNATORIES TO THE AGREEMENT:

We the undersigned have reached the above agreement on this 7th day of August 1997.

Harry S. Harbold

NAVAL BASE NORFOLK PARTNERSHIP
HUMAN HEALTH RISK ASSESSMENT
CONSENSUS AGREEMENT #6.A.3

TOPIC: Application of Residential versus Industrial Region III Risk-Based Soil COC Screening Values

SUMMARY AND BASIS OF AGREEMENT:

Since risk-based soil COC screening values have been established by Region III for the protection of potentially exposed populations under both residential and industrial land use situations, the COPC selection process in a site-specific risk assessment should consider and incorporate the knowledge of land use, both at the site being evaluated, as well as in the vicinity of that site. Therefore, it is agreed upon that prior to the commencement of the human health risk assessment, the Tier 1 members of the Norfolk Naval Base partnership and involved parties of risk assessment/toxicology personnel will reach an understanding of current and future land use patterns at both the site, and in areas immediately surrounding the site. This understanding will be reached under the terms of Consensus Agreement No. 6.B: Current and Future Land Use of Sites at Naval Base Norfolk. Upon reaching this agreed-upon understanding of land use (well in advance of the commencement of the risk assessment), the aforementioned parties will then decide upon the appropriate use (or non-use) of the Region III risk-based residential versus industrial soil COC screening values as primary, site-specific selection criteria in the identification of soil (surface and/or subsurface) COPCs. The following items will serve as a basis in the process of deciding the appropriate use of residential versus industrial soil COC screening values in a site-specific risk assessment.

- Only residential soil COC values will be compared to site-measured soil concentrations if certainty exists that the future land use of the site will be residential, regardless of the known current and future land use of the surrounding areas.

- Only industrial soil COC values will be compared to site-measured soil concentrations if certainty exists that the current and future land use of the site and surrounding areas is industrial/commercial.

- Both residential and industrial soil COC values will be compared to site-measured soil concentrations if the current and/or future land use is understood to be described as anything other than the first two items presented above, or, if there is uncertainty with regard to future land use of the site and surrounding areas, even though the current land use is known. In these situations, even though both the residential and industrial soil COC values are compared to site-measured soil concentrations, the former are more health conservative than the latter, and will therefore, actually determine the soil COPCs to be evaluated in the human health risk assessment. It should be noted though that in this situation, even though both sets of soil COC values are utilized, risks will only be estimated for COPCs identified based on comparisons with the residential values.

SIGNATORIES TO THE AGREEMENT:

We the undersigned have reached the above agreement on this 7th day of August 1997.

Dewlin Harris
Randy M Jackson
Harry S. Harbold

NAVAL BASE NORFOLK PARTNERSHIP
HUMAN HEALTH RISK ASSESSMENT
CONSENSUS AGREEMENT #6.A.4

TOPIC: Derivation of Human Health Risk-Based COPC Selection Criteria for Chemicals Detected in Sediment Samples

SUMMARY AND BASIS OF AGREEMENT:

The 1993 technical SCCRBS guidance makes no provisions for identifying COPCs in sediment, and no risk-based COC screening values have been promulgated by Region III for this medium. Although sediment criteria have been promulgated by USEPA for the protection of ecological receptors, these are not applicable for use in a human health risk assessment.

Therefore, it is agreed that the primary selection criteria for the identification of COPCs in sediment will be a set of human health risk-based sediment screening criteria, to be derived specifically for Norfolk Naval Base by the risk assessor(s) conducting the evaluation. In most human health risk assessments conducted for sites at Naval Base Norfolk, the human health risks associated with sediment have been assessed primarily by evaluating potential exposures to adult and adolescent (ages 7 to 15 years old) recreational users. Under the recreational scenario, application of the adolescent exposure assumptions typically results in a more health conservative screening value for noncarcinogens; whereas, the application of the adult exposure assumptions typically results in a more health conservative screening value for carcinogens. Therefore, the adult and adolescent recreational user scenarios, in conjunction with the agreed-upon equations (the equations used by Region III for the calculation of commercial/industrial soil RBCs) and the exposure assumptions presented below, will be used to derive a set of human health risk-based sediment COC screening values that will be compared directly to site-measured sediment concentrations of carcinogens and noncarcinogens, respectively. Age-adjusting is not necessary since the same ingestion rate is assumed for both the adult and the adolescent. As is the case with all other primary COPC selection criteria (please refer to Consensus Agreement No. 6.A.1), at least one exceedence of a sediment COC screening value by a site-measured chemical concentration will result in the identification of that chemical as a sediment COPC.

The following are the sediment exposure assumptions (i.e., numerical inputs) to be assigned to the variables in the soil RBC equation for calculation of sediment COC screening values for Naval Base Norfolk:

<u>Adults (Carcinogenic Exposures)</u>

Target cancer risk (TR) = 1.0×10^{-6}
Adult body weight (BWa) = 70 kg
Averaging time (ATa) = 25,550 days
Exposure frequency (EF) = 100 days/year
Exposure duration (EDa) = 30 years
Sediment ingestion rate (IRa) = 100 mg/day
Fraction of contaminated sediment (FC) = 0.5
Oral cancer slope factor (CPSo) = chemical specific

<u>Adolescents (Noncarcinogenic Exposures)</u>

Target hazard quotient (THQ) = 0.1
Adolescent body weight (BWad) = 37 kg
Averaging time (ATad) = 3,285 days
Exposure frequency (EF) = 100 days/year
Exposure duration (EDad) = 9 years
Sediment ingestion rate (IRad) = 100 mg/day
Fraction of contaminated sediment (FC) = 0.5
Oral reference dose (RfDo) = chemical specific

NAVAL BASE NORFOLK PARTNERSHIP
HUMAN HEALTH RISK ASSESSMENT
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SIGNATORIES TO THE AGREEMENT:

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NAVAL BASE NORFOLK PARTNERSHIP
HUMAN HEALTH RISK ASSESSMENT
CONSENSUS AGREEMENT #6.A.5

TOPIC: Elimination of Essential Nutrient Inorganics from Consideration as COPCs

SUMMARY AND BASIS OF AGREEMENT:

Certain inorganic constituents, i.e., calcium, magnesium, potassium, and sodium, are considered essential nutrients. It is agreed that all detected inorganics that are considered essential nutrients, unless they are site-related, will not be evaluated in any human health risk assessment as COPCs, based on the following items:

- essential nutrient have inherently low toxicities;
- essential nutrients are naturally abundant in the earth's crust; and
- no information is available with regard to toxicity criteria established for calcium, magnesium, potassium, and sodium in USEPA's toxicological database (IRIS) due to low confidence in studies.

Even though there are no primary selection criteria available for the four inorganics discussed in this consensus agreement, U.S. Food and Drug Administration criteria for recommended daily allowances (RDAs) in dietary intake will be used as the basis for comparison with site-measured concentrations. In the event that exceedences of the RDA-based values by site-measured concentrations are observed, the Tier 1 members of the Norfolk Naval Base partnership and involved parties of risk assessment/toxicology personnel will decide and agree upon the proper course of action to be taken toward evaluation, or non-evaluation, of essential nutrients in the human health risk assessment.

SIGNATORIES TO THE AGREEMENT:

We the undersigned have reached the above agreement on this 7th day of August 1997.

NAVAL BASE NORFOLK PARTNERSHIP
HUMAN HEALTH RISK ASSESSMENT
CONSENSUS AGREEMENT #6.A.6

TOPIC: Evaluation of Lead as a COPC in Soil, Groundwater and Sediment

SUMMARY AND BASIS OF AGREEMENT:

Currently, no risk-based COC screening values are established, or can be established for comparison with lead concentrations detected in soil, groundwater and sediment, due to the inavailability of applicable toxicity criteria (i.e., cancer slope factors and reference doses). Therefore, until the establishment of such criteria, it is agreed that the following will serve as primary COPC selection criteria for lead in those media:

- Groundwater - USEPA's drinking water action level of 15 µg/L
- Soil and sediment - USEPA's residential soil criterion of 400 mg/kg.

Also, until the establishment of USEPA-approved toxicity criteria, the identification of lead as a COPC will result in the evaluation of the potential for the occurrence of adverse health effects in exposed individuals by use of the most recent version of USEPA's Lead Bio-Uptake Model (please refer to Consensus Agreement No. 6.G: Risk Characterization Issues).

SIGNATORIES TO THE AGREEMENT:

We the undersigned have reached the above agreement on this 7th day of August 1997.

NAVAL BASE NORFOLK PARTNERSHIP
HUMAN HEALTH RISK ASSESSMENT
CONSENSUS AGREEMENT #6.B

TOPIC: Current and Future Land Use of Sites at Naval Base Norfolk

SUMMARY AND BASIS OF AGREEMENT:

Both the current and future land use of each site identified at Naval Base Norfolk should be considered individually, but in the context of being part of an operating naval base for which there are no plans for closure. This site-specific consideration of land use is consistent with the following USEPA guidance documents: National Oil and Hazardous Substances Pollution Contingency Plan (1990); Risk Assessment Guidance for Superfund (RAGS), Volume I. Human Health Evaluation Manual (Part A), Interim Final (1989); and Guidance on Land Use in the CERCLA Process (1995). Land use for those sites, and adjacent areas, that are within the boundaries and jurisdiction of the Naval Base are guided by the policies and plans set forth in the document entitled Naval Base Norfolk 2010 Land Use Plan, dated August 1995 (U.S. Navy, 1995). The basis for the development and evaluation of appropriate, site-specific exposure scenarios applicable to all investigated environmental media, as well as the subsequent derivation of risk-based cleanup goals, if necessary, that are protective of human health under the identified land use pattern(s) will be stated in the risk assessment, as well as in the signed Record of Decision (ROD), with a reference to the Naval Base Norfolk 2010 Land Use Plan. This land use plan, COMNAVBASENORVA INST 11011.10B, and COMNAVBASENORVA INST 11011.12D state the policy and mechanisms to ensure that changes in land use impacting a previously evaluated and/or remediated site will be identified, and that proper action will be taken to address the change in land use at the site.

For sites where future land use is uncertain or not outlined in the Naval Base Norfolk 2010 Land Use Plan, then early discussions among members of the Naval Base Partnership, with input from the USEPA Region III, the Commonwealth of Virginia Department of Environmental Quality (VADEQ) and Navy risk assessment contractor(s), will determine the reasonably anticipated use of the site(s), prior to the commencement of risk assessment tasks. Such early discussions will provide an agreed-upon focus for the development of the risk assessment and subsequent remedial objectives. However, sufficient uncertainty associated with some sites may warrant consideration and subsequent analyses of several land use alternatives in the risk assessment.

It is also understood that the environmental medium allotted the greatest consideration with regard to land use at a particular site and surrounding area, is groundwater. Land use patterns guided by the aforementioned policies and partnership discussions with input from the regulatory agencies, in conjunction with available information regarding natural quality, hydrogeological characteristics and the presence or absence of groundwater use restrictions imposed by local government entities, will influence the evaluation of potential current and future groundwater exposures via potable/non-potable use scenarios. The evaluation of groundwater exposure scenarios in the human health risk assessment are addressed in Consensus Agreement 6.C.

NAVAL BASE NORFOLK PARTNERSHIP
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Any decisions reached pertaining to future land use are predicated on Naval Base assurance through appropriate policies and guidance provided to the Partnership that land use patterns to which sites will be remediated cannot be altered without review of the future protectiveness of the newly designated land use by the Naval Base and the regulators (USEPA Region III, the VADEQ and other appropriate agencies). When sites are assessed for or remediated to concentrations that are protective of individuals under any land use scenario other than unrestricted use (i.e., residential use), and the Naval Base proposes a change in land use at that site, or property adjacent to that site, the Naval Base will immediately notify the regulators. The Naval Base will assess any proposed change in land use for protectiveness against the original or planned cleanup goals and will consult with the regulators regarding such an evaluation. No change in land use will be implemented without regulator concurrence that the original or planned remedy will remain human health protective, or unless the Naval Base first remediates site contaminants to lower concentrations corresponding to the proposed change.

SIGNATORIES TO THE AGREEMENT:

We the undersigned have reached the above agreement on this day of September 1997.

APPENDIX I

Site 3 Risk Tables

TABLE 1

SELECTION OF EXPOSURE PATHWAYS

St. Julien's Creek - Landfill C (Site 3)

Scenario Timeframe	Medium	Exposure Medium	Exposure Point	Receptor Population	Receptor Age	Exposure Route	On-Site/ Off-Site	Type of Analysis	Rationale for Selection or Exclusion of Exposure Pathway
Current	Surface Soil	Surface Soil	Onsite	Trespasser	Adult	Dermal	On-Site	Quant	Trespassers may have exposed skin surfaces come into contact with soil
						Ingestion	On-Site	Quant	Trespassers may incidentally ingest soil
					Child	Dermal	On-Site	Quant	Trespassers may have exposed skin surfaces come into contact with soil
						Ingestion	On-Site	Quant	Trespassers may incidentally ingest soil
					Adolescent	Dermal	On-Site	Quant	Trespassers may have exposed skin surfaces come into contact with soil
						Ingestion	On-Site	Quant	Trespassers may incidentally ingest soil
	Subsurface Soil	Deep Groundwater	Tap Water	Resident	Adult	Dermal	Off-Site	Quant	Local municipality currently has some uses for groundwater from deep aquifer
						Ingestion	Off-Site	Quant	Local municipality currently has some uses for groundwater from deep aquifer
				Resident	Child	Dermal	Off-Site	Quant	Local municipality currently has some uses for groundwater from deep aquifer
						Ingestion	Off-Site	Quant	Local municipality currently has some uses for groundwater from deep aquifer
	Groundwater	Deep Groundwater	Tap Water	Resident	Adult	Dermal	Off-Site	Quant	Local municipality currently has some uses for groundwater from deep aquifer
						Inhalation	Off-Site	Quant	Local municipality currently has some uses for groundwater from deep aquifer
						Ingestion	Off-Site	Quant	Local municipality currently has some uses for groundwater from deep aquifer
				Resident	Child	Dermal	Off-Site	Quant	Local municipality currently has some uses for groundwater from deep aquifer
						Ingestion	Off-Site	Quant	Local municipality currently has some uses for groundwater from deep aquifer
	Sediment	Sediment	Onsite	Trespasser	Adult	Dermal	On-Site	Quant	Trespassers may have exposed skin surfaces come into contact with sediment
						Ingestion	On-Site	Quant	Trespassers may incidentally ingest sediment
					Child	Dermal	On-Site	Quant	Trespassers may have exposed skin surfaces come into contact with sediment
						Ingestion	On-Site	Quant	Trespassers may incidentally ingest sediment
					Adolescent	Dermal	On-Site	Quant	Trespassers may have exposed skin surfaces come into contact with sediment
						Ingestion	On-Site	Quant	Trespassers may incidentally ingest sediment
Future	Surface Soil	Surface Soil	Onsite	Resident	Adult	Dermal	On-Site	Quant	Residents may have exposed skin surfaces come into contact with soil
						Ingestion	On-Site	Quant	Residents may incidentally ingest soil
					Child	Dermal	On-Site	Quant	Residents may have exposed skin surfaces come into contact with soil
						Ingestion	On-Site	Quant	Residents may incidentally ingest soil
				Construction Worker	Adult	Dermal	On-Site	Quant	Workers may have exposed skin surfaces come into contact with soil
						Ingestion	On-Site	Quant	Workers may incidentally ingest soil
				Groundskeeper	Adult	Dermal	On-Site	Quant	Workers may have exposed skin surfaces come into contact with soil
						Ingestion	On-Site	Quant	Workers may incidentally ingest soil
		Deep Groundwater	Onsite	Construction Worker	Adult	Dermal	On-Site	Quant	Workers may have exposed skin surfaces come into contact with groundwater
		Shallow Groundwater	Onsite	Groundskeeper	Adult	Dermal	On-site	Quant	Workers may have exposed skin surfaces come into contact with groundwater
		Air	Onsite	Construction Worker	Adult	Inhalation	On-Site	Quant	Workers may inhale volatiles/particulates
	Subsurface Soil	Subsurface Soil	Onsite	Construction Worker	Adult	Dermal	On-Site	Quant	Workers may have exposed skin surfaces come into contact with soil
						Ingestion	On-Site	Quant	Workers may incidentally ingest soil
		Air	Onsite	Construction Worker	Adult	Inhalation	Off-Site	Quant	Workers may inhale volatiles
	Sediment	Sediment	Onsite	Resident	Adult	Dermal	On-Site	Quant	Residents may have exposed skin surfaces come into contact with sediment
						Ingestion	On-Site	Quant	Residents may incidentally ingest sediment
					Child	Dermal	On-Site	Quant	Residents may have exposed skin surfaces come into contact with sediment
						Ingestion	On-Site	Quant	Residents may incidentally ingest sediment
	Groundwater	Deep Groundwater	Onsite	Construction Worker	Adult	Dermal	On-site	Quant	Workers may have exposed skin surfaces come into contact with groundwater
		Shallow Groundwater	Onsite	Groundskeeper	Adult	Dermal	On-Site	Quant	Workers may have exposed skin surfaces come into contact with groundwater

Site 3

Data Usability Worksheets

DATA USEABILITY WORKSHEET
Site: St. Juliens Creek, Landfill C (Site 3)
Medium: Groundwater

Requirement	Comment
Field Sampling	
Discuss sampling problems and field conditions that affect data useability.	No sampling problems were noted during the groundwater investigation at Site 3.
Are samples representative of receptor exposure for this medium (e.g. sample depth, grab vs composite, filtered vs unfiltered, low flow, etc.)?	Grab samples were collected from six monitoring wells. These samples are usable for consideration for direct exposure to current residents and future site workers.
Assess the effect of field QC results on data useability.	Field QC samples included trip blanks, field blanks, equipment rinsate blanks, and duplicates. The trip blank that was collected for this group of samples is TB-180797. The field blanks associated with this group of samples are FB-230697-TAP and FB-230697-DI. The equipment rinsate blanks associated with this group of samples is EB-180797-GW, EB-240797-GW and EB-240797F-GW. Blank contamination is discussed under "Representativeness" and duplicate results are discussed under "Precision."
Summarize the effect of field sampling issues on the risk assessment, if applicable.	Field sampling issues will have no effect on the groundwater risk assessment for Site 3.
Analytical Techniques	
Were the analytical methods appropriate for quantitative risk assessment?	Analyses were conducted in accordance with the EPA CLP organic and inorganic Statements of Work.
Were detection limits adequate?	Sample quantitation limits for some undetected compounds were above tap water RBCs in all samples. This issue will be discussed further in the uncertainty section of the risk assessment.
Summarize the effect of analytical technique issues on the risk assessment, if applicable.	See above comment.

EXHIBIT 3-3

DATA USEABILITY WORKSHEET (continued)
Site: St. Juliens Creek, Landfill C (Site 3)
Medium: Groundwater

Requirement	Comment
Data Quality Objectives	
Precision - How were duplicates handled?	The highest concentration of a compound detected in the duplicate samples was used in the risk assessment.
Accuracy - How were split samples handled?	Not applicable.
Representativeness - Indicate any problems associated with data representativeness (e.g., trip blank or rinsate blank contamination, chain of custody problems, etc.).	Acetone, aluminum, antimony, barium, bis(2-ethylhexyl)phthalate, bromodichloromethane, chloroform, copper, lead, magnesium, mercury, methylene chloride, nickel, silver, and zinc were detected in the various blanks. Analytes qualified with a "B" due to blank contamination will be considered as non-detects during the risk assessment.
Completeness - Indicate any problems associated with data completeness (e.g., incorrect sample analysis, incomplete sample records, problems with field procedures, etc.).	No problems noted
Comparability - Indicate any problems associated with data comparability.	No problems noted.
Were the DQOs specified in the QAPP satisfied?	Relative percent difference for the dissolved metals was above the stated goal of <20%.
Summarize the effect of DQO issues on the risk assessment, if applicable.	RPD goal was not satisfied for the dissolved metals fraction. The calculated RPD of 29% for these samples does not negatively effect the usability of the data.

EXHIBIT 3-3

DATA USEABILITY WORKSHEET (continued)
Site: St. Juliens Creek, Landfill C (Site 3)
Medium: Groundwater

Requirement	Comment
Data Validation and Interpretation	
What are the data validation requirements for this region?	For organic samples, validators are required to check the following items: holding times, instrument performance checks, initial calibrations, continuing calibrations, blanks, system monitoring compounds, matrix spikes/matrix spike duplicates, regional QA/QC, internal standards, target compound identification, contract required quantitation limits, tentatively identified compounds, system performance, and overall assessment of data. For organic samples, validators are required to check holding times, calibration, blanks, interference checks, laboratory control samples, duplicate samples, matrix spike samples, furnace atomic absorption QC, ICP Serial Dilution, sample result verification, field duplicates, and perform an overall assessment of the data.
What method or guidance was used to validate the data?	Region III modifications to "Laboratory Data Validation Functional Guidelines for Validating Organic (and Inorganic) Analyses", USEPA 9/94 (and 4/93).
Was the data validation method consistent with regional guidance? Discuss any discrepancies.	The data validation method appears to be consistent with regional guidance
Were all data qualifiers defined? Discuss those which were not.	All data qualifiers were defined.
Which qualifiers represent useable data?	B, J, K, L ,U, UJ ,UK, UL

EXHIBIT 3-3

DATA USEABILITY WORKSHEET (continued)
Site: St. Juliens Creek, Landfill C (Site 3)
Medium: Groundwater

Requirement	Comment
Which qualifiers represent unusable data?	R
How are tentatively identified compounds handled?	All TICs were reported with "J" qualifiers to indicate that they are quantitative estimates. Only TICs that were determined not to be laboratory or field artifacts were reported.
Summarize the effect of data validation and interpretation issues on the risk assessment, if applicable.	Not applicable.
Additional notes:	

Note: The purpose of this Worksheet is to succinctly summarize the data useability analysis and conclusions. Reference specific pages in the Risk Assessment text to further expand on the information presented here.

DATA USEABILITY WORKSHEET
Site: St. Juliens Creek, Landfill C (Site 3)
Medium: Surface Soil

Requirement	Comment
Field Sampling	
Discuss sampling problems and field conditions that affect data useability.	No sampling problems were noted during the surface soil investigation at Site 3.
Are samples representative of receptor exposure for this medium (e.g. sample depth, grab vs composite, filtered vs unfiltered, low flow, etc.)?	Samples were collected from depths ranging from 0-1' at Site 3. These depths are usable for consideration for contaminant transfer to groundwater, transfer to air, and also direct exposure for residents, trespassers, construction workers, and groundskeepers. Samples were collected using a stainless steel spoon and bowl.
Assess the effect of field QC results on data useability.	Field QC samples included trip blanks, field blanks, equipment rinsate blanks, and duplicates. The trip blank that applies to this group of samples is TB-230697. Field blanks that apply to this group of samples include FB-230697-TAP and FB-230697-DI. The equipment rinsate blank that applies to this group of samples is EB-230697-SS. Blank contamination is discussed under "Representativeness" and duplicate results are discussed under "Precision."
Summarize the effect of field sampling issues on the risk assessment, if applicable.	Field sampling issues will have no effect on the surface soil risk assessment for Site 3.
Analytical Techniques	
Were the analytical methods appropriate for quantitative risk assessment?	Analyses were conducted in accordance with the EPA CLP organic and inorganic Statements of Work.
Were detection limits adequate?	Sample quantitation limits for numerous undetected compounds were above soil to groundwater and soil to air SSLs and residential soil RBCs in all samples. This issue will be discussed further in the uncertainty section of the risk assessment.
Summarize the effect of analytical technique issues on the risk assessment, if applicable.	See above comment.

EXHIBIT 3-3

DATA USEABILITY WORKSHEET (continued)
Site: St. Juliens Creek, Landfill C (Site 3)
Medium: Surface Soil

Requirement	Comment
Data Quality Objectives	
Precision - How were duplicates handled?	The highest concentration of a compound detected in the duplicate samples was used in the risk assessment.
Accuracy - How were split samples handled?	Not applicable.
Representativeness - Indicate any problems associated with data representativeness (e.g., trip blank or rinsate blank contamination, chain of custody problems, etc.).	Acetone , methylene chloride, aluminum, barium, zinc, carbon disulfide, antimony, lead, silver, bromodichloromethane, copper, and magnesium were detected in the various blanks. Analytes qualified with a "B" due to blank contamination will be considered as non-detects during the risk assessment.
Completeness - Indicate any problems associated with data completeness (e.g., incorrect sample analysis, incomplete sample records, problems with field procedures, etc.).	No problems noted.
Comparability - Indicate any problems associated with data comparability.	No problems noted.
Were the DQOs specified in the QAPP satisfied?	Yes. Relative percent difference was below the stated goal of <25%.
Summarize the effect of DQO issues on the risk assessment, if applicable.	Not applicable.

EXHIBIT 3-3

DATA USEABILITY WORKSHEET (continued)
Site: St. Juliens Creek, Landfill C (Site 3)
Medium: Surface Soil

Requirement	Comment
Data Validation and Interpretation	
What are the data validation requirements for this region?	For organic samples, validators are required to check the following items: holding times, instrument performance checks, initial calibrations, continuing calibrations, blanks, system monitoring compounds, matrix spikes/matrix spike duplicates, regional QA/QC, internal standards, target compound identification, contract required quantitation limits, tentatively identified compounds, system performance, and overall assessment of data. For organic samples, validators are required to check holding times, calibration, blanks, interference checks, laboratory control samples, duplicate samples, matrix spike samples, furnace atomic absorption QC, ICP Serial Dilution, sample result verification, field duplicates, and perform an overall assessment of the data.
What method or guidance was used to validate the data?	"Region III Modifications to"Laboratory Data Validation Functional Guidelines for Validating Organic (and Inorganic) Analyses", USEPA 9/94 (and 4/93).
Was the data validation method consistent with regional guidance? Discuss any discrepancies.	The data validation method appears to be consistent with regional guidance.
Were all data qualifiers defined? Discuss those which were not.	All data qualifiers were defined.
Which qualifiers represent useable data?	B, J, K, L ,U, UJ ,UK, UL

EXHIBIT 3-3

DATA USEABILITY WORKSHEET (continued)
Site: St. Juliens Creek, Landfill C (Site 3)
Medium: Surface Soil

Requirement	Comment
Which qualifiers represent unusable data?	R
How are tentatively identified compounds handled?	All TICs were reported with "J" qualifiers to indicate that they are quantitative estimates. Only TICs that were determined not to be laboratory or field artifacts were reported.
Summarize the effect of data validation and interpretation issues on the risk assessment, if applicable.	Not applicable.
Additional notes:	

Note: The purpose of this Worksheet is to succinctly summarize the data useability analysis and conclusions. Reference specific pages in the Risk Assessment text to further expand on the information presented here.

DATA USEABILITY WORKSHEET
Site: St. Juliens Creek, Landfill C (Site 3)
Medium: Subsurface Soil

Requirement	Comment
Field Sampling	
Discuss sampling problems and field conditions that affect data useability.	No sampling problems were noted during the subsurface investigation at Site 3.
Are samples representative of receptor exposure for this medium (e.g. sample depth, grab vs composite, filtered vs unfiltered, low flow, etc.)?	Samples were collected from depths ranging from 0-4' at Site 3. These depths are usable for consideration for contaminant transfer to the deep groundwater aquifer, transfer to air during an excavation scenario, and also direct exposure for construction workers in an excavation scenario. Samples were collected using either a direct push sample barrel or a split spoon sampler.
Assess the effect of field QC results on data useability.	Field QC samples included trip blanks, field blanks, equipment rinsate blanks, and duplicates. Trip blanks that apply to this group of samples include TB-230697 and TB-250697. Field blanks that apply to this group of samples include FB-230697-TAP and FB-230697-DI. Equipment rinsate blanks that apply to this group of samples include EB-230697-SB and EB-250697-SB. Blank contamination is discussed under "Representativeness" and duplicate results are discussed under "Precision."
Summarize the effect of field sampling issues on the risk assessment, if applicable.	Field sampling issues will have no effect on the subsurface soil risk assessment for Site 3.
Analytical Techniques	
Were the analytical methods appropriate for quantitative risk assessment?	Analyses were conducted in accordance with the EPA CLP organic and inorganic Statements of Work.
Were detection limits adequate?	Sample quantitation limits for numerous undetected compounds were above soil to groundwater and soil to air SSLs and residential soil RBCs in all samples. This issue will be discussed further in the uncertainty section of the risk assessment.
Summarize the effect of analytical technique issues on the risk assessment, if applicable.	See above comment.

EXHIBIT 3-3

DATA USEABILITY WORKSHEET (continued)
Site: St. Juliens Creek, Landfill C (Site 3)
Medium: Subsurface Soil

Requirement	Comment
Data Quality Objectives	
Precision - How were duplicates handled?	The highest concentration of a compound detected in the duplicate samples was used in the risk assessment.
Accuracy - How were split samples handled?	Not applicable.
Representativeness - Indicate any problems associated with data representativeness (e.g., trip blank or rinsate blank contamination, chain of custody problems, etc.).	Acetone, antimony, barium, bromodichloromethane, carbon disulfide, chloroform, copper, chromium, lead, nickel, silver, vanadium, zinc, bis(2-ethylhexyl)phthalate, and methylene chloride were detected in the various blanks. Analytes qualified with a "B" due to blank contamination will be considered as non-detects during the risk assessment.
Completeness - Indicate any problems associated with data completeness (e.g., incorrect sample analysis, incomplete sample records, problems with field procedures, etc.).	No problems noted.
Comparability - Indicate any problems associated with data comparability.	No problems noted.
Were the DQOs specified in the QAPP satisfied?	No. Relative percent difference (RPD) was above the stated goal of <25%. No MS/MSD analysis was performed for the organic and inorganic fractions of the sample delivery group containing SB-03 and SB-04.
Summarize the effect of DQO issues on the risk assessment, if applicable.	RPD goal was not satisfied. However, soil samples routinely have RPDs up to 100% (RPDs for the duplicate samples were under 100%) and still not negatively impact the usability of the data. No MS/MSD analysis was performed for the organic and inorganic fractions of the sample delivery group containing SB-03 and SB-04. Therefore, no assessment of the data quality could be performed due to lack of MS/MSD results.

EXHIBIT 3-3

DATA USEABILITY WORKSHEET (continued)
Site: St. Juliens Creek, Landfill C (Site 3)
Medium: Subsurface Soil

Requirement	Comment
Data Validation and Interpretation	
What are the data validation requirements for this region?	For organic samples, validators are required to check the following items: holding times, instrument performance checks, initial calibrations, continuing calibrations, blanks, system monitoring compounds, matrix spikes/matrix spike duplicates, regional QA/QC, internal standards, target compound identification, contract required quantitation limits, tentatively identified compounds, system performance, and overall assessment of data. For organic samples, validators are required to check holding times, calibration, blanks, interference checks, laboratory control samples, duplicate samples, matrix spike samples, furnace atomic absorption QC, ICP Serial Dilution, sample result verification, field duplicates, and perform an overall assessment of the data.
What method or guidance was used to validate the data?	"Region III Modifications to"Laboratory Data Validation Functional Guidelines for Validating Organic (and Inorganic) Analyses", USEPA 9/94 (and 4/93).
Was the data validation method consistent with regional guidance? Discuss any discrepancies.	The data validation method appears to be consistent with regional guidance.
Were all data qualifiers defined? Discuss those which were not.	All data qualifiers were defined.
Which qualifiers represent useable data?	B, J, K, L ,U, UJ ,UK, UL

EXHIBIT 3-3

DATA USEABILITY WORKSHEET (continued)
Site: St. Juliens Creek, Landfill C (Site 3)
Medium: Subsurface Soil

Requirement	Comment
Which qualifiers represent unusable data?	R
How are tentatively identified compounds handled?	All TICs were reported with "J" qualifiers to indicate that they are quantitative estimates. Only TICs that were determined not to be laboratory or field artifacts were reported.
Summarize the effect of data validation and interpretation issues on the risk assessment, if applicable.	Not applicable.
Additional notes:	

Note: The purpose of this Worksheet is to succinctly summarize the data useability analysis and conclusions. Reference specific pages in the Risk Assessment text to further expand on the information presented here.

DATA USEABILITY WORKSHEET
Site: St. Juliens Creek, Landfill C (Site 3)
Medium: Sediment

Requirement	Comment
Field Sampling	
Discuss sampling problems and field conditions that affect data useability.	No sampling problems were noted during the sediment investigation at Site 3.
Are samples representative of receptor exposure for this medium (e.g. sample depth, grab vs composite, filtered vs unfiltered, low flow, etc.)?	Grab samples were collected from depths ranging from 0-1' at Site 3. These samples are usable for consideration for direct exposure to current trespassers and future residents.
Assess the effect of field QC results on data useability.	Field QC samples included trip blanks, field blanks, equipment rinsate blanks, and duplicates. The trip blank that was collected for this group of samples is TB-260697 and TB-140797. The field blanks associated with this group of samples are FB-230697-TAP and FB-230697-DI. The equipment rinsate blanks associated with this group of samples is EB-260697 and EB-140797-SD. Blank contamination is discussed under "Representativeness" and duplicate results are discussed under "Precision."
Summarize the effect of field sampling issues on the risk assessment, if applicable.	Field sampling issues will have no effect on the sediment risk assessment for Site 3.
Analytical Techniques	
Were the analytical methods appropriate for quantitative risk assessment?	Analyses were conducted in accordance with the EPA CLP organic and inorganic Statements of Work.
Were detection limits adequate?	Detection limits appear to be adequate.
Summarize the effect of analytical technique issues on the risk assessment, if applicable.	Not applicable.

EXHIBIT 3-3

DATA USEABILITY WORKSHEET (continued)
Site: St. Juliens Creek, Landfill C (Site 3)
Medium: Sediment

Requirement	Comment
Data Quality Objectives	
Precision - How were duplicates handled?	The highest concentration of a compound detected in the duplicate samples was used in the risk assessment.
Accuracy - How were split samples handled?	Not applicable.
Representativeness - Indicate any problems associated with data representativeness (e.g., trip blank or rinsate blank contamination, chain of custody problems, etc.).	Barium, bis(2-ethylhexyl)phthalate, bromodichloromethane, chloroform, copper, lead, magnesium, methylene chloride, nickel, silver, and zinc were detected in the various blanks. Analytes qualified with a "B" due to blank contamination will be considered as non-detects during the risk assessment.
Completeness - Indicate any problems associated with data completeness (e.g., incorrect sample analysis, incomplete sample records, problems with field procedures, etc.).	No problems noted
Comparability - Indicate any problems associated with data comparability.	No problems noted.
Were the DQOs specified in the QAPP satisfied?	Relative percent difference for pesticides/PCBs was above the stated goal of <25%.
Summarize the effect of DQO issues on the risk assessment, if applicable.	RPD goal was not satisfied for the pesticide/PCB fraction. However, sediment samples routinely have RPDs up to 100% and still have minimal effect on the usability of the data. The calculated RPD of 38% for these samples does not negatively effect the usability of the data.

EXHIBIT 3-3

DATA USEABILITY WORKSHEET (continued)
Site: St. Juliens Creek, Landfill C (Site 3)
Medium: Sediment

Requirement	Comment
Data Validation and Interpretation	
What are the data validation requirements for this region?	For organic samples, validators are required to check the following items: holding times, instrument performance checks, initial calibrations, continuing calibrations, blanks, system monitoring compounds, matrix spikes/matrix spike duplicates, regional QA/QC, internal standards, target compound identification, contract required quantitation limits, tentatively identified compounds, system performance, and overall assessment of data. For organic samples, validators are required to check holding times, calibration, blanks, interference checks, laboratory control samples, duplicate samples, matrix spike samples, furnace atomic absorption QC, ICP Serial Dilution, sample result verification, field duplicates, and perform an overall assessment of the data.
What method or guidance was used to validate the data?	Region III modifications to "Laboratory Data Validation Functional Guidelines for Validating Organic (and Inorganic) Analyses", USEPA 9/94 (and 4/93).
Was the data validation method consistent with regional guidance? Discuss any discrepancies.	The data validation method appears to be consistent with regional guidance
Were all data qualifiers defined? Discuss those which were not.	All data qualifiers were defined.
Which qualifiers represent useable data?	B, J, K, L ,U, UJ ,UK, UL

EXHIBIT 3-3

DATA USEABILITY WORKSHEET (continued)
Site: St. Juliens Creek, Landfill C (Site 3)
Medium: Sediment

Requirement	Comment
Which qualifiers represent unusable data?	R
How are tentatively identified compounds handled?	All TICs were reported with "J" qualifiers to indicate that they are quantitative estimates. Only TICs that were determined not to be laboratory or field artifacts were reported.
Summarize the effect of data validation and interpretation issues on the risk assessment, if applicable.	Not applicable.
Additional notes:	

Note: The purpose of this Worksheet is to succinctly summarize the data useability analysis and conclusions. Reference specific pages in the Risk Assessment text to further expand on the information presented here.

Site 3

Deep Groundwater Current/Future

TABLE 2.1
OCCURRENCE, DISTRIBUTION AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN
St. Juliens Creek - Landfill C (Site 3)

Scenario Timeframe: Current/Future
Medium: Deep Groundwater
Exposure Medium: Groundwater
Exposure Point: Tap Water

CAS Number	Chemical	Minimum Concentration	Minimum Qualifier	Maximum Concentration	Maximum Qualifier	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration Used for Screening	Background Value	Screening Toxicity Value (1)	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag	Rationale for Contaminant Deletion or Selection (2)
7440393	Barium	46.6	J	49.1	J	ug/l	GW-2D	2/2	1-1	49.10	N/A	260	2000	MCL	NO	BSL
7440702	Calcium	95200		103000	J	ug/l	GW-2D	2/2	46-46	N/A	N/A	N/A	N/A	N/A	NO	NUT
7439896	Iron	272	J	487		ug/l	GW-2D	2/2	5-5	487.00	N/A	1100	N/A	N/A	NO	BSL
7439954	Magnesium	37100		39000		ug/l	GW-2D	2/2	45-45	N/A	N/A	N/A	N/A	N/A	NO	NUT
7439965	Manganese	291	L	354		ug/l	GW-2D	2/2	1-1	354.00	N/A	84	N/A	N/A	YES	ASL
7440097	Potassium	16000		17700		ug/l	GW-2D	2/2	97-97	N/A	N/A	N/A	N/A	N/A	NO	NUT
7440224	Silver	1.2	J	1.2	J	ug/l	GW-2D	1/2	3-3	1.20	N/A	18	N/A	N/A	NO	BSL
7440235	Sodium	34500		37300	J	ug/l	GW-2D	2/2	28-28	N/A	N/A	N/A	N/A	N/A	NO	NUT
67663	Chloroform	0.3	J	0.3	J	ug/l	GW-2D	1/2	1-1	0.30	N/A	0.15	100	MCL	YES	ASL

(1) EPA 1997. Region III Updated Risk-Based Concentration Table. October, 1997. The Screening Toxicity Value for Lead was obtained from Naval Base Norfolk Partnership Human Health Risk Assessment Consensus Agreement # 6.A.6

MCL = Federal Maximum Contaminant Level
N = Non-Carcinogenic

(2) Rationale Codes Selection Reason: Above Screening Levels (ASL)

Deletion Reason: Essential Nutrient (NUT)
Below Screening Level (BSL)

TABLE 3.1
MEDIUM-SPECIFIC EXPOSURE POINT CONCENTRATION SUMMARY
St. Juliens Creek - Landfill C (Site 3)

Scenario Timeframe: Current/Future
Medium: Deep Groundwater
Exposure Medium: Groundwater
Exposure Point: Offsite

Chemical of Potential Concern	Units	Arithmetic Mean	95% UCL of Normal Data	Maximum Detected Concentration	Maximum Qualifier	EPC Units	Reasonable Maximum Exposure			Central Tendency		
							Medium EPC Value	Medium EPC Statistic	Medium EPC Rationale	Medium EPC Value	Medium EPC Statistic	Medium EPC Rationale
Manganese	ug/l	323	N/A	354.00		mg/l	0.354	Max	(1)	0.323	Mean-N	(1)
Chloroform	ug/l	0.4	N/A	0.30	J	mg/l	0.0003	Max	(1)	0.0004	Mean-N	(1)

Statistics: Maximum Detected Value (Max); 95% UCL of Normal Data (95% UCL-N); 95% UCL of Log-transformed Data (95% UCL-T); Mean of Log-transformed Data (Mean-T); Mean of Normal Data (Mean-N).

(1) As stated in the Risk Assessment Assumptions Document presented in Appendix F of this report, exposure point concentrations for this media will consist of the maximum detected concentration and the arithmetic mean.

TABLE 4.1

VALUES USED FOR DAILY INTAKE CALCULATIONS

St. Julien's Creek - Landfill C (Site 3)

Scenario Timeframe: Current/Future
Medium: Deep Groundwater
Exposure Medium: Groundwater
Exposure Point: Tap Water
Receptor Population: Resident
Receptor Age: Adult

Exposure Route	Parameter Code	Parameter Definition	Units	RME Value	RME Rationale/ Reference	CT Value	CT Rationale/ Reference	Intake Equation/ Model Name
Ingestion	CW	Chemical Concentration in Water	mg/l	See Table 3	See Table 3	See Table 3	See Table 3	Chronic Daily Intake (CDI) (mg/kg-day)=
	IR-W	Ingestion Rate of Water	l/day	2	EPA, 1991	2	EPA, 1991	CW x IR-W x EF x ED x 1/BW x 1/AT
	EF	Exposure Frequency	days/year	350	EPA, 1991	350	EPA, 1991	
	ED	Exposure Duration	years	30	EPA, 1991	30	EPA, 1991	
	BW	Body Weight	kg	70	EPA, 1991	70	EPA, 1991	
	AT-C	Averaging Time - Cancer	days	25,550	EPA, 1989	25,550	EPA, 1989	
	AT-N	Averaging Time - Non-Cancer	days	8,760	EPA, 1989	8,760	EPA, 1989	
Dermal	CW	Chemical Concentration in Water	mg/l	See Table 3	See Table 3	See Table 3	See Table 3	Chronic Daily Intake (CDI) (mg/kg-day)=
	SA	Skin Surface Area	cm^2	18,150	EPA, 1992	18,150	EPA, 1992	CW x SA x PC x ET x EF x ED x CF x 1/BW x 1/AT
	PC	Permeability Constant	cm/hr	Chemical Specific	EPA, 1992	Chemical Specific	EPA, 1989	
	ET	Exposure Time	hours	0.2	EPA, 1989	0.2	EPA, 1989	
	EF	Exposure Frequency	days/year	350	EPA, 1991	350	EPA, 1991	
	ED	Exposure Duration	years	30	EPA, 1991	30	EPA, 1991	
	CF	Volumetric Conversion Factor for Water	l/cm^3	0.001	EPA, 1989	0.001	EPA, 1989	
	BW	Body Weight	kg	70	EPA, 1991	70	EPA, 1991	
	AT-C	Averaging Time - Cancer	days	25,550	EPA, 1989	25,550	EPA, 1989	
	AT-N	Averaging Time - Non-Cancer	days	8,760	EPA, 1989	8,760	EPA, 1989	
Inhalation (1)								

(1) Inhalation exposure to groundwater for adults will be evaluated using the Foster and Chrotowski Shower Model.

Sources:

EPA, 1989: Risk Assessment Guidance for Superfund. Vol. 1: Human Health Evaluation Manual, Part A. OERR. EPA/540/1-89/002.

EPA, 1991: Risk Assessment Guidance for Superfund. Vol. 1: Human Health Evaluation Manual - Supplemental Guidance, Standard Default Exposure Factors. Interim Final. OSWER Directive 9285.6-03,

EPA, 1992: Dermal Exposure Assessment: Principles and Applications. EPA/600/8-91/011B. The skin surface area presented in this table was derived by averaging the mean adult male and female values.

TABLE 4.2

VALUES USED FOR DAILY INTAKE CALCULATIONS

St. Julien's Creek - Landfill C (Site 3)

Scenario Timeframe: Current/Future
Medium: Groundwater
Exposure Medium: Deep Groundwater
Exposure Point: Tap Water
Receptor Population: Resident
Receptor Age: Child

Exposure Route	Parameter Code	Parameter Definition	Units	RME Value	RME Rationale/ Reference	CT Value	CT Rationale/ Reference	Intake Equation/ Model Name
Ingestion	CW	Chemical Concentration in Water	mg/l	See Table 3	See Table 3	See Table 3	See Table 3	Chronic Daily Intake (CDI) (mg/kg-day)=
	IR-W	Ingestion Rate of Water	l/day	1	EPA, 1989b	1	EPA, 1989b	CW x IR-W x EF x ED x 1/BW x 1/AT
	EF	Exposure Frequency	days/year	350	EPA, 1991	350	EPA, 1991	
	ED	Exposure Duration	years	6	EPA, 1991	6	EPA, 1991	
	BW	Body Weight	kg	15	EPA, 1991	15	EPA, 1991	
	AT-C	Averaging Time - Cancer	days	25,550	EPA, 1989a	25,550	EPA, 1989a	
	AT-N	Averaging Time - Non-Cancer	days	2,190	EPA, 1989a	2,190	EPA, 1989a	
Dermal	CW	Chemical Concentration in Water	mg/l	See Table 3	See Table 3	See Table 3	See Table 3	Chronic Daily Intake (CDI) (mg/kg-day)=
	SA	Skin Surface Area	cm^2	7,200	EPA, 1995	7,200	EPA, 1995b	CW x SA x PC x ET x EF x ED x CF x 1/BW x 1/AT
	PC	Permeability Constant	cm/hr	Chemical Specific	EPA, 1992	Chemical Specific	EPA, 1989	
	ET	Exposure Time	hours	0.2	EPA, 1989a	0.2	EPA, 1989a	
	EF	Exposure Frequency	days/year	350	EPA, 1991	350	EPA, 1991	
	ED	Exposure Duration	years	6	EPA, 1991	6	EPA, 1991	
	CF	Volumetric Conversion Factor for Water	l/cm^2	0.001	EPA, 1989	1	EPA, 1989	
	BW	Body Weight	kg	15	EPA, 1991	15	EPA, 1991	
	AT-C	Averaging Time - Cancer	days	25,550	EPA, 1989a	25,550	EPA, 1989a	
	AT-N	Averaging Time - Non-Cancer	days	2,190	EPA, 1989a	2,190	EPA, 1989a	

Sources:

EPA, 1989a: Risk Assessment Guidance for Superfund. Vol. 1: Human Health Evaluation Manual, Part A. OERR. EPA/540/1-89/002.

EPA, 1989b: Exposure Factors Handbook, July 1989, EPA/600/8-89/043.

EPA, 1991: Risk Assessment Guidance for Superfund. Vol. 1: Human Health Evaluation Manual - Supplemental Guidance, Standard Default Exposure Factors. Interim Final. OSWER Directive 9285.6-03,

EPA, 1992: Dermal Exposure Assessment: Principles and Applications. EPA/600/8-91/011B.

EPA, 1995: Exposure Factors Handbook, June 1995, EPA/600/P-95/002A. The skin surface area presented in this table was derived by averaging the mean child (2 to 7 years) male and female values.

TABLE 4.3

VALUES USED FOR DAILY INTAKE CALCULATIONS

St. Juliens Creek - Landfill C (Site 3)

Scenario Timeframe: Future
Medium: Groundwater
Exposure Medium: Deep Groundwater
Exposure Point: Onsite
Receptor Population: Construction Worker
Receptor Age: Adult

Exposure Route	Parameter Code	Parameter Definition	Units	RME Value	RME Rationale/ Reference	CT Value	CT Rationale/ Reference	Intake Equation/ Model Name
Dermal	CW	Chemical Concentration in Water	mg/l	See Table 3	See Table 3	See Table 3	See Table 3	Chronic Daily Intake (CDI) (mg/kg-day)=
	SA	Skin Surface Area	cm^2	5,300	EPA, 1992	5,300	EPA, 1992	CW x SA x PC x ET x EF x ED x CF x 1/BW x 1/AT
	PC	Permeability Constant	cm/hr	Chemical Specific	EPA, 1992	Chemical Specific	EPA, 1989	
	ET	Exposure Time	hours	1	VADEQ, 1997	1	VADEQ, 1997	
	EF	Exposure Frequency	days/year	250	EPA, 1991	250	EPA, 1991	
	ED	Exposure Duration	years	0.5	Professional Judgment	0.5	Professional Judgment	
	CF	Volumetric Conversion Factor for Water	l/cm^3	0.001	EPA, 1989	1	EPA, 1989	
	BW	Body Weight	kg	70	EPA, 1991	70	EPA, 1991	
	AT-C	Averaging Time - Cancer	days	25,550	EPA, 1989	25,550	EPA, 1989	
	AT-N	Averaging Time - Non-Cancer	days	183	Professional Judgment	183	Professional Judgment	

Sources:

EPA, 1989: Risk Assessment Guidance for Superfund. Vol. 1: Human Health Evaluation Manual, Part A. OERR. EPA/540/1-89/002.

EPA, 1991: Risk Assessment Guidance for Superfund. Vol. 1: Human Health Evaluation Manual - Supplemental Guidance, Standard Default Exposure Factors Interim Final. OSWER Directive 9285.6-03,

EPA, 1992: Dermal Exposure Assessment: Principles and Applications. EPA/600/8-91/011B. The skin surface area presented in this table was derived by averaging the mean adult male and female values.

VADEQ, 1997: Value provided by Pat McMurray, Virginia Department of Environmental Quality, during St. Juliens Creek risk assessment assumptions conference call on November 20, 1997.

TABLE 5.1
NON-CANCER TOXICITY DATA -- ORAL/DERMAL
St. Juliens Creek - Landfill C (Site 3)

Chemical of Potential Concern	Chronic/ Subchronic	Oral RfD Value	Oral RfD Units	Oral to Dermal Adjustment Factor	Adjusted Dermal RfD	Units	Primary Target Organ	Combined Uncertainty/Modifying Factors	Sources of RfD: Target Organ	Dates of RfD: Target Organ (MM/DD/YY)
Manganese	Chronic	2.3E-02	mg/kg/day	1.00	2.3E-02	mg/kg/day	NOAEL	2	IRIS	11/17/97
Chloroform	Chronic	1.0E-02	mg/kg/day	1.00	1.0E-02	mg/kg/day	NOAEL	1001	IRIS	11/17/97

IRIS = Integrated Risk Information System

TABLE 6.1
CANCER TOXICITY DATA -- ORAL/DERMAL
St. Juliens Creek - Landfill C (Site 3)

Chemical of Potential Concern	Oral Cancer Slope Factor	Oral to Dermal Adjustment Factor	Adjusted Dermal Cancer Slope Factor	Units	Weight of Evidence/ Cancer Guideline Description	Source	Date
Manganese	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Chloroform	6.1E-03	1.0E+00	6.1E-03	mg/kg-day -1	B2	IRIS	11/17/97

IRIS = Integrated Risk Information System

EPA Group:
A - Human carcinogen
B1 - Probable human carcinogen - indicates that limited human data are available
B2 - Probable human carcinogen - indicates sufficient evidence in animals and inadequate or no evidence in humans
C - Possible human carcinogen
D - Not classifiable as a human carcinogen
E - Evidence of noncarcinogenicity

TABLE 7.1.RME
CALCULATION OF NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
St. Juliens Creek - Landfill C (Site 3)

Scenario Timeframe: Current
Medium: Deep Groundwater
Exposure Medium: Groundwater
Exposure Point: Onsite
Receptor Population: Resident
Receptor Age: Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Ingestion	Manganese	3.5E-01	mg/l	3.5E-01	mg/l	M	1.2E-02	mg/kg-day	2.3E-02	mg/kg/day	N/A	N/A	5.3E-01
	Chloroform	3.0E-04	mg/l	3.0E-04	mg/l	M	1.0E-05	mg/kg-day	1.0E-02	mg/kg/day	N/A	N/A	1.0E-03
Dermal	Manganese	3.5E-01	mg/l	3.5E-01	mg/l	M	1.1E-05	mg/kg-day	2.3E-02	mg/kg/day	N/A	N/A	4.8E-04
	Chloroform	3.0E-04	mg/l	3.0E-04	mg/l	M	1.7E-07	mg/kg-day	1.0E-02	mg/kg/day	N/A	N/A	1.7E-05
												Total Hazard Index Across All Exposure Routes/Pathways	0.5

M = Medium specific

TABLE 7.1.CT
CALCULATION OF NON-CANCER HAZARDS
CENTRAL TENDENCIES
St. Juliens Creek - Landfill C (Site 3)

Scenario Timeframe: Current
Medium: Deep Groundwater
Exposure Medium: Groundwater
Exposure Point: Offsite
Receptor Population: Resident
Receptor Age: Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Ingestion	Manganese	3.2E-01	mg/l	3.2E-01	mg/l	M	1.1E-02	mg/kg-day	2.3E-02	mg/kg/day	N/A	N/A	4.8E-01
	Chloroform	4.0E-04	mg/l	4.0E-04	mg/l	M	1.4E-05	mg/kg-day	1.0E-02	mg/kg/day	N/A	N/A	1.4E-03
Dermal	Manganese	3.2E-01	mg/l	3.2E-01	mg/l	M	1.0E-05	mg/kg-day	2.3E-02	mg/kg/day	N/A	N/A	4.4E-04
	Chloroform	4.0E-04	mg/l	4.0E-04	mg/l	M	2.2E-07	mg/kg-day	1.0E-02	mg/kg/day	N/A	N/A	2.2E-05
										Total Hazard Index Across All Exposure Routes/Pathways			0.5

M = Medium specific

TABLE 7.2.RME
CALCULATION OF NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
St. Juliens Creek - Landfill C (Site 3)

Scenario Timeframe: Current
Medium: Deep Groundwater
Exposure Medium: Groundwater
Exposure Point: Offsite
Receptor Population: Resident
Receptor Age: Child

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Ingestion	Manganese	3.5E-01	mg/l	3.5E-01	mg/l	M	2.3E-02	mg/kg-day	2.3E-02	mg/kg/day	N/A	N/A	9.8E-01
	Chloroform	3.0E-04	mg/l	3.0E-04	mg/l	M	1.9E-05	mg/kg-day	1.0E-02	mg/kg/day	N/A	N/A	1.9E-03
Dermal	Manganese	3.5E-01	mg/l	3.5E-01	mg/l	M	1.6E-05	mg/kg-day	2.3E-02	mg/kg/day	N/A	N/A	7.1E-04
	Chloroform	3.0E-04	mg/l	3.0E-04	mg/l	M	1.4E-08	mg/kg-day	1.0E-02	mg/kg/day	N/A	N/A	1.4E-06
												Total Hazard Index Across All Exposure Routes/Pathways	0.99

M = Medium specific

TABLE 7.2.CT
CALCULATION OF NON-CANCER HAZARDS
CENTRAL TENDENCIES
St. Juliens Creek - Landfill C (Site 3)

Scenario Timeframe: Current
Medium: Deep Groundwater
Exposure Medium: Groundwater
Exposure Point: Offsite
Receptor Population: Resident
Receptor Age: Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Ingestion	Manganese	3.2E-01	mg/l	3.2E-01	mg/l	M	2.1E-02	mg/kg-day	2.3E-02	mg/kg/day	N/A	N/A	9.0E-01
	Chloroform	4.0E-04	mg/l	4.0E-04	mg/l	M	2.6E-05	mg/kg-day	1.0E-02	mg/kg/day	N/A	N/A	2.6E-03
Dermal	Manganese	3.2E-01	mg/l	3.2E-01	mg/l	M	1.5E-05	mg/kg-day	2.3E-02	mg/kg/day	N/A	N/A	6.5E-04
	Chloroform	4.0E-04	mg/l	4.0E-04	mg/l	M	1.8E-08	mg/kg-day	1.0E-02	mg/kg/day	N/A	N/A	1.8E-06
												Total Hazard Index Across All Exposure Routes/Pathways	0.90

M = Medium specific

TABLE 7.3.RME
CALCULATION OF NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
St. Juliens Creek - Landfill C (Site 3)

Scenario Timeframe: Future
Medium: Deep Groundwater
Exposure Medium: Groundwater
Exposure Point: Onsite
Receptor Population: Construction Worker
Receptor Age: Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Dermal	Manganese	3.5E-01	mg/l	3.5E-01	mg/l	M	9.2E-06	mg/kg-day	2.3E-02	mg/kg/day	N/A	N/A	4.0E-04
	Chloroform	3.0E-04	mg/l	3.0E-04	mg/l	M	1.4E-07	mg/kg-day	1.0E-02	mg/kg/day	N/A	N/A	1.4E-05
												Total Hazard Index Across All Exposure Routes/Pathways	4.1E-04

M = Medium specific

TABLE 7.3.CT
CALCULATION OF NON-CANCER HAZARDS
CENTRAL TENDENCIES
St. Juliens Creek - Landfill C (Site 3)

Scenario Timeframe: Future
Medium: Deep Groundwater
Exposure Medium: Groundwater
Exposure Point: Onsite
Receptor Population: Construction Worker
Receptor Age: Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Dermal	Manganese	3.2E-01	mg/l	3.2E-01	mg/l	M	8.4E-06	mg/kg-day	2.3E-02	mg/kg/day	N/A	N/A	3.6E-04
	Chloroform	4.0E-04	mg/l	4.0E-04	mg/l	M	1.8E-07	mg/kg-day	1.0E-02	mg/kg/day	N/A	N/A	1.8E-05
												Total Hazard Index Across All Exposure Routes/Pathways	3.8E-04

M = Medium specific

TABLE 8.1.RME
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
St. Juliens Creek - Landfill C (Site 3)

Scenario Timeframe: Current
Medium: Deep Groundwater
Exposure Medium: Groundwater
Exposure Point: Offsite
Receptor Population: Resident
Receptor Age: Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
Ingestion	Manganese	3.5E-01	mg/l	4E-01	mg/l	M	4.2E-03	mg/kg-day	N/A	N/A	N/A
	Chloroform	3.0E-04	mg/l	3E-04	mg/l	M	3.5E-06	mg/kg-day	6.1E-03	mg/kg-day -1	2.1E-08
Dermal	Manganese	3.5E-01	mg/l	4E-01	mg/l	M	3.8E-06	mg/kg-day	N/A	N/A	N/A
	Chloroform	3.0E-04	mg/l	3E-04	mg/l	M	5.7E-08	mg/kg-day	6.1E-03	mg/kg-day -1	3.5E-10
										Total Risk Across All Exposure Routes/Pathways	2.2E-08

M = Medium specific

TABLE 8.1.CT
CALCULATION OF CANCER RISKS
CENTRAL TENDENCIES
St. Juliens Creek - Landfill C (Site 3)

Scenario Timeframe: Current
Medium: Deep Groundwater
Exposure Medium: Groundwater
Exposure Point: Offsite
Receptor Population: Resident
Receptor Age: Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
Ingestion	Manganese	3.2E-01	mg/l	3E-01	mg/l	M	3.8E-03	mg/kg-day	N/A	N/A	N/A
	Chloroform	4.0E-04	mg/l	4E-04	mg/l	M	4.7E-06	mg/kg-day	6.1E-03	mg/kg-day -1	2.9E-08
Dermal	Manganese	3.2E-01	mg/l	3E-01	mg/l	M	3.4E-06	mg/kg-day	N/A	N/A	N/A
	Chloroform	4.0E-04	mg/l	4E-04	mg/l	M	7.6E-08	mg/kg-day	6.1E-03	mg/kg-day -1	4.6E-10
										Total Risk Across All Exposure Routes/Pathways	2.9E-08

M = Medium specific

TABLE 8.2.RME
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
St. Juliens Creek - Landfill C (Site 3)

Scenario Timeframe: Current
Medium: Deep Groundwater
Exposure Medium: Groundwater
Exposure Point: Offsite
Receptor Population: Resident
Receptor Age: Child

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
Ingestion	Manganese	3.5E-01	mg/l	3.5E-01	mg/l	M	1.9E-03	mg/kg-day	N/A	N/A	N/A
	Chloroform	3.0E-04	mg/l	3.0E-04	mg/l	M	1.6E-06	mg/kg-day	6.1E-03	mg/kg-day -1	1.0E-08
Dermal	Manganese	3.5E-01	mg/l	3.5E-01	mg/l	M	1.4E-06	mg/kg-day	N/A	N/A	N/A
	Chloroform	3.0E-04	mg/l	3.0E-04	mg/l	M	1.2E-09	mg/kg-day	6.1E-03	mg/kg-day -1	7.2E-12
										Total Risk Across All Exposure Routes/Pathways	1.0E-08

M = Medium specific

TABLE 8.2.CT
CALCULATION OF CANCER RISKS
CENTRAL TENDENCIES
St. Juliens Creek - Landfill C (Site 3)

Scenario Timeframe: Current
Medium: Deep Groundwater
Exposure Medium: Groundwater
Exposure Point: Offsite
Receptor Population: Resident
Receptor Age: Child

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
Ingestion	Manganese	3.2E-01	mg/l	3.2E-01	mg/l	M	1.8E-03	mg/kg-day	N/A	N/A	N/A
	Chloroform	4.0E-04	mg/l	4.0E-04	mg/l	M	2.2E-06	mg/kg-day	6.1E-03	mg/kg-day -1	1.3E-08
Dermal	Manganese	3.2E-01	mg/l	3.2E-01	mg/l	M	1.3E-06	mg/kg-day	N/A	N/A	N/A
	Chloroform	4.0E-04	mg/l	4.0E-04	mg/l	M	1.6E-09	mg/kg-day	6.1E-03	mg/kg-day -1	9.6E-12
										Total Risk Across All Exposure Routes/Pathways	1.3E-08

M = Medium specific

TABLE 8.3.RME
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
St. Juliens Creek - Landfill C (Site 3)

Scenario Timeframe: Future
Medium: Deep Groundwater
Exposure Medium: Groundwater
Exposure Point: Onsite
Receptor Population: Construction Worker
Receptor Age: Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
Dermal	Manganese	3.5E-01	mg/l	3.5E-01	mg/l	M	2.3E-07	mg/kg-day	N/A	N/A	N/A
	Chloroform	3.0E-04	mg/l	3.0E-04	mg/l	M	3.5E-09	mg/kg-day	6.1E-03	mg/kg-day -1	2.1E-11
										Total Risk Across All Exposure Routes/Pathways	2.1E-11

M = Medium specific

TABLE 8.3.CT
CALCULATION OF CANCER RISKS
CENTRAL TENDENCIES
St. Juliens Creek - Landfill C (Site 3)

Scenario Timeframe: Future
Medium: Deep Groundwater
Exposure Medium: Groundwater
Exposure Point: Onsite
Receptor Population: Construction Worker
Receptor Age: Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
Dermal	Manganese	3.2E-01	mg/l	3.2E-01	mg/l	M	2.1E-07	mg/kg-day	N/A	N/A	N/A
	Chloroform	4.0E-04	mg/l	4.0E-04	mg/l	M	4.7E-09	mg/kg-day	6.1E-03	mg/kg-day -1	2.9E-11
										Total Risk Across All Exposure Routes/Pathways	2.9E-11

M = Medium specific

Site 3

Shallow Groundwater Future

TABLE 2.2
OCCURRENCE, DISTRIBUTION AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN
St. Juliens Creek - Landfill C (Site 3)

Scenario Timeframe: Future
Medium: Shallow Groundwater
Exposure Medium: Groundwater
Exposure Point: Tap Water

CAS Number	Chemical	Minimum Concentration	Minimum Qualifier	Maximum Concentration	Maximum Qualifier	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration Used for Screening	Background Value	Screening Toxicity Value (1)	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag	Rationale for Contaminant Deletion or Selection (2)
7429905	Aluminum	56.80	J	19200.00		ug/l	GW-2S	6/6	29-38.1	19200.00	N/A	3700	N/A	N/A	YES	ASL
7440382	Arsenic	3.40	J	3.40	J	ug/l	GW-2S	1/6	3-3.2	3.40	N/A	0.045	50	MCL	YES	ASL
7440393	Barium	16.10	J	75.60	J	ug/l	GW-2S	6/6	1-1	75.60	N/A	260	N/A	N/A	NO	BSL
7440417	Beryllium	0.96	J	4.00	J	ug/l	GW-2S	4/6	1-1	4.00	N/A	0.016	100	MCL	YES	ASL
7440702	Calcium	89700.00		488000.00		ug/l	GW-2S	6/6	46-46	N/A	N/A	N/A	N/A	N/A	NO	NUT
18540299	Chromium	35.20		56.70		ug/l	GW-2S	2/6	4-7	56.70	N/A	18	100	MCL	YES	ASL
7440484	Cobalt	16.00		59.70	J	ug/l	GW-2S	4/6	3-8	59.70	N/A	220	N/A	N/A	NO	BSL
7440508	Copper	9.00		9.00		ug/l	GW-4S	1/6	2-6	9.00	N/A	150	1300	AL	NO	BSL
7439896	Iron	16900.00		45000.00		ug/l	GW-3S	6/6	5-5	45000.00	N/A	1100	N/A	N/A	YES	ASL
7439921	Lead	1.40	J	9.00		ug/l	GW-2S	4/6	1-1.3	9.00	N/A	15	15	AL	NO	BSL
7439954	Magnesium	33600.00		179000.00		ug/l	GW-2S	6/6	45-45	N/A	N/A	N/A	N/A	N/A	NO	BSL
7439965	Manganese	830.00		5330.00		ug/l	GW-2S	6/6	1-1	5330.00	N/A	84	N/A	N/A	YES	ASL
7440020	Nickel	25.10		84.80	J	ug/l	GW-2S	3/6	4-7	84.80	N/A	73	100	MCL	YES	ASL
7440097	Potassium	16000.00		61100.00		ug/l	GW-2S	6/6	97-97	N/A	N/A	N/A	N/A	N/A	NO	BSL
7782492	Selenium	3.30	K	3.30	K	ug/l	GW-2S	1/6	3-3.3	3.30	N/A	18	50	MCL	NO	BSL
7440224	Silver	1.30	J	2.00	J	ug/l	GW-4S	2/6	1.1-3	2.00	N/A	18	N/A	N/A	NO	BSL
7440235	Sodium	34500.00		799000.00		ug/l	GW-4S	6/6	28-28	N/A	N/A	N/A	N/A	N/A	NO	BSL
7440622	Vanadium	15.50	J	43.00		ug/l	GW-2S	3/6	4-6.8	43.00	N/A	26	N/A	N/A	YES	ASL
7440666	Zinc	90.00	J	397.00	J	ug/l	GW-2S	3/6	3-3	397.00	N/A	1100	N/A	N/A	NO	BSL
83329	Acenaphthene	2.00	J	7.00	J	ug/l	GW-3S	2/6	10-10	7.00	N/A	220	N/A	N/A	NO	BSL
117817	bis(2-Ethylhexyl)phthalate	2.00	J	25.00		ug/l	GW-4S	2/6	10-10	25.00	N/A	4.8	6	MCL	YES	ASL
67641	Acetone	5.00	J	10.00		ug/l	GW-3S	2/6	5-5	10.00	N/A	370	N/A	N/A	NO	BSL

(1) EPA 1997. *Region III Updated Risk-Based Concentration Table.* October, 1997. The Screening Toxicity Value for Lead was obtained from *Na Naval Base Norfolk Partnership Human Health Risk Assessment Consensus Agreement #6.A.6*

(2) Rationale Codes Selection Reason: Above Screening Levels (ASL)
Deletion Reason: Essential Nutrient (NUT)
Below Screening Level (BSL)

Definitions: N/A = Not Applicable

COPC = Chemical of Potential Concern
ARAR/TBC = Applicable or Relevant and Appropriate Requirement/To Be Considered
MCL = Federal Maximum Contaminant Level
J = Estimated Value

TABLE 3.2
MEDIUM-SPECIFIC EXPOSURE POINT CONCENTRATION SUMMARY
St. Juliens Creek - Landfill C (Site 3)

Scenario Timeframe: Future
Medium: Shallow Groundwater
Exposure Medium: Groundwater
Exposure Point: Onsite

Chemical of Potential Concern	Units	Arithmetic Mean	95% UCL of Normal Data	Maximum Detected Concentration	Maximum Qualifier	EPC Units	Reasonable Maximum Exposure			Central Tendency		
							Medium EPC Value	Medium EPC Statistic	Medium EPC Rationale	Medium EPC Value	Medium EPC Statistic	Medium EPC Rationale
Aluminum	ug/l	7396	N/A	19200		mg/l	19.2	Max	(1)	7.396	Mean-N	(1)
Arsenic	ug/l	2.10	N/A	3.4	J	mg/l	0.0034	Max	(1)	0.0021	Mean-N	(1)
Beryllium	ug/l	1.43	N/A	4.00	J	mg/l	0.004	Max	(1)	0.001	Mean-N	(1)
Chromium	ug/l	18.29	N/A	56.70		mg/l	0.057	Max	(1)	0.018	Mean-N	(1)
Iron	ug/l	28383.33	N/A	45000.00		mg/l	45.000	Max	(1)	28.383	Mean-N	(1)
Manganese	ug/l	2141.67	N/A	5330.00		mg/l	5.330	Max	(1)	2.142	Mean-N	(1)
Nickel	ug/l	27.69	N/A	84.80	J	mg/l	0.085	Max	(1)	0.028	Mean-N	(1)
Vanadium	ug/l	15.23	N/A	43.00		mg/l	0.043	Max	(1)	0.015	Mean-N	(1)
bis(2-Ethylhexyl)phthalate	ug/l	7.83	N/A	25.00		mg/l	0.025	Max	(1)	0.008	Mean-N	(1)

Statistics: Maximum Detected Value (Max); 95% UCL of Normal Data (95% UCL-N); 95% UCL of Log-transformed Data (95% UCL-T); Mean of Log-transformed Data (Mean-T); Mean of Normal Data (Mean-N).

(1) As stated in the Risk Assessment Assumptions Document presented in Appendix F of this report, exposure point concentrations for this media will consist of the maximum detected concentration and the arithmetic mean.

TABLE 4.4

VALUES USED FOR DAILY INTAKE CALCULATIONS

St. Julien's Creek - Landfill C (Site 3)

Scenario Timeframe: Future
Medium: Shallow Groundwater
Exposure Medium: Groundwater
Exposure Point: Onsite
Receptor Population: Groundskeeper
Receptor Age: Adult

Exposure Route	Parameter Code	Parameter Definition	Units	RME Value	RME Rationale/ Reference	CT Value	CT Rationale/ Reference	Intake Equation/ Model Name
Dermal	CW	Chemical Concentration in Water	mg/l	See Table 3	See Table 3	See Table 3	See Table 3	Chronic Daily Intake (CDI) (mg/kg-day)=
	SA	Skin Surface Area	cm^2	5,300	EPA, 1992	5,300	EPA, 1992	CW x SA x PC x ET x EF x ED x CF x 1/BW x 1/AT
	PC	Permeability Constant	cm/hr	Chemical Specific	EPA, 1992	Chemical Specific	EPA, 1989	
	ET	Exposure Time	hours	1	VADEQ, 1997	1	VADEQ, 1997	
	EF	Exposure Frequency	days/year	250	EPA, 1991	250	EPA, 1991	
	ED	Exposure Duration	years	25	EPA, 1991	25	EPA, 1991	
	CF	Volumetric Conversion Factor for Water	l/cm^3	0.001	EPA, 1989	0.001	EPA, 1989	
	BW	Body Weight	kg	70	EPA, 1991	70	EPA, 1991	
	AT-C	Averaging Time - Cancer	days	25,550	EPA, 1989	25,550	EPA, 1989	
	AT-N	Averaging Time - Non-Cancer	days	9,125	EPA, 1989	9,125	EPA, 1989	

Sources:

EPA, 1989: Risk Assessment Guidance for Superfund. Vol. 1: Human Health Evaluation Manual, Part A. OERR. EPA/540/1-89/002.

EPA, 1991: Risk Assessment Guidance for Superfund. Vol. 1: Human Health Evaluation Manual - Supplemental Guidance, Standard Default Exposure Factors Interim Final. OSWER Directive 9285.6-03,

EPA, 1992: Dermal Exposure Assessment: Principles and Applications. EPA/600/8-91/011B. The skin surface area presented in this table was derived for head, hands, forearms, and lower legs.

VADEQ, 1997: Value provided by Pat McMurray, Virginia Department of Environmental Quality, during St. Juliens Creek risk assessment assumptions conference call on November 20, 1997.

TABLE 5.2
NON-CANCER TOXICITY DATA -- ORAL/DERMAL
St. Juliens Creek - Landfill C (Site 3)

Chemical of Potential Concern	Chronic/ Subchronic	Oral RfD Value	Oral RfD Units	Oral to Dermal Adjustment Factor	Adjusted Dermal RfD	Units	Primary Target Organ	Combined Uncertainty/Modifying Factors	Sources of RfD: Target Organ	Dates of RfD: Target Organ (MM/DD/YY)
Aluminum	Chronic	1.0E+00	mg/kg/day	0.270	2.7E-01	mg/kg/day	NOAEL	100	NCEA	8/26/96
Arsenic	Chronic	3.0E-04	mg/kg/day	0.950	2.9E-04	mg/kg/day	Skin	3	IRIS	11/17/97
Beryllium	Chronic	5.0E-03	mg/kg/day	0.010	5.0E-05	mg/kg/day	NOAEL	101	IRIS	11/17/97
Chromium	Chronic	5.0E-03	mg/kg/day	0.010	5.0E-05	mg/kg/day	NOAEL	505	IRIS	02/09/98
Iron	Chronic	3.0E-01	mg/kg/day	0.050	1.5E-02	mg/kg/day	N/A	N/A	RBC:N/A	10/22/97
Manganese	Chronic	2.3E-02	mg/kg/day	1.000	2.3E-02	mg/kg/day	NOAEL	2	IRIS	11/17/97
Nickel	Chronic	2.0E-02	mg/kg/day	0.100	2.0E-03	mg/kg/day	NOAEL	1E+01	IRIS	11/17/97
Vanadium	Chronic	7.0E-03	mg/kg/day	0.020	1.4E-04	mg/kg/day	NOAEL	1E+02	HEAST	07/00/97
bis(2-Ethylhexyl)phthalate	Chronic	2.0E-01	mg/kg/day	0.550	1.1E-01	mg/kg/day	NOAEL	1E+03	IRIS	11/17/97

N/A = Not Applicable
IRIS = Integrated Risk Information System
HEAST= Health Effects Assessment Summary Tables
NCEA= National Center for Environmental Assessment
RBC= *Region III Updated Risk-Based Concentration Table.* October, 1997.

TABLE 6.2
CANCER TOXICITY DATA -- ORAL/DERMAL
St. Juliens Creek - Landfill C (Site 3)

Chemical of Potential Concern	Oral Cancer Slope Factor	Oral to Dermal Adjustment Factor	Adjusted Dermal Cancer Slope Factor	Units	Weight of Evidence/ Cancer Guideline Description	Source	Date (MM/DD/YY)
Aluminum	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Arsenic	1.5E+00	0.95	1.6E+00	mg/kg-day -1	A	IRIS	11/17/97
Beryllium	4.3E+00	0.01	4.3E+02	mg/kg-day -1	B2	IRIS	11/17/97
Chromium	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Iron	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Manganese	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Nickel	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Vanadium	N/A	N/A	N/A	N/A	N/A	N/A	N/A
bis(2-Ethylhexyl)phthalate	1.4E-02	0.55	2.5E-02	mg/kg-day -1	C	IRIS	11/17/97

IRIS = Integrated Risk Information System

EPA Group:
A - Human carcinogen
B1 - Probable human carcinogen - indicates that limited human data are available
B2 - Probable human carcinogen - indicates sufficient evidence in animals and inadequate or no evidence in humans
C - Possible human carcinogen
D - Not classifiable as a human carcinogen
E - Evidence of noncarcinogenicity

TABLE 7.4 RME
CALCULATION OF NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
St. Juliens Creek - Landfill C (Site 3)

Scenario Timeframe: Future
Medium: Shallow Groundwater
Exposure Medium: Groundwater
Exposure Point: Onsite
Receptor Population: Groundskeeper
Receptor Age: Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Dermal	Aluminum	19.200	mg/l	19.200	mg/l	M	5.0E-04	mg/kg-day	2.7E-01	mg/kg/day	N/A	N/A	1.8E-03
	Arsenic	0.003	mg/l	0.003	mg/l	M	8.8E-08	mg/kg-day	2.9E-04	mg/kg/day	N/A	N/A	3.1E-04
	Beryllium	0.004	mg/l	0.004	mg/l	M	1.0E-07	mg/kg-day	5.0E-05	mg/kg/day	N/A	N/A	2.1E-03
	Chromium	0.057	mg/l	0.057	mg/l	M	1.5E-06	mg/kg-day	5.0E-05	mg/kg/day	N/A	N/A	2.9E-02
	Iron	45.000	mg/l	45.000	mg/l	M	1.2E-03	mg/kg-day	1.5E-02	mg/kg/day	N/A	N/A	7.8E-02
	Manganese	5.330	mg/l	5.330	mg/l	M	1.4E-04	mg/kg-day	2.3E-02	mg/kg/day	N/A	N/A	6.0E-03
	Nickel	0.085	mg/l	0.085	mg/l	M	2.2E-06	mg/kg-day	2.0E-03	mg/kg/day	N/A	N/A	1.1E-03
	Vanadium	0.043	mg/l	0.043	mg/l	M	1.1E-06	mg/kg-day	1.4E-04	mg/kg/day	N/A	N/A	8.0E-03
	bis(2-Ethylhexyl)phthalate	0.025	mg/l	0.025	mg/l	M	1.3E-04	mg/kg-day	1.1E-01	mg/kg/day	N/A	N/A	1.2E-03
												Total Hazard Index Across All Exposure Routes/Pathways	0.13

M = Medium specific

TABLE 7.4 CT
CALCULATION OF NON-CANCER HAZARDS
CENTRAL TENDENCIES
St. Juliens Creek - Landfill C (Site 3)

Scenario Timeframe: Future
Medium: Shallow Groundwater
Exposure Medium: Groundwater
Exposure Point: Onsite
Receptor Population: Groundskeeper
Receptor Age: Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Dermal	Aluminum	7.396	mg/l	7.396	mg/l	M	1.9E-04	mg/kg-day	2.7E-01	mg/kg/day	N/A	N/A	7.1E-04
	Arsenic	0.002	mg/l	0.002	mg/l	M	5.4E-08	mg/kg-day	2.9E-04	mg/kg/day	N/A	N/A	1.9E-04
	Beryllium	0.001	mg/l	0.001	mg/l	M	3.7E-08	mg/kg-day	5.0E-05	mg/kg/day	N/A	N/A	7.4E-04
	Chromium	0.018	mg/l	0.018	mg/l	M	4.7E-07	mg/kg-day	5.0E-05	mg/kg/day	N/A	N/A	9.5E-03
	Iron	28.383	mg/l	28.383	mg/l	M	7.4E-04	mg/kg-day	1.5E-02	mg/kg/day	N/A	N/A	4.9E-02
	Manganese	2.142	mg/l	2.142	mg/l	M	5.6E-05	mg/kg-day	2.3E-02	mg/kg/day	N/A	N/A	2.4E-03
	Nickel	0.028	mg/l	0.028	mg/l	M	7.2E-07	mg/kg-day	2.0E-03	mg/kg/day	N/A	N/A	3.6E-04
	Vanadium	0.015	mg/l	0.015	mg/l	M	3.9E-07	mg/kg-day	1.4E-04	mg/kg/day	N/A	N/A	2.8E-03
	bis(2-Ethylhexyl)phthalate	0.008	mg/l	0.008	mg/l	M	4.0E-05	mg/kg-day	1.1E-01	mg/kg/day	N/A	N/A	3.6E-04
												Total Hazard Index Across All Exposure Routes/Pathways	0.07

M = Medium specific

TABLE 8.4.RME
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
St. Juliens Creek - Landfill C (Site 3)

Scenario Timeframe: Future
Medium: Shallow Groundwater
Exposure Medium: Groundwater
Exposure Point: Onsite
Receptor Population: Groundskeeper
Receptor Age: Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
Dermal	Aluminum	19.200	mg/l	19.200	mg/l	M	1.8E-04	mg/kg-day	N/A	N/A	N/A
	Arsenic	0.003	mg/l	0.003	mg/l	M	3.1E-08	mg/kg-day	1.6E+00	mg/kg-day -1	5.0E-08
	Beryllium	0.004	mg/l	0.004	mg/l	M	3.7E-08	mg/kg-day	4.3E+02	mg/kg-day -1	1.6E-05
	Chromium	0.057	mg/l	0.057	mg/l	M	5.3E-07	mg/kg-day	N/A	N/A	N/A
	Iron	45.000	mg/l	45.000	mg/l	M	4.2E-04	mg/kg-day	N/A	N/A	N/A
	Manganese	5.330	mg/l	5.330	mg/l	M	4.9E-05	mg/kg-day	N/A	N/A	N/A
	Nickel	0.085	mg/l	0.085	mg/l	M	7.9E-07	mg/kg-day	N/A	N/A	N/A
	Vanadium	0.043	mg/l	0.043	mg/l	M	4.0E-07	mg/kg-day	N/A	N/A	N/A
	bis(2-Ethylhexyl)phthalate	0.025	mg/l	0.025	mg/l	M	4.6E-05	mg/kg-day	2.5E-02	mg/kg-day -1	1.2E-06
										Total Risk Across All Exposure Routes/Pathways	1.7E-05

M = Medium specific

TABLE 8.4.CT
CALCULATION OF CANCER RISKS
CENTRAL TENDENCIES
St. Juliens Creek - Landfill C (Site 3)

Scenario Timeframe: Future
Medium: Shallow Groundwater
Exposure Medium: Groundwater
Exposure Point: Onsite
Receptor Population: Groundskeeper
Receptor Age: Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
Dermal	Aluminum	7.396	mg/l	7.396	mg/l	M	6.8E-05	mg/kg-day	N/A	N/A	N/A
	Arsenic	0.002	mg/l	0.002	mg/l	M	1.9E-08	mg/kg-day	1.6E+00	mg/kg-day -1	3.1E-08
	Beryllium	0.001	mg/l	0.001	mg/l	M	1.3E-08	mg/kg-day	4.3E+02	mg/kg-day -1	5.7E-06
	Chromium	0.018	mg/l	0.018	mg/l	M	1.7E-07	mg/kg-day	N/A	N/A	N/A
	Iron	28.383	mg/l	28.383	mg/l	M	2.6E-04	mg/kg-day	N/A	N/A	N/A
	Manganese	2.142	mg/l	2.142	mg/l	M	2.0E-05	mg/kg-day	N/A	N/A	N/A
	Nickel	0.028	mg/l	0.028	mg/l	M	2.6E-07	mg/kg-day	N/A	N/A	N/A
	Vanadium	0.015	mg/l	0.015	mg/l	M	1.4E-07	mg/kg-day	N/A	N/A	N/A
	bis(2-Ethylhexyl)phthalate	0.008	mg/l	0.008	mg/l	M	1.4E-05	mg/kg-day	2.5E-02	mg/kg-day -1	3.6E-07
										Total Risk Across All Exposure Routes/Pathways	6.1E-06

M = Medium specific

Site 3

Surface Soil Current/Future

TABLE 2.4
OCCURRENCE, DISTRIBUTION AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN
St. Juliens Creek - Landfill C (Site 3)

Scenario Timeframe: Current/Future
Medium: Surface Soil
Exposure Medium: Surface Soil
Exposure Point: Onsite

CAS Number	Chemical	Minimum Concentration (1)	Minimum Qualifier	Maximum Concentration (1)	Maximum Qualifier	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration Used for Screening	Background Value (2)	Screening Toxicity Value (3)	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag	Rationale for Contaminant Deletion or Selection (4)
72548	4,4'-DDD	2.9	J	43		ug/kg	SS07	4/6	4.3-4.3	43	NA	2700	NA	NA	NO	BSL
72559	4,4'-DDE	6.4	J	34		ug/kg	SS07	4/6	4.2-4.3	34	NA	1900	NA	NA	NO	BSL
50293	4,4'-DDT	13	J	130		ug/kg	SS07	4/6	4.2-4.3	130	NA	1900	NA	NA	NO	BSL
208968	Acenaphthylene	54	J	86	J	ug/kg	SS06	4/6	360-430	86	NA	NA	NA	NA	NO	NTX
7429905	Aluminum	3310		21400		mg/kg	SS05	6/6	8.27-10.81	21400	NA	7800	NA	NA	YES	ASL
120127	Anthracene	43	J	120	J	ug/kg	SS06	5/6	360-430	120	NA	2300000	NA	NA	NO	BSL
1109769	Aroclor-1254	78		100		ug/kg	SS04	2/6	43-54	100	NA	160	NA	NA	NO	BSL
7440382	Arsenic	2.2		13.9	L	mg/kg	SS05	6/6	0.58-0.74	13.9	NA	2.3	NA	NA	YES	ASL
7440393	Barium	14.6	J	211		mg/kg	SS07	6/6	0.38-0.49	211	NA	550	NA	NA	NO	BSL
56553	Benzo(a)Anthracene	38	J	390	J	ug/kg	SS06	6/6	340-430	390	NA	880	NA	NA	NO	BSL
50328	Benzo(a)Pyrene	38	J	350	J	ug/kg	SS07	6/6	340-430	350	NA	88	NA	NA	YES	ASL
205992	Benzo(b)Fluoranthene	62	J	1500		ug/kg	SS06	6/6	340-430	1500	NA	880	NA	NA	YES	ASL
191242	Benzo(g,h,i)Perylene	130	J	340	J	ug/kg	SS06	5/6	360-410	340	NA	NA	NA	NA	NO	NTX
207089	Benzo(k)Fluoranthene	170	J	460		ug/kg	SS07	5/6	360-410	460	NA	8800	NA	NA	NO	BSL
7440417	Beryllium	0.29	J	1.3		mg/kg	SS07	5/6	0.19-0.25	1.3	NA	0.15	NA	NA	YES	ASL
7440439	Cadmium	0.32	J	0.47	J	mg/kg	SS02	3/6	0.09-0.12	0.47	NA	3.9	NA	NA	NO	BSL
7440702	Calcium	702	J	6240		mg/kg	SS04	6/6	16.36-21.3	6240	NA	NA	NA	NA	NO	NUT
86748	Carbazole	45	J	130	J	ug/kg	SS06	2/6	360-410	130	NA	32000	NA	NA	NO	BSL
7440473	Chromium	6.8		42.1		mg/kg	SS05	5/6	1.32-1.72	42.1	NA	3700	NA	NA	NO	BSL
218019	Chrysene	41	J	730		ug/kg	SS07	6/6	340-430	730	NA	88000	NA	NA	NO	BSL
7440484	Cobalt	3.4	J	6.7	J	mg/kg	SS07	5/6	1.51-1.97	6.7	NA	470	NA	NA	NO	BSL
7440508	Copper	5.3		125		mg/kg	SS07	6/6	1.13-1.43	125	NA	27000	NA	NA	NO	BSL
132649	Dibenzofuran	38	J	58	J	ug/kg	SS06	2/6	360-410	58	NA	31000	NA	NA	NO	BSL
60571	Dieldrin	5.3	J	5.3	J	ug/kg	SS07	1/6	5.4-5.4	5.3	NA	40	NA	NA	NO	BSL
84662	Diethylphthalate	79	J	79	J	ug/kg	SS07	1/6	380-380	79	NA	6300000	NA	NA	NO	BSL
206440	Fluoranthene	63	J	640		ug/kg	SS06	6/6	340-430	640	NA	310000	NA	NA	NO	BSL
86737	Fluorene	48	J	48	J	ug/kg	SS06	1/6	410-410	48	NA	310000	NA	NA	NO	BSL
193395	Indeno(1,2,3-cd)Pyrene	180	J	440		ug/kg	SS06	5/6	360-430	440	NA	880	NA	NA	NO	BSL
7439896	Iron	3440		34000		mg/kg	SS06	6/6	3.2-4.15	34000	NA	2300	NA	NA	YES	ASL
7439921	Lead	11.4	J	240	J	mg/kg	SS07	6/6	0.19-0.25	240	NA	400	NA	NA	NO	BSL
7439954	Magnesium	283	J	3590		mg/kg	SS05	6/6	34.03-44.4	3590	NA	NA	NA	NA	NO	NUT
7439965	Manganese	16		246		mg/kg	SS04	6/6	0.38-0.45	246	NA	180	NA	NA	YES	ASL
7439976	Mercury	0.18		0.6		mg/kg	SS05	5/6	0.05-0.06	0.6	NA	2.3	NA	NA	NO	BSL
91203	Naphthalene	53	J	130	J	ug/kg	SS03	3/6	360-380	130	NA	310000	NA	NA	NO	BSL
7440020	Nickel	4.9	J	22		mg/kg	SS07	5/6	1.32-1.72	22	NA	160	NA	NA	NO	BSL
87865	Pentachlorophenol	160	J	160	J	ug/kg	SS06	1/6	1000-1000	160	NA	5300	NA	NA	NO	BSL
85018	Phenanthrene	100	J	420	J	ug/kg	SS06	5/6	360-430	420	NA	230000	NA	NA	NO	ASL
7440097	Potassium	241	J	3130		mg/kg	SS06	6/6	41.74-54.5	3130	NA	NA	NA	NA	NO	NUT
129000	Pyrene	54	J	560	J	ug/kg	SS06	6/6	340-430	560	NA	230000	NA	NA	NO	NTX
7440235	Sodium	399	J	473	J	mg/kg	SS04	2/6	13.08-13.7	473	NA	NA	NA	NA	NO	NUT
127184	Tetrachloroethene	2	J	2	J	ug/kg	SS02	1/6	10-10	2	NA	12000	NA	NA	NO	BSL
7440280	Thallium	0.89	J	2.5		mg/kg	SS05	3/6	0.38-0.48	2.5	NA	NA	NA	NA	NO	NTX
108883	Toluene	2	J	2	J	ug/kg	SS05	1/6	13-13	2	NA	1600000	NA	NA	NO	BSL
1426544	Total Phosphorous (as P)	4		114		mg/kg	SS06	6/6	1.2-19	114	NA	NA	NA	NA	NO	NTX
7440622	Vanadium	7.9	J	79.8		mg/kg	SS05	6/6	1.7-2.21	79.8	NA	55	NA	NA	YES	BSL
7440666	Zinc	15.5		460	L	mg/kg	SS04	6/6	0.94-1.23	460	NA	2300	NA	NA	NO	BSL

(1) Minimum/maximum detected concentration.

