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Draft
Remedial Investigation and Human Health Risk Assessment
Landfill B (Site 2) and Burning Grounds (Site 5)

St. Juliens Creek Annex
Chesapeake, Virginia

Contract Task Order 028

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

SIGNATURE PAGE

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Abbreviations and Acronyms

AEDS	American Environmental Drilling Services
AOC	Area Of Concern
AWQC	Ambient Water Quality Criteria
BERA	Baseline Ecological Risk Assessment
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
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
HHRA	Human Health Risk Assessment
HSDB	Hazardous Substances Data Bank
HSP	Health and Safety Plan
IAS	Initial Assessment Study
IRP	Installation Restoration Program
MCL	Maximum Contaminant Level
MG/KG	Milligrams Per Kilogram
MG/L	Milligrams Per Liter
MHz	Megahertz
MW	Monitoring Well
NBN	Naval Base, Norfolk
ND	Nondetect
NM	Naval Magazine
NOAA	National Oceanic and Atmospheric Administration
OD	Outside Diameter

Abbreviations and Acronyms, Continued

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
RRR	Relative Risk Ranking
SB	Soil Boring
SAP	Sampling and Analysis Plan
SD	Sediment
SS	Surface Soil
SW	Surface Water
SVOCs	Semivolatile Organic Compounds
TAL	Target Analyte List
TCE	Trichloroethylene
TCL	Target Compound List
TNT	Trinitrotolune
TOC	Total Organic Carbon
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

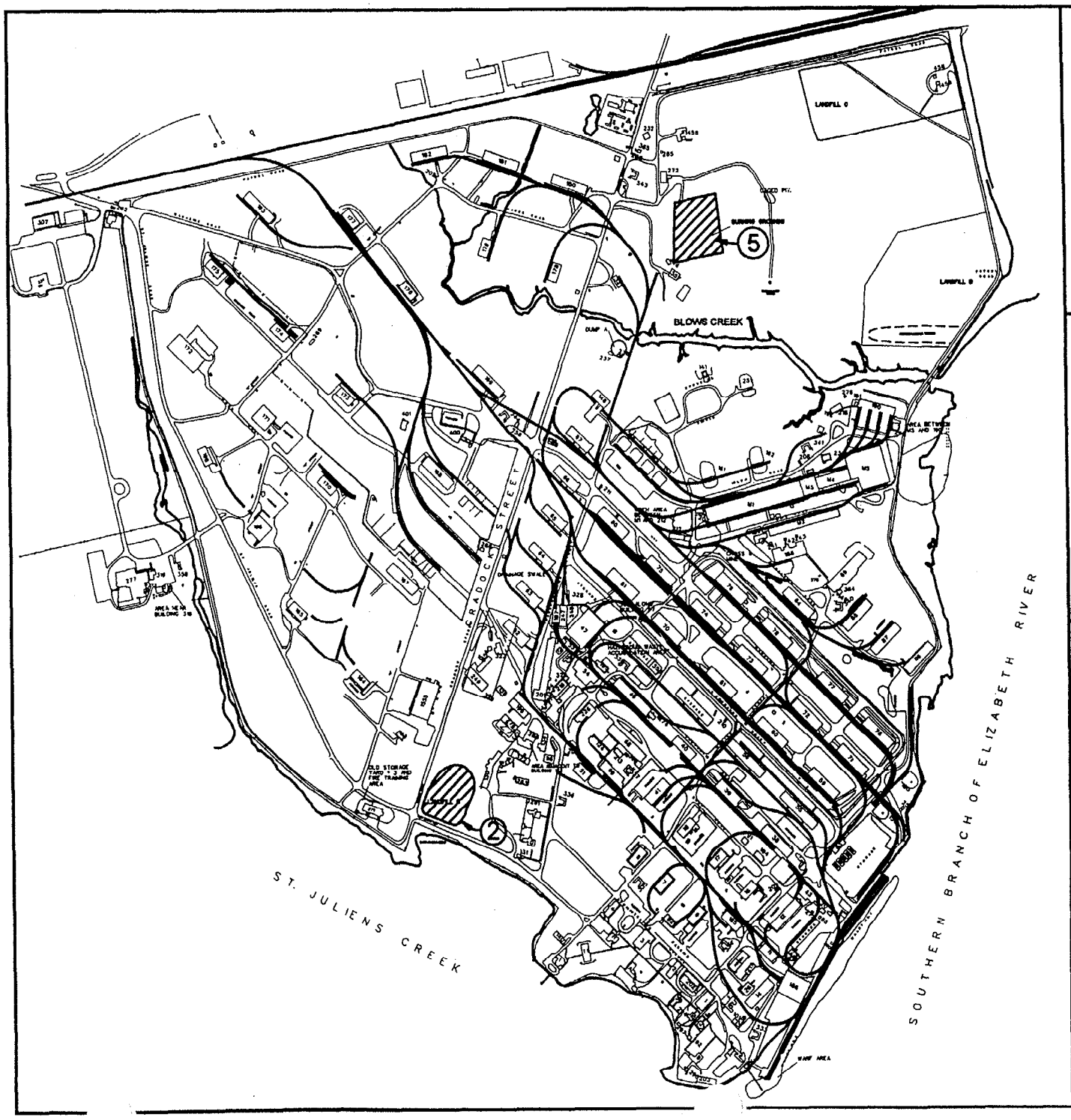
Executive Summary

This report represents the activities and results of the Remedial Investigation (RI) and the Human Health Risk Assessment of Site 2 (Landfill B) and Site 5 (Burning Grounds) 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 B (Site 2) and Burning Grounds (Site 5), 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 presented in a separate document. The locations of Site 2 and Site 5 are shown on **Figure ES-1**.

Site 2 (Landfill B) is an inactive unlined landfill located at the corner of Saint Juliens Drive and Craddock Street in the southwestern section of the facility. The landfill operations were active from 1921 to 1947. Initially, refuse was burned onsite and used to fill in an adjacent swampy area. In 1942, an incinerator was installed and took the place of the open burning. The area has since become swampy and is covered with brush, trees, and grass. A pond is located in the center of the landfill. Refuse disposed of at Landfill B comprises garbage, acids, blast grit, and waste ordnance.

Site 5 (the Burning Grounds) is located off of Craddock Street in the northern part of the facility. Wastes disposed of at the site include black powder, smokeless powder, explosive D, Composition A-3, tetryl, TNT, fuses, carbon tetrachloride, trichloroethylene (TCE), paint sludges, pesticides, and various types of refuse. The site currently consists of an open field with areas overgrown with high reeds. A significant part of the area is covered with a thick layer of gravel. In 1977, the surface of the area was with straw burned (possibly with oil as an accelerant), diced, and burned again, in an effort to decontaminate the soil. Two related subsites were also investigated: a former caged pit and a drop tower.



N

0 300 600 900
SCALE IN FEET

LOCATION OF SITE 2 (LANDFILL B)
AND SITE 5 (BURNING GROUNDS)
SAINT JULIENS CREEK ANNEX

FIGURE ES-1

LEGEND

NUMBER	SITE NAME/DESCRIPTION
2	LANDFILL B
5	BURNING GROUNDS

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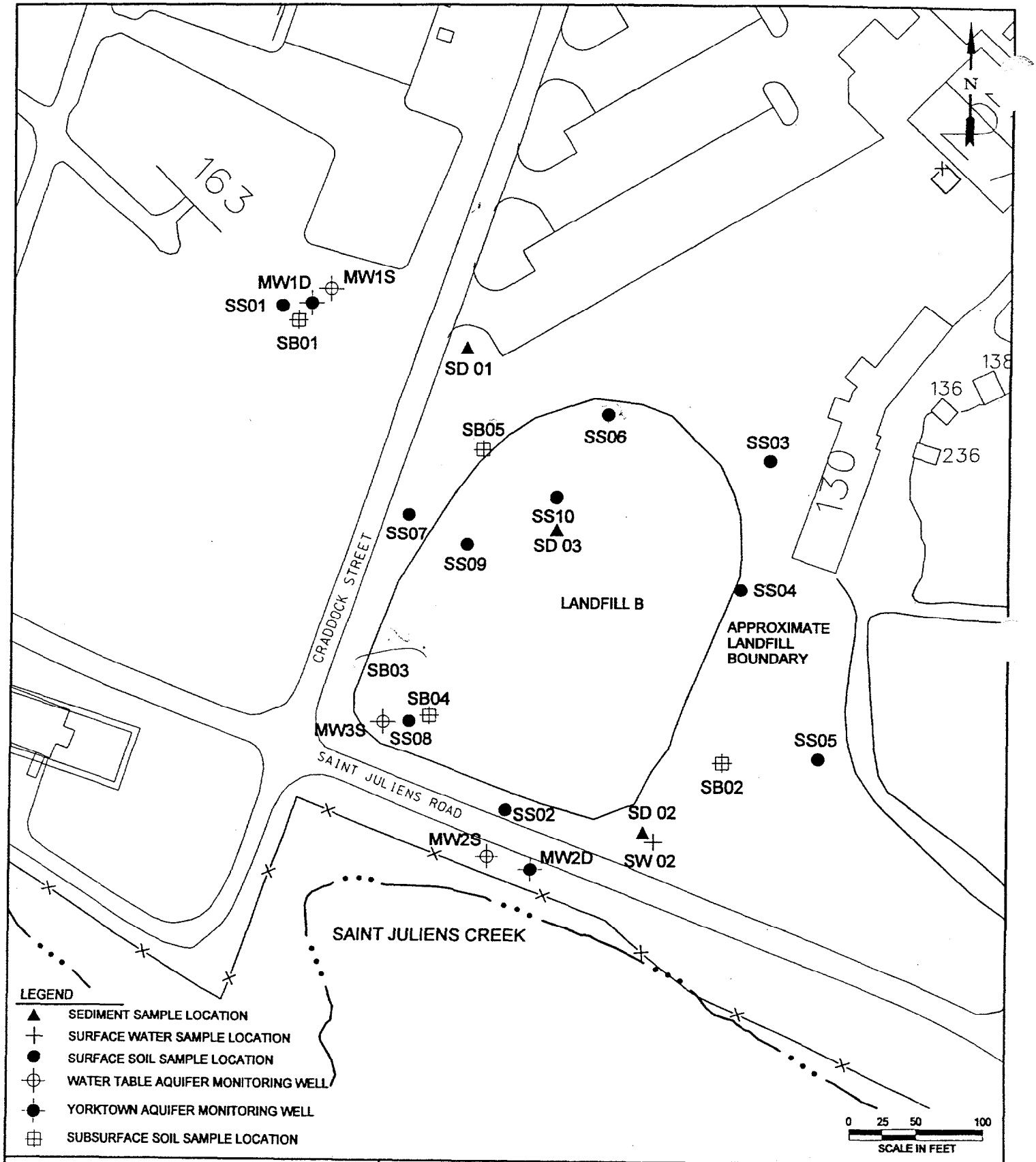
The work performed at each site during the Remedial Investigation is summarized in Table ES-1. The sampling locations for Site 2 and Site 5 are shown on **Figures ES-2 and ES-3** respectively. The objective of the field and analytical work was to delineate the site boundaries, define the geologic and hydrogeologic features of the site that would affect migration of contaminants, and define the nature and extent of the contamination.