(2) To date, no background study has been performed for the St. Juliens Creek Annex.

(3) With the exception of lead, all compounds were screened against: Risk-Based Concentration Table, Third Quarter 1993, U.S. EPA Region III, Roy L. Smith, Ph. D., October 1997. (Cancer benchmark value = 1E-06, HQ=0.1). Lead was screened against a value of 400 mg Human Health Risk Assessment Consensus Agreement #6.A.6, Naval Base Norfolk Partnership, August 1997.

(4) Rationale Codes Selection Reason: Above Screening Levels (ASL)
Deletion Reason: No Toxicity Information (NTX)
Essential Nutrient (NUT)
Below Screening Level (BSL)

Definitions: N/A = Not Applicable
COPC = Chemical of Potential Concern
ARAR/TBC = Applicable or Relevant and Appropriate Requirement/To Be Considered
MCL = Federal Maximum Contaminant Level
J = Estimated Value

TABLE 3.3
MEDIUM-SPECIFIC EXPOSURE POINT CONCENTRATION SUMMARY
Saint Juliens Creek - Landfill C (Site 3)

Scenario Timeframe: Current/Future
Medium: Surface Soil
Exposure Medium: Surface Soil
Exposure Point: Onsite

Chemical of Potential Concern	Units	Arithmetic Mean	95% UCL of Normal Data	Maximum Detected Concentration	Maximum Qualifier	EPC Units	Reasonable Maximum Exposure			Central Tendency		
							Medium EPC Value	Medium EPC Statistic	Medium EPC Rationale	Medium EPC Value	Medium EPC Statistic	Medium EPC Rationale
Aluminum	mg/kg	11011.43	26,691.50	21400.00		mg/kg	21400.00	Max	(1)	11011.43	Mean-N	(1)
Arsenic	mg/kg	8.04	39.63	13.90	L	mg/kg	13.90	Max	(1)	8.04	Mean-N	(1)
Benzo(a)Pyrene	ug/kg	229.71	701.60	350.00	J	mg/kg	0.35	Max	(1)	0.23	Mean-N	(1)
Benzo(b)Fluoranthene	ug/kg	697.43	20,510.53	1500.00		mg/kg	1.50	Max	(1)	0.70	Mean-N	(1)
Beryllium	mg/kg	0.52	1.63	1.30		mg/kg	1.30	Max	(1)	0.52	Mean-N	(1)
Iron	mg/kg	18412.86	56,071.47	34000.00		mg/kg	34000.00	Max	(1)	18412.86	Mean-N	(1)
Manganese	mg/kg	147.29	654.22	246.00		mg/kg	246.00	Max	(1)	147.29	Mean-N	(1)
Vanadium	mg/kg	47.06	172.55	79.80		mg/kg	79.80	Max	(1)	47.06	Mean-N	(1)

Statistics: Maximum Detected Value (Max); 95% UCL of Normal Data (95% UCL-N); 95% UCL of Log-transformed Data (95% UCL-T); Mean of Log-transformed Data (Mean-T); Mean of Normal Data (Mean-N).

(1) As stated in the Risk Assessment Assumptions Document, which is included as Appendix F, the lower of the maximum detected concentration and 95% UCL of the mean is used as the exposure point concentration for surface soil.

TABLE 4.5

VALUES USED FOR DAILY INTAKE CALCULATIONS

St. Juliens Creek - Landfill C (Site 3)

Scenario Timeframe: Current
Medium: Surface Soil
Exposure Medium: Surface Soil
Exposure Point: Onsite
Receptor Population: Trespasser
Receptor Age: Child

Exposure Route	Parameter Code	Parameter Definition	Units	RME Value	RME Rationale/ Reference	CT Value	CT Rationale/ Reference	Intake Equation/ Model Name
Ingestion	CS	Chemical Concentration in Soil	mg/kg	See Table 3	See Table 3	See Table 3	See Table 3	Chronic Daily Intake (CDI) (mg/kg-day)=
	IR-S	Ingestion Rate of Soil	mg/day	200	EPA, 1991	200	EPA, 1991	CS x IR x EF x ED x CF1 x 1/BW x 1/AT
	EF	Exposure Frequency	days/year	52	1 hour per week	52	1 hour per week	
	ED	Exposure Duration	years	6	EPA, 1991	6	EPA, 1991	
	CF1	Conversion Factor	kg/mg	1.00E-06	NA	1.00E-06	NA	
	BW	Body Weight	kg	15	EPA, 1991	15	EPA, 1991	
	AT-C	Averaging Time - Cancer	days	25,550	EPA, 1989	25,550	EPA, 1989	
	AT-N	Averaging Time - Non-Cancer	days	2,190	EPA, 1989	2,190	EPA, 1989	
Dermal	CS	Chemical Concentration in Soil	mg/kg	See Table 3	See Table 3	See Table 3	See Table 3	Chronic Daily Intake (CDI) (mg/kg-day)=
	CF1	Conversion Factor	kg/mg	1.00E-06	NA	1.00E-06	NA	CS x CF1 x SA x AF x AB x EF x ED x 1/BW x 1/AT
	SA	Skin Surface Area Available for Contact	cm^2	2,650	EPA, 1992	2,650	EPA, 1992	
	AF	Soil to Skin Adherence Factor	mg/cm^2	1	EPA, 1992	1	EPA, 1992	
	AB	Absorption Factor	unitless	chemical-specific	EPA, 1995	chemical-specific	EPA, 1995	
	EF	Exposure Frequency	days/year	52	EPA, 1991	52	EPA, 1991	
	ED	Exposure Duration	years	6	EPA, 1991	6	EPA, 1991	
	BW	Body Weight	kg	15	EPA, 1991	15	EPA, 1991	
	AT-C	Averaging Time - Cancer	days	25,550	EPA, 1989	25,550	EPA, 1989	
	AT-N	Averaging Time - Non-Cancer	days	2,190	EPA, 1989	2,190	EPA, 1989	

Sources:

EPA, 1989: Risk Assessment Guidance for Superfund. Vol. 1: Human Health Evaluation Manual, Part A. OERR. EPA/540/1-89/002.

EPA, 1991: Risk Assessment Guidance for Superfund. Vol. 1: Human Health Evaluation Manual - Supplemental Guidance, Standard Default Exposure Factors. Interim Final. OSWER Directive 9285.6-03,

EPA, 1992: Dermal Exposure Assessment: Principles and Applications. EPA/600/8-91/011B.

EPA, 1995: Assessing Dermal Exposure from Soil, Technical Guidance manual, Region III, EPA/903-K-95-003.

TABLE 4.6

VALUES USED FOR DAILY INTAKE CALCULATIONS

St. Julien's Creek - Landfill C (Site 3)

Scenario Timeframe: Current
Medium: Surface Soil
Exposure Medium: Surface Soil
Exposure Point: Onsite
Receptor Population: Trespasser
Receptor Age: Adolescent

Exposure Route	Parameter Code	Parameter Definition	Units	RME Value	RME Rationale/ Reference	CT Value	CT Rationale/ Reference	Intake Equation/ Model Name
Ingestion	CS	Chemical Concentration in Sediment	mg/kg	See Table 3	See Table 3	See Table 3	See Table 3	Chronic Daily Intake (CDI) (mg/kg-day)=
	IR-S	Ingestion Rate of Sediment	mg/day	100	EPA, 1991	100	EPA, 1991	CS x IR x EF x ED x CF1 x 1/BW x 1/AT
	EF	Exposure Frequency	days/year	52	1 hour per week	52	1 hour per week	
	ED	Exposure Duration	years	11	EPA, 1991	11	EPA, 1991	
	CF1	Conversion Factor	kg/mg	1.00E-06	NA	1.00E-06	NA	
	BW	Body Weight	kg	45	EPA, 1995b	45	EPA, 1995b	
	AT-C	Averaging Time - Cancer	days	25,550	EPA, 1989	25,550	EPA, 1989	
	AT-N	Averaging Time - Non-Cancer	days	4,015	EPA, 1989	4,015	EPA, 1989	
Dermal	CS	Chemical Concentration in Sediment	mg/kg	See Table 3	See Table 3	See Table 3	See Table 3	Chronic Daily Intake (CDI) (mg/kg-day)=
	CF1	Conversion Factor	kg/mg	1.00E-06	NA	1.00E-06	NA	CS x CF1 x SA x AF x AB x EF x ED x 1/BW x 1/AT
	SA	Skin Surface Area Available for Contact	cm^2	3,380	EPA, 1995b	3,380	EPA, 1995b	
	AF	Soil to Skin Adherence Factor	mg/cm^2	1	EPA, 1992	1	EPA, 1992	
	AB	Absorption Factor	unitless	chemical-specific	EPA, 1995a	chemical-specific	EPA, 1995a	
	EF	Exposure Frequency	days/year	52	1 hour per week	52	1 hour per week	
	ED	Exposure Duration	years	11	EPA, 1991	11	EPA, 1991	
	BW	Body Weight	kg	45	EPA, 1995b	45	EPA, 1995b	
	AT-C	Averaging Time - Cancer	days	25,550	EPA, 1989	25,550	EPA, 1989	
	AT-N	Averaging Time - Non-Cancer	days	4,015	EPA, 1989	4,015	EPA, 1989	

Sources:

EPA, 1989: Risk Assessment Guidance for Superfund. Vol. 1: Human Health Evaluation Manual, Part A. OERR. EPA/540/1-89/002.

EPA, 1991: Risk Assessment Guidance for Superfund. Vol. 1: Human Health Evaluation Manual - Supplemental Guidance, Standard Default Exposure Factors. Interim Final. OSWER Directive 9285.6-03,

EPA, 1992: Dermal Exposure Assessment: Principles and Applications. EPA/600/8-91/011B.

EPA, 1995a: Assessing Dermal Exposure from Soil, Technical Guidance manual, Region III, EPA/903-K-95-003.

EPA, 1995b: Exposure Factors Handbook (Review Draft). EPA/600/P-95/002A. The skin surface area presented in this table includes hands, forearms, lower legs, neck and head (25% of total surface area) and was derived by averaging the mean (7 to 17 years) male and female values.

TABLE 4.7

VALUES USED FOR DAILY INTAKE CALCULATIONS

St. Juliens Creek - Landfill C (Site 3)

Scenario Timeframe: Current
Medium: Surface Soil
Exposure Medium: Surface Soil
Exposure Point: Onsite
Receptor Population: Trespasser
Receptor Age: Adult

Exposure Route	Parameter Code	Parameter Definition	Units	RME Value	RME Rationale/ Reference	CT Value	CT Rationale/ Reference	Intake Equation/ Model Name
Ingestion	CS	Chemical Concentration in Soil	mg/kg	See Table 3	See Table 3	See Table 3	See Table 3	Chronic Daily Intake (CDI) (mg/kg-day)=
	IR-S	Ingestion Rate of Soil	mg/day	100	EPA, 1991	100	EPA, 1991	CS x IR x EF x ED x CF1 x 1/BW x 1/AT
	EF	Exposure Frequency	days/year	52	1 hour per week	52	1 hour per week	
	ED	Exposure Duration	years	24	EPA, 1991	24	EPA, 1991	
	CF1	Conversion Factor	kg/mg	1.00E-06	NA	1.00E-06	NA	
	BW	Body Weight	kg	70	EPA, 1991	70	EPA, 1991	
	AT-C	Averaging Time - Cancer	days	25,550	EPA, 1989	25,550	EPA, 1989	
	AT-N	Averaging Time - Non-Cancer	days	8,760	EPA, 1989	8,760	EPA, 1989	
Dermal	CS	Chemical Concentration in Soil	mg/kg	See Table 3	See Table 3	See Table 3	See Table 3	Chronic Daily Intake (CDI) (mg/kg-day)=
	CF1	Conversion Factor	kg/mg	1.00E-06	NA	1.00E-06	NA	CS x CF1 x SA x AF x AB x EF x ED x 1/BW x 1/AT
	SA	Skin Surface Area Available for Contact	cm^2	5,800	EPA, 1992	5,800	EPA, 1992	
	AF	Soil to Skin Adherence Factor	mg/cm^2	1	EPA, 1992	1	EPA, 1992	
	AB	Absorption Factor	unitless	chemical-specific	EPA, 1995	chemical-specific	EPA, 1995	
	EF	Exposure Frequency	days/year	52	1 hour per week	52	1 hour per week	
	ED	Exposure Duration	years	24	EPA, 1991	24	EPA, 1991	
	BW	Body Weight	kg	70	EPA, 1991	70	EPA, 1991	
	AT-C	Averaging Time - Cancer	days	25,550	EPA, 1989	25,550	EPA, 1989	
	AT-N	Averaging Time - Non-Cancer	days	8,760	EPA, 1989	8,760	EPA, 1989	

Sources:

EPA, 1989: Risk Assessment Guidance for Superfund. Vol. 1: Human Health Evaluation Manual, Part A. OERR. EPA/540/1-89/002.

EPA, 1991: Risk Assessment Guidance for Superfund. Vol. 1: Human Health Evaluation Manual - Supplemental Guidance, Standard Default Exposure Factors. Interim Final. OSWER Directive 9285.6-03,

EPA, 1992: Dermal Exposure Assessment: Principles and Applications. EPA/600/8-91/011B.

EPA, 1995: Assessing Dermal Exposure from Soil, Technical Guidance manual, Region III, EPA/903-K-95-003.

TABLE 4.8

VALUES USED FOR DAILY INTAKE CALCULATIONS

St. Juliens Creek - Landfill C (Site 3)

Scenario Timeframe: Future
Medium: Surface Soil
Exposure Medium: Surface Soil
Exposure Point: Onsite
Receptor Population: Resident
Receptor Age: Child

Exposure Route	Parameter Code	Parameter Definition	Units	RME Value	RME Rationale/ Reference	CT Value	CT Rationale/ Reference	Intake Equation/ Model Name
Ingestion	CS	Chemical Concentration in Soil	mg/kg	See Table 3	See Table 3	See Table 3	See Table 3	Chronic Daily Intake (CDI) (mg/kg-day)=
	IR-S	Ingestion Rate of Soil	mg/day	200	EPA, 1991	200	EPA, 1991	CS x IR x EF x ED x CF1 x 1/BW x 1/AT
	EF	Exposure Frequency	days/year	350	EPA, 1991	350	1 hour per week	
	ED	Exposure Duration	years	6	EPA, 1991	6	EPA, 1991	
	CF1	Conversion Factor	kg/mg	1.00E-06	NA	1.00E-06	NA	
	BW	Body Weight	kg	15	EPA, 1991	15	EPA, 1991	
	AT-C	Averaging Time - Cancer	days	25,550	EPA, 1989	25,550	EPA, 1989	
	AT-N	Averaging Time - Non-Cancer	days	2,190	EPA, 1989	2,190	EPA, 1989	
Dermal	CS	Chemical Concentration in Soil	mg/kg	See Table 3	See Table 3	See Table 3	See Table 3	Chronic Daily Intake (CDI) (mg/kg-day)=
	CF1	Conversion Factor	kg/mg	1.00E-06	NA	1.00E-06	NA	CS x CF1 x SA x AF x AB x EF x ED x 1/BW x 1/AT
	SA	Skin Surface Area Available for Contact	cm^2	2,650	EPA, 1992	2,650	EPA, 1992	
	AF	Soil to Skin Adherence Factor	mg/cm^2	1	EPA, 1992	1	EPA, 1992	
	AB	Absorption Factor	unitless	chemical-specific	EPA, 1995	chemical-specific	EPA, 1995	
	EF	Exposure Frequency	days/year	350	EPA, 1991	350	EPA, 1991	
	ED	Exposure Duration	years	6	EPA, 1991	6	EPA, 1991	
	BW	Body Weight	kg	15	EPA, 1991	15	EPA, 1991	
	AT-C	Averaging Time - Cancer	days	25,550	EPA, 1989	25,550	EPA, 1989	
	AT-N	Averaging Time - Non-Cancer	days	2,190	EPA, 1989	2,190	EPA, 1989	

Sources:

EPA, 1989: Risk Assessment Guidance for Superfund. Vol. 1: Human Health Evaluation Manual, Part A. OERR. EPA/540/1-89/002.

EPA, 1991: Risk Assessment Guidance for Superfund. Vol. 1: Human Health Evaluation Manual - Supplemental Guidance, Standard Default Exposure Factors. Interim Final. OSWER Directive 9285.6-03,

EPA, 1992: Dermal Exposure Assessment: Principles and Applications. EPA/600/8-91/011B.

EPA, 1995: Assessing Dermal Exposure from Soil, Technical Guidance manual, Region III, EPA/903-K-95-003.

TABLE 4.9

VALUES USED FOR DAILY INTAKE CALCULATIONS

St. Juliens Creek - Landfill C (Site 3)

Scenario Timeframe: Future
Medium: Surface Soil
Exposure Medium: Surface Soil
Exposure Point: Onsite
Receptor Population: Resident
Receptor Age: Adult

Exposure Route	Parameter Code	Parameter Definition	Units	RME Value	RME Rationale/ Reference	CT Value	CT Rationale/ Reference	Intake Equation/ Model Name
Ingestion	CS	Chemical Concentration in Soil	mg/kg	See Table 3	See Table 3	See Table 3	See Table 3	Chronic Daily Intake (CDI) (mg/kg-day)=
	IR-S	Ingestion Rate of Soil	mg/day	100	EPA, 1991	100	EPA, 1991	CS x IR x EF x ED x CF1 x 1/BW x 1/AT
	EF	Exposure Frequency	days/year	350	EPA, 1991	350	EPA, 1991	
	ED	Exposure Duration	years	24	EPA, 1991	24	EPA, 1991	
	CF1	Conversion Factor	kg/mg	1.00E-06	NA	1.00E-06	NA	
	BW	Body Weight	kg	70	EPA, 1991	70	EPA, 1991	
	AT-C	Averaging Time - Cancer	days	25,550	EPA, 1989	25,550	EPA, 1989	
	AT-N	Averaging Time - Non-Cancer	days	8,760	EPA, 1989	8,760	EPA, 1989	
Dermal	CS	Chemical Concentration in Soil	mg/kg	See Table 3	See Table 3	See Table 3	See Table 3	Chronic Daily Intake (CDI) (mg/kg-day)=
	CF1	Conversion Factor	kg/mg	1.00E-06	NA	1.00E-06	NA	CS x CF1 x SA x AF x AB x EF x ED x 1/BW x 1/AT
	SA	Skin Surface Area Available for Contact	cm^2	5,800	EPA, 1992	5,800	EPA, 1992	
	AF	Soil to Skin Adherence Factor	mg/cm^2	1	EPA, 1992	1	EPA, 1992	
	AB	Absorption Factor	unitless	chemical-specific	EPA, 1995	chemical-specific	EPA, 1995	
	EF	Exposure Frequency	days/year	350	EPA, 1991	350	EPA, 1991	
	ED	Exposure Duration	years	24	EPA, 1991	24	EPA, 1991	
	BW	Body Weight	kg	70	EPA, 1991	70	EPA, 1991	
	AT-C	Averaging Time - Cancer	days	25,550	EPA, 1989	25,550	EPA, 1989	
	AT-N	Averaging Time - Non-Cancer	days	8,760	EPA, 1989	8,760	EPA, 1989	

Sources:

EPA, 1989: Risk Assessment Guidance for Superfund. Vol. 1: Human Health Evaluation Manual, Part A. OERR. EPA/540/1-89/002.

EPA, 1991: Risk Assessment Guidance for Superfund. Vol. 1: Human Health Evaluation Manual - Supplemental Guidance, Standard Default Exposure Factors. Interim Final. OSWER Directive 9285.6-03,

EPA, 1992: Dermal Exposure Assessment: Principles and Applications. EPA/600/8-91/011B.

EPA, 1995: Assessing Dermal Exposure from Soil, Technical Guidance manual, Region III, EPA/903-K-95-003.

TABLE 4.10

VALUES USED FOR DAILY INTAKE CALCULATIONS

St. Juliens Creek - Landfill C (Site 3)

Scenario Timeframe: Future
Medium: Surface Soil
Exposure Medium: Surface Soil
Exposure Point: Onsite
Receptor Population: Groundskeeper
Receptor Age: Adult

Exposure Route	Parameter Code	Parameter Definition	Units	RME Value	RME Rationale/ Reference	CT Value	CT Rationale/ Reference	Intake Equation/ Model Name
Ingestion	CS	Chemical Concentration in Soil	mg/kg	See Table 3	See Table 3	See Table 3	See Table 3	Chronic Daily Intake (CDI) (mg/kg-day)=
	IR-S	Ingestion Rate of Soil	mg/day	50	VADEQ, 1997	50	VADEQ, 1997	CS x IR x EF x ED x CF1 x 1/BW x 1/AT
	EF	Exposure Frequency	days/year	250	EPA, 1991	250	EPA, 1991	
	ED	Exposure Duration	years	25	EPA, 1991	25	EPA, 1991	
	CF1	Conversion Factor	kg/mg	1.00E-06	NA	1.00E-06	NA	
	BW	Body Weight	kg	70	EPA, 1991	70	EPA, 1991	
	AT-C	Averaging Time - Cancer	days	25,550	EPA, 1989	25,550	EPA, 1989	
	AT-N	Averaging Time - Non-Cancer	days	9,125	EPA, 1989	9,125	EPA, 1989	
Dermal	CS	Chemical Concentration in Soil	mg/kg	See Table 3	See Table 3	See Table 3	See Table 3	Chronic Daily Intake (CDI) (mg/kg-day)=
	CF1	Conversion Factor	kg/mg	1.00E-06	NA	1.00E-06	NA	CS x CF1 x SA x AF x AB x EF x ED x 1/BW x 1/AT
	SA	Skin Surface Area Available for Contact	cm^2	5,300	EPA, 1992	5,300	EPA, 1992	
	AF	Soil to Skin Adherence Factor	mg/cm^2	1	EPA, 1992	1	EPA, 1992	
	AB	Absorption Factor	unitless	chemical-specific	EPA, 1995	chemical-specific	EPA, 1995	
	EF	Exposure Frequency	days/year	250	EPA, 1991	250	EPA, 1991	
	ED	Exposure Duration	years	25	EPA, 1991	25	EPA, 1991	
	BW	Body Weight	kg	70	EPA, 1991	70	EPA, 1991	
	AT-C	Averaging Time - Cancer	days	25,550	EPA, 1989	25,550	EPA, 1989	
	AT-N	Averaging Time - Non-Cancer	days	9,125	EPA, 1989	9,125	EPA, 1989	

Sources:

EPA, 1989: Risk Assessment Guidance for Superfund. Vol. 1: Human Health Evaluation Manual, Part A. OERR. EPA/540/1-89/002.

EPA, 1991: Risk Assessment Guidance for Superfund. Vol. 1: Human Health Evaluation Manual - Supplemental Guidance, Standard Default Exposure Factors. Interim Final. OSWER Directive 9285.6-03,

EPA, 1992: Dermal Exposure Assessment: Principles and Applications. EPA/600/8-91/011B.

EPA, 1995: Assessing Dermal Exposure from Soil, Technical Guidance manual, Region III, EPA/903-K-95-003.

VADEQ, 1997: Value provided by Pat McMurray, Virginia Department of Environmental Quality, during St. Juliens Creek risk assessment assumptions conference call on November 20, 1997.

TABLE 4.11

VALUES USED FOR DAILY INTAKE CALCULATIONS

St. Juliens Creek - Landfill C (Site 3)

Scenario Timeframe: Future
Medium: Surface Soil
Exposure Medium: Surface Soil
Exposure Point: Onsite
Receptor Population: Construction Worker
Receptor Age: Adult

Exposure Route	Parameter Code	Parameter Definition	Units	RME Value	RME Rationale/ Reference	CT Value	CT Rationale/ Reference	Intake Equation/ Model Name
Ingestion	CS	Chemical Concentration in Soil	mg/kg	See Table 3	See Table 3	See Table 3	See Table 3	Chronic Daily Intake (CDI) (mg/kg-day)=
	IR-S	Ingestion Rate of Soil	mg/day	480	VADEQ, 1997	480	VADEQ, 1997	CS x IR x EF x ED x CF1 x 1/BW x 1/AT
	EF	Exposure Frequency	days/year	250	EPA, 1991	250	EPA, 1991	
	ED	Exposure Duration	years	0.5	VADEQ, 1997	0.5	VADEQ, 1997	
	CF1	Conversion Factor	kg/mg	1.00E-06	NA	1.00E-06	NA	
	BW	Body Weight	kg	70	EPA, 1991	70	EPA, 1991	
	AT-C	Averaging Time - Cancer	days	25,550	EPA, 1989	25,550	EPA, 1989	
	AT-N	Averaging Time - Non-Cancer	days	183	EPA, 1989	183	EPA, 1989	
Dermal	CS	Chemical Concentration in Soil	mg/kg	See Table 3	See Table 3	See Table 3	See Table 3	Chronic Daily Intake (CDI) (mg/kg-day)=
	CF1	Conversion Factor	kg/mg	1.00E-06	NA	1.00E-06	NA	CS x CF1 x SA x AF x AB x EF x ED x 1/BW x 1/AT
	SA	Skin Surface Area Available for Contact	cm^2	5,300	EPA, 1992	5,300	EPA, 1992	
	AF	Soil to Skin Adherence Factor	mg/cm^2	1	EPA, 1992	1	EPA, 1992	
	AB	Absorption Factor	unitless	chemical-specific	EPA, 1995	chemical-specific	EPA, 1995	
	EF	Exposure Frequency	days/year	250	EPA, 1991	250	EPA, 1991	
	ED	Exposure Duration	years	0.5	VADEQ, 1997	0.5	VADEQ, 1997	
	BW	Body Weight	kg	70	EPA, 1991	70	EPA, 1991	
	AT-C	Averaging Time - Cancer	days	25,550	EPA, 1989	25,550	EPA, 1989	
	AT-N	Averaging Time - Non-Cancer	days	183	EPA, 1989	183	EPA, 1989	

Sources:

EPA, 1989: Risk Assessment Guidance for Superfund. Vol. 1: Human Health Evaluation Manual, Part A. OERR. EPA/540/1-89/002.

EPA, 1991: Risk Assessment Guidance for Superfund. Vol. 1: Human Health Evaluation Manual - Supplemental Guidance, Standard Default Exposure Factors. Interim Final. OSWER Directive 9285.6-03,

EPA, 1992: Dermal Exposure Assessment: Principles and Applications. EPA/600/8-91/011B.

EPA, 1995: Assessing Dermal Exposure from Soil, Technical Guidance manual, Region III, EPA/903-K-95-003.

VADEQ, 1997: Value provided by Pat McMurray, Virginia Department of Environmental Quality, during St. Juliens Creek risk assessment assumptions conference call on November 20, 1997.

TABLE 5.3
NON-CANCER TOXICITY DATA -- ORAL/DERMAL
St. Juliens Creek - Landfill C (Site 3)

Chemical of Potential Concern	Chronic/ Subchronic	Oral RfD Value	Oral RfD Units	Oral to Dermal Adjustment Factor	Adjusted Dermal RfD	Units	Primary Target Organ	Combined Uncertainty/Modifying Factors	Sources of RfD: Target Organ	Dates of RfD: Target Organ (MM/DD/YY)
Aluminum	Chronic	1.0E+00	mg/kg/day	0.270	2.7E-01	mg/kg/day	N/A	N/A	RBC:N/A	10/22/97
Arsenic	Chronic	3.0E-04	mg/kg/day	0.950	2.9E-04	mg/kg/day	Skin	3	IRIS	11/17/97
Benzo(a)Pyrene	N/A	N/A	N/A	N/A	N/A	N/A	NOAEL	N/A	N/A	N/A
Benzo(b)Fluoranthene	N/A	N/A	N/A	N/A	N/A	N/A	NOAEL	N/A	N/A	N/A
Beryllium	Chronic	5.0E-03	mg/kg/day	0.010	5.0E-05	mg/kg/day	NOAEL	100	IRIS	11/17/97
Iron	Chronic	3.0E-01	mg/kg/day	0.050	1.5E-02	mg/kg/day	N/A	N/A	RBC:N/A	10/22/97
Manganese	Chronic	1.4E-01	mg/kg/day	1.000	1.4E-01	mg/kg/day	NOAEL	2E+00	IRIS	11/17/97
Vanadium	Chronic	7.0E-03	mg/kg/day	0.020	1.4E-04	mg/kg/day	NOAEL	1E+02	HEAST	07/00/97

N/A = Not Applicable
IRIS = Integrated Risk Information System
HEAST= Health Effects Assessment Summary Tables
NCEA= National Center for Environmental Assessment
RBC= *Region III Updated Risk-Based Concentration Table.* October, 1997.

TABLE 6.3

CANCER TOXICITY DATA -- ORAL/DERMAL

St. Juliens Creek - Landfill C (Site 3)

Chemical of Potential Concern	Oral Cancer Slope Factor	Oral to Dermal Adjustment Factor	Adjusted Dermal Cancer Slope Factor	Units	Weight of Evidence/ Cancer Guideline Description	Source	Date (MM/DD/YY)
Aluminum	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Arsenic	1.5E+00	0.950	1.6E+00	mg/kg-day $^{-1}$	A	IRIS	11/17/97
Benzo(a)Pyrene	7.3E+00	N/A	N/A	mg/kg-day $^{-1}$	B2	IRIS	11/17/97
Benzo(b)Fluoranthene	7.3E-01	N/A	N/A	mg/kg-day $^{-1}$	N/A	RBC:N/A	10/07/98
Beryllium	4.3E+00	0.010	4.3E+02	mg/kg-day $^{-1}$	B2	IRIS	11/17/97
Iron	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Manganese	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Vanadium	N/A	N/A	N/A	N/A	N/A	N/A	N/A

IRIS = Integrated Risk Information System

HEAST= Health Effects Assessment Summary Tables

NCEA= National Center for Environmental Assessment

RBC= *Risk-based Concentration Table*, October 1997.

EPA Group:

A - Human carcinogen

B1 - Probable human carcinogen - indicates that limited human data are available

B2 - Probable human carcinogen - indicates sufficient evidence in animals and inadequate or no evidence in humans

C - Possible human carcinogen

D - Not classifiable as a human carcinogen

E - Evidence of noncarcinogenicity

Weight of Evidence:

Known/Likely

Cannot be Determined

Not Likely

TABLE 7.5.RME
CALCULATION OF NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
St. Juliens Creek - Landfill C (Site 3)

Scenario Timeframe: Current
Medium: Surface Soil
Exposure Medium: Surface Soil
Exposure Point: Onsite
Receptor Population: Trespasser
Receptor Age: Child

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Ingestion	Aluminum	21400.00	mg/kg	21400.00	mg/kg	M	4.1E-02	mg/kg-day	1.0E+00	mg/kg/day	N/A	N/A	4.1E-02
	Arsenic	13.90	mg/kg	13.90	mg/kg	M	2.6E-05	mg/kg-day	3.0E-04	mg/kg/day	N/A	N/A	8.8E-02
	Benzo(a)Pyrene	0.35	mg/kg	0.35	mg/kg	M	6.6E-07	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Benzo(b)Fluoranthene	1.50	mg/kg	1.50	mg/kg	M	2.8E-06	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Beryllium	1.30	mg/kg	1.30	mg/kg	M	2.5E-06	mg/kg-day	5.0E-03	mg/kg/day	N/A	N/A	4.9E-04
	Iron	34000.00	mg/kg	34000.00	mg/kg	M	6.5E-02	mg/kg-day	3.0E-01	mg/kg/day	N/A	N/A	2.2E-01
	Manganese	246.00	mg/kg	246.00	mg/kg	M	4.7E-04	mg/kg-day	1.4E-01	mg/kg/day	N/A	N/A	3.3E-03
	Vanadium	79.80	mg/kg	79.80	mg/kg	M	1.5E-04	mg/kg-day	7.0E-03	mg/kg/day	N/A	N/A	2.2E-02
Dermal	Aluminum	21400.00	mg/kg	21400.00	mg/kg	M	5.4E-03	mg/kg-day	2.7E-01	mg/kg/day	N/A	N/A	2.0E-02
	Arsenic	13.90	mg/kg	13.90	mg/kg	M	1.1E-05	mg/kg-day	2.9E-04	mg/kg/day	N/A	N/A	3.9E-02
	Benzo(a)Pyrene	0.35	mg/kg	0.35	mg/kg	M	8.8E-07	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Benzo(b)Fluoranthene	1.50	mg/kg	1.50	mg/kg	M	3.8E-06	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Beryllium	1.30	mg/kg	1.30	mg/kg	M	3.3E-07	mg/kg-day	5.0E-05	mg/kg/day	N/A	N/A	6.5E-03
	Iron	34000.00	mg/kg	34000.00	mg/kg	M	8.6E-03	mg/kg-day	1.5E-02	mg/kg/day	N/A	N/A	5.7E-01
	Manganese	246.00	mg/kg	246.00	mg/kg	M	6.2E-05	mg/kg-day	1.4E-01	mg/kg/day	N/A	N/A	4.4E-04
	Vanadium	79.80	mg/kg	79.80	mg/kg	M	2.0E-05	mg/kg-day	1.4E-04	mg/kg/day	N/A	N/A	1.4E-01
M = Medium specific												Total Hazard Index Across All Exposure Routes/Pathways	1.15

TABLE 7.5.CT
CALCULATION OF NON-CANCER HAZARDS
CENTRAL TENDENCIES
St. Juliens Creek - Landfill C (Site 3)

Scenario Timeframe: Current
Medium: Surface Soil
Exposure Medium: Surface Soil
Exposure Point: Onsite
Receptor Population: Trespasser
Receptor Age: Child

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Ingestion	Aluminum	11011.43	mg/kg	11011.43	mg/kg	M	2.1E-02	mg/kg-day	1.0E+00	mg/kg/day	N/A	N/A	2.1E-02
	Arsenic	8.04	mg/kg	8.04	mg/kg	M	1.5E-05	mg/kg-day	3.0E-04	mg/kg/day	N/A	N/A	5.1E-02
	Benzo(a)Pyrene	0.23	mg/kg	0.23	mg/kg	M	4.4E-07	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Benzo(b)Fluoranthene	0.70	mg/kg	0.70	mg/kg	M	1.3E-06	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Beryllium	0.52	mg/kg	0.52	mg/kg	M	9.9E-07	mg/kg-day	5.0E-03	mg/kg/day	N/A	N/A	2.0E-04
	Iron	18412.86	mg/kg	18412.86	mg/kg	M	3.5E-02	mg/kg-day	3.0E-01	mg/kg/day	N/A	N/A	1.2E-01
	Manganese	147.29	mg/kg	147.29	mg/kg	M	2.8E-04	mg/kg-day	1.4E-01	mg/kg/day	N/A	N/A	2.0E-03
	Vanadium	47.06	mg/kg	47.06	mg/kg	M	8.9E-05	mg/kg-day	7.0E-03	mg/kg/day	N/A	N/A	1.3E-02
Dermal	Aluminum	11011.43	mg/kg	11011.43	mg/kg	M	2.8E-03	mg/kg-day	2.7E-01	mg/kg/day	N/A	N/A	1.0E-02
	Arsenic	8.04	mg/kg	8.04	mg/kg	M	6.5E-06	mg/kg-day	2.9E-04	mg/kg/day	N/A	N/A	2.3E-02
	Benzo(a)Pyrene	0.23	mg/kg	0.23	mg/kg	M	5.8E-07	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Benzo(b)Fluoranthene	0.70	mg/kg	0.70	mg/kg	M	1.8E-06	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Beryllium	0.52	mg/kg	0.52	mg/kg	M	1.3E-07	mg/kg-day	5.0E-05	mg/kg/day	N/A	N/A	2.6E-03
	Iron	18412.86	mg/kg	18412.86	mg/kg	M	4.6E-03	mg/kg-day	1.5E-02	mg/kg/day	N/A	N/A	3.1E-01
	Manganese	147.29	mg/kg	147.29	mg/kg	M	3.7E-05	mg/kg-day	1.4E-01	mg/kg/day	N/A	N/A	2.6E-04
	Vanadium	47.06	mg/kg	47.06	mg/kg	M	1.2E-05	mg/kg-day	1.4E-04	mg/kg/day	N/A	N/A	8.5E-02

M = Medium specific

Total Hazard Index Across All Exposure Routes/Pathways: 0.63

TABLE 7.6.RME
CALCULATION OF NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
St. Juliens Creek - Landfill C (Site 3)

Scenario Timeframe: Current
Medium: Surface Soil
Exposure Medium: Surface Soil
Exposure Point: Onsite
Receptor Population: Trespasser
Receptor Age: Adolescent

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Ingestion	Aluminum	21400.00	mg/kg	21400.00	mg/kg	M	6.8E-03	mg/kg-day	1.0E+00	mg/kg/day	N/A	N/A	6.8E-03
	Arsenic	13.90	mg/kg	13.90	mg/kg	M	4.4E-06	mg/kg-day	3.0E-04	mg/kg/day	N/A	N/A	1.5E-02
	Benzo(a)Pyrene	0.35	mg/kg	0.35	mg/kg	M	1.1E-07	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Benzo(b)Fluoranthene	1.50	mg/kg	1.50	mg/kg	M	4.7E-07	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Beryllium	1.30	mg/kg	1.30	mg/kg	M	4.1E-07	mg/kg-day	5.0E-03	mg/kg/day	N/A	N/A	8.2E-05
	Iron	34000.00	mg/kg	34000.00	mg/kg	M	1.1E-02	mg/kg-day	3.0E-01	mg/kg/day	N/A	N/A	3.6E-02
	Manganese	246.00	mg/kg	246.00	mg/kg	M	7.8E-05	mg/kg-day	1.4E-01	mg/kg/day	N/A	N/A	5.6E-04
	Vanadium	79.80	mg/kg	79.80	mg/kg	M	2.5E-05	mg/kg-day	7.0E-03	mg/kg/day	N/A	N/A	3.6E-03
Dermal	Aluminum	21400.00	mg/kg	21400.00	mg/kg	M	2.3E-03	mg/kg-day	2.7E-01	mg/kg/day	N/A	N/A	8.5E-03
	Arsenic	13.90	mg/kg	13.90	mg/kg	M	4.8E-06	mg/kg-day	2.9E-04	mg/kg/day	N/A	N/A	1.7E-02
	Benzo(a)Pyrene	0.35	mg/kg	0.35	mg/kg	M	3.7E-07	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Benzo(b)Fluoranthene	1.50	mg/kg	1.50	mg/kg	M	1.6E-06	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Beryllium	1.30	mg/kg	1.30	mg/kg	M	1.4E-07	mg/kg-day	5.0E-05	mg/kg/day	N/A	N/A	2.8E-03
	Iron	34000.00	mg/kg	34000.00	mg/kg	M	3.6E-03	mg/kg-day	1.5E-02	mg/kg/day	N/A	N/A	2.4E-01
	Manganese	246.00	mg/kg	246.00	mg/kg	M	2.6E-05	mg/kg-day	1.4E-01	mg/kg/day	N/A	N/A	1.9E-04
	Vanadium	79.80	mg/kg	79.80	mg/kg	M	8.5E-06	mg/kg-day	1.4E-04	mg/kg/day	N/A	N/A	6.1E-02

M = Medium specific

Total Hazard Index Across All Exposure Routes/Pathways: 0.39

TABLE 7.6.CT
CALCULATION OF NON-CANCER HAZARDS
CENTRAL TENDENCIES
St. Juliens Creek - Landfill C (Site 3)

Scenario Timeframe: Current
Medium: Surface Soil
Exposure Medium: Surface Soil
Exposure Point: Onsite
Receptor Population: Trespasser
Receptor Age: Adolescent

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Ingestion	Aluminum	11011.43	mg/kg	11011.43	mg/kg	M	3.5E-03	mg/kg-day	1.0E+00	mg/kg/day	N/A	N/A	3.5E-03
	Arsenic	8.04	mg/kg	8.04	mg/kg	M	2.5E-06	mg/kg-day	3.0E-04	mg/kg/day	N/A	N/A	8.5E-03
	Benzo(a)Pyrene	0.23	mg/kg	0.23	mg/kg	M	7.3E-08	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Benzo(b)Fluoranthene	0.70	mg/kg	0.70	mg/kg	M	2.2E-07	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Beryllium	0.52	mg/kg	0.52	mg/kg	M	1.6E-07	mg/kg-day	5.0E-03	mg/kg/day	N/A	N/A	3.3E-05
	Iron	18412.86	mg/kg	18412.86	mg/kg	M	5.8E-03	mg/kg-day	3.0E-01	mg/kg/day	N/A	N/A	1.9E-02
	Manganese	147.29	mg/kg	147.29	mg/kg	M	4.7E-05	mg/kg-day	1.4E-01	mg/kg/day	N/A	N/A	3.3E-04
	Vanadium	47.06	mg/kg	47.06	mg/kg	M	1.5E-05	mg/kg-day	7.0E-03	mg/kg/day	N/A	N/A	2.1E-03
Dermal	Aluminum	11011.43	mg/kg	11011.43	mg/kg	M	1.2E-03	mg/kg-day	2.7E-01	mg/kg/day	N/A	N/A	4.4E-03
	Arsenic	8.04	mg/kg	8.04	mg/kg	M	2.8E-06	mg/kg-day	2.9E-04	mg/kg/day	N/A	N/A	9.7E-03
	Benzo(a)Pyrene	0.23	mg/kg	0.23	mg/kg	M	2.5E-07	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Benzo(b)Fluoranthene	0.70	mg/kg	0.70	mg/kg	M	7.5E-07	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Beryllium	0.52	mg/kg	0.52	mg/kg	M	5.6E-08	mg/kg-day	5.0E-05	mg/kg/day	N/A	N/A	1.1E-03
	Iron	18412.86	mg/kg	18412.86	mg/kg	M	2.0E-03	mg/kg-day	1.5E-02	mg/kg/day	N/A	N/A	1.3E-01
	Manganese	147.29	mg/kg	147.29	mg/kg	M	1.6E-05	mg/kg-day	1.4E-01	mg/kg/day	N/A	N/A	1.1E-04
	Vanadium	47.06	mg/kg	47.06	mg/kg	M	5.0E-06	mg/kg-day	1.4E-04	mg/kg/day	N/A	N/A	3.6E-02

M = Medium specific

Total Hazard Index Across All Exposure Routes/Pathways: 0.22

TABLE 7.7.RME
CALCULATION OF NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
St. Juliens Creek - Landfill C (Site 3)

Scenario Timeframe: Current
Medium: Surface Soil
Exposure Medium: Surface Soil
Exposure Point: Onsite
Receptor Population: Trespasser
Receptor Age: Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Ingestion	Aluminum	21400.00	mg/kg	21400.00	mg/kg	M	4.4E-03	mg/kg-day	1.0E+00	mg/kg/day	N/A	N/A	4.4E-03
	Arsenic	13.90	mg/kg	13.90	mg/kg	M	2.8E-06	mg/kg-day	3.0E-04	mg/kg/day	N/A	N/A	9.4E-03
	Benzo(a)Pyrene	0.35	mg/kg	0.35	mg/kg	M	7.1E-08	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Benzo(b)Fluoranthene	1.50	mg/kg	1.50	mg/kg	M	3.1E-07	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Beryllium	1.30	mg/kg	1.30	mg/kg	M	2.6E-07	mg/kg-day	5.0E-03	mg/kg/day	N/A	N/A	5.3E-05
	Iron	34000.00	mg/kg	34000.00	mg/kg	M	6.9E-03	mg/kg-day	3.0E-01	mg/kg/day	N/A	N/A	2.3E-02
	Manganese	246.00	mg/kg	246.00	mg/kg	M	5.0E-05	mg/kg-day	1.4E-01	mg/kg/day	N/A	N/A	3.6E-04
	Vanadium	79.80	mg/kg	79.80	mg/kg	M	1.6E-05	mg/kg-day	7.0E-03	mg/kg/day	N/A	N/A	2.3E-03
Dermal	Aluminum	21400.00	mg/kg	21400.00	mg/kg	M	2.5E-03	mg/kg-day	2.7E-01	mg/kg/day	N/A	N/A	9.4E-03
	Arsenic	13.90	mg/kg	13.90	mg/kg	M	5.3E-06	mg/kg-day	2.9E-04	mg/kg/day	N/A	N/A	1.8E-02
	Benzo(a)Pyrene	0.35	mg/kg	0.35	mg/kg	M	4.1E-07	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Benzo(b)Fluoranthene	1.50	mg/kg	1.50	mg/kg	M	1.8E-06	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Beryllium	1.30	mg/kg	1.30	mg/kg	M	3.3E-07	mg/kg-day	5.0E-05	mg/kg/day	N/A	N/A	6.5E-03
	Iron	34000.00	mg/kg	34000.00	mg/kg	M	8.6E-03	mg/kg-day	1.5E-02	mg/kg/day	N/A	N/A	5.7E-01
	Manganese	246.00	mg/kg	246.00	mg/kg	M	6.2E-05	mg/kg-day	1.4E-01	mg/kg/day	N/A	N/A	4.4E-04
	Vanadium	79.80	mg/kg	79.80	mg/kg	M	2.0E-05	mg/kg-day	1.4E-04	mg/kg/day	N/A	N/A	1.4E-01
												Total Hazard Index Across All Exposure Routes/Pathways	0.79

TABLE 7.7.CT
CALCULATION OF NON-CANCER HAZARDS
CENTRAL TENDENCIES
St. Juliens Creek - Landfill C (Site 3)

Scenario Timeframe: Current
Medium: Surface Soil
Exposure Medium: Surface Soil
Exposure Point: Onsite
Receptor Population: Trespasser
Receptor Age: Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Ingestion	Aluminum	11011.43	mg/kg	11011.43	mg/kg	M	2.2E-03	mg/kg-day	1.0E+00	mg/kg/day	N/A	N/A	2.2E-03
	Arsenic	8.04	mg/kg	8.04	mg/kg	M	1.6E-06	mg/kg-day	3.0E-04	mg/kg/day	N/A	N/A	5.5E-03
	Benzo(a)Pyrene	0.23	mg/kg	0.23	mg/kg	M	4.7E-08	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Benzo(b)Fluoranthene	0.70	mg/kg	0.70	mg/kg	M	1.4E-07	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Beryllium	0.52	mg/kg	0.52	mg/kg	M	1.1E-07	mg/kg-day	5.0E-03	mg/kg/day	N/A	N/A	2.1E-05
	Iron	18412.86	mg/kg	18412.86	mg/kg	M	3.7E-03	mg/kg-day	3.0E-01	mg/kg/day	N/A	N/A	1.2E-02
	Manganese	147.29	mg/kg	147.29	mg/kg	M	3.0E-05	mg/kg-day	1.4E-01	mg/kg/day	N/A	N/A	2.1E-04
	Vanadium	47.06	mg/kg	47.06	mg/kg	M	9.6E-06	mg/kg-day	7.0E-03	mg/kg/day	N/A	N/A	1.4E-03
Dermal	Aluminum	11011.43	mg/kg	11011.43	mg/kg	M	1.3E-03	mg/kg-day	2.7E-01	mg/kg/day	N/A	N/A	4.8E-03
	Arsenic	8.04	mg/kg	8.04	mg/kg	M	3.0E-06	mg/kg-day	2.9E-04	mg/kg/day	N/A	N/A	1.1E-02
	Benzo(a)Pyrene	0.23	mg/kg	0.23	mg/kg	M	2.7E-07	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Benzo(b)Fluoranthene	0.70	mg/kg	0.70	mg/kg	M	8.2E-07	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Beryllium	0.52	mg/kg	0.52	mg/kg	M	1.3E-07	mg/kg-day	5.0E-05	mg/kg/day	N/A	N/A	2.6E-03
	Iron	18412.86	mg/kg	18412.86	mg/kg	M	4.6E-03	mg/kg-day	1.5E-02	mg/kg/day	N/A	N/A	3.1E-01
	Manganese	147.29	mg/kg	147.29	mg/kg	M	3.7E-05	mg/kg-day	1.4E-01	mg/kg/day	N/A	N/A	2.6E-04
	Vanadium	47.06	mg/kg	47.06	mg/kg	M	1.2E-05	mg/kg-day	1.4E-04	mg/kg/day	N/A	N/A	8.5E-02
												Total Hazard Index Across All Exposure Routes/Pathways	0.43

TABLE 7.8.RME
CALCULATION OF NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
St. Juliens Creek - Landfill C (Site 3)

Scenario Timeframe: Future
Medium: Surface Soil
Exposure Medium: Surface Soil
Exposure Point: Onsite
Receptor Population: Resident
Receptor Age: Child

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Ingestion	Aluminum	21400.00	mg/kg	21400.00	mg/kg	M	2.7E-01	mg/kg-day	1.0E+00	mg/kg/day	N/A	N/A	2.7E-01
	Arsenic	13.90	mg/kg	13.90	mg/kg	M	1.8E-04	mg/kg-day	3.0E-04	mg/kg/day	N/A	N/A	5.9E-01
	Benzo(a)Pyrene	0.35	mg/kg	0.35	mg/kg	M	4.5E-06	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Benzo(b)Fluoranthene	1.50	mg/kg	1.50	mg/kg	M	1.9E-05	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Beryllium	1.30	mg/kg	1.30	mg/kg	M	1.7E-05	mg/kg-day	5.0E-03	mg/kg/day	N/A	N/A	3.3E-03
	Iron	34000.00	mg/kg	34000.00	mg/kg	M	4.3E-01	mg/kg-day	3.0E-01	mg/kg/day	N/A	N/A	1.4E+00
	Manganese	246.00	mg/kg	246.00	mg/kg	M	3.1E-03	mg/kg-day	1.4E-01	mg/kg/day	N/A	N/A	2.2E-02
	Vanadium	79.80	mg/kg	79.80	mg/kg	M	1.0E-03	mg/kg-day	7.0E-03	mg/kg/day	N/A	N/A	1.5E-01
Dermal	Aluminum	21400.00	mg/kg	21400.00	mg/kg	M	3.6E-02	mg/kg-day	2.7E-01	mg/kg/day	N/A	N/A	1.3E-01
	Arsenic	13.90	mg/kg	13.90	mg/kg	M	7.5E-05	mg/kg-day	2.9E-04	mg/kg/day	N/A	N/A	2.6E-01
	Benzo(a)Pyrene	0.35	mg/kg	0.35	mg/kg	M	5.9E-07	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Benzo(b)Fluoranthene	1.50	mg/kg	1.50	mg/kg	M	2.5E-06	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Beryllium	1.30	mg/kg	1.30	mg/kg	M	2.2E-06	mg/kg-day	5.0E-05	mg/kg/day	N/A	N/A	4.4E-02
	Iron	34000.00	mg/kg	34000.00	mg/kg	M	5.8E-02	mg/kg-day	1.5E-02	mg/kg/day	N/A	N/A	3.8E+00
	Manganese	246.00	mg/kg	246.00	mg/kg	M	4.2E-04	mg/kg-day	1.4E-01	mg/kg/day	N/A	N/A	3.0E-03
	Vanadium	79.80	mg/kg	79.80	mg/kg	M	1.4E-04	mg/kg-day	1.4E-04	mg/kg/day	N/A	N/A	9.7E-01

M = Medium specific

Total Hazard Index Across All Exposure Routes/Pathways: 7.74

TABLE 7.8.CT
CALCULATION OF NON-CANCER HAZARDS
CENTRAL TENDENCIES
St. Juliens Creek - Landfill C (Site 3)

Scenario Timeframe: Future
Medium: Surface Soil
Exposure Medium: Surface Soil
Exposure Point: Onsite
Receptor Population: Resident
Receptor Age: Child

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Ingestion	Aluminum	11011.43	mg/kg	11011.43	mg/kg	M	1.4E-01	mg/kg-day	1.0E+00	mg/kg/day	N/A	N/A	1.4E-01
	Arsenic	8.04	mg/kg	8.04	mg/kg	M	1.0E-04	mg/kg-day	3.0E-04	mg/kg/day	N/A	N/A	3.4E-01
	Benzo(a)Pyrene	0.23	mg/kg	0.23	mg/kg	M	2.9E-06	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Benzo(b)Fluoranthene	0.70	mg/kg	0.70	mg/kg	M	8.9E-06	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Beryllium	0.52	mg/kg	0.52	mg/kg	M	6.6E-06	mg/kg-day	5.0E-03	mg/kg/day	N/A	N/A	1.3E-03
	Iron	18412.86	mg/kg	18412.86	mg/kg	M	2.4E-01	mg/kg-day	3.0E-01	mg/kg/day	N/A	N/A	7.8E-01
	Manganese	147.29	mg/kg	147.29	mg/kg	M	1.9E-03	mg/kg-day	1.4E-01	mg/kg/day	N/A	N/A	1.3E-02
	Vanadium	47.06	mg/kg	47.06	mg/kg	M	6.0E-04	mg/kg-day	7.0E-03	mg/kg/day	N/A	N/A	8.6E-02
Dermal	Aluminum	11011.43	mg/kg	11011.43	mg/kg	M	1.9E-02	mg/kg-day	2.7E-01	mg/kg/day	N/A	N/A	6.9E-02
	Arsenic	8.04	mg/kg	8.04	mg/kg	M	4.4E-05	mg/kg-day	2.9E-04	mg/kg/day	N/A	N/A	1.5E-01
	Benzo(a)Pyrene	0.23	mg/kg	0.23	mg/kg	M	3.9E-07	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Benzo(b)Fluoranthene	0.70	mg/kg	0.70	mg/kg	M	1.2E-06	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Beryllium	0.52	mg/kg	0.52	mg/kg	M	8.8E-07	mg/kg-day	5.0E-05	mg/kg/day	N/A	N/A	1.8E-02
	Iron	18412.86	mg/kg	18412.86	mg/kg	M	3.1E-02	mg/kg-day	1.5E-02	mg/kg/day	N/A	N/A	2.1E+00
	Manganese	147.29	mg/kg	147.29	mg/kg	M	2.5E-04	mg/kg-day	1.4E-01	mg/kg/day	N/A	N/A	1.8E-03
	Vanadium	47.06	mg/kg	47.06	mg/kg	M	8.0E-05	mg/kg-day	1.4E-04	mg/kg/day	N/A	N/A	5.7E-01

M = Medium specific

Total Hazard Index Across All Exposure Routes/Pathways: 4.26

TABLE 7.9.RME
CALCULATION OF NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
St. Juliens Creek - Landfill C (Site 3)

Scenario Timeframe: Future
Medium: Surface Soil
Exposure Medium: Surface Soil
Exposure Point: Onsite
Receptor Population: Resident
Receptor Age: Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Ingestion	Aluminum	21400.00	mg/kg	21400.00	mg/kg	M	2.9E-02	mg/kg-day	1.0E+00	mg/kg/day	N/A	N/A	2.9E-02
	Arsenic	13.90	mg/kg	13.90	mg/kg	M	1.9E-05	mg/kg-day	3.0E-04	mg/kg/day	N/A	N/A	6.3E-02
	Benzo(a)Pyrene	0.35	mg/kg	0.35	mg/kg	M	4.8E-07	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Benzo(b)Fluoranthene	1.50	mg/kg	1.50	mg/kg	M	2.1E-06	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Beryllium	1.30	mg/kg	1.30	mg/kg	M	1.8E-06	mg/kg-day	5.0E-03	mg/kg/day	N/A	N/A	3.6E-04
	Iron	34000.00	mg/kg	34000.00	mg/kg	M	4.7E-02	mg/kg-day	3.0E-01	mg/kg/day	N/A	N/A	1.6E-01
	Manganese	246.00	mg/kg	246.00	mg/kg	M	3.4E-04	mg/kg-day	1.4E-01	mg/kg/day	N/A	N/A	2.4E-03
	Vanadium	79.80	mg/kg	79.80	mg/kg	M	1.1E-04	mg/kg-day	7.0E-03	mg/kg/day	N/A	N/A	1.6E-02
Dermal	Aluminum	21400.00	mg/kg	21400.00	mg/kg	M	1.7E-02	mg/kg-day	2.7E-01	mg/kg/day	N/A	N/A	6.3E-02
	Arsenic	13.90	mg/kg	13.90	mg/kg	M	3.5E-05	mg/kg-day	2.9E-04	mg/kg/day	N/A	N/A	1.2E-01
	Benzo(a)Pyrene	0.35	mg/kg	0.35	mg/kg	M	2.8E-06	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Benzo(b)Fluoranthene	1.50	mg/kg	1.50	mg/kg	M	1.2E-05	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Beryllium	1.30	mg/kg	1.30	mg/kg	M	1.0E-06	mg/kg-day	5.0E-05	mg/kg/day	N/A	N/A	2.1E-02
	Iron	34000.00	mg/kg	34000.00	mg/kg	M	2.7E-02	mg/kg-day	1.5E-02	mg/kg/day	N/A	N/A	1.8E+00
	Manganese	246.00	mg/kg	246.00	mg/kg	M	2.0E-04	mg/kg-day	1.4E-01	mg/kg/day	N/A	N/A	1.4E-03
	Vanadium	79.80	mg/kg	79.80	mg/kg	M	6.3E-05	mg/kg-day	1.4E-04	mg/kg/day	N/A	N/A	4.5E-01

M = Medium specific

Total Hazard Index Across All Exposure Routes/Pathways: 2.73

TABLE 7.9.CT
CALCULATION OF NON-CANCER HAZARDS
CENTRAL TENDENCIES
St. Juliens Creek - Landfill C (Site 3)

Scenario Timeframe: Future
Medium: Surface Soil
Exposure Medium: Surface Soil
Exposure Point: Onsite
Receptor Population: Resident
Receptor Age: Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Ingestion	Aluminum	11011.43	mg/kg	11011.43	mg/kg	M	1.5E-02	mg/kg-day	1.0E+00	mg/kg/day	N/A	N/A	1.5E-02
	Arsenic	8.04	mg/kg	8.04	mg/kg	M	1.1E-05	mg/kg-day	3.0E-04	mg/kg/day	N/A	N/A	3.7E-02
	Benzo(a)Pyrene	0.23	mg/kg	0.23	mg/kg	M	3.1E-07	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Benzo(b)Fluoranthene	0.70	mg/kg	0.70	mg/kg	M	9.6E-07	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Beryllium	0.52	mg/kg	0.52	mg/kg	M	7.1E-07	mg/kg-day	5.0E-03	mg/kg/day	N/A	N/A	1.4E-04
	Iron	18412.86	mg/kg	18412.86	mg/kg	M	2.5E-02	mg/kg-day	3.0E-01	mg/kg/day	N/A	N/A	8.4E-02
	Manganese	147.29	mg/kg	147.29	mg/kg	M	2.0E-04	mg/kg-day	1.4E-01	mg/kg/day	N/A	N/A	1.4E-03
	Vanadium	47.06	mg/kg	47.06	mg/kg	M	6.4E-05	mg/kg-day	7.0E-03	mg/kg/day	N/A	N/A	9.2E-03
Dermal	Aluminum	11011.43	mg/kg	11011.43	mg/kg	M	8.7E-03	mg/kg-day	2.7E-01	mg/kg/day	N/A	N/A	3.2E-02
	Arsenic	8.04	mg/kg	8.04	mg/kg	M	2.0E-05	mg/kg-day	2.9E-04	mg/kg/day	N/A	N/A	7.2E-02
	Benzo(a)Pyrene	0.23	mg/kg	0.23	mg/kg	M	1.8E-06	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Benzo(b)Fluoranthene	0.70	mg/kg	0.70	mg/kg	M	5.5E-06	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Beryllium	0.52	mg/kg	0.52	mg/kg	M	4.1E-07	mg/kg-day	5.0E-05	mg/kg/day	N/A	N/A	8.3E-03
	Iron	18412.86	mg/kg	18412.86	mg/kg	M	1.5E-02	mg/kg-day	1.5E-02	mg/kg/day	N/A	N/A	9.8E-01
	Manganese	147.29	mg/kg	147.29	mg/kg	M	1.2E-04	mg/kg-day	1.4E-01	mg/kg/day	N/A	N/A	8.4E-04
	Vanadium	47.06	mg/kg	47.06	mg/kg	M	3.7E-05	mg/kg-day	1.4E-04	mg/kg/day	N/A	N/A	2.7E-01

M = Medium specific

Total Hazard Index Across All Exposure Routes/Pathways: 1.50

TABLE 7.10.RME
CALCULATION OF NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
St. Juliens Creek - Landfill C (Site 3)

Scenario Timeframe: Future
Medium: Surface Soil
Exposure Medium: Surface Soil
Exposure Point: Onsite
Receptor Population: Groundskeeper
Receptor Age: Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Ingestion	Aluminum	21400.00	mg/kg	21400.00	mg/kg	M	1.0E-02	mg/kg-day	1.0E+00	mg/kg/day	N/A	N/A	1.0E-02
	Arsenic	13.90	mg/kg	13.90	mg/kg	M	6.8E-06	mg/kg-day	3.0E-04	mg/kg/day	N/A	N/A	2.3E-02
	Benzo(a)Pyrene	0.35	mg/kg	0.35	mg/kg	M	1.7E-07	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Benzo(b)Fluoranthene	1.50	mg/kg	1.50	mg/kg	M	7.3E-07	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Beryllium	1.30	mg/kg	1.30	mg/kg	M	6.4E-07	mg/kg-day	5.0E-03	mg/kg/day	N/A	N/A	1.3E-04
	Iron	34000.00	mg/kg	34000.00	mg/kg	M	1.7E-02	mg/kg-day	3.0E-01	mg/kg/day	N/A	N/A	5.5E-02
	Manganese	246.00	mg/kg	246.00	mg/kg	M	1.2E-04	mg/kg-day	1.4E-01	mg/kg/day	N/A	N/A	8.6E-04
	Vanadium	79.80	mg/kg	79.80	mg/kg	M	3.9E-05	mg/kg-day	7.0E-03	mg/kg/day	N/A	N/A	5.6E-03
Dermal	Aluminum	21400.00	mg/kg	21400.00	mg/kg	M	1.1E-02	mg/kg-day	2.7E-01	mg/kg/day	N/A	N/A	4.1E-02
	Arsenic	13.90	mg/kg	13.90	mg/kg	M	2.3E-05	mg/kg-day	2.9E-04	mg/kg/day	N/A	N/A	8.1E-02
	Benzo(a)Pyrene	0.35	mg/kg	0.35	mg/kg	M	1.8E-06	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Benzo(b)Fluoranthene	1.50	mg/kg	1.50	mg/kg	M	7.8E-06	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Beryllium	1.30	mg/kg	1.30	mg/kg	M	6.7E-07	mg/kg-day	5.0E-05	mg/kg/day	N/A	N/A	1.3E-02
	Iron	34000.00	mg/kg	34000.00	mg/kg	M	1.8E-02	mg/kg-day	1.5E-02	mg/kg/day	N/A	N/A	1.2E+00
	Manganese	246.00	mg/kg	246.00	mg/kg	M	1.3E-04	mg/kg-day	1.4E-01	mg/kg/day	N/A	N/A	9.1E-04
	Vanadium	79.80	mg/kg	79.80	mg/kg	M	4.1E-05	mg/kg-day	1.4E-04	mg/kg/day	N/A	N/A	3.0E-01
												Total Hazard Index Across All Exposure Routes/Pathways	1.70

TABLE 7.10.CT
CALCULATION OF NON-CANCER HAZARDS
CENTRAL TENDENCIES
St. Juliens Creek - Landfill C (Site 3)

Scenario Timeframe: Future
Medium: Surface Soil
Exposure Medium: Surface Soil
Exposure Point: Onsite
Receptor Population: Groundskeeper
Receptor Age: Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Ingestion	Aluminum	11011.43	mg/kg	11011.43	mg/kg	M	5.4E-03	mg/kg-day	1.0E+00	mg/kg/day	N/A	N/A	5.4E-03
	Arsenic	8.04	mg/kg	8.04	mg/kg	M	3.9E-06	mg/kg-day	3.0E-04	mg/kg/day	N/A	N/A	1.3E-02
	Benzo(a)Pyrene	0.23	mg/kg	0.23	mg/kg	M	1.1E-07	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Benzo(b)Fluoranthene	0.70	mg/kg	0.70	mg/kg	M	3.4E-07	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Beryllium	0.52	mg/kg	0.52	mg/kg	M	2.5E-07	mg/kg-day	5.0E-03	mg/kg/day	N/A	N/A	5.1E-05
	Iron	18412.86	mg/kg	18412.86	mg/kg	M	9.0E-03	mg/kg-day	3.0E-01	mg/kg/day	N/A	N/A	3.0E-02
	Manganese	147.29	mg/kg	147.29	mg/kg	M	7.2E-05	mg/kg-day	1.4E-01	mg/kg/day	N/A	N/A	5.1E-04
	Vanadium	47.06	mg/kg	47.06	mg/kg	M	2.3E-05	mg/kg-day	7.0E-03	mg/kg/day	N/A	N/A	3.3E-03
Dermal	Aluminum	11011.43	mg/kg	11011.43	mg/kg	M	5.7E-03	mg/kg-day	2.7E-01	mg/kg/day	N/A	N/A	2.1E-02
	Arsenic	8.04	mg/kg	8.04	mg/kg	M	1.3E-05	mg/kg-day	2.9E-04	mg/kg/day	N/A	N/A	4.7E-02
	Benzo(a)Pyrene	0.23	mg/kg	0.23	mg/kg	M	1.2E-06	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Benzo(b)Fluoranthene	0.70	mg/kg	0.70	mg/kg	M	3.6E-06	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Beryllium	0.52	mg/kg	0.52	mg/kg	M	2.7E-07	mg/kg-day	5.0E-05	mg/kg/day	N/A	N/A	5.4E-03
	Iron	18412.86	mg/kg	18412.86	mg/kg	M	9.5E-03	mg/kg-day	1.5E-02	mg/kg/day	N/A	N/A	6.4E-01
	Manganese	147.29	mg/kg	147.29	mg/kg	M	7.6E-05	mg/kg-day	1.4E-01	mg/kg/day	N/A	N/A	5.5E-04
	Vanadium	47.06	mg/kg	47.06	mg/kg	M	2.4E-05	mg/kg-day	1.4E-04	mg/kg/day	N/A	N/A	1.7E-01
												Total Hazard Index Across All Exposure Routes/Pathways	0.94

TABLE 7.11.RME
CALCULATION OF NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
St. Juliens Creek - Landfill C (Site 3)

Scenario Timeframe: Future
Medium: Surface Soil
Exposure Medium: Surface Soil
Exposure Point: Onsite
Receptor Population: Construction Worker
Receptor Age: Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Ingestion	Aluminum	21400.00	mg/kg	21400.00	mg/kg	M	1.0E-01	mg/kg-day	1.0E+00	mg/kg/day	N/A	N/A	1.0E-01
	Arsenic	13.90	mg/kg	13.90	mg/kg	M	6.5E-05	mg/kg-day	3.0E-04	mg/kg/day	N/A	N/A	2.2E-01
	Benzo(a)Pyrene	0.35	mg/kg	0.35	mg/kg	M	1.6E-06	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Benzo(b)Fluoranthene	1.50	mg/kg	1.50	mg/kg	M	7.0E-06	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Beryllium	1.30	mg/kg	1.30	mg/kg	M	6.1E-06	mg/kg-day	5.0E-03	mg/kg/day	N/A	N/A	1.2E-03
	Iron	34000.00	mg/kg	34000.00	mg/kg	M	1.6E-01	mg/kg-day	3.0E-01	mg/kg/day	N/A	N/A	5.3E-01
	Manganese	246.00	mg/kg	246.00	mg/kg	M	1.2E-03	mg/kg-day	1.4E-01	mg/kg/day	N/A	N/A	8.2E-03
	Vanadium	79.80	mg/kg	79.80	mg/kg	M	3.7E-04	mg/kg-day	7.0E-03	mg/kg/day	N/A	N/A	5.3E-02
Dermal	Aluminum	21400.00	mg/kg	21400.00	mg/kg	M	1.1E-02	mg/kg-day	2.7E-01	mg/kg/day	N/A	N/A	4.1E-02
	Arsenic	13.90	mg/kg	13.90	mg/kg	M	7.2E-06	mg/kg-day	2.9E-04	mg/kg/day	N/A	N/A	2.5E-02
	Benzo(a)Pyrene	0.35	mg/kg	0.35	mg/kg	M	1.8E-07	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Benzo(b)Fluoranthene	1.50	mg/kg	1.50	mg/kg	M	7.8E-07	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Beryllium	1.30	mg/kg	1.30	mg/kg	M	6.7E-07	mg/kg-day	5.0E-05	mg/kg/day	N/A	N/A	1.3E-02
	Iron	34000.00	mg/kg	34000.00	mg/kg	M	1.8E-02	mg/kg-day	1.5E-02	mg/kg/day	N/A	N/A	1.2E+00
	Manganese	246.00	mg/kg	246.00	mg/kg	M	1.3E-04	mg/kg-day	1.4E-01	mg/kg/day	N/A	N/A	9.1E-04
	Vanadium	79.80	mg/kg	79.80	mg/kg	M	4.1E-05	mg/kg-day	1.4E-04	mg/kg/day	N/A	N/A	2.9E-01

M = Medium specific

Total Hazard Index Across All Exposure Routes/Pathways: 2.46

TABLE 7.11.CT
CALCULATION OF NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
St. Juliens Creek - Landfill C (Site 3)

Scenario Timeframe: Future
Medium: Surface Soil
Exposure Medium: Surface Soil
Exposure Point: Onsite
Receptor Population: Construction Worker
Receptor Age: Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Ingestion	Aluminum	11011.43	mg/kg	11011.43	mg/kg	M	5.2E-02	mg/kg-day	1.0E+00	mg/kg/day	N/A	N/A	5.2E-02
	Arsenic	8.04	mg/kg	8.04	mg/kg	M	3.8E-05	mg/kg-day	3.0E-04	mg/kg/day	N/A	N/A	1.3E-01
	Benzo(a)Pyrene	0.23	mg/kg	0.23	mg/kg	M	1.1E-06	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Benzo(b)Fluoranthene	0.70	mg/kg	0.70	mg/kg	M	3.3E-06	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Beryllium	0.52	mg/kg	0.52	mg/kg	M	2.4E-06	mg/kg-day	5.0E-03	mg/kg/day	N/A	N/A	4.9E-04
	Iron	18412.86	mg/kg	18412.86	mg/kg	M	8.6E-02	mg/kg-day	3.0E-01	mg/kg/day	N/A	N/A	2.9E-01
	Manganese	147.29	mg/kg	147.29	mg/kg	M	6.9E-04	mg/kg-day	1.4E-01	mg/kg/day	N/A	N/A	4.9E-03
	Vanadium	47.06	mg/kg	47.06	mg/kg	M	2.2E-04	mg/kg-day	7.0E-03	mg/kg/day	N/A	N/A	3.1E-02
Dermal	Aluminum	11011.43	mg/kg	11011.43	mg/kg	M	5.7E-03	mg/kg-day	2.7E-01	mg/kg/day	N/A	N/A	2.1E-02
	Arsenic	8.04	mg/kg	8.04	mg/kg	M	4.2E-06	mg/kg-day	2.9E-04	mg/kg/day	N/A	N/A	1.5E-02
	Benzo(a)Pyrene	0.23	mg/kg	0.23	mg/kg	M	1.2E-07	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Benzo(b)Fluoranthene	0.70	mg/kg	0.70	mg/kg	M	3.6E-07	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Beryllium	0.52	mg/kg	0.52	mg/kg	M	2.7E-07	mg/kg-day	5.0E-05	mg/kg/day	N/A	N/A	5.4E-03
	Iron	18412.86	mg/kg	18412.86	mg/kg	M	9.5E-03	mg/kg-day	1.5E-02	mg/kg/day	N/A	N/A	6.3E-01
	Manganese	147.29	mg/kg	147.29	mg/kg	M	7.6E-05	mg/kg-day	1.4E-01	mg/kg/day	N/A	N/A	5.4E-04
	Vanadium	47.06	mg/kg	47.06	mg/kg	M	2.4E-05	mg/kg-day	1.4E-04	mg/kg/day	N/A	N/A	1.7E-01
M = Medium specific												Total Hazard Index Across All Exposure Routes/Pathways	1.35

TABLE 8.5.RME
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
St. Juliens Creek - Landfill C (Site 3)

Scenario Timeframe: Current
Medium: Surface Soil
Exposure Medium: Surface Soil
Exposure Point: Onsite
Receptor Population: Trespasser
Receptor Age: Child

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
Ingestion	Aluminum	21400.00	mg/kg	21400.00	mg/kg	M	3.5E-03	mg/kg-day	N/A	N/A	N/A
	Arsenic	13.90	mg/kg	13.90	mg/kg	M	2.3E-06	mg/kg-day	1.5E+00	mg/kg-day $^{-1}$	3.4E-06
	Benzo(a)Pyrene	0.35	mg/kg	0.35	mg/kg	M	5.7E-08	mg/kg-day	7.3E+00	mg/kg-day $^{-1}$	4.2E-07
	Benzo(b)Fluoranthen	1.50	mg/kg	1.50	mg/kg	M	2.4E-07	mg/kg-day	7.3E-01	mg/kg-day $^{-1}$	1.8E-07
	Beryllium	1.30	mg/kg	1.30	mg/kg	M	2.1E-07	mg/kg-day	4.3E+00	mg/kg-day $^{-1}$	9.1E-07
	Iron	34000.00	mg/kg	34000.00	mg/kg	M	5.5E-03	mg/kg-day	N/A	N/A	N/A
	Manganese	246.00	mg/kg	246.00	mg/kg	M	4.0E-05	mg/kg-day	N/A	N/A	N/A
	Vanadium	79.80	mg/kg	79.80	mg/kg	M	1.3E-05	mg/kg-day	N/A	N/A	N/A
Dermal	Aluminum	21400.00	mg/kg	21400.00	mg/kg	M	4.6E-04	mg/kg-day	N/A	N/A	N/A
	Arsenic	13.90	mg/kg	13.90	mg/kg	M	3.0E-07	mg/kg-day	1.6E+00	mg/kg-day $^{-1}$	4.7E-07
	Benzo(a)Pyrene	0.35	mg/kg	0.35	mg/kg	M	7.6E-09	mg/kg-day	N/A	mg/kg-day $^{-1}$	N/A
	Benzo(b)Fluoranthen	1.50	mg/kg	1.50	mg/kg	M	3.2E-08	mg/kg-day	N/A	mg/kg-day $^{-1}$	N/A
	Beryllium	1.30	mg/kg	1.30	mg/kg	M	2.8E-08	mg/kg-day	4.3E+02	mg/kg-day $^{-1}$	1.2E-05
	Iron	34000.00	mg/kg	34000.00	mg/kg	M	7.3E-04	mg/kg-day	N/A	N/A	N/A
	Manganese	246.00	mg/kg	246.00	mg/kg	M	5.3E-06	mg/kg-day	N/A	N/A	N/A
	Vanadium	79.80	mg/kg	79.80	mg/kg	M	1.7E-06	mg/kg-day	N/A	N/A	N/A

M = Medium specific

Total Risk Across All Exposure Routes/Pathways 1.7E-05

TABLE 8.5.CT
CALCULATION OF CANCER RISKS
CENTRAL TENDENCIES
St. Juliens Creek - Landfill C (Site 3)

Scenario Timeframe: Current
Medium: Surface Soil
Exposure Medium: Surface Soil
Exposure Point: Onsite
Receptor Population: Trespasser
Receptor Age: Child

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
Ingestion	Aluminum	11011.43	mg/kg	11011.43	mg/kg	M	1.8E-03	mg/kg-day	N/A	N/A	N/A
	Arsenic	8.04	mg/kg	8.04	mg/kg	M	1.3E-06	mg/kg-day	1.5E+00	mg/kg-day $^{-1}$	2.0E-06
	Benzo(a)Pyrene	0.23	mg/kg	0.23	mg/kg	M	3.7E-08	mg/kg-day	7.3E+00	mg/kg-day $^{-1}$	2.7E-07
	Benzo(b)Fluoranthen	0.70	mg/kg	0.70	mg/kg	M	1.1E-07	mg/kg-day	7.3E-01	mg/kg-day $^{-1}$	8.3E-08
	Beryllium	0.52	mg/kg	0.52	mg/kg	M	8.5E-08	mg/kg-day	4.3E+00	mg/kg-day $^{-1}$	3.6E-07
	Iron	18412.86	mg/kg	18412.86	mg/kg	M	3.0E-03	mg/kg-day	N/A	N/A	N/A
	Manganese	147.29	mg/kg	147.29	mg/kg	M	2.4E-05	mg/kg-day	N/A	N/A	N/A
	Vanadium	47.06	mg/kg	47.06	mg/kg	M	7.7E-06	mg/kg-day	N/A	N/A	N/A
Dermal	Aluminum	11011.43	mg/kg	11011.43	mg/kg	M	2.4E-04	mg/kg-day	N/A	N/A	N/A
	Arsenic	8.04	mg/kg	8.04	mg/kg	M	1.7E-07	mg/kg-day	1.6E+00	mg/kg-day $^{-1}$	2.7E-07
	Benzo(a)Pyrene	0.23	mg/kg	0.23	mg/kg	M	5.0E-09	mg/kg-day	N/A	mg/kg-day $^{-1}$	N/A
	Benzo(b)Fluoranthen	0.70	mg/kg	0.70	mg/kg	M	1.5E-08	mg/kg-day	N/A	mg/kg-day $^{-1}$	N/A
	Beryllium	0.52	mg/kg	0.52	mg/kg	M	1.1E-08	mg/kg-day	4.3E+02	mg/kg-day $^{-1}$	4.8E-06
	Iron	18412.86	mg/kg	18412.86	mg/kg	M	4.0E-04	mg/kg-day	N/A	N/A	N/A
	Manganese	147.29	mg/kg	147.29	mg/kg	M	3.2E-06	mg/kg-day	N/A	N/A	N/A
	Vanadium	47.06	mg/kg	47.06	mg/kg	M	1.0E-06	mg/kg-day	N/A	N/A	N/A

M = Medium specific

Total Risk Across All Exposure Routes/Pathways 7.8E-06

TABLE 8.6.RME
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
St. Juliens Creek - Landfill C (Site 3)

Scenario Timeframe: Current
Medium: Surface Soil
Exposure Medium: Surface Soil
Exposure Point: Onsite
Receptor Population: Trespasser
Receptor Age: Adolescent

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
Ingestion	Aluminum	21400.00	mg/kg	21400.00	mg/kg	M	1.1E-03	mg/kg-day	N/A	N/A	N/A
	Arsenic	13.90	mg/kg	13.90	mg/kg	M	6.9E-07	mg/kg-day	1.5E+00	mg/kg-day $^{-1}$	1.0E-06
	Benzo(a)Pyrene	0.35	mg/kg	0.35	mg/kg	M	1.7E-08	mg/kg-day	7.3E+00	mg/kg-day $^{-1}$	1.3E-07
	Benzo(b)Fluoranthen	1.50	mg/kg	1.50	mg/kg	M	7.5E-08	mg/kg-day	7.3E-01	mg/kg-day $^{-1}$	5.4E-08
	Beryllium	1.30	mg/kg	1.30	mg/kg	M	6.5E-08	mg/kg-day	4.3E+00	mg/kg-day $^{-1}$	2.8E-07
	Iron	34000.00	mg/kg	34000.00	mg/kg	M	1.7E-03	mg/kg-day	N/A	N/A	N/A
	Manganese	246.00	mg/kg	246.00	mg/kg	M	1.2E-05	mg/kg-day	N/A	N/A	N/A
	Vanadium	79.80	mg/kg	79.80	mg/kg	M	4.0E-06	mg/kg-day	N/A	N/A	N/A
Dermal	Aluminum	21400.00	mg/kg	21400.00	mg/kg	M	3.6E-04	mg/kg-day	N/A	N/A	N/A
	Arsenic	13.90	mg/kg	13.90	mg/kg	M	7.5E-07	mg/kg-day	1.6E+00	mg/kg-day $^{-1}$	1.2E-06
	Benzo(a)Pyrene	0.35	mg/kg	0.35	mg/kg	M	5.9E-08	mg/kg-day	N/A	mg/kg-day $^{-1}$	N/A
	Benzo(b)Fluoranthen	1.50	mg/kg	1.50	mg/kg	M	2.5E-07	mg/kg-day	N/A	mg/kg-day $^{-1}$	N/A
	Beryllium	1.30	mg/kg	1.30	mg/kg	M	2.2E-08	mg/kg-day	4.3E+02	mg/kg-day $^{-1}$	9.4E-06
	Iron	34000.00	mg/kg	34000.00	mg/kg	M	5.7E-04	mg/kg-day	N/A	N/A	N/A
	Manganese	246.00	mg/kg	246.00	mg/kg	M	4.1E-06	mg/kg-day	N/A	N/A	N/A
	Vanadium	79.80	mg/kg	79.80	mg/kg	M	1.3E-06	mg/kg-day	N/A	N/A	N/A

M = Medium specific

Total Risk Across All Exposure Routes/Pathways 1.2E-05

TABLE 8.6.CT
CALCULATION OF CANCER RISKS
CENTRAL TENDENCIES
St. Juliens Creek - Landfill C (Site 3)

Scenario Timeframe: Current
Medium: Surface Soil
Exposure Medium: Surface Soil
Exposure Point: Onsite
Receptor Population: Trespasser
Receptor Age: Adolescent

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
Ingestion	Aluminum	11011.43	mg/kg	11011.43	mg/kg	M	5.5E-04	mg/kg-day	N/A	N/A	N/A
	Arsenic	8.04	mg/kg	8.04	mg/kg	M	4.0E-07	mg/kg-day	1.5E+00	mg/kg-day $^{-1}$	6.0E-07
	Benzo(a)Pyrene	0.23	mg/kg	0.23	mg/kg	M	1.1E-08	mg/kg-day	7.3E+00	mg/kg-day $^{-1}$	8.3E-08
	Benzo(b)Fluoranthen	0.70	mg/kg	0.70	mg/kg	M	3.5E-08	mg/kg-day	7.3E-01	mg/kg-day $^{-1}$	2.5E-08
	Beryllium	0.52	mg/kg	0.52	mg/kg	M	2.6E-08	mg/kg-day	4.3E+00	mg/kg-day $^{-1}$	1.1E-07
	Iron	18412.86	mg/kg	18412.86	mg/kg	M	9.2E-04	mg/kg-day	N/A	N/A	N/A
	Manganese	147.29	mg/kg	147.29	mg/kg	M	7.3E-06	mg/kg-day	N/A	N/A	N/A
	Vanadium	47.06	mg/kg	47.06	mg/kg	M	2.3E-06	mg/kg-day	N/A	N/A	N/A
Dermal	Aluminum	11011.43	mg/kg	11011.43	mg/kg	M	1.9E-04	mg/kg-day	N/A	N/A	N/A
	Arsenic	8.04	mg/kg	8.04	mg/kg	M	4.3E-07	mg/kg-day	1.6E+00	mg/kg-day $^{-1}$	6.8E-07
	Benzo(a)Pyrene	0.23	mg/kg	0.23	mg/kg	M	3.9E-08	mg/kg-day	N/A	mg/kg-day $^{-1}$	N/A
	Benzo(b)Fluoranthen	0.70	mg/kg	0.70	mg/kg	M	1.2E-07	mg/kg-day	N/A	mg/kg-day $^{-1}$	N/A
	Beryllium	0.52	mg/kg	0.52	mg/kg	M	8.7E-09	mg/kg-day	4.3E+02	mg/kg-day $^{-1}$	3.8E-06
	Iron	18412.86	mg/kg	18412.86	mg/kg	M	3.1E-04	mg/kg-day	N/A	N/A	N/A
	Manganese	147.29	mg/kg	147.29	mg/kg	M	2.5E-06	mg/kg-day	N/A	N/A	N/A
	Vanadium	47.06	mg/kg	47.06	mg/kg	M	7.9E-07	mg/kg-day	N/A	N/A	N/A

M = Medium specific

Total Risk Across All Exposure Routes/Pathways: 5.3E-06

TABLE 8.7.RME
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
St. Juliens Creek - Landfill C (Site 3)

Scenario Timeframe: Current
Medium: Surface Soil
Exposure Medium: Surface Soil
Exposure Point: Onsite
Receptor Population: Trespasser
Receptor Age: Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
Ingestion	Aluminum	21400.00	mg/kg	21400.00	mg/kg	M	1.5E-03	mg/kg-day	N/A	N/A	N/A
	Arsenic	13.90	mg/kg	13.90	mg/kg	M	9.7E-07	mg/kg-day	1.5E+00	mg/kg-day $^{-1}$	1.5E-06
	Benzo(a)Pyrene	0.35	mg/kg	0.35	mg/kg	M	2.4E-08	mg/kg-day	7.3E+00	mg/kg-day $^{-1}$	1.8E-07
	Benzo(b)Fluoranthen	1.50	mg/kg	1.50	mg/kg	M	1.0E-07	mg/kg-day	7.3E-01	mg/kg-day $^{-1}$	7.6E-08
	Beryllium	1.30	mg/kg	1.30	mg/kg	M	9.1E-08	mg/kg-day	4.3E+00	mg/kg-day $^{-1}$	3.9E-07
	Iron	34000.00	mg/kg	34000.00	mg/kg	M	2.4E-03	mg/kg-day	N/A	N/A	N/A
	Manganese	246.00	mg/kg	246.00	mg/kg	M	1.7E-05	mg/kg-day	N/A	N/A	N/A
	Vanadium	79.80	mg/kg	79.80	mg/kg	M	5.6E-06	mg/kg-day	N/A	N/A	N/A
Dermal	Aluminum	21400.00	mg/kg	21400.00	mg/kg	M	3.6E-04	mg/kg-day	N/A	N/A	N/A
	Arsenic	13.90	mg/kg	13.90	mg/kg	M	7.5E-07	mg/kg-day	1.6E+00	mg/kg-day $^{-1}$	1.2E-06
	Benzo(a)Pyrene	0.35	mg/kg	0.35	mg/kg	M	5.9E-08	mg/kg-day	N/A	mg/kg-day $^{-1}$	N/A
	Benzo(b)Fluoranthen	1.50	mg/kg	1.50	mg/kg	M	2.5E-07	mg/kg-day	N/A	mg/kg-day $^{-1}$	N/A
	Beryllium	1.30	mg/kg	1.30	mg/kg	M	2.2E-08	mg/kg-day	4.3E+02	mg/kg-day $^{-1}$	9.4E-06
	Iron	34000.00	mg/kg	34000.00	mg/kg	M	5.7E-04	mg/kg-day	N/A	N/A	N/A
	Manganese	246.00	mg/kg	246.00	mg/kg	M	4.1E-06	mg/kg-day	N/A	N/A	N/A
	Vanadium	79.80	mg/kg	79.80	mg/kg	M	1.3E-06	mg/kg-day	N/A	N/A	N/A

M = Medium specific

Total Risk Across All Exposure Routes/Pathways: 1.3E-05

TABLE 8.7.CT
CALCULATION OF CANCER RISKS
CENTRAL TENDENCY
St. Juliens Creek - Landfill C (Site 3)

Scenario Timeframe: Current
Medium: Surface Soil
Exposure Medium: Surface Soil
Exposure Point: Onsite
Receptor Population: Trespasser
Receptor Age: Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
Ingestion	Aluminum	11011.43	mg/kg	11011.43	mg/kg	M	7.7E-04	mg/kg-day	N/A	N/A	N/A
	Arsenic	8.04	mg/kg	8.04	mg/kg	M	5.6E-07	mg/kg-day	1.5E+00	mg/kg-day $^{-1}$	8.4E-07
	Benzo(a)Pyrene	0.23	mg/kg	0.23	mg/kg	M	1.6E-08	mg/kg-day	7.3E+00	mg/kg-day $^{-1}$	1.2E-07
	Benzo(b)Fluoranthen	0.70	mg/kg	0.70	mg/kg	M	4.9E-08	mg/kg-day	7.3E-01	mg/kg-day $^{-1}$	3.6E-08
	Beryllium	0.52	mg/kg	0.52	mg/kg	M	3.6E-08	mg/kg-day	4.3E+00	mg/kg-day $^{-1}$	1.6E-07
	Iron	18412.86	mg/kg	18412.86	mg/kg	M	1.3E-03	mg/kg-day	N/A	N/A	N/A
	Manganese	147.29	mg/kg	147.29	mg/kg	M	1.0E-05	mg/kg-day	N/A	N/A	N/A
	Vanadium	47.06	mg/kg	47.06	mg/kg	M	3.3E-06	mg/kg-day	N/A	N/A	N/A
Dermal	Aluminum	11011.43	mg/kg	11011.43	mg/kg	M	1.9E-04	mg/kg-day	N/A	N/A	N/A
	Arsenic	8.04	mg/kg	8.04	mg/kg	M	4.3E-07	mg/kg-day	1.6E+00	mg/kg-day $^{-1}$	6.8E-07
	Benzo(a)Pyrene	0.23	mg/kg	0.23	mg/kg	M	3.9E-08	mg/kg-day	N/A	mg/kg-day $^{-1}$	N/A
	Benzo(b)Fluoranthen	0.70	mg/kg	0.70	mg/kg	M	1.2E-07	mg/kg-day	N/A	mg/kg-day $^{-1}$	N/A
	Beryllium	0.52	mg/kg	0.52	mg/kg	M	8.7E-09	mg/kg-day	4.3E+02	mg/kg-day $^{-1}$	3.8E-06
	Iron	18412.86	mg/kg	18412.86	mg/kg	M	3.1E-04	mg/kg-day	N/A	N/A	N/A
	Manganese	147.29	mg/kg	147.29	mg/kg	M	2.5E-06	mg/kg-day	N/A	N/A	N/A
	Vanadium	47.06	mg/kg	47.06	mg/kg	M	7.9E-07	mg/kg-day	N/A	N/A	N/A

M = Medium specific

Total Risk Across All Exposure Routes/Pathways 5.6E-06

TABLE 8.8.RME
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
St. Juliens Creek - Landfill C (Site 3)

Scenario Timeframe: Future
Medium: Surface Soil
Exposure Medium: Surface Soil
Exposure Point: Onsite
Receptor Population: Resident
Receptor Age: Child

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
Ingestion	Aluminum	21400.00	mg/kg	21400.00	mg/kg	M	2.3E-02	mg/kg-day	N/A	N/A	N/A
	Arsenic	13.90	mg/kg	13.90	mg/kg	M	1.5E-05	mg/kg-day	1.5E+00	mg/kg-day $^{-1}$	2.3E-05
	Benzo(a)Pyrene	0.35	mg/kg	0.35	mg/kg	M	3.8E-07	mg/kg-day	7.3E+00	mg/kg-day $^{-1}$	2.8E-06
	Benzo(b)Fluoranthen	1.50	mg/kg	1.50	mg/kg	M	1.6E-06	mg/kg-day	7.3E-01	mg/kg-day $^{-1}$	1.2E-06
	Beryllium	1.30	mg/kg	1.30	mg/kg	M	1.4E-06	mg/kg-day	4.3E+00	mg/kg-day $^{-1}$	6.1E-06
	Iron	34000.00	mg/kg	34000.00	mg/kg	M	3.7E-02	mg/kg-day	N/A	N/A	N/A
	Manganese	246.00	mg/kg	246.00	mg/kg	M	2.7E-04	mg/kg-day	N/A	N/A	N/A
	Vanadium	79.80	mg/kg	79.80	mg/kg	M	8.7E-05	mg/kg-day	N/A	N/A	N/A
Dermal	Aluminum	21400.00	mg/kg	21400.00	mg/kg	M	3.1E-03	mg/kg-day	N/A	N/A	N/A
	Arsenic	13.90	mg/kg	13.90	mg/kg	M	6.5E-06	mg/kg-day	1.6E+00	mg/kg-day $^{-1}$	1.0E-05
	Benzo(a)Pyrene	0.35	mg/kg	0.35	mg/kg	M	5.1E-07	mg/kg-day	N/A	mg/kg-day $^{-1}$	N/A
	Benzo(b)Fluoranthen	1.50	mg/kg	1.50	mg/kg	M	2.2E-06	mg/kg-day	N/A	mg/kg-day $^{-1}$	N/A
	Beryllium	1.30	mg/kg	1.30	mg/kg	M	1.9E-07	mg/kg-day	4.3E+02	mg/kg-day $^{-1}$	8.1E-05
	Iron	34000.00	mg/kg	34000.00	mg/kg	M	4.9E-03	mg/kg-day	N/A	N/A	N/A
	Manganese	246.00	mg/kg	246.00	mg/kg	M	3.6E-05	mg/kg-day	N/A	N/A	N/A
	Vanadium	79.80	mg/kg	79.80	mg/kg	M	1.2E-05	mg/kg-day	N/A	N/A	N/A

M = Medium specific

Total Risk Across All Exposure Routes/Pathways | 1.2E-04

TABLE 8.8.CT
CALCULATION OF CANCER RISKS
CENTRAL TENDENCIES
St. Juliens Creek - Landfill C (Site 3)

Scenario Timeframe: Future
Medium: Surface Soil
Exposure Medium: Surface Soil
Exposure Point: Onsite
Receptor Population: Resident
Receptor Age: Child

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
Ingestion	Aluminum	11011.43	mg/kg	11011.43	mg/kg	M	1.2E-02	mg/kg-day	N/A	N/A	N/A
	Arsenic	8.04	mg/kg	8.04	mg/kg	M	8.8E-06	mg/kg-day	1.5E+00	mg/kg-day $^{-1}$	1.3E-05
	Benzo(a)Pyrene	0.23	mg/kg	0.23	mg/kg	M	2.5E-07	mg/kg-day	7.3E+00	mg/kg-day $^{-1}$	1.8E-06
	Benzo(b)Fluoranthen	0.70	mg/kg	0.70	mg/kg	M	7.6E-07	mg/kg-day	7.3E-01	mg/kg-day $^{-1}$	5.6E-07
	Beryllium	0.52	mg/kg	0.52	mg/kg	M	5.7E-07	mg/kg-day	4.3E+00	mg/kg-day $^{-1}$	2.4E-06
	Iron	18412.86	mg/kg	18412.86	mg/kg	M	2.0E-02	mg/kg-day	N/A	N/A	N/A
	Manganese	147.29	mg/kg	147.29	mg/kg	M	1.6E-04	mg/kg-day	N/A	N/A	N/A
	Vanadium	47.06	mg/kg	47.06	mg/kg	M	5.2E-05	mg/kg-day	N/A	N/A	N/A
Dermal	Aluminum	11011.43	mg/kg	11011.43	mg/kg	M	1.6E-03	mg/kg-day	N/A	N/A	N/A
	Arsenic	8.04	mg/kg	8.04	mg/kg	M	3.7E-06	mg/kg-day	1.6E+00	mg/kg-day $^{-1}$	5.9E-06
	Benzo(a)Pyrene	0.23	mg/kg	0.23	mg/kg	M	3.3E-07	mg/kg-day	N/A	mg/kg-day $^{-1}$	N/A
	Benzo(b)Fluoranthen	0.70	mg/kg	0.70	mg/kg	M	1.0E-06	mg/kg-day	N/A	mg/kg-day $^{-1}$	N/A
	Beryllium	0.52	mg/kg	0.52	mg/kg	M	7.5E-08	mg/kg-day	4.3E+02	mg/kg-day $^{-1}$	3.2E-05
	Iron	18412.86	mg/kg	18412.86	mg/kg	M	2.7E-03	mg/kg-day	N/A	N/A	N/A
	Manganese	147.29	mg/kg	147.29	mg/kg	M	2.1E-05	mg/kg-day	N/A	N/A	N/A
	Vanadium	47.06	mg/kg	47.06	mg/kg	M	6.8E-06	mg/kg-day	N/A	N/A	N/A

M = Medium specific

Total Risk Across All Exposure Routes/Pathways 5.6E-05

TABLE 8.9.RME
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
St. Juliens Creek - Landfill C (Site 3)

Scenario Timeframe: Future
Medium: Surface Soil
Exposure Medium: Surface Soil
Exposure Point: Onsite
Receptor Population: Resident
Receptor Age: Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
Ingestion	Aluminum	21400.00	mg/kg	21400.00	mg/kg	M	1.0E-02	mg/kg-day	N/A	N/A	N/A
	Arsenic	13.90	mg/kg	13.90	mg/kg	M	6.5E-06	mg/kg-day	1.5E+00	mg/kg-day $^{-1}$	9.8E-06
	Benzo(a)Pyrene	0.35	mg/kg	0.35	mg/kg	M	1.6E-07	mg/kg-day	7.3E+00	mg/kg-day $^{-1}$	1.2E-06
	Benzo(b)Fluoranthen	1.50	mg/kg	1.50	mg/kg	M	7.0E-07	mg/kg-day	7.3E-01	mg/kg-day $^{-1}$	5.1E-07
	Beryllium	1.30	mg/kg	1.30	mg/kg	M	6.1E-07	mg/kg-day	4.3E+00	mg/kg-day $^{-1}$	2.6E-06
	Iron	34000.00	mg/kg	34000.00	mg/kg	M	1.6E-02	mg/kg-day	N/A	N/A	N/A
	Manganese	246.00	mg/kg	246.00	mg/kg	M	1.2E-04	mg/kg-day	N/A	N/A	N/A
	Vanadium	79.80	mg/kg	79.80	mg/kg	M	3.7E-05	mg/kg-day	N/A	N/A	N/A
Dermal	Aluminum	21400.00	mg/kg	21400.00	mg/kg	M	5.8E-03	mg/kg-day	N/A	N/A	N/A
	Arsenic	13.90	mg/kg	13.90	mg/kg	M	1.2E-05	mg/kg-day	1.6E+00	mg/kg-day $^{-1}$	1.9E-05
	Benzo(a)Pyrene	0.35	mg/kg	0.35	mg/kg	M	9.5E-07	mg/kg-day	N/A	mg/kg-day $^{-1}$	N/A
	Benzo(b)Fluoranthen	1.50	mg/kg	1.50	mg/kg	M	4.1E-06	mg/kg-day	N/A	mg/kg-day $^{-1}$	N/A
	Beryllium	1.30	mg/kg	1.30	mg/kg	M	3.5E-07	mg/kg-day	4.3E+02	mg/kg-day $^{-1}$	1.5E-04
	Iron	34000.00	mg/kg	34000.00	mg/kg	M	9.3E-03	mg/kg-day	N/A	N/A	N/A
	Manganese	246.00	mg/kg	246.00	mg/kg	M	6.7E-05	mg/kg-day	N/A	N/A	N/A
	Vanadium	79.80	mg/kg	79.80	mg/kg	M	2.2E-05	mg/kg-day	N/A	N/A	N/A

M = Medium specific

Total Risk Across All Exposure Routes/Pathways: 1.9E-04

TABLE 8.9.CT
CALCULATION OF CANCER RISKS
CENTRAL TENDENCIES
St. Juliens Creek - Landfill C (Site 3)

Scenario Timeframe: Future
Medium: Surface Soil
Exposure Medium: Surface Soil
Exposure Point: Onsite
Receptor Population: Resident
Receptor Age: Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
Ingestion	Aluminum	11011.43	mg/kg	11011.43	mg/kg	M	5.2E-03	mg/kg-day	N/A	N/A	N/A
	Arsenic	8.04	mg/kg	8.04	mg/kg	M	3.8E-06	mg/kg-day	1.5E+00	mg/kg-day $^{-1}$	5.7E-06
	Benzo(a)Pyrene	0.23	mg/kg	0.23	mg/kg	M	1.1E-07	mg/kg-day	7.3E+00	mg/kg-day $^{-1}$	7.9E-07
	Benzo(b)Fluoranthen	0.70	mg/kg	0.70	mg/kg	M	3.3E-07	mg/kg-day	7.3E-01	mg/kg-day $^{-1}$	2.4E-07
	Beryllium	0.52	mg/kg	0.52	mg/kg	M	2.4E-07	mg/kg-day	4.3E+00	mg/kg-day $^{-1}$	1.0E-06
	Iron	18412.86	mg/kg	18412.86	mg/kg	M	8.6E-03	mg/kg-day	N/A	N/A	N/A
	Manganese	147.29	mg/kg	147.29	mg/kg	M	6.9E-05	mg/kg-day	N/A	N/A	N/A
	Vanadium	47.06	mg/kg	47.06	mg/kg	M	2.2E-05	mg/kg-day	N/A	N/A	N/A
Dermal	Aluminum	11011.43	mg/kg	11011.43	mg/kg	M	3.0E-03	mg/kg-day	N/A	N/A	N/A
	Arsenic	8.04	mg/kg	8.04	mg/kg	M	7.0E-06	mg/kg-day	1.6E+00	mg/kg-day $^{-1}$	1.1E-05
	Benzo(a)Pyrene	0.23	mg/kg	0.23	mg/kg	M	6.3E-07	mg/kg-day	N/A	mg/kg-day $^{-1}$	N/A
	Benzo(b)Fluoranthen	0.70	mg/kg	0.70	mg/kg	M	1.9E-06	mg/kg-day	N/A	mg/kg-day $^{-1}$	N/A
	Beryllium	0.52	mg/kg	0.52	mg/kg	M	1.4E-07	mg/kg-day	4.3E+02	mg/kg-day $^{-1}$	6.1E-05
	Iron	18412.86	mg/kg	18412.86	mg/kg	M	5.0E-03	mg/kg-day	N/A	N/A	N/A
	Manganese	147.29	mg/kg	147.29	mg/kg	M	4.0E-05	mg/kg-day	N/A	N/A	N/A
	Vanadium	47.06	mg/kg	47.06	mg/kg	M	1.3E-05	mg/kg-day	N/A	N/A	N/A

M = Medium specific

Total Risk Across All Exposure Routes/Pathways 8.0E-05

TABLE 8.10.RME
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
St. Juliens Creek - Landfill C (Site 3)

Scenario Timeframe: Future
Medium: Surface Soil
Exposure Medium: Surface Soil
Exposure Point: Onsite
Receptor Population: Groundskeeper
Receptor Age: Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
Ingestion	Aluminum	21400.00	mg/kg	21400.00	mg/kg	M	3.7E-03	mg/kg-day	N/A	N/A	N/A
	Arsenic	13.90	mg/kg	13.90	mg/kg	M	2.4E-06	mg/kg-day	1.5E+00	mg/kg-day $^{-1}$	3.6E-06
	Benzo(a)Pyrene	0.35	mg/kg	0.35	mg/kg	M	6.1E-08	mg/kg-day	7.3E+00	mg/kg-day $^{-1}$	4.5E-07
	Benzo(b)Fluoranthen	1.50	mg/kg	1.50	mg/kg	M	2.6E-07	mg/kg-day	7.3E-01	mg/kg-day $^{-1}$	1.9E-07
	Beryllium	1.30	mg/kg	1.30	mg/kg	M	2.3E-07	mg/kg-day	4.3E+00	mg/kg-day $^{-1}$	9.8E-07
	Iron	34000.00	mg/kg	34000.00	mg/kg	M	5.9E-03	mg/kg-day	N/A	N/A	N/A
	Manganese	246.00	mg/kg	246.00	mg/kg	M	4.3E-05	mg/kg-day	N/A	N/A	N/A
	Vanadium	79.80	mg/kg	79.80	mg/kg	M	1.4E-05	mg/kg-day	N/A	N/A	N/A
Dermal	Aluminum	21400.00	mg/kg	21400.00	mg/kg	M	4.0E-03	mg/kg-day	N/A	N/A	N/A
	Arsenic	13.90	mg/kg	13.90	mg/kg	M	8.2E-06	mg/kg-day	1.6E+00	mg/kg-day $^{-1}$	1.3E-05
	Benzo(a)Pyrene	0.35	mg/kg	0.35	mg/kg	M	6.5E-07	mg/kg-day	N/A	mg/kg-day $^{-1}$	N/A
	Benzo(b)Fluoranthen	1.50	mg/kg	1.50	mg/kg	M	2.8E-06	mg/kg-day	N/A	mg/kg-day $^{-1}$	N/A
	Beryllium	1.30	mg/kg	1.30	mg/kg	M	2.4E-07	mg/kg-day	4.3E+02	mg/kg-day $^{-1}$	1.0E-04
	Iron	34000.00	mg/kg	34000.00	mg/kg	M	6.3E-03	mg/kg-day	N/A	N/A	N/A
	Manganese	246.00	mg/kg	246.00	mg/kg	M	4.6E-05	mg/kg-day	N/A	N/A	N/A
	Vanadium	79.80	mg/kg	79.80	mg/kg	M	1.5E-05	mg/kg-day	N/A	N/A	N/A

M = Medium specific

Total Risk Across All Exposure Routes/Pathways: 1.2E-04

TABLE 8.10.CT
CALCULATION OF CANCER RISKS
CENTRAL TENDENCIES
St. Juliens Creek - Landfill C (Site 3)

Scenario Timeframe: Future
Medium: Surface Soil
Exposure Medium: Surface Soil
Exposure Point: Onsite
Receptor Population: Groundskeeper
Receptor Age: Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
Ingestion	Aluminum	11011.43	mg/kg	11011.43	mg/kg	M	1.9E-03	mg/kg-day	N/A	N/A	N/A
	Arsenic	8.04	mg/kg	8.04	mg/kg	M	1.4E-06	mg/kg-day	1.5E+00	mg/kg-day $^{-1}$	2.1E-06
	Benzo(a)Pyrene	0.23	mg/kg	0.23	mg/kg	M	4.0E-08	mg/kg-day	7.3E+00	mg/kg-day $^{-1}$	2.9E-07
	Benzo(b)Fluoranthen	0.70	mg/kg	0.70	mg/kg	M	1.2E-07	mg/kg-day	7.3E-01	mg/kg-day $^{-1}$	8.9E-08
	Beryllium	0.52	mg/kg	0.52	mg/kg	M	9.1E-08	mg/kg-day	4.3E+00	mg/kg-day $^{-1}$	3.9E-07
	Iron	18412.86	mg/kg	18412.86	mg/kg	M	3.2E-03	mg/kg-day	N/A	N/A	N/A
	Manganese	147.29	mg/kg	147.29	mg/kg	M	2.6E-05	mg/kg-day	N/A	N/A	N/A
	Vanadium	47.06	mg/kg	47.06	mg/kg	M	8.2E-06	mg/kg-day	N/A	N/A	N/A
Dermal	Aluminum	11011.43	mg/kg	11011.43	mg/kg	M	2.0E-03	mg/kg-day	N/A	N/A	N/A
	Arsenic	8.04	mg/kg	8.04	mg/kg	M	4.8E-06	mg/kg-day	1.6E+00	mg/kg-day $^{-1}$	7.5E-06
	Benzo(a)Pyrene	0.23	mg/kg	0.23	mg/kg	M	4.3E-07	mg/kg-day	N/A	mg/kg-day $^{-1}$	N/A
	Benzo(b)Fluoranthen	0.70	mg/kg	0.70	mg/kg	M	1.3E-06	mg/kg-day	N/A	mg/kg-day $^{-1}$	N/A
	Beryllium	0.52	mg/kg	0.52	mg/kg	M	9.6E-08	mg/kg-day	4.3E+02	mg/kg-day $^{-1}$	4.1E-05
	Iron	18412.86	mg/kg	18412.86	mg/kg	M	3.4E-03	mg/kg-day	N/A	N/A	N/A
	Manganese	147.29	mg/kg	147.29	mg/kg	M	2.7E-05	mg/kg-day	N/A	N/A	N/A
	Vanadium	47.06	mg/kg	47.06	mg/kg	M	8.7E-06	mg/kg-day	N/A	N/A	N/A

M = Medium specific

Total Risk Across All Exposure Routes/Pathways: 5.2E-05

TABLE 8.11.RME
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
St. Juliens Creek - Landfill C (Site 3)

Scenario Timeframe: Future
Medium: Surface Soil
Exposure Medium: Surface Soil
Exposure Point: Onsite
Receptor Population: Construction Worker
Receptor Age: Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
Ingestion	Aluminum	21400.00	mg/kg	21400.00	mg/kg	M	7.2E-04	mg/kg-day	N/A	N/A	N/A
	Arsenic	13.90	mg/kg	13.90	mg/kg	M	4.7E-07	mg/kg-day	1.5E+00	mg/kg-day $^{-1}$	7.0E-07
	Benzo(a)Pyrene	0.35	mg/kg	0.35	mg/kg	M	1.2E-08	mg/kg-day	7.3E+00	mg/kg-day $^{-1}$	8.6E-08
	Benzo(b)Fluoranthen	1.50	mg/kg	1.50	mg/kg	M	5.0E-08	mg/kg-day	7.3E-01	mg/kg-day $^{-1}$	3.7E-08
	Beryllium	1.30	mg/kg	1.30	mg/kg	M	4.4E-08	mg/kg-day	4.3E+00	mg/kg-day $^{-1}$	1.9E-07
	Iron	34000.00	mg/kg	34000.00	mg/kg	M	1.1E-03	mg/kg-day	N/A	N/A	N/A
	Manganese	246.00	mg/kg	246.00	mg/kg	M	8.3E-06	mg/kg-day	N/A	N/A	N/A
	Vanadium	79.80	mg/kg	79.80	mg/kg	M	2.7E-06	mg/kg-day	N/A	N/A	N/A
Dermal	Aluminum	21400.00	mg/kg	21400.00	mg/kg	M	7.9E-05	mg/kg-day	N/A	N/A	N/A
	Arsenic	13.90	mg/kg	13.90	mg/kg	M	1.6E-07	mg/kg-day	1.6E+00	mg/kg-day $^{-1}$	2.6E-07
	Benzo(a)Pyrene	0.35	mg/kg	0.35	mg/kg	M	1.3E-08	mg/kg-day	N/A	mg/kg-day $^{-1}$	N/A
	Benzo(b)Fluoranthen	1.50	mg/kg	1.50	mg/kg	M	5.6E-08	mg/kg-day	N/A	mg/kg-day $^{-1}$	N/A
	Beryllium	1.30	mg/kg	1.30	mg/kg	M	4.8E-09	mg/kg-day	4.3E+02	mg/kg-day $^{-1}$	2.1E-06
	Iron	34000.00	mg/kg	34000.00	mg/kg	M	1.3E-04	mg/kg-day	N/A	N/A	N/A
	Manganese	246.00	mg/kg	246.00	mg/kg	M	9.1E-07	mg/kg-day	N/A	N/A	N/A
	Vanadium	79.80	mg/kg	79.80	mg/kg	M	3.0E-07	mg/kg-day	N/A	N/A	N/A

M = Medium specific

Total Risk Across All Exposure Routes/Pathways: 3.3E-06

TABLE 8.11.CT
CALCULATION OF CANCER RISKS
CENTRAL TENDENCIES
St. Juliens Creek - Landfill C (Site 3)

Scenario Timeframe: Future
Medium: Surface Soil
Exposure Medium: Surface Soil
Exposure Point: Onsite
Receptor Population: Construction Worker
Receptor Age: Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
Ingestion	Aluminum	11011.43	mg/kg	11011.43	mg/kg	M	3.7E-04	mg/kg-day	N/A	N/A	N/A
	Arsenic	8.04	mg/kg	8.04	mg/kg	M	2.7E-07	mg/kg-day	1.5E+00	mg/kg-day $^{-1}$	4.0E-07
	Benzo(a)Pyrene	0.23	mg/kg	0.23	mg/kg	M	7.7E-09	mg/kg-day	7.3E+00	mg/kg-day $^{-1}$	5.6E-08
	Benzo(b)Fluoranthen	0.70	mg/kg	0.70	mg/kg	M	2.3E-08	mg/kg-day	7.3E-01	mg/kg-day $^{-1}$	1.7E-08
	Beryllium	0.52	mg/kg	0.52	mg/kg	M	1.7E-08	mg/kg-day	4.3E+00	mg/kg-day $^{-1}$	7.5E-08
	Iron	18412.86	mg/kg	18412.86	mg/kg	M	6.2E-04	mg/kg-day	N/A	N/A	N/A
	Manganese	147.29	mg/kg	147.29	mg/kg	M	4.9E-06	mg/kg-day	N/A	N/A	N/A
	Vanadium	47.06	mg/kg	47.06	mg/kg	M	1.6E-06	mg/kg-day	N/A	N/A	N/A
Dermal	Aluminum	11011.43	mg/kg	11011.43	mg/kg	M	4.1E-05	mg/kg-day	N/A	N/A	N/A
	Arsenic	8.04	mg/kg	8.04	mg/kg	M	9.5E-08	mg/kg-day	1.6E+00	mg/kg-day $^{-1}$	1.5E-07
	Benzo(a)Pyrene	0.23	mg/kg	0.23	mg/kg	M	8.5E-09	mg/kg-day	N/A	mg/kg-day $^{-1}$	N/A
	Benzo(b)Fluoranthen	0.70	mg/kg	0.70	mg/kg	M	2.6E-08	mg/kg-day	N/A	mg/kg-day $^{-1}$	N/A
	Beryllium	0.52	mg/kg	0.52	mg/kg	M	1.9E-09	mg/kg-day	4.3E+02	mg/kg-day $^{-1}$	8.3E-07
	Iron	18412.86	mg/kg	18412.86	mg/kg	M	6.8E-05	mg/kg-day	N/A	N/A	N/A
	Manganese	147.29	mg/kg	147.29	mg/kg	M	5.5E-07	mg/kg-day	N/A	N/A	N/A
	Vanadium	47.06	mg/kg	47.06	mg/kg	M	1.7E-07	mg/kg-day	N/A	N/A	N/A

M = Medium specific

Total Risk Across All Exposure Routes/Pathways: 1.5E-06

Site 3

Surface Soil to Groundwater

TABLE 2.5
OCCURRENCE, DISTRIBUTION AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN
St. Juliens Creek - Landfill C (Site 3)

Scenario Timeframe: Future
Medium: Surface Soil
Exposure Medium: Groundwater
Exposure Point: Onsite

CAS Number	Chemical	(1) Minimum Concentration	Minimum Qualifier	(1) Maximum Concentration	Maximum Qualifier	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration Used for Screening	(2) Background Value	(3) Screening Toxicity Value	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag	(4) Rationale for Contaminant Deletion or Selection
72548	4,4'-DDD	2.9	J	43		ug/kg	SS07	4/6	4.3-4.3	43	NA	NA	NA	NA	NO	NTX
72559	4,4'-DDE	6.4	J	34		ug/kg	SS07	4/6	4.2-4.3	34	NA	NA	NA	NA	NO	NTX
50293	4,4'-DDT	13	J	130		ug/kg	SS07	4/6	4.2-4.3	130	NA	NA	NA	NA	NO	NTX
208968	Acenaphthylene	54	J	86	J	ug/kg	SS06	4/6	360-430	86	NA	NA	NA	NA	NO	NTX
7429905	Aluminum	3310		21400		mg/kg	SS05	6/6	8.27-10.81	21400	NA	NA	NA	NA	NO	NTX
120127	Anthracene	43	J	120	J	ug/kg	SS06	5/6	360-430	120	NA	NA	NA	NA	NO	NTX
1109769	Aroclor-1254	78		100		ug/kg	SS04	2/6	43-54	100	NA	NA	NA	NA	NO	NTX
7440382	Arsenic	2.2		13.9	L	mg/kg	SS05	6/6	0.56-0.74	13.9	NA	NA	NA	NA	NO	NTX
7440393	Barium	14.6	J	211		mg/kg	SS07	6/6	0.38-0.49	211	NA	32	NA	NA	YES	ASL
56553	Benzo(a)Anthracene	36	J	390	J	ug/kg	SS06	6/6	340-430	390	NA	NA	NA	NA	NO	NTX
50328	Benzo(a)Pyrene	38	J	350	J	ug/kg	SS07	6/6	340-430	350	NA	NA	NA	NA	NO	NTX
205992	Benzo(b)Fluoranthene	62	J	1500		ug/kg	SS06	6/6	340-430	1500	NA	NA	NA	NA	NO	NTX
191242	Benzo(g,h,i)Perylene	130	J	340	J	ug/kg	SS06	5/6	360-410	340	NA	NA	NA	NA	NO	NTX
207089	Benzo(k)Fluoranthene	170	J	460		ug/kg	SS07	5/6	360-410	460	NA	NA	NA	NA	NO	NTX
7440417	Beryllium	0.29	J	1.3		mg/kg	SS07	5/6	0.19-0.25	1.3	NA	NA	NA	NA	NO	NTX
7440439	Cadmium	0.32	J	0.47	J	mg/kg	SS02	3/6	0.09-0.12	0.47	NA	NA	NA	NA	NO	NTX
7440702	Calcium	702	J	6240		mg/kg	SS04	6/6	16.36-21.3	6240	NA	NA	NA	NA	NO	NUT
86748	Carbazole	45	J	130	J	ug/kg	SS06	2/6	360-410	130	NA	NA	NA	NA	NO	NTX
7440473	Chromium	6.8		42.1		mg/kg	SS05	5/6	1.32-1.72	42.1	NA	NA	NA	NA	NO	NTX
218019	Chrysene	41	J	730		ug/kg	SS07	6/6	340-430	730	NA	NA	NA	NA	NO	NTX
7440484	Cobalt	3.4	J	6.7	J	mg/kg	SS07	5/6	1.51-1.97	6.7	NA	NA	NA	NA	NO	NTX
7440508	Copper	5.3		125		mg/kg	SS07	6/6	1.13-1.43	125	NA	NA	NA	NA	NO	NTX
132649	Dibenzofuran	38	J	58	J	ug/kg	SS06	2/6	360-410	58	NA	NA	NA	NA	NO	NTX
60571	Dieldrin	5.3	J	5.3	J	ug/kg	SS07	1/6	5.4-5.4	5.3	NA	1	NA	NA	YES	ASL
84662	Diethylphthalate	79	J	79	J	ug/kg	SS07	1/6	380-380	79	NA	NA	NA	NA	NO	NTX
206440	Fluoranthene	63	J	640		ug/kg	SS06	6/6	340-430	640	NA	NA	NA	NA	NO	NTX
86737	Fluorene	48	J	48	J	ug/kg	SS06	1/6	410-410	48	NA	NA	NA	NA	NO	NTX
193395	Indeno(1,2,3-cd)Pyrene	180	J	440		ug/kg	SS06	5/6	360-430	440	NA	NA	NA	NA	NO	NTX
7439896	Iron	3440		34000		mg/kg	SS06	6/6	3.2-4.15	34000	NA	NA	NA	NA	NO	NTX
7439921	Lead	11.4	J	240	J	mg/kg	SS07	6/6	0.19-0.25	240	NA	NA	NA	NA	NO	NTX
7439954	Magnesium	283	J	3590		mg/kg	SS05	6/6	34.03-44.4	3590	NA	NA	NA	NA	NO	NUT
7439965	Manganese	16		246		mg/kg	SS04	6/6	0.38-0.45	246	NA	NA	NA	NA	NO	NTX
7439976	Mercury	0.18		0.6		mg/kg	SS05	5/6	0.05-0.06	0.6	NA	NA	NA	NA	NO	NTX
91203	Naphthalene	53	J	130	J	ug/kg	SS03	3/6	360-380	130	NA	NA	NA	NA	NO	NTX
7440020	Nickel	4.9	J	22		mg/kg	SS07	5/6	1.32-1.72	22	NA	32	NA	NA	NO	BSL
87865	Pentachlorophenol	160	J	160	J	ug/kg	SS06	1/6	1000-1000	160	NA	NA	NA	NA	NO	NTX
85018	Phenanthrene	100	J	420	J	ug/kg	SS06	5/6	360-430	420	NA	NA	NA	NA	NO	NTX
7440097	Potassium	241	J	3130		mg/kg	SS06	6/6	41.74-54.5	3130	NA	NA	NA	NA	NO	NUT
129000	Pyrene	54	J	560	J	ug/kg	SS06	6/6	340-430	560	NA	NA	NA	NA	NO	NTX
7440235	Sodium	399	J	473	J	mg/kg	SS04	2/6	13.08-13.7	473	NA	NA	NA	NA	NO	NUT
127184	Tetrachloroethene	2	J	2	J	ug/kg	SS02	1/6	10-10	2	NA	NA	NA	NA	NO	NTX
7440280	Thallium	0.69	J	2.5		mg/kg	SS05	3/6	0.38-0.49	2.5	NA	NA	NA	NA	NO	NTX
108883	Toluene	2	J	2	J	ug/kg	SS05	1/6	13-13	2	NA	NA	NA	NA	NO	NTX
1426544	Total Phosphorous (as P)	4		114		mg/kg	SS06	6/6	1.2-19	114	NA	NA	NA	NA	NO	NTX
7440622	Vanadium	7.9	J	79.8		mg/kg	SS05	6/6	1.7-2.21	79.8	NA	NA	NA	NA	NO	NTX
7440666	Zinc	15.5		460	L	mg/kg	SS04	6/6	0.94-1.23	460	NA	NA	NA	NA	NO	NTX

(1) Minimum/maximum detected concentration.

(2) To date, no background study has been performed for the St. Juliens Creek Annex.

(3) All compounds were screened against: Soil Screening Levels (Surface Soil to Groundwater), as presented in: Risk-Based Concentration Table, Third Quarter 1993, U.S. EPA Region III, Roy L. Smith, Ph. D., March 1997. (Cancer benchmark value = 1E-06, HQ=0. Human Health Risk Assessment Consensus Agreement #6.A.6, Naval Base Norfolk Partnership, August 1997.

(4) Rationale Codes Selection Reason: Above Screening Levels (ASL)
No Toxicity Information (NTX)
Deletion Reason: Essential Nutrient (NUT)
Below Screening Level (BSL)

Definitions: N/A = Not Applicable
COPC = Chemical of Potential Concern
ARAR/TBC = Applicable or Relevant and Appropriate Requirement/To Be Considered
MCL = Federal Maximum Contaminant Level
J = Estimated Value

Site 3

Surface Soil to Air

TABLE 2.6
OCCURRENCE, DISTRIBUTION AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN
St. Juliens Creek - Landfill C (Site 3)

Scenario Timeframe: Future
Medium: Surface Soil
Exposure Medium: Air
Exposure Point: Onsite

CAS Number	Chemical	Minimum Concentration (1)	Minimum Qualifier	Maximum Concentration (1)	Maximum Qualifier	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration Used for Screening	Background Value (2)	Screening Toxicity Value (3)	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag	Rationale for Contaminant Deletion or Selection (4)
72548	4,4'-DDD	2.9	J	43		ug/kg	SS07	4/6	4.3-4.3	43	NA	NA	NA	NA	NO	NTX
72559	4,4'-DDE	6.4	J	34		ug/kg	SS07	4/6	4.2-4.3	34	NA	NA	NA	NA	NO	NTX
50293	4,4'-DDT	13	J	130		ug/kg	SS07	4/6	4.2-4.3	130	NA	NA	NA	NA	NO	NTX
208968	Acenaphthylene	54	J	86	J	ug/kg	SS06	4/6	360-430	86	NA	NA	NA	NA	NO	NTX
7429905	Aluminum	3310		21400		mg/kg	SS05	6/6	8.27-10.81	21400	NA	NA	NA	NA	NO	NTX
120127	Anthracene	43	J	120	J	ug/kg	SS06	5/6	360-430	120	NA	NA	NA	NA	NO	NTX
1109769	Aroclor-1254	78		100		ug/kg	SS04	2/6	43-54	100	NA	NA	NA	NA	NO	NTX
7440382	Arsenic	2.2		13.9	L	mg/kg	SS05	6/6	0.56-0.74	13.9	NA	NA	NA	NA	NO	NTX
7440393	Barium	14.6	J	211		mg/kg	SS07	6/6	0.38-0.49	211	NA	NA	NA	NA	NO	NTX
56553	Benzo(a)Anthracene	36	J	390	J	ug/kg	SS06	6/6	340-430	390	NA	NA	NA	NA	NO	NTX
50328	Benzo(a)Pyrene	38	J	350	J	ug/kg	SS07	6/6	340-430	350	NA	NA	NA	NA	NO	NTX
205992	Benzo(b)Fluoranthene	62	J	1500		ug/kg	SS06	6/6	340-430	1500	NA	NA	NA	NA	NO	NTX
191242	Benzo(g,h,i)Perylene	130	J	340	J	ug/kg	SS06	5/6	360-410	340	NA	NA	NA	NA	NO	NTX
207089	Benzo(k)Fluoranthene	170	J	460		ug/kg	SS07	5/6	360-410	460	NA	NA	NA	NA	NO	NTX
7440417	Beryllium	0.29	J	1.3		mg/kg	SS07	5/6	0.19-0.25	1.3	NA	NA	NA	NA	NO	NTX
7440439	Cadmium	0.32	J	0.47	J	mg/kg	SS02	3/6	0.09-0.12	0.47	NA	NA	NA	NA	NO	NTX
7440702	Calcium	702	J	6240		mg/kg	SS04	6/6	16.36-21.3	6240	NA	NA	NA	NA	NO	NUT
86748	Carbazole	45	J	130	J	ug/kg	SS06	2/6	360-410	130	NA	NA	NA	NA	NO	NTX
7440473	Chromium	6.8		42.1		mg/kg	SS05	5/6	1.32-1.72	42.1	NA	NA	NA	NA	NO	NTX
218019	Chrysene	41	J	730		ug/kg	SS07	6/6	340-430	730	NA	NA	NA	NA	NO	NTX
7440484	Cobalt	3.4	J	6.7	J	mg/kg	SS07	5/6	1.51-1.97	6.7	NA	NA	NA	NA	NO	NTX
7440508	Copper	5.3		125		mg/kg	SS07	6/6	1.13-1.43	125	NA	NA	NA	NA	NO	NTX
132649	Dibenzofuran	38	J	58	J	ug/kg	SS06	2/6	360-410	58	NA	NA	NA	NA	NO	NTX
60571	Dieldrin	5.3	J	5.3	J	ug/kg	SS07	1/6	5.4-5.4	5.3	NA	NA	NA	NA	NO	NTX
84662	Diethylphthalate	79	J	79	J	ug/kg	SS07	1/6	380-380	79	NA	NA	NA	NA	NO	NTX
206440	Fluoranthene	63	J	640		ug/kg	SS06	6/6	340-430	640	NA	NA	NA	NA	NO	NTX
86737	Fluorene	48	J	48	J	ug/kg	SS06	1/6	410-410	48	NA	NA	NA	NA	NO	NTX
193395	Indeno(1,2,3-cd)Pyrene	180	J	440		ug/kg	SS06	5/6	360-430	440	NA	NA	NA	NA	NO	NTX
7439896	Iron	3440		34000		mg/kg	SS06	6/6	3.2-4.15	34000	NA	NA	NA	NA	NO	NTX
7439921	Lead	11.4	J	240	J	mg/kg	SS07	6/6	0.19-0.25	240	NA	NA	NA	NA	NO	NTX
7439954	Magnesium	283	J	3590		mg/kg	SS05	6/6	34.03-44.4	3590	NA	NA	NA	NA	NO	NUT
7439965	Manganese	16		246		mg/kg	SS04	6/6	0.38-0.45	246	NA	NA	NA	NA	NO	NTX
7439976	Mercury	0.18		0.6		mg/kg	SS05	5/6	0.05-0.06	0.6	NA	NA	NA	NA	NO	NTX
91203	Naphthalene	53	J	130	J	ug/kg	SS03	3/6	360-380	130	NA	NA	NA	NA	NO	NTX
7440020	Nickel	4.9	J	22		mg/kg	SS07	5/6	1.32-1.72	22	NA	NA	NA	NA	NO	NTX
87865	Pentachlorophenol	160	J	160	J	ug/kg	SS06	1/6	1000-1000	160	NA	NA	NA	NA	NO	NTX
85018	Phenanthrene	100	J	420	J	ug/kg	SS06	5/6	360-430	420	NA	NA	NA	NA	NO	NTX
7440097	Potassium	241	J	3130		mg/kg	SS06	6/6	41.74-54.5	3130	NA	NA	NA	NA	NO	NUT
129000	Pyrene	54	J	560	J	ug/kg	SS06	6/6	340-430	560	NA	NA	NA	NA	NO	NTX
7440235	Sodium	399	J	473	J	mg/kg	SS04	2/6	13.08-13.7	473	NA	NA	NA	NA	NO	NUT
127184	Tetrachloroethene	2	J	2	J	ug/kg	SS02	1/6	10-10	2	NA	NA	NA	NA	NO	NTX
7440280	Thallium	0.69	J	2.5		mg/kg	SS05	3/6	0.38-0.49	2.5	NA	NA	NA	NA	NO	NTX
108883	Toluene	2	J	2	J	ug/kg	SS05	1/6	13-13	2	NA	NA	NA	NA	NO	NTX
1426544	Total Phosphorous (as P)	4		114		mg/kg	SS06	6/6	1.2-19	114	NA	NA	NA	NA	NO	NTX
7440622	Vanadium	7.9	J	79.8		mg/kg	SS05	6/6	1.7-2.21	79.8	NA	NA	NA	NA	NO	NTX
7440666	Zinc	15.5		460	L	mg/kg	SS04	6/6	0.84-1.23	460	NA	NA	NA	NA	NO	NTX

(1) Minimum/maximum detected concentration.

(2) To date, no background study has been performed for the St. Juliens Creek Annex.

(3) All compounds were screened against: Soil Screening Levels (Surface Soil to Air), as presented in: Risk-Based Concentration Table, Third Quarter 1993, U.S. EPA Region III, Roy L. Smith, Ph. D., March 1997. (Cancer benchmark value = 1E-06, HQ=0.1)
Human Health Risk Assessment Consensus Agreement #6.A.6, Naval Base Norfolk Partnership, August 1997.

(4) Rationale Codes Selection Reason: Above Screening Levels (ASL)
Deletion Reason: No Toxicity Information (NTX)
Essential Nutrient (NUT)
Below Screening Level (BSL)

Definitions: N/A = Not Applicable
COPC = Chemical of Potential Concern
ARAR/TBC = Applicable or Relevant and Appropriate Requirement/To Be Considered
MCL = Federal Maximum Contaminant Level
J = Estimated Value

Site 3

Subsurface Soil Current/Future

TABLE 2.7
OCCURRENCE, DISTRIBUTION AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN
St. Juliens Creek - Landfill C (Site 3)

Scenario Timeframe: Future
Medium: Subsurface Soil
Exposure Medium: Subsurface Soil
Exposure Point: Onsite

CAS Number	Chemical	Minimum Concentration (1)	Minimum Qualifier	Maximum Concentration (1)	Maximum Qualifier	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration Used for Screening	Background Value (2)	Screening Toxicity Value (3)	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag	Rationale for Contaminant Deletion or Selection (4)
78933	2-Butanone	19	J	21		ug/kg	SB02	2/6	14-15	21	NA	4700000	NA	NA	NO	BSL
83329	Acenaphthene	49	J	49	J	ug/kg	SB05	1/6	470-470	49	NA	470000	NA	NA	NO	BSL
208968	Acenaphthylene	100	J	100	J	ug/kg	SB05	1/6	520-520	100	NA	NA	NA	NA	NO	NTX
742990	Aluminum	963		17100		mg/kg	SB06	6/6	8.3-12.45	17100	NA	7800	NA	NA	YES	ASL
120127	Anthracene	55	J	170	J	ug/kg	SB02	4/6	430-510	170	NA	2300000	NA	NA	NO	BSL
744036	Antimony	0.38	J	0.38	J	mg/kg	SB04	1/6	0.38-0.38	0.38	NA	3.1	NA	NA	NO	BSL
744038	Arsenic	0.78	J	12.3	L	mg/kg	SB06	6/6	0.57-0.85	12.3	NA	0.43	NA	NA	YES	ASL
744039	Barium	11.3	J	67.7		mg/kg	SB06	5/6	0.38-0.57	67.7	NA	550	NA	NA	NO	BSL
56553	Benzo(a)Anthracene	190	J	700		ug/kg	SB05	4/6	430-510	700	NA	880	NA	NA	NO	BSL
50328	Benzo(a)Pyrene	140	J	560		ug/kg	SB05	4/6	430-510	560	NA	88	NA	NA	YES	ASL
205992	Benzo(b)Fluoranthene	540		1500		ug/kg	SB02	4/6	430-520	1500	NA	880	NA	NA	YES	ASL
191242	Benzo(g,h,i)Perylene	140	J	400	J	ug/kg	SB02	4/6	430-510	400	NA	NA	NA	NA	NO	NTX
207089	Benzo(k)Fluoranthene	200	J	490	J	ug/kg	SB02	4/6	430-510	490	NA	8800	NA	NA	NO	BSL
744041	Beryllium	0.44	J	0.51	J	mg/kg	SB07	3/6	0.23-0.27	0.51	NA	0.15	NA	NA	YES	ASL
744043	Cadmium	0.2	J	0.2	J	mg/kg	SB05	1/6	0.14-0.14	0.2	NA	3.9	NA	NA	NO	BSL
744070	Calcium	683	J	7550		mg/kg	SB03	6/6	16.42-24.6	7550	NA	NA	NA	NA	NO	NUT
744047	Chromium	3		34.4		mg/kg	SB06	5/6	1.44-1.98	34.4	NA	39	NA	NA	NO	BSL
218019	Chrysene	370	J	1200		ug/kg	SB02	3/6	430-520	1200	NA	88000	NA	NA	NO	BSL
744048	Cobalt	2.3	J	7.7	J	mg/kg	SB07	5/6	1.51-2.26	7.7	NA	470	NA	NA	NO	BSL
744050	Copper	4.8		43.5		mg/kg	SB06	4/6	1.13-1.7	43.5	NA	27000	NA	NA	NO	BSL
132649	Dibenzofuran	60	J	60	J	ug/kg	SB05	1/6	470-470	60	NA	31000	NA	NA	NO	BSL
206440	Fluoranthene	110	J	1100		ug/kg	SB05	5/6	400-520	1100	NA	310000	NA	NA	NO	BSL
86737	Fluorene	51	J	51	J	ug/kg	SB05	1/6	470-470	51	NA	310000	NA	NA	NO	BSL
193395	Indeno(1,2,3-cd)Pyrene	180	J	500	J	ug/kg	SB02	4/6	430-520	500	NA	880	NA	NA	NO	BSL
743969	Iron	2030		34300		mg/kg	SB06	6/6	3.21-4.81	34300	NA	2300	NA	NA	YES	ASL
743992	Lead	10.1		77.9	J	mg/kg	SB06	6/6	0.19-0.28	77.9	NA	400	NA	NA	NO	BSL
743995	Magnesium	203	J	3250		mg/kg	SB06	6/6	34.16-51.2	3250	NA	NA	NA	NA	NO	NUT
43996	Manganese	26		133		mg/kg	SB07	6/6	0.38-0.57	133	NA	180	NA	NA	NO	BSL
43997	Mercury	0.09	J	0.88		mg/kg	SB06	5/6	0.05-0.07	0.88	NA	2.3	NA	NA	NO	BSL
75092	Methylene Chloride	12	J	12	J	ug/kg	SB03	1/6	14-14	12	NA	85000	NA	NA	NO	BSL
91203	Naphthalene	60	J	160	J	ug/kg	SB05	2/6	470-480	160	NA	310000	NA	NA	NO	BSL
744002	Nickel	3	J	6.1	J	mg/kg	SB02	2/6	1.32-1.98	6.1	NA	160	NA	NA	NO	BSL
85018	Phenanthrene	56	J	250	J	ug/kg	SB05	4/6	430-510	250	NA	NA	NA	NA	NO	NTX
744009	Potassium	162	J	2900		mg/kg	SB06	6/6	41.89-62.8	2900	NA	NA	NA	NA	NO	NUT
129000	Pyrene	81	J	990		ug/kg	SB05	5/6	400-510	990	NA	230000	NA	NA	NO	BSL
744022	Silver	0.73	J	0.73	J	mg/kg	SB02	1/6	0.28-0.28	0.73	NA	39	NA	NA	NO	BSL
744023	Sodium	151	J	151	J	mg/kg	SB02	1/6	16.42-16.4	151	NA	NA	NA	NA	NO	NUT
127184	Tetrachloroethene	3	J	3	J	ug/kg	SB06	1/6	13-13	3	NA	12000	NA	NA	NO	BSL
744028	Thallium	2.4	J	2.8		mg/kg	SB06	2/6	0.52-0.54	2.8	NA	7	NA	NA	NO	NTX
108883	Toluene	2	J	3	J	ug/kg	SB06	2/6	13-15	3	NA	1600000	NA	NA	NO	BSL
426544	Total Phosphorous (as P)	3.4		9.6		mg/kg	SB06	6/6	1.4-1.8	9.6	NA	NA	NA	NA	NO	NTX
744062	Vanadium	2	J	40.9		mg/kg	SB06	5/6	1.7-2.55	40.9	NA	55	NA	NA	NO	BSL
744066	Zinc	83.9	L	533	L	mg/kg	SB07	3/6	1.3-1.4	533	NA	2300	NA	NA	NO	BSL

(1) Minimum/maximum detected concentration.

(2) To date, no background study has been performed for the St. Juliens Creek Annex.

(3) All compounds were screened against: Soil Screening Levels (Soil to Groundwater), as presented in: Risk-Based Concentration Table, Third Quarter 1993, U.S. EPA Region III, Roy L. Smith, Ph. D., March 1997. (Cancer benchmark value = 1E-06, HQ=0.1). Lead was screened against as prescribed in Human Health Risk Assessment Consensus Agreement #6.A.6, Naval Base Norfolk Partnership, August 1997.

(4) Rationale Codes Selection Reason: Above Screening Levels (ASL)
No Toxicity Information (NTX)
Deletion Reason: Essential Nutrient (NUT)
Below Screening Level (BSL)

Definitions:
N/A = Not Applicable
SQL = Sample Quantitation Limit
COPC = Chemical of Potential Concern
ARAR/TBC = Applicable or Relevant and Appropriate Requirement/To Be Considered
MCL = Federal Maximum Contaminant Level
SMCL = Secondary Maximum Contaminant Level
J = Estimated Value
C = Carcinogenic
N = Non-Carcinogenic

TABLE 3.4
MEDIUM-SPECIFIC EXPOSURE POINT CONCENTRATION SUMMARY
St. Juliens Creek - Landfill C (Site 3)

Scenario Timeframe: Future
Medium: Subsurface Soil
Exposure Medium: Subsurface Soil
Exposure Point: Onsite

Chemical of Potential Concern	Units	Arithmetic Mean	95% UCL of Normal Data	Maximum Detected Concentration	Maximum Qualifier	EPC Units	Reasonable Maximum Exposure			Central Tendency		
							Medium EPC Value	Medium EPC Statistic	Medium EPC Rationale	Medium EPC Value	Medium EPC Statistic	Medium EPC Rationale
Aluminum	mg/kg	6755.50	N/A	17100.00		mg/kg	17100.00	Max	(1)	6755.50	Mean-N	(1)
Arsenic	mg/kg	4.21	N/A	12.30	L	mg/kg	12.30	Max	(1)	4.21	Mean-N	(1)
Benzo(a)Pyrene	ug/kg	293.57	N/A	560.00		mg/kg	0.56	Max	(1)	0.29	Mean-N	(1)
Benzo(b)Fluoranthene	ug/kg	823.57	N/A	1500.00		mg/kg	1.50	Max	(1)	0.82	Mean-N	(1)
Beryllium	mg/kg	0.27	N/A	0.51	J	mg/kg	0.51	Max	(1)	0.27	Mean-N	(1)
Iron	mg/kg	10502.86	N/A	34300.00		mg/kg	34300.00	Max	(1)	10502.86	Mean-N	(1)

Statistics: Maximum Detected Value (Max); 95% UCL of Normal Data (95% UCL-N); 95% UCL of Log-transformed Data (95% UCL-T); Mean of Log-transformed Data (Mean-T); Mean of Normal Data (Mean-N).

(1) As stated in the Risk Assessment Assumptions Document presented in Appendix F of this report, exposure point concentrations for this media will consist of the maximum detected concentration and the arithmetic mean.

TABLE 4.12

VALUES USED FOR DAILY INTAKE CALCULATIONS

St. Juliens Creek - Landfill C (Site 3)

Scenario Timeframe: Future
Medium: Subsurface Soil
Exposure Medium: Subsurface Soil
Exposure Point: Onsite
Receptor Population: Construction Worker
Receptor Age: Adult

Exposure Route	Parameter Code	Parameter Definition	Units	RME Value	RME Rationale/ Reference	CT Value	CT Rationale/ Reference	Intake Equation/ Model Name
Ingestion	CS	Chemical Concentration in Soil	mg/kg	See Table 3	See Table 3	See Table 3	See Table 3	Chronic Daily Intake (CDI) (mg/kg-day)=
	IR-S	Ingestion Rate of Soil	mg/day	480	VADEQ, 1997	480	VADEQ, 1997	CS x IR x EF x ED x CF1 x 1/BW x 1/AT
	EF	Exposure Frequency	days/year	250	EPA, 1991	250	EPA, 1991	
	ED	Exposure Duration	years	0.5	Professional Judgement	0.5	Professional Judgement	
	CF1	Conversion Factor	kg/mg	1.00E-06	NA	1.00E-06	NA	
	BW	Body Weight	kg	70	EPA, 1991	70	EPA, 1991	
	AT-C	Averaging Time - Cancer	days	25,550	EPA, 1989	25,550	EPA, 1989	
	AT-N	Averaging Time - Non-Cancer	days	183	Professional Judgement	183	Professional Judgement	
Dermal	CS	Chemical Concentration in Soil	mg/kg	See Table 3	See Table 3	See Table 3	See Table 3	Chronic Daily Intake (CDI) (mg/kg-day)=
	CF1	Conversion Factor	kg/mg	1.00E-06	NA	1.00E-06	NA	CS x CF1 x SA x AF x AB x EF x ED x 1/BW x 1/AT
	SA	Skin Surface Area Available for Contact	cm^2	5,300	EPA, 1992	5,300	EPA, 1992	
	AF	Soil to Skin Adherence Factor	mg/cm^2	1	EPA, 1992	1	EPA, 1992	
	AB	Absorption Factor	unitless	chemical-specific	EPA, 1995	chemical-specific	EPA, 1995	
	EF	Exposure Frequency	days/year	250	EPA, 1991	250	EPA, 1991	
	ED	Exposure Duration	years	0.5	Professional Judgement	0.5	Professional Judgement	
	BW	Body Weight	kg	70	EPA, 1991	70	EPA, 1991	
	AT-C	Averaging Time - Cancer	days	25,550	EPA, 1989	25,550	EPA, 1989	
	AT-N	Averaging Time - Non-Cancer	days	183	Professional Judgement	183	Professional Judgement	

Sources:

EPA, 1989: Risk Assessment Guidance for Superfund. Vol. 1: Human Health Evaluation Manual, Part A. OERR. EPA/540/1-89/002.

EPA, 1991: Risk Assessment Guidance for Superfund. Vol. 1: Human Health Evaluation Manual - Supplemental Guidance, Standard Default Exposure Factors. Interim Final. OSWER Directive 9285.6-03,

EPA, 1992: Dermal Exposure Assessment: Principles and Applications. EPA/600/8-91/011B.

EPA, 1995: Assessing Dermal Exposure from Soil, Technical Guidance manual, Region III, EPA/903-K-95-003.

VADEQ, 1997: Value provided by Pat McMurray, Virginia Department of Environmental Quality, during St. Juliens Creek risk assessment assumptions conference call on November 20, 1997.

TABLE 5.4
NON-CANCER TOXICITY DATA -- ORAL/DERMAL
St. Juliens Creek - Landfill C (Site 3)

Chemical of Potential Concern	Chronic/ Subchronic	Oral RfD Value	Oral RfD Units	Oral to Dermal Adjustment Factor	Adjusted Dermal RfD	Units	Primary Target Organ	Combined Uncertainty/Modifying Factors	Sources of RfD: Target Organ	Dates of RfD: Target Organ (MM/DD/YY)
Aluminum	Chronic	1.0E+00	mg/kg/day	0.27	3E-01	mg/kg/day	N/A	N/A	RBC:N/A	10/7/97
Arsenic	Chronic	3.0E-04	mg/kg/day	0.95	3E-04	mg/kg/day	Skin	3	IRIS	11/17/97
Benzo(a)Pyrene	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Benzo(b)Fluoranthene	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Beryllium	Chronic	5.0E-03	mg/kg/day	0.01	5E-05	mg/kg/day	NOAEL	100	IRIS	11/17/97
Iron	Chronic	3.0E-01	mg/kg/day	0.05	2E-02	mg/kg/day	N/A	N/A	RBC:N/A	10/7/97

N/A = Not Applicable
IRIS = Integrated Risk Information System
RBC= *Region III Updated Risk-Based Concentration Table.* October, 1997.

TABLE 6.4
CANCER TOXICITY DATA -- ORAL/DERMAL
St. Juliens Creek - Landfill C (Site 3)

Chemical of Potential Concern	Oral Cancer Slope Factor	Oral to Dermal Adjustment Factor	Adjusted Dermal Cancer Slope Factor	Units	Weight of Evidence/ Cancer Guideline Description	Source	Date (MM/DD/YY)
Aluminum	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Arsenic	1.5E+00	0.95	1.6E+00	mg/kg-day -1	A	IRIS	11/17/97
Benzo(a)Pyrene	7.3E+00	N/A	N/A	mg/kg-day -1	B2	IRIS	11/17/97
Benzo(b)Fluoranthene	7.3E-01	N/A	N/A	mg/kg-day -1	N/A	RBC:N/A	10/07/97
Beryllium	4.3E+00	0.01	4.3E+02	mg/kg-day -1	B2	IRIS	11/17/97
Iron	N/A	N/A	N/A	N/A	N/A	N/A	N/A

IRIS = Integrated Risk Information System
HEAST= Health Effects Assessment Summary Tables
RBC = *Risk-based Concentration Table*, October 1997

EPA Group:
- A - Human carcinogen
- B1 - Probable human carcinogen - indicates that limited human data are available
- B2 - Probable human carcinogen - indicates sufficient evidence in animals and inadequate or no evidence in humans
- C - Possible human carcinogen
- D - Not classifiable as a human carcinogen
- E - Evidence of noncarcinogenicity

Weight of Evidence:
- Known/Likely
- Cannot be Determined
- Not Likely

TABLE 7.12.RME
CALCULATION OF NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
St. Juliens Creek - Landfill C (Site 3)

Scenario Timeframe: Future
Medium: Subsurface Soil
Exposure Medium: Subsurface Soil
Exposure Point: Onsite
Receptor Population: Construction Worker
Receptor Age: Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Ingestion	Aluminum	17100.00	mg/kg	17100.00	mg/kg	M	8.0E-02	mg/kg-day	1.0E+00	mg/kg/day	N/A	N/A	8.0E-02
	Arsenic	12.30	mg/kg	12.30	mg/kg	M	5.8E-05	mg/kg-day	3.0E-04	mg/kg/day	N/A	N/A	1.9E-01
	Benzo(a)Pyrene	0.56	mg/kg	0.56	mg/kg	M	2.6E-06	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Benzo(b)Fluoranthene	1.50	mg/kg	1.50	mg/kg	M	7.0E-06	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Beryllium	0.51	mg/kg	0.51	mg/kg	M	2.4E-06	mg/kg-day	5.0E-03	mg/kg/day	N/A	N/A	4.8E-04
	Iron	34300.00	mg/kg	34300.00	mg/kg	M	1.6E-01	mg/kg-day	3.0E-01	mg/kg/day	N/A	N/A	5.4E-01
Dermal	Aluminum	17100.00	mg/kg	17100.00	mg/kg	M	8.8E-03	mg/kg-day	2.7E-01	mg/kg/day	N/A	N/A	3.3E-02
	Arsenic	12.30	mg/kg	12.30	mg/kg	M	2.0E-05	mg/kg-day	2.9E-04	mg/kg/day	N/A	N/A	7.1E-02
	Benzo(a)Pyrene	0.56	mg/kg	0.56	mg/kg	M	2.9E-06	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Benzo(b)Fluoranthene	1.50	mg/kg	1.50	mg/kg	M	7.8E-06	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Beryllium	0.51	mg/kg	0.51	mg/kg	M	2.6E-07	mg/kg-day	5.0E-05	mg/kg/day	N/A	N/A	5.3E-03
	Iron	34300.00	mg/kg	34300.00	mg/kg	M	1.8E-02	mg/kg-day	1.5E-02	mg/kg/day	N/A	N/A	1.2E+00

M = Medium Specific

Total Hazard Index Across All Exposure Routes/Pathways: 2.10

TABLE 7.12CT
CALCULATION OF NON-CANCER HAZARDS
CENTRAL TENDENCIES
St. Juliens Creek - Landfill C (Site 3)

Scenario Timeframe: Future
Medium: Subsurface Soil
Exposure Medium: Subsurface Soil
Exposure Point: Onsite
Receptor Population: Construction Worker
Receptor Age: Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Ingestion	Aluminum	6755.50	mg/kg	6755.50	mg/kg	M	3.2E-02	mg/kg-day	1.0E+00	mg/kg/day	N/A	N/A	3.2E-02
	Arsenic	4.21	mg/kg	4.21	mg/kg	M	2.0E-05	mg/kg-day	3.0E-04	mg/kg/day	N/A	N/A	6.6E-02
	Benzo(a)Pyrene	0.29	mg/kg	0.29	mg/kg	M	1.4E-06	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Benzo(b)Fluoranthene	0.82	mg/kg	0.82	mg/kg	M	3.9E-06	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Beryllium	0.27	mg/kg	0.27	mg/kg	M	1.3E-06	mg/kg-day	5.0E-03	mg/kg/day	N/A	N/A	2.6E-04
	Iron	10502.86	mg/kg	10502.86	mg/kg	M	4.9E-02	mg/kg-day	3.0E-01	mg/kg/day	N/A	N/A	1.6E-01
Dermal	Aluminum	6755.50	mg/kg	6755.50	mg/kg	M	3.5E-03	mg/kg-day	2.7E-01	mg/kg/day	N/A	N/A	1.3E-02
	Arsenic	4.21	mg/kg	4.21	mg/kg	M	7.0E-06	mg/kg-day	2.9E-04	mg/kg/day	N/A	N/A	2.4E-02
	Benzo(a)Pyrene	0.29	mg/kg	0.29	mg/kg	M	1.5E-06	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Benzo(b)Fluoranthene	0.82	mg/kg	0.82	mg/kg	M	4.3E-06	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Beryllium	0.27	mg/kg	0.27	mg/kg	M	1.4E-07	mg/kg-day	5.0E-05	mg/kg/day	N/A	N/A	2.8E-03
	Iron	10502.86	mg/kg	10502.86	mg/kg	M	5.4E-03	mg/kg-day	1.5E-02	mg/kg/day	N/A	N/A	3.6E-01

M = Medium Specific

Total Hazard Index Across All Exposure Routes/Pathways: 0.66

TABLE 8.12.RME
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
St. Juliens Creek - Landfill C (Site 3)

Scenario Timeframe: Future
Medium: Subsurface Soil
Exposure Medium: Subsurface Soil
Exposure Point: Onsite
Receptor Population: Construction Worker
Receptor Age: Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
Ingestion	Aluminum	17100.00	mg/kg	17100.00	mg/kg	M	5.7E-04	mg/kg-day	N/A	N/A	N/A
	Arsenic	12.30	mg/kg	12.30	mg/kg	M	4.1E-07	mg/kg-day	1.5E+00	mg/kg-day $^{-1}$	6.19E-07
	Benzo(a)Pyrene	0.56	mg/kg	0.56	mg/kg	M	1.9E-08	mg/kg-day	7.3E+00	mg/kg-day $^{-1}$	1.37E-07
	Benzo(b)Fluoranthen	1.50	mg/kg	1.50	mg/kg	M	5.0E-08	mg/kg-day	7.3E-01	mg/kg-day $^{-1}$	3.67E-08
	Beryllium	0.51	mg/kg	0.51	mg/kg	M	1.7E-08	mg/kg-day	4.3E+00	mg/kg-day $^{-1}$	7.36E-08
	Iron	34300.00	mg/kg	34300.00	mg/kg	M	1.2E-03	mg/kg-day	N/A	N/A	N/A
Dermal	Aluminum	17100.00	mg/kg	17100.00	mg/kg	M	6.3E-05	mg/kg-day	N/A	N/A	N/A
	Arsenic	12.30	mg/kg	12.30	mg/kg	M	1.5E-07	mg/kg-day	1.6E+00	mg/kg-day $^{-1}$	2.30E-07
	Benzo(a)Pyrene	0.56	mg/kg	0.56	mg/kg	M	2.1E-08	mg/kg-day	N/A	mg/kg-day $^{-1}$	N/A
	Benzo(b)Fluoranthen	1.50	mg/kg	1.50	mg/kg	M	5.6E-08	mg/kg-day	N/A	mg/kg-day $^{-1}$	N/A
	Beryllium	0.51	mg/kg	0.51	mg/kg	M	1.9E-09	mg/kg-day	4.3E+02	mg/kg-day $^{-1}$	8.12E-07
	Iron	34300.00	mg/kg	34300.00	mg/kg	M	1.3E-04	mg/kg-day	N/A	N/A	N/A

M = Medium Specific

Total Risk Across All Exposure Routes/Pathways: 1.9E-06

TABLE 8.12CT
CALCULATION OF CANCER RISKS
CENTRAL TENDENCIES
St. Juliens Creek - Landfill C (Site 3)

Scenario Timeframe: Future
Medium: Subsurface Soil
Exposure Medium: Subsurface Soil
Exposure Point: Onsite
Receptor Population: Construction Worker
Receptor Age: Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
Ingestion	Aluminum	6755.50	mg/kg	6755.50	mg/kg	M	2.3E-04	mg/kg-day	N/A	N/A	N/A
	Arsenic	4.21	mg/kg	4.21	mg/kg	M	1.4E-07	mg/kg-day	1.5E+00	mg/kg-day $^{-1}$	2.12E-07
	Benzo(a)Pyrene	0.29	mg/kg	0.29	mg/kg	M	9.8E-09	mg/kg-day	7.3E+00	mg/kg-day $^{-1}$	7.19E-08
	Benzo(b)Fluoranthen	0.82	mg/kg	0.82	mg/kg	M	2.8E-08	mg/kg-day	7.3E-01	mg/kg-day $^{-1}$	2.02E-08
	Beryllium	0.27	mg/kg	0.27	mg/kg	M	9.2E-09	mg/kg-day	4.3E+00	mg/kg-day $^{-1}$	3.94E-08
	Iron	10502.86	mg/kg	10502.86	mg/kg	M	3.5E-04	mg/kg-day	N/A	N/A	N/A
Dermal	Aluminum	6755.50	mg/kg	6755.50	mg/kg	M	2.5E-05	mg/kg-day	N/A	N/A	N/A
	Arsenic	4.21	mg/kg	4.21	mg/kg	M	5.0E-08	mg/kg-day	1.6E+00	mg/kg-day $^{-1}$	7.87E-08
	Benzo(a)Pyrene	0.29	mg/kg	0.29	mg/kg	M	1.1E-08	mg/kg-day	N/A	mg/kg-day $^{-1}$	N/A
	Benzo(b)Fluoranthen	0.82	mg/kg	0.82	mg/kg	M	3.1E-08	mg/kg-day	N/A	mg/kg-day $^{-1}$	N/A
	Beryllium	0.27	mg/kg	0.27	mg/kg	M	1.0E-09	mg/kg-day	4.3E+02	mg/kg-day $^{-1}$	4.35E-07
	Iron	10502.86	mg/kg	10502.86	mg/kg	M	3.9E-05	mg/kg-day	N/A	N/A	N/A

M = Medium Specific

Total Risk Across All Exposure Routes/Pathways 8.6E-07

Site 3

Subsurface Soil to Groundwater

TABLE 2.9
OCCURRENCE, DISTRIBUTION AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN
St. Juliens Creek - Landfill C (Site 3)

Scenario Timeframe: Future
Medium: Subsurface Soil
Exposure Medium: Groundwater
Exposure Point: Tap Water

CAS Number	Chemical	Minimum Concentration (1)	Minimum Qualifier	Maximum Concentration (1)	Maximum Qualifier	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration Used for Screening	Background Value (2)	Screening Toxicity Value (3)	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag	Rationale for Contaminant Deletion or Selection (4)
78933	2-Butanone	19	J	21		ug/kg	SB02	2/6	14-15	21	NA	NA	NA	NA	NO	NTX
83329	Acenaphthene	49	J	49	J	ug/kg	SB05	1/6	470-470	49	NA	NA	NA	NA	NO	NTX
208968	Acenaphthylene	100	J	100	J	ug/kg	SB05	1/6	520-520	100	NA	NA	NA	NA	NO	NTX
7429905	Aluminum	963		17100		mg/kg	SB06	6/6	8.3-12.45	17100	NA	NA	NA	NA	NO	NTX
120127	Anthracene	55	J	170	J	ug/kg	SB02	4/6	430-510	170	NA	NA	NA	NA	NO	NTX
7440360	Antimony	0.38	J	0.38	J	mg/kg	SB04	1/6	0.38-0.38	0.38	NA	NA	NA	NA	NO	NTX
7440382	Arsenic	0.79	J	12.3	L	mg/kg	SB06	6/6	0.57-0.85	12.3	NA	NA	NA	NA	NO	NTX
7440393	Barium	11.3	J	67.7		mg/kg	SB06	5/6	0.38-0.57	67.7	NA	32	NA	NA	YES	ASL
56553	Benzo(a)Anthracene	190	J	700		ug/kg	SB05	4/6	430-510	700	NA	NA	NA	NA	NO	NTX
50328	Benzo(a)Pyrene	140	J	560		ug/kg	SB05	4/6	430-510	560	NA	NA	NA	NA	NO	NTX
205992	Benzo(b)Fluoranthene	540		1500		ug/kg	SB02	4/6	430-520	1500	NA	NA	NA	NA	NO	NTX
191242	Benzo(g,h,i)Perylene	140	J	400	J	ug/kg	SB02	4/6	430-510	400	NA	NA	NA	NA	NO	NTX
207089	Benzo(k)Fluoranthene	200	J	490	J	ug/kg	SB02	4/6	430-510	490	NA	NA	NA	NA	NO	NTX
7440417	Beryllium	0.44	J	0.51	J	mg/kg	SB07	3/6	0.23-0.27	0.51	NA	NA	NA	NA	NO	NTX
7440439	Cadmium	0.2	J	0.2	J	mg/kg	SB05	1/6	0.14-0.14	0.2	NA	NA	NA	NA	NO	NTX
7440702	Calcium	683	J	7550		mg/kg	SB03	6/6	16.42-24.6	7550	NA	NA	NA	NA	NO	NUT
7440473	Chromium	3		34.4		mg/kg	SB06	5/6	1.44-1.98	34.4	NA	NA	NA	NA	NO	NTX
218019	Chrysene	370	J	1200		ug/kg	SB02	3/6	430-520	1200	NA	1000	NA	NA	YES	ASL
7440484	Cobalt	2.3	J	7.7	J	mg/kg	SB07	5/6	1.51-2.26	7.7	NA	NA	NA	NA	NO	NTX
7440508	Copper	4.8		43.5		mg/kg	SB06	4/6	1.13-1.7	43.5	NA	NA	NA	NA	NO	NTX
132649	Dibenzofuran	60	J	60	J	ug/kg	SB05	1/6	470-470	60	NA	NA	NA	NA	NO	NTX
206440	Fluoranthene	110	J	1100		ug/kg	SB05	5/6	400-520	1100	NA	NA	NA	NA	NO	NTX
86737	Fluorene	51	J	51	J	ug/kg	SB05	1/6	470-470	51	NA	NA	NA	NA	NO	NTX
193395	Indeno(1,2,3-cd)Pyrene	180	J	500	J	ug/kg	SB02	4/6	430-520	500	NA	NA	NA	NA	NO	NTX
7439896	Iron	2030		34300		mg/kg	SB06	6/6	3.21-4.81	34300	NA	NA	NA	NA	NO	NTX
7439921	Lead	10.1		77.9	J	mg/kg	SB06	6/6	0.19-0.28	77.9	NA	NA	NA	NA	NO	NTX
7439954	Magnesium	203	J	3250		mg/kg	SB06	6/6	34.16-51.2	3250	NA	NA	NA	NA	NO	NUT
7439965	Manganese	26		133		mg/kg	SB07	6/6	0.38-0.57	133	NA	NA	NA	NA	NO	NTX
7439976	Mercury	0.09	J	0.88		mg/kg	SB06	5/6	0.05-0.07	0.88	NA	NA	NA	NA	NO	NTX
75092	Methylene Chloride	12	J	12	J	ug/kg	SB03	1/6	14-14	12	NA	10	NA	NA	YES	ASL
91203	Naphthalene	60	J	160	J	ug/kg	SB05	2/6	470-480	160	NA	NA	NA	NA	NO	NTX
7440020	Nickel	3	J	6.1	J	mg/kg	SB02	2/6	1.32-1.98	6.1	NA	NA	NA	NA	NO	NTX
85018	Phenanthrene	56	J	250	J	ug/kg	SB05	4/6	430-510	250	NA	NA	NA	NA	NO	NTX
7440097	Potassium	162	J	2900		mg/kg	SB06	6/6	41.89-62.8	2900	NA	NA	NA	NA	NO	NUT
129000	Pyrene	81	J	890		ug/kg	SB05	5/6	400-510	890	NA	NA	NA	NA	NO	NTX
7440224	Silver	0.73	J	0.73	J	mg/kg	SB02	1/6	0.28-0.28	0.73	NA	NA	NA	NA	NO	NTX
7440235	Sodium	151	J	151	J	mg/kg	SB02	1/6	16.42-16.4	151	NA	NA	NA	NA	NO	NUT
127184	Tetrachloroethene	3	J	3	J	ug/kg	SB06	1/6	13-13	3	NA	NA	NA	NA	NO	NTX
7440280	Thallium	2.4	J	2.8		mg/kg	SB06	2/6	0.52-0.54	2.8	NA	NA	NA	NA	NO	NTX
108883	Toluene	2	J	3	J	ug/kg	SB06	2/6	13-15	3	NA	NA	NA	NA	NO	NTX
14265442	Total Phosphorous (as P)	3.4		9.6		mg/kg	SB06	6/6	1.4-1.8	9.6	NA	NA	NA	NA	NO	NTX
7440622	Vanadium	2	J	40.9		mg/kg	SB06	5/6	1.7-2.55	40.9	NA	NA	NA	NA	NO	NTX
7440666	Zinc	83.9	L	533	L	mg/kg	SB07	3/6	1.3-1.4	533	NA	NA	NA	NA	NO	NTX

(1) Minimum/maximum detected concentration.