Table ES-1

Summary of Field Investigation at Site 2 and Site 5

Investigation Technique	Site 2	Site 5
Geophysical Survey	Electromagnetic (EM) and magnetometer surveys on 100 ft grid and profiles.	EM and magnetometer surveys on 100 ft grid, and on a 50- ft grid in the caged pit area.
Subsurface Soil Boring	Five DPT samples (1 collected from 0-3 ft for Ecological Risk Assessment).	Eight DPT samples (1 collected from 0-3 ft for Ecological Risk Assessment) from Burning Grounds. Three DPT samples from the caged pit area, and four DPT samples from the former drop tower.
Surface Soil Samples	Ten samples.	Nine samples.
Groundwater Monitoring Well installation and sampling	Three Water Table Aquifer wells, two Yorktown Aquifer wells.	Three Water Table Aquifer and two Yorktown Aquifer well.
Surface Water Sample	One sample.	No samples.
Sediment Sample	Three samples.	Three samples.
TNT Immunoassay Field Screening	Field screening of surface soil, subsurface soil and shallow groundwater.	Field screening of surface soil, subsurface soil and shallow groundwater.
Tidal Study	Water level data from Site 2 wells collected with datalogger for more than 48 hours.	Water level data from Site 2 wells collected with datalogger for more than 48 hours.

The primary objective of the human health risk assessment is to assess the health risks to current and potential future human receptors from contamination present at and migrating from Site 2 and Site 5. The risk assessment is comprised of the following components:



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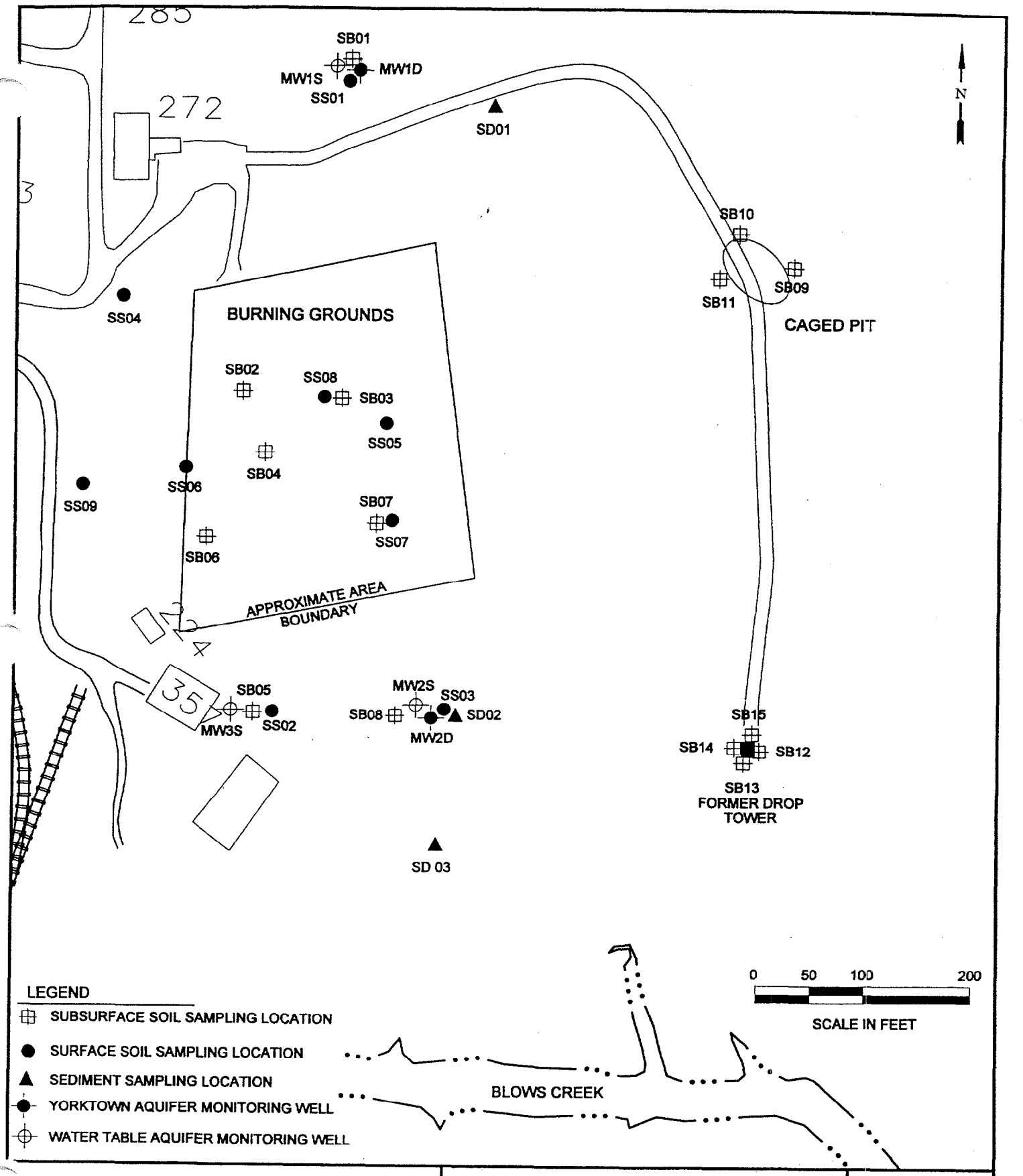
SAMPLING LOCATIONS, SITE 2
SAINT JULIENS CREEK ANNEX

FIGURE
ES-2



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SAMPLING LOCATIONS, SITE 5
SAINT JULIENS CREEK ANNEX

FIGURE
ES-3

- **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 components were evaluated following EPA risk assessment guidance. In addition to the guidance this risk assessment was completed following the applicable Consensus Agreements prepared and agreed to by the Navy, EPA and the Virginia Department of Environmental Quality.

Geologic and Hydrogeologic Framework

The stratigraphy at both sites includes sands and clays of the Yorktown Formation, and silts, sand and clay of the post-Pliocene sediments. The deepest hydrostratigraphic unit investigated is the Yorktown Aquifer, which consists of sands of the Yorktown Formation. At Site 5 there is evidence that the aquifer is underlain by gravely clay.

The Yorktown Aquifer is 12 to 20 feet thick and consists of a sand found at depths of about 43 to 50 ft bgs. The potentiometric surface is found at elevations between 1 to 2 ft msl. The direction of groundwater flow varies from west (in the northern part of Site 5 to the southeast (in the southern part of Site 5), to east, toward the South Branch of the Elizabeth River. Additional data points are required to more accurately determine the groundwater flow direction.

Water level data indicate that the potentiometric surface (which has a low flow gradient) will vary with the tides at both sites. This is particularly evident at Site 2, where water levels in the Yorktown Aquifer adjacent to St. Juliens Creek varied over 1 foot in response to tides.

The Yorktown Aquifer is confined by a stiff, greenish, 11 to 27 ft thick, clay that comprises the uppermost part of the Yorktown Formation at the Base. This clay is encountered at a depths of approximately to 14 ft to 40 ft. Small upward vertical gradients were measured across this clay at both sites, although the gradient can be expected to vary with the tides.

At Site 2 there is, potentially, an intermediate water-bearing zone between the Water Table Aquifer and the Yorktown Aquifer. This zone consists of a sand unit, approximately 4 to 5 ft thick, at a depth of 35 to 36 ft. No monitoring wells were screened within this limited intermediate sand unit.

The Water Table Aquifer consists of the post-Pliocene sands, silts and clayey sands in the top 14 to 28 ft of the stratigraphy. The potentiometric surface of the Water Table Aquifer is approximately 2.5 ft to -0.5 ft msl. A potentiometric surface map could not be produced for the Water Table Aquifer at Site 2 because of the locations of the monitoring wells and tidal impacts. The direction of groundwater flow in the aquifer at Site 5 is toward the east .

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 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 2 summary and Conclusions

The objective of the Remedial Investigation at Site 2 was to delineate Landfill B, identify the impact of landfilling activities on environmental media, and determine the extent of any impact that was identified. The extent of the landfill and was delineated by the combination of the geophysical survey and soil boring data.

The distribution of organic COPCs in surface soils approximately corresponds to the suspected landfill boundaries with the exception of pesticides. All samples collected within the suspected landfill boundaries contained some polynuclear aromatic hydrocarbons (PAHs). Materials disposed in the landfill that could contribute to PAH contamination include garbage, blasting grit, and fuels used to accelerate burning. The landfill also is a probable source of other semivolatile organic compounds (SVOCs) (carbazole, dibenzofuran, and phthalates) in surface soils. Similarly, the landfill is considered a source of metals found in the surface soil samples collected within the suspected site boundaries. A sample suspected of containing blasting grit, and another sample collected immediately adjacent to the landfill boundary, contained particularly high concentrations of chromium, copper, iron, lead, manganese, nickel, vanadium, and zinc. Cyanide, while probably due to landfilling activities, does not appear to be a widespread contaminant.

Generally the highest concentration and greatest number of COPCs in subsurface soil were detected in borings located at the southwest corner of the site. A nearby monitoring well boring encountered fill in the upper four feet in that area. These are the only two samples in which a significant number of non-COPC organic constituents were detected and their presence is considered to be due to the landfill.

Although the groundwater flow direction could not be determined, the sample from the monitoring well that is most probably downgradient of the site, contained the greatest number, and generally highest concentrations of COPCs. Based on the limited available data, it appears that no deep monitoring wells are located downgradient (east) of the landfill. The chloroform detected in both Yorktown Aquifer wells during Round 1 is considered to be a laboratory contaminant and not due to the landfill.

The surface water COPCs correlate closely with the sediment COPCs that were found at relatively high concentrations at that same location. The presence of the COPCs in the sample may be due to contaminants coming from St. Juliens Creek (via a culvert during high tide), suspended solids in the samples, or dissolved metals leached from the landfill or sediments.

Concentrations of arsenic, chromium, copper, lead, vanadium, and zinc, in sediment samples from the central pond are similar to those found in the most contaminated surface soil samples indicating that the contribution of sediment from the landfill is impacting the

pond sediment quality. The concentration of these metals in the sediment sample collected from the drainage ditch are significantly lower. The organic constituents found in the sediment, predominantly PAHs and pesticides, may be contributed from drainage ditch runoff.

The landfill is not considered to be the source of pesticides found in surface soil and sediment samples. The presence of polychlorinated biphenyls (PCBs) in some sediment and surface water samples is not explained as PCBs were not reported to have been disposed in the landfill. Similarly, the volatile organic compounds (VOCs) detected at low concentrations in soil and sediments were not reported to have been disposed in the landfill, and the source of these VOCs is not known.