(2) To date, no background study has been performed for the St. Juliens Creek Annex.

(3) All compounds were screened against: Soil Screening Levels (Soil to Groundwater), as presented in: Risk-Based Concentration Table, Third Quarter 1993, U.S. EPA Region III, Roy L. Smith, Ph. D., March 1997. (Cancer benchmark value = 1E-06, HQ=0.1) Lead was screened against as prescribed in Human Health Risk Assessment Consensus Agreement #6.A.6, Naval Base Norfolk Partnership, August 1997.

(4) Rationale Codes Selection Reason: Above Screening Levels (ASL)
No Toxicity Information (NTX)
Deletion Reason: Essential Nutrient (NUT)
Below Screening Level (BSL)

Definitions:
N/A = Not Applicable
SQL = Sample Quantitation Limit
COPC = Chemical of Potential Concern
ARAR/TBC = Applicable or Relevant and Appropriate Requirement/To Be Considered
MCL = Federal Maximum Contaminant Level
SMCL = Secondary Maximum Contaminant Level
J = Estimated Value
C = Carcinogenic
N = Non-Carcinogenic

Site 3

Subsurface Soil to Air

TABLE 2.8
OCCURRENCE, DISTRIBUTION AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN
St. Juliens Creek - Landfill C (Site 3)

Scenario Timeframe: Future
Medium: Subsurface Soil
Exposure Medium: Air
Exposure Point: Onsite

CAS Number	Chemical	Minimum Concentration (1)	Minimum Qualifier	Maximum Concentration (1)	Maximum Qualifier	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration Used for Screening	Background Value (2)	Screening Toxicity Value (3)	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag	Rationale for Contaminant Deletion or Selection (4)
78933	2-Butanone	19	J	21		ug/kg	SB02	2/6	14-15	21	NA	NA	NA	NA	NO	NTX
83329	Acenaphthene	49	J	49	J	ug/kg	SB05	1/6	470-470	49	NA	NA	NA	NA	NO	NTX
208968	Acenaphthylene	100	J	100	J	ug/kg	SB05	1/6	520-520	100	NA	NA	NA	NA	NO	NTX
7429905	Aluminum	963		17100		mg/kg	SB06	6/6	8.3-12.45	17100	NA	NA	NA	NA	NO	NTX
120127	Anthracene	55	J	170	J	ug/kg	SB02	4/6	430-510	170	NA	NA	NA	NA	NO	NTX
7440360	Antimony	0.38	J	0.38	J	mg/kg	SB04	1/6	0.38-0.38	0.38	NA	NA	NA	NA	NO	NTX
7440382	Arsenic	0.79	J	12.3	L	mg/kg	SB06	6/6	0.57-0.85	12.3	NA	NA	NA	NA	NO	NTX
7440393	Barium	11.3	J	67.7		mg/kg	SB06	5/6	0.38-0.57	67.7	NA	NA	NA	NA	NO	NTX
56553	Benzo(a)Anthracene	190	J	700		ug/kg	SB05	4/6	430-510	700	NA	NA	NA	NA	NO	NTX
50328	Benzo(a)Pyrene	140	J	560		ug/kg	SB05	4/6	430-510	560	NA	NA	NA	NA	NO	NTX
205992	Benzo(b)Fluoranthene	540		1500		ug/kg	SB02	4/6	430-520	1500	NA	NA	NA	NA	NO	NTX
191242	Benzo(g,h,i)Perylene	140	J	400	J	ug/kg	SB02	4/6	430-510	400	NA	NA	NA	NA	NO	NTX
207089	Benzo(k)Fluoranthene	200	J	490	J	ug/kg	SB02	4/6	430-510	490	NA	NA	NA	NA	NO	NTX
7440417	Beryllium	0.44	J	0.51	J	mg/kg	SB07	3/6	0.23-0.27	0.51	NA	NA	NA	NA	NO	NTX
7440439	Cadmium	0.2	J	0.2	J	mg/kg	SB05	1/6	0.14-0.14	0.2	NA	NA	NA	NA	NO	NTX
7440702	Calcium	683	J	7550		mg/kg	SB03	6/6	16.42-24.6	7550	NA	NA	NA	NA	NO	NUT
7440473	Chromium	3		34.4		mg/kg	SB06	5/6	1.44-1.98	34.4	NA	NA	NA	NA	NO	NTX
218019	Chrysene	370	J	1200		ug/kg	SB02	3/6	430-520	1200	NA	NA	NA	NA	NO	NTX
7440484	Cobalt	2.3	J	7.7	J	mg/kg	SB07	5/6	1.51-2.26	7.7	NA	NA	NA	NA	NO	NTX
7440508	Copper	4.8		43.5		mg/kg	SB06	4/6	1.13-1.7	43.5	NA	NA	NA	NA	NO	NTX
132649	Dibenzofuran	60	J	60	J	ug/kg	SB05	1/6	470-470	60	NA	NA	NA	NA	NO	NTX
206440	Fluoranthene	110	J	1100		ug/kg	SB05	5/6	400-520	1100	NA	NA	NA	NA	NO	NTX
86737	Fluorene	51	J	51	J	ug/kg	SB05	1/6	470-470	51	NA	NA	NA	NA	NO	NTX
193395	Indeno(1,2,3-cd)Pyrene	180	J	500	J	ug/kg	SB02	4/6	430-520	500	NA	NA	NA	NA	NO	NTX
7439896	Iron	2030		34300		mg/kg	SB06	6/6	3.21-4.81	34300	NA	NA	NA	NA	NO	NTX
7439921	Lead	10.1		77.9	J	mg/kg	SB06	6/6	0.19-0.28	77.9	NA	NA	NA	NA	NO	NTX
7439954	Magnesium	203	J	3250		mg/kg	SB06	6/6	34.16-51.2	3250	NA	NA	NA	NA	NO	NUT
7439965	Manganese	26		133		mg/kg	SB07	6/6	0.38-0.57	133	NA	NA	NA	NA	NO	NTX
7439976	Mercury	0.09	J	0.88		mg/kg	SB06	5/6	0.05-0.07	0.88	NA	NA	NA	NA	NO	NTX
75092	Methylene Chloride	12	J	12	J	ug/kg	SB03	1/6	14-14	12	NA	NA	NA	NA	NO	NTX
91203	Naphthalene	60	J	160	J	ug/kg	SB05	2/6	470-480	160	NA	NA	NA	NA	NO	NTX
7440020	Nickel	3	J	6.1	J	mg/kg	SB02	2/6	1.32-1.98	6.1	NA	NA	NA	NA	NO	NTX
85018	Phenanthrene	56	J	250	J	ug/kg	SB05	4/6	430-510	250	NA	NA	NA	NA	NO	NTX
7440097	Potassium	162	J	2900		mg/kg	SB06	6/6	41.89-62.8	2900	NA	NA	NA	NA	NO	NUT
129000	Pyrene	81	J	990		ug/kg	SB05	5/6	400-510	990	NA	NA	NA	NA	NO	NTX
7440224	Silver	0.73	J	0.73	J	mg/kg	SB02	1/6	0.28-0.28	0.73	NA	NA	NA	NA	NO	NTX
7440235	Sodium	151	J	151	J	mg/kg	SB02	1/6	16.42-16.4	151	NA	NA	NA	NA	NO	NUT
127184	Tetrachloroethene	3	J	3	J	ug/kg	SB06	1/6	13-13	3	NA	NA	NA	NA	NO	NTX
7440280	Thallium	2.4	J	2.8		mg/kg	SB06	2/6	0.52-0.54	2.8	NA	NA	NA	NA	NO	NTX
108883	Toluene	2	J	3	J	ug/kg	SB06	2/6	13-15	3	NA	NA	NA	NA	NO	NTX
14265442	Total Phosphorous (as P)	3.4		9.6		mg/kg	SB06	6/6	1.4-1.8	9.6	NA	NA	NA	NA	NO	NTX
7440622	Vanadium	2	J	40.9		mg/kg	SB06	5/6	1.7-2.55	40.9	NA	NA	NA	NA	NO	NTX
7440666	Zinc	83.9	L	533	L	mg/kg	SB07	3/6	1.3-1.4	533	NA	NA	NA	NA	NO	NTX

(1) Minimum/maximum detected concentration.

(2) To date, no background study has been performed for the St. Juliens Creek Annex.

(3) All compounds were screened against: Soil Screening Levels (Surface Soil to Air), as presented in: Risk-Based Concentration Table, Third Quarter 1993, U.S. EPA Region III, Roy L. Smith, Ph. D., March 1997. (Cancer benchmark value = 1E-06, HQ=0.1). Lead was screened against a val as prescribed in Human Health Risk Assessment Consensus Agreement #6.A.6, Naval Base Norfolk Partnership, August 1997.

(4) Rationale Codes Selection Reason: Above Screening Levels (ASL)
Deletion Reason: Essential Nutrient (NUT)
Below Screening Level (BSL)

Definitions:
N/A = Not Applicable
SQL = Sample Quantitation Limit
COPC = Chemical of Potential Concern
ARAR/TBC = Applicable or Relevant and Appropriate Requirement/To Be Considered
MCL = Federal Maximum Contaminant Level
SMCL = Secondary Maximum Contaminant Level
J = Estimated Value
C = Carcinogenic
N = Non-Carcinogenic

Site 3

Sediment

T, /9

OCCURRENCE, DISTRIBUTION AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN
St. Juliens Creek - Landfill C (Site 3)

Scenario Timeframe: Current/Future
Medium: Sediment
Exposure Medium: Sediment
Exposure Point: Onsite

CAS Number	Chemical	Minimum Concentration	Minimum Qualifier	Maximum Concentration	Maximum Qualifier	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration Used for Screening	Background Value (1)	Screening Toxicity Value (2)	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag	Rationale for Contaminant Deletion or Selection (3)
72548	4,4'-DDD	60		66		ug/kg	SD-02	2/3	4.3-5.3	66	NA	5.0E+04	NA	NA	NO	BSL
72559	4,4'-DDE	5.6		78	J	ug/kg	SD-03	3/3	3.3-5.3	78	NA	3.5E+04	NA	NA	NO	BSL
50293	4,4'-DDT	16	J	20		ug/kg	SD-03	2/3	3.3-5.3	20	NA	3.5E+04	NA	NA	NO	BSL
7429905	Aluminum	4240		14200		mg/kg	SD-03	3/3	8.54-14.33	14200	NA	2.7E+05	NA	NA	NO	BSL
120127	Anthracene	56	J	56	J	ug/kg	SD-03	1/3	530-530	56	NA	2.7E+05	NA	NA	NO	BSL
7440360	Antimony	2.4	L	2.4	L	mg/kg	SD-06	1/3	0.39-0.39	2.4	NA	1.1E+02	NA	NA	NO	BSL
7440382	Arsenic	3.8		9.1		mg/kg	SD-02	3/3	0.58-0.98	9.1	NA	8.1E+01	NA	NA	NO	BSL
7440393	Barium	25.8	J	300		mg/kg	SD-02	3/3	0.39-0.65	300	NA	1.9E+04	NA	NA	NO	BSL
56553	Benzo(a)Anthracene	180	J	250	J	ug/kg	SD-03	2/3	530-1600	250	NA	1.6E+04	NA	NA	NO	BSL
50328	Benzo(a)Pyrene	220	J	220	J	ug/kg	SD-03	1/3	530-530	220	NA	1.6E+03	NA	NA	NO	BSL
205992	Benzo(b)Fluoranthene	280	J	450	J	ug/kg	SD-03	2/3	530-1600	450	NA	1.6E+04	NA	NA	NO	BSL
207089	Benzo(k)Fluoranthene	170	J	470	J	ug/kg	SD-02	2/3	530-4400	470	NA	1.6E+05	NA	NA	NO	BSL
7440417	Beryllium	1.2		1.7		mg/kg	SD-03	2/3	0.23-0.33	1.7	NA	2.8E+00	NA	NA	NO	BSL
7440439	Cadmium	0.77	J	2.5		mg/kg	SD-02	2/3	0.1-0.11	2.5	NA	1.4E+02	NA	NA	NO	BSL
218019	Chrysene	240	J	270	J	ug/kg	SD-03	2/3	530-1600	270	NA	1.6E+06	NA	NA	NO	BSL
7440484	Cobalt	3.7	J	5.6	J	mg/kg	SD-02	3/3	1.55-2.61	5.6	NA	1.6E+04	NA	NA	NO	BSL
7440508	Copper	40.2		126		mg/kg	SD-02	3/3	1.16-1.95	126	NA	9.5E+05	NA	NA	NO	BSL
53703	Dibenz(a,h)Anthracene	66	J	66	J	ug/kg	SD-03	1/3	530-530	66	NA	1.6E+03	NA	NA	NO	BSL
60571	Dieldrin	6	J	13	J	ug/kg	SD-02	2/3	3.3-4.3	13	NA	7.5E+02	NA	NA	NO	BSL
84662	Diethylphthalate	340	J	340	J	ug/kg	SD-06	1/3	1600-1600	340	NA	2.2E+08	NA	NA	NO	BSL
206440	Fluoranthene	200	J	320	J	ug/kg	SD-03	2/3	530-1600	320	NA	1.1E+07	NA	NA	NO	BSL
193395	Indeno(1,2,3-cd)Pyrene	180	J	180	J	ug/kg	SD-03	1/3	530-530	180	NA	1.6E+04	NA	NA	NO	BSL
7439896	Iron	8310		18700		mg/kg	SD-02	3/3	3.3-5.5	18700	NA	8.1E+04	NA	NA	NO	BSL
7439921	Lead	47.9		734		mg/kg	SD-02	3/3	0.19-0.33	734	NA	4.0E+02	NA	NA	YES	ASL
7439965	Manganese	51.5	K	257	K	mg/kg	SD-02	3/3	0.39-0.65	257	NA	6.2E+03	NA	NA	NO	BSL
7439976	Mercury	0.15		0.27		mg/kg	SD-02	3/3	0.05-0.08	0.27	NA	8.1E+01	NA	NA	NO	BSL
75092	Methylene Chloride	100		110	J	ug/kg	SD-02	2/3	11.0-14.0	110	NA	1.6E+06	NA	NA	NO	BSL
91203	Naphthalene	110	J	110	J	ug/kg	SD-03	1/3	530-530	110	NA	1.1E+07	NA	NA	NO	BSL
7440020	Nickel	8.1		15.4		mg/kg	SD-02	3/3	1.36-2.28	15.4	NA	5.4E+03	NA	NA	NO	BSL
129000	Pyrene	220	J	460	J	ug/kg	SD-02	3/3	530-4400	460	NA	8.1E+06	NA	NA	NO	BSL
7440224	Silver	0.37	J	0.37	J	mg/kg	SD-03	1/3	0.33-0.33	0.37	NA	1.4E+03	NA	NA	NO	BSL
108883	Toluene	4	J	4	J	ug/kg	SD-06	1/3	11.0-11.0	4	NA	5.4E+07	NA	NA	NO	BSL
7440622	Vanadium	26.9		32.6		mg/kg	SD-02	3/3	1.75-2.93	32.6	NA	1.9E+03	NA	NA	NO	BSL
7440666	Zinc	93.4		577		mg/kg	SD-02	3/3	0.97-1.63	577	NA	8.1E+04	NA	NA	NO	BSL

(1) To date, no background study has been performed for the St. Juliens Creek Annex.

(2) With the exception of lead, all compounds were screened against: Risk-Based Concentration Table, Third Quarter 1993, U.S. Roy L. Smith, Ph. D., October 1997. (Cancer benchmark value = 1E-06, HQ=0.1). Lead was screened against a value of 400 mg/kg, as prescribed in Human Health Risk Assessment Consensus Agreement #6.A.6, Naval Base Norfolk Partnership, August 1997.

(3) Rationale Codes Selection Reason: Above Screening Levels (ASL)
Deletion Reason: Infrequent Detection (IFD)
No Toxicity Information (NTX)
Below Screening Level (BSL)

Definitions: N/A = Not Applicable
SQL = Sample Quantitation Limit
COPC = Chemical of Potential Concern
ARAR/TBC = Applicable or Relevant and Appropriate Requirement/To Be Considered
MCL = Federal Maximum Contaminant Level
SMCL = Secondary Maximum Contaminant Level
J = Estimated Value
C = Carcinogenic

APPENDIX J

Site 4 Risk Tables

TABLE 1

SELECTION OF EXPOSURE PATHWAYS

St. Julien's Creek - Landfill D (Site 4)

Scenario Timeframe	Medium	Exposure Medium	Exposure Point	Receptor Population	Receptor Age	Exposure Route	On-Site/ Off-Site	Type of Analysis	Rationale for Selection or Exclusion of Exposure Pathway
Current	Surface Soil	Surface Soil	Onsite	Trespasser	Adult	Dermal	On-Site	Quant	Trespassers may have exposed skin surfaces come into contact with soil
						Ingestion	On-Site	Quant	Trespassers may incidentally ingest soil
					Child	Dermal	On-Site	Quant	Trespassers may have exposed skin surfaces come into contact with soil
						Ingestion	On-Site	Quant	Trespassers may incidentally ingest soil
					Adolescent	Dermal	On-Site	Quant	Trespassers may have exposed skin surfaces come into contact with soil
						Ingestion	On-Site	Quant	Trespassers may incidentally ingest soil
	Subsurface Soil	Deep Groundwater	Tap Water	Resident	Adult	Dermal	Off-Site	Quant	Local municipality currently has some uses for groundwater from deep aquifer
						Ingestion	Off-Site	Quant	Local municipality currently has some uses for groundwater from deep aquifer
				Resident	Child	Dermal	Off-Site	Quant	Local municipality currently has some uses for groundwater from deep aquifer
						Ingestion	Off-Site	Quant	Local municipality currently has some uses for groundwater from deep aquifer
	Groundwater	Deep Groundwater	Tap Water	Resident	Adult	Dermal	Off-Site	Quant	Local municipality currently has some uses for groundwater from deep aquifer
						Inhalation	Off-Site	Quant	Local municipality currently has some uses for groundwater from deep aquifer
						Ingestion	Off-Site	Quant	Local municipality currently has some uses for groundwater from deep aquifer
				Resident	Child	Dermal	Off-Site	Quant	Local municipality currently has some uses for groundwater from deep aquifer
						Ingestion	Off-Site	Quant	Local municipality currently has some uses for groundwater from deep aquifer
	Surface Water	Surface Water	Onsite	Trespasser	Adult	Dermal	On-Site	Quant	Trespassers may have exposed skin surfaces come into contact with surface water
						Dermal	On-Site	Quant	Trespassers may have exposed skin surfaces come into contact with surface water
						Dermal	On-Site	Quant	Trespassers may have exposed skin surfaces come into contact with surface water
	Sediment	Sediment	Onsite	Trespasser	Adult	Dermal	On-Site	Quant	Trespassers may have exposed skin surfaces come into contact with sediment
						Ingestion	On-Site	Quant	Trespassers may incidentally ingest sediment
					Child	Dermal	On-Site	Quant	Trespassers may have exposed skin surfaces come into contact with sediment
						Ingestion	On-Site	Quant	Trespassers may incidentally ingest sediment
					Adolescent	Dermal	On-Site	Quant	Trespassers may have exposed skin surfaces come into contact with sediment
						Ingestion	On-Site	Quant	Trespassers may incidentally ingest sediment
Future	Surface Soil	Surface Soil	Onsite	Resident	Adult	Dermal	On-Site	Quant	Residents may have exposed skin surfaces come into contact with soil
						Ingestion	On-Site	Quant	Residents may incidentally ingest soil
					Child	Dermal	On-Site	Quant	Residents may have exposed skin surfaces come into contact with soil
						Ingestion	On-Site	Quant	Residents may incidentally ingest soil
				Construction Worker	Adult	Dermal	On-Site	Quant	Workers may have exposed skin surfaces come into contact with soil
						Ingestion	On-Site	Quant	Workers may incidentally ingest soil
				Groundskeeper	Adult	Dermal	On-Site	Quant	Workers may have exposed skin surfaces come into contact with soil
						Ingestion	On-Site	Quant	Workers may incidentally ingest soil
		Deep Groundwater	Onsite	Construction Worker	Adult	Dermal	On-Site	Quant	Workers may have exposed skin surfaces come into contact with groundwater
		Shallow Groundwater	Onsite	Groundskeeper	Adult	Dermal	On-site	Quant	Workers may have exposed skin surfaces come into contact with groundwater
		Air	Onsite	Construction Worker	Adult	Inhalation	On-Site	Quant	Workers may inhale volatiles/particulates
	Subsurface Soil	Subsurface Soil	Onsite	Construction Worker	Adult	Dermal	On-Site	Quant	Workers may have exposed skin surfaces come into contact with soil
						Ingestion	On-Site	Quant	Workers may incidentally ingest soil
		Air	Onsite	Construction Worker	Adult	Inhalation	Off-Site	Quant	Workers may inhale volatiles
	Surface Water	Surface Water	Onsite	Resident	Adult	Dermal	On-Site	Quant	Residents may have exposed skin surfaces come into contact with surface water
					Child	Dermal	On-Site	Quant	Residents may have exposed skin surfaces come into contact with surface water
	Sediment	Sediment	Onsite	Resident	Adult	Dermal	On-Site	Quant	Residents may have exposed skin surfaces come into contact with sediment
						Ingestion	On-Site	Quant	Residents may incidentally ingest sediment
					Child	Dermal	On-Site	Quant	Residents may have exposed skin surfaces come into contact with sediment
						Ingestion	On-Site	Quant	Residents may incidentally ingest sediment
	Groundwater	Deep Groundwater	Onsite	Construction Worker	Adult	Dermal	On-site	Quant	Workers may have exposed skin surfaces come into contact with groundwater
		Shallow Groundwater	Onsite	Groundskeeper	Adult	Dermal	On-Site	Quant	Workers may have exposed skin surfaces come into contact with groundwater

Site 4

Data Usability Worksheets

DATA USEABILITY WORKSHEET
Site: St. Juliens Creek, Landfill D (Site 4)
Medium: Groundwater

Requirement	Comment
Field Sampling	
Discuss sampling problems and field conditions that affect data useability.	No sampling problems were noted during the groundwater investigation at Site 4.
Are samples representative of receptor exposure for this medium (e.g. sample depth, grab vs composite, filtered vs unfiltered, low flow, etc.)?	Grab samples were collected from six monitoring wells. These samples are usable for consideration for direct exposure to current residents and future site workers.
Assess the effect of field QC results on data useability.	Field QC samples included trip blanks, field blanks, equipment rinsate blanks, and duplicates. The trip blank that was collected for this group of samples is TB-180797 and TB-300797. The field blanks associated with this group of samples are FB-230697-TAP and FB-230697-DI. The equipment rinsate blanks associated with this group of samples is EB-180797-GW, EB-240797-GW, EB-240797F-GW, and EB-300797-GW. Blank contamination is discussed under "Representativeness" and duplicate results are discussed under "Precision."
Summarize the effect of field sampling issues on the risk assessment, if applicable.	Field sampling issues will have no effect on the groundwater risk assessment for Site 4.
Analytical Techniques	
Were the analytical methods appropriate for quantitative risk assessment?	Analyses were conducted in accordance with the EPA CLP organic and inorganic Statements of Work.
Were detection limits adequate?	Sample quantitation limits for some undetected compounds were above tap water RBCs in all samples. This issue will be discussed further in the uncertainty section of the risk assessment.
Summarize the effect of analytical technique issues on the risk assessment, if applicable.	See above comment.

EXHIBIT 3-3

DATA USEABILITY WORKSHEET (continued)
Site: St. Juliens Creek, Landfill D (Site 4)
Medium: Groundwater

Requirement	Comment
Data Quality Objectives	
Precision - How were duplicates handled?	The highest concentration of a compound detected in the duplicate samples was used in the risk assessment.
Accuracy - How were split samples handled?	Not applicable.
Representativeness - Indicate any problems associated with data representativeness (e.g., trip blank or rinsate blank contamination, chain of custody problems, etc.).	Acetone, aluminum, antimony, 2-butanone, barium, bis(2-ethylhexyl)phthalate, bromodichloromethane, chloroform, copper, lead, magnesium, mercury, methylene chloride, nickel, silver, and zinc were detected in the various blanks. Analytes qualified with a "B" due to blank contamination will be considered as non-detects during the risk assessment.
Completeness - Indicate any problems associated with data completeness (e.g., incorrect sample analysis, incomplete sample records, problems with field procedures, etc.).	No problems noted
Comparability - Indicate any problems associated with data comparability.	No problems noted.
Were the DQOs specified in the QAPP satisfied?	Yes. Relative percent difference was below the stated goal of <20%.
Summarize the effect of DQO issues on the risk assessment, if applicable.	Not applicable.

EXHIBIT 3-3

DATA USEABILITY WORKSHEET (continued)
Site: St. Juliens Creek, Landfill D (Site 4)
Medium: Groundwater

Requirement	Comment
Data Validation and Interpretation	
What are the data validation requirements for this region?	For organic samples, validators are required to check the following items: holding times, instrument performance checks, initial calibrations, continuing calibrations, blanks, system monitoring compounds, matrix spikes/matrix spike duplicates, regional QA/QC, internal standards, target compound identification, contract required quantitation limits, tentatively identified compounds, system performance, and overall assessment of data. For organic samples, validators are required to check holding times, calibration, blanks, interference checks, laboratory control samples, duplicate samples, matrix spike samples, furnace atomic absorption QC, ICP Serial Dilution, sample result verification, field duplicates, and perform an overall assessment of the data.
What method or guidance was used to validate the data?	Region III modifications to "Laboratory Data Validation Functional Guidelines for Validating Organic (and Inorganic) Analyses", USEPA 9/94 (and 4/93).
Was the data validation method consistent with regional guidance? Discuss any discrepancies.	The data validation method appears to be consistent with regional guidance
Were all data qualifiers defined? Discuss those which were not.	All data qualifiers were defined.
Which qualifiers represent useable data?	B, J, K, L ,U, UJ ,UK, UL

EXHIBIT 3-3

DATA USEABILITY WORKSHEET (continued)
Site: St. Juliens Creek, Landfill D (Site 4)
Medium: Groundwater

Requirement	Comment
Which qualifiers represent unusable data?	R
How are tentatively identified compounds handled?	All TICs were reported with "J" qualifiers to indicate that they are quantitative estimates. Only TICs that were determined not to be laboratory or field artifacts were reported.
Summarize the effect of data validation and interpretation issues on the risk assessment, if applicable.	Not applicable.
Additional notes:	

Note: The purpose of this Worksheet is to succinctly summarize the data useability analysis and conclusions. Reference specific pages in the Risk Assessment text to further expand on the information presented here.

DATA USEABILITY WORKSHEET
Site: St. Juliens Creek, Landfill D (Site 4)
Medium: Surface Soil

Requirement	Comment
Field Sampling	
Discuss sampling problems and field conditions that affect data useability.	No sampling problems were noted during the surface investigation at Site 4.
Are samples representative of receptor exposure for this medium (e.g. sample depth, grab vs composite, filtered vs unfiltered, low flow, etc.)?	Samples were collected from depths ranging from 0-1' at Site 4. These depths are usable for consideration for contaminant transfer to the groundwater, transfer to air, and also direct exposure for residents, trespassers, construction workers, and groundskeepers. Samples were collected using a stainless steel spoon and bowl.
Assess the effect of field QC results on data useability.	Field QC samples included trip blanks, field blanks, equipment rinsate blanks, and duplicates. The trip blank that applies to this group of samples is TB-260697. Field blanks that apply to this group of samples include FB-230697-TAP and FB-230697-DI. The equipment rinsate blank that applies to this group of samples is EB-260697-SD/SS. Blank contamination is discussed under "Representativeness" and duplicate results are discussed under "Precision."
Summarize the effect of field sampling issues on the risk assessment, if applicable.	Field sampling issues will have no effect on the surface soil risk assessment for Site 3.
Analytical Techniques	
Were the analytical methods appropriate for quantitative risk assessment?	Analyses were conducted in accordance with the EPA CLP organic and inorganic Statements of Work.
Were detection limits adequate?	Sample quantitation limits for numerous undetected compounds were above residential soil RBCs in all samples. This issue will be discussed further in the uncertainty section of the risk assessment.
Summarize the effect of analytical technique issues on the risk assessment, if applicable.	See above comment.

EXHIBIT 3-3

DATA USEABILITY WORKSHEET (continued)
Site: St. Juliens Creek, Landfill D (Site 4)
Medium: Surface Soil

Requirement	Comment
Data Quality Objectives	
Precision - How were duplicates handled?	The highest concentration of a compound detected in the duplicate samples was used in the risk assessment.
Accuracy - How were split samples handled?	Not applicable.
Representativeness - Indicate any problems associated with data representativeness (e.g., trip blank or rinsate blank contamination, chain of custody problems, etc.).	Acetone , methylene chloride, bis(2-ethylhexyl)phthalate, aluminum, barium, zinc, antimony, lead, silver, bromodichloromethane, copper, and magnesium were detected in the various blanks. Analytes qualified with a "B" due to blank contamination will be considered as non-detects during the risk assessment.
Completeness - Indicate any problems associated with data completeness (e.g., incorrect sample analysis, incomplete sample records, problems with field procedures, etc.).	No problems noted.
Comparability - Indicate any problems associated with data comparability.	No problems noted.
Were the DQOs specified in the QAPP satisfied?	Relative percent difference was above the stated goal of <25% for semi-volatiles.
Summarize the effect of DQO issues on the risk assessment, if applicable.	RPD goal was not satisfied. However, soil samples routinely have RPDs up to 100% (RPDs for the duplicate SVOC fraction were 48%) and still not negatively effect the usability of the data.

EXHIBIT 3-3

DATA USEABILITY WORKSHEET (continued)
Site: St. Juliens Creek, Landfill D (Site 4)
Medium: Surface Soil

Requirement	Comment
Data Validation and Interpretation	
What are the data validation requirements for this region?	For organic samples, validators are required to check the following items: holding times, instrument performance checks, initial calibrations, continuing calibrations, blanks, system monitoring compounds, matrix spikes/matrix spike duplicates, regional QA/QC, internal standards, target compound identification, contract required quantitation limits, tentatively identified compounds, system performance, and overall assessment of data. For organic samples, validators are required to check holding times, calibration, blanks, interference checks, laboratory control samples, duplicate samples, matrix spike samples, furnace atomic absorption QC, ICP Serial Dilution, sample result verification, field duplicates, and perform an overall assessment of the data.
What method or guidance was used to validate the data?	"Region III Modifications to"Laboratory Data Validation Functional Guidelines for Validating Organic (and Inorganic) Analyses", USEPA 9/94 (and 4/93).
Was the data validation method consistent with regional guidance? Discuss any discrepancies.	The data validation method appears to be consistent with regional guidance.
Were all data qualifiers defined? Discuss those which were not.	All data qualifiers were defined.
Which qualifiers represent useable data?	B, J, K, L ,U, UJ ,UK, UL

EXHIBIT 3-3

DATA USEABILITY WORKSHEET (continued)
Site: St. Juliens Creek, Landfill D (Site 4)
Medium: Surface Soil

Requirement	Comment
Which qualifiers represent unusable data?	R
How are tentatively identified compounds handled?	All TICs were reported with "J" qualifiers to indicate that they are quantitative estimates. Only TICs that were determined not to be laboratory or field artifacts were reported.
Summarize the effect of data validation and interpretation issues on the risk assessment, if applicable.	Not applicable.
Additional notes:	

Note: The purpose of this Worksheet is to succinctly summarize the data useability analysis and conclusions. Reference specific pages in the Risk Assessment text to further expand on the information presented here.

DATA USEABILITY WORKSHEET
Site: St. Juliens Creek, Landfill D (Site 4)
Medium: Subsurface Soil

Requirement	Comment
Field Sampling	
Discuss sampling problems and field conditions that affect data useability.	No sampling problems were noted during the subsurface investigation at Site 4.
Are samples representative of receptor exposure for this medium (e.g. sample depth, grab vs composite, filtered vs unfiltered, low flow, etc.)?	Samples were collected from depths ranging from 2'-4' at Site 4. These depths are usable for consideration for contaminant transfer to the deep groundwater aquifer, transfer to air during an excavation scenario, and also direct exposure for construction workers in an excavation scenario. Samples were collected using either a direct push sample barrel or a split spoon sampler.
Assess the effect of field QC results on data useability.	Field QC samples included trip blanks, field blanks, equipment rinsate blanks, and duplicates. Trip blanks that apply to this group of samples include TB-230697. Field blanks that apply to this group of samples include FB-230697-TAP and FB-230697-DI. Equipment rinsate blanks that apply to this group of samples include EB-230697-SB. Blank contamination is discussed under "Representativeness" and duplicate results are discussed under "Precision."
Summarize the effect of field sampling issues on the risk assessment, if applicable.	Field sampling issues will have no effect on the subsurface soil risk assessment for Site 4.
Analytical Techniques	
Were the analytical methods appropriate for quantitative risk assessment?	Analyses were conducted in accordance with the EPA CLP organic and inorganic Statements of Work.
Were detection limits adequate?	Sample quantitation limits for numerous undetected compounds were above residential soil RBCs in all samples. This issue will be discussed further in the uncertainty section of the risk assessment.
Summarize the effect of analytical technique issues on the risk assessment, if applicable.	See above comment.

EXHIBIT 3-3

DATA USEABILITY WORKSHEET (continued)
Site: St. Juliens Creek, Landfill D (Site 4)
Medium: Subsurface Soil

Requirement	Comment
Data Quality Objectives	
Precision - How were duplicates handled?	A duplicate was not collected for this matrix.
Accuracy - How were split samples handled?	Not applicable.
Representativeness - Indicate any problems associated with data representativeness (e.g., trip blank or rinsate blank contamination, chain of custody problems, etc.).	Acetone, aluminum, antimony, barium, bromodichloromethane, chloroform, copper, lead, manganese, nickel, silver, vanadium, bis(2-ethylhexyl)phthalate, and methylene chloride were detected in the various blanks. Analytes qualified with a "B" due to blank contamination will be considered as non-detects during the risk assessment.
Completeness - Indicate any problems associated with data completeness (e.g., incorrect sample analysis, incomplete sample records, problems with field procedures, etc.).	No problems noted.
Comparability - Indicate any problems associated with data comparability.	No problems noted.
Were the DQOs specified in the QAPP satisfied?	Not applicable; A duplicate was not collected for this matrix.
Summarize the effect of DQO issues on the risk assessment, if applicable.	Not applicable.

EXHIBIT 3-3

DATA USEABILITY WORKSHEET (continued)
Site: St. Juliens Creek, Landfill D (Site 4)
Medium: Subsurface Soil

Requirement	Comment
Data Validation and Interpretation	
What are the data validation requirements for this region?	For organic samples, validators are required to check the following items: holding times, instrument performance checks, initial calibrations, continuing calibrations, blanks, system monitoring compounds, matrix spikes/matrix spike duplicates, regional QA/QC, internal standards, target compound identification, contract required quantitation limits, tentatively identified compounds, system performance, and overall assessment of data. For organic samples, validators are required to check holding times, calibration, blanks, interference checks, laboratory control samples, duplicate samples, matrix spike samples, furnace atomic absorption QC, ICP Serial Dilution, sample result verification, field duplicates, and perform an overall assessment of the data.
What method or guidance was used to validate the data?	"Region III Modifications to"Laboratory Data Validation Functional Guidelines for Validating Organic (and Inorganic) Analyses", USEPA 9/94 (and 4/93).
Was the data validation method consistent with regional guidance? Discuss any discrepancies.	The data validation method appears to be consistent with regional guidance.
Were all data qualifiers defined? Discuss those which were not.	All data qualifiers were defined.
Which qualifiers represent useable data?	B, J, K, L ,U, UJ ,UK, UL

EXHIBIT 3-3

DATA USEABILITY WORKSHEET (continued)
Site: St. Juliens Creek, Landfill D (Site 4)
Medium: Subsurface Soil

Requirement	Comment
Which qualifiers represent unusable data?	R
How are tentatively identified compounds handled?	All TICs were reported with "J" qualifiers to indicate that they are quantitative estimates. Only TICs that were determined not to be laboratory or field artifacts were reported.
Summarize the effect of data validation and interpretation issues on the risk assessment, if applicable.	Not applicable.
Additional notes:	

Note: The purpose of this Worksheet is to succinctly summarize the data useability analysis and conclusions. Reference specific pages in the Risk Assessment text to further expand on the information presented here.

DATA USEABILITY WORKSHEET
Site: St. Juliens Creek, Landfill D (Site 4)
Medium: Sediment

Requirement	Comment
Field Sampling	
Discuss sampling problems and field conditions that affect data useability.	No sampling problems were noted during the sediment investigation at Site 4.
Are samples representative of receptor exposure for this medium (e.g. sample depth, grab vs composite, filtered vs unfiltered, low flow, etc.)?	Grab samples were collected from depths ranging from 0-1' at Site 4. These samples are usable for consideration for direct exposure to current trespassers and future residents.
Assess the effect of field QC results on data useability.	Field QC samples included trip blanks, field blanks, equipment rinsate blanks, and duplicates. The trip blanks that were collected for this group of samples are TB-260697 and TB-140797. The field blanks associated with this group of samples are FB-230697-TAP and FB-230697-DI. The equipment rinsate blanks associated with this group of samples are EB-260697-SD/SS and EB-140797-SD. Blank contamination is discussed under "Representativeness" and duplicate results are discussed under "Precision."
Summarize the effect of field sampling issues on the risk assessment, if applicable.	Field sampling issues will have no effect on the sediment risk assessment for Site 4.
Analytical Techniques	
Were the analytical methods appropriate for quantitative risk assessment?	Analyses were conducted in accordance with the EPA CLP organic and inorganic Statements of Work.
Were detection limits adequate?	Detection limits appear to be adequate.
Summarize the effect of analytical technique issues on the risk assessment, if applicable.	Not applicable.

EXHIBIT 3-3

DATA USEABILITY WORKSHEET (continued)
Site: St. Juliens Creek, Landfill D (Site 4)
Medium: Sediment

Requirement	Comment
Data Quality Objectives	
Precision - How were duplicates handled?	A duplicate was not collected for this matrix.
Accuracy - How were split samples handled?	Not applicable.
Representativeness - Indicate any problems associated with data representativeness (e.g., trip blank or rinsate blank contamination, chain of custody problems, etc.).	Acetone, bis(2-ethylhexyl)phthalate, barium, bromodichloromethane, copper, lead, methylene chloride, nickel, zinc, and silver were detected in various blanks. Analytes qualified with a "B" due to blank contamination will be considered as non-detects during the risk assessment.
Completeness - Indicate any problems associated with data completeness (e.g., incorrect sample analysis, incomplete sample records, problems with field procedures, etc.).	No problems noted
Comparability - Indicate any problems associated with data comparability.	No problems noted.
Were the DQOs specified in the QAPP satisfied?	Not applicable. A duplicate was not collected for this matrix.
Summarize the effect of DQO issues on the risk assessment, if applicable.	Not applicable.

EXHIBIT 3-3

DATA USEABILITY WORKSHEET (continued)
Site: St. Juliens Creek, Landfill D (Site 4)
Medium: Sediment

Requirement	Comment
Data Validation and Interpretation	
What are the data validation requirements for this region?	For organic samples, validators are required to check the following items: holding times, instrument performance checks, initial calibrations, continuing calibrations, blanks, system monitoring compounds, matrix spikes/matrix spike duplicates, regional QA/QC, internal standards, target compound identification, contract required quantitation limits, tentatively identified compounds, system performance, and overall assessment of data. For organic samples, validators are required to check holding times, calibration, blanks, interference checks, laboratory control samples, duplicate samples, matrix spike samples, furnace atomic absorption QC, ICP Serial Dilution, sample result verification, field duplicates, and perform an overall assessment of the data.
What method or guidance was used to validate the data?	Region III modifications to "Laboratory Data Validation Functional Guidelines for Validating Organic (and Inorganic) Analyses", USEPA 9/94 (and 4/93).
Was the data validation method consistent with regional guidance? Discuss any discrepancies.	The data validation method appears to be consistent with regional guidance.
Were all data qualifiers defined? Discuss those which were not.	All data qualifiers were defined.
Which qualifiers represent useable data?	B, J, K, L ,U, UJ ,UK, UL

EXHIBIT 3-3

DATA USEABILITY WORKSHEET (continued)
Site: St. Juliens Creek, Landfill D (Site 4)
Medium: Sediment

Requirement	Comment
Which qualifiers represent unusable data?	R
How are tentatively identified compounds handled?	All TICs were reported with "J" qualifiers to indicate that they are quantitative estimates. Only TICs that were determined not to be laboratory or field artifacts were reported.
Summarize the effect of data validation and interpretation issues on the risk assessment, if applicable.	Not applicable.
Additional notes:	

Note: The purpose of this Worksheet is to succinctly summarize the data useability analysis and conclusions. Reference specific pages in the Risk Assessment text to further expand on the information presented here.

DATA USEABILITY WORKSHEET
Site: St. Juliens Creek, Landfill D (Site 4)
Medium: Surface Water

Requirement	Comment
Field Sampling	
Discuss sampling problems and field conditions that affect data useability.	Due to dry conditions only one surface water sample was collected at this site.
Are samples representative of receptor exposure for this medium (e.g. sample depth, grab vs composite, filtered vs unfiltered, low flow, etc.)?	One grab samples were collected at this site. This sample is usable for consideration for direct exposure to current trespassers and site workers.
Assess the effect of field QC results on data useability.	Field QC samples included trip blanks, field blanks, equipment rinsate blanks, and duplicates. The trip blank that was collected for this group of samples is TB-140797. The field blanks associated with this group of samples are FB-230697-TAP and FB-230697-DI. Blank contamination is discussed under "Representativeness" and duplicate results are discussed under "Precision."
Summarize the effect of field sampling issues on the risk assessment, if applicable.	Fewer data points were available to assess risk from surface water at this site. This will be discussed further in the uncertainty section of the risk assessment.
Analytical Techniques	
Were the analytical methods appropriate for quantitative risk assessment?	Analyses were conducted in accordance with the EPA CLP organic and inorganic Statements of Work.
Were detection limits adequate?	Sample quantitation limits for some undetected compounds were above ambient water quality criteria in all samples. This issue will be discussed further in the uncertainty section of the risk assessment.
Summarize the effect of analytical technique issues on the risk assessment, if applicable.	See above comment.

EXHIBIT 3-3

DATA USEABILITY WORKSHEET (continued)
Site: St. Juliens Creek, Landfill D (Site 4)
Medium: Surface Water

Requirement	Comment
Data Quality Objectives	
Precision - How were duplicates handled?	The highest concentration of a compound detected in the duplicate samples was used in the risk assessment.
Accuracy - How were split samples handled?	Not applicable.
Representativeness - Indicate any problems associated with data representativeness (e.g., trip blank or rinsate blank contamination, chain of custody problems, etc.).	Acetone, barium, bromodichloromethane, chloroform, copper, lead, magnesium, methylene chloride, nickel, silver, and zinc were detected in the various blanks. Analytes qualified with a "B" due to blank contamination will be considered as non-detects during the risk assessment.
Completeness - Indicate any problems associated with data completeness (e.g., incorrect sample analysis, incomplete sample records, problems with field procedures, etc.).	No problems noted
Comparability - Indicate any problems associated with data comparability.	No problems noted.
Were the DQOs specified in the QAPP satisfied?	Yes. Relative percent difference was below the stated goal of <20%.
Summarize the effect of DQO issues on the risk assessment, if applicable.	Not applicable.

EXHIBIT 3-3

DATA USEABILITY WORKSHEET (continued)
Site: St. Juliens Creek, Landfill D (Site 4)
Medium: Surface Water

Requirement	Comment
Data Validation and Interpretation	
What are the data validation requirements for this region?	For organic samples, validators are required to check the following items: holding times, instrument performance checks, initial calibrations, continuing calibrations, blanks, system monitoring compounds, matrix spikes/matrix spike duplicates, regional QA/QC, internal standards, target compound identification, contract required quantitation limits, tentatively identified compounds, system performance, and overall assessment of data. For organic samples, validators are required to check holding times, calibration, blanks, interference checks, laboratory control samples, duplicate samples, matrix spike samples, furnace atomic absorption QC, ICP Serial Dilution, sample result verification, field duplicates, and perform an overall assessment of the data.
What method or guidance was used to validate the data?	Region III modifications to "Laboratory Data Validation Functional Guidelines for Validating Organic (and Inorganic) Analyses", USEPA 9/94 (and 4/93).
Was the data validation method consistent with regional guidance? Discuss any discrepancies.	The data validation method appears to be consistent with regional guidance
Were all data qualifiers defined? Discuss those which were not.	All data qualifiers were defined.
Which qualifiers represent useable data?	B, J, K, L ,U, UJ ,UK, UL

EXHIBIT 3-3

DATA USEABILITY WORKSHEET (continued)
Site: St. Juliens Creek, Landfill D (Site 4)
Medium: Surface Water

Requirement	Comment
Which qualifiers represent unusable data?	R
How are tentatively identified compounds handled?	All TICs were reported with "J" qualifiers to indicate that they are quantitative estimates. Only TICs that were determined not to be laboratory or field artifacts were reported.
Summarize the effect of data validation and interpretation issues on the risk assessment, if applicable.	Not applicable.
Additional notes:	

Note: The purpose of this Worksheet is to succinctly summarize the data useability analysis and conclusions. Reference specific pages in the Risk Assessment text to further expand on the information presented here.

Site 4

Deep Groundwater Current/Future

TABLE 2.1
OCCURRENCE, DISTRIBUTION AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN
St. Juliens Creek - Landfill D (Site 4)

Scenario Timeframe: Current/Future
Medium: Deep Groundwater
Exposure Medium: Groundwater
Exposure Point: Tap Water

CAS Number	Chemical	Minimum Concentration	Minimum Qualifier	Maximum Concentration	Maximum Qualifier	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration Used for Screening	Background Value	Screening Toxicity Value (1)	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag	Rationale for Contaminant Deletion or Selection (2)
7429905	Aluminum	435		1340		ug/l	GW-3D	2/2	29-44	1340.00	N/A	3700	N/A	N/A	NO	BSL
7440382	Arsenic	3.8	J	4.9	J	ug/l	GW-3D	2/2	3-3	4.90	N/A	0.045	50	MCL	YES	ASL
7440393	Barium	56.5	J	67.3	J	ug/l	GW-3D	2/2	1-1	67.30	N/A	260	2000	MCL	NO	BSL
7439896	Iron	8500	K	11800		ug/l	GW-3D	2/2	5-5	11800.00	N/A	1100	N/A	N/A	YES	ASL
7439921	Lead	1.5		1.5	J	ug/l	GW-3D	1/2	1-1	1.50	N/A	15	15	MCL	NO	BSL
7439965	Manganese	1840		2300		ug/l	GW-3D	2/2	1-1	2300.00	N/A	84	N/A	N/A	YES	ASL
117817	bis(2-Ethylhexyl)phthalate	5	J	5	J	ug/l	GW-3D	1/2	10-10	5.00	N/A	0.48	6	MCL	YES	ASL
67663	Chloroform	8		9		ug/l	GW-3D	2/2	1-1	9.00	N/A	0.15	100	MCL	YES	ASL
108883	Toluene	0.2	J	0.2	J	ug/l	GW-3D	1/2	1-1	0.20	N/A	75	1000	MCL	NO	BSL

(1) EPA 1997. Region III Updated Risk-Based Concentration Table. October, 1997. The Screening Toxicity Value for Lead was obtained from Naval Base Norfolk Partnership Human Health Risk Assessment Consensus Agreement # 6.A.6

(2) Rationale Codes Selection Reason: Above Screening Levels (ASL)

Deletion Reason: Essential Nutrient (NUT)
Below Screening Level (BSL)

MCL = Federal Maximum Contaminant Level
N = Non-Carcinogenic

TABLE 3.1
MEDIUM-SPECIFIC EXPOSURE POINT CONCENTRATION SUMMARY
St. Juliens Creek - Landfill D (Site 4)

Scenario Timeframe: Current/Future
Medium: Deep Groundwater
Exposure Medium: Groundwater
Exposure Point: Offsite

Chemical of Potential Concern	Units	Arithmetic Mean	95% UCL of Normal Data	Maximum Detected Concentration	Maximum Qualifier	EPC Units	Reasonable Maximum Exposure			Central Tendency		
							Medium EPC Value	Medium EPC Statistic	Medium EPC Rationale	Medium EPC Value	Medium EPC Statistic	Medium EPC Rationale
Arsenic	ug/l	4.35	N/A	4.9	J	mg/l	0.0049	Max	(1)	0.00435	Mean-N	(1)
Barium	ug/l	67.3	N/A	65	J	mg/l	0.065	Max	(1)	0.0673	Mean-N	(1)
bis(2-Ethylhexyl)phthalate	ug/l	5	N/A	5	J	mg/l	0.005	Max	(1)	0.005	Mean-N	(1)
Iron	ug/l	10910	N/A	12700		mg/l	12.7	Max	(1)	10.91	Mean-N	(1)
Manganese	ug/l	2195	N/A	2490		mg/l	2.49	Max	(1)	2.195	Mean-N	(1)
Chloroform	ug/l	4.75	N/A	9		mg/l	0.009	Max	(1)	0.00475	Mean-N	(1)

Statistics: Maximum Detected Value (Max); 95% UCL of Normal Data (95% UCL-N); 95% UCL of Log-transformed Data (95% UCL-T); Mean of Log-transformed Data (Mean-T); Mean of Normal Data (Mean-N).

(1) As stated in the Risk Assessment Assumptions Document presented in Appendix F of this report, exposure point concentrations for this media will consist of the maximum detected concentration and the arithmetic mean.

TABLE 4.2

VALUES USED FOR DAILY INTAKE CALCULATIONS

St. Julien's Creek - Landfill D (Site 4)

Scenario Timeframe: Current
Medium: Groundwater
Exposure Medium: Deep Groundwater
Exposure Point: Tap Water
Receptor Population: Resident
Receptor Age: Child

Exposure Route	Parameter Code	Parameter Definition	Units	RME Value	RME Rationale/ Reference	CT Value	CT Rationale/ Reference	Intake Equation/ Model Name
Ingestion	CW	Chemical Concentration in Water	mg/l	See Table 3	See Table 3	See Table 3	See Table 3	Chronic Daily Intake (CDI) (mg/kg-day)=
	IR-W	Ingestion Rate of Water	l/day	1	EPA, 1989b	1	EPA, 1989b	CW x IR-W x EF x ED x 1/BW x 1/AT
	EF	Exposure Frequency	days/year	350	EPA, 1991	350	EPA, 1991	
	ED	Exposure Duration	years	6	EPA, 1991	6	EPA, 1991	
	BW	Body Weight	kg	15	EPA, 1991	15	EPA, 1991	
	AT-C	Averaging Time - Cancer	days	25,550	EPA, 1989a	25,550	EPA, 1989a	
	AT-N	Averaging Time - Non-Cancer	days	2,190	EPA, 1989a	2,190	EPA, 1989a	
Dermal	CW	Chemical Concentration in Water	mg/l	See Table 3	See Table 3	See Table 3	See Table 3	Chronic Daily Intake (CDI) (mg/kg-day)=
	SA	Skin Surface Area	cm^2	7,200	EPA, 1995	7,200	EPA, 1995b	CW x SA x PC x ET x EF x ED x CF x 1/BW x 1/AT
	PC	Permeability Constant	cm/hr	Chemical Specific	EPA, 1992	Chemical Specific	EPA, 1989	
	ET	Exposure Time	hours	0.2	EPA, 1989a	0.2	EPA, 1989a	
	EF	Exposure Frequency	days/year	350	EPA, 1991	350	EPA, 1991	
	ED	Exposure Duration	years	6	EPA, 1991	6	EPA, 1991	
	CF	Volumetric Conversion Factor for Water	l/cm^2	0.001	EPA, 1989	1	EPA, 1989	
	BW	Body Weight	kg	15	EPA, 1991	15	EPA, 1991	
	AT-C	Averaging Time - Cancer	days	25,550	EPA, 1989a	25,550	EPA, 1989a	
	AT-N	Averaging Time - Non-Cancer	days	2,190	EPA, 1989a	2,190	EPA, 1989a	

Sources:

EPA, 1989a: Risk Assessment Guidance for Superfund. Vol. 1: Human Health Evaluation Manual, Part A. OERR. EPA/540/1-89/002.

EPA, 1989b: Exposure Factors Handbook, July 1989, EPA/600/8-89/043.

EPA, 1991: Risk Assessment Guidance for Superfund. Vol. 1: Human Health Evaluation Manual - Supplemental Guidance, Standard Default Exposure Factors. Interim Final. OSWER Directive 9285.6-03,

EPA, 1992: Dermal Exposure Assessment: Principles and Applications. EPA/600/8-91/011B.

EPA, 1995: Exposure Factors Handbook, June 1995, EPA/600/P-95/002A. The skin surface area presented in this table was derived by averaging the mean child (2 to 7 years) male and female values.

TABLE 4.3

VALUES USED FOR DAILY INTAKE CALCULATIONS

St. Julien's Creek - Landfill D (Site 4)

Scenario Timeframe: Current
Medium: Deep Groundwater
Exposure Medium: Groundwater
Exposure Point: Tap Water
Receptor Population: Resident
Receptor Age: Adult

Exposure Route	Parameter Code	Parameter Definition	Units	RME Value	RME Rationale/ Reference	CT Value	CT Rationale/ Reference	Intake Equation/ Model Name
Ingestion	CW	Chemical Concentration in Water	mg/l	See Table 3	See Table 3	See Table 3	See Table 3	Chronic Daily Intake (CDI) (mg/kg-day)=
	IR-W	Ingestion Rate of Water	l/day	2	EPA, 1991	2	EPA, 1991	CW x IR-W x EF x ED x 1/BW x 1/AT
	EF	Exposure Frequency	days/year	350	EPA, 1991	350	EPA, 1991	
	ED	Exposure Duration	years	30	EPA, 1991	30	EPA, 1991	
	BW	Body Weight	kg	70	EPA, 1991	70	EPA, 1991	
	AT-C	Averaging Time - Cancer	days	25,550	EPA, 1989	25,550	EPA, 1989	
	AT-N	Averaging Time - Non-Cancer	days	8,760	EPA, 1989	8,760	EPA, 1989	
Dermal	CW	Chemical Concentration in Water	mg/l	See Table 3	See Table 3	See Table 3	See Table 3	Chronic Daily Intake (CDI) (mg/kg-day)=
	SA	Skin Surface Area	cm^2	18,150	EPA, 1992	18,150	EPA, 1992	CW x SA x PC x ET x EF x ED x CF x 1/BW x 1/AT
	PC	Permeability Constant	cm/hr	Chemical Specific	EPA, 1992	Chemical Specific	EPA, 1989	
	ET	Exposure Time	hours	0.2	EPA, 1989	0.2	EPA, 1989	
	EF	Exposure Frequency	days/year	350	EPA, 1991	350	EPA, 1991	
	ED	Exposure Duration	years	30	EPA, 1991	30	EPA, 1991	
	CF	Volumetric Conversion Factor for Water	l/cm^3	0.001	EPA, 1989	0.001	EPA, 1989	
	BW	Body Weight	kg	70	EPA, 1991	70	EPA, 1991	
	AT-C	Averaging Time - Cancer	days	25,550	EPA, 1989	25,550	EPA, 1989	
	AT-N	Averaging Time - Non-Cancer	days	8,760	EPA, 1989	8,760	EPA, 1989	
Inhalation (1)								

(1) Inhalation exposure to groundwater for adults will be evaluated using the Foster and Chrotowski Shower Model.

Sources:

EPA, 1989: Risk Assessment Guidance for Superfund. Vol. 1: Human Health Evaluation Manual, Part A OERR. EPA/540/1-89/002.

EPA, 1991: Risk Assessment Guidance for Superfund. Vol. 1: Human Health Evaluation Manual - Supplemental Guidance, Standard Default Exposure Factors. Interim Final. OSWER Directive 9285.6-03,

EPA, 1992: Dermal Exposure Assessment: Principles and Applications. EPA/600/8-91/011B. The skin surface area presented in this table was derived by averaging the mean adult male and female values.

TABLE 4.4

VALUES USED FOR DAILY INTAKE CALCULATIONS

St. Juliens Creek - Landfill D (Site 4)

Scenario Timeframe: Future
Medium: Groundwater
Exposure Medium: Deep Groundwater
Exposure Point: Onsite
Receptor Population: Construction Worker
Receptor Age: Adult

Exposure Route	Parameter Code	Parameter Definition	Units	RME Value	RME Rationale/ Reference	CT Value	CT Rationale/ Reference	Intake Equation/ Model Name
Dermal	CW	Chemical Concentration in Water	mg/l	See Table 3	See Table 3	See Table 3	See Table 3	Chronic Daily Intake (CDI) (mg/kg-day)=
	SA	Skin Surface Area	cm^2	5,300	EPA, 1992	5,300	EPA, 1992	CW x SA x PC x ET x EF x ED x CF x 1/BW x 1/AT
	PC	Permeability Constant	cm/hr	Chemical Specific	EPA, 1992	Chemical Specific	EPA, 1989	
	ET	Exposure Time	hours	1	EPA, 1989	1	EPA, 1989	
	EF	Exposure Frequency	days/year	250	EPA, 1991	250	EPA, 1991	
	ED	Exposure Duration	years	0.5	Professional Judgment	0.5	Professional Judgment	
	CF	Volumetric Conversion Factor for Water	l/cm^3	0.001	EPA, 1989	1	EPA, 1989	
	BW	Body Weight	kg	70	EPA, 1991	70	EPA, 1991	
	AT-C	Averaging Time - Cancer	days	25,550	EPA, 1989	25,550	EPA, 1989	
	AT-N	Averaging Time - Non-Cancer	days	183	Professional Judgment	183	Professional Judgment	

Sources:

EPA, 1989: Risk Assessment Guidance for Superfund. Vol. 1: Human Health Evaluation Manual, Part A. OERR. EPA/540/1-89/002.

EPA, 1991: Risk Assessment Guidance for Superfund. Vol. 1: Human Health Evaluation Manual - Supplemental Guidance, Standard Default Exposure Factors. Interim Final. OSWER Directive 9285.6-03,

EPA, 1992: Dermal Exposure Assessment: Principles and Applications. EPA/600/8-91/011B. The skin surface area presented in this table was derived by averaging the mean adult male and female values.

TABLE 5.1
NON-CANCER TOXICITY DATA -- ORAL/DERMAL
St. Juliens Creek - Landfill D (Site 4)

Chemical of Potential Concern	Chronic/ Subchronic	Oral RfD Value	Oral RfD Units	Oral to Dermal Adjustment Factor	Adjusted Dermal RfD	Units	Primary Target Organ	Combined Uncertainty/Modifying Factors	Sources of RfD: Target Organ	Dates of RfD: Target Organ (MM/DD/YY)
Arsenic	Chronic	3.00E-04	mg/kg/day	0.95	2.9E-04	mg/kg/day	SKIN	3	IRIS	11/17/97
Barium	Chronic	7.00E-02	mg/kg/day	1.00	7.0E-02	mg/kg/day	NOAEL	4	IRIS	11/17/97
bis(2-Ethylhexyl)phthalate	Chronic	3.00E-01	mg/kg/day	0.55	1.7E-01	mg/kg/day	NOAEL	1000	IRIS	11/17/97
Iron	Chronic	2.00E-01	mg/kg/day	0.05	1.0E-02	mg/kg/day	N/A	N/A	RBC: N/A	10/7/97
Manganese	Chronic	2.3E-02	mg/kg/day	1.00	2.3E-02	mg/kg/day	NOAEL	2	IRIS	11/17/97
Chloroform	Chronic	1.0E-02	mg/kg/day	1.00	1.0E-02	mg/kg/day	NOAEL	1001	IRIS	11/17/97

N/A = Not Applicable
IRIS= Integrated Risk Information System
RBC= Risk-Based Concentration Table. October, 1997.

TABLE 6.1
CANCER TOXICITY DATA -- ORAL/DERMAL
St. Juliens Creek - Landfill D (Site 4)

Chemical of Potential Concern	Oral Cancer Slope Factor	Oral to Dermal Adjustment Factor	Adjusted Dermal Cancer Slope Factor	Units	Weight of Evidence/ Cancer Guideline Description	Source	Date
Arsenic	1.5	9.5E-01	1.6E+00	mg/kg-day -1	A	IRIS	11/17/97
Barium	N/A	N/A	N/A	N/A	N/A	N/A	N/A
bis(2-Ethylhexyl)phthalate	1.40E-02	5.5E-01	2.5E-02	mg/kg-day -1	C	IRIS	11/17/97
Iron	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Manganese	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Chloroform	6.1E-03	1.0E+00	6.1E-03	mg/kg-day -1	B2	IRIS	11/17/97

IRIS = Integrated Risk Information System
HEAST= Health Effects Assessment Summary Tables

EPA Group:
A - Human carcinogen
B1 - Probable human carcinogen - indicates that limited human data are available
B2 - Probable human carcinogen - indicates sufficient evidence in animals and inadequate or no evidence in humans
C - Possible human carcinogen
D - Not classifiable as a human carcinogen
E - Evidence of noncarcinogenicity

TABLE 7.2.RME
CALCULATION OF NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
St. Juliens Creek - Landfill D (Site 4)

Scenario Timeframe: Current
Medium: Deep Groundwater
Exposure Medium: Groundwater
Exposure Point: Offsite
Receptor Population: Resident
Receptor Age: Child

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Ingestion	Arsenic	0.0049	mg/l	4.9E-03	mg/l	M	3.1E-04	mg/kg-day	3.00E-04	mg/kg/day	N/A	N/A	1.0E+00
	Barium	0.065	mg/l	6.5E-02	mg/l	M	4.2E-03	mg/kg-day	7.00E-02	mg/kg/day	N/A	N/A	5.9E-02
	bis(2-Ethylhexyl)phthalate	0.005	mg/l	5.0E-03	mg/l	M	3.2E-04	mg/kg-day	3.00E-01	mg/kg/day	N/A	N/A	1.1E-03
	Iron	12.7	mg/l	1.3E+01	mg/l	M	8.1E-01	mg/kg-day	2.00E-01	mg/kg/day	N/A	N/A	4.1E+00
	Manganese	2.49	mg/l	2.5E+00	mg/l	M	1.6E-01	mg/kg-day	2.30E-02	mg/kg/day	N/A	N/A	6.9E+00
	Chloroform	0.009	mg/l	9.0E-03	mg/l	M	5.8E-04	mg/kg-day	1.00E-02	mg/kg/day	N/A	N/A	5.8E-02
Dermal	Arsenic	4.9E-03	mg/l	4.9E-03	mg/l	M	2.3E-07	mg/kg-day	2.9E-04	mg/kg/day	N/A	N/A	7.9E-04
	Barium	6.5E-02	mg/l	6.5E-02	mg/l	M	3.0E-06	mg/kg-day	7.0E-02	mg/kg/day	N/A	N/A	4.3E-05
	bis(2-Ethylhexyl)phthalate	5.0E-03	mg/l	5.0E-03	mg/l	M	4.5E-05	mg/kg-day	1.7E-01	mg/kg/day	N/A	N/A	2.7E-04
	Iron	1.3E+01	mg/l	1.3E+01	mg/l	M	5.8E-04	mg/kg-day	1.0E-02	mg/kg/day	N/A	N/A	5.8E-02
	Manganese	2.5E+00	mg/l	2.5E+00	mg/l	M	1.1E-04	mg/kg-day	2.3E-02	mg/kg/day	N/A	N/A	5.0E-03
	Chloroform	9.0E-03	mg/l	9.0E-03	mg/l	M	7.4E-06	mg/kg-day	1.0E-02	mg/kg/day	N/A	N/A	7.4E-04
												Total Hazard Index Across All Exposure Routes/Pathways	7.0E+00

M= Medium Specific

TABLE 7.2.CT
CALCULATION OF NON-CANCER HAZARDS
CENTRAL TENDENCIES
St. Juliens Creek - Landfill D (Site 4)

Scenario Timeframe: Current
Medium: Deep Groundwater
Exposure Medium: Groundwater
Exposure Point: Offsite
Receptor Population: Resident
Receptor Age: Child

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Ingestion	Arsenic	0.00435	mg/l	4.4E-03	mg/l	M	2.8E-04	mg/kg-day	3.00E-04	mg/kg/day	N/A	N/A	9.3E-01
	Barium	0.0673	mg/l	6.7E-02	mg/l	M	4.3E-03	mg/kg-day	7.00E-02	mg/kg/day	N/A	N/A	6.1E-02
	bis(2-Ethylhexyl)phthalate	0.005	mg/l	5.0E-03	mg/l	M	3.2E-04	mg/kg-day	3.00E-01	mg/kg/day	N/A	N/A	1.1E-03
	Iron	10.91	mg/l	1.1E+01	mg/l	M	7.0E-01	mg/kg-day	2.00E-01	mg/kg/day	N/A	N/A	3.5E+00
	Manganese	2.195	mg/l	2.2E+00	mg/l	M	1.4E-01	mg/kg-day	2.30E-02	mg/kg/day	N/A	N/A	6.1E+00
	Chloroform	0.00475	mg/l	4.8E-03	mg/l	M	3.0E-04	mg/kg-day	1.00E-02	mg/kg/day	N/A	N/A	3.0E-02
Dermal	Arsenic	0.00435	mg/l	4.4E-03	mg/l	M	2.0E-07	mg/kg-day	2.9E-04	mg/kg/day	N/A	N/A	7.0E-04
	Barium	0.0673	mg/l	6.7E-02	mg/l	M	3.1E-06	mg/kg-day	7.0E-02	mg/kg/day	N/A	N/A	4.4E-05
	bis(2-Ethylhexyl)phthalate	0.005	mg/l	5.0E-03	mg/l	M	4.5E-05	mg/kg-day	1.7E-01	mg/kg/day	N/A	N/A	2.7E-04
	Iron	10.91	mg/l	1.1E+01	mg/l	M	5.0E-04	mg/kg-day	1.0E-02	mg/kg/day	N/A	N/A	5.0E-02
	Manganese	2.195	mg/l	2.2E+00	mg/l	M	1.0E-04	mg/kg-day	2.3E-02	mg/kg/day	N/A	N/A	4.4E-03
	Chloroform	0.00475	mg/l	4.8E-03	mg/l	M	3.9E-06	mg/kg-day	1.0E-02	mg/kg/day	N/A	N/A	3.9E-04
												Total Hazard Index Across All Exposure Routes/Pathways	6.2E+00

M= Medium Specific

TABLE 7.3.RME
CALCULATION OF NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
St. Juliens Creek - Landfill D (Site 4)

Scenario Timeframe: Current
Medium: Deep Groundwater
Exposure Medium: Groundwater
Exposure Point: Onsite
Receptor Population: Resident
Receptor Age: Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Ingestion	Arsenic	0.0049	mg/l	4.9E-03	mg/l	M	1.7E-04	mg/kg-day	3.00E-04	mg/kg/day	N/A	N/A	5.6E-01
	Barium	0.065	mg/l	6.5E-02	mg/l	M	2.2E-03	mg/kg-day	7.00E-02	mg/kg/day	N/A	N/A	3.2E-02
	bis(2-Ethylhexyl)phthalate	0.005	mg/l	5.0E-03	mg/l	M	1.7E-04	mg/kg-day	3.00E-01	mg/kg/day	N/A	N/A	5.7E-04
	Iron	12.7	mg/l	1.3E+01	mg/l	M	4.3E-01	mg/kg-day	2.00E-01	mg/kg/day	N/A	N/A	2.2E+00
	Manganese	2.49	mg/l	2.5E+00	mg/l	M	8.5E-02	mg/kg-day	2.30E-02	mg/kg/day	N/A	N/A	3.7E+00
	Chloroform	0.009	mg/l	9.0E-03	mg/l	M	3.1E-04	mg/kg-day	1.00E-02	mg/kg/day	N/A	N/A	3.1E-02
Dermal	Arsenic	0.0049	mg/l	4.9E-03	mg/l	M	1.5E-07	mg/kg-day	2.85E-04	mg/kg/day	N/A	N/A	5.3E-04
	Barium	0.065	mg/l	6.5E-02	mg/l	M	2.0E-06	mg/kg-day	7.00E-02	mg/kg/day	N/A	N/A	2.9E-05
	bis(2-Ethylhexyl)phthalate	0.005	mg/l	5.0E-03	mg/l	M	3.1E-05	mg/kg-day	1.65E-01	mg/kg/day	N/A	N/A	1.9E-04
	Iron	12.7	mg/l	1.3E+01	mg/l	M	3.9E-04	mg/kg-day	1.00E-02	mg/kg/day	N/A	N/A	3.9E-02
	Manganese	2.49	mg/l	2.5E+00	mg/l	M	7.7E-05	mg/kg-day	2.30E-02	mg/kg/day	N/A	N/A	3.4E-03
	Chloroform	0.009	mg/l	9.0E-03	mg/l	M	5.0E-06	mg/kg-day	1.00E-02	mg/kg/day	N/A	N/A	5.0E-04

Total Hazard Index Across All Exposure Routes/Pathways 6.5E+00

M= Medium Specific

TABLE 7.3.CT
CALCULATION OF NON-CANCER HAZARDS
CENTRAL TENDENCIES
St. Juliens Creek - Landfill D (Site 4)

Scenario Timeframe: Current
Medium: Deep Groundwater
Exposure Medium: Groundwater
Exposure Point: Onsite
Receptor Population: Resident
Receptor Age: Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Ingestion	Arsenic	0.00435	mg/l	4.4E-03	mg/l	M	1.5E-04	mg/kg-day	3.00E-04	mg/kg/day	N/A	N/A	5.0E-01
	Barium	0.0673	mg/l	6.7E-02	mg/l	M	2.3E-03	mg/kg-day	7.00E-02	mg/kg/day	N/A	N/A	3.3E-02
	bis(2-Ethylhexyl)phthalate	0.005	mg/l	5.0E-03	mg/l	M	1.7E-04	mg/kg-day	3.00E-01	mg/kg/day	N/A	N/A	5.7E-04
	Iron	10.91	mg/l	1.1E+01	mg/l	M	3.7E-01	mg/kg-day	2.00E-01	mg/kg/day	N/A	N/A	1.9E+00
	Manganese	2.195	mg/l	2.2E+00	mg/l	M	7.5E-02	mg/kg-day	2.30E-02	mg/kg/day	N/A	N/A	3.3E+00
	Chloroform	0.00475	mg/l	4.8E-03	mg/l	M	1.6E-04	mg/kg-day	1.00E-02	mg/kg/day	N/A	N/A	1.6E-02
Dermal	Arsenic	0.00435	mg/l	4.4E-03	mg/l	M	1.4E-07	mg/kg-day	2.85E-04	mg/kg/day	N/A	N/A	4.7E-04
	Barium	0.0673	mg/l	6.7E-02	mg/l	M	2.1E-06	mg/kg-day	7.00E-02	mg/kg/day	N/A	N/A	3.0E-05
	bis(2-Ethylhexyl)phthalate	0.005	mg/l	5.0E-03	mg/l	M	3.1E-05	mg/kg-day	1.65E-01	mg/kg/day	N/A	N/A	1.9E-04
	Iron	10.91	mg/l	1.1E+01	mg/l	M	3.4E-04	mg/kg-day	1.00E-02	mg/kg/day	N/A	N/A	3.4E-02
	Manganese	2.195	mg/l	2.2E+00	mg/l	M	6.8E-05	mg/kg-day	2.30E-02	mg/kg/day	N/A	N/A	3.0E-03
	Chloroform	0.00475	mg/l	4.8E-03	mg/l	M	2.6E-06	mg/kg-day	1.00E-02	mg/kg/day	N/A	N/A	2.6E-04
												Total Hazard Index Across All Exposure Routes/Pathways	5.7E+00

M= Medium Specific

TABLE 7.4.RME
CALCULATION OF NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
St. Juliens Creek - Landfill D (Site 4)

Scenario Timeframe: Future
Medium: Deep Groundwater
Exposure Medium: Groundwater
Exposure Point: Onsite
Receptor Population: Construction Worker
Receptor Age: Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Dermal	Arsenic	0.0049	mg/l	4.9E-03	mg/l	M	1.3E-07	mg/kg-day	0.000285	mg/kg/day	N/A	N/A	4.4E-04
	Barium	0.065	mg/l	6.5E-02	mg/l	M	1.7E-06	mg/kg-day	0.07	mg/kg/day	N/A	N/A	2.4E-05
	bis(2-Ethylhexyl)phthalate	0.005	mg/l	5.0E-03	mg/l	M	2.5E-05	mg/kg-day	0.165	mg/kg/day	N/A	N/A	1.5E-04
	Iron	12.7	mg/l	1.3E+01	mg/l	M	3.3E-04	mg/kg-day	0.01	mg/kg/day	N/A	N/A	3.3E-02
	Manganese	2.49	mg/l	2.5E+00	mg/l	M	6.4E-05	mg/kg-day	0.023	mg/kg/day	N/A	N/A	2.8E-03
	Chloroform	0.009	mg/l	9.0E-03	mg/l	M	4.1E-06	mg/kg-day	0.01	mg/kg/day	N/A	N/A	4.1E-04
												Total Hazard Index Across All Exposure Routes/Pathways	3.7E-02

M= Medium Specific

TABLE 7.4.CT
CALCULATION OF NON-CANCER HAZARDS
CENTRAL TENDENCIES
St. Juliens Creek - Landfill D (Site 4)

Scenario Timeframe: Future
Medium: Deep Groundwater
Exposure Medium: Groundwater
Exposure Point: Onsite
Receptor Population: Construction Worker
Receptor Age: Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Dermal	Arsenic	0.00435	mg/l	4.4E-03	mg/l	M	1.1E-07	mg/kg-day	0.000285	mg/kg/day	N/A	N/A	3.9E-04
	Barium	0.0673	mg/l	6.7E-02	mg/l	M	1.7E-06	mg/kg-day	0.07	mg/kg/day	N/A	N/A	2.5E-05
	bis(2-Ethylhexyl)phthalate	0.005	mg/l	5.0E-03	mg/l	M	2.5E-05	mg/kg-day	0.165	mg/kg/day	N/A	N/A	1.5E-04
	Iron	10.91	mg/l	1.1E+01	mg/l	M	2.8E-04	mg/kg-day	0.01	mg/kg/day	N/A	N/A	2.8E-02
	Manganese	2.195	mg/l	2.2E+00	mg/l	M	5.7E-05	mg/kg-day	0.023	mg/kg/day	N/A	N/A	2.5E-03
	Chloroform	0.00475	mg/l	4.8E-03	mg/l	M	2.2E-06	mg/kg-day	0.01	mg/kg/day	N/A	N/A	2.2E-04
												Total Hazard Index Across All Exposure Routes/Pathways	3.1E-02

M= Medium Specific

TABLE 8.2.RME
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
St. Juliens Creek - Landfill D (Site 4)

Scenario Timeframe: Current
Medium: Deep Groundwater
Exposure Medium: Groundwater
Exposure Point: Offsite
Receptor Population: Resident
Receptor Age: Child

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
Ingestion	Arsenic	0.005	mg/l	4.9E-03	mg/l	M	2.7E-05	mg/kg-day	1.5E+00	mg/kg-day -1	4.0E-05
	Barium	0.065	mg/l	6.5E-02	mg/l	M	3.6E-04	mg/kg-day	N/A	N/A	N/A
	bis(2-Ethylhexyl)phthalate	0.005	mg/l	5.0E-03	mg/l	M	2.7E-05	mg/kg-day	1.4E-02	mg/kg-day -1	3.8E-07
	Iron	12.700	mg/l	1.3E+01	mg/l	M	7.0E-02	mg/kg-day	N/A	N/A	N/A
	Manganese	2.490	mg/l	2.5E+00	mg/l	M	1.4E-02	mg/kg-day	N/A	N/A	N/A
	Chloroform	0.009	mg/l	9.0E-03	mg/l	M	4.9E-05	mg/kg-day	6.1E-03	mg/kg-day -1	3.0E-07
Dermal	Arsenic	0.005	mg/l	4.9E-03	mg/l	M	1.9E-08	mg/kg-day	1.5E+00	mg/kg-day -1	2.9E-08
	Barium	0.065	mg/l	6.5E-02	mg/l	M	2.6E-07	mg/kg-day	N/A	N/A	N/A
	bis(2-Ethylhexyl)phthalate	0.005	mg/l	5.0E-03	mg/l	M	3.9E-06	mg/kg-day	1.4E-02	mg/kg-day -1	5.4E-08
	Iron	12.700	mg/l	1.3E+01	mg/l	M	5.0E-05	mg/kg-day	N/A	N/A	N/A
	Manganese	2.490	mg/l	2.5E+00	mg/l	M	9.8E-06	mg/kg-day	N/A	N/A	N/A
	Chloroform	0.009	mg/l	9.0E-03	mg/l	M	3.6E-08	mg/kg-day	6.1E-03	mg/kg-day -1	2.2E-10
										Total Risk Across All Exposure Routes/Pathways	4.1E-05

TABLE 8.2.CT
CALCULATION OF CANCER RISKS
CENTRAL TENDENCIES
St. Juliens Creek - Landfill D (Site 4)

Scenario Timeframe: Current
Medium: Deep Groundwater
Exposure Medium: Groundwater
Exposure Point: Offsite
Receptor Population: Resident
Receptor Age: Child

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
Ingestion	Arsenic	0.004	mg/l	4.4E-03	mg/l	M	2.4E-05	mg/kg-day	1.5E+00	mg/kg-day -1	3.6E-05
	Barium	0.067	mg/l	6.7E-02	mg/l	M	3.7E-04	mg/kg-day	N/A	N/A	N/A
	bis(2-Ethylhexyl)phthalate	0.005	mg/l	5.0E-03	mg/l	M	2.7E-05	mg/kg-day	1.4E-02	mg/kg-day -1	3.8E-07
	Iron	10.910	mg/l	1.1E+01	mg/l	M	6.0E-02	mg/kg-day	N/A	N/A	N/A
	Manganese	2.195	mg/l	2.2E+00	mg/l	M	1.2E-02	mg/kg-day	N/A	N/A	N/A
	Chloroform	0.005	mg/l	4.8E-03	mg/l	M	2.6E-05	mg/kg-day	6.1E-03	mg/kg-day -1	1.6E-07
Dermal	Arsenic	0.004	mg/l	4.4E-03	mg/l	M	1.7E-08	mg/kg-day	1.5E+00	mg/kg-day -1	2.6E-08
	Barium	0.067	mg/l	6.7E-02	mg/l	M	2.7E-07	mg/kg-day	N/A	N/A	N/A
	bis(2-Ethylhexyl)phthalate	0.005	mg/l	5.0E-03	mg/l	M	3.9E-06	mg/kg-day	1.4E-02	mg/kg-day -1	5.4E-08
	Iron	10.910	mg/l	1.1E+01	mg/l	M	4.3E-05	mg/kg-day	N/A	N/A	N/A
	Manganese	2.195	mg/l	2.2E+00	mg/l	M	8.7E-06	mg/kg-day	N/A	N/A	N/A
	Chloroform	0.005	mg/l	4.8E-03	mg/l	M	1.9E-08	mg/kg-day	6.1E-03	mg/kg-day -1	1.1E-10
										Total Risk Across All Exposure Routes/Pathways	3.6E-05

TABLE 8.3.RME
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
St. Juliens Creek - Landfill D (Site 4)

Scenario Timeframe: Current
Medium: Deep Groundwater
Exposure Medium: Groundwater
Exposure Point: Offsite
Receptor Population: Resident
Receptor Age: Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
Ingestion	Arsenic	0.005	mg/l	0.005	mg/l	M	5.8E-05	mg/kg-day	1.5	mg/kg-day -1	8.6E-05
	Barium	0.065	mg/l	0.065	mg/l	M	7.6E-04	mg/kg-day	N/A	N/A	N/A
	bis(2-Ethylhexyl)phthalate	0.005	mg/l	0.005	mg/l	M	5.9E-05	mg/kg-day	0.014	mg/kg-day -1	8.2E-07
	Iron	12.700	mg/l	12.700	mg/l	M	1.5E-01	mg/kg-day	N/A	N/A	N/A
	Manganese	2.490	mg/l	2.490	mg/l	M	2.9E-02	mg/kg-day	N/A	N/A	N/A
	Chloroform	0.009	mg/l	0.009	mg/l	M	1.1E-04	mg/kg-day	0.0061	mg/kg-day -1	6.4E-07
Dermal	Arsenic	0.005	mg/l	0.005	mg/l	M	5.2E-08	mg/kg-day	1.5	mg/kg-day -1	7.8E-08
	Barium	0.065	mg/l	0.065	mg/l	M	6.9E-07	mg/kg-day	N/A	N/A	N/A
	bis(2-Ethylhexyl)phthalate	0.005	mg/l	0.005	mg/l	M	1.0E-05	mg/kg-day	0.014	mg/kg-day -1	1.5E-07
	Iron	12.700	mg/l	12.700	mg/l	M	1.4E-04	mg/kg-day	N/A	N/A	N/A
	Manganese	2.490	mg/l	2.490	mg/l	M	2.7E-05	mg/kg-day	N/A	N/A	N/A
	Chloroform	0.009	mg/l	0.009	mg/l	M	1.7E-06	mg/kg-day	6.1E-03	mg/kg-day -1	1.0E-08
										Total Risk Across All Exposure Routes/Pathways	8.8E-05

TABLE 8.3.CT
CALCULATION OF CANCER RISKS
CENTRAL TENDENCIES
St. Juliens Creek - Landfill D (Site 4)

Scenario Timeframe: Current
Medium: Deep Groundwater
Exposure Medium: Groundwater
Exposure Point: Offsite
Receptor Population: Resident
Receptor Age: Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
Ingestion	Arsenic	0.004	mg/l	0.004	mg/l	M	5.1E-05	mg/kg-day	1.5	mg/kg-day -1	7.7E-05
	Barium	0.067	mg/l	0.067	mg/l	M	7.9E-04	mg/kg-day	N/A	N/A	N/A
	bis(2-Ethylhexyl)phthalate	0.005	mg/l	0.005	mg/l	M	5.9E-05	mg/kg-day	0.014	mg/kg-day -1	8.2E-07
	Iron	10.910	mg/l	10.910	mg/l	M	1.3E-01	mg/kg-day	N/A	N/A	N/A
	Manganese	2.195	mg/l	2.195	mg/l	M	2.6E-02	mg/kg-day	N/A	N/A	N/A
	Chloroform	0.005	mg/l	0.005	mg/l	M	5.6E-05	mg/kg-day	0.0061	mg/kg-day -1	3.4E-07
Dermal	Arsenic	0.004	mg/l	0.004	mg/l	M	4.6E-08	mg/kg-day	1.5	mg/kg-day -1	7.0E-08
	Barium	0.067	mg/l	0.067	mg/l	M	7.2E-07	mg/kg-day	N/A	N/A	N/A
	bis(2-Ethylhexyl)phthalate	0.005	mg/l	0.005	mg/l	M	1.0E-05	mg/kg-day	0.014	mg/kg-day -1	1.5E-07
	Iron	10.910	mg/l	10.910	mg/l	M	1.2E-04	mg/kg-day	N/A	N/A	N/A
	Manganese	2.195	mg/l	2.195	mg/l	M	2.3E-05	mg/kg-day	N/A	N/A	N/A
	Chloroform	0.005	mg/l	0.005	mg/l	M	9.0E-07	mg/kg-day	6.1E-03	mg/kg-day -1	5.5E-09
										Total Risk Across All Exposure Routes/Pathways	7.8E-05

TABLE 8.4.RME
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
St. Juliens Creek - Landfill D (Site 4)

Scenario Timeframe: Future
Medium: Deep Groundwater
Exposure Medium: Groundwater
Exposure Point: Onsite
Receptor Population: Construction Worker
Receptor Age: Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
Dermal	Arsenic	0.005	mg/l	0.005	mg/l	M	3.2E-09	mg/kg-day	1.5E+00	mg/kg-day -1	4.8E-09
	Barium	0.065	mg/l	0.065	mg/l	M	4.3E-08	mg/kg-day	N/A	N/A	N/A
	bis(2-Ethylhexyl)phthalate	0.005	mg/l	0.005	mg/l	M	6.5E-07	mg/kg-day	1.4E-02	mg/kg-day -1	9.0E-09
	Iron	12.700	mg/l	12.700	mg/l	M	8.3E-06	mg/kg-day	N/A	N/A	N/A
	Manganese	2.195	mg/l	2.195	mg/l	M	1.4E-06	mg/kg-day	N/A	N/A	N/A
	Chloroform	0.005	mg/l	0.005	mg/l	M	5.6E-08	mg/kg-day	6.1E-03	mg/kg-day -1	3.4E-10
										Total Risk Across All Exposure Routes/Pathways	1.4E-08

TABLE 8.4.CT
CALCULATION OF CANCER RISKS
CENTRAL TENDENCIES
St. Juliens Creek - Landfill D (Site 4)

Scenario Timeframe: Future
Medium: Deep Groundwater
Exposure Medium: Groundwater
Exposure Point: Onsite
Receptor Population: Construction Worker
Receptor Age: Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
Dermal	Arsenic	0.004	mg/l	0.004	mg/l	M	2.9E-09	mg/kg-day	1.5E+00	mg/kg-day -1	4.3E-09
	Barium	0.067	mg/l	0.067	mg/l	M	4.4E-08	mg/kg-day	N/A	N/A	N/A
	bis(2-Ethylhexyl)phthalate	0.005	mg/l	0.005	mg/l	M	6.5E-07	mg/kg-day	1.4E-02	mg/kg-day -1	9.0E-09
	Iron	10.910	mg/l	10.910	mg/l	M	7.2E-06	mg/kg-day	N/A	N/A	N/A
	Manganese	2.195	mg/l	2.195	mg/l	M	1.4E-06	mg/kg-day	N/A	N/A	N/A
	Chloroform	0.005	mg/l	0.005	mg/l	M	5.6E-08	mg/kg-day	6.1E-03	mg/kg-day -1	3.4E-10
										Total Risk Across All Exposure Routes/Pathways	1.4E-08

Site 4

Shallow Groundwater Future

TABLE 2.2
OCCURRENCE, DISTRIBUTION AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN
St. Juliens Creek - Landfill D (Site 4)

Scenario Timeframe: Future
Medium: Shallow Groundwater
Exposure Medium: Groundwater
Exposure Point: Tap Water

CAS Number	Chemical	Minimum Concentration	Minimum Qualifier	Maximum Concentration	Maximum Qualifier	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration Used for Screening	Background Value	Screening Toxicity Value (1)	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag	Rationale for Contaminant Deletion or Selection (2)
7429905	Aluminum	179.00	J	28000.00	J	ug/l	GW-2S	4/6	29-38.1	28000.00	N/A	3700	N/A	N/A	YES	ASL
7440382	Arsenic	9.20	J	14.40		ug/l	GW-2S	3/6	3-3.2	14.40	N/A	0.045	50	MCL	YES	ASL
7440393	Barium	33.00	J	488.00		ug/l	GW-4S	6/6	1-1	488.00	N/A	260	N/A	N/A	YES	ASL
7440417	Beryllium	3.30	J	3.30	J	ug/l	GW-2S	1/6	1-1	3.30	N/A	0.016	100	MCL	YES	ASL
7440439	Cadmium	2.10	J	6.10	K	ug/l	GW-3S	2/6	0.5-0.5	6.10	N/A	1.80	5	MCL	YES	ASL
18540299	Chromium	6.10	L	47.80		ug/l	GW-4S	3/6	4-7	47.80	N/A	18	100	MCL	YES	ASL
7440484	Cobalt	12.20	J	88.70		ug/l	GW-2S	2/6	3-8	88.70	N/A	220	N/A	N/A	NO	BSL
7440508	Copper	8.70	J	39.30		ug/l	GW-4S	3/6	2-8	39.30	N/A	150	1300	AL	NO	BSL
7439896	Iron	338.00		40400.00	J	ug/l	GW-2S	6/6	5-5	40400.00	N/A	1100	N/A	N/A	YES	ASL
7439921	Lead	2.30	J	23.70	L	ug/l	GW-2S	4/6	1-1	23.70	N/A	15	15	AL	YES	ASL
7439965	Manganese	436.00		3160.00		ug/l	GW-2S	5/6	1-1	N/A	N/A	N/A	N/A	N/A	NO	BSL
7440020	Nickel	18.00	J	110.00		ug/l	GW-2S	3/6	4-7	110.00	N/A	73	100	MCL	YES	ASL
7440224	Silver	1.50	J	400.00		ug/l	GW-2S	3/6	1-3	400.00	N/A	18	N/A	N/A	YES	ASL
1314325	Thallium	3.10	J	3.10	J	ug/l	GW-2S	1/6	2-2	3.10	N/A	N/A	N/A	N/A	N/A	NTX
7440622	Vanadium	9.20	J	55.90		ug/l	GW-2S	2/6	4-9	55.90	N/A	26	N/A	N/A	YES	ASL
7440666	Zinc	177.00		542.00		ug/l	GW-2S	2/6	3-5	542.00	N/A	1100	N/A	N/A	NO	BSL
117817	bis(2-Ethylhexyl)phthalate	13.00		13.00		ug/l	GW-3S	1/6	10-10	13.00	N/A	4.8	6	MCL	YES	ASL
67641	Acetone	6.00		12.00		ug/l	GW-3S	2/6	5-5	12.00	N/A	370	N/A	N/A	NO	BSL
75092	Methylene Chloride	3.00		3.00		ug/l	GW-2S	1/6	1-1	N/A	N/A	4.10	N/A	N/A	YES	ASL

(1) EPA 1997. Region III Updated Risk-Based Concentration Table. October, 1997. The Screening Toxicity Value for Lead was obtained from Naval Base Norfolk Part Naval Base Norfolk Partnership Human Health Risk Assessment Consensus Agreement #6.A.6

(2) Rationale Codes Selection Reason: Above Screening Levels (ASL)
Deletion Reason: Essential Nutrient (NUT)
Below Screening Level (BSL)

Definitions: N/A = Not Applicable
COPC = Chemical of Potential Concern
ARAR/TBC = Applicable or Relevant and Appropriate Requirement/To Be Considered
MCL = Federal Maximum Contaminant Level
J = Estimated Value

TABLE 3.2
MEDIUM-SPECIFIC EXPOSURE POINT CONCENTRATION SUMMARY
St. Juliens Creek - Landfill D (Site 4)

Scenario Timeframe: Current/Future
Medium: Deep Groundwater
Exposure Medium: Groundwater
Exposure Point: Offsite

Chemical of Potential Concern	Units	Arithmetic Mean	95% UCL of Normal Data	Maximum Detected Concentration	Maximum Qualifier	EPC Units	Reasonable Maximum Exposure			Central Tendency		
							Medium EPC Value	Medium EPC Statistic	Medium EPC Rationale	Medium EPC Value	Medium EPC Statistic	Medium EPC Rationale
Aluminum	ug/l	5623.00	N/A	28000	J	mg/l	28.00	Max	(1)	5.62	Mean-N	(1)
Arsenic	ug/l	6.55	N/A	14.4		mg/l	0.01	Max	(1)	0.01	Mean-N	(1)
Barium	ug/l	209.18	N/A	488		mg/l	0.49	Max	(1)	0.21	Mean-N	(1)
Beryllium	ug/l	0.93	N/A	3.3	J	mg/l	0.00	Max	(1)	0.00	Mean-N	(1)
Cadmium	ug/l	1.48	N/A	6.1	K	mg/l	0.01	Max	(1)	0.00	Mean-N	(1)
Chromium	ug/l	17.75	N/A	47.8		mg/l	0.05	Max	(1)	0.02	Mean-N	(1)
Iron	ug/l	14976.50	N/A	40400	J	mg/l	40.40	Max	(1)	14.98	Mean-N	(1)
Manganese	ug/l	1071.58	N/A	3180		mg/l	3.18	Max	(1)	1.07	Mean-N	(1)
Nickel	ug/l	26.73	N/A	110		mg/l	0.11	Max	(1)	0.03	Mean-N	(1)
Silver	ug/l	68.03	N/A	400		mg/l	0.40	Max	(1)	0.07	Mean-N	(1)
Vanadium	ug/l	13.30	N/A	55.9		mg/l	0.06	Max	(1)	0.01	Mean-N	(1)
bis(2-Ethylhexyl)phthalate	ug/l	6.33	N/A	13		mg/l	0.01	Max	(1)	0.01	Mean-N	(1)

Statistics: Maximum Detected Value (Max); 95% UCL of Normal Data (95% UCL-N); 95% UCL of Log-transformed Data (95% UCL-T); Mean of Log-transformed Data (Mean-T); Mean of Normal Data (Mean-N).

(1) As stated in the Risk Assessment Assumptions Document presented in Appendix F of this report, exposure point concentrations for this media will consist of the maximum detected concentration and the arithmetic mean

TABLE 4.1

VALUES USED FOR DAILY INTAKE CALCULATIONS

St. Julien's Creek - Landfill D (Site 4)

Scenario Timeframe: Future
Medium: Shallow Groundwater
Exposure Medium: Groundwater
Exposure Point: Onsite
Receptor Population: Groundskeeper
Receptor Age: Adult

Exposure Route	Parameter Code	Parameter Definition	Units	RME Value	RME Rationale/ Reference	CT Value	CT Rationale/ Reference	Intake Equation/ Model Name
Dermal	CW	Chemical Concentration in Water	mg/l	See Table 3	See Table 3	See Table 3	See Table 3	Chronic Daily Intake (CDI) (mg/kg-day)=
	SA	Skin Surface Area	cm^2	5,300	EPA, 1992	5,300	EPA, 1992	CW x SA x PC x ET x EF x ED x CF x 1/BW x 1/AT
	PC	Permeability Constant	cm/hr	Chemical Specific	EPA, 1992	Chemical Specific	EPA, 1989	
	ET	Exposure Time	hours	1	VADEQ, 1997	1	VADEQ, 1997	
	EF	Exposure Frequency	days/year	250	EPA, 1991	250	EPA, 1991	
	ED	Exposure Duration	years	25	EPA, 1991	25	EPA, 1991	
	CF	Volumetric Conversion Factor for Water	l/cm^3	0.001	EPA, 1989	0.001	EPA, 1989	
	BW	Body Weight	kg	70	EPA, 1991	70	EPA, 1991	
	AT-C	Averaging Time - Cancer	days	25,550	EPA, 1989	25,550	EPA, 1989	
	AT-N	Averaging Time - Non-Cancer	days	9,125	EPA, 1989	9,125	EPA, 1989	

Sources:

EPA, 1989: Risk Assessment Guidance for Superfund. Vol. 1: Human Health Evaluation Manual, Part A. OERR. EPA/540/1-89/002.

EPA, 1991: Risk Assessment Guidance for Superfund. Vol. 1: Human Health Evaluation Manual - Supplemental Guidance, Standard Default Exposure Factors. Interim Final. OSWER Directive 9285.6-03,

EPA, 1992: Dermal Exposure Assessment: Principles and Applications. EPA/600/8-91/011B. The skin surface area presented in this table was derived for head, hands, forearms, and lower legs.

VADEQ, 1997: Value provided by Pat McMurray, Virginia Department of Environmental Quality, during St. Juliens Creek risk assessment assumptions conference call on November 20, 1997.

TABLE 5.2
NON-CANCER TOXICITY DATA -- ORAL/DERMAL
St. Juliens Creek - Landfill D (Site 4)

Chemical of Potential Concern	Chronic/ Subchronic	Oral RfD Value	Oral RfD Units	Oral to Dermal Adjustment Factor	Adjusted Dermal RfD	Units	Primary Target Organ	Combined Uncertainty/Modifying Factors	Sources of RfD: Target Organ	Dates of RfD: Target Organ (MM/DD/YY)
Aluminum	Chronic	1.0E+00	mg/kg/day	0.270	2.7E-01	mg/kg/day	NOAEL	100	NCEA	8/26/96
Arsenic	Chronic	3.0E-04	mg/kg/day	0.950	2.9E-04	mg/kg/day	SKIN	3	IRIS	11/17/97
Barium	Chronic	7.0E-02	mg/kg/day	1.000	7.0E-02	mg/kg/day	NOAEL	4	IRIS	11/17/97
Beryllium	Chronic	5.0E-03	mg/kg/day	0.010	5.0E-05	mg/kg/day	NOAEL	101	IRIS	11/17/97
Cadmium	Chronic	5.0E-04	mg/kg/day	0.050	2.5E-05	mg/kg/day	NOAEL	11	IRIS	11/17/97
Chromium	Chronic	5.0E-03	mg/kg/day	0.010	5.0E-05	mg/kg/day	NOAEL	505	IRIS	02/09/98
Iron	Chronic	3.0E-01	mg/kg/day	0.050	1.5E-02	mg/kg/day	N/A	N/A	RBC:N/A	10/00/97
Manganese	Chronic	2.3E-02	mg/kg/day	1.000	2.3E-02	mg/kg/day	NOAEL	2	IRIS	11/17/97
Nickel	Chronic	2.0E-02	mg/kg/day	0.100	2.0E-03	mg/kg/day	NOAEL	10	IRIS	11/17/97
Silver	Chronic	5.0E-03	mg/kg/day	N/A	N/A	mg/kg/day	SKIN	4	IRIS	11/17/97
Vanadium	Chronic	7.0E-03	mg/kg/day	0.020	1.4E-04	mg/kg/day	NOAEL	100	HEAST	07/00/97
bis(2-Ethylhexyl)phthalate	Chronic	2.0E-01	mg/kg/day	0.550	1.1E-01	mg/kg/day	NOAEL	1001	IRIS	11/17/97

N/A = Not Applicable
IRIS= Integrated Risk Information System
HEAST= Health Effects Assessment Summary Tables
RBC= Risk-Based Concentration Table. October, 1997.

TABLE 6.2
CANCER TOXICITY DATA -- ORAL/DERMAL
St. Juliens Creek - Landfill D (Site 4)

Chemical of Potential Concern	Oral Cancer Slope Factor	Oral to Dermal Adjustment Factor	Adjusted Dermal Cancer Slope Factor	Units	Weight of Evidence/ Cancer Guideline Description	Source	Date (MM/DD/YY)
Aluminum	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Arsenic	1.5E+00	0.95	1.6E+00	mg/kg-day -1	A	IRIS	11/17/97
Barium	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Beryllium	4.3E+00	0.01	4.3E+02	mg/kg-day -1	B2	IRIS	11/17/97
Cadmium	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Chromium	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Iron	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Manganese	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Nickel	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Silver	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Vanadium	N/A	N/A	N/A	N/A	N/A	N/A	N/A
bis(2-Ethylhexyl)phthalate	1.4E-02	0.55	2.5E-02	mg/kg-day -1	C	IRIS	11/17/97

IRIS = Integrated Risk Information System
HEAST= Health Effects Assessment Summary Tables

EPA Group:
A - Human carcinogen
B1 - Probable human carcinogen - indicates that limited human data are available
B2 - Probable human carcinogen - indicates sufficient evidence in animals and inadequate or no evidence in humans
C - Possible human carcinogen
D - Not classifiable as a human carcinogen
E - Evidence of noncarcinogenicity

TABLE 7.1 RME
CALCULATION OF NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
St. Juliens Creek - Landfill D (Site 4)

Scenario Timeframe: Future
Medium: Shallow Groundwater
Exposure Medium: Groundwater
Exposure Point: Onsite
Receptor Population: Groundskeeper
Receptor Age: Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Dermal	Aluminum	28.000	mg/l	28.000	mg/l	M	7.3E-04	mg/kg-day	2.7E-01	mg/kg/day	N/A	N/A	2.7E-03
	Arsenic	0.014	mg/l	0.014	mg/l	M	3.7E-07	mg/kg-day	2.9E-04	mg/kg/day	N/A	N/A	1.3E-03
	Barium	0.488	mg/l	0.488	mg/l	M	1.3E-05	mg/kg-day	7.0E-02	mg/kg/day	N/A	N/A	1.8E-04
	Beryllium	0.003	mg/l	0.003	mg/l	M	8.6E-08	mg/kg-day	5.0E-05	mg/kg/day	N/A	N/A	1.7E-03
	Cadmium	0.006	mg/l	0.006	mg/l	M	1.6E-07	mg/kg-day	2.5E-05	mg/kg/day	N/A	N/A	6.3E-03
	Chromium	0.048	mg/l	0.048	mg/l	M	1.2E-06	mg/kg-day	5.0E-05	mg/kg/day	N/A	N/A	2.5E-02
	Iron	40.400	mg/l	40.400	mg/l	M	1.0E-03	mg/kg-day	1.5E-02	mg/kg/day	N/A	N/A	7.0E-02
	Manganese	3.180	mg/l	3.180	mg/l	M	8.2E-05	mg/kg-day	2.3E-02	mg/kg/day	N/A	N/A	3.6E-03
	Nickel	0.110	mg/l	0.110	mg/l	M	2.9E-06	mg/kg-day	2.0E-03	mg/kg/day	N/A	N/A	1.4E-03
	Silver	0.400	mg/l	0.400	mg/l	M	1.0E-05	mg/kg-day	N/A	mg/kg/day	N/A	N/A	N/A
	Vanadium	0.056	mg/l	0.056	mg/l	M	1.4E-06	mg/kg-day	1.4E-04	mg/kg/day	N/A	N/A	1.0E-02
	bis(2-Ethylhexyl)phthalate	0.013	mg/l	0.013	mg/l	M	6.6E-05	mg/kg-day	1.1E-01	mg/kg/day	N/A	N/A	6.0E-04
												Total Hazard Index Across All Exposure Routes/Pathways	1.2E-01

M= Medium Specific

TABLE 7.1.CT
CALCULATION OF NON-CANCER HAZARDS
CENTRAL TENDENCIES
St. Juliens Creek - Landfill D (Site 4)

Scenario Timeframe: Future
Medium: Shallow Groundwater
Exposure Medium: Groundwater
Exposure Point: Onsite
Receptor Population: Groundskeeper
Receptor Age: Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Dermal	Aluminum	5.623	mg/l	5.623	mg/l	M	1.5E-04	mg/kg-day	2.7E-01	mg/kg/day	N/A	N/A	5.4E-04
	Arsenic	0.007	mg/l	0.007	mg/l	M	1.7E-07	mg/kg-day	2.9E-04	mg/kg/day	N/A	N/A	6.0E-04
	Barium	0.209	mg/l	0.209	mg/l	M	5.4E-06	mg/kg-day	7.0E-02	mg/kg/day	N/A	N/A	7.7E-05
	Beryllium	0.001	mg/l	0.001	mg/l	M	2.4E-08	mg/kg-day	5.0E-05	mg/kg/day	N/A	N/A	4.8E-04
	Cadmium	0.001	mg/l	0.001	mg/l	M	3.8E-08	mg/kg-day	2.5E-05	mg/kg/day	N/A	N/A	1.5E-03
	Chromium	0.018	mg/l	0.018	mg/l	M	4.6E-07	mg/kg-day	5.0E-05	mg/kg/day	N/A	N/A	9.2E-03
	Iron	14.977	mg/l	14.977	mg/l	M	3.9E-04	mg/kg-day	1.5E-02	mg/kg/day	N/A	N/A	2.6E-02
	Manganese	1.072	mg/l	1.072	mg/l	M	2.8E-05	mg/kg-day	2.3E-02	mg/kg/day	N/A	N/A	1.2E-03
	Nickel	0.027	mg/l	0.027	mg/l	M	6.9E-07	mg/kg-day	2.0E-03	mg/kg/day	N/A	N/A	3.5E-04
	Silver	0.068	mg/l	0.068	mg/l	M	1.8E-06	mg/kg-day	N/A	mg/kg/day	N/A	N/A	N/A
	Vanadium	0.013	mg/l	0.013	mg/l	M	3.4E-07	mg/kg-day	1.4E-04	mg/kg/day	N/A	N/A	2.5E-03
	bis(2-Ethylhexyl)phthalate	0.006	mg/l	0.006	mg/l	M	3.2E-05	mg/kg-day	1.1E-01	mg/kg/day	N/A	N/A	2.9E-04
												Total Hazard Index Across All Exposure Routes/Pathways	4.3E-02

M= Medium Specific

TABLE 8.1.RME
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
St. Juliens Creek - Landfill D (Site 4)

Scenario Timeframe: Future
Medium: Shallow Groundwater
Exposure Medium: Groundwater
Exposure Point: Onsite
Receptor Population: Groundskeeper
Receptor Age: Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
Dermal	Aluminum	28.000	mg/l	28.000	mg/l	M	2.6E-04	mg/kg-day	N/A	N/A	N/A
	Arsenic	0.014	mg/l	0.014	mg/l	M	1.3E-07	mg/kg-day	1.6E+00	mg/kg-day -1	2.1E-07
	Barium	0.488	mg/l	0.488	mg/l	M	4.5E-06	mg/kg-day	N/A	N/A	N/A
	Beryllium	0.003	mg/l	0.003	mg/l	M	3.1E-08	mg/kg-day	4.3E+02	mg/kg-day -1	1.3E-05
	Cadmium	0.006	mg/l	0.006	mg/l	M	5.6E-08	mg/kg-day	N/A	N/A	N/A
	Chromium	0.048	mg/l	0.048	mg/l	M	4.4E-07	mg/kg-day	N/A	N/A	N/A
	Iron	40.400	mg/l	40.400	mg/l	M	3.7E-04	mg/kg-day	N/A	N/A	N/A
	Manganese	3.180	mg/l	3.180	mg/l	M	2.9E-05	mg/kg-day	N/A	N/A	N/A
	Nickel	0.110	mg/l	0.110	mg/l	M	1.0E-06	mg/kg-day	N/A	N/A	N/A
	Silver	0.400	mg/l	0.400	mg/l	M	3.7E-06	mg/kg-day	N/A	N/A	N/A
	Vanadium	0.056	mg/l	0.056	mg/l	M	5.2E-07	mg/kg-day	N/A	N/A	N/A
	bis(2-Ethylhexyl)phthalate	0.013	mg/l	0.013	mg/l	M	2.4E-05	mg/kg-day	2.5E-02	mg/kg-day -1	6.0E-07
										Total Risk Across All Exposure Routes/Pathways	1.4E-05

M= Medium Specific

TABLE 8.1.CT
CALCULATION OF CANCER RISKS
CENTRAL TENDENCIES
St. Juliens Creek - Landfill D (Site 4)

Scenario Timeframe: Future
Medium: Shallow Groundwater
Exposure Medium: Groundwater
Exposure Point: Onsite
Receptor Population: Groundskeeper
Receptor Age: Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
Dermal	Aluminum	5.623	mg/l	5.623	mg/l	M	5.2E-05	mg/kg-day	N/A	N/A	N/A
	Arsenic	0.007	mg/l	0.007	mg/l	M	6.1E-08	mg/kg-day	1.6E+00	mg/kg-day -1	9.6E-08
	Barium	0.209	mg/l	0.209	mg/l	M	1.9E-06	mg/kg-day	N/A	N/A	N/A
	Beryllium	0.001	mg/l	0.001	mg/l	M	8.6E-09	mg/kg-day	4.3E+02	mg/kg-day -1	3.7E-06
	Cadmium	0.001	mg/l	0.001	mg/l	M	1.4E-08	mg/kg-day	N/A	N/A	N/A
	Chromium	0.018	mg/l	0.018	mg/l	M	1.6E-07	mg/kg-day	N/A	N/A	N/A
	Iron	14.977	mg/l	14.977	mg/l	M	1.4E-04	mg/kg-day	N/A	N/A	N/A
	Manganese	1.072	mg/l	1.072	mg/l	M	9.9E-06	mg/kg-day	N/A	N/A	N/A
	Nickel	0.027	mg/l	0.027	mg/l	M	2.5E-07	mg/kg-day	N/A	N/A	N/A
	Silver	0.068	mg/l	0.068	mg/l	M	6.3E-07	mg/kg-day	N/A	N/A	N/A
	Vanadium	0.013	mg/l	0.013	mg/l	M	1.2E-07	mg/kg-day	N/A	N/A	N/A
	bis(2-Ethylhexyl)phthalate	0.006	mg/l	0.006	mg/l	M	1.2E-05	mg/kg-day	2.5E-02	mg/kg-day -1	2.9E-07
										Total Risk Across All Exposure Routes/Pathways	4.1E-06

M= Medium Specific

Site 4

Surface Soil Current/Future

TABLE 2 3
OCCURRENCE, DISTRIBUTION AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN
St Juliens Creek - Landfill D (Site 4)

Scenario Timeframe: Current
Medium: Surface Soil
Exposure Medium: Surface Soil
Exposure Point: Onsite

CAS Number	Chemical	(1) Minimum Concentration	Minimum Qualifier	(1) Maximum Concentration	Maximum Qualifier	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration Used for Screening	(2) Background Value	(3) Screening Toxicity Value	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag	(4) Rationale for Contaminant Deletion or Selection
78933	2-Butanone	11		28		ug/kg	SS-04	2/9	10-16	28	NA	4700000	NA	NA	NO	BSL
72548	4,4'-DDD	3.8		15	J	ug/kg	SS-05	4/9	3 3-21	15	NA	2700	NA	NA	NO	BSL
72559	4,4'-DDE	3.5		37		ug/kg	SS-05	5/9	3 3-21	37	NA	1900	NA	NA	NO	BSL
50293	4,4'-DDT	6 1		40	J	ug/kg	SS-05	7/9	3 3-21	40	NA	1900	NA	NA	NO	BSL
108101	4-Methyl-2-Pentanone	2	J	2	J	ug/kg	SS-03	1/9	10-16	2	NA	630000	NA	NA	NO	BSL
83329	Acenaphthene	54	J	54	J	ug/kg	SS-07	1/9	340-40000	54	NA	470000	NA	NA	NO	BSL
67641	Acetone	8	J	79	J	ug/kg	SS-06	6/9	10-16	79	NA	780000	NA	NA	NO	BSL
7429905	Aluminum	3910		7010		mg/kg	SS-10	9/9	6 63-8 51	7010	NA	7800	NA	NA	NO	BSL
120127	Anthracene	74	J	200	J	ug/kg	SS-08	2/9	340-1700	200	NA	2300000	NA	NA	NO	BSL
7440382	Arsenic	1 9		10 9		mg/kg	SS-04	9/9	0 46-0 58	10 9	NA	0 43	NA	NA	YES	ASL
7440393	Barium	55 5		105		mg/kg	SS-02	8/9	0 3-0 39	105	NA	550	NA	NA	NO	BSL
56553	Benzo(a)Anthracene	39	J	1400	J	ug/kg	SS-05	8/9	340-40000	1400	NA	880	NA	NA	YES	ASL
50328	Benzo(a)Pyrene	35	J	870	J	ug/kg	SS-08	8/9	340-40000	870	NA	88	NA	NA	YES	ASL
205992	Benzo(b)Fluoranthene	79	J	1900	J	ug/kg	SS-05	8/9	340-40000	1900	NA	880	NA	NA	YES	ASL
207089	Benzo(k)Fluoranthene	37	J	770	J	ug/kg	SS-05	6/9	340-40000	770	NA	8800	NA	NA	NO	BSL
7440417	Beryllium	1 1		1 1		mg/kg	SS-03	1/9	0 15-0 19	1 1	NA	0 15	NA	NA	YES	ASL
85687	Butylbenzylphthalate	35	J	35	J	ug/kg	SS-07	1/9	340-40000	35	NA	1600000	NA	NA	NO	BSL
86748	Carbazole	53	J	300	J	ug/kg	SS-05	2/9	340-40000	300	NA	32000	NA	NA	NO	BSL
218019	Chrysene	39	J	1800	J	ug/kg	SS-05	8/9	340-40000	1800	NA	88000	NA	NA	NO	BSL
7440484	Cobalt	9 6		10 6		mg/kg	SS-05	2/9	1 23-1 74	10 6	NA	470	NA	NA	NO	BSL
7440508	Copper	7		596		mg/kg	SS-05	9/9	0 9-1 15	596	NA	27000	NA	NA	NO	BSL
60571	Dieldrin	3 4		72	J	ug/kg	SS-08	7/9	3 3-21	72	NA	40	NA	NA	YES	ASL
84662	Diethylphthalate	360	J	620	J	ug/kg	SS-09	6/9	340-40000	620	NA	6300000	NA	NA	NO	BSL
72208	Endrin	3 9		3 9	J	ug/kg	SS-10	1/9	3 3-21	3 9	NA	2300	NA	NA	NO	BSL
206440	Fluoranthene	49	J	3300		ug/kg	SS-05	8/9	340-40000	3300	NA	310000	NA	NA	NO	BSL
86737	Fluorene	47	J	47	J	ug/kg	SS-07	1/9	340-40000	47	NA	310000	NA	NA	NO	BSL
193395	Indeno(1,2,3-cd)Pyrene	46	J	750	J	ug/kg	SS-05	6/9	340-40000	750	NA	880	NA	NA	NO	BSL
7439896	Iron	2920		29500		mg/kg	SS-05	9/9	2 61-3 69	29500	NA	2300	NA	NA	YES	ASL
7439965	Manganese	38 6		352		mg/kg	SS-05	9/9	0 33-0 43	352	NA	180	NA	NA	YES	ASL
7439976	Mercury	0 28		1 3		mg/kg	SS-06	8/9	0 04-0 06	1 3	NA	2 3	NA	NA	NO	BSL
7440020	Nickel	10 9		546		mg/kg	SS-05	8/9	1 11-1 52	546	NA	160	NA	NA	YES	ASL
129000	Pyrene	56	J	3100		ug/kg	SS-05	7/9	340-40000	3100	NA	230000	NA	NA	NO	BSL
7440224	Silver	1 6		1 6		mg/kg	SS-05	1/9	0 16-0 22	1 6	NA	39	NA	NA	NO	BSL
108883	Toluene	1	J	2	J	ug/kg	SS-10	2/9	10-16	2	NA	1600000	NA	NA	NO	ASL
7440622	Vanadium	11 2		354		mg/kg	SS-04	9/9	1 38-1 74	354	NA	55	NA	NA	YES	BSL
7440666	Zinc	26 4		607		mg/kg	SS-04	9/9	0 77-1 09	607	NA	2300	NA	NA	NO	BSL

(1) Minimum/maximum detected concentration

(2) To date, no background study has been performed for the St Juliens Creek Annex

(3) All compounds were screened against Soil Screening Levels as provided in Risk-Based Concentration Table, March 1997. (Cancer benchmark value = 1E-06, HQ=0.1)

(4) Rationale Codes Selection Reason:
- Infrequent Detection but Associated Historically (HIST)
- Frequent Detection (FD)
- Toxicity Information Available (TX)
- Above Screening Levels (ASL)

Deletion Reason:
- Infrequent Detection (IFD)
- No Toxicity Information (NTX)
- Essential Nutrient (NUT)
- Below Screening Level (BSL)

Definitions:
- N/A = Not Applicable
- SQL = Sample Quantitation Limit
- COPC = Chemical of Potential Concern
- ARAR/TBC = Applicable or Relevant and Appropriate Requirement/To Be Considered
- MCL = Federal Maximum Contaminant Level
- SMCL = Secondary Maximum Contaminant Level
- J = Estimated Value
- C = Carcinogenic
- N = Non-Carcinogenic

TABLE 3.3
MEDIUM-SPECIFIC EXPOSURE POINT CONCENTRATION SUMMARY
Saint Juliens Creek - Landfill D (Site 4)

Scenario Timeframe: Current
Medium: Surface Soil
Exposure Medium: Surface Soil
Exposure Point: Onsite

Chemical of Potential Concern	Units	Arithmetic Mean	95% UCL of Normal Data	Maximum Detected Concentration	Maximum Qualifier	EPC Units	Reasonable Maximum Exposure			Central Tendency		
							Medium EPC Value	Medium EPC Statistic	Medium EPC Rationale	Medium EPC Value	Medium EPC Statistic	Medium EPC Rationale
Arsenic	mg/kg	6.01	7.62	10.90		mg/kg	7.62	95 UCL	(1)	6.01	Mean-N	(1)
Benzo(a)Anthracene	ug/kg	448.57	42757.73	1400.00	J	mg/kg	1.40	Max	(1)	0.45	Mean-N	(1)
Benzo(a)Pyrene	ug/kg	387.90	40687.58	870.00	J	mg/kg	0.87	Max	(1)	0.39	Mean-N	(1)
Benzo(b)Fluoranthene	ug/kg	709.90	21923.29	1900.00	J	mg/kg	1.90	Max	(1)	0.71	Mean-N	(1)
Beryllium	mg/kg	0.35	1.41	1.10		mg/kg	1.10	Max	(1)	0.35	Mean-N	(1)
Dieldrin	ug/kg	21.41	94.67	72.00	J	mg/kg	0.07	Max	(1)	0.02	Mean-N	(1)
Iron	mg/kg	15672.00	24405.55	29500.00		mg/kg	24405.55	95 UCL	(1)	15672.00	Mean-N	(1)
Manganese	mg/kg	142.21	248.32	352.00		mg/kg	248.32	95 UCL	(1)	142.21	Mean-N	(1)
Nickel	mg/kg	93.79	1071.00	546.00		mg/kg	546.00	Max	(1)	93.79	Mean-N	(1)
Vanadium	mg/kg	76.96	227.35	354.00		mg/kg	227.35	95 UCL	(1)	76.96	Mean-N	(1)

Statistics: Maximum Detected Value (Max); 95% UCL of Normal Data (95% UCL-N); 95% UCL of Log-transformed Data (95% UCL-T); Mean of Log-transformed Data (Mean-T); Mean of Normal Data (Mean-N).

(1) As stated in the Risk Assessment Assumption Document, which is included as Appendix F, the lower of the maximum detected concentration and 95% UCL of the mean is used as the exposure point concentration for surface soil.

TABLE 4.5

VALUES USED FOR DAILY INTAKE CALCULATIONS

St. Juliens Creek - Landfill D (Site 4)

Scenario Timeframe: Current
Medium: Surface Soil
Exposure Medium: Surface Soil
Exposure Point: Onsite
Receptor Population: Trespasser
Receptor Age: Child

Exposure Route	Parameter Code	Parameter Definition	Units	RME Value	RME Rationale/ Reference	CT Value	CT Rationale/ Reference	Intake Equation/ Model Name
Ingestion	CS	Chemical Concentration in Soil	mg/kg	See Table 3	See Table 3	See Table 3	See Table 3	Chronic Daily Intake (CDI) (mg/kg-day)=
	IR-S	Ingestion Rate of Soil	mg/day	200	EPA, 1991	200	EPA, 1991	CS x IR x EF x ED x CF1 x 1/BW x 1/AT
	EF	Exposure Frequency	days/year	52	1 hour per week	52	1 hour per week	
	ED	Exposure Duration	years	6	EPA, 1991	6	EPA, 1991	
	CF1	Conversion Factor	kg/mg	1.00E-06	NA	1.00E-06	NA	
	BW	Body Weight	kg	15	EPA, 1991	15	EPA, 1991	
	AT-C	Averaging Time - Cancer	days	25,550	EPA, 1989	25,550	EPA, 1989	
	AT-N	Averaging Time - Non-Cancer	days	2,190	EPA, 1989	2,190	EPA, 1989	
Dermal	CS	Chemical Concentration in Soil	mg/kg	See Table 3	See Table 3	See Table 3	See Table 3	Chronic Daily Intake (CDI) (mg/kg-day)=
	CF1	Conversion Factor	kg/mg	1.00E-06	NA	1.00E-06	NA	CS x CF1 x SA x AF x AB x EF x ED x 1/BW x 1/AT
	SA	Skin Surface Area Available for Contact	cm^2	2,650	EPA, 1992	2,650	EPA, 1992	
	AF	Soil to Skin Adherence Factor	mg/cm^2	1	EPA, 1992	1	EPA, 1992	
	AB	Absorption Factor	unitless	chemical-specific	EPA, 1995	chemical-specific	EPA, 1995	
	EF	Exposure Frequency	days/year	52	EPA, 1991	52	EPA, 1991	
	ED	Exposure Duration	years	6	EPA, 1991	6	EPA, 1991	
	BW	Body Weight	kg	15	EPA, 1991	15	EPA, 1991	
	AT-C	Averaging Time - Cancer	days	25,550	EPA, 1989	25,550	EPA, 1989	
	AT-N	Averaging Time - Non-Cancer	days	2,190	EPA, 1989	2,190	EPA, 1989	

Sources:

EPA, 1989: Risk Assessment Guidance for Superfund. Vol. 1: Human Health Evaluation Manual, Part A. OERR. EPA/540/1-89/002.

EPA, 1991: Risk Assessment Guidance for Superfund. Vol. 1: Human Health Evaluation Manual - Supplemental Guidance, Standard Default Exposure Factors. Interim Final. OSWER Directive 9285 6-03,

EPA, 1992: Dermal Exposure Assessment: Principles and Applications. EPA/600/8-91/011B.

EPA, 1995: Assessing Dermal Exposure from Soil, Technical Guidance manual, Region III, EPA/903-K-95-003.

TABLE 4.6

VALUES USED FOR DAILY INTAKE CALCULATIONS

St. Julien's Creek - Landfill D (Site 4)

Scenario Timeframe: Current
Medium: Surface Soil
Exposure Medium: Surface Soil
Exposure Point: Onsite
Receptor Population: Trespasser
Receptor Age: Adolescent

Exposure Route	Parameter Code	Parameter Definition	Units	RME Value	RME Rationale/ Reference	CT Value	CT Rationale/ Reference	Intake Equation/ Model Name
Ingestion	CS	Chemical Concentration in Sediment	mg/kg	See Table 3	See Table 3	See Table 3	See Table 3	Chronic Daily Intake (CDI) (mg/kg-day)=
	IR-S	Ingestion Rate of Sediment	mg/day	100	EPA, 1991	100	EPA, 1991	CS x IR x EF x ED x CF1 x 1/BW x 1/AT
	EF	Exposure Frequency	days/year	52	1 hour per week	52	1 hour per week	
	ED	Exposure Duration	years	11	EPA, 1991	11	EPA, 1991	
	CF1	Conversion Factor	kg/mg	1.00E-06	NA	1.00E-06	NA	
	BW	Body Weight	kg	45	EPA, 1995b	45	EPA, 1995b	
	AT-C	Averaging Time - Cancer	days	25,550	EPA, 1989	25,550	EPA, 1989	
	AT-N	Averaging Time - Non-Cancer	days	4,015	EPA, 1989	4,015	EPA, 1989	
Dermal	CS	Chemical Concentration in Sediment	mg/kg	See Table 3	See Table 3	See Table 3	See Table 3	Chronic Daily Intake (CDI) (mg/kg-day)=
	CF1	Conversion Factor	kg/mg	1.00E-06	NA	1.00E-06	NA	CS x CF1 x SA x AF x AB x EF x ED x 1/BW x 1/AT
	SA	Skin Surface Area Available for Contact	cm^2	3,380	EPA, 1995b	3,380	EPA, 1995b	
	AF	Soil to Skin Adherence Factor	mg/cm^2	1	EPA, 1992	1	EPA, 1992	
	AB	Absorption Factor	unitless	chemical-specific	EPA, 1995a	chemical-specific	EPA, 1995a	
	EF	Exposure Frequency	days/year	52	1 hour per week	52	1 hour per week	
	ED	Exposure Duration	years	11	EPA, 1991	11	EPA, 1991	
	BW	Body Weight	kg	45	EPA, 1995b	45	EPA, 1995b	
	AT-C	Averaging Time - Cancer	days	25,550	EPA, 1989	25,550	EPA, 1989	
	AT-N	Averaging Time - Non-Cancer	days	4,015	EPA, 1989	4,015	EPA, 1989	

Sources:

EPA, 1989: Risk Assessment Guidance for Superfund. Vol. 1: Human Health Evaluation Manual, Part A. OERR. EPA/540/1-89/002.

EPA, 1991: Risk Assessment Guidance for Superfund. Vol. 1: Human Health Evaluation Manual - Supplemental Guidance, Standard Default Exposure Factors. Interim Final. OSWER Directive 9285.6-03,

EPA, 1992: Dermal Exposure Assessment: Principles and Applications. EPA/600/8-91/011B.

EPA, 1995a: Assessing Dermal Exposure from Soil, Technical Guidance manual, Region III, EPA/903-K-95-003.

EPA, 1995b: Exposure Factors Handbook (Review Draft). EPA/600/P-95/002A. The skin surface area presented in this table includes hands, forearms, lower legs, neck and head (25% of total surface area) and was derived by averaging the mean (7 to 17 years) male and female values.

TABLE 4.7

VALUES USED FOR DAILY INTAKE CALCULATIONS

St. Juliens Creek - Landfill D (Site 4)

Scenario Timeframe: Current
Medium: Surface Soil
Exposure Medium: Surface Soil
Exposure Point: Onsite
Receptor Population: Trespasser
Receptor Age: Adult

Exposure Route	Parameter Code	Parameter Definition	Units	RME Value	RME Rationale/ Reference	CT Value	CT Rationale/ Reference	Intake Equation/ Model Name
Ingestion	CS	Chemical Concentration in Soil	mg/kg	See Table 3	See Table 3	See Table 3	See Table 3	Chronic Daily Intake (CDI) (mg/kg-day)=
	IR-S	Ingestion Rate of Soil	mg/day	100	EPA, 1991	100	EPA, 1991	CS x IR x EF x ED x CF1 x 1/BW x 1/AT
	EF	Exposure Frequency	days/year	52	1 hour per week	52	1 hour per week	
	ED	Exposure Duration	years	24	EPA, 1991	24	EPA, 1991	
	CF1	Conversion Factor	kg/mg	1.00E-06	NA	1.00E-06	NA	
	BW	Body Weight	kg	70	EPA, 1991	70	EPA, 1991	
	AT-C	Averaging Time - Cancer	days	25,550	EPA, 1989	25,550	EPA, 1989	
	AT-N	Averaging Time - Non-Cancer	days	8,760	EPA, 1989	8,760	EPA, 1989	
Dermal	CS	Chemical Concentration in Soil	mg/kg	See Table 3	See Table 3	See Table 3	See Table 3	Chronic Daily Intake (CDI) (mg/kg-day)=
	CF1	Conversion Factor	kg/mg	1.00E-06	NA	1.00E-06	NA	CS x CF1 x SA x AF x AB x EF x ED x 1/BW x 1/AT
	SA	Skin Surface Area Available for Contact	cm^2	5,800	EPA, 1992	5,800	EPA, 1992	
	AF	Soil to Skin Adherence Factor	mg/cm^2	1	EPA, 1992	1	EPA, 1992	
	AB	Absorption Factor	unitless	chemical-specific	EPA, 1995	chemical-specific	EPA, 1995	
	EF	Exposure Frequency	days/year	52	1 hour per week	52	1 hour per week	
	ED	Exposure Duration	years	24	EPA, 1991	24	EPA, 1991	
	BW	Body Weight	kg	70	EPA, 1991	70	EPA, 1991	
	AT-C	Averaging Time - Cancer	days	25,550	EPA, 1989	25,550	EPA, 1989	
	AT-N	Averaging Time - Non-Cancer	days	8,760	EPA, 1989	8,760	EPA, 1989	

Sources:

EPA, 1989: Risk Assessment Guidance for Superfund. Vol. 1: Human Health Evaluation Manual, Part A. OERR. EPA/540/1-89/002.

EPA, 1991: Risk Assessment Guidance for Superfund. Vol. 1: Human Health Evaluation Manual - Supplemental Guidance, Standard Default Exposure Factors. Interim Final. OSWER Directive 9285.6-03,

EPA, 1992: Dermal Exposure Assessment: Principles and Applications. EPA/600/8-91/011B.

EPA, 1995: Assessing Dermal Exposure from Soil, Technical Guidance manual, Region III, EPA/903-K-95-003.

TABLE 4.8

VALUES USED FOR DAILY INTAKE CALCULATIONS

St. Juliens Creek - Landfill D (Site 4)

Scenario Timeframe: Future
Medium: Surface Soil
Exposure Medium: Surface Soil
Exposure Point: Onsite
Receptor Population: Resident
Receptor Age: Child

Exposure Route	Parameter Code	Parameter Definition	Units	RME Value	RME Rationale/ Reference	CT Value	CT Rationale/ Reference	Intake Equation/ Model Name
Ingestion	CS	Chemical Concentration in Soil	mg/kg	See Table 3	See Table 3	See Table 3	See Table 3	Chronic Daily Intake (CDI) (mg/kg-day)=
	IR-S	Ingestion Rate of Soil	mg/day	200	EPA, 1991	200	EPA, 1991	CS x IR x EF x ED x CF1 x 1/BW x 1/AT
	EF	Exposure Frequency	days/year	350	EPA, 1991	350	1 hour per week	
	ED	Exposure Duration	years	6	EPA, 1991	6	EPA, 1991	
	CF1	Conversion Factor	kg/mg	1.00E-06	NA	1.00E-06	NA	
	BW	Body Weight	kg	15	EPA, 1991	15	EPA, 1991	
	AT-C	Averaging Time - Cancer	days	25,550	EPA, 1989	25,550	EPA, 1989	
	AT-N	Averaging Time - Non-Cancer	days	2,190	EPA, 1989	2,190	EPA, 1989	
Dermal	CS	Chemical Concentration in Soil	mg/kg	See Table 3	See Table 3	See Table 3	See Table 3	Chronic Daily Intake (CDI) (mg/kg-day)=
	CF1	Conversion Factor	kg/mg	1.00E-06	NA	1.00E-06	NA	CS x CF1 x SA x AF x AB x EF x ED x 1/BW x 1/AT
	SA	Skin Surface Area Available for Contact	cm^2	2,650	EPA, 1992	2,650	EPA, 1992	
	AF	Soil to Skin Adherence Factor	mg/cm^2	1	EPA, 1992	1	EPA, 1992	
	AB	Absorption Factor	unitless	chemical-specific	EPA, 1995	chemical-specific	EPA, 1995	
	EF	Exposure Frequency	days/year	350	EPA, 1991	350	EPA, 1991	
	ED	Exposure Duration	years	6	EPA, 1991	6	EPA, 1991	
	BW	Body Weight	kg	15	EPA, 1991	15	EPA, 1991	
	AT-C	Averaging Time - Cancer	days	25,550	EPA, 1989	25,550	EPA, 1989	
	AT-N	Averaging Time - Non-Cancer	days	2,190	EPA, 1989	2,190	EPA, 1989	

Sources:

EPA, 1989: Risk Assessment Guidance for Superfund. Vol. 1: Human Health Evaluation Manual, Part A. OERR. EPA/540/1-89/002.

EPA, 1991: Risk Assessment Guidance for Superfund. Vol. 1: Human Health Evaluation Manual - Supplemental Guidance, Standard Default Exposure Factors. Interim Final. OSWER Directive 9285.6-03,

EPA, 1992: Dermal Exposure Assessment: Principles and Applications. EPA/600/8-91/011B.

EPA, 1995: Assessing Dermal Exposure from Soil, Technical Guidance manual, Region III, EPA/903-K-95-003.

TABLE 4.9

VALUES USED FOR DAILY INTAKE CALCULATIONS

St. Juliens Creek - Landfill D (Site 4)

Scenario Timeframe: Future
Medium: Surface Soil
Exposure Medium: Surface Soil
Exposure Point: Onsite
Receptor Population: Resident
Receptor Age: Adult

Exposure Route	Parameter Code	Parameter Definition	Units	RME Value	RME Rationale/ Reference	CT Value	CT Rationale/ Reference	Intake Equation/ Model Name
Ingestion	CS	Chemical Concentration in Soil	mg/kg	See Table 3	See Table 3	See Table 3	See Table 3	Chronic Daily Intake (CDI) (mg/kg-day)=
	IR-S	Ingestion Rate of Soil	mg/day	100	EPA, 1991	100	EPA, 1991	CS x IR x EF x ED x CF1 x 1/BW x 1/AT
	EF	Exposure Frequency	days/year	350	EPA, 1991	350	EPA, 1991	
	ED	Exposure Duration	years	24	EPA, 1991	24	EPA, 1991	
	CF1	Conversion Factor	kg/mg	1.00E-06	NA	1.00E-06	NA	
	BW	Body Weight	kg	70	EPA, 1991	70	EPA, 1991	
	AT-C	Averaging Time - Cancer	days	25,550	EPA, 1989	25,550	EPA, 1989	
	AT-N	Averaging Time - Non-Cancer	days	8,760	EPA, 1989	8,760	EPA, 1989	
Dermal	CS	Chemical Concentration in Soil	mg/kg	See Table 3	See Table 3	See Table 3	See Table 3	Chronic Daily Intake (CDI) (mg/kg-day)=
	CF1	Conversion Factor	kg/mg	1.00E-06	NA	1.00E-06	NA	CS x CF1 x SA x AF x AB x EF x ED x 1/BW x 1/AT
	SA	Skin Surface Area Available for Contact	cm^2	5,800	EPA, 1992	5,800	EPA, 1992	
	AF	Soil to Skin Adherence Factor	mg/cm^2	1	EPA, 1992	1	EPA, 1992	
	AB	Absorption Factor	unitless	chemical-specific	EPA, 1995	chemical-specific	EPA, 1995	
	EF	Exposure Frequency	days/year	350	EPA, 1991	350	EPA, 1991	
	ED	Exposure Duration	years	24	EPA, 1991	24	EPA, 1991	
	BW	Body Weight	kg	70	EPA, 1991	70	EPA, 1991	
	AT-C	Averaging Time - Cancer	days	25,550	EPA, 1989	25,550	EPA, 1989	
	AT-N	Averaging Time - Non-Cancer	days	8,760	EPA, 1989	8,760	EPA, 1989	

Sources:

EPA, 1989: Risk Assessment Guidance for Superfund. Vol. 1: Human Health Evaluation Manual, Part A. OERR. EPA/540/1-89/002.

EPA, 1991: Risk Assessment Guidance for Superfund. Vol. 1: Human Health Evaluation Manual - Supplemental Guidance, Standard Default Exposure Factors. Interim Final. OSWER Directive 9285.6-03,

EPA, 1992: Dermal Exposure Assessment: Principles and Applications. EPA/600/8-91/011B.

EPA, 1995: Assessing Dermal Exposure from Soil, Technical Guidance manual, Region III, EPA/903-K-95-003.

TABLE 4.10

VALUES USED FOR DAILY INTAKE CALCULATIONS

St. Juliens Creek - Landfill D (Site 4)

Scenario Timeframe: Future
Medium: Surface Soil
Exposure Medium: Surface Soil
Exposure Point: Onsite
Receptor Population: Construction Worker
Receptor Age: Adult

Exposure Route	Parameter Code	Parameter Definition	Units	RME Value	RME Rationale/ Reference	CT Value	CT Rationale/ Reference	Intake Equation/ Model Name
Ingestion	CS	Chemical Concentration in Soil	mg/kg	See Table 3	See Table 3	See Table 3	See Table 3	Chronic Daily Intake (CDI) (mg/kg-day)=
	IR-S	Ingestion Rate of Soil	mg/day	480	VADEQ, 1997	480	VADEQ, 1997	CS x IR x EF x ED x CF1 x 1/BW x 1/AT
	EF	Exposure Frequency	days/year	250	EPA, 1991	250	EPA, 1991	
	ED	Exposure Duration	years	0.5	VADEQ, 1997	0.5	VADEQ, 1997	
	CF1	Conversion Factor	kg/mg	1.00E-06	NA	1.00E-06	NA	
	BW	Body Weight	kg	70	EPA, 1991	70	EPA, 1991	
	AT-C	Averaging Time - Cancer	days	25,550	EPA, 1989	25,550	EPA, 1989	
	AT-N	Averaging Time - Non-Cancer	days	183	EPA, 1989	183	EPA, 1989	
Dermal	CS	Chemical Concentration in Soil	mg/kg	See Table 3	See Table 3	See Table 3	See Table 3	Chronic Daily Intake (CDI) (mg/kg-day)=
	CF1	Conversion Factor	kg/mg	1.00E-06	NA	1.00E-06	NA	CS x CF1 x SA x AF x AB x EF x ED x 1/BW x 1/AT
	SA	Skin Surface Area Available for Contact	cm^2	5,300	EPA, 1992	5,300	EPA, 1992	
	AF	Soil to Skin Adherence Factor	mg/cm^2	1	EPA, 1992	1	EPA, 1992	
	AB	Absorption Factor	unitless	chemical-specific	EPA, 1995	chemical-specific	EPA, 1995	
	EF	Exposure Frequency	days/year	250	EPA, 1991	250	EPA, 1991	
	ED	Exposure Duration	years	0.5	VADEQ, 1997	0.5	VADEQ, 1997	
	BW	Body Weight	kg	70	EPA, 1991	70	EPA, 1991	
	AT-C	Averaging Time - Cancer	days	25,550	EPA, 1989	25,550	EPA, 1989	
	AT-N	Averaging Time - Non-Cancer	days	183	EPA, 1989	183	EPA, 1989	

Sources:

EPA, 1989: Risk Assessment Guidance for Superfund. Vol. 1: Human Health Evaluation Manual, Part A. OERR. EPA/540/1-89/002.

EPA, 1991: Risk Assessment Guidance for Superfund. Vol. 1: Human Health Evaluation Manual - Supplemental Guidance, Standard Default Exposure Factors. Interim Final. OSWER Directive 9285.6-03,

EPA, 1992: Dermal Exposure Assessment: Principles and Applications. EPA/600/8-91/011B.

EPA, 1995: Assessing Dermal Exposure from Soil, Technical Guidance manual, Region III, EPA/903-K-95-003.

VADEQ, 1997: Value provided by Pat McMurray, Virginia Department of Environmental Quality, during St. Juliens Creek risk assessment assumptions conference call on November 20, 1997.

TABLE 4.11

VALUES USED FOR DAILY INTAKE CALCULATIONS

St. Juliens Creek - Landfill D (Site 4)

Scenario Timeframe: Future
Medium: Surface Soil
Exposure Medium: Surface Soil
Exposure Point: Onsite
Receptor Population: Groundskeeper
Receptor Age: Adult

Exposure Route	Parameter Code	Parameter Definition	Units	RME Value	RME Rationale/ Reference	CT Value	CT Rationale/ Reference	Intake Equation/ Model Name
Ingestion	CS	Chemical Concentration in Soil	mg/kg	See Table 3	See Table 3	See Table 3	See Table 3	Chronic Daily Intake (CDI) (mg/kg-day)=
	IR-S	Ingestion Rate of Soil	mg/day	50	VADEQ, 1997	50	VADEQ, 1997	CS x IR x EF x ED x CF1 x 1/BW x 1/AT
	EF	Exposure Frequency	days/year	250	EPA, 1991	250	EPA, 1991	
	ED	Exposure Duration	years	25	EPA, 1991	25	EPA, 1991	
	CF1	Conversion Factor	kg/mg	1.00E-06	NA	1.00E-06	NA	
	BW	Body Weight	kg	70	EPA, 1991	70	EPA, 1991	
	AT-C	Averaging Time - Cancer	days	25,550	EPA, 1989	25,550	EPA, 1989	
	AT-N	Averaging Time - Non-Cancer	days	9,125	EPA, 1989	9,125	EPA, 1989	
Dermal	CS	Chemical Concentration in Soil	mg/kg	See Table 3	See Table 3	See Table 3	See Table 3	Chronic Daily Intake (CDI) (mg/kg-day)=
	CF1	Conversion Factor	kg/mg	1.00E-06	NA	1.00E-06	NA	CS x CF1 x SA x AF x AB x EF x ED x 1/BW x 1/AT
	SA	Skin Surface Area Available for Contact	cm^2	5,300	EPA, 1992	5,300	EPA, 1992	
	AF	Soil to Skin Adherence Factor	mg/cm^2	1	EPA, 1992	1	EPA, 1992	
	AB	Absorption Factor	unitless	chemical-specific	EPA, 1995	chemical-specific	EPA, 1995	
	EF	Exposure Frequency	days/year	250	EPA, 1991	250	EPA, 1991	
	ED	Exposure Duration	years	25	EPA, 1991	25	EPA, 1991	
	BW	Body Weight	kg	70	EPA, 1991	70	EPA, 1991	
	AT-C	Averaging Time - Cancer	days	25,550	EPA, 1989	25,550	EPA, 1989	
	AT-N	Averaging Time - Non-Cancer	days	9,125	EPA, 1989	9,125	EPA, 1989	

Sources:

EPA, 1989: Risk Assessment Guidance for Superfund. Vol. 1: Human Health Evaluation Manual, Part A. OERR. EPA/540/1-89/002.

EPA, 1991. Risk Assessment Guidance for Superfund. Vol. 1: Human Health Evaluation Manual - Supplemental Guidance, Standard Default Exposure Factors. Interim Final. OSWER Directive 9285.6-03,

EPA, 1992: Dermal Exposure Assessment: Principles and Applications. EPA/600/8-91/011B.

EPA, 1995: Assessing Dermal Exposure from Soil, Technical Guidance manual, Region III, EPA/903-K-95-003.

VADEQ, 1997: Value provided by Pat McMurray, Virginia Department of Environmental Quality, during St. Juliens Creek risk assessment assumptions conference call on November 20, 1997.

TABLE 5.3
NON-CANCER TOXICITY DATA -- ORAL/DERMAL
St. Juliens Creek - Landfill D (Site 4)

Chemical of Potential Concern	Chronic/ Subchronic	Oral RfD Value	Oral RfD Units	Oral to Dermal Adjustment Factor	Adjusted Dermal RfD	Units	Primary Target Organ	Combined Uncertainty/Modifying Factors	Sources of RfD: Target Organ	Dates of RfD: Target Organ (MM/DD/YY)
Arsenic	Chronic	3.0E-04	mg/kg/day	0.950	2.9E-04	mg/kg/day	Skin	3	IRIS	11/17/97
Benzo(a)Anthracene	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Benzo(a)Pyrene	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Benzo(b)Fluoranthene	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Beryllium	Chronic	5.0E-03	mg/kg/day	0.010	5.0E-05	mg/kg/day	NOAEL	100	IRIS	11/17/97
Dieldrin	Chronic	5.0E-05	mg/kg/day	0.800	4.0E-05	mg/kg/day	NOAEL	101	IRIS	11/17/97
Iron	Chronic	3.0E-01	mg/kg/day	0.050	1.5E-02	mg/kg/day	N/A	N/A	RBC: N/A	10/7/97
Manganese	Chronic	2.3E-02	mg/kg/day	1.000	2.3E-02	mg/kg/day	NOAEL	2	IRIS	11/17/97
Nickel	Chronic	2.0E-02	mg/kg/day	0.100	2.0E-03	mg/kg/day	NOAEL	301	IRIS	11/17/97
Vanadium	Chronic	7.0E-03	mg/kg/day	0.020	1.4E-04	mg/kg/day	NOAEL	100	HEAST	07/00/97

N/A = Not Applicable
IRIS= Integrated Risk Information System
HEAST= Health Effects Assessment Summary Tables
RBC= Risk-Based Concentration Table. October, 1997.

TABLE 6.3
CANCER TOXICITY DATA -- ORAL/DERMAL
St. Juliens Creek - Landfill D (Site 4)

Chemical of Potential Concern	Oral Cancer Slope Factor	Oral to Dermal Adjustment Factor	Adjusted Dermal Cancer Slope Factor	Units	Weight of Evidence/ Cancer Guideline Description	Source	Date (MM/DD/YY)
Arsenic	1.5E+00	0.950	1.6E+00	mg/kg-day -1	A	IRIS	11/17/97
Benzo(a)Anthracene	7.3E-01	N/A	N/A	mg/kg-day -1	N/A	RBC: N/A	10/08/97
Benzo(a)Pyrene	7.3E+00	N/A	N/A	mg/kg-day -1	B2	IRIS	11/17/97
Benzo(b)Fluoranthene	7.3E-01	N/A	N/A	mg/kg-day -1	N/A	RBC: N/A	10/08/97
Beryllium	4.3E+00	0.010	4.3E+02	mg/kg-day -1	B2	IRIS	11/17/97
Dieldrin	1.6E+01	0.800	2.0E+01	mg/kg-day -1	B2	IRIS	11/17/97
Iron	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Manganese	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Nickel	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Vanadium	N/A	N/A	N/A	N/A	N/A	N/A	N/A

IRIS = Integrated Risk Information System
HEAST= Health Effects Assessment Summary Tables
RBC= Risk-Based Concentration Table. October, 1997.

EPA Group:
A - Human carcinogen
B1 - Probable human carcinogen - indicates that limited human data are available
B2 - Probable human carcinogen - indicates sufficient evidence in animals and inadequate or no evidence in humans
C - Possible human carcinogen
D - Not classifiable as a human carcinogen
E - Evidence of noncarcinogenicity

Weight of Evidence:
Known/Likely
Cannot be Determined
Not Likely

TABLE 7.5.RME
CALCULATION OF NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
St. Juliens Creek - Landfill D (Site 4)

Scenario Timeframe: Current
Medium: Surface Soil
Exposure Medium: Surface Soil
Exposure Point: Onsite
Receptor Population: Trespasser
Receptor Age: Child

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Ingestion	Arsenic	7.62	mg/kg	7.62	mg/kg	M	1.4E-05	mg/kg-day	3.0E-04	mg/kg/day	N/A	N/A	4.8E-02
	Benzo(a)Anthracene	1.40	mg/kg	1.40	mg/kg	M	2.7E-06	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Benzo(a)Pyrene	0.87	mg/kg	0.87	mg/kg	M	1.7E-06	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Benzo(b)Fluoranthene	1.90	mg/kg	1.90	mg/kg	M	3.6E-06	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Beryllium	1.10	mg/kg	1.10	mg/kg	M	2.1E-06	mg/kg-day	5.0E-03	mg/kg/day	N/A	N/A	4.2E-04
	Dieldrin	0.07	mg/kg	0.07	mg/kg	M	1.4E-07	mg/kg-day	5.0E-05	mg/kg/day	N/A	N/A	2.7E-03
	Iron	24405.55	mg/kg	24405.55	mg/kg	M	4.6E-02	mg/kg-day	3.0E-01	mg/kg/day	N/A	N/A	1.5E-01
	Manganese	248.32	mg/kg	248.32	mg/kg	M	4.7E-04	mg/kg-day	2.3E-02	mg/kg/day	N/A	N/A	2.1E-02
	Nickel	546.00	mg/kg	546.00	mg/kg	M	1.0E-03	mg/kg-day	2.0E-02	mg/kg/day	N/A	N/A	5.2E-02
	Vanadium	227.35	mg/kg	227.35	mg/kg	M	4.3E-04	mg/kg-day	7.0E-03	mg/kg/day	N/A	N/A	6.2E-02
Dermal	Arsenic	7.62	mg/kg	7.62	mg/kg	M	6.1E-06	mg/kg-day	2.9E-04	mg/kg/day	N/A	N/A	2.2E-02
	Benzo(a)Anthracene	1.40	mg/kg	1.40	mg/kg	M	3.5E-06	mg/kg-day	N/A	mg/kg/day	N/A	N/A	N/A
	Benzo(a)Pyrene	0.87	mg/kg	0.87	mg/kg	M	2.2E-06	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Benzo(b)Fluoranthene	1.90	mg/kg	1.90	mg/kg	M	4.8E-06	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Beryllium	1.10	mg/kg	1.10	mg/kg	M	2.8E-07	mg/kg-day	5.0E-05	mg/kg/day	N/A	N/A	5.5E-03
	Dieldrin	0.07	mg/kg	0.07	mg/kg	M	1.8E-07	mg/kg-day	4.0E-05	mg/kg/day	N/A	N/A	4.5E-03
	Iron	24405.55	mg/kg	24405.55	mg/kg	M	6.1E-03	mg/kg-day	1.5E-02	mg/kg/day	N/A	N/A	4.1E-01
	Manganese	248.32	mg/kg	248.32	mg/kg	M	6.2E-05	mg/kg-day	2.3E-02	mg/kg/day	N/A	N/A	2.7E-03
	Nickel	546.00	mg/kg	546.00	mg/kg	M	1.4E-04	mg/kg-day	2.0E-03	mg/kg/day	N/A	N/A	6.9E-02
	Vanadium	227.35	mg/kg	227.35	mg/kg	M	5.7E-05	mg/kg-day	1.4E-04	mg/kg/day	N/A	N/A	4.1E-01
												Total Hazard Index Across All Exposure Routes/Pathways	1.3E+00

M= Medium Specific

TABLE 7.5.CT
CALCULATION OF NON-CANCER HAZARDS
CENTRAL TENDENCIES
St. Juliens Creek - Landfill D (Site 4)

Scenario Timeframe: Current
Medium: Surface Soil
Exposure Medium: Surface Soil
Exposure Point: Onsite
Receptor Population: Trespasser
Receptor Age: Child

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Ingestion	Arsenic	6.01	mg/kg	6.01	mg/kg	M	1.1E-05	mg/kg-day	3.0E-04	mg/kg/day	N/A	N/A	3.8E-02
	Benzo(a)Anthracene	0.45	mg/kg	0.45	mg/kg	M	8.5E-07	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Benzo(a)Pyrene	0.39	mg/kg	0.39	mg/kg	M	7.4E-07	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Benzo(b)Fluoranthene	0.71	mg/kg	0.71	mg/kg	M	1.3E-06	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Beryllium	0.35	mg/kg	0.35	mg/kg	M	6.7E-07	mg/kg-day	5.0E-03	mg/kg/day	N/A	N/A	1.3E-04
	Dieldrin	0.02	mg/kg	0.02	mg/kg	M	4.1E-08	mg/kg-day	5.0E-05	mg/kg-day	N/A	N/A	8.1E-04
	Iron	15672.00	mg/kg	15672.00	mg/kg	M	3.0E-02	mg/kg-day	3.0E-01	mg/kg/day	N/A	N/A	9.9E-02
	Manganese	142.21	mg/kg	142.21	mg/kg	M	2.7E-04	mg/kg-day	2.3E-02	mg/kg/day	N/A	N/A	1.2E-02
	Nickel	93.79	mg/kg	93.79	mg/kg	M	1.8E-04	mg/kg-day	2.0E-02	mg/kg-day	N/A	N/A	8.9E-03
	Vanadium	76.96	mg/kg	76.96	mg/kg	M	1.5E-04	mg/kg-day	7.0E-03	mg/kg/day	N/A	N/A	2.1E-02
Dermal	Arsenic	6.01	mg/kg	6.01	mg/kg	M	4.8E-06	mg/kg-day	2.9E-04	mg/kg/day	N/A	N/A	1.7E-02
	Benzo(a)Anthracene	0.45	mg/kg	0.45	mg/kg	M	1.1E-06	mg/kg-day	N/A	mg/kg/day	N/A	N/A	N/A
	Benzo(a)Pyrene	0.39	mg/kg	0.39	mg/kg	M	9.8E-07	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Benzo(b)Fluoranthene	0.71	mg/kg	0.71	mg/kg	M	1.8E-06	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Beryllium	0.35	mg/kg	0.35	mg/kg	M	8.9E-08	mg/kg-day	5.0E-05	mg/kg/day	N/A	N/A	1.8E-03
	Dieldrin	0.02	mg/kg	0.02	mg/kg	M	5.4E-08	mg/kg-day	4.0E-05	mg/kg/day	N/A	N/A	1.3E-03
	Iron	15672.00	mg/kg	15672.00	mg/kg	M	3.9E-03	mg/kg-day	1.5E-02	mg/kg/day	N/A	N/A	2.6E-01
	Manganese	142.21	mg/kg	142.21	mg/kg	M	3.6E-05	mg/kg-day	2.3E-02	mg/kg/day	N/A	N/A	1.6E-03
	Nickel	93.79	mg/kg	93.79	mg/kg	M	2.4E-05	mg/kg-day	2.0E-03	mg/kg-day	N/A	N/A	1.2E-02
	Vanadium	76.96	mg/kg	76.96	mg/kg	M	1.9E-05	mg/kg-day	1.4E-04	mg/kg-day	N/A	N/A	1.4E-01
												Total Hazard Index Across All Exposure Routes/Pathways	6.1E-01

M= Medium Specific

TABLE 7.6.RME
CALCULATION OF NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
St. Juliens Creek - Landfill D (Site 4)

Scenario Timeframe: Current
Medium: Surface Soil
Exposure Medium: Surface Soil
Exposure Point: Onsite
Receptor Population: Trespasser
Receptor Age: Adolescent

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Ingestion	Arsenic	7.62	mg/kg	7.62	mg/kg	M	2.4E-06	mg/kg-day	3.0E-04	mg/kg/day	N/A	N/A	8.0E-03
	Benzo(a)Anthracene	1.40	mg/kg	1.40	mg/kg	M	4.4E-07	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Benzo(a)Pyrene	0.87	mg/kg	0.87	mg/kg	M	2.8E-07	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Benzo(b)Fluoranthene	1.90	mg/kg	1.90	mg/kg	M	6.0E-07	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Beryllium	1.10	mg/kg	1.10	mg/kg	M	3.5E-07	mg/kg-day	5.0E-03	mg/kg/day	N/A	N/A	7.0E-05
	Dieldrin	0.07	mg/kg	0.07	mg/kg	M	2.3E-08	mg/kg-day	5.0E-05	mg/kg-day	N/A	N/A	4.6E-04
	Iron	24405.55	mg/kg	24405.55	mg/kg	M	7.7E-03	mg/kg-day	3.0E-01	mg/kg/day	N/A	N/A	2.6E-02
	Manganese	248.32	mg/kg	248.32	mg/kg	M	7.9E-05	mg/kg-day	2.3E-02	mg/kg/day	N/A	N/A	3.4E-03
	Nickel	546.00	mg/kg	546.00	mg/kg	M	1.7E-04	mg/kg-day	2.0E-02	mg/kg-day	N/A	N/A	8.6E-03
	Vanadium	227.35	mg/kg	227.35	mg/kg	M	7.2E-05	mg/kg-day	7.0E-03	mg/kg/day	N/A	N/A	1.0E-02
Dermal	Arsenic	7.62	mg/kg	7.62	mg/kg	M	2.6E-06	mg/kg-day	2.9E-04	mg/kg/day	N/A	N/A	9.2E-03
	Benzo(a)Anthracene	1.40	mg/kg	1.40	mg/kg	M	4.8E-07	mg/kg-day	N/A	mg/kg/day	N/A	N/A	N/A
	Benzo(a)Pyrene	0.87	mg/kg	0.87	mg/kg	M	3.0E-07	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Benzo(b)Fluoranthene	1.90	mg/kg	1.90	mg/kg	M	6.5E-07	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Beryllium	1.10	mg/kg	1.10	mg/kg	M	3.8E-07	mg/kg-day	5.0E-05	mg/kg/day	N/A	N/A	7.5E-03
	Dieldrin	0.07	mg/kg	0.07	mg/kg	M	2.5E-08	mg/kg-day	4.0E-05	mg/kg/day	N/A	N/A	6.2E-04
	Iron	24405.55	mg/kg	24405.55	mg/kg	M	8.4E-03	mg/kg-day	1.5E-02	mg/kg/day	N/A	N/A	5.6E-01
	Manganese	248.32	mg/kg	248.32	mg/kg	M	8.5E-05	mg/kg-day	2.3E-02	mg/kg/day	N/A	N/A	3.7E-03
	Nickel	546.00	mg/kg	546.00	mg/kg	M	1.9E-04	mg/kg-day	2.0E-03	mg/kg-day	N/A	N/A	9.3E-02
	Vanadium	227.35	mg/kg	227.35	mg/kg	M	7.8E-05	mg/kg-day	1.4E-04	mg/kg-day	N/A	N/A	5.6E-01
												Total Hazard Index Across All Exposure Routes/Pathways	1.3E+00

M= Medium Specific

TABLE 7.6.CT
CALCULATION OF NON-CANCER HAZARDS
CENTRAL TENDENCIES
St. Juliens Creek - Landfill D (Site 4)

Scenario Timeframe: Current
Medium: Surface Soil
Exposure Medium: Surface Soil
Exposure Point: Onsite
Receptor Population: Trespasser
Receptor Age: Adolescent

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Ingestion	Arsenic	6.01	mg/kg	6.01	mg/kg	M	1.9E-06	mg/kg-day	3.0E-04	mg/kg/day	N/A	N/A	6.3E-03
	Benzo(a)Anthracene	0.45	mg/kg	0.45	mg/kg	M	1.4E-07	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Benzo(a)Pyrene	0.39	mg/kg	0.39	mg/kg	M	1.2E-07	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Benzo(b)Fluoranthene	0.71	mg/kg	0.71	mg/kg	M	2.2E-07	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Beryllium	0.35	mg/kg	0.35	mg/kg	M	1.1E-07	mg/kg-day	5.0E-03	mg/kg/day	N/A	N/A	2.2E-05
	Dieldrin	0.02	mg/kg	0.02	mg/kg	M	6.8E-09	mg/kg-day	5.0E-05	mg/kg-day	N/A	N/A	1.4E-04
	Iron	15672.00	mg/kg	15672.00	mg/kg	M	5.0E-03	mg/kg-day	3.0E-01	mg/kg/day	N/A	N/A	1.7E-02
	Manganese	142.21	mg/kg	142.21	mg/kg	M	4.5E-05	mg/kg-day	2.3E-02	mg/kg/day	N/A	N/A	2.0E-03
	Nickel	93.79	mg/kg	93.79	mg/kg	M	3.0E-05	mg/kg-day	2.0E-02	mg/kg/day	N/A	N/A	1.5E-03
	Vanadium	76.96	mg/kg	76.96	mg/kg	M	2.4E-05	mg/kg-day	7.0E-03	mg/kg/day	N/A	N/A	3.5E-03
Dermal	Arsenic	6.01	mg/kg	6.01	mg/kg	M	2.1E-06	mg/kg-day	2.9E-04	mg/kg/day	N/A	N/A	7.2E-03
	Benzo(a)Anthracene	0.45	mg/kg	0.45	mg/kg	M	1.5E-07	mg/kg-day	N/A	mg/kg/day	N/A	N/A	N/A
	Benzo(a)Pyrene	0.39	mg/kg	0.39	mg/kg	M	1.3E-07	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Benzo(b)Fluoranthene	0.71	mg/kg	0.71	mg/kg	M	2.4E-07	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Beryllium	0.35	mg/kg	0.35	mg/kg	M	1.2E-07	mg/kg-day	5.0E-05	mg/kg/day	N/A	N/A	2.4E-03
	Dieldrin	0.02	mg/kg	0.02	mg/kg	M	7.3E-09	mg/kg-day	4.0E-05	mg/kg/day	N/A	N/A	1.8E-04
	Iron	15672.00	mg/kg	15672.00	mg/kg	M	5.4E-03	mg/kg-day	1.5E-02	mg/kg/day	N/A	N/A	3.6E-01
	Manganese	142.21	mg/kg	142.21	mg/kg	M	4.9E-05	mg/kg-day	2.3E-02	mg/kg/day	N/A	N/A	2.1E-03
	Nickel	93.79	mg/kg	93.79	mg/kg	M	3.2E-05	mg/kg-day	2.0E-03	mg/kg/day	N/A	N/A	1.6E-02
	Vanadium	76.96	mg/kg	76.96	mg/kg	M	2.6E-05	mg/kg/day	1.4E-04	mg/kg/day	N/A	N/A	1.9E-01
												Total Hazard Index Across All Exposure Routes/Pathways	6.0E-01

M= Medium Specific

TABLE 7.7.RME
CALCULATION OF NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
St. Juliens Creek - Landfill D (Site 4)

Scenario Timeframe: Current
Medium: Surface Soil
Exposure Medium: Surface Soil
Exposure Point: Onsite
Receptor Population: Trespasser
Receptor Age: Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Ingestion	Arsenic	7.62	mg/kg	7.62	mg/kg	M	1.6E-06	mg/kg-day	3.0E-04	mg/kg/day	N/A	N/A	5.2E-03
	Benzo(a)Anthracene	1.40	mg/kg	1.40	mg/kg	M	2.8E-07	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Benzo(a)Pyrene	0.87	mg/kg	0.87	mg/kg	M	1.8E-07	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Benzo(b)Fluoranthene	1.90	mg/kg	1.90	mg/kg	M	3.9E-07	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Beryllium	1.10	mg/kg	1.10	mg/kg	M	2.2E-07	mg/kg-day	5.0E-03	mg/kg/day	N/A	N/A	4.5E-05
	Dieldrin	0.07	mg/kg	0.07	mg/kg	M	1.5E-08	mg/kg-day	5.0E-05	mg/kg-day	N/A	N/A	2.9E-04
	Iron	24405.55	mg/kg	24405.55	mg/kg	M	5.0E-03	mg/kg-day	3.0E-01	mg/kg/day	N/A	N/A	1.7E-02
	Manganese	248.32	mg/kg	248.32	mg/kg	M	5.1E-05	mg/kg-day	2.3E-02	mg/kg/day	N/A	N/A	2.2E-03
	Nickel	546.00	mg/kg	546.00	mg/kg	M	1.1E-04	mg/kg-day	2.0E-02	mg/kg-day	N/A	N/A	5.6E-03
	Vanadium	227.35	mg/kg	227.35	mg/kg	M	4.6E-05	mg/kg-day	7.0E-03	mg/kg/day	N/A	N/A	6.6E-03
Dermal	Arsenic	7.62	mg/kg	7.62	mg/kg	M	2.9E-06	mg/kg-day	2.9E-04	mg/kg/day	N/A	N/A	1.0E-02
	Benzo(a)Anthracene	1.40	mg/kg	1.40	mg/kg	M	5.3E-07	mg/kg-day	N/A	mg/kg/day	N/A	N/A	N/A
	Benzo(a)Pyrene	0.87	mg/kg	0.87	mg/kg	M	3.3E-07	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Benzo(b)Fluoranthene	1.90	mg/kg	1.90	mg/kg	M	7.2E-07	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Beryllium	1.10	mg/kg	1.10	mg/kg	M	4.2E-07	mg/kg-day	5.0E-05	mg/kg/day	N/A	N/A	8.3E-03
	Dieldrin	0.07	mg/kg	0.07	mg/kg	M	2.7E-08	mg/kg-day	4.0E-05	mg/kg/day	N/A	N/A	6.8E-04
	Iron	24405.55	mg/kg	24405.55	mg/kg	M	9.2E-03	mg/kg-day	1.5E-02	mg/kg/day	N/A	N/A	6.1E-01
	Manganese	248.32	mg/kg	248.32	mg/kg	M	9.4E-05	mg/kg-day	2.3E-02	mg/kg/day	N/A	N/A	4.1E-03
	Nickel	546.00	mg/kg	546.00	mg/kg	M	2.1E-04	mg/kg-day	2.0E-03	mg/kg-day	N/A	N/A	1.0E-01
	Vanadium	227.35	mg/kg	227.35	mg/kg	M	8.6E-05	mg/kg-day	1.4E-04	mg/kg-day	N/A	N/A	6.1E-01
												Total Hazard Index Across All Exposure Routes/Pathways	1.4E+00