Priority Pollutant metals or organic COPCs do not appear to be leaching to groundwater, although iron concentrations in the Water Table Aquifer are higher than published values for the aquifer. The direction of groundwater flow has not been determined for the Water Table Aquifer, and therefore it is not possible to determine that samples have been collected downgradient of the landfill. The tides impact the water levels in the shallow aquifer and may affect the direction of groundwater flow.

Similarly, the direction of groundwater flow in the Yorktown Aquifer has not been determined accurately and may also fluctuate with the tides. The limited data suggest that no monitoring wells are installed downgradient from the landfill, and therefore the potential impact on groundwater quality in that aquifer has not been fully evaluated.

The majority of the COPCs detected in the soils, sediments, surface water and groundwater at Site 2 can be classified as persistent, non-volatile and non-degradable metals (antimony, arsenic, beryllium, cadmium, 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 sediments and are relatively immobile. Concentrations in soils and sediments will persist into the future with only slow dissolution of metals to groundwater and surface water.

The volatile, soluble, degradable VOCs such as acetone and carbon disulfide were found only in trace concentrations in the soils and sediments. No data indicate these chemicals ever leached to the groundwater.

Current and future risks and hazards at Site 2 are within or below EPA's risk range for all groundwater, surface water, and sediment exposure scenarios. For surface soil, the evaluation for the child trespasser, adolescent trespasser, adult trespasser, residential child, residential adult, groundskeeper and the construction worker results in non-carcinogenic risk estimates outside EPA's risk range. For the adolescent and adult trespasser, EPA's acceptable risk range is exceeded for the reasonable maximum exposure (RME) evaluation, but not for the central tendencies (CT) evaluation. RME carcinogenic risk estimates for the trespasser (child, adolescent, adult) and resident (child, adult) are above EPA's acceptable risk range. The CT evaluation for the three trespasser 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 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 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 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 planned soil background study to be conducted at St. Juliens Creek Annex.

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

4) Install additional groundwater monitoring wells in the shallow aquifer to determine the direction of groundwater flow and monitor groundwater in the shallow aquifer.

5) Install an additional Yorktown Aquifer groundwater monitoring well , downgradient of the site to monitor groundwater quality in that aquifer.

Site 5 Summary and Conclusions

The objective of the Remedial Investigation at Site 5 was to delineate the Burning Grounds and the former caged pit area, identify the impact of site activities on environmental media, from these two sites as well as the former drop tower, and determine the extent of any impact that is identified.

The majority of the EM anomalies identified at the Burning Grounds are associated with metallic and other objects at the surface. Two EM anomalies are apparently caused by buried materials or changes in salt or clay content of the soil. The magnetic and conductivity surveys conducted in the area of the caged pit successfully identified anomalies considered to be buried debris from the former caged pit.

Organic and inorganic COPCs were identified for all media at the site. Explosive constituents (2,4-dinitrotoluene and 2,6-dinitrotoluene), PAHs, and lead in the surface soil and PAHs and dioxin in the subsurface soil are good indicators of the extent of contamination due to site activities in the Burning Grounds area. Based on the distribution of these constituents in the various media, the extent of contamination (and the extent of the Burning Ground boundaries) have not been fully determined.

Although there are no organic COPCs in shallow groundwater, there are several inorganic COPCs in the dissolved fraction of the Water Table Aquifer samples that indicate the site may be acting as a source. The extent of this contamination has not been determined because there are no Water Table Aquifer monitoring wells located directly downgradient of the Burning Grounds site, or at the downgradient edge of contamination. Although there are more dissolved metals in Yorktown Aquifer monitoring wells at this site than at other sites on the Base, it is considered unlikely that these metals are migrating through the confining clay of the Yorktown Aquitard, particularly without a strong downward vertical gradient.

Results of the subsurface soil sampling in the caged pit area do not indicate contamination related to site activities.

At the former drop tower area, there is some indication of subsurface soil contamination from PAHs. The although the extent of subsurface soil appears limited, surface soil contamination has not been evaluated.

The majority of the COPCs detected in the soils, sediments, surface water and groundwater at Site 5 can be classified as persistent, non-volatile and non-degradable metals (antimony, arsenic, beryllium, chromium, copper, lead, mercury, nickel, silver, thallium and zinc) and very slowly degradable organics that include PAHs, explosives, dioxins, pesticides 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 moderate dissolution of metals to groundwater. Transport of metals in groundwater, whether in the dissolved or particulate form, to Blows Creek is possible.

The volatile, soluble, degradable VOCs such as acetone, 2-butanone and toluene were found only in trace concentrations in the surface, subsurface soils and sediments. Only toluene was found in very low concentrations in groundwater indicating limited migration of VOCs to groundwater.

Current and future risks and hazards at Site 5 are within EPA's acceptable risk range for all shallow groundwater exposure scenarios. For deep groundwater, non-carcinogenic RME risk estimates are above EPA's acceptable risk range for the adult resident, but within EPA's acceptable risk range for the child resident. For surface soil, the evaluation for the child trespasser, resident (child, adult), groundskeeper and construction worker results in non-carcinogenic risk estimates outside EPA's risk range. For the child trespasser, EPA's risk range was exceeded for the RME evaluation, but not for the CT evaluation. RME estimates of carcinogenic risk from Site 5 surface soils exceed EPA's risk range for the residential child and adult and groundskeeper. The CT evaluation for these scenarios produced a risk which is within EPA's acceptable risk range. For subsurface soil, risk estimates are above EPA's acceptable risk range for the construction worker. For sediment, EPA's non-carcinogenic risk range was exceeded for the child trespasser, the child resident, and the adult resident. 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 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 a background study conducted at St. Juliens Creek Annex.

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

4) Install additional Water Table Aquifer wells upgradient and downgradient of the site.

5) Install one additional Yorktown Aquifer Monitoring well to determine the direction of groundwater flow more accurately and to provide additional data on the water quality of that aquifer.

6) Conduct additional surface soil sampling to the north, east, and south of the Burning Grounds to define the extent of surface soil contamination.

7) Conduct surface soil sampling in the former drop tower area to determine the extent of potential surface soil contamination.

8) Conduct additional subsurface soil sampling, particularly to the east of the Burning Grounds to determine the extent of contamination.

1 Introduction

This report presents the activities and results of the Remedial Investigation (RI) and Human Health Risk Assessment (HHRA) of Site 2 (Landfill B) and Site 5 (the Burning Grounds) 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 B (Site 2) and the Burning Grounds (Site 5), 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 2 and Site 5. 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) for Site 2 and Site 5 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 2 (Landfill B) and Site 5 (the Burning Grounds). 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.

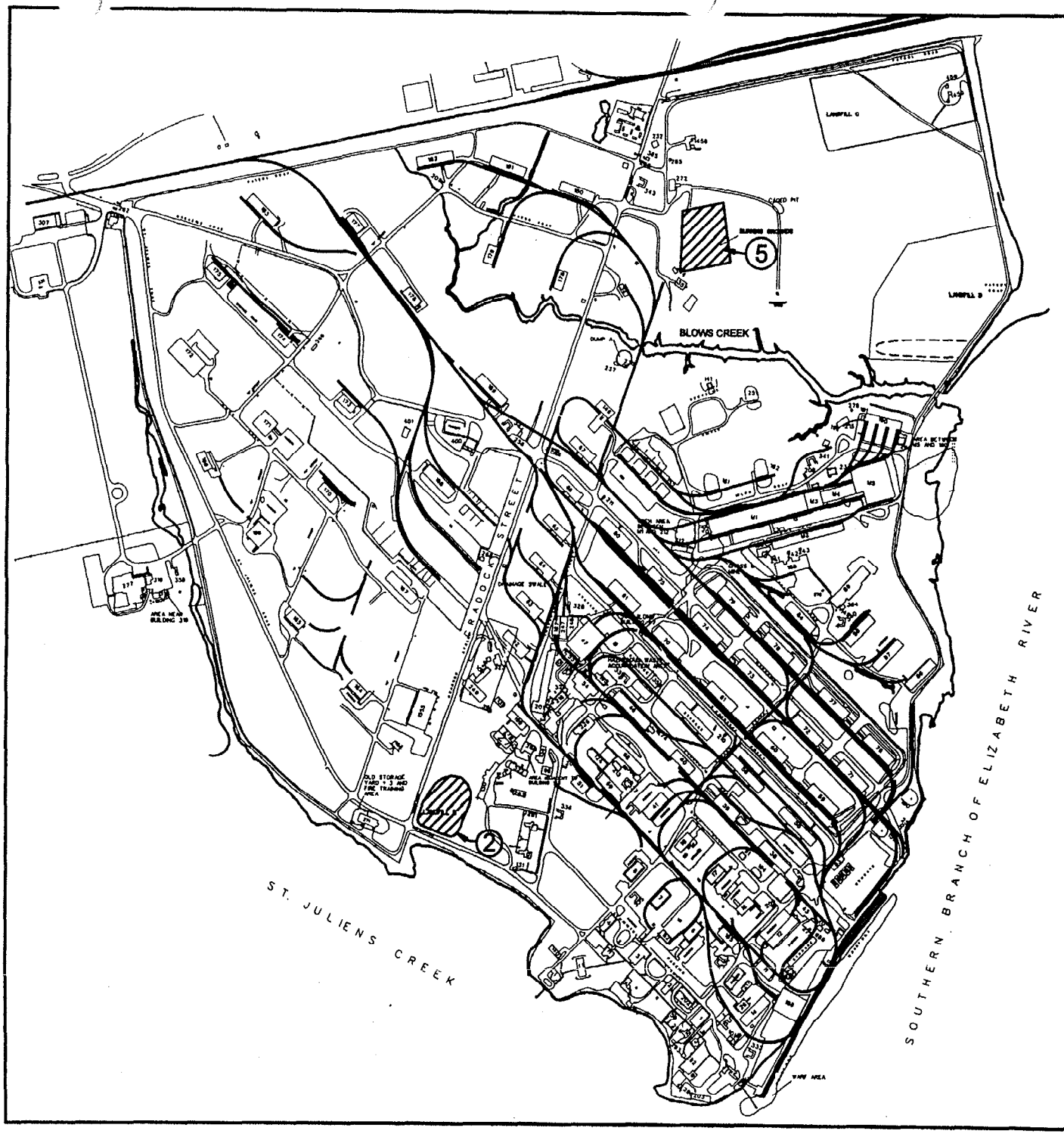
1.1.1 Site 2 Description

Site 2 (Landfill B) is an inactive unlined landfill located at the corner of Saint Juliens Drive and Craddock Street in the southwestern section of the facility (**Figure 1-1**). The landfill operations began in 1921. Initially, refuse was burned onsite and used to fill in an adjacent swampy area. In 1942, an incinerator was installed and took the place of the open burning. The landfill was closed sometime after 1947. The area has since become swampy and is covered with brush, trees, and grass. A pond is located in the center of the landfill.

Refuse disposed of at Landfill B comprises garbage, acids, and waste ordnance. Total volumes before burning are estimated at 950,000 cubic feet, half of which was disposed of prior to 1942. Blast grit from ship overhaul and repair operations was also dumped at this location, although the exact year is unknown.