M= Medium Specific

TABLE 7.7.CT
CALCULATION OF NON-CANCER HAZARDS
CENTRAL TENDENCIES
St. Juliens Creek - Landfill D (Site 4)

Scenario Timeframe: Current
Medium: Surface Soil
Exposure Medium: Surface Soil
Exposure Point: Onsite
Receptor Population: Trespasser
Receptor Age: Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Ingestion	Arsenic	6.01	mg/kg	6.01	mg/kg	M	1.2E-06	mg/kg-day	3.0E-04	mg/kg/day	N/A	N/A	4.1E-03
	Benzo(a)Anthracene	0.45	mg/kg	0.45	mg/kg	M	9.1E-08	mg/kg/day	N/A	N/A	N/A	N/A	N/A
	Benzo(a)Pyrene	0.39	mg/kg	0.39	mg/kg	M	7.9E-08	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Benzo(b)Fluoranthene	0.71	mg/kg	0.71	mg/kg	M	1.4E-07	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Beryllium	0.35	mg/kg	0.35	mg/kg	M	7.2E-08	mg/kg-day	5.0E-03	mg/kg/day	N/A	N/A	1.4E-05
	Dieldrin	0.02	mg/kg	0.02	mg/kg	M	4.4E-09	mg/kg/day	5.0E-05	mg/kg/day	N/A	N/A	8.7E-05
	Iron	15672.00	mg/kg	15672.00	mg/kg	M	3.2E-03	mg/kg-day	3.0E-01	mg/kg/day	N/A	N/A	1.1E-02
	Manganese	142.21	mg/kg	142.21	mg/kg	M	2.9E-05	mg/kg-day	2.3E-02	mg/kg/day	N/A	N/A	1.3E-03
	Nickel	93.79	mg/kg	93.79	mg/kg	M	1.9E-05	mg/kg/day	2.0E-02	mg/kg/day	N/A	N/A	9.5E-04
	Vanadium	76.96	mg/kg	76.96	mg/kg	M	1.6E-05	mg/kg-day	7.0E-03	mg/kg/day	N/A	N/A	2.2E-03
Dermal	Arsenic	6.01	mg/kg	6.01	mg/kg	M	2.3E-06	mg/kg-day	2.9E-04	mg/kg/day	N/A	N/A	8.0E-03
	Benzo(a)Anthracene	0.45	mg/kg	0.45	mg/kg	M	1.7E-07	mg/kg-day	N/A	mg/kg/day	N/A	N/A	N/A
	Benzo(a)Pyrene	0.39	mg/kg	0.39	mg/kg	M	1.5E-07	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Benzo(b)Fluoranthene	0.71	mg/kg	0.71	mg/kg	M	2.7E-07	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Beryllium	0.35	mg/kg	0.35	mg/kg	M	1.3E-07	mg/kg-day	5.0E-05	mg/kg/day	N/A	N/A	2.7E-03
	Dieldrin	0.02	mg/kg	0.02	mg/kg	M	8.1E-09	mg/kg-day	4.0E-05	mg/kg/day	N/A	N/A	2.0E-04
	Iron	15672.00	mg/kg	15672.00	mg/kg	M	5.9E-03	mg/kg-day	1.5E-02	mg/kg/day	N/A	N/A	3.9E-01
	Manganese	142.21	mg/kg	142.21	mg/kg	M	5.4E-05	mg/kg-day	2.3E-02	mg/kg/day	N/A	N/A	2.3E-03
	Nickel	93.79	mg/kg	93.79	mg/kg	M	3.5E-05	mg/kg-day	2.0E-03	mg/kg-day	N/A	N/A	1.8E-02
	Vanadium	76.96	mg/kg	76.96	mg/kg	M	2.9E-05	mg/kg-day	1.4E-04	mg/kg-day	N/A	N/A	2.1E-01
												Total Hazard Index Across All Exposure Routes/Pathways	6.5E-01

M= Medium Specific

TABLE 7.8.RME
CALCULATION OF NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
St. Juliens Creek - Landfill D (Site 4)

Scenario Timeframe: Future
Medium: Surface Soil
Exposure Medium: Surface Soil
Exposure Point: Onsite
Receptor Population: Resident
Receptor Age: Child

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Ingestion	Arsenic	7.62	mg/kg	7.62	mg/kg	M	9.7E-05	mg/kg-day	3.0E-04	mg/kg/day	N/A	N/A	3.2E-01
	Benzo(a)Anthracene	1.40	mg/kg	1.40	mg/kg	M	1.8E-05	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Benzo(a)Pyrene	0.87	mg/kg	0.87	mg/kg	M	1.1E-05	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Benzo(b)Fluoranthene	1.90	mg/kg	1.90	mg/kg	M	2.4E-05	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Beryllium	1.10	mg/kg	1.10	mg/kg	M	1.4E-05	mg/kg-day	5.0E-03	mg/kg/day	N/A	N/A	2.8E-03
	Dieldrin	0.07	mg/kg	0.07	mg/kg	M	9.2E-07	mg/kg-day	5.0E-05	mg/kg-day	N/A	N/A	1.8E-02
	Iron	24405.55	mg/kg	24405.55	mg/kg	M	3.1E-01	mg/kg-day	3.0E-01	mg/kg/day	N/A	N/A	1.0E+00
	Manganese	248.32	mg/kg	248.32	mg/kg	M	3.2E-03	mg/kg-day	2.3E-02	mg/kg/day	N/A	N/A	1.4E-01
	Nickel	546.00	mg/kg	546.00	mg/kg	M	7.0E-03	mg/kg-day	2.0E-02	mg/kg-day	N/A	N/A	3.5E-01
	Vanadium	227.35	mg/kg	227.35	mg/kg	M	2.9E-03	mg/kg-day	7.0E-03	mg/kg/day	N/A	N/A	4.2E-01
Dermal	Arsenic	7.62	mg/kg	7.62	mg/kg	M	4.1E-05	mg/kg-day	2.9E-04	mg/kg/day	N/A	N/A	1.4E-01
	Benzo(a)Anthracene	1.40	mg/kg	1.40	mg/kg	M	2.4E-05	mg/kg-day	N/A	mg/kg/day	N/A	N/A	N/A
	Benzo(a)Pyrene	0.87	mg/kg	0.87	mg/kg	M	1.5E-05	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Benzo(b)Fluoranthene	1.90	mg/kg	1.90	mg/kg	M	3.2E-05	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Beryllium	1.10	mg/kg	1.10	mg/kg	M	1.9E-06	mg/kg-day	5.0E-05	mg/kg/day	N/A	N/A	3.7E-02
	Dieldrin	0.07	mg/kg	0.07	mg/kg	M	1.2E-06	mg/kg-day	4.0E-05	mg/kg/day	N/A	N/A	3.0E-02
	Iron	24405.55	mg/kg	24405.55	mg/kg	M	4.1E-02	mg/kg-day	1.5E-02	mg/kg/day	N/A	N/A	2.8E+00
	Manganese	248.32	mg/kg	248.32	mg/kg	M	4.2E-04	mg/kg-day	2.3E-02	mg/kg/day	N/A	N/A	1.8E-02
	Nickel	546.00	mg/kg	546.00	mg/kg	M	9.2E-04	mg/kg-day	2.0E-03	mg/kg-day	N/A	N/A	4.6E-01
	Vanadium	227.35	mg/kg	227.35	mg/kg	M	3.9E-04	mg/kg-day	1.4E-04	mg/kg-day	N/A	N/A	2.8E+00
												Total Hazard Index Across All Exposure Routes/Pathways	8.5E+00

M= Medium Specific

TABLE 7.8.CT
CALCULATION OF NON-CANCER HAZARDS
CENTRAL TENDENCIES
St. Juliens Creek - Landfill D (Site 4)

Scenario Timeframe: Future
Medium: Surface Soil
Exposure Medium: Surface Soil
Exposure Point: Onsite
Receptor Population: Resident
Receptor Age: Child

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Ingestion	Arsenic	6.01	mg/kg	6.01	mg/kg	M	7.7E-05	mg/kg-day	3.0E-04	mg/kg/day	N/A	N/A	2.6E-01
	Benzo(a)Anthracene	0.45	mg/kg	0.45	mg/kg	M	5.7E-06	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Benzo(a)Pyrene	0.39	mg/kg	0.39	mg/kg	M	5.0E-06	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Benzo(b)Fluoranthene	0.71	mg/kg	0.71	mg/kg	M	9.1E-06	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Beryllium	0.35	mg/kg	0.35	mg/kg	M	4.5E-06	mg/kg-day	5.0E-03	mg/kg/day	N/A	N/A	9.1E-04
	Dieldrin	0.02	mg/kg	0.02	mg/kg	M	2.7E-07	mg/kg-day	5.0E-05	mg/kg-day	N/A	N/A	5.5E-03
	Iron	15672.00	mg/kg	15672.00	mg/kg	M	2.0E-01	mg/kg-day	3.0E-01	mg/kg/day	N/A	N/A	6.7E-01
	Manganese	142.21	mg/kg	142.21	mg/kg	M	1.8E-03	mg/kg-day	2.3E-02	mg/kg/day	N/A	N/A	7.9E-02
	Nickel	93.79	mg/kg	93.79	mg/kg	M	1.2E-03	mg/kg-day	2.0E-02	mg/kg-day	N/A	N/A	6.0E-02
	Vanadium	76.96	mg/kg	76.96	mg/kg	M	9.8E-04	mg/kg-day	7.0E-03	mg/kg/day	N/A	N/A	1.4E-01
Dermal	Arsenic	6.01	mg/kg	6.01	mg/kg	M	3.3E-05	mg/kg-day	2.9E-04	mg/kg/day	N/A	N/A	1.1E-01
	Benzo(a)Anthracene	0.45	mg/kg	0.45	mg/kg	M	7.6E-06	mg/kg-day	N/A	mg/kg/day	N/A	N/A	N/A
	Benzo(a)Pyrene	0.39	mg/kg	0.39	mg/kg	M	6.6E-06	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Benzo(b)Fluoranthene	0.71	mg/kg	0.71	mg/kg	M	1.2E-05	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Beryllium	0.35	mg/kg	0.35	mg/kg	M	6.0E-07	mg/kg-day	5.0E-05	mg/kg/day	N/A	N/A	1.2E-02
	Dieldrin	0.02	mg/kg	0.02	mg/kg	M	3.6E-07	mg/kg-day	4.0E-05	mg/kg/day	N/A	N/A	9.1E-03
	Iron	15672.00	mg/kg	15672.00	mg/kg	M	2.7E-02	mg/kg-day	1.5E-02	mg/kg/day	N/A	N/A	1.8E+00
	Manganese	142.21	mg/kg	142.21	mg/kg	M	2.4E-04	mg/kg-day	2.3E-02	mg/kg/day	N/A	N/A	1.0E-02
	Nickel	93.79	mg/kg	93.79	mg/kg	M	1.6E-04	mg/kg-day	2.0E-03	mg/kg-day	N/A	N/A	7.9E-02
	Vanadium	76.96	mg/kg	76.96	mg/kg	M	1.3E-04	mg/kg-day	1.4E-04	mg/kg-day	N/A	N/A	9.3E-01
												Total Hazard Index Across All Exposure Routes/Pathways	4.1E+00

M= Medium Specific

TABLE 7.9.RME
CALCULATION OF NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
St. Juliens Creek - Landfill D (Site 4)

Scenario Timeframe: Future
Medium: Surface Soil
Exposure Medium: Surface Soil
Exposure Point: Onsite
Receptor Population: Resident
Receptor Age: Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Ingestion	Arsenic	7.62	mg/kg	7.62	mg/kg	M	1.0E-05	mg/kg-day	3.0E-04	mg/kg/day	N/A	N/A	3.5E-02
	Benzo(a)Anthracene	1.40	mg/kg	1.40	mg/kg	M	1.9E-06	mg/kg/day	N/A	N/A	N/A	N/A	N/A
	Benzo(a)Pyrene	0.87	mg/kg	0.87	mg/kg	M	1.2E-06	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Benzo(b)Fluoranthene	1.90	mg/kg	1.90	mg/kg	M	2.6E-06	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Beryllium	1.10	mg/kg	1.10	mg/kg	M	1.5E-06	mg/kg-day	5.0E-03	mg/kg/day	N/A	N/A	3.0E-04
	Dieldrin	0.07	mg/kg	0.07	mg/kg	M	9.9E-08	mg/kg/day	5.0E-05	mg/kg/day	N/A	N/A	2.0E-03
	Iron	24405.55	mg/kg	24405.55	mg/kg	M	3.3E-02	mg/kg-day	3.0E-01	mg/kg/day	N/A	N/A	1.1E-01
	Manganese	248.32	mg/kg	248.32	mg/kg	M	3.4E-04	mg/kg-day	2.3E-02	mg/kg/day	N/A	N/A	1.5E-02
	Nickel	546.00	mg/kg	546.00	mg/kg	M	7.5E-04	mg/kg/day	2.0E-02	mg/kg/day	N/A	N/A	3.7E-02
	Vanadium	227.35	mg/kg	227.35	mg/kg	M	3.1E-04	mg/kg-day	7.0E-03	mg/kg/day	N/A	N/A	4.4E-02
Dermal	Arsenic	7.62	mg/kg	7.62	mg/kg	M	1.9E-05	mg/kg-day	2.9E-04	mg/kg/day	N/A	N/A	6.8E-02
	Benzo(a)Anthracene	1.40	mg/kg	1.40	mg/kg	M	1.1E-05	mg/kg-day	N/A	mg/kg/day	N/A	N/A	N/A
	Benzo(a)Pyrene	0.87	mg/kg	0.87	mg/kg	M	6.9E-06	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Benzo(b)Fluoranthene	1.90	mg/kg	1.90	mg/kg	M	1.5E-05	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Beryllium	1.10	mg/kg	1.10	mg/kg	M	8.7E-07	mg/kg-day	5.0E-05	mg/kg/day	N/A	N/A	1.7E-02
	Dieldrin	0.07	mg/kg	0.07	mg/kg	M	7.7E-08	mg/kg-day	4.0E-05	mg/kg/day	N/A	N/A	1.9E-03
	Iron	24405.55	mg/kg	24405.55	mg/kg	M	1.9E-02	mg/kg-day	1.5E-02	mg/kg/day	N/A	N/A	1.3E+00
	Manganese	248.32	mg/kg	248.32	mg/kg	M	2.0E-04	mg/kg-day	2.3E-02	mg/kg/day	N/A	N/A	8.6E-03
	Nickel	546.00	mg/kg	546.00	mg/kg	M	4.3E-04	mg/kg-day	2.0E-03	mg/kg/day	N/A	N/A	2.2E-01
	Vanadium	227.35	mg/kg	227.35	mg/kg	M	1.8E-04	mg/kg-day	1.4E-04	mg/kg/day	N/A	N/A	1.3E+00
												Total Hazard Index Across All Exposure Routes/Pathways	3.1E+00

M= Medium Specific

TABLE 7.9.CT
CALCULATION OF NON-CANCER HAZARDS
CENTRAL TENDENCIES
St. Juliens Creek - Landfill D (Site 4)

Scenario Timeframe: Future
Medium: Surface Soil
Exposure Medium: Surface Soil
Exposure Point: Onsite
Receptor Population: Resident
Receptor Age: Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Ingestion	Arsenic	6.01	mg/kg	6.01	mg/kg	M	8.2E-06	mg/kg-day	3.0E-04	mg/kg/day	N/A	N/A	2.7E-02
	Benzo(a)Anthracene	0.45	mg/kg	0.45	mg/kg	M	6.1E-07	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Benzo(a)Pyrene	0.39	mg/kg	0.39	mg/kg	M	5.3E-07	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Benzo(b)Fluoranthene	0.71	mg/kg	0.71	mg/kg	M	9.7E-07	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Beryllium	0.35	mg/kg	0.35	mg/kg	M	4.8E-07	mg/kg-day	5.0E-03	mg/kg/day	N/A	N/A	9.7E-05
	Dieldrin	0.02	mg/kg	0.02	mg/kg	M	2.9E-08	mg/kg-day	5.0E-05	mg/kg-day	N/A	N/A	5.9E-04
	Iron	15672.00	mg/kg	15672.00	mg/kg	M	2.1E-02	mg/kg-day	3.0E-01	mg/kg/day	N/A	N/A	7.2E-02
	Manganese	142.21	mg/kg	142.21	mg/kg	M	1.9E-04	mg/kg-day	2.3E-02	mg/kg/day	N/A	N/A	8.5E-03
	Nickel	93.79	mg/kg	93.79	mg/kg	M	1.3E-04	mg/kg-day	2.0E-02	mg/kg-day	N/A	N/A	6.4E-03
	Vanadium	76.96	mg/kg	76.96	mg/kg	M	1.1E-04	mg/kg-day	7.0E-03	mg/kg/day	N/A	N/A	1.5E-02
Dermal	Arsenic	6.01	mg/kg	6.01	mg/kg	M	1.5E-05	mg/kg-day	2.9E-04	mg/kg/day	N/A	N/A	5.4E-02
	Benzo(a)Anthracene	0.45	mg/kg	0.45	mg/kg	M	3.6E-06	mg/kg-day	N/A	mg/kg/day	N/A	N/A	N/A
	Benzo(a)Pyrene	0.39	mg/kg	0.39	mg/kg	M	3.1E-06	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Benzo(b)Fluoranthene	0.71	mg/kg	0.71	mg/kg	M	5.6E-06	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Beryllium	0.35	mg/kg	0.35	mg/kg	M	2.8E-07	mg/kg-day	5.0E-05	mg/kg/day	N/A	N/A	5.6E-03
	Dieldrin	0.02	mg/kg	0.02	mg/kg	M	2.3E-08	mg/kg-day	4.0E-05	mg/kg/day	N/A	N/A	5.7E-04
	Iron	15672.00	mg/kg	15672.00	mg/kg	M	1.2E-02	mg/kg-day	1.5E-02	mg/kg/day	N/A	N/A	8.3E-01
	Manganese	142.21	mg/kg	142.21	mg/kg	M	1.1E-04	mg/kg-day	2.3E-02	mg/kg/day	N/A	N/A	4.9E-03
	Nickel	93.79	mg/kg	93.79	mg/kg	M	7.5E-05	mg/kg-day	2.0E-03	mg/kg-day	N/A	N/A	3.7E-02
	Vanadium	76.96	mg/kg	76.96	mg/kg	M	6.1E-05	mg/kg-day	1.4E-04	mg/kg-day	N/A	N/A	4.4E-01
												Total Hazard Index Across All Exposure Routes/Pathways	1.5E+00

M= Medium Specific

TABLE 7.10.RME
CALCULATION OF NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
St. Juliens Creek - Landfill D (Site 4)

Scenario Timeframe: Future
Medium: Surface Soil
Exposure Medium: Surface Soil
Exposure Point: Onsite
Receptor Population: Construction Worker
Receptor Age: Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Ingestion	Arsenic	7.62	mg/kg	7.62	mg/kg	M	3.6E-05	mg/kg-day	3.0E-04	mg/kg/day	N/A	N/A	1.2E-01
	Benzo(a)Anthracene	1.40	mg/kg	1.40	mg/kg	M	6.6E-06	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Benzo(a)Pyrene	0.87	mg/kg	0.87	mg/kg	M	4.1E-06	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Benzo(b)Fluoranthene	1.90	mg/kg	1.90	mg/kg	M	8.9E-06	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Beryllium	1.10	mg/kg	1.10	mg/kg	M	5.2E-06	mg/kg-day	5.0E-03	mg/kg/day	N/A	N/A	1.0E-03
	Dieldrin	0.07	mg/kg	0.07	mg/kg	M	3.4E-07	mg/kg-day	5.0E-05	mg/kg-day	N/A	N/A	6.7E-03
	Iron	24405.55	mg/kg	24405.55	mg/kg	M	1.1E-01	mg/kg-day	3.0E-01	mg/kg/day	N/A	N/A	3.8E-01
	Manganese	248.32	mg/kg	248.32	mg/kg	M	1.2E-03	mg/kg-day	2.3E-02	mg/kg/day	N/A	N/A	5.1E-02
	Nickel	546.00	mg/kg	546.00	mg/kg	M	2.6E-03	mg/kg-day	2.0E-02	mg/kg-day	N/A	N/A	1.3E-01
	Vanadium	227.35	mg/kg	227.35	mg/kg	M	1.1E-03	mg/kg-day	7.0E-03	mg/kg/day	N/A	N/A	1.5E-01
Dermal	Arsenic	7.62	mg/kg	7.62	mg/kg	M	1.3E-05	mg/kg-day	2.9E-04	mg/kg/day	N/A	N/A	4.4E-02
	Benzo(a)Anthracene	1.40	mg/kg	1.40	mg/kg	M	7.2E-06	mg/kg-day	N/A	mg/kg/day	N/A	N/A	N/A
	Benzo(a)Pyrene	0.87	mg/kg	0.87	mg/kg	M	4.5E-06	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Benzo(b)Fluoranthene	1.90	mg/kg	1.90	mg/kg	M	9.8E-06	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Beryllium	1.10	mg/kg	1.10	mg/kg	M	5.7E-07	mg/kg-day	5.0E-05	mg/kg/day	N/A	N/A	1.1E-02
	Dieldrin	0.07	mg/kg	0.07	mg/kg	M	3.7E-07	mg/kg-day	4.0E-05	mg/kg/day	N/A	N/A	9.3E-03
	Iron	24405.55	mg/kg	24405.55	mg/kg	M	1.3E-02	mg/kg-day	1.5E-02	mg/kg/day	N/A	N/A	8.4E-01
	Manganese	248.32	mg/kg	248.32	mg/kg	M	1.3E-04	mg/kg-day	2.3E-02	mg/kg/day	N/A	N/A	5.6E-03
	Nickel	546.00	mg/kg	546.00	mg/kg	M	2.8E-04	mg/kg-day	2.0E-03	mg/kg-day	N/A	N/A	1.4E-01
	Vanadium	227.35	mg/kg	227.35	mg/kg	M	1.2E-04	mg/kg-day	1.4E-04	mg/kg-day	N/A	N/A	8.4E-01
												Total Hazard Index Across All Exposure Routes/Pathways	2.7E+00

M= Medium Specific

TABLE 7.10.CT
CALCULATION OF NON-CANCER HAZARDS
CENTRAL TENDENCIES
St. Juliens Creek - Landfill D (Site 4)

Scenario Timeframe: Future
Medium: Surface Soil
Exposure Medium: Surface Soil
Exposure Point: Onsite
Receptor Population: Construction Worker
Receptor Age: Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Ingestion	Arsenic	6.01	mg/kg	6.01	mg/kg	M	2.8E-05	mg/kg-day	3.0E-04	mg/kg/day	N/A	N/A	9.4E-02
	Benzo(a)Anthracene	0.45	mg/kg	0.45	mg/kg	M	2.1E-06	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Benzo(a)Pyrene	0.39	mg/kg	0.39	mg/kg	M	1.8E-06	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Benzo(b)Fluoranthene	0.71	mg/kg	0.71	mg/kg	M	3.3E-06	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Beryllium	0.35	mg/kg	0.35	mg/kg	M	1.7E-06	mg/kg-day	5.0E-03	mg/kg/day	N/A	N/A	3.3E-04
	Dieldrin	0.02	mg/kg	0.02	mg/kg	M	1.0E-07	mg/kg-day	5.0E-05	mg/kg-day	N/A	N/A	2.0E-03
	Iron	15672.00	mg/kg	15672.00	mg/kg	M	7.3E-02	mg/kg-day	3.0E-01	mg/kg/day	N/A	N/A	2.4E-01
	Manganese	142.21	mg/kg	142.21	mg/kg	M	6.7E-04	mg/kg-day	2.3E-02	mg/kg/day	N/A	N/A	2.9E-02
	Nickel	93.79	mg/kg	93.79	mg/kg	M	4.4E-04	mg/kg-day	2.0E-02	mg/kg-day	N/A	N/A	2.2E-02
	Vanadium	76.96	mg/kg	76.96	mg/kg	M	3.6E-04	mg/kg-day	7.0E-03	mg/kg/day	N/A	N/A	5.1E-02
Dermal	Arsenic	6.01	mg/kg	6.01	mg/kg	M	9.9E-06	mg/kg-day	2.9E-04	mg/kg/day	N/A	N/A	3.5E-02
	Benzo(a)Anthracene	0.45	mg/kg	0.45	mg/kg	M	2.3E-06	mg/kg-day	N/A	mg/kg/day	N/A	N/A	N/A
	Benzo(a)Pyrene	0.39	mg/kg	0.39	mg/kg	M	2.0E-06	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Benzo(b)Fluoranthene	0.71	mg/kg	0.71	mg/kg	M	3.7E-06	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Beryllium	0.35	mg/kg	0.35	mg/kg	M	1.8E-07	mg/kg-day	5.0E-05	mg/kg/day	N/A	N/A	3.7E-03
	Dieldrin	0.02	mg/kg	0.02	mg/kg	M	1.1E-07	mg/kg-day	4.0E-05	mg/kg/day	N/A	N/A	2.8E-03
	Iron	15672.00	mg/kg	15672.00	mg/kg	M	8.1E-03	mg/kg-day	1.5E-02	mg/kg/day	N/A	N/A	5.4E-01
	Manganese	142.21	mg/kg	142.21	mg/kg	M	7.4E-05	mg/kg-day	2.3E-02	mg/kg/day	N/A	N/A	3.2E-03
	Nickel	93.79	mg/kg	93.79	mg/kg	M	4.9E-05	mg/kg-day	2.0E-03	mg/kg-day	N/A	N/A	2.4E-02
	Vanadium	76.96	mg/kg	76.96	mg/kg	M	4.0E-05	mg/kg-day	1.4E-04	mg/kg-day	N/A	N/A	2.8E-01
												Total Hazard Index Across All Exposure Routes/Pathways	1.3E+00

M= Medium Specific

TABLE 7.11.RME
CALCULATION OF NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
St. Juliens Creek - Landfill D (Site 4)

Scenario Timeframe: Future
Medium: Surface Soil
Exposure Medium: Surface Soil
Exposure Point: Onsite
Receptor Population: Groundskeeper
Receptor Age: Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Ingestion	Arsenic	7.62	mg/kg	7.62	mg/kg	M	3.7E-06	mg/kg-day	3.0E-04	mg/kg/day	N/A	N/A	1.2E-02
	Benzo(a)Anthracene	1.40	mg/kg	1.40	mg/kg	M	6.8E-07	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Benzo(a)Pyrene	0.87	mg/kg	0.87	mg/kg	M	4.3E-07	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Benzo(b)Fluoranthene	1.90	mg/kg	1.90	mg/kg	M	9.3E-07	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Beryllium	1.10	mg/kg	1.10	mg/kg	M	5.4E-07	mg/kg-day	5.0E-03	mg/kg/day	N/A	N/A	1.1E-04
	Dieldrin	0.07	mg/kg	0.07	mg/kg	M	3.5E-08	mg/kg-day	5.0E-05	mg/kg-day	N/A	N/A	7.0E-04
	Iron	24405.55	mg/kg	24405.55	mg/kg	M	1.2E-02	mg/kg-day	3.0E-01	mg/kg/day	N/A	N/A	4.0E-02
	Manganese	248.32	mg/kg	248.32	mg/kg	M	1.2E-04	mg/kg-day	2.3E-02	mg/kg/day	N/A	N/A	5.3E-03
	Nickel	546.00	mg/kg	546.00	mg/kg	M	2.6E-03	mg/kg-day	2.0E-02	mg/kg-day	N/A	N/A	1.3E-01
	Vanadium	227.35	mg/kg	227.35	mg/kg	M	1.1E-03	mg/kg-day	7.0E-03	mg/kg/day	N/A	N/A	1.5E-01
Dermal	Arsenic	7.62	mg/kg	7.62	mg/kg	M	1.3E-05	mg/kg-day	2.9E-04	mg/kg/day	N/A	N/A	4.4E-02
	Benzo(a)Anthracene	1.40	mg/kg	1.40	mg/kg	M	7.3E-06	mg/kg-day	N/A	mg/kg/day	N/A	N/A	N/A
	Benzo(a)Pyrene	0.87	mg/kg	0.87	mg/kg	M	4.5E-06	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Benzo(b)Fluoranthene	1.90	mg/kg	1.90	mg/kg	M	9.9E-06	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Beryllium	1.10	mg/kg	1.10	mg/kg	M	5.7E-07	mg/kg-day	5.0E-05	mg/kg/day	N/A	N/A	1.1E-02
	Dieldrin	0.07	mg/kg	0.07	mg/kg	M	3.7E-07	mg/kg-day	4.0E-05	mg/kg/day	N/A	N/A	9.3E-03
	Iron	24405.55	mg/kg	24405.55	mg/kg	M	1.3E-02	mg/kg-day	1.5E-02	mg/kg/day	N/A	N/A	8.4E-01
	Manganese	248.32	mg/kg	248.32	mg/kg	M	1.3E-04	mg/kg-day	2.3E-02	mg/kg/day	N/A	N/A	5.6E-03
	Nickel	546.00	mg/kg	546.00	mg/kg	M	2.8E-04	mg/kg-day	2.0E-03	mg/kg-day	N/A	N/A	1.4E-01
	Vanadium	227.35	mg/kg	227.35	mg/kg	M	1.2E-04	mg/kg-day	1.4E-04	mg/kg-day	N/A	N/A	8.4E-01
												Total Hazard Index Across All Exposure Routes/Pathways	2.2E+00

M= Medium Specific

TABLE 7.11.CT
CALCULATION OF NON-CANCER HAZARDS
CENTRAL TENDENCIES
St. Juliens Creek - Landfill D (Site 4)

Scenario Timeframe: Future
Medium: Surface Soil
Exposure Medium: Surface Soil
Exposure Point: Onsite
Receptor Population: Groundskeeper
Receptor Age: Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Ingestion	Arsenic	6.01	mg/kg	6.01	mg/kg	M	2.9E-06	mg/kg-day	3.0E-04	mg/kg/day	N/A	N/A	9.8E-03
	Benzo(a)Anthracene	0.45	mg/kg	0.45	mg/kg	M	2.2E-07	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Benzo(a)Pyrene	0.39	mg/kg	0.39	mg/kg	M	1.9E-07	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Benzo(b)Fluoranthene	0.71	mg/kg	0.71	mg/kg	M	3.5E-07	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Beryllium	0.35	mg/kg	0.35	mg/kg	M	1.7E-07	mg/kg-day	5.0E-03	mg/kg/day	N/A	N/A	3.5E-05
	Dieldrin	0.02	mg/kg	0.02	mg/kg	M	1.0E-08	mg/kg-day	5.0E-05	mg/kg-day	N/A	N/A	2.1E-04
	Iron	15672.00	mg/kg	15672.00	mg/kg	M	7.7E-03	mg/kg-day	3.0E-01	mg/kg/day	N/A	N/A	2.6E-02
	Manganese	142.21	mg/kg	142.21	mg/kg	M	7.0E-05	mg/kg-day	2.3E-02	mg/kg/day	N/A	N/A	3.0E-03
	Nickel	93.79	mg/kg	93.79	mg/kg	M	4.4E-04	mg/kg-day	2.0E-02	mg/kg-day	N/A	N/A	2.2E-02
	Vanadium	76.96	mg/kg	76.96	mg/kg	M	3.6E-04	mg/kg-day	7.0E-03	mg/kg/day	N/A	N/A	5.1E-02
Dermal	Arsenic	6.01	mg/kg	6.01	mg/kg	M	1.0E-05	mg/kg-day	2.9E-04	mg/kg/day	N/A	N/A	3.5E-02
	Benzo(a)Anthracene	0.45	mg/kg	0.45	mg/kg	M	2.3E-06	mg/kg-day	N/A	mg/kg/day	N/A	N/A	N/A
	Benzo(a)Pyrene	0.39	mg/kg	0.39	mg/kg	M	2.0E-06	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Benzo(b)Fluoranthene	0.71	mg/kg	0.71	mg/kg	M	3.7E-06	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Beryllium	0.35	mg/kg	0.35	mg/kg	M	1.8E-07	mg/kg-day	5.0E-05	mg/kg/day	N/A	N/A	3.7E-03
	Dieldrin	0.02	mg/kg	0.02	mg/kg	M	1.1E-07	mg/kg-day	4.0E-05	mg/kg/day	N/A	N/A	2.8E-03
	Iron	15672.00	mg/kg	15672.00	mg/kg	M	8.1E-03	mg/kg-day	1.5E-02	mg/kg/day	N/A	N/A	5.4E-01
	Manganese	142.21	mg/kg	142.21	mg/kg	M	7.4E-05	mg/kg-day	2.3E-02	mg/kg/day	N/A	N/A	3.2E-03
	Nickel	93.79	mg/kg	93.79	mg/kg	M	4.9E-05	mg/kg-day	2.0E-03	mg/kg-day	N/A	N/A	2.4E-02
	Vanadium	76.96	mg/kg	76.96	mg/kg	M	4.0E-05	mg/kg-day	1.4E-04	mg/kg-day	N/A	N/A	2.9E-01
												Total Hazard Index Across All Exposure Routes/Pathways	1.0E+00

M= Medium Specific

TABLE 8.5.RME
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
St. Juliens Creek - Landfill D (Site 4)

Scenario Timeframe: Current
Medium: Surface Soil
Exposure Medium: Surface Soil
Exposure Point: Onsite
Receptor Population: Trespasser
Receptor Age: Child

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
Ingestion	Arsenic	7.62	mg/kg	7.62	mg/kg	M	1.2E-06	mg/kg-day	1.5E+00	mg/kg-day -1	1.9E-06
	Benzo(a)Anthracene	1.40	mg/kg	1.40	mg/kg	M	2.3E-07	mg/kg-day	7.3E-01	mg/kg-day -1	1.7E-07
	Benzo(a)Pyrene	0.87	mg/kg	0.87	mg/kg	M	1.4E-07	mg/kg-day	7.3E+00	mg/kg-day -1	1.0E-06
	Benzo(b)Fluoranthene	1.90	mg/kg	1.90	mg/kg	M	3.1E-07	mg/kg-day	7.3E-01	mg/kg-day -1	2.3E-07
	Beryllium	1.10	mg/kg	1.10	mg/kg	M	1.8E-07	mg/kg-day	4.3E+00	mg/kg-day -1	7.7E-07
	Dieldrin	0.07	mg/kg	0.07	mg/kg	M	1.2E-08	mg/kg-day	1.6E+01	mg/kg-day -1	1.9E-07
	Iron	24405.55	mg/kg	24405.55	mg/kg	M	4.0E-03	mg/kg-day	N/A	N/A	N/A
	Manganese	248.32	mg/kg	248.32	mg/kg	M	4.0E-05	mg/kg-day	N/A	N/A	N/A
	Nickel	546.00	mg/kg	546.00	mg/kg	M	8.9E-05	mg/kg-day	N/A	N/A	N/A
	Vanadium	227.35	mg/kg	227.35	mg/kg	M	3.7E-05	mg/kg-day	N/A	N/A	N/A
Dermal	Arsenic	7.62	mg/kg	7.62	mg/kg	M	5.3E-07	mg/kg-day	1.6E+00	mg/kg-day -1	8.3E-07
	Benzo(a)Anthracene	1.40	mg/kg	1.40	mg/kg	M	3.0E-07	mg/kg-day	N/A	mg/kg-day -1	N/A
	Benzo(a)Pyrene	0.87	mg/kg	0.87	mg/kg	M	1.9E-07	mg/kg-day	N/A	mg/kg-day -1	N/A
	Benzo(b)Fluoranthene	1.90	mg/kg	1.90	mg/kg	M	4.1E-07	mg/kg-day	N/A	mg/kg-day -1	N/A
	Beryllium	1.10	mg/kg	1.10	mg/kg	M	2.4E-08	mg/kg-day	4.3E+02	mg/kg-day -1	1.0E-05
	Dieldrin	0.07	mg/kg	0.07	mg/kg	M	1.6E-08	mg/kg-day	2.0E+01	mg/kg-day -1	3.1E-07
	Iron	24405.55	mg/kg	24405.55	mg/kg	M	5.3E-04	mg/kg-day	N/A	N/A	N/A
	Manganese	248.32	mg/kg	248.32	mg/kg	M	5.4E-06	mg/kg-day	N/A	N/A	N/A
	Nickel	546.00	mg/kg	546.00	mg/kg	M	1.2E-05	mg/kg-day	N/A	N/A	N/A
	Vanadium	227.35	mg/kg	227.35	mg/kg	M	4.9E-06	mg/kg-day	N/A	N/A	N/A
										Total Risk Across All Exposure Routes/Pathways	1.6E-05

M= Medium Specific

TABLE 8.5.CT
CALCULATION OF CANCER RISKS
CENTRAL TENDENCIES
St. Juliens Creek - Landfill D (Site 4)

Scenario Timeframe: Current
Medium: Surface Soil
Exposure Medium: Surface Soil
Exposure Point: Onsite
Receptor Population: Trespasser
Receptor Age: Child

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
Ingestion	Arsenic	6.01	mg/kg	6.01	mg/kg	M	9.8E-07	mg/kg-day	1.5E+00	mg/kg-day -1	1.5E-06
	Benzo(a)Anthracene	0.45	mg/kg	0.45	mg/kg	M	7.3E-08	mg/kg-day	7.3E-01	mg/kg-day -1	5.3E-08
	Benzo(a)Pyrene	0.39	mg/kg	0.39	mg/kg	M	6.3E-08	mg/kg-day	7.3E+00	mg/kg-day -1	4.6E-07
	Benzo(b)Fluoranthene	0.71	mg/kg	0.71	mg/kg	M	1.2E-07	mg/kg-day	7.3E-01	mg/kg-day -1	8.4E-08
	Beryllium	0.35	mg/kg	0.35	mg/kg	M	5.8E-08	mg/kg-day	4.3E+00	mg/kg-day -1	2.5E-07
	Dieldrin	0.02	mg/kg	0.02	mg/kg	M	3.5E-09	mg/kg-day	1.6E+01	mg/kg-day -1	5.6E-08
	Iron	15672.00	mg/kg	15672.00	mg/kg	M	2.6E-03	mg/kg-day	N/A	N/A	N/A
	Manganese	142.21	mg/kg	142.21	mg/kg	M	2.3E-05	mg/kg-day	N/A	N/A	N/A
	Nickel	93.79	mg/kg	93.79	mg/kg	M	1.5E-05	mg/kg-day	N/A	N/A	N/A
	Vanadium	76.96	mg/kg	76.96	mg/kg	M	1.3E-05	mg/kg-day	N/A	N/A	N/A
Dermal	Arsenic	6.01	mg/kg	6.01	mg/kg	M	4.1E-07	mg/kg-day	1.6E+00	mg/kg-day -1	6.6E-07
	Benzo(a)Anthracene	0.45	mg/kg	0.45	mg/kg	M	9.7E-08	mg/kg-day	N/A	mg/kg-day -1	N/A
	Benzo(a)Pyrene	0.39	mg/kg	0.39	mg/kg	M	8.4E-08	mg/kg-day	N/A	mg/kg-day -1	N/A
	Benzo(b)Fluoranthene	0.71	mg/kg	0.71	mg/kg	M	1.5E-07	mg/kg-day	N/A	mg/kg-day -1	N/A
	Beryllium	0.35	mg/kg	0.35	mg/kg	M	7.6E-09	mg/kg-day	4.3E+02	mg/kg-day -1	3.3E-06
	Dieldrin	0.02	mg/kg	0.02	mg/kg	M	4.6E-09	mg/kg-day	2.0E+01	mg/kg-day -1	9.2E-08
	Iron	15672.00	mg/kg	15672.00	mg/kg	M	3.4E-04	mg/kg-day	N/A	N/A	N/A
	Manganese	142.21	mg/kg	142.21	mg/kg	M	3.1E-06	mg/kg-day	N/A	N/A	N/A
	Nickel	93.79	mg/kg	93.79	mg/kg	M	2.0E-06	mg/kg-day	N/A	N/A	N/A
	Vanadium	76.96	mg/kg	76.96	mg/kg	M	1.7E-06	mg/kg-day	N/A	N/A	N/A
										Total Risk Across All Exposure Routes/Pathways	6.4E-06

M= Medium Specific

TABLE 8.6.RME
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
St. Juliens Creek - Landfill D (Site 4)

Scenario Timeframe: Current
Medium: Surface Soil
Exposure Medium: Surface Soil
Exposure Point: Onsite
Receptor Population: Trespasser
Receptor Age: Adolescent

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
Ingestion	Arsenic	7.62	mg/kg	7.62	mg/kg	M	3.8E-07	mg/kg-day	1.5E+00	mg/kg-day -1	5.7E-07
	Benzo(a)Anthracene	1.40	mg/kg	1.40	mg/kg	M	7.0E-08	mg/kg-day	7.3E-01	mg/kg-day -1	5.1E-08
	Benzo(a)Pyrene	0.87	mg/kg	0.87	mg/kg	M	4.3E-08	mg/kg-day	7.3E+00	mg/kg-day -1	3.2E-07
	Benzo(b)Fluoranthene	1.90	mg/kg	1.90	mg/kg	M	9.5E-08	mg/kg-day	7.3E-01	mg/kg-day -1	6.9E-08
	Beryllium	1.10	mg/kg	1.10	mg/kg	M	5.5E-08	mg/kg-day	4.3E+00	mg/kg-day -1	2.4E-07
	Dieldrin	0.07	mg/kg	0.07	mg/kg	M	3.6E-09	mg/kg-day	1.6E+01	mg/kg-day -1	5.7E-08
	Iron	24405.55	mg/kg	24405.55	mg/kg	M	1.2E-03	mg/kg-day	N/A	N/A	N/A
	Manganese	248.32	mg/kg	248.32	mg/kg	M	1.2E-05	mg/kg-day	N/A	N/A	N/A
	Nickel	546.00	mg/kg	546.00	mg/kg	M	2.7E-05	mg/kg-day	N/A	N/A	N/A
	Vanadium	227.35	mg/kg	227.35	mg/kg	M	1.1E-05	mg/kg-day	N/A	N/A	N/A
Dermal	Arsenic	7.62	mg/kg	7.62	mg/kg	M	4.1E-07	mg/kg-day	1.6E+00	mg/kg-day -1	6.5E-07
	Benzo(a)Anthracene	1.40	mg/kg	1.40	mg/kg	M	7.5E-08	mg/kg-day	N/A	mg/kg-day -1	N/A
	Benzo(a)Pyrene	0.87	mg/kg	0.87	mg/kg	M	4.7E-08	mg/kg-day	N/A	mg/kg-day -1	N/A
	Benzo(b)Fluoranthene	1.90	mg/kg	1.90	mg/kg	M	1.0E-07	mg/kg-day	N/A	mg/kg-day -1	N/A
	Beryllium	1.10	mg/kg	1.10	mg/kg	M	5.9E-08	mg/kg-day	4.3E+02	mg/kg-day -1	2.5E-05
	Dieldrin	0.07	mg/kg	0.07	mg/kg	M	3.9E-09	mg/kg-day	2.0E+01	mg/kg-day -1	7.7E-08
	Iron	24405.55	mg/kg	24405.55	mg/kg	M	1.3E-03	mg/kg-day	N/A	N/A	N/A
	Manganese	248.32	mg/kg	248.32	mg/kg	M	1.3E-05	mg/kg-day	N/A	N/A	N/A
	Nickel	546.00	mg/kg	546.00	mg/kg	M	2.9E-05	mg/kg-day	N/A	N/A	N/A
	Vanadium	227.35	mg/kg	227.35	mg/kg	M	1.2E-05	mg/kg-day	N/A	N/A	N/A
										Total Risk Across All Exposure Routes/Pathways	2.7E-05

M= Medium Specific

TABLE 8.6.CT
CALCULATION OF CANCER RISKS
CENTRAL TENDENCIES
St. Juliens Creek - Landfill D (Site 4)

Scenario Timeframe: Current
Medium: Surface Soil
Exposure Medium: Surface Soil
Exposure Point: Onsite
Receptor Population: Trespasser
Receptor Age: Adolescent

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
Ingestion	Arsenic	6.01	mg/kg	6.01	mg/kg	M	3.0E-07	mg/kg-day	1.5E+00	mg/kg-day -1	4.5E-07
	Benzo(a)Anthracene	0.45	mg/kg	0.45	mg/kg	M	2.2E-08	mg/kg-day	7.3E-01	mg/kg-day -1	1.6E-08
	Benzo(a)Pyrene	0.39	mg/kg	0.39	mg/kg	M	1.9E-08	mg/kg-day	7.3E+00	mg/kg-day -1	1.4E-07
	Benzo(b)Fluoranthene	0.71	mg/kg	0.71	mg/kg	M	3.5E-08	mg/kg-day	7.3E-01	mg/kg-day -1	2.6E-08
	Beryllium	0.35	mg/kg	0.35	mg/kg	M	1.8E-08	mg/kg-day	4.3E+00	mg/kg-day -1	7.6E-08
	Dieldrin	0.02	mg/kg	0.02	mg/kg	M	1.1E-09	mg/kg-day	1.6E+01	mg/kg-day -1	1.7E-08
	Iron	15672.00	mg/kg	15672.00	mg/kg	M	7.8E-04	mg/kg-day	N/A	N/A	N/A
	Manganese	142.21	mg/kg	142.21	mg/kg	M	7.1E-06	mg/kg-day	N/A	N/A	N/A
	Nickel	93.79	mg/kg	93.79	mg/kg	M	4.7E-06	mg/kg-day	N/A	N/A	N/A
	Vanadium	76.96	mg/kg	76.96	mg/kg	M	3.8E-06	mg/kg-day	N/A	N/A	N/A
Dermal	Arsenic	6.01	mg/kg	6.01	mg/kg	M	3.2E-07	mg/kg-day	1.6E+00	mg/kg-day -1	5.1E-07
	Benzo(a)Anthracene	0.45	mg/kg	0.45	mg/kg	M	2.4E-08	mg/kg-day	N/A	mg/kg-day -1	N/A
	Benzo(a)Pyrene	0.39	mg/kg	0.39	mg/kg	M	2.1E-08	mg/kg-day	N/A	mg/kg-day -1	N/A
	Benzo(b)Fluoranthene	0.71	mg/kg	0.71	mg/kg	M	3.8E-08	mg/kg-day	N/A	mg/kg-day -1	N/A
	Beryllium	0.35	mg/kg	0.35	mg/kg	M	1.9E-08	mg/kg-day	4.3E+02	mg/kg-day -1	8.2E-06
	Dieldrin	0.02	mg/kg	0.02	mg/kg	M	1.2E-09	mg/kg-day	2.0E+01	mg/kg-day -1	2.3E-08
	Iron	15672.00	mg/kg	15672.00	mg/kg	M	8.4E-04	mg/kg-day	N/A	N/A	N/A
	Manganese	142.21	mg/kg	142.21	mg/kg	M	7.7E-06	mg/kg-day	N/A	N/A	N/A
	Nickel	93.79	mg/kg	93.79	mg/kg	M	5.0E-06	mg/kg-day	N/A	N/A	N/A
	Vanadium	76.96	mg/kg	76.96	mg/kg	M	4.1E-06	mg/kg-day	N/A	N/A	N/A
										Total Risk Across All Exposure Routes/Pathways	9.4E-06

M= Medium Specific

TABLE 8.7.RME
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
St. Juliens Creek - Landfill D (Site 4)

Scenario Timeframe: Current
Medium: Surface Soil
Exposure Medium: Surface Soil
Exposure Point: Onsite
Receptor Population: Trespasser
Receptor Age: Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
Ingestion	Arsenic	7.62	mg/kg	7.62	mg/kg	M	5.3E-07	mg/kg-day	1.5E+00	mg/kg-day -1	8.0E-07
	Benzo(a)Anthracene	1.40	mg/kg	1.40	mg/kg	M	9.8E-08	mg/kg-day	7.3E-01	mg/kg-day -1	7.1E-08
	Benzo(a)Pyrene	0.87	mg/kg	0.87	mg/kg	M	6.1E-08	mg/kg-day	7.3E+00	mg/kg-day -1	4.4E-07
	Benzo(b)Fluoranthene	1.90	mg/kg	1.90	mg/kg	M	1.3E-07	mg/kg-day	7.3E-01	mg/kg-day -1	9.7E-08
	Beryllium	1.10	mg/kg	1.10	mg/kg	M	7.7E-08	mg/kg-day	4.3E+00	mg/kg-day -1	3.3E-07
	Dieldrin	0.07	mg/kg	0.07	mg/kg	M	5.0E-09	mg/kg-day	1.6E+01	mg/kg-day -1	8.0E-08
	Iron	24405.55	mg/kg	24405.55	mg/kg	M	1.7E-03	mg/kg-day	N/A	N/A	N/A
	Manganese	248.32	mg/kg	248.32	mg/kg	M	1.7E-05	mg/kg-day	N/A	N/A	N/A
	Nickel	546.00	mg/kg	546.00	mg/kg	M	3.8E-05	mg/kg-day	N/A	N/A	N/A
	Vanadium	227.35	mg/kg	227.35	mg/kg	M	1.6E-05	mg/kg-day	N/A	N/A	N/A
Dermal	Arsenic	7.62	mg/kg	7.62	mg/kg	M	9.9E-07	mg/kg-day	1.6E+00	mg/kg-day -1	1.6E-06
	Benzo(a)Anthracene	1.40	mg/kg	1.40	mg/kg	M	1.8E-07	mg/kg-day	N/A	mg/kg-day -1	N/A
	Benzo(a)Pyrene	0.87	mg/kg	0.87	mg/kg	M	1.1E-07	mg/kg-day	N/A	mg/kg-day -1	N/A
	Benzo(b)Fluoranthene	1.90	mg/kg	1.90	mg/kg	M	2.5E-07	mg/kg-day	N/A	mg/kg-day -1	N/A
	Beryllium	1.10	mg/kg	1.10	mg/kg	M	1.4E-07	mg/kg-day	4.3E+02	mg/kg-day -1	6.1E-05
	Dieldrin	0.07	mg/kg	0.07	mg/kg	M	9.3E-09	mg/kg-day	2.0E+01	mg/kg-day -1	1.9E-07
	Iron	24405.55	mg/kg	24405.55	mg/kg	M	3.2E-03	mg/kg-day	N/A	N/A	N/A
	Manganese	248.32	mg/kg	248.32	mg/kg	M	3.2E-05	mg/kg-day	N/A	N/A	N/A
	Nickel	546.00	mg/kg	546.00	mg/kg	M	7.1E-05	mg/kg-day	N/A	N/A	N/A
	Vanadium	227.35	mg/kg	227.35	mg/kg	M	2.9E-05	mg/kg-day	N/A	N/A	N/A
										Total Risk Across All Exposure Routes/Pathways	6.5E-05

M= Medium Specific

TABLE 8.7.CT
CALCULATION OF CANCER RISKS
CENTRAL TENDENCIES
St. Juliens Creek - Landfill D (Site 4)

Scenario Timeframe: Current
Medium: Surface Soil
Exposure Medium: Surface Soil
Exposure Point: Onsite
Receptor Population: Trespasser
Receptor Age: Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
Ingestion	Arsenic	6.01	mg/kg	6.01	mg/kg	M	4.2E-07	mg/kg-day	1.5E+00	mg/kg-day -1	6.3E-07
	Benzo(a)Anthracene	0.45	mg/kg	0.45	mg/kg	M	3.1E-08	mg/kg-day	7.3E-01	mg/kg-day -1	2.3E-08
	Benzo(a)Pyrene	0.39	mg/kg	0.39	mg/kg	M	2.7E-08	mg/kg-day	7.3E+00	mg/kg-day -1	2.0E-07
	Benzo(b)Fluoranthene	0.71	mg/kg	0.71	mg/kg	M	5.0E-08	mg/kg-day	7.3E-01	mg/kg-day -1	3.6E-08
	Beryllium	0.35	mg/kg	0.35	mg/kg	M	2.5E-08	mg/kg-day	4.3E+00	mg/kg-day -1	1.1E-07
	Dieldrin	0.02	mg/kg	0.02	mg/kg	M	1.5E-09	mg/kg-day	1.6E+01	mg/kg-day -1	2.4E-08
	Iron	15672.00	mg/kg	15672.00	mg/kg	M	1.1E-03	mg/kg-day	N/A	N/A	N/A
	Manganese	142.21	mg/kg	142.21	mg/kg	M	9.9E-06	mg/kg-day	N/A	N/A	N/A
	Nickel	93.79	mg/kg	93.79	mg/kg	M	6.5E-06	mg/kg-day	N/A	N/A	N/A
	Vanadium	76.96	mg/kg	76.96	mg/kg	M	5.4E-06	mg/kg-day	N/A	N/A	N/A
Dermal	Arsenic	6.01	mg/kg	6.01	mg/kg	M	7.8E-07	mg/kg-day	1.6E+00	mg/kg-day -1	1.2E-06
	Benzo(a)Anthracene	0.45	mg/kg	0.45	mg/kg	M	5.8E-08	mg/kg-day	N/A	mg/kg-day -1	N/A
	Benzo(a)Pyrene	0.39	mg/kg	0.39	mg/kg	M	5.0E-08	mg/kg-day	N/A	mg/kg-day -1	N/A
	Benzo(b)Fluoranthene	0.71	mg/kg	0.71	mg/kg	M	9.2E-08	mg/kg-day	N/A	mg/kg-day -1	N/A
	Beryllium	0.35	mg/kg	0.35	mg/kg	M	4.6E-08	mg/kg-day	4.3E+02	mg/kg-day -1	2.0E-05
	Dieldrin	0.02	mg/kg	0.02	mg/kg	M	2.8E-09	mg/kg-day	2.0E+01	mg/kg-day -1	5.5E-08
	Iron	15672.00	mg/kg	15672.00	mg/kg	M	2.0E-03	mg/kg-day	N/A	N/A	N/A
	Manganese	142.21	mg/kg	142.21	mg/kg	M	1.8E-05	mg/kg-day	N/A	N/A	N/A
	Nickel	93.79	mg/kg	93.79	mg/kg	M	1.2E-05	mg/kg-day	N/A	N/A	N/A
	Vanadium	76.96	mg/kg	76.96	mg/kg	M	1.0E-05	mg/kg-day	N/A	N/A	N/A
										Total Risk Across All Exposure Routes/Pathways	2.2E-05

M= Medium Specific

TABLE 8.8.RME
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
St. Juliens Creek - Landfill D (Site 4)

Scenario Timeframe: Future
Medium: Surface Soil
Exposure Medium: Surface Soil
Exposure Point: Onsite
Receptor Population: Resident
Receptor Age: Child

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
Ingestion	Arsenic	7.62	mg/kg	7.62	mg/kg	M	8.4E-06	mg/kg-day	1.5E+00	mg/kg-day -1	1.3E-05
	Benzo(a)Anthracene	1.40	mg/kg	1.40	mg/kg	M	1.5E-06	mg/kg-day	7.3E-01	mg/kg-day -1	1.1E-06
	Benzo(a)Pyrene	0.87	mg/kg	0.87	mg/kg	M	9.5E-07	mg/kg-day	7.3E+00	mg/kg-day -1	7.0E-06
	Benzo(b)Fluoranthene	1.90	mg/kg	1.90	mg/kg	M	2.1E-06	mg/kg-day	7.3E-01	mg/kg-day -1	1.5E-06
	Beryllium	1.10	mg/kg	1.10	mg/kg	M	1.2E-06	mg/kg-day	4.3E+00	mg/kg-day -1	5.2E-06
	Dieldrin	0.07	mg/kg	0.07	mg/kg	M	7.9E-08	mg/kg-day	1.6E+01	mg/kg-day -1	1.3E-06
	Iron	24405.55	mg/kg	24405.55	mg/kg	M	2.7E-02	mg/kg-day	N/A	N/A	N/A
	Manganese	248.32	mg/kg	248.32	mg/kg	M	2.7E-04	mg/kg-day	N/A	N/A	N/A
	Nickel	546.00	mg/kg	546.00	mg/kg	M	6.0E-04	mg/kg-day	N/A	N/A	N/A
	Vanadium	227.35	mg/kg	227.35	mg/kg	M	2.5E-04	mg/kg-day	N/A	N/A	N/A
Dermal	Arsenic	7.62	mg/kg	7.62	mg/kg	M	3.5E-06	mg/kg-day	1.6E+00	mg/kg-day -1	5.6E-06
	Benzo(a)Anthracene	1.40	mg/kg	1.40	mg/kg	M	2.0E-06	mg/kg-day	N/A	mg/kg-day -1	N/A
	Benzo(a)Pyrene	0.87	mg/kg	0.87	mg/kg	M	1.3E-06	mg/kg-day	N/A	mg/kg-day -1	N/A
	Benzo(b)Fluoranthene	1.90	mg/kg	1.90	mg/kg	M	2.8E-06	mg/kg-day	N/A	mg/kg-day -1	N/A
	Beryllium	1.10	mg/kg	1.10	mg/kg	M	1.6E-07	mg/kg-day	4.3E+02	mg/kg-day -1	6.9E-05
	Dieldrin	0.07	mg/kg	0.07	mg/kg	M	1.0E-07	mg/kg-day	2.0E+01	mg/kg-day -1	2.1E-06
	Iron	24405.55	mg/kg	24405.55	mg/kg	M	3.5E-03	mg/kg-day	N/A	N/A	N/A
	Manganese	248.32	mg/kg	248.32	mg/kg	M	3.6E-05	mg/kg-day	N/A	N/A	N/A
	Nickel	546.00	mg/kg	546.00	mg/kg	M	7.9E-05	mg/kg-day	N/A	N/A	N/A
	Vanadium	227.35	mg/kg	227.35	mg/kg	M	3.3E-05	mg/kg-day	N/A	N/A	N/A
										Total Risk Across All Exposure Routes/Pathways	1.0E-04

M= Medium Specific

TABLE 8.8.CT
CALCULATION OF CANCER RISKS
CENTRAL TENDENCIES
St. Juliens Creek - Landfill D (Site 4)

Scenario Timeframe: Future
Medium: Surface Soil
Exposure Medium: Surface Soil
Exposure Point: Onsite
Receptor Population: Resident
Receptor Age: Child

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
Ingestion	Arsenic	6.01	mg/kg	6.01	mg/kg	M	6.6E-06	mg/kg-day	1.5E+00	mg/kg-day -1	9.9E-06
	Benzo(a)Anthracene	0.45	mg/kg	0.45	mg/kg	M	4.9E-07	mg/kg-day	7.3E-01	mg/kg-day -1	3.6E-07
	Benzo(a)Pyrene	0.39	mg/kg	0.39	mg/kg	M	4.3E-07	mg/kg-day	7.3E+00	mg/kg-day -1	3.1E-06
	Benzo(b)Fluoranthene	0.71	mg/kg	0.71	mg/kg	M	7.8E-07	mg/kg-day	7.3E-01	mg/kg-day -1	5.7E-07
	Beryllium	0.35	mg/kg	0.35	mg/kg	M	3.9E-07	mg/kg-day	4.3E+00	mg/kg-day -1	1.7E-06
	Dieldrin	0.02	mg/kg	0.02	mg/kg	M	2.3E-08	mg/kg-day	1.6E+01	mg/kg-day -1	3.8E-07
	Iron	15672.00	mg/kg	15672.00	mg/kg	M	1.7E-02	mg/kg-day	N/A	N/A	N/A
	Manganese	142.21	mg/kg	142.21	mg/kg	M	1.6E-04	mg/kg-day	N/A	N/A	N/A
	Nickel	93.79	mg/kg	93.79	mg/kg	M	1.0E-04	mg/kg-day	N/A	N/A	N/A
	Vanadium	76.96	mg/kg	76.96	mg/kg	M	8.4E-05	mg/kg-day	N/A	N/A	N/A
Dermal	Arsenic	6.01	mg/kg	6.01	mg/kg	M	2.8E-06	mg/kg-day	1.6E+00	mg/kg-day -1	4.4E-06
	Benzo(a)Anthracene	0.45	mg/kg	0.45	mg/kg	M	6.5E-07	mg/kg-day	N/A	mg/kg-day -1	N/A
	Benzo(a)Pyrene	0.39	mg/kg	0.39	mg/kg	M	5.6E-07	mg/kg-day	N/A	mg/kg-day -1	N/A
	Benzo(b)Fluoranthene	0.71	mg/kg	0.71	mg/kg	M	1.0E-06	mg/kg-day	N/A	mg/kg-day -1	N/A
	Beryllium	0.35	mg/kg	0.35	mg/kg	M	5.1E-08	mg/kg-day	4.3E+02	mg/kg-day -1	2.2E-05
	Dieldrin	0.02	mg/kg	0.02	mg/kg	M	3.1E-08	mg/kg-day	2.0E+01	mg/kg-day -1	6.2E-07
	Iron	15672.00	mg/kg	15672.00	mg/kg	M	2.3E-03	mg/kg-day	N/A	N/A	N/A
	Manganese	142.21	mg/kg	142.21	mg/kg	M	2.1E-05	mg/kg-day	N/A	N/A	N/A
	Nickel	93.79	mg/kg	93.79	mg/kg	M	1.4E-05	mg/kg-day	N/A	N/A	N/A
	Vanadium	76.96	mg/kg	76.96	mg/kg	M	1.1E-05	mg/kg-day	N/A	N/A	N/A
										Total Risk Across All Exposure Routes/Pathways	4.3E-05

M= Medium Specific

TABLE 8.9.RME
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
St. Juliens Creek - Landfill D (Site 4)

Scenario Timeframe: Future
Medium: Surface Soil
Exposure Medium: Surface Soil
Exposure Point: Onsite
Receptor Population: Resident
Receptor Age: Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
Ingestion	Arsenic	7.62	mg/kg	7.62	mg/kg	M	3.6E-06	mg/kg-day	1.5E+00	mg/kg-day -1	5.4E-06
	Benzo(a)Anthracene	1.40	mg/kg	1.40	mg/kg	M	6.6E-07	mg/kg-day	7.3E-01	mg/kg-day -1	4.8E-07
	Benzo(a)Pyrene	0.87	mg/kg	0.87	mg/kg	M	4.1E-07	mg/kg-day	7.3E+00	mg/kg-day -1	3.0E-06
	Benzo(b)Fluoranthene	1.90	mg/kg	1.90	mg/kg	M	8.9E-07	mg/kg-day	7.3E-01	mg/kg-day -1	6.5E-07
	Beryllium	1.10	mg/kg	1.10	mg/kg	M	5.2E-07	mg/kg-day	4.3E+00	mg/kg-day -1	2.2E-06
	Dieldrin	0.07	mg/kg	0.07	mg/kg	M	3.4E-08	mg/kg-day	1.6E+01	mg/kg-day -1	5.4E-07
	Iron	24405.55	mg/kg	24405.55	mg/kg	M	1.1E-02	mg/kg-day	N/A	N/A	N/A
	Manganese	248.32	mg/kg	248.32	mg/kg	M	1.2E-04	mg/kg-day	N/A	N/A	N/A
	Nickel	546.00	mg/kg	546.00	mg/kg	M	2.6E-04	mg/kg-day	N/A	N/A	N/A
	Vanadium	227.35	mg/kg	227.35	mg/kg	M	1.1E-04	mg/kg-day	N/A	N/A	N/A
Dermal	Arsenic	7.62	mg/kg	7.62	mg/kg	M	6.6E-06	mg/kg-day	1.6E+00	mg/kg-day -1	1.0E-05
	Benzo(a)Anthracene	1.40	mg/kg	1.40	mg/kg	M	3.8E-06	mg/kg-day	N/A	mg/kg-day -1	N/A
	Benzo(a)Pyrene	0.87	mg/kg	0.87	mg/kg	M	2.4E-06	mg/kg-day	N/A	mg/kg-day -1	N/A
	Benzo(b)Fluoranthene	1.90	mg/kg	1.90	mg/kg	M	5.2E-06	mg/kg-day	N/A	mg/kg-day -1	N/A
	Beryllium	1.10	mg/kg	1.10	mg/kg	M	3.0E-07	mg/kg-day	4.3E+02	mg/kg-day -1	1.3E-04
	Dieldrin	0.07	mg/kg	0.07	mg/kg	M	2.0E-07	mg/kg-day	2.0E+01	mg/kg-day -1	3.9E-06
	Iron	24405.55	mg/kg	24405.55	mg/kg	M	6.6E-03	mg/kg-day	N/A	N/A	N/A
	Manganese	248.32	mg/kg	248.32	mg/kg	M	6.8E-05	mg/kg-day	N/A	N/A	N/A
	Nickel	546.00	mg/kg	546.00	mg/kg	M	1.5E-04	mg/kg-day	N/A	N/A	N/A
	Vanadium	227.35	mg/kg	227.35	mg/kg	M	6.2E-05	mg/kg-day	N/A	N/A	N/A
										Total Risk Across All Exposure Routes/Pathways	1.6E-04

M= Medium Specific

TABLE 8.9.CT
CALCULATION OF CANCER RISKS
CENTRAL TENDENCIES
St. Juliens Creek - Landfill D (Site 4)

Scenario Timeframe: Future
Medium: Surface Soil
Exposure Medium: Surface Soil
Exposure Point: Onsite
Receptor Population: Resident
Receptor Age: Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
Ingestion	Arsenic	6.01	mg/kg	6.01	mg/kg	M	2.8E-06	mg/kg-day	1.5E+00	mg/kg-day -1	4.2E-06
	Benzo(a)Anthracene	0.45	mg/kg	0.45	mg/kg	M	2.1E-07	mg/kg-day	7.3E-01	mg/kg-day -1	1.5E-07
	Benzo(a)Pyrene	0.39	mg/kg	0.39	mg/kg	M	1.8E-07	mg/kg-day	7.3E+00	mg/kg-day -1	1.3E-06
	Benzo(b)Fluoranthene	0.71	mg/kg	0.71	mg/kg	M	3.3E-07	mg/kg-day	7.3E-01	mg/kg-day -1	2.4E-07
	Beryllium	0.35	mg/kg	0.35	mg/kg	M	1.7E-07	mg/kg-day	4.3E+00	mg/kg-day -1	7.1E-07
	Dieldrin	0.02	mg/kg	0.02	mg/kg	M	1.0E-08	mg/kg-day	1.6E+01	mg/kg-day -1	1.6E-07
	Iron	15672.00	mg/kg	15672.00	mg/kg	M	7.4E-03	mg/kg-day	N/A	N/A	N/A
	Manganese	142.21	mg/kg	142.21	mg/kg	M	6.7E-05	mg/kg-day	N/A	N/A	N/A
	Nickel	93.79	mg/kg	93.79	mg/kg	M	4.4E-05	mg/kg-day	N/A	N/A	N/A
	Vanadium	76.96	mg/kg	76.96	mg/kg	M	3.6E-05	mg/kg-day	N/A	N/A	N/A
Dermal	Arsenic	6.01	mg/kg	6.01	mg/kg	M	5.2E-06	mg/kg-day	1.6E+00	mg/kg-day -1	8.3E-06
	Benzo(a)Anthracene	0.45	mg/kg	0.45	mg/kg	M	1.2E-06	mg/kg-day	N/A	mg/kg-day -1	N/A
	Benzo(a)Pyrene	0.39	mg/kg	0.39	mg/kg	M	1.1E-06	mg/kg-day	N/A	mg/kg-day -1	N/A
	Benzo(b)Fluoranthene	0.71	mg/kg	0.71	mg/kg	M	1.9E-06	mg/kg-day	N/A	mg/kg-day -1	N/A
	Beryllium	0.35	mg/kg	0.35	mg/kg	M	9.6E-08	mg/kg-day	4.3E+02	mg/kg-day -1	4.1E-05
	Dieldrin	0.02	mg/kg	0.02	mg/kg	M	5.8E-08	mg/kg-day	2.0E+01	mg/kg-day -1	1.2E-06
	Iron	15672.00	mg/kg	15672.00	mg/kg	M	4.3E-03	mg/kg-day	N/A	N/A	N/A
	Manganese	142.21	mg/kg	142.21	mg/kg	M	3.9E-05	mg/kg-day	N/A	N/A	N/A
	Nickel	93.79	mg/kg	93.79	mg/kg	M	2.6E-05	mg/kg-day	N/A	N/A	N/A
	Vanadium	76.96	mg/kg	76.96	mg/kg	M	2.1E-05	mg/kg-day	N/A	N/A	N/A
										Total Risk Across All Exposure Routes/Pathways	5.8E-05

M= Medium Specific

TABLE 8.10.RME
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
St. Juliens Creek - Landfill D (Site 4)

Scenario Timeframe: Future
Medium: Surface Soil
Exposure Medium: Surface Soil
Exposure Point: Onsite
Receptor Population: Construction Worker
Receptor Age: Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
Ingestion	Arsenic	7.62	mg/kg	7.62	mg/kg	M	2.6E-07	mg/kg-day	1.5E+00	mg/kg-day -1	3.8E-07
	Benzo(a)Anthracene	1.40	mg/kg	1.40	mg/kg	M	4.7E-08	mg/kg-day	7.3E-01	mg/kg-day -1	3.4E-08
	Benzo(a)Pyrene	0.87	mg/kg	0.87	mg/kg	M	2.9E-08	mg/kg-day	7.3E+00	mg/kg-day -1	2.1E-07
	Benzo(b)Fluoranthene	1.90	mg/kg	1.90	mg/kg	M	6.4E-08	mg/kg-day	7.3E-01	mg/kg-day -1	4.7E-08
	Beryllium	1.10	mg/kg	1.10	mg/kg	M	3.7E-08	mg/kg-day	4.3E+00	mg/kg-day -1	1.6E-07
	Dieldrin	0.07	mg/kg	0.07	mg/kg	M	2.4E-09	mg/kg-day	1.6E+01	mg/kg-day -1	3.9E-08
	Iron	24405.55	mg/kg	24405.55	mg/kg	M	8.2E-04	mg/kg-day	N/A	N/A	N/A
	Manganese	248.32	mg/kg	248.32	mg/kg	M	8.3E-06	mg/kg-day	N/A	N/A	N/A
	Nickel	546.00	mg/kg	546.00	mg/kg	M	1.8E-05	mg/kg-day	N/A	N/A	N/A
	Vanadium	227.35	mg/kg	227.35	mg/kg	M	7.6E-06	mg/kg-day	N/A	N/A	N/A
Dermal	Arsenic	7.62	mg/kg	7.62	mg/kg	M	9.0E-08	mg/kg-day	1.6E+00	mg/kg-day -1	1.4E-07
	Benzo(a)Anthracene	1.40	mg/kg	1.40	mg/kg	M	5.2E-08	mg/kg-day	N/A	mg/kg-day -1	N/A
	Benzo(a)Pyrene	0.87	mg/kg	0.87	mg/kg	M	3.2E-08	mg/kg-day	N/A	mg/kg-day -1	N/A
	Benzo(b)Fluoranthene	1.90	mg/kg	1.90	mg/kg	M	7.0E-08	mg/kg-day	N/A	mg/kg-day -1	N/A
	Beryllium	1.10	mg/kg	1.10	mg/kg	M	4.1E-09	mg/kg-day	4.3E+02	mg/kg-day -1	1.8E-06
	Dieldrin	0.07	mg/kg	0.07	mg/kg	M	2.7E-09	mg/kg-day	2.0E+01	mg/kg-day -1	5.3E-08
	Iron	24405.55	mg/kg	24405.55	mg/kg	M	9.0E-05	mg/kg-day	N/A	N/A	N/A
	Manganese	248.32	mg/kg	248.32	mg/kg	M	9.2E-07	mg/kg-day	N/A	N/A	N/A
	Nickel	546.00	mg/kg	546.00	mg/kg	M	2.0E-06	mg/kg-day	N/A	N/A	N/A
	Vanadium	227.35	mg/kg	227.35	mg/kg	M	8.4E-07	mg/kg-day	N/A	N/A	N/A
										Total Risk Across All Exposure Routes/Pathways	2.8E-06

M= Medium Specific

TABLE 8.10.CT
CALCULATION OF CANCER RISKS
CENTRAL TENDENCIES
St. Juliens Creek - Landfill D (Site 4)

Scenario Timeframe: Future
Medium: Surface Soil
Exposure Medium: Surface Soil
Exposure Point: Onsite
Receptor Population: Construction Worker
Receptor Age: Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
Ingestion	Arsenic	6.01	mg/kg	6.01	mg/kg	M	2.0E-07	mg/kg-day	1.5E+00	mg/kg-day -1	3.0E-07
	Benzo(a)Anthracene	0.45	mg/kg	0.45	mg/kg	M	1.5E-08	mg/kg-day	7.3E-01	mg/kg-day -1	1.1E-08
	Benzo(a)Pyrene	0.39	mg/kg	0.39	mg/kg	M	1.3E-08	mg/kg-day	7.3E+00	mg/kg-day -1	9.5E-08
	Benzo(b)Fluoranthene	0.71	mg/kg	0.71	mg/kg	M	2.4E-08	mg/kg-day	7.3E-01	mg/kg-day -1	1.7E-08
	Beryllium	0.35	mg/kg	0.35	mg/kg	M	1.2E-08	mg/kg-day	4.3E+00	mg/kg-day -1	5.1E-08
	Dieldrin	0.02	mg/kg	0.02	mg/kg	M	7.2E-10	mg/kg-day	1.6E+01	mg/kg-day -1	1.1E-08
	Iron	15672.00	mg/kg	15672.00	mg/kg	M	5.3E-04	mg/kg-day	N/A	N/A	N/A
	Manganese	142.21	mg/kg	142.21	mg/kg	M	4.8E-06	mg/kg-day	N/A	N/A	N/A
	Nickel	93.79	mg/kg	93.79	mg/kg	M	3.1E-06	mg/kg-day	N/A	N/A	N/A
	Vanadium	76.96	mg/kg	76.96	mg/kg	M	2.6E-06	mg/kg-day	N/A	N/A	N/A
Dermal	Arsenic	6.01	mg/kg	6.01	mg/kg	M	7.1E-08	mg/kg-day	1.6E+00	mg/kg-day -1	1.1E-07
	Benzo(a)Anthracene	0.45	mg/kg	0.45	mg/kg	M	1.7E-08	mg/kg-day	N/A	mg/kg-day -1	N/A
	Benzo(a)Pyrene	0.39	mg/kg	0.39	mg/kg	M	1.4E-08	mg/kg-day	N/A	mg/kg-day -1	N/A
	Benzo(b)Fluoranthene	0.71	mg/kg	0.71	mg/kg	M	2.6E-08	mg/kg-day	N/A	mg/kg-day -1	N/A
	Beryllium	0.35	mg/kg	0.35	mg/kg	M	1.3E-09	mg/kg-day	4.3E+02	mg/kg-day -1	5.6E-07
	Dieldrin	0.02	mg/kg	0.02	mg/kg	M	7.9E-10	mg/kg-day	2.0E+01	mg/kg-day -1	1.6E-08
	Iron	15672.00	mg/kg	15672.00	mg/kg	M	5.8E-05	mg/kg-day	N/A	N/A	N/A
	Manganese	142.21	mg/kg	142.21	mg/kg	M	5.3E-07	mg/kg-day	N/A	N/A	N/A
	Nickel	93.79	mg/kg	93.79	mg/kg	M	3.5E-07	mg/kg-day	N/A	N/A	N/A
	Vanadium	76.96	mg/kg	76.96	mg/kg	M	2.9E-07	mg/kg-day	N/A	N/A	N/A
										Total Risk Across All Exposure Routes/Pathways	1.2E-06

M= Medium Specific

TABLE 8.11.RME
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
St. Juliens Creek - Landfill D (Site 4)

Scenario Timeframe: Future
Medium: Surface Soil
Exposure Medium: Surface Soil
Exposure Point: Onsite
Receptor Population: Groundskeeper
Receptor Age: Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
Ingestion	Arsenic	7.62	mg/kg	7.62	mg/kg	M	1.3E-06	mg/kg-day	1.5E+00	mg/kg-day -1	2.0E-06
	Benzo(a)Anthracene	1.40	mg/kg	1.40	mg/kg	M	2.4E-07	mg/kg-day	7.3E-01	mg/kg-day -1	1.8E-07
	Benzo(a)Pyrene	0.87	mg/kg	0.87	mg/kg	M	1.5E-07	mg/kg-day	7.3E+00	mg/kg-day -1	1.1E-06
	Benzo(b)Fluoranthene	1.90	mg/kg	1.90	mg/kg	M	3.3E-07	mg/kg-day	7.3E-01	mg/kg-day -1	2.4E-07
	Beryllium	1.10	mg/kg	1.10	mg/kg	M	1.9E-07	mg/kg-day	4.3E+00	mg/kg-day -1	8.3E-07
	Dieldrin	0.07	mg/kg	0.07	mg/kg	M	1.3E-08	mg/kg-day	1.6E+01	mg/kg-day -1	2.0E-07
	Iron	24405.55	mg/kg	24405.55	mg/kg	M	4.3E-03	mg/kg-day	N/A	N/A	N/A
	Manganese	248.32	mg/kg	248.32	mg/kg	M	4.3E-05	mg/kg-day	N/A	N/A	N/A
	Nickel	546.00	mg/kg	546.00	mg/kg	M	9.5E-05	mg/kg-day	N/A	N/A	N/A
	Vanadium	227.35	mg/kg	227.35	mg/kg	M	4.0E-05	mg/kg-day	N/A	N/A	N/A
Dermal	Arsenic	7.62	mg/kg	7.62	mg/kg	M	4.5E-06	mg/kg-day	1.6E+00	mg/kg-day -1	7.1E-06
	Benzo(a)Anthracene	1.40	mg/kg	1.40	mg/kg	M	2.6E-06	mg/kg-day	N/A	mg/kg-day -1	N/A
	Benzo(a)Pyrene	0.87	mg/kg	0.87	mg/kg	M	1.6E-06	mg/kg-day	N/A	mg/kg-day -1	N/A
	Benzo(b)Fluoranthene	1.90	mg/kg	1.90	mg/kg	M	3.5E-06	mg/kg-day	N/A	mg/kg-day -1	N/A
	Beryllium	1.10	mg/kg	1.10	mg/kg	M	2.0E-07	mg/kg-day	4.3E+02	mg/kg-day -1	8.8E-05
	Dieldrin	0.07	mg/kg	0.07	mg/kg	M	2.7E-09	mg/kg-day	2.0E+01	mg/kg-day -1	5.3E-08
	Iron	24405.55	mg/kg	24405.55	mg/kg	M	4.5E-03	mg/kg-day	N/A	N/A	N/A
	Manganese	248.32	mg/kg	248.32	mg/kg	M	4.6E-05	mg/kg-day	N/A	N/A	N/A
	Nickel	546.00	mg/kg	546.00	mg/kg	M	1.0E-04	mg/kg-day	N/A	N/A	N/A
	Vanadium	227.35	mg/kg	227.35	mg/kg	M	4.2E-05	mg/kg-day	N/A	N/A	N/A
										Total Risk Across All Exposure Routes/Pathways	9.9E-05

M= Medium Specific

TABLE 8.11.CT
CALCULATION OF CANCER RISKS
CENTRAL TENDENCIES
St. Juliens Creek - Landfill D (Site 4)

Scenario Timeframe: Future
Medium: Surface Soil
Exposure Medium: Surface Soil
Exposure Point: Onsite
Receptor Population: Groundskeeper
Receptor Age: Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
Ingestion	Arsenic	6.01	mg/kg	6.01	mg/kg	M	1.0E-06	mg/kg-day	1.5E+00	mg/kg-day -1	1.6E-06
	Benzo(a)Anthracene	0.45	mg/kg	0.45	mg/kg	M	7.8E-08	mg/kg-day	7.3E-01	mg/kg-day -1	5.7E-08
	Benzo(a)Pyrene	0.39	mg/kg	0.39	mg/kg	M	6.8E-08	mg/kg-day	7.3E+00	mg/kg-day -1	4.9E-07
	Benzo(b)Fluoranthene	0.71	mg/kg	0.71	mg/kg	M	1.2E-07	mg/kg-day	7.3E-01	mg/kg-day -1	9.1E-08
	Beryllium	0.35	mg/kg	0.35	mg/kg	M	6.2E-08	mg/kg-day	4.3E+00	mg/kg-day -1	2.7E-07
	Dieldrin	0.02	mg/kg	0.02	mg/kg	M	3.7E-09	mg/kg-day	1.6E+01	mg/kg-day -1	6.0E-08
	Iron	15672.00	mg/kg	15672.00	mg/kg	M	2.7E-03	mg/kg-day	N/A	N/A	N/A
	Manganese	142.21	mg/kg	142.21	mg/kg	M	2.5E-05	mg/kg-day	N/A	N/A	N/A
	Nickel	93.79	mg/kg	93.79	mg/kg	M	1.6E-05	mg/kg-day	N/A	N/A	N/A
	Vanadium	76.96	mg/kg	76.96	mg/kg	M	1.3E-05	mg/kg-day	N/A	N/A	N/A
Dermal	Arsenic	6.01	mg/kg	6.01	mg/kg	M	3.6E-06	mg/kg-day	1.6E+00	mg/kg-day -1	5.6E-06
	Benzo(a)Anthracene	0.45	mg/kg	0.45	mg/kg	M	8.3E-07	mg/kg-day	N/A	mg/kg-day -1	N/A
	Benzo(a)Pyrene	0.39	mg/kg	0.39	mg/kg	M	7.2E-07	mg/kg-day	N/A	mg/kg-day -1	N/A
	Benzo(b)Fluoranthene	0.71	mg/kg	0.71	mg/kg	M	1.3E-06	mg/kg-day	N/A	mg/kg-day -1	N/A
	Beryllium	0.35	mg/kg	0.35	mg/kg	M	6.6E-08	mg/kg-day	4.3E+02	mg/kg-day -1	2.8E-05
	Dieldrin	0.02	mg/kg	0.02	mg/kg	M	7.9E-10	mg/kg-day	2.0E+01	mg/kg-day -1	1.6E-08
	Iron	15672.00	mg/kg	15672.00	mg/kg	M	2.9E-03	mg/kg-day	N/A	N/A	N/A
	Manganese	142.21	mg/kg	142.21	mg/kg	M	2.6E-05	mg/kg-day	N/A	N/A	N/A
	Nickel	93.79	mg/kg	93.79	mg/kg	M	1.7E-05	mg/kg-day	N/A	N/A	N/A
	Vanadium	76.96	mg/kg	76.96	mg/kg	M	1.4E-05	mg/kg-day	N/A	N/A	N/A
										Total Risk Across All Exposure Routes/Pathways	3.6E-05

M= Medium Specific

Site 4

Surface Soil to Groundwater

TABLE 2.4
OCCURRENCE, DISTRIBUTION AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN
St. Juliens Creek - Landfill D (Site 4)

Scenario Timeframe: Current
Medium: Surface Soil
Exposure Medium: Groundwater
Exposure Point: Onsite

CAS Number	Chemical	Minimum Concentration (1)	Minimum Qualifier	Maximum Concentration (1)	Maximum Qualifier	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration Used for Screening	Background Value (2)	Screening Toxicity Value (3)	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag	Rationale for Contaminant Deletion or Selection (4)
78933	2-Butanone	11		28		ug/kg	SS-04	2/9	10-16	28	NA	NA	NA	NA	NO	BSL
72548	4,4'-DDD	3.8		15	J	ug/kg	SS-05	4/9	3.3-21	15	NA	NA	NA	NA	NO	BSL
72559	4,4'-DDE	3.5		37		ug/kg	SS-05	5/9	3.3-21	37	NA	NA	NA	NA	NO	BSL
50293	4,4'-DDT	6.1		40	J	ug/kg	SS-05	7/9	3.3-21	40	NA	NA	NA	NA	NO	BSL
108101	4-Methyl-2-Pentanone	2	J	2	J	ug/kg	SS-03	1/9	10-16	2	NA	NA	NA	NA	NO	BSL
83329	Acenaphthene	54	J	54	J	ug/kg	SS-07	1/9	340-40000	54	NA	NA	NA	NA	NO	BSL
67641	Acetone	8	J	79	J	ug/kg	SS-08	6/9	10-16	79	NA	NA	NA	NA	NO	BSL
7429905	Aluminum	3910		7010		mg/kg	SS-10	9/9	6.53-8.51	7010	NA	NA	NA	NA	NO	BSL
120127	Anthracene	74	J	200	J	ug/kg	SS-08	2/9	340-1700	200	NA	NA	NA	NA	NO	BSL
7440382	Arsenic	1.9		10.9		mg/kg	SS-04	9/9	0.46-0.58	10.9	NA	15	NA	NA	NO	BSL
7440393	Barium	55.5		105		mg/kg	SS-02	8/9	0.3-0.39	105	NA	32	NA	NA	YES	ASL
56553	Benzo(a)Anthracene	39	J	1400	J	ug/kg	SS-05	8/9	340-40000	1400	NA	700	NA	NA	YES	ASL
50328	Benzo(a)Pyrene	35	J	870	J	ug/kg	SS-08	8/9	340-40000	870	NA	NA	NA	NA	NO	BSL
205992	Benzo(b)Fluoranthene	79	J	1900	J	ug/kg	SS-05	8/9	340-40000	1900	NA	NA	NA	NA	NO	BSL
207089	Benzo(k)Fluoranthene	37	J	770	J	ug/kg	SS-05	6/9	340-40000	770	NA	NA	NA	NA	NO	BSL
7440417	Beryllium	1.1		1.1		mg/kg	SS-03	1/9	0.15-0.19	1.1	NA	NA	NA	NA	NO	BSL
85687	Butylbenzylphthalate	35	J	35	J	ug/kg	SS-07	1/9	340-40000	35	NA	NA	NA	NA	NO	BSL
86748	Carbazole	53	J	300	J	ug/kg	SS-05	2/9	340-40000	300	NA	NA	NA	NA	NO	BSL
218019	Chrysene	39	J	1800	J	ug/kg	SS-05	8/9	340-40000	1800	NA	1000	NA	NA	YES	ASL
7440484	Cobalt	9.6		10.6		mg/kg	SS-05	2/9	1.23-1.74	10.6	NA	NA	NA	NA	NO	BSL
7440508	Copper	7		596		mg/kg	SS-05	9/9	0.9-1.15	596	NA	NA	NA	NA	NO	BSL
60571	Dieldrin	3.4		72	J	ug/kg	SS-08	7/9	3.3-21	72	NA	1	NA	NA	YES	ASL
84662	Diethylphthalate	360	J	620	J	ug/kg	SS-09	6/9	340-40000	620	NA	NA	NA	NA	NO	BSL
72208	Endrin	3.9		3.9	J	ug/kg	SS-10	1/9	3.3-21	3.9	NA	NA	NA	NA	NO	BSL
206440	Fluoranthene	49	J	3300		ug/kg	SS-05	8/9	340-40000	3300	NA	NA	NA	NA	NO	BSL
86737	Fluorene	47	J	47	J	ug/kg	SS-07	1/9	340-40000	47	NA	NA	NA	NA	NO	BSL
193395	Indeno(1,2,3-cd)Pyrene	46	J	750	J	ug/kg	SS-05	6/9	340-40000	750	NA	NA	NA	NA	NO	BSL
7439896	Iron	2920		29500		mg/kg	SS-05	9/9	2.61-3.69	29500	NA	NA	NA	NA	NO	BSL
7439965	Manganese	38.6		352		mg/kg	SS-05	9/9	0.33-0.43	352	NA	NA	NA	NA	NO	BSL
7439976	Mercury	0.28		1.3		mg/kg	SS-08	8/9	0.04-0.06	1.3	NA	NA	NA	NA	NO	BSL
7440020	Nickel	10.9		548		mg/kg	SS-05	8/9	1.11-1.52	548	NA	21	NA	NA	YES	ASL
129000	Pyrene	56	J	3100		ug/kg	SS-05	7/9	340-40000	3100	NA	NA	NA	NA	NO	BSL
7440224	Silver	1.6		1.6		mg/kg	SS-05	1/9	0.15-0.22	1.6	NA	NA	NA	NA	NO	BSL
108883	Toluene	1	J	2	J	ug/kg	SS-10	2/9	10-16	2	NA	NA	NA	NA	NO	BSL
7440622	Vanadium	11.2		354		mg/kg	SS-04	9/9	1.38-1.74	354	NA	NA	NA	NA	NO	BSL
7440666	Zinc	26.4		607		mg/kg	SS-04	9/9	0.77-1.09	607	NA	NA	NA	NA	NO	BSL

(1) Minimum/maximum detected concentration.

(2) To date, no background study has been performed for the St. Juliens Creek Annex.

(3) All compounds were screened against Soil Screening Levels as provided in Risk-Based Concentration Table, March 1997 (Cancer benchmark value = 1E-06, HQ=0.1)

(4) Rationale Codes: Selection Reason:
- Infrequent Detection but Associated Historically (HST)
- Frequent Detection (FD)
- Toxicity Information Available (TX)
- Above Screening Levels (ASL)

Deletion Reason:
- Infrequent Detection (IFD)
- No Toxicity Information (NTX)
- Essential Nutrient (NUT)
- Below Screening Level (BSL)

Definitions:
- N/A = Not Applicable
- SQL = Sample Quantitation Limit
- COPC = Chemical of Potential Concern
- ARAR/TBC = Applicable or Relevant and Appropriate Requirement/To Be Considered
- MCL = Federal Maximum Contaminant Level
- SMCL = Secondary Maximum Contaminant Level
- J = Estimated Value
- C = Carcinogenic
- N = Non-Carcinogenic

Site 4

Surface Soil to Air

TABLE 2.5
OCCURRENCE, DISTRIBUTION AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN
St. Juliens Creek - Landfill D (Site 4)

Scenario Timeframe: Current
Medium: Surface Soil
Exposure Medium: Air
Exposure Point: Onsite

CAS Number	Chemical	Minimum Concentration (1)	Minimum Qualifier	Maximum Concentration (1)	Maximum Qualifier	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration Used for Screening	Background Value (2)	Screening Toxicity Value (3)	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag	Rationale for Contaminant Deletion or Selection (4)
78933	2-Butanone	11		28		ug/kg	SS-04	2/9	10-16	28	NA	NA	NA	NA	NO	NTX
72548	4,4'-DDD	3.8		15	J	ug/kg	SS-05	4/9	3.3-21	15	NA	NA	NA	NA	NO	NTX
72559	4,4'-DDE	3.5		37		ug/kg	SS-05	5/9	3.3-21	37	NA	NA	NA	NA	NO	NTX
50293	4,4'-DDT	6.1		40	J	ug/kg	SS-05	7/9	3.3-21	40	NA	NA	NA	NA	NO	NTX
108101	4-Methyl-2-Pentanone	2	J	2	J	ug/kg	SS-03	1/9	10-16	2	NA	NA	NA	NA	NO	NTX
83329	Acenaphthene	54	J	54	J	ug/kg	SS-07	1/9	340-40000	54	NA	NA	NA	NA	NO	NTX
67641	Acetone	8	J	79	J	ug/kg	SS-08	6/9	10-16	79	NA	NA	NA	NA	NO	NTX
7429905	Aluminum	3910		7010		mg/kg	SS-10	9/9	6.63-8.51	7010	NA	NA	NA	NA	NO	NTX
120127	Anthracene	74	J	200	J	ug/kg	SS-08	2/9	340-1700	200	NA	NA	NA	NA	NO	NTX
7440382	Arsenic	1.9		10.9		mg/kg	SS-04	9/9	0.48-0.58	10.9	NA	NA	NA	NA	NO	NTX
7440393	Barium	55.5		105		mg/kg	SS-02	8/9	0.3-0.39	105	NA	NA	NA	NA	NO	NTX
56553	Benzo(a)Anthracene	39	J	1400	J	ug/kg	SS-05	8/9	340-40000	1400	NA	NA	NA	NA	NO	NTX
50328	Benzo(a)Pyrene	35	J	870	J	ug/kg	SS-08	8/9	340-40000	870	NA	NA	NA	NA	NO	NTX
205992	Benzo(b)Fluoranthene	79	J	1900	J	ug/kg	SS-05	8/9	340-40000	1900	NA	NA	NA	NA	NO	NTX
207089	Benzo(k)Fluoranthene	37	J	770	J	ug/kg	SS-05	6/9	340-40000	770	NA	NA	NA	NA	NO	NTX
7440417	Beryllium	1.1		1.1		mg/kg	SS-03	1/9	0.15-0.19	1.1	NA	NA	NA	NA	NO	NTX
85687	Butylbenzylphthalate	35	J	35	J	ug/kg	SS-07	1/9	340-40000	35	NA	NA	NA	NA	NO	NTX
86748	Carbazole	53	J	300	J	ug/kg	SS-05	2/9	340-40000	300	NA	NA	NA	NA	NO	NTX
218019	Chrysene	39	J	1800	J	ug/kg	SS-05	8/9	340-40000	1800	NA	NA	NA	NA	NO	NTX
7440484	Cobalt	9.6		10.6		mg/kg	SS-05	2/9	1.23-1.74	10.6	NA	NA	NA	NA	NO	NTX
7440508	Copper	7		596		mg/kg	SS-05	9/9	0.9-1.15	596	NA	NA	NA	NA	NO	NTX
60571	Dieldrin	3.4		72	J	ug/kg	SS-08	7/9	3.3-21	72	NA	NA	NA	NA	NO	NTX
84662	Diethylphthalate	360	J	620	J	ug/kg	SS-09	6/9	340-40000	620	NA	NA	NA	NA	NO	NTX
72208	Endrin	3.9		3.9	J	ug/kg	SS-10	1/9	3.3-21	3.9	NA	NA	NA	NA	NO	NTX
206440	Fluoranthene	49	J	3300		ug/kg	SS-05	8/9	340-40000	3300	NA	NA	NA	NA	NO	NTX
86737	Fluorene	47	J	47	J	ug/kg	SS-07	1/9	340-40000	47	NA	NA	NA	NA	NO	NTX
193395	Indeno(1,2,3-cd)Pyrene	46	J	750	J	ug/kg	SS-05	6/9	340-40000	750	NA	NA	NA	NA	NO	NTX
7439896	Iron	2920		29500		mg/kg	SS-05	9/9	2.61-3.69	29500	NA	NA	NA	NA	NO	NTX
7439965	Manganese	38.6		352		mg/kg	SS-05	9/9	0.33-0.43	352	NA	NA	NA	NA	NO	NTX
7439976	Mercury	0.28		1.3		mg/kg	SS-06	8/9	0.04-0.06	1.3	NA	NA	NA	NA	NO	NTX
7440020	Nickel	10.9		546		mg/kg	SS-05	8/9	1.11-1.52	546	NA	NA	NA	NA	NO	NTX
129000	Pyrene	56	J	3100		ug/kg	SS-05	7/9	340-40000	3100	NA	NA	NA	NA	NO	NTX
7440224	Silver	1.6		1.6		mg/kg	SS-05	1/9	0.16-0.22	1.6	NA	NA	NA	NA	NO	NTX
108883	Toluene	1	J	2	J	ug/kg	SS-10	2/9	10-16	2	NA	NA	NA	NA	NO	NTX
7440622	Vanadium	11.2		354		mg/kg	SS-04	9/9	1.38-1.74	354	NA	NA	NA	NA	NO	NTX
7440666	Zinc	26.4		607		mg/kg	SS-04	9/9	0.77-1.09	607	NA	NA	NA	NA	NO	NTX

(1) Minimum/maximum detected concentration.

(2) To date, no background study has been performed for the St. Juliens Creek Annex.

(3) All compounds were screened against Soil Screening Levels as provided in Risk-Based Concentration Table, March 1997 (Cancer benchmark value = 1E-06, HQ=0.1).

(4) Rationale Codes: Selection Reason:
- Infrequent Detection but Associated Historically (HIST)
- Frequent Detection (FD)
- Toxicity Information Available (TX)
- Above Screening Levels (ASL)

Deletion Reason:
- Infrequent Detection (IFD)
- No Toxicity Information (NTX)
- Essential Nutrient (NUT)
- Below Screening Level (BSL)

Definitions:
- N/A = Not Applicable
- SQL = Sample Quantitation Limit
- COPC = Chemical of Potential Concern
- ARAR/TBC = Applicable or Relevant and Appropriate Requirement/To Be Considered
- MCL = Federal Maximum Contaminant Level
- SMCL = Secondary Maximum Contaminant Level
- J = Estimated Value
- C = Carcinogenic
- N = Non-Carcinogenic

Site 4

Subsurface Soil Current/Future

TABLE 2.6
OCCURRENCE, DISTRIBUTION AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN
St. Juliens Creek - Landfill D (Site 4)

Scenario Timeframe: Future
Medium: Subsurface Soil
Exposure Medium: Subsurface Soil
Exposure Point: Onsite

CAS Number	Chemical	Minimum Concentration (1)	Minimum Qualifier	Maximum Concentration (1)	Maximum Qualifier	Units	Location of Maximum Concnetration	Detection Frequency	Range of Detection Limits	Concentration Used for Screening	Background Value (2)	Screening Toxicity Value (3)	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag	Rationale for Contaminant Deletion or Selection (4)
72548	4,4'-DDD	1.8	J	13	J	ug/kg	SB-02	2/2	4.2-5.4	13	NA	2700	NA	NA	NO	BSL
72559	4,4'-DDE	3.1	J	32		ug/kg	SB-03	2/2	4.2-4.2	32	NA	1900	NA	NA	NO	BSL
50293	4,4'-DDT	4.9	J	4.9	J	ug/kg	SB-03	1/2	3.7-5.4	4.9	NA	1900	NA	NA	NO	BSL
7429905	Aluminum	4530		14900		mg/kg	SB-03	2/2	10.33-10.5	14900	NA	7800	NA	NA	YES	ASL
11097691	Aroclor-1254	42		42		ug/kg	SB-02	1/2	37-37	42	NA	160	NA	NA	NO	BSL
7440382	Arsenic	7.9	L	23.5	L	mg/kg	SB-02	2/2	0.7-0.72	23.5	NA	0.43	NA	NA	YES	ASL
7440393	Barium	61.9		262		mg/kg	SB-02	2/2	0.47-0.48	262	NA	550	NA	NA	NO	BSL
56553	Benzo(a)Anthracene	100	J	100	J	ug/kg	SB-03	1/2	400-550	100	NA	880	NA	NA	NO	BSL
50328	Benzo(a)Pyrene	100	J	100	J	ug/kg	SB-03	1/2	400-550	100	NA	88	NA	NA	YES	ASL
205992	Benzo(b)Fluoranthene	240	J	240	J	ug/kg	SB-03	1/2	400-550	240	NA	880	NA	NA	NO	BSL
207089	Benzo(k)Fluoranthene	81	J	81	J	ug/kg	SB-03	1/2	400-550	81	NA	8800	NA	NA	NO	BSL
7440417	Beryllium	1.3		1.7		ug/kg	SB-03	2/2	0.23-0.24	1.7	NA	0.15	NA	NA	YES	ASL
218019	Chrysene	160	J	160	J	ug/kg	SB-03	1/2	400-550	160	NA	88000	NA	NA	NO	BSL
7440484	Cobalt	4.2	J	13.9		mg/kg	SB-03	2/2	1.88-1.91	13.9	NA	470	NA	NA	NO	BSL
7440508	Copper	23.8		105		mg/kg	SB-02	2/2	1.41-1.98	105	NA	27000	NA	NA	NO	BSL
206440	Fluoranthene	87	J	87	J	ug/kg	SB-03	1/2	400-550	87	NA	310000	NA	NA	NO	BSL
193395	Indeno(1,2,3-cd)Pyrene	78	J	78	J	ug/kg	SB-03	1/2	400-550	78	NA	880	NA	NA	NO	BSL
7439896	Iron	10800		46900		mg/kg	SB-03	2/2	3.99-4.06	46900	NA	2300	NA	NA	YES	ASL
7439965	Manganese	72.8		252		mg/kg	SB-03	2/2	0.47-0.48	252	NA	180	NA	NA	YES	ASL
7439976	Mercury	0.56		0.62		mg/kg	SB-02	2/2	0.06-0.07	0.62	NA	23	NA	NA	NO	BSL
7440020	Nickel	22.3		22.3		mg/kg	SB-03	1/2	1.64-1.67	22.3	NA	160	NA	NA	NO	BSL
129000	Pyrene	84	J	84	J	ug/kg	SB-03	1/2	400-550	84	NA	230000	NA	NA	NO	BSL
7782492	Selenium	2.6	K	2.6	K	mg/kg	SB-02	1/2	0.7-0.72	2.6	NA	39	NA	NA	NO	BSL
127184	Tetrachloroethene	2	J	3	J	ug/kg	SB-02	2/2	13-14	3	NA	12000	NA	NA	NO	BSL
7440622	Vanadium	26.9		28		mg/kg	SB-03	2/2	2.11-2.15	28	NA	55	NA	NA	NO	BSL
7440666	Zinc	131	L	135	L	mg/kg	SB-03	2/2	1.17-1.19	135	NA	2300	NA	NA	NO	BSL

(1 Minimum/maximum detected concentration.

(2 To date, no background study has been performed for the St. Juliens Creek Annex.

(3 With the exception of lead, all compounds were screened against: Risk-Based Concentration Table, Third Quarter 1993, U.S. EPA Region III, Roy L. Smith, Ph. D., October 1997. (Cancer benchmark value = 1E-06, HQ=0.1). Lead was screened against a value of 400 mg/kg, as Human Health Risk Assessment Consensus Agreement #6.A.6, Naval Base Norfolk Partnership, August 1997.

(4 Rationale Codes Selection Reason: Infrequent Detection but Associated Historically (HST)
Frequent Detection (FD)
Toxicity Information Available (TX)
Above Screening Levels (ASL)

Deletion Reason: Infrequent Detection (IFD)
No Toxicity Information (NTX)
Essential Nutrient (NUT)
Below Screening Level (BSL)

Definitions: N/A = Not Applicable
SQL = Sample Quantitation Limit
COPC = Chemical of Potential Concern
ARAR/TBC = Applicable or Relevant and Appropriate Requirement/To Be Considered
MCL = Federal Maximum Contaminant Level
SMCL = Secondary Maximum Contaminant Level
J = Estimated Value
C = Carcinogenic
N = Non-Carcinogenic

TABLE 3.4
MEDIUM-SPECIFIC EXPOSURE POINT CONCENTRATION SUMMARY
St. Juliens Creek - Landfill D (Site 4)

Scenario Timeframe: Future
Medium: Subsurface Soil
Exposure Medium: Subsurface Soil
Exposure Point: Onsite

Chemical of Potential Concern	Units	Arithmetic Mean	95% UCL of Normal Data	Maximum Detected Concentration	Maximum Qualifier	EPC Units	Reasonable Maximum Exposure			Central Tendency		
							Medium EPC Value	Medium EPC Statistic	Medium EPC Rationale	Medium EPC Value	Medium EPC Statistic	Medium EPC Rationale
Aluminum	mg/kg	12510.00	N/A	14900.00		mg/kg	14900.00	Max	(1)	12510.00	Mean-N	(1)
Arsenic	mg/kg	13.77	N/A	23.50	L	mg/kg	23.50	Max	(1)	13.77	Mean-N	(1)
Benzo(a)Pyrene	ug/kg	110.00	N/A	100.00	J	mg/kg	0.10	Max	(1)	0.11	Mean-N	(1)
Beryllium	mg/kg	1.07	N/A	1.70	J	mg/kg	1.70	Max	(1)	1.07	Mean-N	(1)
Iron	mg/kg	31100.00	N/A	46900.00		mg/kg	46900.00	Max	(1)	31100.00	Mean-N	(1)
Manganese	mg/kg	148.93	N/A	252.00		mg/kg	252.00	Max	(1)	148.93	Mean-N	(1)

Statistics: Maximum Detected Value (Max); 95% UCL of Normal Data (95% UCL-N); 95% UCL of Log-transformed Data (95% UCL-T); Mean of Log-transformed Data (Mean-T); Mean of Normal Data (Mean-N).

(1) As stated in the Risk Assessment Assumptions Document presented in Appendix F of this report, exposure point concentrations for this media will consist of the maximum detected concentration and the arithmetic mean.

TABLE 4.12

VALUES USED FOR DAILY INTAKE CALCULATIONS

St. Juliens Creek - Landfill D (Site 4)

Scenario Timeframe: Future
Medium: Subsurface Soil
Exposure Medium: Subsurface Soil
Exposure Point: Onsite
Receptor Population: Construction Worker
Receptor Age: Adult

Exposure Route	Parameter Code	Parameter Definition	Units	RME Value	RME Rationale/ Reference	CT Value	CT Rationale/ Reference	Intake Equation/ Model Name
Ingestion	CS	Chemical Concentration in Soil	mg/kg	See Table 3	See Table 3	See Table 3	See Table 3	Chronic Daily Intake (CDI) (mg/kg-day)=
	IR-S	Ingestion Rate of Soil	mg/day	480	VADEQ, 1997	480	VADEQ, 1997	CS x IR x EF x ED x CF1 x 1/BW x 1/AT
	EF	Exposure Frequency	days/year	250	EPA, 1991	250	EPA, 1991	
	ED	Exposure Duration	years	25	EPA, 1991	25	EPA, 1991	
	CF1	Conversion Factor	kg/mg	1.00E-06	NA	1.00E-06	NA	
	BW	Body Weight	kg	70	EPA, 1991	70	EPA, 1991	
	AT-C	Averaging Time - Cancer	days	25,550	EPA, 1989	25,550	EPA, 1989	
	AT-N	Averaging Time - Non-Cancer	days	9,125	EPA, 1989	9,125	EPA, 1989	
Dermal	CS	Chemical Concentration in Soil	mg/kg	See Table 3	See Table 3	See Table 3	See Table 3	Chronic Daily Intake (CDI) (mg/kg-day)=
	CF1	Conversion Factor	kg/mg	1.00E-06	NA	1.00E-06	NA	CS x CF1 x SA x AF x AB x EF x ED x 1/BW x 1/AT
	SA	Skin Surface Area Available for Contact	cm^2	5,300	EPA, 1992	5,300	EPA, 1992	
	AF	Soil to Skin Adherence Factor	mg/cm^2	1	EPA, 1992	1	EPA, 1992	
	AB	Absorption Factor	unitless	chemical-specific	EPA, 1995	chemical-specific	EPA, 1995	
	EF	Exposure Frequency	days/year	250	EPA, 1991	250	EPA, 1991	
	ED	Exposure Duration	years	25	EPA, 1991	25	EPA, 1991	
	BW	Body Weight	kg	70	EPA, 1991	70	EPA, 1991	
	AT-C	Averaging Time - Cancer	days	25,550	EPA, 1989	25,550	EPA, 1989	
	AT-N	Averaging Time - Non-Cancer	days	9,125	EPA, 1989	9,125	EPA, 1989	

Sources:

EPA, 1989: Risk Assessment Guidance for Superfund. Vol. 1: Human Health Evaluation Manual, Part A. OERR. EPA/540/1-89/002.

EPA, 1991: Risk Assessment Guidance for Superfund. Vol. 1: Human Health Evaluation Manual - Supplemental Guidance, Standard Default Exposure Factors. Interim Final. OSWER Directive 9285.6-03,

EPA, 1992: Dermal Exposure Assessment: Principles and Applications. EPA/600/8-91/011B.

EPA, 1995: Assessing Dermal Exposure from Soil, Technical Guidance manual, Region III, EPA/903-K-95-003.

VADEQ, 1997: Value provided by Pat McMurray, Virginia Department of Environmental Quality, during St. Juliens Creek risk assessment assumptions conference call on November 20, 1997.

TABLE 5.4
NON-CANCER TOXICITY DATA -- ORAL/DERMAL
St. Juliens Creek - Landfill D (Site 4)

Chemical of Potential Concern	Chronic/ Subchronic	Oral RfD Value	Oral RfD Units	Oral to Dermal Adjustment Factor (1)	Adjusted Dermal RfD (2)	Units	Primary Target Organ	Combined Uncertainty/Modifying Factors	Sources of RfD: Target Organ	Dates of RfD: Target Organ (3) (MM/DD/YY)
Aluminum	Chronic	1.0E+00	mg/kg/day	0.27	3E-01	mg/kg/day	N/A	N/A	RBC: N/A	10/7/97
Arsenic	Chronic	3.0E-04	mg/kg/day	0.95	3E-04	mg/kg/day	Skin	3	IRIS	11/17/97
Benzo(a)Pyrene	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Beryllium	Chronic	5.0E-03	mg/kg/day	0.01	5E-05	mg/kg/day	N/A	100	IRIS	11/17/97
Iron	Chronic	3.0E-01	mg/kg/day	0.05	2E-02	mg/kg/day	N/A	N/A	RBC: N/A	10/7/97
Manganese	Chronic	2E-02	mg/kg/day	1.00	2E-02	mg/kg/day	NOAEL	2	IRIS	11/17/97

N/A = Not Applicable
IRIS= Integrated Risk Information System
RBC= Risk-Based Concentration Table. October, 1997.

TABLE 6.4
CANCER TOXICITY DATA -- ORAL/DERMAL
St. Juliens Creek - Landfill C (Site 3)

Chemical of Potential Concern	Oral Cancer Slope Factor	Oral to Dermal Adjustment Factor	Adjusted Dermal Cancer Slope Factor	Units	Weight of Evidence/ Cancer Guideline Description	Source	Date (MM/DD/YY)
Aluminum	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Arsenic	1.5E+00	0.95	1.4E+00	mg/kg-day -1	A	IRIS	11/17/97
Benzo(a)Pyrene	7.3E+00	N/A	N/A	mg/kg-day -1	B2	IRIS	11/17/97
Beryllium	4.3E+00	0.01	4.3E-02	mg/kg-day -1	B2	IRIS	11/17/97
Iron	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Manganese	N/A	N/A	N/A	N/A	N/A	N/A	N/A

IRIS = Integrated Risk Information System
HEAST= Health Effects Assessment Summary Tables
NCEA= National Center for Environmental Assessment

EPA Group:
A - Human carcinogen
B1 - Probable human carcinogen - indicates that limited human data are available
B2 - Probable human carcinogen - indicates sufficient evidence in animals and inadequate or no evidence in humans
C - Possible human carcinogen
D - Not classifiable as a human carcinogen
E - Evidence of noncarcinogenicity

Weight of Evidence:
Known/Likely
Cannot be Determined
Not Likely

TABLE 7.12.RME
CALCULATION OF NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
St. Juliens Creek - Landfill D (Site 4)

Scenario Timeframe: Future
Medium: Subsurface Soil
Exposure Medium: Subsurface Soil
Exposure Point: Onsite
Receptor Population: Construction Worker
Receptor Age: Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Ingestion	Aluminum	14900.00	mg/kg	14900.00	mg/kg	M	7.0E-02	mg/kg-day	1.0E+00	mg/kg/day	N/A	N/A	7.0E-02
	Arsenic	23.50	mg/kg	23.50	mg/kg	M	1.1E-04	mg/kg-day	3.0E-04	mg/kg/day	N/A	N/A	3.7E-01
	Benzo(a)Pyrene	0.10	mg/kg	0.10	mg/kg	M	4.7E-07	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Beryllium	1.70	mg/kg	1.70	mg/kg	M	8.0E-06	mg/kg-day	5.0E-03	mg/kg/day	N/A	N/A	1.6E-03
	Iron	46900.00	mg/kg	46900.00	mg/kg	M	2.2E-01	mg/kg-day	3.0E-01	mg/kg/day	N/A	N/A	7.3E-01
	Manganese	252.00	mg/kg	252.00	mg/kg	M	1.2E-03	mg/kg-day	2.3E-02	mg/kg/day	N/A	N/A	5.1E-02
Dermal	Aluminum	14900.00	mg/kg	14900.00	mg/kg	M	7.7E-03	mg/kg-day	2.7E-01	mg/kg/day	N/A	N/A	2.9E-02
	Arsenic	23.50	mg/kg	23.50	mg/kg	M	3.9E-05	mg/kg-day	2.9E-04	mg/kg/day	N/A	N/A	1.4E-01
	Benzo(a)Pyrene	0.10	mg/kg	0.10	mg/kg	M	1.7E-07	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Beryllium	1.70	mg/kg	1.70	mg/kg	M	8.8E-07	mg/kg-day	5.0E-05	mg/kg/day	N/A	N/A	1.8E-02
	Iron	46900.00	mg/kg	46900.00	mg/kg	M	2.4E-02	mg/kg-day	1.5E-02	mg/kg/day	N/A	N/A	1.6E+00
	Manganese	252.00	mg/kg	252.00	mg/kg	M	1.3E-04	mg/kg-day	2.3E-02	mg/kg/day	N/A	N/A	5.7E-03
												Total Hazard Index Across All Exposure Routes/Pathways	3.0E+00

M= Medium Specific

TABLE 7.12.CT
CALCULATION OF NON-CANCER HAZARDS
CENTRAL TENDENCIES
St. Juliens Creek - Landfill D (Site 4)

Scenario Timeframe: Future
Medium: Subsurface Soil
Exposure Medium: Subsurface Soil
Exposure Point: Onsite
Receptor Population: Construction Worker
Receptor Age: Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Ingestion	Aluminum	12510.00	mg/kg	12510.00	mg/kg	M	5.9E-02	mg/kg-day	1.0E+00	mg/kg/day	N/A	N/A	5.9E-02
	Arsenic	13.77	mg/kg	13.77	mg/kg	M	6.5E-05	mg/kg-day	3.0E-04	mg/kg/day	N/A	N/A	2.2E-01
	Benzo(a)Pyrene	1.1E-01	mg/kg	1.1E-01	mg/kg	M	5.2E-07	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Beryllium	1.07	mg/kg	1.07	mg/kg	M	5.0E-06	mg/kg-day	5.0E-03	mg/kg/day	N/A	N/A	1.0E-03
	Iron	31100.00	mg/kg	31100.00	mg/kg	M	1.5E-01	mg/kg-day	3.0E-01	mg/kg/day	N/A	N/A	4.9E-01
	Manganese	148.93	mg/kg	148.93	mg/kg	M	7.0E-04	mg/kg-day	2.3E-02	mg/kg-day	N/A	N/A	3.0E-02
Dermal	Aluminum	12510.00	mg/kg	12510.00	mg/kg	M	6.5E-03	mg/kg-day	2.7E-01	mg/kg/day	N/A	N/A	2.4E-02
	Arsenic	13.77	mg/kg	13.77	mg/kg	M	2.3E-05	mg/kg-day	2.9E-04	mg/kg/day	N/A	N/A	8.0E-02
	Benzo(a)Pyrene	1.1E-01	mg/kg	1.1E-01	mg/kg	M	1.8E-07	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Beryllium	1.07	mg/kg	1.07	mg/kg	M	5.5E-07	mg/kg-day	5.0E-05	mg/kg/day	N/A	N/A	1.1E-02
	Iron	31100.00	mg/kg	31100.00	mg/kg	M	1.6E-02	mg/kg-day	1.5E-02	mg/kg/day	N/A	N/A	1.1E+00
	Manganese	148.93	mg/kg	148.93	mg/kg	M	7.7E-05	mg/kg-day	2.3E-02	mg/kg-day	N/A	N/A	3.4E-03
												Total Hazard Index Across All Exposure Routes/Pathways	2.0E+00

M= Medium Specific

TABLE 8.12.RME
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
St. Juliens Creek - Landfill D (Site 4)

Scenario Timeframe: Future
Medium: Subsurface Soil
Exposure Medium: Surface Soil
Exposure Point: Onsite
Receptor Population: Construction Worker
Receptor Age: Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
Ingestion	Aluminum	14900.00	mg/kg	14900.00	mg/kg	M	2.5E-02	mg/kg-day	N/A	N/A	N/A
	Arsenic	23.50	mg/kg	23.50	mg/kg	M	3.9E-05	mg/kg-day	1.5E+00	mg/kg-day -1	5.91E-05
	Benzo(a)Pyrene	0.10	mg/kg	0.10	mg/kg	M	1.7E-07	mg/kg-day	7.3E+00	mg/kg-day -1	1.22E-06
	Beryllium	1.70	mg/kg	1.70	mg/kg	M	2.9E-06	mg/kg-day	4.3E+00	mg/kg-day -1	1.23E-05
	Iron	46900.00	mg/kg	46900.00	mg/kg	M	7.9E-02	mg/kg-day	N/A	N/A	N/A
	Manganese	252.00	mg/kg	252.00	mg/kg	M	4.2E-04	mg/kg-day	N/A	N/A	N/A
Dermal	Aluminum	14900.00	mg/kg	14900.00	mg/kg	M	2.8E-03	mg/kg-day	N/A	N/A	N/A
	Arsenic	23.50	mg/kg	23.50	mg/kg	M	4.4E-06	mg/kg-day	1.4E+00	mg/kg-day -1	6.20E-06
	Benzo(a)Pyrene	0.10	mg/kg	0.10	mg/kg	M	1.9E-08	mg/kg-day	N/A	mg/kg-day -1	N/A
	Beryllium	1.70	mg/kg	1.70	mg/kg	M	3.1E-07	mg/kg-day	4.3E-02	mg/kg-day -1	1.35E-08
	Iron	46900.00	mg/kg	46900.00	mg/kg	M	8.7E-03	mg/kg-day	N/A	N/A	N/A
	Manganese	252.00	mg/kg	252.00	mg/kg	M	4.7E-05	mg/kg-day	N/A	N/A	N/A
										Total Risk Across All Exposure Routes/Pathways	7.9E-05

M= Medium Specific

TABLE 8.12.CT
CALCULATION OF CANCER RISKS
CENTRAL TENDENCIES
St. Juliens Creek - Landfill D (Site 4)

Scenario Timeframe: Future
Medium: Subsurface Soil
Exposure Medium: Subsurface Soil
Exposure Point: Onsite
Receptor Population: Construction Worker
Receptor Age: Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
Ingestion	Aluminum	12510.00	mg/kg	12510.00	mg/kg	M	2.1E-02	mg/kg-day	N/A	N/A	N/A
	Arsenic	13.77	mg/kg	13.77	mg/kg	M	2.3E-05	mg/kg-day	1.5E+00	mg/kg-day -1	3.46E-05
	Benzo(a)Pyrene	1.1E-01	mg/kg	1.1E-01	mg/kg	M	1.8E-07	mg/kg-day	7.3E+00	mg/kg-day -1	1.35E-06
	Beryllium	1.07	mg/kg	1.07	mg/kg	M	1.8E-06	mg/kg-day	4.3E+00	mg/kg-day -1	7.69E-06
	Iron	31100.00	mg/kg	31100.00	mg/kg	M	5.2E-02	mg/kg-day	N/A	N/A	N/A
	Manganese	148.93	mg/kg	148.93	mg/kg	M	2.5E-04	mg/kg-day	N/A	N/A	N/A
Dermal	Aluminum	12510.00	mg/kg	12510.00	mg/kg	M	2.3E-03	mg/kg-day	N/A	N/A	N/A
	Arsenic	13.77	mg/kg	13.77	mg/kg	M	2.5E-06	mg/kg-day	1.4E+00	mg/kg-day -1	3.63E-06
	Benzo(a)Pyrene	1.1E-01	mg/kg	1.1E-01	mg/kg	M	2.0E-08	mg/kg-day	N/A	mg/kg-day -1	N/A
	Beryllium	1.07	mg/kg	1.07	mg/kg	M	2.0E-07	mg/kg-day	4.3E-02	mg/kg-day -1	8.50E-09
	Iron	31100.00	mg/kg	31100.00	mg/kg	M	5.8E-03	mg/kg-day	N/A	N/A	N/A
	Manganese	148.93	mg/kg	148.93	mg/kg	M	2.8E-05	mg/kg-day	N/A	N/A	N/A
										Total Risk Across All Exposure Routes/Pathways	4.7E-05

M= Medium Specific

Site 4

Subsurface Soil to Groundwater

TABLE 2.7
OCCURRENCE, DISTRIBUTION AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN
St. Juliens Creek - Landfill D (Site 4)

Scenario Timeframe: Future
Medium: Subsurface Soil
Exposure Medium: Groundwater
Exposure Point: Onsite

CAS Number	Chemical	Minimum Concentration (1)	Minimum Qualifier	Maximum Concentration (1)	Maximum Qualifier	Units	Location of Maximum Concnetration	Detection Frequency	Range of Detection Limits	Concentration Used for Screening	Background Value (2)	Screening Toxicity Value (3)	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag	Rationale for Contaminant Deletion or Selection (4)
72548	4,4'-DDD	1.8	J	13	J	ug/kg	SB-02	2/2	4.2-5.4	13	NA	NA	NA	NA	NO	NTX
72559	4,4'-DDE	3.1	J	32		ug/kg	SB-03	2/2	4.2-4.2	32	NA	NA	NA	NA	NO	NTX
50293	4,4'-DDT	4.9	J	4.9	J	ug/kg	SB-03	1/2	3.7-5.4	4.9	NA	NA	NA	NA	NO	NTX
7429905	Aluminum	4530		14900		mg/kg	SB-03	2/2	10.33-10.5	14900	NA	NA	NA	NA	NO	NTX
11097691	Aroclor-1254	42		42		ug/kg	SB-02	1/2	37-37	42	NA	NA	NA	NA	NO	NTX
7440382	Arsenic	7.9	L	23.5	L	mg/kg	SB-02	2/2	0.7-0.72	23.5	NA	15	NA	NA	YES	NTX
7440393	Barium	61.9		262		mg/kg	SB-02	2/2	0.47-0.48	262	NA	32	NA	NA	YES	NTX
56553	Benzo(a)Anthracene	100	J	100	J	ug/kg	SB-03	1/2	400-550	100	NA	NA	NA	NA	NO	NTX
50328	Benzo(a)Pyrene	100	J	100	J	ug/kg	SB-03	1/2	400-550	100	NA	NA	NA	NA	NO	NTX
205992	Benzo(b)Fluoranthene	240	J	240	J	ug/kg	SB-03	1/2	400-550	240	NA	NA	NA	NA	NO	NTX
207089	Benzo(k)Fluoranthene	81	J	81	J	ug/kg	SB-03	1/2	400-550	81	NA	NA	NA	NA	NO	NTX
7440417	Beryllium	1.3		1.7		ug/kg	SB-03	2/2	0.23-0.24	1.7	NA	NA	NA	NA	NO	NTX
218019	Chrysene	160	J	160	J	ug/kg	SB-03	1/2	400-550	160	NA	NA	NA	NA	NO	NTX
7440484	Cobalt	4.2	J	13.9		mg/kg	SB-03	2/2	1.88-1.91	13.9	NA	NA	NA	NA	NO	NTX
7440508	Copper	23.8		105		mg/kg	SB-02	2/2	1.41-1.98	105	NA	NA	NA	NA	NO	NTX
206440	Fluoranthene	87	J	87	J	ug/kg	SB-03	1/2	400-550	87	NA	NA	NA	NA	NO	NTX
193395	Indeno(1,2,3-cd)Pyrene	78	J	78	J	ug/kg	SB-03	1/2	400-550	78	NA	NA	NA	NA	NO	NTX
7439896	Iron	10800		46900		mg/kg	SB-03	2/2	3.99-4.06	46900	NA	NA	NA	NA	NO	NTX
7439965	Manganese	72.8		252		mg/kg	SB-03	2/2	0.47-0.48	252	NA	NA	NA	NA	NO	NTX
7439976	Mercury	0.56		0.62		mg/kg	SB-02	2/2	0.06-0.07	0.62	NA	NA	NA	NA	NO	NTX
7440020	Nickel	22.3		22.3		mg/kg	SB-03	1/2	1.64-1.67	22.3	NA	21	NA	NA	YES	NTX
129000	Pyrene	84	J	84	J	ug/kg	SB-03	1/2	400-550	84	NA	NA	NA	NA	NO	NTX
7782492	Selenium	2.6	K	2.6	K	mg/kg	SB-02	1/2	0.7-0.72	2.6	NA	NA	NA	NA	NO	NTX
127184	Tetrachloroethene	2	J	3	J	ug/kg	SB-02	2/2	13-14	3	NA	NA	NA	NA	NO	NTX
7440622	Vanadium	26.9		28		mg/kg	SB-03	2/2	2.11-2.15	28	NA	NA	NA	NA	NO	NTX
7440666	Zinc	131	L	135	L	mg/kg	SB-03	2/2	1.17-1.19	135	NA	NA	NA	NA	NO	NTX

(1 Minimum/maximum detected concentration.

(2 To date, no background study has been performed for the St. Juliens Creek Annex.

(3 All compounds were screened against: Soil Screening Levels as presented in Risk-Based Concentration Table, Third Quarter 1993, U.S. EPA Region III, Roy L. Smith, Ph. D., March 1997. (Cancer benchmark value = 1E-06, HQ=0.1). Lead was screened against a value of 400 mg/kg, as p Human Health Risk Assessment Consensus Agreement #6,A.6, Naval Base Norfolk Partnership, August 1997.

(4 Rationale Codes Selection Reason:
- Infrequent Detection but Associated Historically (HST)
- Frequent Detection (FD)
- Toxicity Information Available (TX)
- Above Screening Levels (ASL)

Deletion Reason:
- Infrequent Detection (IFD)
- No Toxicity Information (NTX)
- Essential Nutrient (NUT)
- Below Screening Level (BSL)

Definitions:
- N/A = Not Applicable
- SQL = Sample Quantitation Limit
- COPC = Chemical of Potential Concern
- ARAR/TBC = Applicable or Relevant and Appropriate Requirement/To Be Considered
- MCL = Federal Maximum Contaminant Level
- SMCL = Secondary Maximum Contaminant Level
- J = Estimated Value
- C = Carcinogenic
- N = Non-Carcinogenic

Site 4

Subsurface Soil to Air

TABLE 2.8
OCCURRENCE, DISTRIBUTION AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN
St. Juliens Creek - Landfill D (Site 4)

Scenario Timeframe: Future
Medium: Subsurface Soil
Exposure Medium: Air
Exposure Point: Onsite

CAS Number	Chemical	Minimum Concentration (1)	Minimum Qualifier	Maximum Concentration (1)	Maximum Qualifier	Units	Location of Maximum Concnetration	Detection Frequency	Range of Detection Limits	Concentration Used for Screening	Background Value (2)	Screening Toxicity Value (3)	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag	Rationale for Contaminant Deletion or Selection (4)
72548	4,4'-DDD	1.8	J	13	J	ug/kg	SB-02	2/2	4.2-5.4	13	NA	NA	NA	NA	NO	NTX
72559	4,4'-DDE	3.1	J	32		ug/kg	SB-03	2/2	4.2-4.2	32	NA	NA	NA	NA	NO	NTX
50293	4,4'-DDT	4.9	J	4.9	J	ug/kg	SB-03	1/2	3.7-5.4	4.9	NA	NA	NA	NA	NO	NTX
7429905	Aluminum	4530		14900		mg/kg	SB-03	2/2	10.33-10.5	14900	NA	NA	NA	NA	NO	NTX
11097691	Aroclor-1254	42		42		ug/kg	SB-02	1/2	37-37	42	NA	NA	NA	NA	NO	NTX
7440382	Arsenic	7.9	L	23.5	L	mg/kg	SB-02	2/2	0.7-0.72	23.5	NA	NA	NA	NA	NO	NTX
7440393	Barium	61.9		262		mg/kg	SB-02	2/2	0.47-0.48	262	NA	NA	NA	NA	NO	NTX
56553	Benzo(a)Anthracene	100	J	100	J	ug/kg	SB-03	1/2	400-550	100	NA	NA	NA	NA	NO	NTX
50328	Benzo(a)Pyrene	100	J	100	J	ug/kg	SB-03	1/2	400-550	100	NA	NA	NA	NA	NO	NTX
205992	Benzo(b)Fluoranthene	240	J	240	J	ug/kg	SB-03	1/2	400-550	240	NA	NA	NA	NA	NO	NTX
207089	Benzo(k)Fluoranthene	81	J	81	J	ug/kg	SB-03	1/2	400-550	81	NA	NA	NA	NA	NO	NTX
7440417	Beryllium	1.3		1.7		ug/kg	SB-03	2/2	0.23-0.24	1.7	NA	NA	NA	NA	NO	NTX
218019	Chrysene	160	J	160	J	ug/kg	SB-03	1/2	400-550	160	NA	NA	NA	NA	NO	NTX
7440484	Cobalt	4.2	J	13.9		mg/kg	SB-03	2/2	1.86-1.91	13.9	NA	NA	NA	NA	NO	NTX
7440508	Copper	23.8		105		mg/kg	SB-02	2/2	1.41-1.98	105	NA	NA	NA	NA	NO	NTX
206440	Fluoranthene	87	J	87	J	ug/kg	SB-03	1/2	400-550	87	NA	NA	NA	NA	NO	NTX
193395	Indeno(1,2,3-cd)Pyrene	78	J	78	J	ug/kg	SB-03	1/2	400-550	78	NA	NA	NA	NA	NO	NTX
7439896	Iron	10800		46900		mg/kg	SB-03	2/2	3.99-4.06	46900	NA	NA	NA	NA	NO	NTX
7439965	Manganese	72.8		252		mg/kg	SB-03	2/2	0.47-0.48	252	NA	NA	NA	NA	NO	NTX
7439976	Mercury	0.56		0.62		mg/kg	SB-02	2/2	0.06-0.07	0.62	NA	NA	NA	NA	NO	NTX
7440020	Nickel	22.3		22.3		mg/kg	SB-03	1/2	1.64-1.67	22.3	NA	NA	NA	NA	NO	NTX
129000	Pyrene	84	J	84	J	ug/kg	SB-03	1/2	400-550	84	NA	NA	NA	NA	NO	NTX
7782492	Selenium	2.6	K	2.6	K	mg/kg	SB-02	1/2	0.7-0.72	2.6	NA	NA	NA	NA	NO	NTX
127184	Tetrachloroethene	2	J	3	J	ug/kg	SB-02	2/2	13-14	3	NA	NA	NA	NA	NO	NTX
7440622	Vanadium	26.9		28		mg/kg	SB-03	2/2	2.11-2.15	28	NA	NA	NA	NA	NO	NTX
7440666	Zinc	131	L	135	L	mg/kg	SB-03	2/2	1.17-1.19	135	NA	NA	NA	NA	NO	NTX

(1 Minimum/maximum detected concentration.

(2 To date, no background study has been performed for the St. Juliens Creek Annex.

(3 All compounds were screened against: Soil Screening Levels as presented in Risk-Based Concentration Table, Third Quarter 1993, U.S. EPA Region III, Roy L. Smith, Ph. D., March 1997. (Cancer benchmark value = 1E-06, HQ=0.1). Lead was screened against a value of 400 mg/kg, as p Human Health Risk Assessment Consensus Agreement #6.A.6, Naval Base Norfolk Partnership, August 1997.

(4 Rationale Codes Selection Reason:
- Infrequent Detection but Associated Historically (HST)
- Frequent Detection (FD)
- Toxicity Information Available (TX)
- Above Screening Levels (ASL)

Deletion Reason:
- Infrequent Detection (IFD)
- No Toxicity Information (NTX)
- Essential Nutrient (NUT)
- Below Screening Level (BSL)

Definitions:
- N/A = Not Applicable
- SQL = Sample Quantitation Limit
- COPC = Chemical of Potential Concern
- ARAR/TBC = Applicable or Relevant and Appropriate Requirement/To Be Considered
- MCL = Federal Maximum Contaminant Level
- SMCL = Secondary Maximum Contaminant Level
- J = Estimated Value
- C = Carcinogenic
- N = Non-Carcinogenic

Site 4

Sediment

TABLE 2.9
OCCURRENCE, DISTRIBUTION AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN
St. Juliens Creek - Landfill D (Site 4)

Scenario Timeframe: Current
Medium: Sediment
Exposure Medium: Sediment
Exposure Point: Onsite

CAS Number	Chemical	Minimum Concentration	Minimum Qualifier	Maximum Concentration	Maximum Qualifier	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration Used for Screening	Background Value (1)	Screening Toxicity Value (2)	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag	Rationale for Contaminant Deletion or Selection (3)
91576	2-Methylnaphthalene	140	J	140	J	ug/kg	SD-03	1/3	420-2000	140	NA	1.1E+07	NA	NA	NO	BSL
72548	4,4'-DDD	4.9		5.7	J	ug/kg	SD-02	2/3	4-42	5.7	NA	5.0E+04	NA	NA	NO	BSL
72559	4,4'-DDE	6.3	J	18		ug/kg	SD-02	3/3	4-5.7	18	NA	3.5E+04	NA	NA	NO	BSL
50293	4,4'-DDT	8.2	J	8.2	J	ug/kg	SD-02	1/3	4-5.7	8.2	NA	3.5E+04	NA	NA	NO	BSL
67641	Acetone	7	J	140		ug/kg	SD-04	2/3	10-31	140	NA	2.7E+07	NA	NA	NO	BSL
7429905	Aluminum	7350		22100		mg/kg	SD-04	3/3	8.8-29.4	22100	NA	2.7E+05	NA	NA	NO	BSL
120127	Anthracene	200	J	200	J	ug/kg	SD-04	1/3	420-2000	200	NA	2.7E+05	NA	NA	NO	BSL
7440360	Antimony	2.1	L	2.1	L	mg/kg	SD-02	1/3	0.4-1.34	2.1	NA	1.1E+02	NA	NA	NO	BSL
7440382	Arsenic	9.7		33.1		mg/kg	SD-03	3/3	0.8-2.01	33.1	NA	8.1E+01	NA	NA	NO	BSL
7440393	Barium	63.2		185		mg/kg	SD-03	3/3	0.4-1.34	185	NA	1.9E+04	NA	NA	NO	BSL
56553	Benzo(a)Anthracene	200	J	1300		ug/kg	SD-04	3/3	420-2000	1300	NA	1.8E+04	NA	NA	NO	BSL
50328	Benzo(a)Pyrene	210	J	1200		ug/kg	SD-04	3/3	420-2000	1200	NA	1.8E+03	NA	NA	NO	BSL
205992	Benzo(b)Fluoranthene	300	J	1900		ug/kg	SD-04	3/3	420-2000	1900	NA	1.8E+04	NA	NA	NO	BSL
207089	Benzo(k)Fluoranthene	200	J	1100		ug/kg	SD-04	3/3	420-2000	1100	NA	1.8E+05	NA	NA	NO	BSL
7440417	Beryllium	0.5	J	2.7	J	mg/kg	SD-04	2/3	0.2-0.67	2.7	NA	2.8E+00	NA	NA	NO	BSL
85687	Butylbenzylphthalate	58	J	58	J	ug/kg	SD-04	1/3	420-2000	58	NA	5.4E+07	NA	NA	NO	BSL
7440439	Cadmium	0.26	J	0.84	J	mg/kg	SD-03	2/3	0.1-0.33	0.84	NA	1.4E+02	NA	NA	NO	BSL
75150	Carbon Disulfide	19	J	19	J	ug/kg	SD-04	1/3	10-31	19	NA	2.7E+07	NA	NA	NO	BSL
218019	Chrysene	290	J	1200		ug/kg	SD-04	3/3	4.68-2000	1200	NA	1.8E+06	NA	NA	NO	BSL
7440484	Cobalt	6.3	J	23.3		mg/kg	SD-03	3/3	1.59-5.35	23.3	NA	1.8E+04	NA	NA	NO	BSL
7440508	Copper	73		387		mg/kg	SD-03	3/3	1.19-4.01	387	NA	9.5E+05	NA	NA	NO	BSL
84742	Di-n-Butylphthalate	67	J	67	J	ug/kg	SD-03	1/3	420-2000	67	NA	2.7E+07	NA	NA	NO	BSL
53703	Dibenz(a,h)Anthracene	150	J	150	J	ug/kg	SD-04	1/3	420-2000	150	NA	1.8E+03	NA	NA	NO	BSL
132649	Dibenzofuran	63	J	63	J	ug/kg	SD-03	1/3	420-2000	63	NA	1.1E+06	NA	NA	NO	BSL
60571	Dieldrin	6	J	23		ug/kg	SD-02	2/3	4-5.7	23	NA	7.5E+02	NA	NA	NO	BSL
84662	Diethylphthalate	300	J	300	J	ug/kg	SD-02	1/3	420-2000	300	NA	2.2E+08	NA	NA	NO	BSL
206440	Fluoranthene	370	J	2800		ug/kg	SD-04	3/3	420-2000	2800	NA	1.1E+07	NA	NA	NO	BSL
193395	Indeno(1,2,3-cd)Pyren	85	J	370	J	ug/kg	SD-04	3/3	420-2000	370	NA	1.8E+04	NA	NA	NO	BSL
7439921	Lead	155		441		mg/kg	SD-04	3/3	0.2-0.67	441	NA	4.0E+02	NA	NA	YES	ASL
7439896	Iron	10500		48600	K	mg/kg	SD-04	3/3	3.38-11.37	48600	NA	8.1E+04	NA	NA	NO	BSL
7439965	Manganese	75.2		877		mg/kg	SD-03	3/3	0.4-1.34	877	NA	6.2E+03	NA	NA	NO	BSL
7439976	Mercury	0.4		6.4	J	mg/kg	SD-03	3/3	0.06-0.15	6.4	NA	8.1E+01	NA	NA	NO	BSL
91203	Naphthalene	100	J	100		ug/kg	SD-03	2/3	420-2000	100	NA	1.1E+07	NA	NA	NO	BSL
7440020	Nickel	17.6		43.9		mg/kg	SD-03	3/3	1.39-4.68	43.9	NA	5.4E+03	NA	NA	NO	BSL
129000	Pyrene	370	J	2800	J	ug/kg	SD-02	3/3	420-2000	2800	NA	8.1E+06	NA	NA	NO	BSL
7440224	Silver	0.79	J	1		mg/kg	SD-03	2/3	0.2-0.67	1	NA	1.4E+03	NA	NA	NO	BSL
7440622	Vanadium	36.5		88.5		mg/kg	SD-04	3/3	1.79-6.02	88.5	NA	1.9E+03	NA	NA	NO	BSL
7440666	Zinc	438		624		mg/kg	SD-03	3/3	1-3.34	624	NA	8.1E+04	NA	NA	NO	BSL

(1) To date, no background study has been performed for the St. Juliens Creek Annex.

(2) With the exception of lead, all compounds were screened against: Risk-Based Concentration Table, Third Quarter 199
Roy L. Smith, Ph. D., October 1997. (Cancer benchmark value = 1E-06, HQ=0.1). Lead was screened against a value of 400 mg/kg, as prescribed i
Human Health Risk Assessment Consensus Agreement #6.A.6, Naval Base Norfolk Partnership, August 1997

(3) Rationale Codes Selection Reaso Above Screening Levels (ASL)
Deletion Reason: Infrequent Detection (IFD)
No Toxicity Information (NTX)
Below Screening Level (BSL)

Definitions:
N/A = Not Applicable
SQL = Sample Quantitation Limit
COPC = Chemical of Potential Concern
ARAR/TBC = Applicable or Relevant and Appropriate Requirement/To Be Considered
MCL = Federal Maximum Contaminant Level
SMCL = Secondary Maximum Contaminant Level
J = Estimated Value
C = Carcinogenic
N = Non-Carcinogenic

Site 4

Surface Water

TABLE 2.10
OCCURRENCE, DISTRIBUTION AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN
St. Juliens Creek - Landfill D (Site 4)

Scenario Timeframe: Current/Future
Medium: Surface Water
Exposure Medium: Surface Water
Exposure Point: Onsite

CAS Number	Chemical	(1) Minimum Concentration	Minimum Qualifier	(1) Maximum Concentration	Maximum Qualifier	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration Used for Screening	Background Value	(2) Screening Toxicity Value	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag	(3) Rationale for Contaminant Deletion or Selection
7440360	Antimony	3.7	J	3.7	J	ug/l	SW-04	1/1	N/A	3.7	N/A	30	4300	VAWQS	NO	BSL
7440382	Arsenic	26.6		26.6		ug/l	SW-04	1/1	N/A	26.6	N/A	190	N/A	VAWQS	NO	BSL
7440417	Beryllium	6.8		6.8		ug/l	SW-04	1/1	N/A	6.8	N/A	5.3	N/A	VAWQS	YES	ASL
7440473	Chromium	66.6		66.6		ug/l	SW-04	1/1	N/A	66.6	N/A	11	N/A	VAWQS	YES	ASL
7440508	Copper	179		179		ug/l	SW-04	1/1	N/A	179	N/A	12	N/A	VAWQS	YES	ASL
7439896	Iron	93100		93100		ug/l	SW-04	1/1	N/A	93100	N/A	1000	N/A	VAWQS	YES	ASL
7439921	Lead	822		822		ug/l	SW-04	1/1	N/A	822	N/A	3.2	N/A	VAWQS	YES	ASL
7439976	Mercury	1.2		1.2		ug/l	SW-04	1/1	N/A	1.2	N/A	0.012	0.053	VAWQS	YES	ASL
7440020	Nickel	64		64		ug/l	SW-04	1/1	N/A	64	N/A	160	4600	VAWQS	NO	BSL
108952	Phenol	2	J	2	J	ug/l	SW-04	1/1	N/A	2	N/A	2560	4,600,000	VAWQS	NO	BSL
7440666	Zinc	1160		1160		ug/l	SW-04	1/1	N/A	1160	N/A	110	N/A	VAWQS	YES	ASL

(1) Minimum/maximum detected concentration.

(2) Federal Ambient Water Quality Criteria.

(3) Rationale Codes Selection Reason:
- Infrequent Detection but Associated Historically (HIST)
- Frequent Detection (FD)
- Toxicity Information Available (TX)
- Above Screening Levels (ASL)

Deletion Reason:
- Infrequent Detection (IFD)
- Background Levels (BKG)
- No Toxicity Information (NTX)
- Essential Nutrient (NUT)
- Below Screening Level (BSL)

Definitions:
- N/A = Not Applicable
- SQL = Sample Quantitation Limit
- COPC = Chemical of Potential Concern
- ARAR/TBC = Applicable or Relevant and Appropriate Requirement/To Be Considered
- VAWQS = Virginia Water Quality Criteria
- J = Estimated Value
- C = Carcinogenic
- N = Non-Carcinogenic
- AWQC = Ambient Water Quality Criteria

TABLE 3.5
MEDIUM-SPECIFIC EXPOSURE POINT CONCENTRATION SUMMARY
St. Juliens Creek - Landfill D (Site 4)

Scenario Timeframe: Future
Medium: Surface Water
Exposure Medium: Surface Water
Exposure Point: Onsite

Chemical of Potential Concern	Units	Arithmetic Mean	95% UCL of Normal Data	Maximum Detected Concentration	Maximum Qualifier	EPC Units	Reasonable Maximum Exposure			Central Tendency		
							Medium EPC Value	Medium EPC Statistic	Medium EPC Rationale	Medium EPC Value	Medium EPC Statistic	Medium EPC Rationale
Beryllium	ug/l	N/A	N/A	6.8		mg/l	0.007	Max	(1)	N/A	N/A	N/A
Chromium	ug/l	N/A	N/A	66.6		mg/l	0.067	Max	(1)	N/A	N/A	N/A
Copper	ug/l	N/A	N/A	179		mg/l	0.179	Max	(1)	N/A	N/A	N/A
Iron	ug/l	N/A	N/A	93100		mg/l	93.100	Max	(1)	N/A	N/A	N/A
Lead	ug/l	N/A	N/A	822		mg/l	0.822	Max	(1)	N/A	N/A	N/A
Mercury	ug/l	N/A	N/A	1.2		mg/l	0.001	Max	(1)	N/A	N/A	N/A
Zinc	ug/l	N/A	N/A	1160		mg/l	1.160	Max	(1)	N/A	N/A	N/A

(1) As stated in the Risk Assessment Assumptions Document presented in Appendix F of this report, exposure point concentrations for this media will consist of the maximum detected concentration and the arithmetic mean. However, since only one surface water sample was collected from this site, the arithmetic mean is equivalent to the maximum concentration.

TABLE 4.13

VALUES USED FOR DAILY INTAKE CALCULATIONS
St. Julien's Creek - Landfill D (Site 4)

Scenario Timeframe: Current
Medium: Surface Water
Exposure Medium: Surface Water
Exposure Point: Onsite
Receptor Population: Trespasser
Receptor Age: Child

Exposure Route	Parameter Code	Parameter Definition	Units	RME Value	RME Rationale/ Reference	CT Value	CT Rationale/ Reference	Intake Equation/ Model Name
Dermal	CW	Chemical Concentration in Water	mg/l	See Table 3	See Table 3	See Table 3	See Table 3	Chronic Daily Intake (CDI) (mg/kg-day)=
	SA	Skin Surface Area	cm^2	2,650	EPA, 1992	2,650	EPA, 1992	CW x SA x PC x ET x EF x ED x CF x 1/BW x 1/AT
	PC	Permeability Constant	cm/hr	Chemical Specific	EPA, 1992	Chemical Specific	EPA, 1992	
	ET	Exposure Time	hours/event	1	1 hour per week	1	1 hour per week	
	EF	Exposure Frequency	events/year	52	CDM Federal, 1997	52	CDM Federal, 1997	
	ED	Exposure Duration	years	6	EPA, 1991	6	EPA, 1991	
	CF	Volumetric Conversion Factor for Water	l/cm^3	0.001	EPA, 1989	1	EPA, 1989	
	BW	Body Weight	kg	15	EPA, 1991	15	EPA, 1991	
	AT-C	Averaging Time - Cancer	days	25,550	EPA, 1989	25,550	EPA, 1989	
	AT-N	Averaging Time - Non-Cancer	days	2,190	EPA, 1989	2,190	EPA, 1989	

Sources:

EPA, 1989: Risk Assessment Guidance for Superfund. Vol. 1: Human Health Evaluation Manual, Part A. OERR. EPA/540/1-89/002.

EPA, 1991: Risk Assessment Guidance for Superfund. Vol. 1: Human Health Evaluation Manual - Supplemental Guidance, Standard Default Exposure Factors. Interim Final. OSWER Directive 9285.6-03,

EPA, 1992: Dermal Exposure Assessment: Principles and Applications. EPA/600/8-91/011B.

CDM Federal, 1997: St. Julien's Creek Risk Assumptions Document.

TABLE 4.14

VALUES USED FOR DAILY INTAKE CALCULATIONS

St. Julien's Creek - Landfill D (Site 4)

Scenario Timeframe: Current
Medium: Surface Water
Exposure Medium: Surface Water
Exposure Point: Onsite
Receptor Population: Trespasser
Receptor Age: Adolescent

Exposure Route	Parameter Code	Parameter Definition	Units	RME Value	RME Rationale/ Reference	CT Value	CT Rationale/ Reference	Intake Equation/ Model Name
Dermal	CW	Chemical Concentration in Water	mg/l	See Table 3	See Table 3	See Table 3	See Table 3	Chronic Daily Intake (CDI) (mg/kg-day)=
	SA	Skin Surface Area	cm^2	3,300	EPA, 1995	3,300	EPA, 1995	CW x SA x PC x ET x EF x ED x CF x 1/BW x 1/AT
	PC	Permeability Constant	cm/hr	Chemical Specific	EPA, 1992	Chemical Specific	EPA, 1992	
	ET	Exposure Time	hours/event	1	1 hour per week	1	1 hour per week	
	EF	Exposure Frequency	events/year	52	CDM Federal, 1997	52	CDM Federal, 1997	
	ED	Exposure Duration	years	10	EPA, 1991	10	EPA, 1991	
	CF	Volumetric Conversion Factor for Water	l/cm^3	0.001	EPA, 1989	1	EPA, 1989	
	BW	Body Weight	kg	45	EPA, 1995	45	EPA, 1995	
	AT-C	Averaging Time - Cancer	days	25,550	EPA, 1989	25,550	EPA, 1989	
	AT-N	Averaging Time - Non-Cancer	days	3,650	EPA, 1989	3,650	EPA, 1989	

Sources:

EPA, 1989: Risk Assessment Guidance for Superfund. Vol. 1: Human Health Evaluation Manual, Part A. OERR. EPA/540/1-89/002.

EPA, 1991: Risk Assessment Guidance for Superfund. Vol. 1: Human Health Evaluation Manual - Supplemental Guidance, Standard Default Exposure Factors. Interim Final. OSWER Directive 9285.6-03.

EPA, 1992: Dermal Exposure Assessment: Principles and Applications. EPA/600/8-91/011B.

EPA, 1995: Exposure Factors Handbook (Review Draft). EPA/600/P-95/002A. The skin surface area presented in this table includes hands, forearms, lower legs, neck and head (25% of total surface area) and was derived by averaging the mean (7 to 16 years) male and female values.

CDM Federal, 1997: St. Julien's Creek Risk Assumptions Document.

TABLE 4.15

VALUES USED FOR DAILY INTAKE CALCULATIONS

St. Julien's Creek - Landfill D (Site 4)

Scenario Timeframe: Current
Medium: Surface Water
Exposure Medium: Surface Water
Exposure Point: Onsite
Receptor Population: Trespasser
Receptor Age: Adult

Exposure Route	Parameter Code	Parameter Definition	Units	RME Value	RME Rationale/ Reference	CT Value	CT Rationale/ Reference	Intake Equation/ Model Name
Dermal	CW	Chemical Concentration in Water	mg/l	See Table 3	See Table 3	See Table 3	See Table 3	Chronic Daily Intake (CDI) (mg/kg-day)=
	SA	Skin Surface Area	cm^2	5,800	EPA, 1992	5,800	EPA, 1992	CW x SA x PC x ET x EF x ED x CF x 1/BW x 1/AT
	PC	Permeability Constant	cm/hr	Chemical Specific	EPA, 1992	Chemical Specific	EPA, 1992	
	ET	Exposure Time	hours/event	1	1 hour per week	1	1 hour per week	
	EF	Exposure Frequency	events/year	52	CDM Federal, 1997	52	CDM Federal, 1997	
	ED	Exposure Duration	years	30	EPA, 1991	30	EPA, 1991	
	CF	Volumetric Conversion Factor for Water	l/cm^3	0.001	EPA, 1989	1	EPA, 1989	
	BW	Body Weight	kg	70	EPA, 1991	70	EPA, 1991	
	AT-C	Averaging Time - Cancer	days	25,550	EPA, 1989	25,550	EPA, 1989	
	AT-N	Averaging Time - Non-Cancer	days	10,950	EPA, 1989	10,950	EPA, 1989	

Sources:

EPA, 1989: Risk Assessment Guidance for Superfund. Vol. 1: Human Health Evaluation Manual, Part A. OERR. EPA/540/1-89/002.

EPA, 1991: Risk Assessment Guidance for Superfund. Vol. 1: Human Health Evaluation Manual - Supplemental Guidance, Standard Default Exposure Factors Interim Final. OSWER Directive 9285.6-03,

EPA, 1992: Dermal Exposure Assessment: Principles and Applications. EPA/600/8-91/011B. The skin surface area presented in this table was derived by averaging the mean adult male and female values.

Skin surface area includes hands, forearms, lower legs, neck , and head (25% of total surface area).

CDM Federal, 1997: St. Julien's Creek Risk Assumptions Document.

TABLE 4.16

VALUES USED FOR DAILY INTAKE CALCULATIONS

St. Julien's Creek - Landfill D (Site 4)

Scenario Timeframe: Future
Medium: Surface Water
Exposure Medium: Surface Water
Exposure Point: Onsite
Receptor Population: Resident
Receptor Age: Child

Exposure Route	Parameter Code	Parameter Definition	Units	RME Value	RME Rationale/ Reference	CT Value	CT Rationale/ Reference	Intake Equation/ Model Name
Dermal	CW	Chemical Concentration in Water	mg/l	See Table 3	See Table 3	See Table 3	See Table 3	Chronic Daily Intake (CDI) (mg/kg-day)=
	SA	Skin Surface Area	cm^2	2,650	EPA, 1992	2,650	EPA, 1992	CW x SA x PC x ET x EF x ED x CF x 1/BW x 1/AT
	PC	Permeability Constant	cm/hr	Chemical Specific	EPA, 1992	Chemical Specific	EPA, 1992	
	ET	Exposure Time	hours/day	2.6	CDM Federal, 1997	2.6	CDM Federal, 1997	
	EF	Exposure Frequency	days/year	350	EPA, 1991	350	EPA, 1991	
	ED	Exposure Duration	years	6	EPA, 1991	6	EPA, 1991	
	CF	Volumetric Conversion Factor for Water	l/cm^3	0.001	EPA, 1989	1	EPA, 1989	
	BW	Body Weight	kg	15	EPA, 1991	15	EPA, 1991	
	AT-C	Averaging Time - Cancer	days	25,550	EPA, 1989	25,550	EPA, 1989	
	AT-N	Averaging Time - Non-Cancer	days	2,190	EPA, 1989	2,190	EPA, 1989	

Sources:

EPA, 1989: Risk Assessment Guidance for Superfund. Vol. 1: Human Health Evaluation Manual, Part A. OERR. EPA/540/1-89/002.

EPA, 1991: Risk Assessment Guidance for Superfund. Vol. 1: Human Health Evaluation Manual - Supplemental Guidance, Standard Default Exposure Factors. Interim Final. OSWER Directive 9285.6-03,

EPA, 1992: Dermal Exposure Assessment: Principles and Applications. EPA/600/8-91/011B.

CDM Federal, 1997: St. Julien's Creek Risk Assumptions Document.

TABLE 4.17

VALUES USED FOR DAILY INTAKE CALCULATIONS

St. Julien's Creek - Landfill D (Site 4)

Scenario Timeframe: Future
Medium: Surface Water
Exposure Medium: Surface Water
Exposure Point: Onsite
Receptor Population: Resident
Receptor Age: Adult

Exposure Route	Parameter Code	Parameter Definition	Units	RME Value	RME Rationale/ Reference	CT Value	CT Rationale/ Reference	Intake Equation/ Model Name
Dermal	CW	Chemical Concentration in Water	mg/l	See Table 3	See Table 3	See Table 3	See Table 3	Chronic Daily Intake (CDI) (mg/kg-day)=
	SA	Skin Surface Area	cm^2	5,800	EPA, 1992	5,800	EPA, 1992	CW x SA x PC x ET x EF x ED x CF x 1/BW x 1/AT
	PC	Permeability Constant	cm/hr	Chemical Specific	EPA, 1992	Chemical Specific	EPA, 1992	
	ET	Exposure Time	hours/day	2.6	CDM Federal, 1997	2.6	CDM Federal, 1997	
	EF	Exposure Frequency	days/year	350	EPA, 1991	350	EPA, 1991	
	ED	Exposure Duration	years	24	EPA, 1991	24	EPA, 1991	
	CF	Volumetric Conversion Factor for Water	l/cm^3	0.001	EPA, 1989	1	EPA, 1989	
	BW	Body Weight	kg	70	EPA, 1991	70	EPA, 1991	
	AT-C	Averaging Time - Cancer	days	25,550	EPA, 1989	25,550	EPA, 1989	
	AT-N	Averaging Time - Non-Cancer	days	8,760	EPA, 1989	8,760	EPA, 1989	

Sources:

EPA, 1989: Risk Assessment Guidance for Superfund. Vol. 1: Human Health Evaluation Manual, Part A. OERR. EPA/540/1-89/002.

EPA, 1991: Risk Assessment Guidance for Superfund. Vol. 1: Human Health Evaluation Manual - Supplemental Guidance, Standard Default Exposure Factors. Interim Final. OSWER Directive 9285.6-03,

EPA, 1992: Dermal Exposure Assessment: Principles and Applications. EPA/600/8-91/011B. The skin surface area presented in this table was derived by averaging the mean adult male and female values.

Skin surface area includes hands, forearms, lower legs, neck , and head (25% of total surface area).

CDM Federal, 1997: St. Julien's Creek Risk Assumptions Document.

TABLE 5.5
NON-CANCER TOXICITY DATA -- ORAL/DERMAL
St. Juliens Creek - Landfill D (Site 4)

Chemical of Potential Concern	Chronic/ Subchronic	Oral RfD Value	Oral RfD Units	Oral to Dermal Adjustment Factor	Adjusted Dermal RfD	Units	Primary Target Organ	Combined Uncertainty/Modifying Factors	Sources of RfD: Target Organ	Dates of RfD: Target Organ (MM/DD/YY)
Beryllium	Chronic	5.0E-03	mg/kg/day	0.010	5.0E-05	mg/kg/day	NOAEL	101	IRIS	11/17/98
Chromium	Chronic	5.0E-03	mg/kg/day	0.010	5.0E-05	mg/kg/day	NOAEL	501	IRIS	02/09/98
Copper	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Iron	Chronic	3.0E-01	mg/kg/day	0.050	1.5E-02	mg/kg/day	N/A	N/A	RBC: N/A	10/7/98
Mercury	Chronic	3.0E-04	mg/kg/day	0.150	4.5E-05	mg/kg/day	N/A	N/A	RBC: N/A	10/07/98
Zinc	Chronic	3.0E-01	mg/kg/day	0.250	7.5E-02	mg/kg/day	NOAEL	4	IRIS	11/17/98

N/A = Not Applicable
IRIS= Integrated Risk Information System
RBC= Risk-Based Concentration Table. October, 1997.

TABLE 6.5
CANCER TOXICITY DATA -- ORAL/DERMAL
St. Juliens Creek - Landfill D (Site 4)

Chemical of Potential Concern	Oral Cancer Slope Factor	Oral to Dermal Adjustment Factor	Adjusted Dermal Cancer Slope Factor	Units	Weight of Evidence/ Cancer Guideline Description	Source	Date (MM/DD/YY)
Beryllium	4.3E+00	0.01	4.3E+02	mg/kg/day	B 2	IRIS	11/17/97
Chromium	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Copper	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Iron	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mercury	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Zinc	N/A	N/A	N/A	N/A	N/A	N/A	N/A

IRIS = Integrated Risk Information System
HEAST= Health Effects Assessment Summary Tables
NCEA= National Center for Environmental Assessment

EPA Group:
- A - Human carcinogen
- B1 - Probable human carcinogen - indicates that limited human data are available
- B2 - Probable human carcinogen - indicates sufficient evidence in animals and inadequate or no evidence in humans
- C - Possible human carcinogen
- D - Not classifiable as a human carcinogen
- E - Evidence of noncarcinogenicity

Weight of Evidence:
- Known/Likely
- Cannot be Determined
- Not Likely

TABLE 7.13.RME
CALCULATION OF NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
St. Juliens Creek - Landfill D (Site 4)

Scenario Timeframe: Current
Medium: Surface Water
Exposure Medium: Surface Water
Exposure Point: Onsite
Receptor Population: Trespasser
Receptor Age: Child

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Dermal	Beryllium	0.007	mg/l	0.007	mg/l	M	8.6E-08	mg/kg-day	5.0E-05	mg/kg/day	N/A	N/A	1.7E-03
	Chromium	0.067	mg/l	0.067	mg/l	M	8.4E-07	mg/kg-day	5.0E-05	mg/kg/day	N/A	N/A	1.7E-02
	Copper	0.179	mg/l	0.179	mg/l	M	2.3E-06	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Iron	93.100	mg/l	93.100	mg/l	M	1.2E-03	mg/kg-day	1.5E-02	mg/kg/day	N/A	N/A	7.8E-02
	Mercury	0.822	mg/l	0.822	mg/l	M	1.0E-05	mg/kg-day	4.5E-05	mg/kg-day	N/A	N/A	2.3E-01
	Zinc	0.001	mg/l	0.001	mg/l	M	1.5E-08	mg/kg-day	7.5E-02	mg/kg/day	N/A	N/A	2.0E-07
												Total Hazard Index Across All Exposure Routes/Pathways	3.3E-01

M= Medium Specific

TABLE 7.14.RME
CALCULATION OF NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
St. Juliens Creek - Landfill D (Site 4)

Scenario Timeframe: Current
Medium: Surface Water
Exposure Medium: Surface Water
Exposure Point: Onsite
Receptor Population: Trespasser
Receptor Age: Adolescent

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Dermal	Beryllium	0.007	mg/l	0.01	mg/l	M	3.6E-08	mg/kg-day	5.0E-05	mg/kg/day	N/A	N/A	7.1E-04
	Chromium	0.067	mg/l	0.07	mg/l	M	3.5E-07	mg/kg-day	5.0E-05	mg/kg/day	N/A	N/A	7.0E-03
	Copper	0.179	mg/l	0.18	mg/l	M	9.4E-07	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Iron	93.100	mg/l	93.10	mg/l	M	4.9E-04	mg/kg-day	1.5E-02	mg/kg/day	N/A	N/A	3.2E-02
	Mercury	0.822	mg/l	0.82	mg/l	M	4.3E-06	mg/kg-day	4.5E-05	mg/kg/day	N/A	N/A	9.5E-02
	Zinc	0.001	mg/l	0.00	mg/l	M	6.3E-09	mg/kg-day	7.5E-02	mg/kg/day	N/A	N/A	8.4E-08
												Total Hazard Index Across All Exposure Routes/Pathways	1.4E-01

M= Medium Specific

TABLE 7.15.RME
CALCULATION OF NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
St. Juliens Creek - Landfill D (Site 4)

Scenario Timeframe: Current
Medium: Surface Water
Exposure Medium: Surface Water
Exposure Point: Onsite
Receptor Population: Trespasser
Receptor Age: Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Dermal	Beryllium	0.007	mg/l	0.007	mg/l	M	4.0E-08	mg/kg-day	5.0E-05	mg/kg/day	N/A	N/A	8.0E-04
	Chromium	0.067	mg/l	0.067	mg/l	M	3.9E-07	mg/kg-day	5.0E-05	mg/kg/day	N/A	N/A	7.9E-03
	Copper	0.179	mg/l	0.179	mg/l	M	1.1E-06	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Iron	93.100	mg/l	93.100	mg/l	M	5.5E-04	mg/kg-day	1.5E-02	mg/kg/day	N/A	N/A	3.7E-02
	Mercury	0.822	mg/l	0.822	mg/l	M	4.9E-06	mg/kg-day	4.5E-05	mg/kg/day	N/A	N/A	1.1E-01
	Zinc	0.001	mg/l	0.001	mg/l	M	7.1E-09	mg/kg-day	7.5E-02	mg/kg/day	N/A	N/A	9.4E-08
										Total Hazard Index Across All Exposure Routes/Pathways			1.5E-01

M= Medium Specific

TABLE 7.16.RME
CALCULATION OF NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
St. Juliens Creek - Landfill D (Site 4)

Scenario Timeframe: Future
Medium: Surface Water
Exposure Medium: Surface Water
Exposure Point: Onsite
Receptor Population: Resident
Receptor Age: Child

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Dermal	Beryllium	0.007	mg/l	0.007	mg/l	M	5.8E-07	mg/kg-day	5.0E-05	mg/kg/day	N/A	N/A	1.2E-02
	Chromium	0.067	mg/l	0.067	mg/l	M	5.6E-06	mg/kg-day	5.0E-05	mg/kg/day	N/A	N/A	1.1E-01
	Copper	0.179	mg/l	0.179	mg/l	M	1.5E-05	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Iron	93.100	mg/l	93.100	mg/l	M	7.9E-03	mg/kg-day	1.5E-02	mg/kg/day	N/A	N/A	5.3E-01
	Mercury	0.822	mg/l	0.822	mg/l	M	7.0E-05	mg/kg-day	4.5E-05	mg/kg-day	N/A	N/A	1.5E+00
	Zinc	0.001	mg/l	0.001	mg/l	M	1.0E-07	mg/kg-day	7.5E-02	mg/kg/day	N/A	N/A	1.4E-06
												Total Hazard Index Across All Exposure Routes/Pathways	2.2E+00

M= Medium Specific

TABLE 7.17.RME
CALCULATION OF NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
St. Juliens Creek - Landfill D (Site 4)

Scenario Timeframe: Future
Medium: Surface Water
Exposure Medium: Surface Water
Exposure Point: Onsite
Receptor Population: Resident
Receptor Age: Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Dermal	Beryllium	0.007	mg/l	0.007	mg/l	M	2.7E-07	mg/kg-day	5.0E-05	mg/kg/day	N/A	N/A	5.4E-03
	Chromium	0.067	mg/l	0.067	mg/l	M	2.6E-06	mg/kg-day	5.0E-05	mg/kg/day	N/A	N/A	5.3E-02
	Copper	0.179	mg/l	0.179	mg/l	M	7.1E-06	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Iron	93.100	mg/l	93.100	mg/l	M	3.7E-03	mg/kg-day	1.5E-02	mg/kg/day	N/A	N/A	2.5E-01
	Mercury	0.822	mg/l	0.822	mg/l	M	3.3E-05	mg/kg-day	4.5E-05	mg/kg-day	N/A	N/A	7.3E-01
	Zinc	0.001	mg/l	0.001	mg/l	M	4.8E-08	mg/kg-day	7.5E-02	mg/kg/day	N/A	N/A	6.4E-07
												Total Hazard Index Across All Exposure Routes/Pathways	1.0E+00

M= Medium Specific

Site 4

Table 9s

Site 4

Table 10s

APPENDIX K

Sediment COPC Screening Tables

Risk-Based Concentrations for Noncarcinogenic & Carcinogenic Effects
Sediment Ingestion for Recreational Adult and Adolescent Scenarios
St. Juliens Creek - Landfill D (Site 4)

Chemical	Oral RfD (mg/kg-day)	Adolescent RBC Noncarcinogen (mg/kg)	Oral Slope Factor (OSF) (kg-day/mg)	Adult RBC Carcinogen (mg/kg)	Lowest Recreational RBC (mg/kg)	Lowest Recreational RBC	Units
2-Methylnaphthalene	4.0E-02	1.1E+04	NA		1.1E+04	1.1E+07	ug/kg
4,4'-DDD	NA		2.4E-01	5.0E+01	5.0E+01	5.0E+04	ug/kg
4,4'-DDE	NA		3.4E-01	3.5E+01	3.5E+01	3.5E+04	ug/kg
4,4'-DDT	5.0E-04	1.4E+02	3.4E-01	3.5E+01	3.5E+01	3.5E+04	ug/kg
Acetone	1.0E-01	2.7E+04	NA		2.7E+04	2.7E+07	ug/kg
Aluminum	1.0E+00	2.7E+05	NA		2.7E+05	2.7E+05	mg/kg
Anthracene	1.0E-03	2.7E+02	NA		2.7E+02	2.7E+05	ug/kg
Antimony	4.0E-04	1.1E+02	NA		1.1E+02	1.1E+02	mg/kg
Arsenic	3.0E-04	8.1E+01	NA		8.1E+01	8.1E+01	mg/kg
Barium	7.0E-02	1.9E+04	1.5E+00		1.9E+04	1.9E+04	mg/kg
Benzo(a)Anthracene	NA		7.3E-01	1.6E+01	1.6E+01	1.6E+04	ug/kg
Benzo(a)Pyrene	NA		7.3E+00	1.6E+00	1.6E+00	1.6E+03	ug/kg
Benzo(b)Fluoranthene	NA		7.3E-01	1.6E+01	1.6E+01	1.6E+04	ug/kg
Benzo(k)Fluoranthene	NA		7.3E-02	1.6E+02	1.6E+02	1.6E+05	ug/kg
Beryllium	5.0E-03	1.4E+03	4.3E+00	2.8E+00	2.8E+00	2.8E+00	mg/kg
Butylbenzylphthalate	2.0E-01	5.4E+04	NA		5.4E+04	5.4E+07	ug/kg
Cadmium	5.0E-04	1.4E+02	NA		1.4E+02	1.4E+02	mg/kg
Carbon Disulfide	1.0E-01	2.7E+04	NA		2.7E+04	2.7E+07	ug/kg
Chrysene	NA		7.3E-03	1.6E+03	1.6E+03	1.6E+06	ug/kg
Cobalt	6.0E-02	1.6E+04	NA		1.6E+04	1.6E+04	mg/kg
Copper	3.5E+00	9.5E+05	NA		9.5E+05	9.5E+05	mg/kg
Di-n-butylphthalate	1.0E-01	2.7E+04	NA		2.7E+04	2.7E+07	ug/kg
Dibenz(a,h)anthracene	NA		7.3E+00	1.6E+00	1.6E+00	1.6E+03	ug/kg
Dibenzofuran	4.0E-03	1.1E+03	NA		1.1E+03	1.1E+06	ug/kg
Dieldrin	5.0E-05	1.4E+01	1.6E+01	7.5E-01	7.5E-01	7.5E+02	ug/kg
Diethylphthalate	8.0E-01	2.2E+05	NA		2.2E+05	2.2E+08	ug/kg
Fluoranthene	4.0E-02	1.1E+04	NA		1.1E+04	1.1E+07	ug/kg
Indeno(1,2,3-cd)Pyrene	NA		7.3E-01	1.6E+01	1.6E+01	1.6E+04	ug/kg
Iron	3.0E-01	8.1E+04	NA		8.1E+04	8.1E+04	mg/kg
Manganese	2.3E-02	6.2E+03	NA		6.2E+03	6.2E+03	mg/kg
Mercury	3.0E-04	8.1E+01	NA		8.1E+01	8.1E+01	mg/kg
Naphthalene	4.0E-02	1.1E+04	NA		1.1E+04	1.1E+07	ug/kg
Nickel	2.0E-02	5.4E+03	NA		5.4E+03	5.4E+03	mg/kg
Pyrene	3.0E-02	8.1E+03	NA		8.1E+03	8.1E+06	ug/kg
Silver	5.0E-03	1.4E+03	NA		1.4E+03	1.4E+03	mg/kg
Vanadium	7.0E-03	1.9E+03	NA		1.9E+03	1.9E+03	mg/kg
Zinc	3.0E-01	8.1E+04	NA		8.1E+04	8.1E+04	mg/kg

Risk-Based Concentrations for Noncarcinogenic & Carcinogenic Effects
Sediment Ingestion for Recreational Adult and Adolescent Scenarios
St. Juliens Creek - Landfill D (Site 4)

Chemical	Oral RfD (mg/kg-day)	Adolescent RBC Noncarcinogen (mg/kg)	Oral Slope Factor (OSF) (kg-day/mg)	Adult RBC Carcinogen (mg/kg)	Lowest Recreational RBC (mg/kg)	Lowest Recreational RBC	Units

Noncarcinogenic effects calculations:

$$\text{RBC (mg/kg)} = \frac{\text{THI} * \text{BW} * \text{ATnc} * 365\ \text{days/year} * 1\text{E}+06\ \text{mg/kg}}{\text{EF} * \text{ED} * (1/\text{OralRfD}) * \text{IngR} * \text{FC}}$$

Carcinogen calculations:

$$\text{RBC (mg/kg)} = \frac{\text{Risk} * \text{BW} * \text{ATc} * 365\ \text{days/year} * 1\text{E}+06\ \text{mg/kg}}{\text{EF} * \text{ED} * \text{OSF} * \text{IngR} * \text{FC}}$$

EXPOSURE ASSUMPTIONS

Exposure setting	Adolescent	Adult
THI - Target hazard index (unitless)	0.1	0.1
Risk - Target excess lifetime cancer risk (unitless	1.0E-06	1.0E-06
BW - Body weight (kilograms)	37	70
ATnc - Averaging time for noncarcinogens (year)	9	NA
ATc - Averaging time for carcinogens (year)	NA	70
EF - Exposure frequency (days/year)	100	100
ED - Exposure duration (year)	9	30
FC - Fraction of contaminated sediment	0.5	0.5
IngR - Ingestion rate (mg/day)	100	100

NA - No reference dose or slope factor available.