1.1.2 Site 5 Description

Site 5 (the Burning Grounds) is located off of Craddock Street in the northern part of the facility (Figure 1-1). The site currently consists of an open field with areas overgrown with high reeds. A significant part of the area is covered with a thick (18-inch) layer of gravel. The exact start and closure dates of the Burning Grounds are unknown, although it is believed to have been operated from the 1930s to the 1970s. In 1977, the surface of the area was burned with straw, diced, and burned again, in an effort to decontaminate the soil. One report stated that oil was mixed with the straw; however, a former Navy employee who worked at the Burning Grounds told CDM Federal in an interview that no oil was burned with the straw.



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SCALE IN FEET

LOCATION OF SITE 2 (LANDFILL B)
AND SITE 5 (BURNING GROUNDS)
SAINT JULIENS CREEK ANNEX

FIGURE 1-1

LEGEND

NUMBER	SITE NAME/DESCRIPTION
2	LANDFILL B
5	BURNING GROUNDS

CDM Federal Programs Corporation
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Wastes disposed of 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.

1.3 Previous Investigations

Site 2 and the Site 5 have been addressed in the reports of four and three previous environmental investigations, respectively. The intent, findings, and recommendations of those investigations are summarized below.

1.3.1 Initial Assessment Study

Site 2 and Site 5 were included in a 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. This study revealed that low-level concentrations of ordnance materials exist throughout the facility. However, it was determined that since the concentrations were low, they did not pose a threat to human health or the environment, and no confirmation study needed to be conducted. No sampling was conducted as part of the study.

1.3.2 Preliminary Assessment

Site 2 was included in a 1983 Preliminary Assessment (PA) conducted by NUS. Ambient air in the area of the landfill was monitored for volatile organic compounds (VOCs) and radiation. No findings were reported, and sampling was not conducted.

1.3.3 RCRA Facility Assessment

Site 2 and Site 5 were both part of the 1989 RCRA Facility Assessment (RFA) conducted by A.T. Kearney, Inc. and K.W. Brown & Associates, Inc. No sampling was conducted as part of the RFA. Ash, grit, and stained soil associated with leaking heavy equipment were observed at Landfill B during the RFA Visual Site Inspection (VSI). At the Burning Grounds, a faint hydrocarbon odor was noted emanating from the soils, and several abandoned automotive vehicles were observed during the VSI.

Both Site 2 and Site 5 were recommended for further investigation and sampling. Reasons given for the Landfill B recommendation include: a high potential for release to soils and groundwater due to the unlined nature of the landfill and the proximity of the water table to ground surface; a moderate to high potential for release to surface water via groundwater discharge due to its proximity to St. Juliens Creek; a low potential for ongoing release to air; and a moderate to high potential for release to subsurface gas based on the volatile nature of wastes disposed of in an unlined landfill.

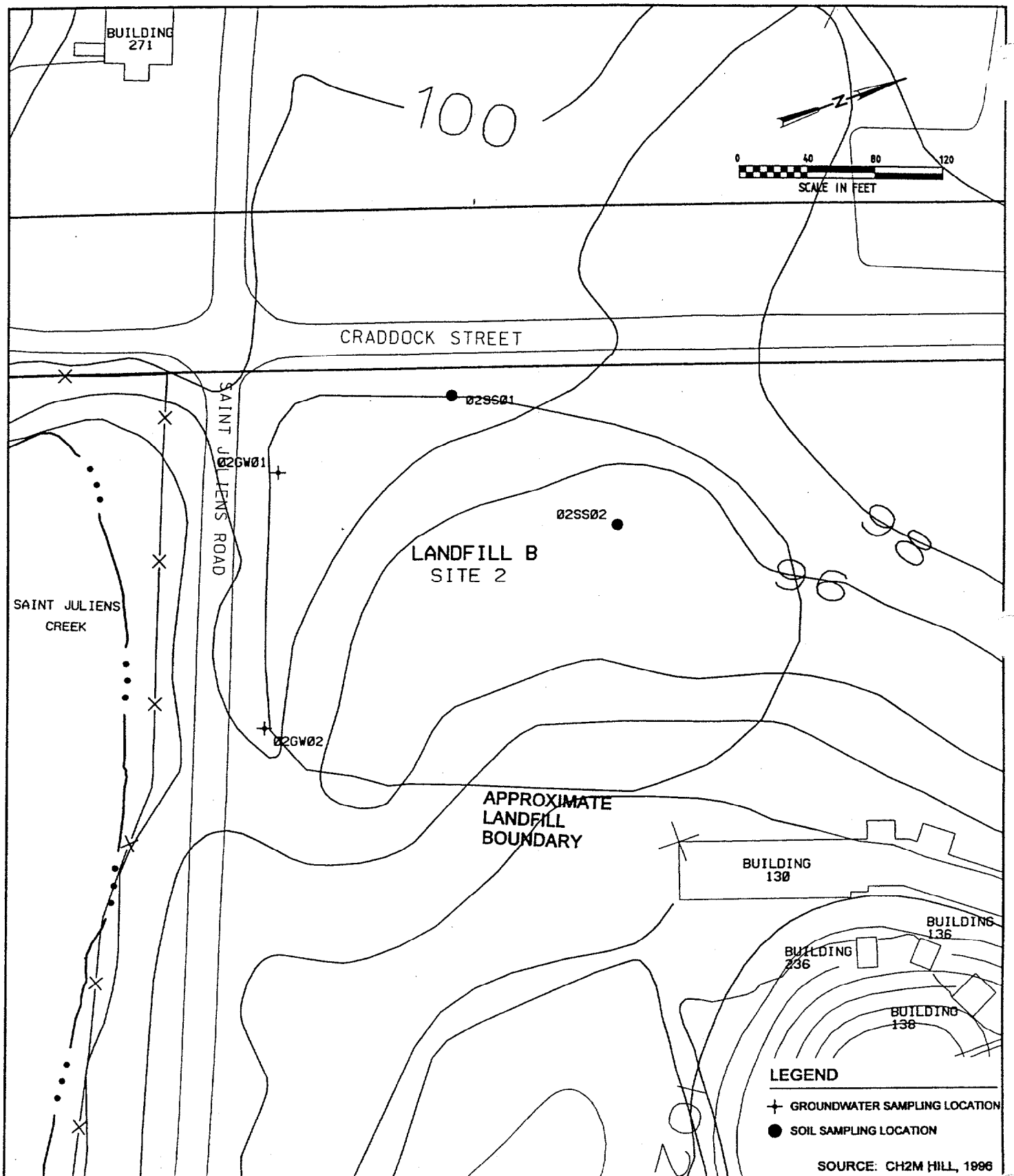
Reasons cited for the recommendation of the Burning Grounds include: high potential for release to soils and groundwater due to the fact that wastes were burned directly on the ground and the depth to groundwater at the Annex is less than 5 feet; moderate to high potential for release to surface water via groundwater discharge and via Blows Creek; and a low potential for ongoing releases to air.

1.3.4 Relative Risk Ranking System Data Collection Report

Site 2 and Site 5 were two of 21 sites sampled as part of a Relative Risk Ranking (RRR) System Data Collection sampling effort conducted by CH2M HILL Federal Group Ltd. in 1996. Two surface soil and three groundwater samples were collected at each of the two sites. Samples were analyzed for Target Compound List (TCL) VOCs, semivolatile organic compounds (SVOCs), pesticides/polychlorinated biphenyls (PCBs), Target Analyte List (TAL) 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 2 Results

Two surface soil and two groundwater samples were collected from Landfill B (Site 2) (**Figure 1-2**). The analytical data from that investigation are summarized on **Table 1-1**. 4,4-DDE, 4,4-DDT, gamma-chlordane, and Aroclor-1254 were detected above detection limits at concentrations ranging from 3.4 to 100 parts per billion (ppb) in the surface soil sample located in the northwestern corner of Site 2; 4,4-DDE, alpha-chlordane, Aroclor-1254, and endrin were detected above detection limits at concentrations ranging from 2.8 to 71 ppb in the surface soil sample located on the northern side of Site 2. Several inorganic compounds were also detected in both soil samples. Acetone (24 ppb) and several organics were



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RELATIVE RISK RANKING STUDY, SURFACE SOIL AND GROUNDWATER SAMPLING LOCATIONS, SITE 2 LANDFILL B, SAINT JULIENS CREEK ANNEX

FIGURE 1-2

TABLE 1-1

ANALYTICAL RESULTS OF RRR STUDY AT SITE 2 AND SITE 5

Sample ID	Chemical Name	Result	Qualifer	Units	Detect Limit
SJC02GW01	ALUMINUM	535		UG/L	
SJC02GW01	ARSENIC	5.8	B	UG/L	
SJC02GW01	BARIUM	60.3	J	UG/L	
SJC02GW01	CALCIUM	141000		UG/L	
SJC02GW01	COBALT	3.1	J	UG/L	
SJC02GW01	IRON	6120		UG/L	
SJC02GW01	MAGNESIUM	47700		UG/L	
SJC02GW01	MANGANESE	657		UG/L	
SJC02GW01	NICKEL	12	J	UG/L	
SJC02GW01	POTASSIUM	19900		UG/L	
SJC02GW01	SODIUM	94500		UG/L	
SJC02GW01	VANADIUM	3.1	J	UG/L	
SJC02GW01	ZINC	29.1		UG/L	
SJC02GW01	ACETONE	24		UG/L	10
SJC02GW02	1,3,5-TRINITROBENZENE	0.58		UG/L	0.5
SJC02GW02	2,4,6-TRINITROTOLUENE	0.58		UG/L	0.5
SJC02GW02	ALUMINUM	34.2	J	UG/L	
SJC02GW02	BARIUM	72.7	J	UG/L	
SJC02GW02	CALCIUM	28000		UG/L	
SJC02GW02	IRON	18900		UG/L	
SJC02GW02	MAGNESIUM	44400		UG/L	
SJC02GW02	MANGANESE	726		UG/L	
SJC02GW02	NICKEL	11.6	J	UG/L	
SJC02GW02	POTASSIUM	9680		UG/L	
SJC02GW02	SODIUM	215000		UG/L	
SJC02GW02	ZINC	29.4		UG/L	
SJC02GW02	ACETONE	8	J	UG/L	10
SJC02SS01	ALUMINUM	5860		MG/KG	
SJC02SS01	ARSENIC	3.8		MG/KG	
SJC02SS01	BARIUM	84.8		MG/KG	
SJC02SS01	CADMIUM	0.4	J	MG/KG	
SJC02SS01	CALCIUM	8650		MG/KG	
SJC02SS01	CHROMIUM	10.6		MG/KG	
SJC02SS01	COBALT	1.8	B	MG/KG	
SJC02SS01	COPPER	40.8		MG/KG	
SJC02SS01	IRON	5430		MG/KG	
SJC02SS01	LEAD	137		MG/KG	
SJC02SS01	MAGNESIUM	706	J	MG/KG	
SJC02SS01	MANGANESE	48.8		MG/KG	
SJC02SS01	MERCURY	2.7		MG/KG	
SJC02SS01	NICKEL	5.1	J	MG/KG	
SJC02SS01	POTASSIUM	411	J	MG/KG	
SJC02SS01	SODIUM	59.8	J	MG/KG	
SJC02SS01	VANADIUM	13		MG/KG	
SJC02SS01	ZINC	212		MG/KG	

TABLE 1-1

ANALYTICAL RESULTS OF RRR STUDY AT SITE 2 AND SITE 5

Sample ID	Chemical Name	Result	Qualifer	Units	Detect Limit
SJC02SS01	4,4'-DDD	55		UG/KG	
SJC02SS01	4,4'-DDE	59		UG/KG	
SJC02SS01	ALPHA-CHLORDANE	4.3	J	UG/KG	
SJC02SS01	AROCLOR-1254	41		UG/KG	
SJC02SS01	GAMMA-CHLORDANE	3.4	J	UG/KG	
SJC02SS01DL	4,4'-DDT	100		UG/KG	
SJC02SS02	ALUMINUM	20700		MG/KG	
SJC02SS02	ANTIMONY	12.8		MG/KG	
SJC02SS02	ARSENIC	3.6		MG/KG	
SJC02SS02	BARIUM	241		MG/KG	
SJC02SS02	BERYLLIUM	11.5		MG/KG	
SJC02SS02	CADMIUM	2.1		MG/KG	
SJC02SS02	CALCIUM	7620		MG/KG	
SJC02SS02	CHROMIUM	225		MG/KG	
SJC02SS02	COBALT	49		MG/KG	
SJC02SS02	COPPER	3450		MG/KG	
SJC02SS02	IRON	101000		MG/KG	
SJC02SS02	LEAD	1830		MG/KG	
SJC02SS02	MAGNESIUM	2300		MG/KG	
SJC02SS02	MANGANESE	417		MG/KG	
SJC02SS02	MERCURY	0.05	J	MG/KG	
SJC02SS02	NICKEL	201		MG/KG	
SJC02SS02	POTASSIUM	2370		MG/KG	
SJC02SS02	SODIUM	494	J	MG/KG	
SJC02SS02	VANADIUM	38.3		MG/KG	
SJC02SS02	ZINC	5940		MG/KG	
SJC02SS02	4,4'-DDD	9.5	J	UG/KG	
SJC02SS02	4,4'-DDE	20		UG/KG	
SJC02SS02	4,4'-DDT	26	J	UG/KG	
SJC02SS02	ALPHA-CHLORDANE	2.8	J	UG/KG	
SJC02SS02	AROCLOR-1254	71	J	UG/KG	
SJC02SS02	ENDRIN	3.6	J	UG/KG	
SJC02SS02	GAMMA-CHLORDANE	4.1	J	UG/KG	
SJC02SS02	BENZO(B)FLUORANTHENE	55	J	UG/KG	340
SJC02SS02	BENZO(G,H,I)PERYLENE	40	J	UG/KG	340
SJC02SS02	BIS(2-ETHYLHEXYL)PHTHALATE	560		UG/KG	340
SJC02SS02	BUTYLBENZYLPHTHALATE	250	J	UG/KG	340
SJC02SS02	FLUORANTHENE	53	J	UG/KG	340
SJC02SS02	PYRENE	43	J	UG/KG	340
SJC02SS02	TRICHLOROETHENE	4	J	UG/KG	11
SJC05GW01	ALUMINUM	60	J	UG/L	
SJC05GW01	ARSENIC	6.1	J	UG/L	
SJC05GW01	BARIUM	48	J	UG/L	
SJC05GW01	CALCIUM	57000		UG/L	
SJC05GW01	COPPER	15.9	J	UG/L	

TABLE 1-1

ANALYTICAL RESULTS OF RRR STUDY AT SITE 2 AND SITE 5

Sample ID	Chemical Name	Result	Qualifer	Units	Detect Limit
SJC05GW01	IRON	2960		UG/L	
SJC05GW01	MAGNESIUM	123000		UG/L	
SJC05GW01	MANGANESE	609		UG/L	
SJC05GW01	NICKEL	16.4	J	UG/L	
SJC05GW01	POTASSIUM	44200		UG/L	
SJC05GW01	SODIUM	958000		UG/L	
SJC05GW01	THALLIUM	9.3	J	UG/L	
SJC05GW01	VANADIUM	2.2	J	UG/L	
SJC05GW01	ZINC	21.2		UG/L	
SJC05GW02	ALUMINUM	21.1	B	UG/L	
SJC05GW02	BARIUM	21.3	J	UG/L	
SJC05GW02	CALCIUM	50700		UG/L	
SJC05GW02	COBALT	20.8	J	UG/L	
SJC05GW02	COPPER	22.2	J	UG/L	
SJC05GW02	IRON	42600		UG/L	
SJC05GW02	MAGNESIUM	68400		UG/L	
SJC05GW02	MANGANESE	1890		UG/L	
SJC05GW02	NICKEL	19.2	J	UG/L	
SJC05GW02	POTASSIUM	16500		UG/L	
SJC05GW02	SILVER	11.1		UG/L	
SJC05GW02	SODIUM	619000		UG/L	
SJC05GW02	VANADIUM	2.9	J	UG/L	
SJC05GW02	ZINC	75.4		UG/L	
SJC05GW02	PENTACHLOROPHENOL	1	J	UG/L	10
SJC05GW03	ALUMINUM	78.9	B	UG/L	
SJC05GW03	ARSENIC	3.1	J	UG/L	
SJC05GW03	BARIUM	264		UG/L	
SJC05GW03	CALCIUM	93600		UG/L	
SJC05GW03	COBALT	14.7	J	UG/L	
SJC05GW03	COPPER	19.3	J	UG/L	
SJC05GW03	IRON	25200		UG/L	
SJC05GW03	MAGNESIUM	118000		UG/L	
SJC05GW03	MANGANESE	1460		UG/L	
SJC05GW03	POTASSIUM	29300		UG/L	
SJC05GW03	SILVER	7.9	J	UG/L	
SJC05GW03	SODIUM	767000		UG/L	
SJC05GW03	ZINC	22.9		UG/L	
SJC05GW03	DI-N-BUTYLPHTHALATE	1	L	UG/L	10
SJC05GW04	ALUMINUM	96.2	J	UG/L	
SJC05GW04	ARSENIC	15.6		UG/L	
SJC05GW04	BARIUM	159	J	UG/L	
SJC05GW04	CALCIUM	131000		UG/L	
SJC05GW04	COBALT	2.2	J	UG/L	
SJC05GW04	COPPER	18.2	J	UG/L	

TABLE 1-1

ANALYTICAL RESULTS OF RRR STUDY AT SITE 2 AND SITE 5

Sample ID	Chemical Name	Result	Qualifer	Units	Detect Limit
SJC05GW04	CYANIDE	5.4	L	UG/L	
SJC05GW04	IRON	3600		UG/L	
SJC05GW04	MAGNESIUM	242000		UG/L	
SJC05GW04	MANGANESE	300		UG/L	
SJC05GW04	NICKEL	14.5	J	UG/L	
SJC05GW04	POTASSIUM	71200		UG/L	
SJC05GW04	SODIUM	2010000		UG/L	
SJC05GW04	THALLIUM	12.7		UG/L	
SJC05GW04	VANADIUM	2.3	J	UG/L	
SJC05GW04	ZINC	25.4		UG/L	
SJC05GW04	PHENANTHRENE	1	JX	UG/L	10
SJC05SS01	ALUMINUM	4520		MG/KG	
SJC05SS01	ARSENIC	5.2		MG/KG	
SJC05SS01	BARIUM	67.3		MG/KG	
SJC05SS01	BERYLLIUM	0.32	J	MG/KG	
SJC05SS01	CALCIUM	7340		MG/KG	
SJC05SS01	CHROMIUM	5.8		MG/KG	
SJC05SS01	COBALT	2.1	J	MG/KG	
SJC05SS01	COPPER	17.4		MG/KG	
SJC05SS01	IRON	7700		MG/KG	
SJC05SS01	LEAD	29.9		MG/KG	
SJC05SS01	MAGNESIUM	1540		MG/KG	
SJC05SS01	MANGANESE	245		MG/KG	
SJC05SS01	NICKEL	129		MG/KG	
SJC05SS01	POTASSIUM	912	J	MG/KG	
SJC05SS01	SODIUM	234	B	MG/KG	
SJC05SS01	VANADIUM	11.1	J	MG/KG	
SJC05SS01	ZINC	55.5		MG/KG	
SJC05SS01	4,4'-DDE	4.3		UG/KG	
SJC05SS01	4,4'-DDT	5.2	J	UG/KG	
SJC05SS01	2,4-DINITROTOLUENE	860		UG/KG	400
SJC05SS01	2,6-DINITROTOLUENE	52	J	UG/KG	400
SJC05SS01	BENZO(A)ANTHRACENE	64	J	UG/KG	400
SJC05SS01	BENZO(A)PYRENE	81	J	UG/KG	400
SJC05SS01	BENZO(B)FLUORANTHENE	110	J	UG/KG	400
SJC05SS01	BENZO(K)FLUORANTHENE	51	J	UG/KG	400
SJC05SS01	BIS(2-ETHYLHEXYL)PHTHALATE	48	J	UG/KG	400
SJC05SS01	CHRYSENE	160	J	UG/KG	400
SJC05SS01	FLUORANTHENE	160	J	UG/KG	400
SJC05SS01	INDENO(1,2,3-CD)PYRENE	49	J	UG/KG	400
SJC05SS01	N-NITROSODIPHENYLAMINE	120	J	UG/KG	400
SJC05SS01	PHENANTHRENE	77	J	UG/KG	400
SJC05SS01	PYRENE	170	J	UG/KG	400
SJC05SS02	ALUMINUM	4690		MG/KG	
SJC05SS02	ARSENIC	4		MG/KG	