[1] The soil screening level for lead, 400 mg/kg, is not applicable for sediment.

APPENDIX L

Chemical Specific Exposure Values

United States Environmental Protection Agency
Hazardous Waste Management Division
841 Chestnut Building
December 1995

Region III
Office of Superfund Programs
Philadelphia, PA 19107
EPA/903-K-95-003

Region III

Technical Guidance Manual

Risk Assessment

Assessing Dermal Exposure from Soil

EPA Contact: Jennifer Hubbard

Dermal absorption from soil is one of the routes of exposure that may be addressed during risk assessment at Superfund sites. One factor necessary to estimate dose, and therefore risk, via this route is the absorption factor of a chemical from soil. This document is intended to provide default assumptions for this factor in the assessment of dermal soil exposure.

ASSESSING DERMAL CONTACT WITH SOIL; EXISTING GUIDANCE

Risk Assessment Guidance for Superfund, Volume I, Human Health Evaluation Manual (Part A) ("RAGS"; EPA, 1989) presents an equation used to estimate exposure from dermal contact with soil:

$$AD = (CS \times CF \times SA \times AF \times ABS \times EF \times ED)/(BW \times AT)$$

Where:
- AD = Absorbed dose (mg/kg/day)
- CS = Chemical concentration in soil (mg/kg)
- CF = Conversion factor (10-6 kg/mg)
- SA = Skin surface area available for contact (cm2/event)
- AF = Soil-to-skin adherence factor (mg/cm2)
- ABS = Absorption factor (unitless)
- EF = Exposure frequency (events/year)
- ED = Exposure duration (years)
- BW = Body weight (kg)
- AT = Averaging time (period over which exposure is averaged-days)

(RAGS, Exhibit 6-15)

RAGS then states: "Absorption factors (ABS) are used to reflect the desorption of the chemical from soil and the absorption of the chemical across the skin and into the bloodstream. Consult the open literature for information on chemical-specific absorption factors. In the absence of chemical-specific information, use conservative assumptions to estimate ABS." The use of conservative assumptions is appropriate when determining Reasonable Maximum Exposure (RME), and reflects EPA's policy that protection of human health should be ensured.

http://www.epa.gov/reg3hwmd/risk/solabsg2.htm

Assessment of dermal exposure is important for a complete risk assessment. This document summarizes chemical-specific and general (for classes of compounds) absorption factors that have been found in the limited database available. The factors were compiled from existing national guidance and peer-reviewed scientific literature. It is recommended that these numbers be used as defaults for the ABS parameter when calculating RME soil exposure in the absence of chemical-specific, site-specific information. These defaults are presented in order to facilitate performance of risk assessments by compiling these factors in one place, and to promote consistency in risk assessment.

POLYCHLORINATED BIPHENYLS (PCBs)

A review of studies assessing the dermal absorption of 3,3',4,4'-tetrachlorobiphenyl (TCB) from soil appeared in EPA, 1992. The range of absorption was reported to be 0.6% to 6%. Region III recommends accepting the 6% value as a conservative assumption of ABS for polychlorinated biphenyls, in keeping with RAGS.

CHLORINATED DIOXINS

A review of studies assessing the dermal absorption of 2,3,7,8-tetrachlorodibenzo-*p*-dioxin (TCDD) from soil appeared in EPA, 1992. The range of absorption was reported to be 0.1% to 3%. Region III recommends accepting the 3% value as a conservative assumption of ABS for chlorinated dioxins, in keeping with RAGS.

CADMIUM

A review of studies assessing the dermal absorption of cadmium from soil appeared in EPA, 1992. The range of absorption was reported to be 0.1% to 1%. Region III recommends accepting the 1% value as a conservative assumption of ABS for cadmium, in keeping with RAGS.

ARSENIC

In vivo studies from Wester *et al*, 1993a, report 3.2% for a dose of 0.6 ug/cm2. Region III recommends accepting this as a default ABS for arsenic.

OTHER METALS

Suggested ABS factors based on the pharmacokinetic properties of chemicals appeared in Ryan *et al*, 1987. The proposed range for dermal absorption of inorganics from soil was 0.1% to 1%. This was also consistent with a review of the studies for cadmium, an inorganic, as assessed in EPA, 1992. Region III recommends accepting the 1% value as a conservative assumption of ABS for inorganics, in keeping with RAGS.

VOLATILE ORGANIC COMPOUNDS

Volatile organics are especially difficult to assess, because most studies to date have involved occluding the skin, which may give artificially high ABS values, since these compounds would also be expected to volatilize from the skin. Suggested ABS factors based on the pharmacokinetic properties of chemicals appeared in Ryan *et al*, 1987. The proposed range for dermal absorption of volatile organics from soil was 10% to 25%. However, experimental data show even lower ABS values for volatile organics. For volatile organics such as benzene (vapor pressure approximately 95.2 mm Hg), Region III recommends

http://www.epa.gov/reg3hwmd/risk/solabsg2.htm

accepting the 0.05% value based on Skowronski *et al*, 1988, and Franz, 1984. This would include chemicals such as 1,1- dichloroethane 1,1,1-trichloroethane, and other volatiles with vapor pressure similar to or greater than that of benzene. For volatiles such as ethylbenzene, tetrachloroethene, toluene, and xylenes, which have vapor pressures lower than that of benzene (and less volatilization from the skin may occur), a default ABS of 3% is recommended.

These numbers only apply to non-occluded skin, which would be the scenario expected for most environmental exposures. If, however, the skin is occluded for any reason, higher ABS values (up to 100%) should be used.

PENTACHLOROPHENOL

In vivo studies from Wester *et al*, 1993b, report 24.4% for a dose of 0.7 ug/cm2 in soil. Region III recommends accepting this as a default ABS for pentachlorophenol.

OTHER SEMIVOLATILE ORGANIC COMPOUNDS

Suggested ABS factors based on the pharmacokinetic properties of chemicals appeared in Ryan *et al*, 1987. The proposed range for dermal absorption of semivolatile organics from soil was 1% to 10%. The reported absorption of topically applied pure benzo[a]pyrene in studies in EPA, 1992, ranged from 1% to 13%. Kao et al, 1985, reported approximately 3% for absorption of topically applied pure benzo[a]pyrene by *in vitro* human skin. The absorption from soil would be expected to be lower and indicates that the range in Ryan *et al*, 1987, may be conservative with respect to this particular compound but not necessarily unreasonable. Region III recommends accepting the 10% value as a conservative assumption of ABS for semivolatile organics, in keeping with RAGS.

PESTICIDES

Suggested ABS factors based on the pharmacokinetic properties of chemicals appeared in Ryan *et al*, 1987. The proposed range for dermal absorption of pesticides from soil was 1% to 10%. The reported absorption of topically applied pesticides and herbicides in acetone to *in vitro* human skin was reported to be within this range for lindane, aldrin, dieldrin, malathion, parathion, and 2,4-D in Feldmann and Maibach, 1974. DDT absorption from soil in monkey and human skin was reported to range from 1.04 to 3.3% in EPA, 1992. These studies indicate that the range in Ryan *et al*, 1987, may be conservative but not necessarily unreasonable. Region III recommends accepting the 10% value as a conservative assumption of ABS for pesticides, in keeping with RAGS.

APPLICATIONS OF THIS GUIDANCE

This document represents a summary of best professional judgment at this time. It is not intended to be a detailed technical analysis of dermal exposure experimentation. As a summary of best professional judgment and default parameters, the recommendations herein may be superseded by newer, chemical-specific and route-specific studies, or by site-specific studies of acceptable quality.

These factors apply to absorption from soil or sediment. Dermal absorption of chemicals from water is discussed in RAGS and EPA, 1992.

It should be noted that when estimating absorbed doses for chemicals, dose-response parameters such as Reference Doses (RfDs) and Cancer Slope Factors (CSFs) should be adjusted accordingly, where

http://www.epa.gov/reg3hwmd/risk/solabsg2.htm

possible and appropriate, as per RAGS Appendix A.

SUMMARY

Dermal absorption from soil is one of the routes of exposure that may be addressed during risk assessment at Superfund sites. One factor necessary to estimate dose, and therefore risk, via this route is the absorption factor of a chemical from soil. This document recommends default assumptions for this factor in the assessment of dermal soil exposure, based on the limited available information and best professional judgment.

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For additional information, call (215) 597-1309.

Approved by: Thomas C. Voltaggio, Director
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http://www.epa.gov/reg3hwmd/risk/solabsg2.htm

Chemical	Permeability Constant*
Aluminum	5.00×10^{-4}
Arsenic	5.00×10^{-4}
Barium	5.00×10^{-4}
Beryllium	5.00×10^{-4}
Cadmium	5.00×10^{-4}
Chromium	5.00×10^{-4}
Copper	5.00×10^{-4}
Iron	5.00×10^{-4}
Manganese	5.00×10^{-4}
Mercury	5.00×10^{-4}
Nickel	5.00×10^{-4}
Silver	5.00×10^{-4}
Vanadium	5.00×10^{-4}
Zinc	5.00×10^{-4}
bis(2-ethylhexyl) phthalate	9.83×10^{-2}
Chloroform	8.90×10^{-3}

* Permeability constants for metals and chloroform were obtained from *Dermal Exposure Assessment: Principals and Applications*, EPA, 1992. The permeability constant for water was used for metals. The permeability constant for bis(2-ethylhexyl) phthalate was obtained from *Final Risk Assessment Handbook*, Massachusetts Military Reservation, September 1994.

APPENDIX M

Chemical Specific Toxicological Values

ORAL ABS VALUES FOR ORAL-TO-DERMAL EXTRAPOLATION PER RAGS APPENDIX A
LAST UDATED: 12/30/96

CHEMICAL	ORAL ABS	SOURCE
VOCs		
Acetone	0.83	NCEA 10-9-92
Benzene	1 CSF	IRIS
2-Butanone	0.95	NCEA 10-9-92
Chloroform	1	NCEA 2-91
1,2-Dichloroethene	1	NCEA 11-1-93
Ethylbenzene	0.92	NCEA 11-1-93
Tetrachloroethene	1	NCEA 11-1-93
Toluene	1	NCEA 10-9-92
Vinyl chloride	1	NCEA 11-1-93
Xylenes	0.9	NCEA 10-9-92
BNAs		
Bis(2-ethylhexyl)phthalate	0.55	ATSDR, 1991
4-Methylphenol	0.65	NCEA 5-5-94
Pentachlorophenol	0.9	ATSDR, 1994
Acenaphthene	0.7	ATSDR, 1993
Acenaphthylene	0.7	ATSDR, 1993
Anthracene	0.6	ATSDR, 1993
Benz[a]anthracene	N/A	NCEA 2-9-93
Benzo[b]fluoranthene	N/A	NCEA 2-11-92
Benzo[a]pyrene	N/A	NCEA 7-24-91
Chrysene	N/A	NCEA 2-11-92
Dibenz[a,h]anthracene	N/A	NCEA 12-29-92
Dibenzofuran	0.7	ATSDR, 1993
Fluoranthene	0.7	ATSDR, 1993
Fluorene	0.7	ATSDR, 1993
Indeno[1,2,3-c,d]pyrene	N/A	NCEA 2-11-92
2-Methylnaphthalene	0.8	See naphthalene
Naphthalene	0.8	ATSDR, 1993
Pyrene	0.8	ATSDR, 1993
Pesticides/PCBs/Dioxins		
Chlordane	0.8	ATSDR, 1994
PCBs	0.89 RfD	NCEA 7-31-92
PCBs	For CSF, see IRIS	
Inorganics		
Aluminum	0.27	ATSDR, 1992
Antimony	0.1	ATSDR, 1992
Arsenic	0.95	NCEA 10-9-92
Barium	1	NCEA 8-5-93
Beryllium	0.01	NCEA 5-12-94
Cadmium	.05 water RfD	IRIS
	0.025 food RfD	IRIS
Chromium	0.01	ATSDR, 1993
Cobalt	0.3	ATSDR, 1992
Copper	0.6	NCEA 6-24-92
Cyanide	N/A	NCEA 6-3-91
Mercury	0.15	NCEA 1993
Nickel	0.01-0.1	NCEA 6-5-92
Selenium	0.9	ATSDR, 1994
Silver	N/A	NCEA 6-10-91
Thallium	1	ATSDR, 1992
Titanium	0.03 oral/food	Casarett & Doull, 1986
Vanadium	0.02	ATSDR, 1992
Zinc	0.25	NCEA 10-9-92
	0.2	RAGS, 1989

* Use to adjust RfD & CSF when doing dermal risk

(RfD)

* For Hazardous Index Multiple by available #

* For Cancer Slope Factor Divide by available #

*Takes into effect GI % of chemical absorbed by GI tract

NCEA = National Center for Environmental Assessment Issue Paper
IRIS = Integrated Risk Information System
ATSDR = Agency for Toxic Substances and Disease Registry
RAGS = Risk Assessment Guidance for Superfund, Volume I Human Health Evaluation Manual (Part A)

APPENDIX N

Toxicological Profiles

ALUMINUM

Aluminum is not thought to be harmful to humans in the forms normally encountered (e.g., via cooking utensils, antacids, and antiperspirants). However, exposure to aluminum is not beneficial and excess exposure may be harmful to certain people. Sensitive subpopulations may include pregnant women and Alzheimer's patients. The potential health risks associated with exposure to aluminum include respiratory problems from breathing the dust, and possibly neurological, teratogenic, and skeletal problems from drinking water containing high levels of aluminum. Inhalation and dermal exposure of healthy subjects are not associated with adverse health risks (ATSDR 1991).

Aluminum is not known to cause cancer in humans. Some workers in the aluminum industry have had a higher than expected incidence of cancer, but this is probably due to the other potent carcinogens to which they are exposed, such as polycyclic aromatic hydrocarbons and tobacco smoke. The few animal studies that were available were designed to study noncancer endpoints, but they also do not indicate that aluminum is carcinogenic (ATSDR 1991).

Studies of interactions of aluminum with other materials that may be found at hazardous waste sites show that aluminum has a protective effect against the toxic effects of some other chemicals. For example, aluminum hydroxide, commonly found in antacids, can decrease the intestinal absorption of fluoride in humans. Aluminum has been used in the prevention and treatment of silicosis, but its utility in this regard is questionable. Aluminum lactate has been shown to decrease the adverse effects of quartz in the sheep lung (ATSDR 1991).

REFERENCES

Agency for Toxic Substances and Disease Registry (ATSDR). 1991. *Toxicological Profile for Aluminum*. U.S. Public Health Service. Draft for Public Comment.

ANTIMONY

Antimony is a soft metal found as oxides and sulfides in a variety of ores. Antimony compounds exist in the environment primarily in the +3 (trivalent) and +5 (pentavalent) oxidation states. Antimony is used to make alloys such as Babbit metal, white metal, and hard lead; in bullets and fireworks; and for coating metals (Patnaik 1992).

The major target organs of antimony toxicity are the respiratory system, the heart, the gastrointestinal system, and the skin. Antimony exposure, however, has beneficial as well as adverse effects. Antimony is currently used to treat two parasitic diseases, schistosomiasis and leishmaniasis. Side effects following treatment include altered EKG, anemia, vomiting, diarrhea, joint and muscle pain, and even death (ATSDR 1990).

Metallic antimony has not been placed in a weight-of -evidence cancer group by EPA (IRIS 1997).

REFERENCES

Agency for Toxic Substances and Disease Registry (ATSDR). 1990. *Toxicological Profile for Antimony*. U.S. Public Health Service. Draft for Public Comment.

Patnaik. P. 1992. A Comprehensive Guide to the Hazardous Properties of Chemical Substances. Van Nostrand Reinhold. New York.

U.S. Environmental Protection Agency (EPA). 1997. *Integrated Risk Information System (IRIS)*.

ARSENIC

Acute exposure of humans to the metal arsenic has been associated with gastrointestinal effects, hemolysis, and neuropathy. Chronic exposure of humans to this metal can produce toxic effects on both the peripheral and central nervous systems, keratosis, hyperpigmentation, precancerous dermal lesions, and cardiovascular damage. Arsenic is embryotoxic, fetotoxic, and teratogenic in several animal species (EPA 1984). Arsenic is a known human carcinogen (Group A) (IRIS 1997). Epidemiological studies of workers in smelters and in plants manufacturing arsenical pesticides have shown that inhalation of arsenic is strongly associated with lung cancer and perhaps with hepatic angiosarcoma (EPA 1984). Ingestion of arsenic has been linked to a form of skin cancer and more recently to bladder, liver, and lung cancer (Tseng et al. 1968).

REFERENCES

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U.S. Environmental Protection Agency (EPA). 1984. Health Assessment Document for Inorganic Arsenic. Office of Health and Environmental Assessment, Washington, D.C. March 1984. EPA 600/8-83/021F.

U.S. Environmental Protection Agency (EPA). 1997. *Integrated Risk Information System (IRIS)*.

BARIUM

Humans exposed to acute levels of barium have shown respiratory, gastrointestinal, cardiovascular, renal, and neurological effects. Respiratory effects of benign pneumonoconiosis have been observed in workers exposed occupationally by inhalation to barium. Respiratory weakness and paralysis were seen in humans following ingestion of barium. Acute ingestion of barium has also lead to cardiovascular effects of increased blood pressure, changes in heart rhythm, myocardial damage, and changes in heart physiology and metabolism and gastrointestinal effects of hemorrhaging, pain, vomiting, and diarrhea. Renal effects of degeneration and failure and neurological effects of numbness and tingling of the mouth and neck, partial and complete paralysis, and brain congestion and edema were reported in the human case studies (ATSDR 1991).

Barium has not been evaluated by EPA for human carcinogenic potential (IRIS 1997).

The limited data available suggest that certain subgroups of the population may be more susceptible to barium exposure than the general population. These include people with cardiovascular problems, those taking certain prescription drugs, children, pregnant women, smokers, and people with lung disease (ATSDR 1991).

A consistent toxic effect of barium in humans and animals is increased blood pressure. Therefore, humans with hypertension could be at increased risk from either chronic, intermediate, or acute barium exposure. In addition, the cardiotoxic effects of barium exposure could increase the risk for those individuals suffering from other heart problems (ATSDR 1991).

Barbiturates have been shown to have an enhanced depressant effect on the heart in barium-exposed animals. Individuals on this type of medication may experience an increased risk of heart problems on exposure to barium (ATSDR 1991).

Children may be at increased risk. Animal studies demonstrate a higher absorption rate in young rats compared with older animals. However, a study of an epidemic of oral barium poisoning in Poland indicated that children did not react as adversely as adults even when they had ingested the same amount or more of barium (ATSDR 1991).

One study showed an increase in barium absorption in the presence of lysine and lactose and could indicate an increased risk in individuals who drink large quantities of milk. These would include young children and pregnant women (ATSDR 1991).

People who smoke and those who have a history of lung disease may be at an increased risk of exposure by inhalation. Studies show that inhalation of dust from barium salts produces a mild, but lengthy, inflammatory response in the lungs of rats. A benign pneumoconiosis has been noted in cases of chronic, low-level exposure in humans. Smoking and lung diseases may increase the intensity of this response in affected individuals (ATSDR 1991).

BERYLLIUM

Beryllium is a hard, grayish element that is moderately rare in its natural form. The element does occur as a chemical component in certain rocks, soils, and volcanic dust. Pure beryllium has applications in nuclear weapons and reactors, aircraft and space vehicle structures and instruments, X-ray machines, and mirrors. Beryllium oxide is made from beryllium ores and is used to make specialty ceramics for electrical and high technology applications. Beryllium is also converted into alloys used in the production of electronic parts, construction materials for machinery, and molds for plastics (ATSDR 1992).

The respiratory tract in humans and animals is the primary target of inhalation exposure to beryllium and its compounds. Inhalation of some forms of beryllium can cause obstructive and restrictive diseases of the lung, known as chronic beryllium disease (berylliosis); inhalation of high concentrations can cause chemical pneumonitis. The heart is an indirect target organ for beryllium in humans, monkeys, and dogs, with effects probably secondary to the respiratory effects. Renal effects have been observed in animals inhaling low concentrations of beryllium oxide, as indicated by proteinuria. Hepatic effects were not observed in humans or animals, unless the concentrations were high enough to be lethal. Dermal exposure causes the formation of skin granulomas in the intact skin of sensitized individuals (ATSDR 1992).

Epidemiology studies suggest an increased risk of lung cancer due to occupational exposure to beryllium. Increased incidences of lung cancer were observed among workers at beryllium extraction, processing, and fabrication facilities. Beryllium has been shown to induce lung cancer via inhalation in rats and monkeys and to induce osteosarcomas in rabbits via intravenous or intramedullary injection. Human epidemiology studies are considered to be inadequate. Human and animal data suggest that beryllium is considered carcinogenic in animals and is a suspect or probable human carcinogen. Beryllium has been classified in EPA Group B2, probable human carcinogen (ATSDR 1992, IRIS 1997).

REFERENCES

Agency for Toxic Substances and Disease Registry (ATSDR). 1992. *Toxicological Profile for Beryllium*. U.S. Public Health Service. Draft for Public Comment.

U.S. Environmental Protection Agency (EPA). 1997. *Integrated Risk Information System (IRIS)*.

BIS(2-ETHYLHEXYL)PHTHALATE

Bis(2-ethylhexyl)phthalate, also known as di(2-ethylhexyl)phthalate or DEHP, is used primarily as a plasticizer in the production of plastics such as polyvinyl chloride and vinyl chloride. It is also used as an ingredient in paints, tubing, and medical products, and is used as a component in paper and paperboard.

There is currently no evidence of adverse health effects in humans, but animal data show that DEHP can have effects on the liver, testes, kidney, thyroid, and pancreas. Fertility of both males and females can be affected; gestational exposure to DEHP may cause birth defects.

It is possible that exposure to DEHP through dialysis has an adverse effect on the human kidney. An increase in polycystic kidney disease has been reported in long-term hemodialysis patients. Although it is not possible to confirm a causative role for DEHP in this effect, data from animal studies indicate that DEHP may be toxic to the kidneys. Acute exposures of rats to DEHP can cause an increase in kidney weight and enlarged lysosomes in the tubules.

No studies were located regarding developmental or reproductive effects in humans after exposure to DEHP, however, developmental toxicity did occur in both mice and rats orally exposed to DEHP throughout the gestation period. Neonatal weight and survival were reduced in exposed animals; fetal malformations were present in both species but were only statistically significant for the rats. Malformations were present in the kidneys and heart. There are multiple studies in rats where DEHP increased the weights of the testes, prostate, seminal vesicles, and epididymis.

No studies were located regarding cancer in humans after exposure to DEHP. However, long-term exposure of rodents to DEHP causes cancer of the liver in both rats and mice. DEHP has been classified in EPA Group B2, probable human carcinogen (ATSDR 1992, IRIS 1997).

REFERENCES

Agency for Toxic Substances and Disease Registry (ATSDR). 1992. *Toxicological Profile for Di(2-ethylhexyl)phthalate*. U.S. Public Health Service. Draft for Public Comment.

U.S. Environmental Protection Agency (EPA). 1997. *Integrated Risk Information System (IRIS)*.

CADMIUM

Gastrointestinal absorption of cadmium in humans ranges from 5% to 6%. Cadmium bioaccumulates in humans, particularly in the kidney and liver. Chronic oral and inhalation exposure of humans to cadmium has been associated with renal dysfunction, itia-itia disease (bone damage), hypertension, anemia, endocrine alterations, and immunosuppression. Renal toxicity occurs in humans at a renal cortex concentration of cadmium of 200 ug/g. Epidemiological studies have demonstrated a strong association between inhalation exposure to cadmium and cancers of the lung, kidney, and prostate. In experimental animals, cadmium induces injection-site sarcomas and testicular tumors. When administered by inhalation, cadmium chloride is a potent pulmonary carcinogen in rats. Cadmium is a well-documented animal teratogen (EPA 1985).

EPA has classified cadmium as a B1 chemical (Probable Human Carcinogen) by inhalation (IRIS 1997).

REFERENCES

U.S. Environmental Protection Agency. 1985. Updated Mutagenicity and Carcinogenicity Assessment of Cadmium. Addendum to the Health Assessment Document for Cadmium (May 1981; EPA/600/8-81/023). Office of Health and Environmental Assessment, Washington, DC. June 1985. EPA 600/8-83/025F.

U.S. Environmental Protection Agency (EPA). 1997. *Integrated Risk Information System (IRIS)*.

CHLOROFORM

Chloroform, also known as trichloromethane, is used in production of fluorocarbon-222 for refrigerants and fluoropolymers. Chloroform has been used in the past as a solvent or extraction solvent for fats, oils, greases, resins, lacquers, alkaloids, gums, waxes, penicillin, vitamins, flavors, floor polishes, adhesives in artificial silk; as a dry cleaning spot remover; in fire extinguishers, as an intermediate in dyes and pesticides manufacture and as a fumigant. Chloroform was also used as an anesthetic, but it has been replaced by safer and more versatile materials. Its uses in drugs, cosmetics, and food packaging, other than as a result from its use as a processing solvent or a by-product from drug synthesis was banned by the U.S. Food and Drug Administration in 1976 (ATSDR 1993).

The major effects from acute inhalation exposure to chloroform in humans is central nervous system depression. At very high levels, (40,000 ppm), chloroform exposure may result in death, with concentrations in the range of 1,500 to 30,000 ppm producing anesthesia, and lower concentrations resulting in dizziness, headache, tiredness, and other effects. Effects noted in humans exposed to chloroform via anesthesia include changes in respiratory rate, cardiac effects, gastrointestinal effects, such as nausea and vomiting, and effects on the liver and kidney. In humans, a fatal oral dose of chloroform may be as low as 10 mL (14.8 g), with death due to respiratory or cardiac arrest (ATSDR 1993). Tests involving acute exposure of animals have shown chloroform to have low acute toxicity from inhalation exposure and moderate acute toxicity from oral exposure (RTECS 1993).

Liver damage is a major toxic effect of human chloroform inhalation exposure. Increased sulfobromo-phthalein retention indicating impaired liver function was observed in some patients exposed to chloroform via anesthesia (8,000 to 10,000 ppm) (Smith et al., 1973). Workers exposed to 14 - 400 ppm chloroform for 1-6 months developed toxic hepatitis and jaundice and experienced nausea and vomiting (Phoon et al., 1983). Chronic human exposure to between 71 and 237 ppm chloroform in one study (Challen et al., 1958) did not result in clinical evidence of liver injury, while workers exposed to between 2 - 204 ppm chloroform in another study (Bomski et al., 1967) exhibited liver damage characterized by enhanced serum glutamic pyruvic transaminase (SGPT) and serum glutamic oxaloacetic transmainase (SGOT). These increased enzyme levels in serum indicate liver cellular damage. Studies of chloroform inhalation in animals generally result in responses similar to those observed in humans (ATSDR 1993).

The kidney is a target organ of chloroform inhalation in animals (ATSDR 1993).

The central nervous system is a major target of chloroform toxicity in humans and animals.

Ingestion of 6 ounces of (3,755 mg/kg) chloroform resulted in death (Piersol et al. 1953) while ingestion of 4 ounces (2,500 mg/kg) resulted in acute toxic hepatitis from which the patient recovered (Schroeder 1965). The liver, kidneys and the central nervous system are all major targets of chloroform ingestion.

Dermal exposure has resulted in complete destruction of the layer of transparent skin covering the

eyeball, pupil and iris in young volunteers. Effects were milder in two older individuals. Exact exposure was unknown (Malten et al. 1968). Skin necrosis was observed in rabbits dermally exposed to 1,000 mg/kg chloroform for 24 hours (Torkelson et al. 1976).

No information is available on the reproductive or developmental effects of chloroform in humans, via any route of exposure. Animal studies have demonstrated developmental effects, such as decreased fetal body weight, fetal resorptions, and malformations in the offspring of animals exposed to chloroform by inhalation. Animal studies have reported decreased fetal weight, increased fetal resorptions, but no evidence of birth defects in animals orally exposed to chloroform (ATSDR 1993).

ATSDR (1993) reported that no studies were located regarding cancer in humans following inhalation exposure to chloroform. Studies in animals indicate that oral exposure to chloroform causes cancer, resulting in an increase in several tumor types. EPA has classified chloroform as a Group B2, probable human carcinogen (IRIS 1997).

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Agency for Toxic Substances and Disease Registry (ATSDR). 1993. *Toxicological Profile for Chloroform*. U.S. Public Health Service.

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Phoon W.H., Goh K.T., Lee L.T., et al. 1983. Toxic jaundice from occupational exposure to chloroform. Med. J. Malaysia 38:31-34.

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Torkelson T.R., Oyen F., and V.K. Rowe. 1976. The toxicity of chloroform as determined by single and repeated exposure of laboratory animals. Am. Ind. Hyg. Assoc. J.

37:697-705.

U.S. Department of Health and Human Services. 1993. *Registry of Toxic Effects of Chemical Substances (RTECS).*

U.S. Environmental Protection Agency (EPA). 1997. *Integrated Risk Information System (IRIS).*

CHROMIUM

Most of the toxic effects associated with chromium compounds are attributed to the more highly soluble, irritating hexavalent form of chromium. Trivalent chromium is considered one of the least toxic of the trace metals. Inhalation exposures to hexavalent chromium compounds have been associated with nasal damage, such as perforated septa, nosebleeds, and inflamed mucosa. Skin contact with high levels of chromium compounds has been reported to produce an eczema-like condition.

Hexavalent chromium is suspected of being responsible for mutagenic and cell transforming effects of chromates in various test systems. These adverse effects appear to be prevented in the presence of liver enzymes or gastric juice, but are unaffected by lung enzymes.

Hexavalent chromium is classified as a Group A human carcinogen by inhalation, based on sufficient evidence of human carcinogenicity. Results of epidemiologic studies are consistent across investigators and locations. Studies of chromate production facilities in the U.S., Great Britain, Japan, and Germany have established an association between chromium exposure and lung cancer. Three studies of the chrome pigment industry in Norway, England, and the Netherlands found an association between occupational chromium exposure and lung cancer (ATSDR 1992, IRIS 1998).

REFERENCES

Agency for Toxic Substances and Disease Registry (ATSDR). 1992. *Toxicological Profile for Chromium*. U.S. Public Health Service. Draft for Public Comment.

U.S. Environmental Protection Agency (EPA). 1998. *Integrated Risk Information System (IRIS)*.

COPPER

Copper is a naturally occurring metal which is used in the production of brass and bronze alloys and wire. The electrical industry is one of the major users of copper for the production of electrical wire and other electrical apparatus. Copper is used extensively in containers such as boilers, steam pipes, automobile radiators, and cooking utensils.

A daily copper intake of 2 mg is considered to be adequate for normal health and nutrition; a minimum daily requirement is 10 ug/kg (EPA 1985). Adverse effects in humans resulting from acute overexposure to copper from ingestion includes salivation, gastrointestinal irritation, nausea, vomiting, hemorrhagic gastritis, and diarrhea. Dermal or ocular exposure of humans to copper salts can produce irritation. Acute inhalation of dusts or mists of copper salts by humans may produce irritation of the mucous membranes and pharynx, ulceration of the nasal septum, and metal fume fever. Limited data is available on the chronic toxicity of copper, however, chronic overexposure to copper by humans has been associated with anemia (ACGIH 1986). The available evidence indicates that copper is not tetrogenic in experimental animals (EPA 1980) and various copper compounds are negative for mutagenicity in microbial assay systems (EPA 1985). Results of several animal bioassays suggest that copper compounds are not carcinogenic by oral administration, however, some copper compounds can induce injection-site tumors in mice (EPA 1985).

Copper is classified for carcinogenicity by EPA (1997) as a Group D chemical (not classified). This classification applies to agents for which there is inadequate evidence of carcinogenicity in animals and humans.

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U.S. Environmental Protection Agency (EPA). 1980. Ambient Water Quality Criteria for Copper. Office of Water Regulations and Standards, Criteria and Standards Division, Washington, D.C. EPA 440/5-80-036.

U.S. Environmental Protection Agency (EPA). 1985. National primary drinking water regulations; synthetic organic chemicals, inorganic chemicals, and microorganisms. Fed. Reg. 50:46937-47025. November 13.

U.S. Environmental Protection Agency (EPA). 1997. *Integrated Risk Information System (IRIS).*

ALDRIN/DIELDRIN

Information on the effects that occur in humans in response to aldrin or dieldrin exposure comes from case reports of accidental or intentional poisoning and from studies of workers occupationally exposed in either the manufacture or application of these pesticides. Acute high-level exposure of humans to aldrin or dieldrin has been observed to cause central nervous system excitation culminating in convulsions. In two very young children, death occurred either during the convulsions or shortly after the convulsions ceased. The other effect observed in humans after acute high-level exposure is renal toxicity.

Longer-term exposure of humans in occupational settings has been associated with occasional cases of central nervous system intoxication, but other toxic effects in workers routinely handling these pesticides have not been reported. Two case reports of persons who developed immunohemolytic anemia after repeated exposure to aldrin or dieldrin were located, but this effect was not observed in other studies of larger populations of those employed in the manufacture or application of these pesticides, suggesting that this effect may be quite rare.

For the most part, studies in animals support the observation of these toxic effects in humans. In addition, studies in animals indicate that other toxic effects may also be associated with exposure to sufficiently high levels of aldrin or dieldrin. These include hepatic degeneration, immunosuppression, increased postnatal mortality and possible teratogenesis, decreased reproductive function, and cancer.

Epidemiological studies have been inadequate to determine whether aldrin or dieldrin cause cancer in exposed populations because of the small sample sizes studied and the exposure of subjects to a variety of chemicals other than aldrin or dieldrin. However, several studies in mice demonstrate the ability of aldrin and/or dieldrin to cause hepatocellular carcinoma. Thus, the possibility exists that aldrin or dieldrin may cause cancer in humans. Based on the conclusion that sufficient animal evidence for carcinogenicity existed, EPA has classified both aldrin and dieldrin as B2, probable human carcinogens (ATSDR 1992, IRIS 1997).

Agency for Toxic Substances and Disease Registry (ATSDR). 1992. *Toxicological Profile for Aldrin/Dieldrin*. U.S. Public Health Service. Draft for Public Comment.

U.S. Environmental Protection Agency (EPA). 1997. *Integrated Risk Information System (IRIS)*.

Since barium toxicity has been repeatedly demonstrated to significantly decrease serum potassium in both humans and animals, individuals taking diuretics may have a more severe hypokalemic reaction to barium toxicity (ATSDR 1991).

REFERENCES

Agency for Toxic Substances and Disease Registry (ATSDR). 1991. *Toxicological Profile for Barium.* U.S. Public Health Service. Draft for Public Comment.

U.S. Environmental Protection Agency (EPA). 1997. *Integrated Risk Information System (IRIS).*

IRON

Iron is a metal belonging to the first transition series of the periodic table. The inorganic chemistry of iron is dominated by compounds in the +2 and +3 valence states. The primary examples of iron in the 0 valence state are metal and alloys and the carbonyl compounds (EPA 1984).

Chronic toxicity to iron usually results from prolonged accumulation of iron in the tissues (siderosis). Excessive amounts of iron stored in the tissues results in a condition called hemochromatosis, a pathological general tissue fibrosis. Most cases of hemochromatosis probably result from source of iron intrinsic to the tissues after hemolytic anemias or repeated blood transfusions. Idiopathic or primary hemochromatosis is a genetic disorder of iron metabolism that is characterized by deposition of unusually large amounts of iron in the tissues. Absorption of iron from the gut is greatly in excess of body requirements, therefore, increasing tissue deposition over several years. The liver and pancreas may typically contain stores of iron that are 50-100 times the normal levels. The thyroid, pituitary, heart, spleen, and adrenals are other sites of unusually high iron deposition. Males are 10 times more frequently affected than females; the disease is typically manifested in the fifth or sixth decade of life (EPA 1984).

Chronic inhalation exposure of man to iron or its compounds is likely to result from occupational exposures. Epidemiological studies of mortality among steel workers have not indicated an association with exposure to iron oxide. In lung function studies on workers in these occupations, no relationship was found between the incidence of chronic bronchitis and emphysema and exposure to iron oxide dusts although the respirable fraction never exceeded a mean level of 2 $mg/^3$ (EPA 1984).

Esophageal carcinoma has been associated with either iron deficiency or iron overload, although a causal relation has not been established. One report on inhalation exposure to iron mining dusts described an association with excess deaths from lung cancers. More recently, it has been found that the presence of radon gas was a more likely cause of the reported excess of lung cancers. IARC briefly summarized the early reports of lung tumors associated with exposure to iron-ore dusts or fumes from hot metals (i.e., from welding operations). In these cases, reports of excess lung tumors from exposure to iron have not been corroborated. Exposure to alcohol, tobacco, silica, soot, and fumes of other metals confound the validity of association of lung cancers with iron and its compounds. No other reports of cancers in humans or animals associated with oral exposure to iron (and compounds) have been located in the available literature; hence, no slope factors for oral or inhalation exposure can be calculated.

REFERENCES

U.S. Environmental Protection Agency (EPA). 1984. *Health Effects Assessment for Iron (and Compounds)*. Environmental Criteria and Assessment Office, Cincinnati, Ohio. September.

LEAD

Lead is a commonly used, naturally occurring metal that is ubiquitous in the environment. Lead is found in construction materials, leaded gasoline, radiation protection gear, paint, ceramics, plastics, and ammunition. Because of its extensive use and its ubiquitous distribution, exposure to lead is common.

Oral absorption of inorganic lead in humans ranges from as low as 3% to as high as 80%. The percentage of absorbed lead appears to be dependent on the solubility of the lead salt ingested as well as age, nutritional status, and fasting time. Dietary absorption of lead has been reported as 50% and 15% for children and adults, respectively. The primary site of lead absorption in children is the gastrointestinal (GI) tract. Animal studies indicate that particle size also influences lead absorption from the GI tract (ATSDR 1993).

Absorption of inhaled lead is thought to reach 100%; however, not all inhaled particles are deposited in the respiratory tract. The deposition rate of lead-containing particles is influenced by factors such as particle size and ventilation rate, and is estimated to be between 30% and 50% of the inhaled particles (EPA 1986).

Dermal absorption of lead is not considered a significant pathway. Route of absorption does not effect distribution of lead. After absorption, lead is distributed among several physiologically distinct compartments, including blood, soft tissue, particularly brain, kidney and liver, and bone (ATSDR 1993).

All absorbed lead that is not retained is excreted by the kidney or through biliary clearance into the GI tract. Infants (O to 2 years of age) retain approximately 32% of the lead absorbed whereas adults retain only about 1% of absorbed lead (ATSDR 1993). Most toxicity endpoints associated with exposure to lead can be correlated with blood-lead levels. Blood-lead levels are, therefore, a useful index of toxicity.

Cases of severe lead encephalopathy have resulted in death in both adults and children. Blood-lead levels associated with death in children have ranged from approximately 125 micrograms of lead per deciliter blood (ug Pb/dL) to 750 ug Pb/dL. Lead encephalopathy (non-fatal) has been seen at blood-lead levels of 60-300 ug/dL. At lower blood-lead levels, systemic effects associated with lead intoxication include increased systolic and diastolic blood pressure (ATSDR 1993).

Lead is known to depress heme synthesis and this effect appears to have no threshold in the range of available blood-lead concentration data. Cytochrome P450 formation is also inhibited in the presence of lead. Kidney damage occurs with both acute and chronic exposures to lead. Acute renal toxicity has been reported in lead-intoxicated children and is considered reversible, whereas chronic renal toxicity has been observed in lead-exposed workers and is considered irreversible. Lead interferes with vitamin D metabolism and may have some effect on the cellular component of the immune system.

Early symptoms of lead toxicity include irritability, poor attention span, headache, muscular tremor, loss of memory and hallucinations. As the condition worsens, symptoms include delirium, convulsions, paralysis and coma and may lead to death.

Neurotoxicity in children is seen at very low blood-lead levels. Low-level prenatal exposure to lead has been shown to result in reduced birth weight and gestation age, as well as neurobehavioral deficits or delays (ATSDR 1993). Prenatal exposure was generally estimated through neonatal or cord blood-lead concentrations. Postnatal lead exposures may result in fine motor dysfunction, hyperactivity, and altered behavioral patterns (ATSDR 1993). Several studies have demonstrated a statistically significant decrement in children's intelligence quotients (IQS) when correlated with blood-lead levels. Subtle signs of lead-induced effects begin to be apparent at blood-lead levels of 10 ug/dL or even lower, with effects becoming clearer by 30 to 40 ug/dL. Some researchers claim that some of the effects of lead, including neurobehavioral effects, heme synthesis depression, and fetal developmental problems, do not have a threshold value (EPA 1994).

Studies on association of occupational exposure to lead with increased cancer risks are insufficient to determine the carcinogenicity of lead in humans. Ingestion of lead acetate and lead phosphate produced renal tumors in laboratory rats and mice.

REFERENCES

Agency for Toxic Substances and Disease Registry (ATSDR). 1993. *Toxicological Profile for Lead (Update).* U.S. Public Health Service.

U.S. Environmental Protection Agency (EPA). 1994. Revised Interim Soil Lead Guidance for CERCLA Sites and RCRA Corrective Action Facilities. OSWER Directive #9355.4-12.

U.S. Environmental Protection Agency (EPA). 1986. Air Quality Criteria for Lead. Office of Research and Development. Office of Health and Environmental Assessment, Environmental Criteria and Assessment Office. EPA 600/8-83-028F.

MANGANESE

Manganese occurs naturally as compounds of oxygen, sulfur, and chlorine. Manganese metal is used in steel alloys, dry batteries, matches, fireworks, ceramics, fertilizers, pesticides, and dietary supplements (ATSDR 1990).

Manganese is widely distributed in environmental media at low levels. The approximate levels of manganese in different media are about 4 µg/l in drinking water, 40 to 900 ppm in soil, and 0.02 $\mu g/m^3$ in air. For most people, food is the predominant source of manganese, and daily intakes range from 2 to 9 mg (ATSDR 1990).

Very limited information is available on the acute effects of exposure to high levels of manganese in humans or animals. Chronic exposure to low levels of manganese is considered to be nutritionally essential to humans, with a recommended daily allowance of 2 to 5 mg/day. Chronic exposure to high levels of manganese by inhalation in humans results primarily in central nervous system effects, with a disease termed manganism. Manganism is characterized by feelings of weakness and lethargy, speech disturbances, a mask-like face, tremors, and psychological disturbances. Respiratory effects have also been noted. Reproductive effects, such as impotence and loss of libido, have been noted in male workers exposed to high levels of manganese by inhalation. Animal studies have reported reproductive effects such as sterility and developmental effects such as decreased activity level in the offspring of animals exposed to manganese ATSDR 1990).

No information is available regarding the carcinogenic effects of manganese in humans, and animal studies have reported mixed results. EPA has classified manganese as a Group D, not classifiable as to carcinogenicity in humans (IRIS 1997).

REFERENCES

Agency for Toxic Substances and Disease Registry (ATSDR). 1991. *Toxicological Profile for Manganese*. U.S. Public Health Service. Draft for Public Comment.

U.S. Environmental Protection Agency (EPA). 1997. *Integrated Risk Information System (IRIS)*.

NICKEL

Nickel is a silvery-white metal that is used for nickel alloys, electroplating baths, batteries, textile dyes, coins, spark plugs, machinery parts, stainless steel, nickel-chrome resistance wires, and catalysts (EPA 1985).

Nickel carbonyl is the most acutely toxic form of nickels in humans, with the lung and kidney as the target organs. Symptoms include headache, vomiting, chest pains, coughing, and visual imparity have been reported in acute inhalation exposure in humans (EPA 1985). Contact dermatitis is the most common effect in humans from chromic exposure. Respiratory effects, including asthma and an increase risk of chromic respiratory infections, have also been reported in humans from inhalation exposure to nickel (EPA 1985, ATSDR 1993). Nickel has been demonstrated to be an essential element in some animal species, and it has been suggested it may be an essential nutrient for human nutrition. No information has been reported regarding the reproductive or developmental effects of nickel in humans. Animal studies have reported developmental effects, such as a reduction in fetal body weight, and reproductive effects, such as testicular degeneration from inhalation exposure (ATSDR 1993).

Human and animals studies have reported an increase risk of lung and nasal cancers from exposure to nickel refinery dusts and to nickel subsulfide. The EPA has not evaluated soluble salts of nickel as a class of compounds for potential human carcinogenicity. EPA has classified nickel refinery dusts and nickel subsulfide as Group A, human carcinogens. Nickel carbonyl has been reported to produce lung tumors in animal studies. EPA has classified nickel carbonyl as a Group B, a probable human carcinogen (IRIS 1997).

REFERENCES

Agency for Toxic Substances and Disease Registry (ATSDR). 1993. *Toxicological Profile for Nickel.* U.S. Public Health Service. Draft for Public Comment.

U.S. Environmental Protection Agency (EPA). 1985. *Health Assessment Document for Nickel.* Environmental Criteria and Assessment Office, Office of Health and Environmental Assessment, Office of Research and Development, Cincinnati, Ohio.

U.S. Environmental Protection Agency (EPA). 1997. *Integrated Risk Information System (IRIS).*

SILVER

The one clinical condition that is known in humans to be attributable to long term exposure to silver and silver compounds is a gray or blue-gray discoloring of the skin (argyria). Argyria may occur in an area of repeated or abrasive dermal contact with silver or silver compounds, or more extensively over widespread areas of skin and the conjunctiva of the eyes following long-term oral or inhalation exposure (ATSDR 1990).

Studies in humans and animals indicate that silver compounds are absorbed readily by the inhalation and oral routes and poorly by the dermal route, and are distributed widely throughout the body. Evidence from both human and animal studies indicates that inhalation of silver compounds can irritate the respiratory pathway. Case reports where individuals have accidentally swallowed solutions of silver nitrate show that it may cause gastric discomfort as well (ATSDR 1990).

No studies were located regarding cancer in humans or animals following inhalation, oral, or dermal exposure to silver or silver compounds. Both positive and negative results for tumorigenesis have been reported following injection of subcutaneous colloidal silver in rats. However, the relevance of this route of exposure to humans is not clear. Animal toxicity and human occupational studies using normal routes of exposure have not provided any indications of carcinogenicity, and silver is not expected to be carcinogenic in humans (ATSDR 1990). No evidence of cancer in humans has been reported despite frequent therapeutic use of the compound. EPA has classified silver as a Group D, not classified as to human carcinogenicity (IRIS 1997).

REFERENCES

Agency for Toxic Substances and Disease Registry (ATSDR). 1990. *Toxicological Profile for Silver*. U.S. Public Health Service. Draft for Public Comment.

U.S. Environmental Protection Agency (EPA). 1997. *Integrated Risk Information System (IRIS)*.

VANADIUM

Vanadium is a natural element in the earth's crust and is widely distributed. It is a white to gray metal that is naturally present in the form of crystals. In the environment, it is usually found in combination with more than 50 different minerals, with other elements such as oxygen (most common), sodium, sulfur, or chloride. Vanadium is also found in association with fuel oils and coal deposits. Vanadium has six oxidation states, of which three (+3, +4, and +5) are the most common (ATSDR 1990).

The toxic actions of vanadium is largely confined to the respiratory tract. Bronchitis and bronchopneumonia are more frequent for workers exposed to vanadium compounds. In industrial exposures to vanadium peroxide dust, a greenish-black discoloration of the tongue is characteristic. Irritant activity with respect to the skin and eyes has also been ascribed to industrial exposure. Gastrointestinal distress, nausea, vomiting, abdominal pain, cardiac palpitation, tremor, nervous depression, and kidney damage have been linked with industrial vanadium exposure (Amdur 1991).

Ingestion of vanadium compounds for medical purposes produced gastrointestinal disturbances, slight abnormalities of clinical chemistry related to renal function, and nervous system effects. Acute vanadium poisoning in animals is characterized by marked effects of the nervous system, hemorrhage, paralysis, convulsions, and respiratory depression. Short-term inhalation exposure to experimental animals tends to confirm the effects of the lungs as well as the effects on the kidney. In addition, experimental investigations have suggested that the liver, adrenals, and bone marrow maybe adversely affected by subacute exposure to high levels (Amdur 1991).

REFERENCES

Agency for Toxic Substances and Disease Registry (ATSDR). 1990. *Toxicological Profile for Vanadium and Compounds*. U.S. Public Health Service. Draft for Public Comment.

Amdur M.O., and C.D. Klaassen, eds. 1991. Casarett and Doulls's Toxicology, The Basic Science of Poisons. Fourth Edition. New York, NY: Pergamon Press, Inc.

ZINC

Zinc is a naturally occurring element usually found in the form of zinc sulfide ores. Smelting or electrolytic processing are the two most common methods for extracting zinc from the ore. Zinc is commonly used as a protective coating of other metals and in alloys such as bronze and brass. Zinc is also used in organic chemical extractions and reductions, fluorescent screens, manufacture of pigments, and as a photo conductor in copying machines.

Zinc may be released to the atmosphere as dust and fumes from zinc production facilities, lead smelters, brass works, automobile emissions, fuel combustion, incineration, and soil erosion (ATSDR 1989).

Zinc is absorbed gastrointestinally, dermally, and via the lungs. Gastrointestinal zinc absorption is more efficient in people with zinc-deficiencies than in people with adequate nutritional levels of zinc.

Zinc is the most abundant trace metal and is distributed throughout the body. Zinc is toxic, however, when ingested in large amounts. Distribution of zinc is limited following ingestion in large doses, probably due to the fact that absorption of zinc decreases at high levels in the gastrointestinal system.

Approximately 20 to 30 percent of ingested zinc is absorbed. Absorption is probably a carrier mediated process and is influenced by nutritional status (Klaassen et al. 1986). Zinc is absorbed through the lungs. The amount absorbed is dependent on the inhaled particle size and particle deposition. Zinc is required as a cofactor in more than 70 metalloenzymes. The recommended daily allowance (RDA) of zinc is 15 mg for men and is 12 mg for women. Toxicity of zinc ingestion appears at levels at least an order of magnitude greater than the RDA. Acute toxicity of ingested zinc results in GI distress and diarrhea. Acute toxicity has been reported following ingestion of beverages from galvanized cans and the use of galvanized utensils.

Inhalation of zinc fumes in an industrial setting has resulted in metal fume fever, also seen after inhalation of other metal fumes, particularly magnesium, iron, and copper. Symptoms appearing approximately eight hours after exposure include chills, fever, sweating, and weakness. Attacks last only between 24 and 48 hours and appear to have no lasting health effects (ATSDR 1989).

Inhalation of zinc chloride fumes is more harmful than inhalation of zinc oxide fumes because zinc chloride is a corrosive salt. Inhalation of zinc chloride fumes in an enclosed space has resulted in death (ATSDR 1989).

Hepatitis effects (mecrotic hepatocytes) and renal effects (diffuse nephrosis) have been observed in animals upon oral exposure to zinc (Straube et al. 1980).

Ingestion of zinc has resulted in pancreatic abnormalities. Long term zinc administration may result in copper deficiency and anemia. Liver and kidney effects have been seen in experimental animals after chronic exposure to zinc.

APPENDIX O

Foster and Chrotowski Shower Model

SITE 3 - Landfill C
INHALATION EXPOSURE
RECEPTOR: Current Adult Resident
EQUATIONS:

kg = kH x SQRT (MW H / MW)

kg = GAS-FILM MASS TRANSFER COEFFICIENT (CM/HR)
kH = kg FOR WATER (CM/HR: 3000)
MW H = MOLEC. WT. FOR WATER (G/MOL: 18)
MW = MOLECULAR WT. (G/MOL)

kl = kC x SQRT (MW C / MW)

kl = LIQUID-FILM MASS TRANSFER COEFFICIENT (CM/HR)
kC = kl FOR CARBON DIOXIDE (CM/HR: 20)
MW C = MOLEC. WT. FOR CARB. DIOXIDE (G/MOL: 44)

KL = 1 / [(1 / kl) + ((R x T) / (H x kg))]

KL = MASS TRANSFER COEFFICIENT (CM/HR)
R = GAS CONSTANT (ATM M3/MOL K: 8.2E-5)
T = ABSOLUTE TEMP. (K: 293)
H = HENRY'S LAW CONSTANT (ATM M3/MOL)

KaL = KL / SQRT [(T1 x US) / (TS x U1)]

KaL = ADJUSTED OVERALL MASS TRANS. COEFF. (CM/HR)
T1 = CALIB. WATER TEMP OF KL (K)
TS = SHOWER WATER TEMP. (K)
U1 = WATER VISCOSITY AT T1 (CP)
US = WATER VISCOSITY AT TS (CP)

CWD = C x CF x (1 - EXP [(-KaL x ts) / (60 x d)])

CWD = CONC LEAVING SHOWER DROPLET AFTER TIME ts (UG/L)
C = CONCENTRATION IN WATER (MG/L)
CF = CONVERSION FACTOR (UG/MG: 1E3)
ts = SHOWER DROPLET TIME (SEC)
d = SHOWER DROPLET DIAMETER (MM)

S = CWD x FR / SV

S = INDOOR VOC GENERATION RATE (UG/M3/MIN)
FR = SHOWER FLOW RATE (L/MIN)
SV = SHOWER ROOM AIR VOLUME (M3)

D = [(VR x S) / (BW x Ra x 1E6)] x Q

D = INHALATION DOSE (MG/KG/SHOWER)
VR = VENTILATION RATE (L/MIN)
BW = BODY WEIGHT (KG)
Dt = TOTAL DURATION IN SHOWER ROOM (MIN)
Ra = RATE OF AIR EXCHANGE (1/MIN)

Q = Ds + [(EXP(-Ra x Dt)) / Ra] - [(EXP(Ra x (Ds-Dt))) / Ra]

Ds = DURATION OF SHOWER (MIN)

INPUTS:

T1	293	VR	14
TS	318	BW	70
U1	1.002	EF	350
US	0.596	ED	24
d	1	AT-NC	8760
ts	2	AT-C	25550
FR	20		
SV	6		
Ds	12	Q	2.481917
Dt	20		
Ra	0.01667		

CHEMICAL	C (MG/L)	MW	H	kg	kl	KL	KaL	CWD	S	D
Chloroform	0.0003	119.39	4.35E-03	1164.859	12.1415	11.48057	15.50794	0.121096	0.403652	0.000012
————				N/A	N/A	N/A	0	0	0	0
————				N/A	N/A	N/A	0	0	0	0
————				N/A	N/A	N/A	0	0	0	0
————				N/A	N/A	N/A	0	0	0	0
————				N/A	N/A	N/A	0	0	0	0
————				N/A	N/A	N/A	0	0	0	0
————				N/A	N/A	N/A	0	0	0	0
————				N/A	N/A	N/A	0	0	0	0
————				N/A	N/A	N/A	0	0	0	0
————				N/A	N/A	N/A	0	0	0	0
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————				N/A	N/A	N/A	0	0	0	0
————				N/A	N/A	N/A	0	0	0	0
————				N/A	N/A	N/A	0	0	0	0
————				N/A	N/A	N/A	0	0	0	0
————				N/A	N/A	N/A	0	0	0	0
————				N/A	N/A	N/A	0	0	0	0
————				N/A	N/A	N/A	0	0	0	0
————				N/A	N/A	N/A	0	0	0	0
————				N/A	N/A	N/A	0	0	0	0
————				N/A	N/A	N/A	0	0	0	0
————				N/A	N/A	N/A	0	0	0	0
————				N/A	N/A	N/A	0	0	0	0
————				N/A	N/A	N/A	0	0	0	0
————				N/A	N/A	N/A	0	0	0	0
————				N/A	N/A	N/A	0	0	0	0
————				N/A	N/A	N/A	0	0	0	0
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————				N/A	N/A	N/A	0	0	0	0
————				N/A	N/A	N/A	0	0	0	0
————				N/A	N/A	N/A	0	0	0	0
————				N/A	N/A	N/A	0	0	0	0
————				N/A	N/A	N/A	0	0	0	0
————				N/A	N/A	N/A	0	0	0	0
————				N/A	N/A	N/A	0	0	0	0
————				N/A	N/A	N/A	0	0	0	0
————				N/A	N/A	N/A	0	0	0	0
————				N/A	N/A	N/A	0	0	0	0
————				N/A	N/A	N/A	0	0	0	0
————				N/A	N/A	N/A	0	0	0	0
————				N/A	N/A	N/A	0	0	0	0
————				N/A	N/A	N/A	0	0	0	0
————				N/A	N/A	N/A	0	0	0	0
————				N/A	N/A	N/A	0	0	0	0

CHEMICAL	D	RFD	CSF	HQ	CR
Chloroform	1.20E-05	0.00E+00	8.05E-02	N/A	3.2E-07
----------	0.00E+00			N/A	0.0E+00
----------	0.00E+00			N/A	0.0E+00
----------	0.00E+00			N/A	0.0E+00
----------	0.00E+00			N/A	0.0E+00
----------	0.00E+00			N/A	0.0E+00
----------	0.00E+00			N/A	0.0E+00
----------	0.00E+00			N/A	0.0E+00
----------	0.00E+00			N/A	0.0E+00
----------	0.00E+00			N/A	0.0E+00
----------	0.00E+00			N/A	0.0E+00
----------	0.00E+00			N/A	0.0E+00
----------	0.00E+00			N/A	0.0E+00
TOTALS/INHAL				0.0E+00	3.2E-07

SITE 4 - Landfill D
INHALATION EXPOSURE
RECEPTOR: Current Adult Resident
EQUATIONS:

kg = kH x SQRT (MW H / MW)

kg = GAS-FILM MASS TRANSFER COEFFICIENT (CM/HR)
kH = kg FOR WATER (CM/HR: 3000)
MW H = MOLEC. WT. FOR WATER (G/MOL: 18)
MW = MOLECULAR WT. (G/MOL)

kl = kC x SQRT (MW C / MW)

kl = LIQUID-FILM MASS TRANSFER COEFFICIENT (CM/HR)
kC = kl FOR CARBON DIOXIDE (CM/HR: 20)
MW C = MOLEC. WT. FOR CARB. DIOXIDE (G/MOL: 44)

KL = 1 / [(1 / kl) + ((R x T) / (H x kg))]

KL = MASS TRANSFER COEFFICIENT (CM/HR)
R = GAS CONSTANT (ATM M3/MOL K: 8.2E-5)
T = ABSOLUTE TEMP. (K: 293)
H = HENRY'S LAW CONSTANT (ATM M3/MOL)

KaL = KL / SQRT [(T1 x US) / (TS x U1)]

KaL = ADJUSTED OVERALL MASS TRANS. COEFF. (CM/HR)
T1 = CALIB. WATER TEMP OF KL (K)
TS = SHOWER WATER TEMP. (K)
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CWD = CONC LEAVING SHOWER DROPLET AFTER TIME ts (UG/L)
C = CONCENTRATION IN WATER (MG/L)
CF = CONVERSION FACTOR (UG/MG: 1E3)
ts = SHOWER DROPLET TIME (SEC)
d = SHOWER DROPLET DIAMETER (MM)

S = CWD x FR / SV

S = INDOOR VOC GENERATION RATE (UG/M3/MIN)
FR = SHOWER FLOW RATE (L/MIN)
SV = SHOWER ROOM AIR VOLUME (M3)

D = [(VR x S) / (BW x Ra x 1E6)] x Q

D = INHALATION DOSE (MG/KG/SHOWER)
VR = VENTILATION RATE (L/MIN)
BW = BODY WEIGHT (KG)
Dt = TOTAL DURATION IN SHOWER ROOM (MIN)
Ra = RATE OF AIR EXCHANGE (1/MIN)

Q = Ds + [(EXP(-Ra x Dt)) / Ra] - [(EXP(Ra x (Ds-Dt))) / Ra]

Ds = DURATION OF SHOWER (MIN)

INPUTS:

T1	293	VR	14
TS	318	BW	70
U1	1.002	EF	350
US	0.596	ED	24
d	1	AT-NC	8760
ts	2	AT-C	25550
FR	20		
SV	6		
Ds	12	Q	2.481917
Dt	20		
Ra	0.01667		

CHEMICAL	C (MG/L)	MW	H	kg	kl	KL	KaL	CWD	S	D
Chloroform	0.0002	119.39	4.35E-03	1164.859	12.1415	11.48057	15.50794	0.08073	0.269101	8.0E-06
Toluene	0.009	92.13	5.94E-03	1326.041	13.82152	13.26239	17.91481	4.046649	13.48883	0.000402
------------				N/A	N/A	N/A	0	0	0	0
------------				N/A	N/A	N/A	0	0	0	0
------------				N/A	N/A	N/A	0	0	0	0
------------				N/A	N/A	N/A	0	0	0	0
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------------				N/A	N/A	N/A	0	0	0	0
------------				N/A	N/A	N/A	0	0	0	0
------------				N/A	N/A	N/A	0	0	0	0
------------				N/A	N/A	N/A	0	0	0	0
------------				N/A	N/A	N/A	0	0	0	0
------------				N/A	N/A	N/A	0	0	0	0
------------				N/A	N/A	N/A	0	0	0	0
------------				N/A	N/A	N/A	0	0	0	0
------------				N/A	N/A	N/A	0	0	0	0
------------				N/A	N/A	N/A	0	0	0	0
------------				N/A	N/A	N/A	0	0	0	0
------------				N/A	N/A	N/A	0	0	0	0
------------				N/A	N/A	N/A	0	0	0	0
------------				N/A	N/A	N/A	0	0	0	0

CHEMICAL	D	RFD	CSF	HQ	CR
Chloroform	8.01E-06	0.00E+00	8.05E-02	N/A	2.1E-07
Toluene	4.02E-04	1.14E-01		3.4E-03	0.0E+00
----------	0.00E+00			N/A	0.0E+00
----------	0.00E+00			N/A	0.0E+00
----------	0.00E+00			N/A	0.0E+00
----------	0.00E+00			N/A	0.0E+00
----------	0.00E+00			N/A	0.0E+00
----------	0.00E+00			N/A	0.0E+00
----------	0.00E+00			N/A	0.0E+00
----------	0.00E+00			N/A	0.0E+00
----------	0.00E+00			N/A	0.0E+00
----------	0.00E+00			N/A	0.0E+00
----------	0.00E+00			N/A	0.0E+00
TOTALS/INHAL				3.4E-03	2.1E-07

APPENDIX P

IEUBK Lead Model

LEAD MODEL Version 0.99d

AIR CONCENTRATION: 0.100 ug Pb/m3 DEFAULT
Indoor AIR Pb Conc: 30.0 percent of outdoor.
Other AIR Parameters:

Age	Time Outdoors (hr)	Vent. Rate (m3/day)	Lung Abs. (%)
0-1	1.0	2.0	32.0
1-2	2.0	3.0	32.0
2-3	3.0	5.0	32.0
3-4	4.0	5.0	32.0
4-5	4.0	5.0	32.0
5-6	4.0	7.0	32.0
6-7	4.0	7.0	32.0

DIET: DEFAULT

DRINKING WATER Conc: 4.00 ug Pb/L DEFAULT
WATER Consumption: DEFAULT

Site 3
Sed = 734 mg/kg
Water = Default
Geo = 6

SOIL & DUST:
Soil: constant conc.
Dust: constant conc.

Age	Soil (ug Pb/g)	House Dust (ug Pb/g)
0-1	734.0	200.0
1-2	734.0	200.0
2-3	734.0	200.0
3-4	734.0	200.0
4-5	734.0	200.0
5-6	734.0	200.0
6-7	734.0	200.0

Additional Dust Sources: None DEFAULT

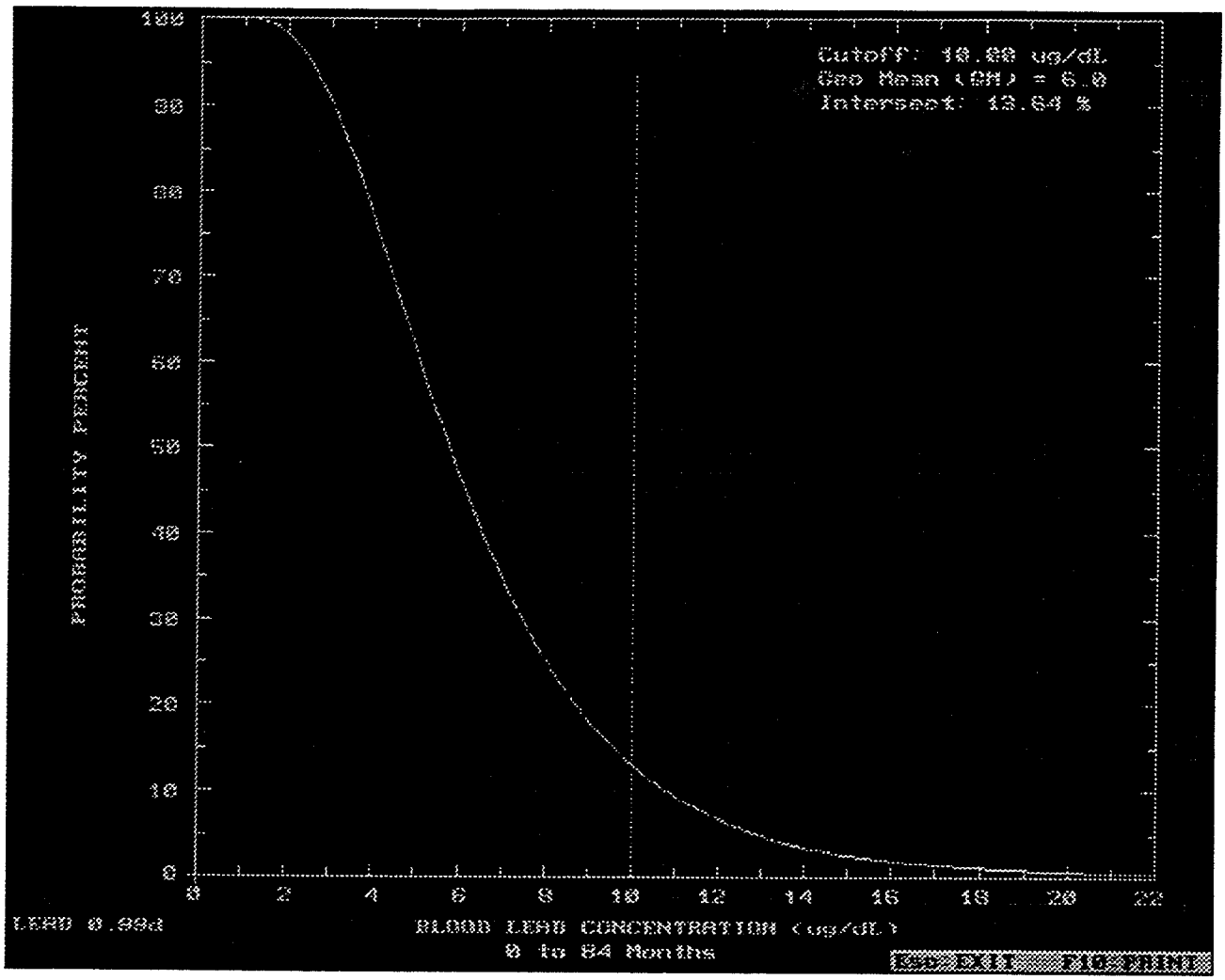
PAINT Intake: 0.00 ug Pb/day DEFAULT

MATERNAL CONTRIBUTION: Infant Model
Maternal Blood Conc: 2.50 ug Pb/dL

CALCULATED BLOOD Pb and Pb UPTAKES:

YEAR	Blood Level (ug/dL)	Total Uptake (ug/day)	Soil+Dust Uptake (ug/day)
0.5-1:	6.7	12.48	9.72
1-2:	7.6	18.46	15.12
2-3:	7.1	19.19	15.43
3-4:	6.8	19.49	15.73
4-5:	5.6	15.93	12.10
5-6:	4.8	15.16	11.04
6-7:	4.3	14.97	10.50

YEAR	Diet Uptake (ug/day)	Water Uptake (ug/day)	Paint Uptake (ug/day)	Air Uptake (ug/day)
0.5-1:	2.39	0.35	0.00	0.02
1-2:	2.45	0.85	0.00	0.03
2-3:	2.81	0.90	0.00	0.06
3-4:	2.75	0.94	0.00	0.07
4-5:	2.75	1.01	0.00	0.07
5-6:	2.94	1.08	0.00	0.09
6-7:	3.27	1.10	0.00	0.09


Cutoff: 10.00 ug/dL
Geo Mean (GM) = 6.0
Intersect: 13.64 %
PROBABILITY PERCENT
100
90
80
70
60
50
40
30
20
10
0
0
2
4
6
8
10
12
14
16
18
20
22
LEAD 0.99d
BLOOD LEAD CONCENTRATION (ug/dL)
0 to 84 Months
F10 PRINT

LEAD MODEL Version 0.99d

AIR CONCENTRATION: 0.100 ug Pb/m3 DEFAULT
Indoor AIR Pb Conc: 30.0 percent of outdoor.
Other AIR Parameters:

Age	Time Outdoors (hr)	Vent. Rate (m3/day)	Lung Abs. (%)
0-1	1.0	2.0	32.0
1-2	2.0	3.0	32.0
2-3	3.0	5.0	32.0
3-4	4.0	5.0	32.0
4-5	4.0	5.0	32.0
5-6	4.0	7.0	32.0
6-7	4.0	7.0	32.0

DIET: DEFAULT

DRINKING WATER Conc: 4.00 ug Pb/L DEFAULT
WATER Consumption: DEFAULT

SOIL & DUST:
Soil: constant conc.
Dust: constant conc.

Age	Soil (ug Pb/g)	House Dust (ug Pb/g)
0-1	441.0	200.0
1-2	441.0	200.0
2-3	441.0	200.0
3-4	441.0	200.0
4-5	441.0	200.0
5-6	441.0	200.0
6-7	441.0	200.0

Additional Dust Sources: None DEFAULT

PAINT Intake: 0.00 ug Pb/day DEFAULT

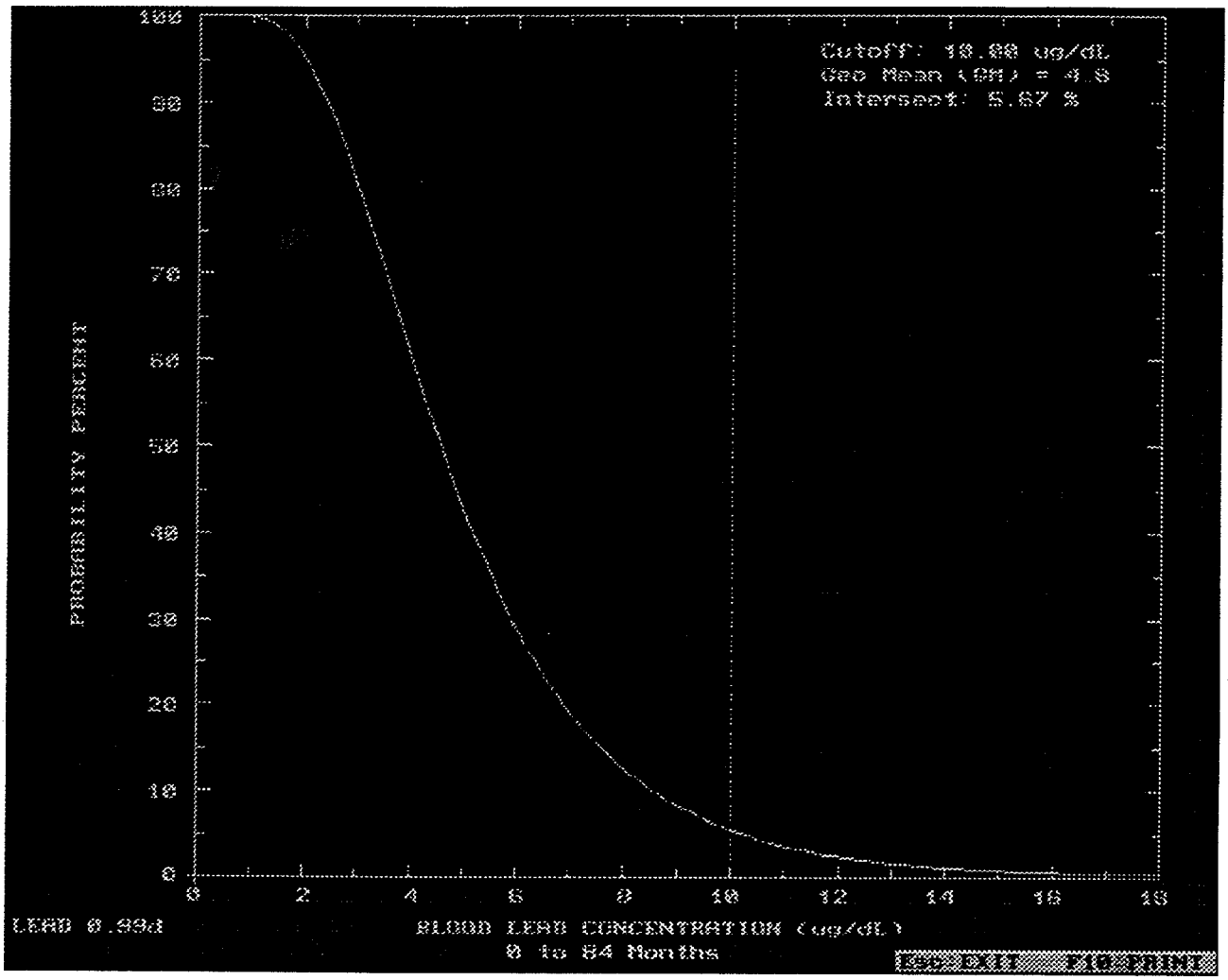
MATERNAL CONTRIBUTION: Infant Model
Maternal Blood Conc: 2.50 ug Pb/dL

Site 4
Sediment = 441 mg/kg
Water - default
Graph info:

CALCULATED BLOOD Pb and Pb UPTAKES:

YEAR	Blood Level (ug/dL)	Total Uptake (ug/day)	Soil+Dust Uptake (ug/day)
0.5-1:	5.3	9.87	7.02
1-2:	6.0	14.45	10.99
2-3:	5.6	15.05	11.16
3-4:	5.3	15.20	11.34
4-5:	4.4	12.54	8.64
5-6:	3.8	12.04	7.86
6-7:	3.4	11.99	7.46

YEAR	Diet Uptake (ug/day)	Water Uptake (ug/day)	Paint Uptake (ug/day)	Air Uptake (ug/day)
0.5-1:	2.47	0.36	0.00	0.02
1-2:	2.54	0.88	0.00	0.03
2-3:	2.90	0.93	0.00	0.06
3-4:	2.83	0.96	0.00	0.07
4-5:	2.81	1.03	0.00	0.07
5-6:	2.99	1.09	0.00	0.09
6-7:	3.32	1.12	0.00	0.09


Cutoff: 10.00 ug/dL
Geo Mean (GM) = 4.8
Intercept: 5.67 %
PROBABILITY PERCENT
100
80
70
60
50
40
30
20
10
0
0
2
4
6
8
10
12
14
16
18
LEAD 0.99d
BLOOD LEAD CONCENTRATION (ug/dL)
0 to 84 Months

APPENDIX Q

Adult Lead Model

Site 3

Assessment of non-residential adult exposure to lead in sediment.

PbB (adult, central) = PbB(adult, 0) + ((PbS x BKSF x IRs x AFs x EFs)/AT)

PbB (adult, 0)* (ug/dL)	**PbS***** (ug/g)	**BKSF**** (ug/dL per ug/day)	**IRs**** (g/day)	**AFs**** unitless	**EFs**** (days/year	**AT**** (days/year	**PbB (adult, central)** (ug/dL)
1.7	734	0.4	0.05	0.12	219	350	2.80
2.2	734	0.4	0.05	0.12	219	350	3.30

*Note: 1.7 - 2.2 range of default values.

**Default Values

***Maximum lead value in sediment.

Site 4

Assessment of non-residential adult exposure to lead in sediment.

PbB (adult, central) = PbB(adult, 0) + ((PbS x BKSF x IRs x AFs x EFs)/AT)

PbB (adult, 0)*	**PbS*****	**BKSF****	**IRs****	**AFs****	**EFs****	**AT****	**PbB (adult, central)**
(ug/dL)	(ug/g)	(ug/dL per ug/day)	(g/day)	unitless	(days/year	(days/year	(ug/dL)
1.7	441	0.4	0.05	0.12	219	350	2.36
2.2	441	0.4	0.05	0.12	219	350	2.86

*Note: 1.7 - 2.2 range of default values.

**Default Values

***Maximum lead value in sediment.