TABLE 1-1

ANALYTICAL RESULTS OF RRR STUDY AT SITE 2 AND SITE 5

Sample ID	Chemical Name	Result	Qualifer	Units	Detect Limit
SJC05SS02	BARIUM	42.7		MG/KG	
SJC05SS02	BERYLLIUM	0.37	J	MG/KG	
SJC05SS02	CADMIUM	0.86		MG/KG	
SJC05SS02	CALCIUM	6030		MG/KG	
SJC05SS02	CHROMIUM	5.2		MG/KG	
SJC05SS02	COBALT	3.5	B	MG/KG	
SJC05SS02	COPPER	33.3		MG/KG	
SJC05SS02	IRON	10000		MG/KG	
SJC05SS02	LEAD	60.4		MG/KG	
SJC05SS02	MAGNESIUM	1850		MG/KG	
SJC05SS02	MANGANESE	222		MG/KG	
SJC05SS02	MERCURY	0.05	J	MG/KG	
SJC05SS02	NICKEL	4.8	J	MG/KG	
SJC05SS02	POTASSIUM	1200		MG/KG	
SJC05SS02	SODIUM	63.8	J	MG/KG	
SJC05SS02	VANADIUM	11.9		MG/KG	
SJC05SS02	ZINC	105		MG/KG	
SJC05SS02	4,4'-DDD	3.9		UG/KG	
SJC05SS02	4,4'-DDE	18		UG/KG	
SJC05SS02	4,4'-DDT	6.3		UG/KG	
SJC05SS02	AROCLOR-1254	10	J	UG/KG	
SJC05SS02	ENDRIN ALDEHYDE	5.2		UG/KG	
SJC05SS02	BIS(2-ETHYLHEXYL)PHTHALATE	130	J	UG/KG	360
SJC05SS02RE	METHYLENE CHLORIDE	5	J	UG/KG	11
SJC05SS03	ALUMINUM	5210		MG/KG	
SJC05SS03	ARSENIC	16.7		MG/KG	
SJC05SS03	BARIUM	4640		MG/KG	
SJC05SS03	BERYLLIUM	0.27	J	MG/KG	
SJC05SS03	CADMIUM	6		MG/KG	
SJC05SS03	CALCIUM	43500		MG/KG	
SJC05SS03	CHROMIUM	15.9		MG/KG	
SJC05SS03	COBALT	5.8	J	MG/KG	
SJC05SS03	COPPER	310		MG/KG	
SJC05SS03	IRON	6670		MG/KG	
SJC05SS03	LEAD	742		MG/KG	
SJC05SS03	MAGNESIUM	2200		MG/KG	
SJC05SS03	MANGANESE	144		MG/KG	
SJC05SS03	MERCURY	0.19		MG/KG	
SJC05SS03	NICKEL	46.1		MG/KG	
SJC05SS03	POTASSIUM	626	J	MG/KG	
SJC05SS03	SODIUM	387	B	MG/KG	
SJC05SS03	VANADIUM	5.7	J	MG/KG	
SJC05SS03	ZINC	1550		MG/KG	
SJC05SS03	2,4-DINITROTOLUENE	2100		UG/KG	430
SJC05SS03	2,6-DINITROTOLUENE	200	J	UG/KG	430
SJC05SS03	BENZO(A)PYRENE	56	J	UG/KG	430

TABLE 1-1

ANALYTICAL RESULTS OF RRR STUDY AT SITE 2 AND SITE 5

Sample ID	Chemical Name	Result	Qualifer	Units	Detect Limit
SJC05SS03	BENZO(B)FLUORANTHENE	70	J	UG/KG	430
SJC05SS03	BENZO(G,H,I)PERYLENE	52	J	UG/KG	430
SJC05SS03	BENZO(K)FLUORANTHENE	67	J	UG/KG	430
SJC05SS03	BIS(2-ETHYLHEXYL)PHTHALATE	97	J	UG/KG	430
SJC05SS03	CHRYSENE	88	J	UG/KG	430
SJC05SS03	DI-N-BUTYLPHTHALATE	3400	J	UG/KG	430
SJC05SS03	FLUORANTHENE	95	J	UG/KG	430
SJC05SS03	N-NITROSODIPHENYLAMINE	330	J	UG/KG	430
SJC05SS03	NAPHTHALENE	50	J	UG/KG	430
SJC05SS03	PHENANTHRENE	92	J	UG/KG	430
SJC05SS03	PYRENE	58	J	UG/KG	430
SJC05SS04	ALUMINUM	4390		MG/KG	
SJC05SS04	ANTIMONY	18.6		MG/KG	
SJC05SS04	ARSENIC	8.3		MG/KG	
SJC05SS04	BARIUM	583		MG/KG	
SJC05SS04	BERYLLIUM	0.5	J	MG/KG	
SJC05SS04	CADMIUM	6.6		MG/KG	
SJC05SS04	CALCIUM	16200		MG/KG	
SJC05SS04	CHROMIUM	63.8		MG/KG	
SJC05SS04	COBALT	5.7	J	MG/KG	
SJC05SS04	COPPER	1210		MG/KG	
SJC05SS04	IRON	31400		MG/KG	
SJC05SS04	LEAD	7910		MG/KG	
SJC05SS04	MAGNESIUM	2000		MG/KG	
SJC05SS04	MANGANESE	658		MG/KG	
SJC05SS04	MERCURY	0.26		MG/KG	
SJC05SS04	NICKEL	34.3		MG/KG	
SJC05SS04	POTASSIUM	1120		MG/KG	
SJC05SS04	SILVER	1.5	J	MG/KG	
SJC05SS04	SODIUM	448	J	MG/KG	
SJC05SS04	VANADIUM	13.3		MG/KG	
SJC05SS04	ZINC	2470		MG/KG	
SJC05SS04	4,4'-DDE	5.4	J	UG/KG	
SJC05SS04	AROCLOR-1254	23	J	UG/KG	
SJC05SS04	ENDOSULFAN II	5	J	UG/KG	
SJC05SS04	ENDOSULFAN SULFATE	4	U	UG/KG	4
SJC05SS04	ENDRIN	17	J	UG/KG	
SJC05SS04	ACENAPHTHYLENE	310	J	UG/KG	400
SJC05SS04	ANTHRACENE	160	J	UG/KG	400
SJC05SS04	BENZO(A)ANTHRACENE	700		UG/KG	400
SJC05SS04	BENZO(A)PYRENE	800		UG/KG	400
SJC05SS04	BENZO(B)FLUORANTHENE	1000		UG/KG	400
SJC05SS04	BENZO(G,H,I)PERYLENE	700		UG/KG	400
SJC05SS04	BENZO(K)FLUORANTHENE	540		UG/KG	400
SJC05SS04	BIS(2-ETHYLHEXYL)PHTHALATE	76	J	UG/KG	400
SJC05SS04	CHRYSENE	750		UG/KG	400

TABLE 1-1

ANALYTICAL RESULTS OF RRR STUDY AT SITE 2 AND SITE 5

Sample ID	Chemical Name	Result	Qualifer	Units	Detect Limit
SJC05SS04	FLUORANTHENE	830		UG/KG	400
SJC05SS04	INDENO(1,2,3-CD)PYRENE	580		UG/KG	400
SJC05SS04	PHENANTHRENE	280	J	UG/KG	400
SJC05SS04	PYRENE	1200		UG/KG	400

Relative Risk Data

TABLE 1-1					
ANALYTICAL RESULTS OF RRR STUDY AT SITE 2 AND SITE 5					
Sample ID	Chemical Name	Result	Qualifer	Units	Method
SJC02GW01	ALUMINUM	535		UG/L	
SJC02GW01	ARSENIC	5.8	B	UG/L	
SJC02GW01	BARIUM	60.3	J	UG/L	
SJC02GW01	CALCIUM	141000		UG/L	
SJC02GW01	COBALT	3.1	J	UG/L	
SJC02GW01	IRON	6120		UG/L	
SJC02GW01	MAGNESIUM	47700		UG/L	
SJC02GW01	MANGANESE	657		UG/L	
SJC02GW01	NICKEL	12	J	UG/L	
SJC02GW01	POTASSIUM	19900		UG/L	
SJC02GW01	SODIUM	94500		UG/L	
SJC02GW01	VANADIUM	3.1	J	UG/L	
SJC02GW01	ZINC	29.1		UG/L	
SJC02GW01	ACETONE	24		UG/L	
SJC02GW02	1,3,5-TRINITROBENZENE	0.58		UG/L	
SJC02GW02	2,4,6-TRINITROTOLUENE	0.58		UG/L	
SJC02GW02	ALUMINUM	34.2	J	UG/L	
SJC02GW02	BARIUM	72.7	J	UG/L	
SJC02GW02	CALCIUM	28000		UG/L	
SJC02GW02	IRON	18900		UG/L	
SJC02GW02	MAGNESIUM	44400		UG/L	
SJC02GW02	MANGANESE	726		UG/L	
SJC02GW02	NICKEL	11.6	J	UG/L	
SJC02GW02	POTASSIUM	9680		UG/L	
SJC02GW02	SODIUM	215000		UG/L	
SJC02GW02	ZINC	29.4		UG/L	
SJC02GW02	ACETONE	8	J	UG/L	
SJC02SS01	ALUMINUM	5860		MG/KG	
SJC02SS01	ARSENIC	3.8		MG/KG	
SJC02SS01	BARIUM	84.8		MG/KG	
SJC02SS01	CADMIUM	0.4	J	MG/KG	
SJC02SS01	CALCIUM	8650		MG/KG	
SJC02SS01	CHROMIUM	10.6		MG/KG	
SJC02SS01	COBALT	1.8	B	MG/KG	
SJC02SS01	COPPER	40.8		MG/KG	
SJC02SS01	IRON	5430		MG/KG	
SJC02SS01	LEAD	137		MG/KG	
SJC02SS01	MAGNESIUM	706	J	MG/KG	
SJC02SS01	MANGANESE	48.8		MG/KG	
SJC02SS01	MERCURY	2.7		MG/KG	
SJC02SS01	NICKEL	5.1	J	MG/KG	
SJC02SS01	POTASSIUM	411	J	MG/KG	
SJC02SS01	SODIUM	59.8	J	MG/KG	
SJC02SS01	VANADIUM	13		MG/KG	
SJC02SS01	ZINC	212		MG/KG	

TABLE 1-1

ANALYTICAL RESULTS OF RRR STUDY AT SITE 2 AND SITE 5

Sample ID	Chemical Name	Result	Qualifer	Units	Method
SJC02SS01	4,4'-DDD	55		UG/KG	
SJC02SS01	4,4'-DDE	59		UG/KG	
SJC02SS01	ALPHA-CHLORDANE	4.3	J	UG/KG	
SJC02SS01	AROCLOR-1254	41		UG/KG	
SJC02SS01	GAMMA-CHLORDANE	3.4	J	UG/KG	
SJC02SS01DL	4,4'-DDT	100		UG/KG	
SJC02SS02	ALUMINUM	20700		MG/KG	
SJC02SS02	ANTIMONY	12.8		MG/KG	
SJC02SS02	ARSENIC	3.6		MG/KG	
SJC02SS02	BARIUM	241		MG/KG	
SJC02SS02	BERYLLIUM	11.5		MG/KG	
SJC02SS02	CADMIUM	2.1		MG/KG	
SJC02SS02	CALCIUM	7620		MG/KG	
SJC02SS02	CHROMIUM	225		MG/KG	
SJC02SS02	COBALT	49		MG/KG	
SJC02SS02	COPPER	3450		MG/KG	
SJC02SS02	IRON	101000		MG/KG	
SJC02SS02	LEAD	1830		MG/KG	
SJC02SS02	MAGNESIUM	2300		MG/KG	
SJC02SS02	MANGANESE	417		MG/KG	
SJC02SS02	MERCURY	0.05	J	MG/KG	
SJC02SS02	NICKEL	201		MG/KG	
SJC02SS02	POTASSIUM	2370		MG/KG	
SJC02SS02	SODIUM	494	J	MG/KG	
SJC02SS02	VANADIUM	38.3		MG/KG	
SJC02SS02	ZINC	5940		MG/KG	
SJC02SS02	4,4'-DDD	9.5	J	UG/KG	
SJC02SS02	4,4'-DDE	20		UG/KG	
SJC02SS02	4,4'-DDT	26	J	UG/KG	
SJC02SS02	ALPHA-CHLORDANE	2.8	J	UG/KG	
SJC02SS02	AROCLOR-1254	71	J	UG/KG	
SJC02SS02	ENDRIN	3.6	J	UG/KG	
SJC02SS02	GAMMA-CHLORDANE	4.1	J	UG/KG	
SJC02SS02	BENZO(B)FLUORANTHENE	55	J	UG/KG	
SJC02SS02	BENZO(G,H,I)PERYLENE	40	J	UG/KG	
SJC02SS02	BIS(2-ETHYLHEXYL)PHTHALATE	560		UG/KG	
SJC02SS02	BUTYLBENZYLPHTHALATE	250	J	UG/KG	
SJC02SS02	FLUORANTHENE	53	J	UG/KG	
SJC02SS02	PYRENE	43	J	UG/KG	
SJC02SS02	TRICHLOROETHENE	4	J	UG/KG	
SJC05GW01	ALUMINUM	60	J	UG/L	
SJC05GW01	ARSENIC	6.1	J	UG/L	
SJC05GW01	BARIUM	48	J	UG/L	
SJC05GW01	CALCIUM	57000		UG/L	
SJC05GW01	COPPER	15.9	J	UG/L	

TABLE 1-1

ANALYTICAL RESULTS OF RRR STUDY AT SITE 2 AND SITE 5

Sample ID	Chemical Name	Result	Qualifer	Units	Method
SJC05GW01	IRON	2960		UG/L	
SJC05GW01	MAGNESIUM	123000		UG/L	
SJC05GW01	MANGANESE	609		UG/L	
SJC05GW01	NICKEL	16.4	J	UG/L	
SJC05GW01	POTASSIUM	44200		UG/L	
SJC05GW01	SODIUM	958000		UG/L	
SJC05GW01	THALLIUM	9.3	J	UG/L	
SJC05GW01	VANADIUM	2.2	J	UG/L	
SJC05GW01	ZINC	21.2		UG/L	
SJC05GW02	ALUMINUM	21.1	B	UG/L	
SJC05GW02	BARIUM	21.3	J	UG/L	
SJC05GW02	CALCIUM	50700		UG/L	
SJC05GW02	COBALT	20.8	J	UG/L	
SJC05GW02	COPPER	22.2	J	UG/L	
SJC05GW02	IRON	42600		UG/L	
SJC05GW02	MAGNESIUM	68400		UG/L	
SJC05GW02	MANGANESE	1890		UG/L	
SJC05GW02	NICKEL	19.2	J	UG/L	
SJC05GW02	POTASSIUM	16500		UG/L	
SJC05GW02	SILVER	11.1		UG/L	
SJC05GW02	SODIUM	619000		UG/L	
SJC05GW02	VANADIUM	2.9	J	UG/L	
SJC05GW02	ZINC	75.4		UG/L	
SJC05GW02	PENTACHLOROPHENOL	1	J	UG/L	
SJC05GW03	ALUMINUM	78.9	B	UG/L	
SJC05GW03	ARSENIC	3.1	J	UG/L	
SJC05GW03	BARIUM	264		UG/L	
SJC05GW03	CALCIUM	93600		UG/L	
SJC05GW03	COBALT	14.7	J	UG/L	
SJC05GW03	COPPER	19.3	J	UG/L	
SJC05GW03	IRON	25200		UG/L	
SJC05GW03	MAGNESIUM	118000		UG/L	
SJC05GW03	MANGANESE	1460		UG/L	
SJC05GW03	POTASSIUM	29300		UG/L	
SJC05GW03	SILVER	7.9	J	UG/L	
SJC05GW03	SODIUM	767000		UG/L	
SJC05GW03	ZINC	22.9		UG/L	
SJC05GW03	DI-N-BUTYLPHTHALATE	1	L	UG/L	
SJC05GW04	ALUMINUM	96.2	J	UG/L	
SJC05GW04	ARSENIC	15.6		UG/L	
SJC05GW04	BARIUM	159	J	UG/L	
SJC05GW04	CALCIUM	131000		UG/L	
SJC05GW04	COBALT	2.2	J	UG/L	
SJC05GW04	COPPER	18.2	J	UG/L	

TABLE 1-1

ANALYTICAL RESULTS OF RRR STUDY AT SITE 2 AND SITE 5

Sample ID	Chemical Name	Result	Qualifer	Units	Method
SJC05GW04	CYANIDE	5.4	L	UG/L	
SJC05GW04	IRON	3600		UG/L	
SJC05GW04	MAGNESIUM	242000		UG/L	
SJC05GW04	MANGANESE	300		UG/L	
SJC05GW04	NICKEL	14.5	J	UG/L	
SJC05GW04	POTASSIUM	71200		UG/L	
SJC05GW04	SODIUM	2010000		UG/L	
SJC05GW04	THALLIUM	12.7		UG/L	
SJC05GW04	VANADIUM	2.3	J	UG/L	
SJC05GW04	ZINC	25.4		UG/L	
SJC05GW04	PHENANTHRENE	1	JX	UG/L	
SJC05SS01	ALUMINUM	4520		MG/KG	
SJC05SS01	ARSENIC	5.2		MG/KG	
SJC05SS01	BARIUM	67.3		MG/KG	
SJC05SS01	BERYLLIUM	0.32	J	MG/KG	
SJC05SS01	CALCIUM	7340		MG/KG	
SJC05SS01	CHROMIUM	5.8		MG/KG	
SJC05SS01	COBALT	2.1	J	MG/KG	
SJC05SS01	COPPER	17.4		MG/KG	
SJC05SS01	IRON	7700		MG/KG	
SJC05SS01	LEAD	29.9		MG/KG	
SJC05SS01	MAGNESIUM	1540		MG/KG	
SJC05SS01	MANGANESE	245		MG/KG	
SJC05SS01	NICKEL	129		MG/KG	
SJC05SS01	POTASSIUM	912	J	MG/KG	
SJC05SS01	SODIUM	234	B	MG/KG	
SJC05SS01	VANADIUM	11.1	J	MG/KG	
SJC05SS01	ZINC	55.5		MG/KG	
SJC05SS01	4,4'-DDE	4.3		UG/KG	
SJC05SS01	4,4'-DDT	5.2	J	UG/KG	
SJC05SS01	2,4-DINITROTOLUENE	860		UG/KG	
SJC05SS01	2,6-DINITROTOLUENE	52	J	UG/KG	
SJC05SS01	BENZO(A)ANTHRACENE	64	J	UG/KG	
SJC05SS01	BENZO(A)PYRENE	81	J	UG/KG	
SJC05SS01	BENZO(B)FLUORANTHENE	110	J	UG/KG	
SJC05SS01	BENZO(K)FLUORANTHENE	51	J	UG/KG	
SJC05SS01	BIS(2-ETHYLHEXYL)PHTHALATE	48	J	UG/KG	
SJC05SS01	CHRYSENE	160	J	UG/KG	
SJC05SS01	FLUORANTHENE	160	J	UG/KG	
SJC05SS01	INDENO(1,2,3-CD)PYRENE	49	J	UG/KG	
SJC05SS01	N-NITROSODIPHENYLAMINE	120	J	UG/KG	
SJC05SS01	PHENANTHRENE	77	J	UG/KG	
SJC05SS01	PYRENE	170	J	UG/KG	
SJC05SS02	ALUMINUM	4690		MG/KG	
SJC05SS02	ARSENIC	4		MG/KG	

TABLE 1-1

ANALYTICAL RESULTS OF RRR STUDY AT SITE 2 AND SITE 5

Sample ID	Chemical Name	Result	Qualifer	Units	Method
SJC05SS02	BARIUM	42.7		MG/KG	
SJC05SS02	BERYLLIUM	0.37	J	MG/KG	
SJC05SS02	CADMIUM	0.86		MG/KG	
SJC05SS02	CALCIUM	6030		MG/KG	
SJC05SS02	CHROMIUM	5.2		MG/KG	
SJC05SS02	COBALT	3.5	B	MG/KG	
SJC05SS02	COPPER	33.3		MG/KG	
SJC05SS02	IRON	10000		MG/KG	
SJC05SS02	LEAD	60.4		MG/KG	
SJC05SS02	MAGNESIUM	1850		MG/KG	
SJC05SS02	MANGANESE	222		MG/KG	
SJC05SS02	MERCURY	0.05	J	MG/KG	
SJC05SS02	NICKEL	4.8	J	MG/KG	
SJC05SS02	POTASSIUM	1200		MG/KG	
SJC05SS02	SODIUM	63.8	J	MG/KG	
SJC05SS02	VANADIUM	11.9		MG/KG	
SJC05SS02	ZINC	105		MG/KG	
SJC05SS02	4,4'-DDD	3.9		UG/KG	
SJC05SS02	4,4'-DDE	18		UG/KG	
SJC05SS02	4,4'-DDT	6.3		UG/KG	
SJC05SS02	AROCLOR-1254	10	J	UG/KG	
SJC05SS02	ENDRIN ALDEHYDE	5.2		UG/KG	
SJC05SS02	BIS(2-ETHYLHEXYL)PHTHALATE	130	J	UG/KG	
SJC05SS02RE	METHYLENE CHLORIDE	5	J	UG/KG	
SJC05SS03	ALUMINUM	5210		MG/KG	
SJC05SS03	ARSENIC	16.7		MG/KG	
SJC05SS03	BARIUM	4640		MG/KG	
SJC05SS03	BERYLLIUM	0.27	J	MG/KG	
SJC05SS03	CADMIUM	6		MG/KG	
SJC05SS03	CALCIUM	43500		MG/KG	
SJC05SS03	CHROMIUM	15.9		MG/KG	
SJC05SS03	COBALT	5.8	J	MG/KG	
SJC05SS03	COPPER	310		MG/KG	
SJC05SS03	IRON	6670		MG/KG	
SJC05SS03	LEAD	742		MG/KG	
SJC05SS03	MAGNESIUM	2200		MG/KG	
SJC05SS03	MANGANESE	144		MG/KG	
SJC05SS03	MERCURY	0.19		MG/KG	
SJC05SS03	NICKEL	46.1		MG/KG	
SJC05SS03	POTASSIUM	626	J	MG/KG	
SJC05SS03	SODIUM	387	B	MG/KG	
SJC05SS03	VANADIUM	5.7	J	MG/KG	
SJC05SS03	ZINC	1550		MG/KG	
SJC05SS03	2,4-DINITROTOLUENE	2100		UG/KG	
SJC05SS03	2,6-DINITROTOLUENE	200	J	UG/KG	
SJC05SS03	BENZO(A)PYRENE	56	J	UG/KG	

TABLE 1-1

ANALYTICAL RESULTS OF RRR STUDY AT SITE 2 AND SITE 5

Sample ID	Chemical Name	Result	Qualifer	Units	Method
SJC05SS03	BENZO(B)FLUORANTHENE	70	J	UG/KG	
SJC05SS03	BENZO(G,H,I)PERYLENE	52	J	UG/KG	
SJC05SS03	BENZO(K)FLUORANTHENE	67	J	UG/KG	
SJC05SS03	BIS(2-ETHYLHEXYL)PHTHALATE	97	J	UG/KG	
SJC05SS03	CHRYSENE	88	J	UG/KG	
SJC05SS03	DI-N-BUTYLPHTHALATE	3400	J	UG/KG	
SJC05SS03	FLUORANTHENE	95	J	UG/KG	
SJC05SS03	N-NITROSODIPHENYLAMINE	330	J	UG/KG	
SJC05SS03	NAPHTHALENE	50	J	UG/KG	
SJC05SS03	PHENANTHRENE	92	J	UG/KG	
SJC05SS03	PYRENE	58	J	UG/KG	
SJC05SS04	ALUMINUM	4390		MG/KG	
SJC05SS04	ANTIMONY	18.6		MG/KG	
SJC05SS04	ARSENIC	8.3		MG/KG	
SJC05SS04	BARIUM	583		MG/KG	
SJC05SS04	BERYLLIUM	0.5	J	MG/KG	
SJC05SS04	CADMIUM	6.6		MG/KG	
SJC05SS04	CALCIUM	16200		MG/KG	
SJC05SS04	CHROMIUM	63.8		MG/KG	
SJC05SS04	COBALT	5.7	J	MG/KG	
SJC05SS04	COPPER	1210		MG/KG	
SJC05SS04	IRON	31400		MG/KG	
SJC05SS04	LEAD	7910		MG/KG	
SJC05SS04	MAGNESIUM	2000		MG/KG	
SJC05SS04	MANGANESE	658		MG/KG	
SJC05SS04	MERCURY	0.26		MG/KG	
SJC05SS04	NICKEL	34.3		MG/KG	
SJC05SS04	POTASSIUM	1120		MG/KG	
SJC05SS04	SILVER	1.5	J	MG/KG	
SJC05SS04	SODIUM	448	J	MG/KG	
SJC05SS04	VANADIUM	13.3		MG/KG	
SJC05SS04	ZINC	2470		MG/KG	
SJC05SS04	4,4'-DDE	5.4	J	UG/KG	
SJC05SS04	AROCLOR-1254	23	J	UG/KG	
SJC05SS04	ENDOSULFAN II	5	J	UG/KG	
SJC05SS04	ENDOSULFAN SULFATE	4	U	UG/KG	
SJC05SS04	ENDRIN	17	J	UG/KG	
SJC05SS04	ACENAPHTHYLENE	310	J	UG/KG	
SJC05SS04	ANTHRACENE	160	J	UG/KG	
SJC05SS04	BENZO(A)ANTHRACENE	700		UG/KG	
SJC05SS04	BENZO(A)PYRENE	800		UG/KG	
SJC05SS04	BENZO(B)FLUORANTHENE	1000		UG/KG	
SJC05SS04	BENZO(G,H,I)PERYLENE	700		UG/KG	
SJC05SS04	BENZO(K)FLUORANTHENE	540		UG/KG	
SJC05SS04	BIS(2-ETHYLHEXYL)PHTHALATE	76	J	UG/KG	
SJC05SS04	CHRYSENE	750		UG/KG	

TABLE 1-1					
ANALYTICAL RESULTS OF RRR STUDY AT SITE 2 AND SITE 5					
Sample ID	Chemical Name	Result	Qualifer	Units	Method
SJC05SS04	FLUORANTHENE	830		UG/KG	
SJC05SS04	INDENO(1,2,3-CD)PYRENE	580		UG/KG	
SJC05SS04	PHENANTHRENE	280	J	UG/KG	
SJC05SS04	PYRENE	1200		UG/KG	

TABLE 1-1

ANALYTICAL RESULTS OF RRR STUDY AT SITE 2 AND SITE 5

Sample ID	Chemical Name	Result	Qualifer	Units	Group
SJC02GW01	ALUMINUM	535		UG/L	
SJC02GW01	ARSENIC	5.8	B	UG/L	
SJC02GW01	BARIUM	60.3	J	UG/L	
SJC02GW01	CALCIUM	141000		UG/L	
SJC02GW01	COBALT	3.1	J	UG/L	
SJC02GW01	IRON	6120		UG/L	
SJC02GW01	MAGNESIUM	47700		UG/L	
SJC02GW01	MANGANESE	657		UG/L	
SJC02GW01	NICKEL	12	J	UG/L	
SJC02GW01	POTASSIUM	19900		UG/L	
SJC02GW01	SODIUM	94500		UG/L	
SJC02GW01	VANADIUM	3.1	J	UG/L	
SJC02GW01	ZINC	29.1		UG/L	
SJC02GW01	ACETONE	24		UG/L	
SJC02GW02	1,3,5-TRINITROBENZENE	0.58		UG/L	
SJC02GW02	2,4,6-TRINITROTOLUENE	0.58		UG/L	
SJC02GW02	ALUMINUM	34.2	J	UG/L	
SJC02GW02	BARIUM	72.7	J	UG/L	
SJC02GW02	CALCIUM	28000		UG/L	
SJC02GW02	IRON	18900		UG/L	
SJC02GW02	MAGNESIUM	44400		UG/L	
SJC02GW02	MANGANESE	726		UG/L	
SJC02GW02	NICKEL	11.6	J	UG/L	
SJC02GW02	POTASSIUM	9680		UG/L	
SJC02GW02	SODIUM	215000		UG/L	
SJC02GW02	ZINC	29.4		UG/L	
SJC02GW02	ACETONE	8	J	UG/L	
SJC02SS01	ALUMINUM	5860		MG/KG	
SJC02SS01	ARSENIC	3.8		MG/KG	
SJC02SS01	BARIUM	84.8		MG/KG	
SJC02SS01	CADMIUM	0.4	J	MG/KG	
SJC02SS01	CALCIUM	8650		MG/KG	
SJC02SS01	CHROMIUM	10.6		MG/KG	
SJC02SS01	COBALT	1.8	B	MG/KG	
SJC02SS01	COPPER	40.8		MG/KG	
SJC02SS01	IRON	5430		MG/KG	
SJC02SS01	LEAD	137		MG/KG	
SJC02SS01	MAGNESIUM	706	J	MG/KG	
SJC02SS01	MANGANESE	48.8		MG/KG	
SJC02SS01	MERCURY	2.7		MG/KG	
SJC02SS01	NICKEL	5.1	J	MG/KG	
SJC02SS01	POTASSIUM	411	J	MG/KG	
SJC02SS01	SODIUM	59.8	J	MG/KG	
SJC02SS01	VANADIUM	13		MG/KG	
SJC02SS01	ZINC	212		MG/KG	

TABLE 1-1

ANALYTICAL RESULTS OF RRR STUDY AT SITE 2 AND SITE 5

Sample ID	Chemical Name	Result	Qualifer	Units	Group
SJC02SS01	4,4'-DDD	55		UG/KG	
SJC02SS01	4,4'-DDE	59		UG/KG	
SJC02SS01	ALPHA-CHLORDANE	4.3	J	UG/KG	
SJC02SS01	AROCLOR-1254	41		UG/KG	
SJC02SS01	GAMMA-CHLORDANE	3.4	J	UG/KG	
SJC02SS01DL	4,4'-DDT	100		UG/KG	
SJC02SS02	ALUMINUM	20700		MG/KG	
SJC02SS02	ANTIMONY	12.8		MG/KG	
SJC02SS02	ARSENIC	3.6		MG/KG	
SJC02SS02	BARIUM	241		MG/KG	
SJC02SS02	BERYLLIUM	11.5		MG/KG	
SJC02SS02	CADMIUM	2.1		MG/KG	
SJC02SS02	CALCIUM	7620		MG/KG	
SJC02SS02	CHROMIUM	225		MG/KG	
SJC02SS02	COBALT	49		MG/KG	
SJC02SS02	COPPER	3450		MG/KG	
SJC02SS02	IRON	101000		MG/KG	
SJC02SS02	LEAD	1830		MG/KG	
SJC02SS02	MAGNESIUM	2300		MG/KG	
SJC02SS02	MANGANESE	417		MG/KG	
SJC02SS02	MERCURY	0.05	J	MG/KG	
SJC02SS02	NICKEL	201		MG/KG	
SJC02SS02	POTASSIUM	2370		MG/KG	
SJC02SS02	SODIUM	494	J	MG/KG	
SJC02SS02	VANADIUM	38.3		MG/KG	
SJC02SS02	ZINC	5940		MG/KG	
SJC02SS02	4,4'-DDD	9.5	J	UG/KG	
SJC02SS02	4,4'-DDE	20		UG/KG	
SJC02SS02	4,4'-DDT	26	J	UG/KG	
SJC02SS02	ALPHA-CHLORDANE	2.8	J	UG/KG	
SJC02SS02	AROCLOR-1254	71	J	UG/KG	
SJC02SS02	ENDRIN	3.6	J	UG/KG	
SJC02SS02	GAMMA-CHLORDANE	4.1	J	UG/KG	
SJC02SS02	BENZO(B)FLUORANTHENE	55	J	UG/KG	
SJC02SS02	BENZO(G,H,I)PERYLENE	40	J	UG/KG	
SJC02SS02	BIS(2-ETHYLHEXYL)PHTHALATE	560		UG/KG	
SJC02SS02	BUTYLBENZYLPHTHALATE	250	J	UG/KG	
SJC02SS02	FLUORANTHENE	53	J	UG/KG	
SJC02SS02	PYRENE	43	J	UG/KG	
SJC02SS02	TRICHLOROETHENE	4	J	UG/KG	
SJC05GW01	ALUMINUM	60	J	UG/L	
SJC05GW01	ARSENIC	6.1	J	UG/L	
SJC05GW01	BARIUM	48	J	UG/L	
SJC05GW01	CALCIUM	57000		UG/L	
SJC05GW01	COPPER	15.9	J	UG/L	

TABLE 1-1

ANALYTICAL RESULTS OF RRR STUDY AT SITE 2 AND SITE 5

Sample ID	Chemical Name	Result	Qualifer	Units	Group
SJC05GW01	IRON	2960		UG/L	
SJC05GW01	MAGNESIUM	123000		UG/L	
SJC05GW01	MANGANESE	609		UG/L	
SJC05GW01	NICKEL	16.4	J	UG/L	
SJC05GW01	POTASSIUM	44200		UG/L	
SJC05GW01	SODIUM	958000		UG/L	
SJC05GW01	THALLIUM	9.3	J	UG/L	
SJC05GW01	VANADIUM	2.2	J	UG/L	
SJC05GW01	ZINC	21.2		UG/L	
SJC05GW02	ALUMINUM	21.1	B	UG/L	
SJC05GW02	BARIUM	21.3	J	UG/L	
SJC05GW02	CALCIUM	50700		UG/L	
SJC05GW02	COBALT	20.8	J	UG/L	
SJC05GW02	COPPER	22.2	J	UG/L	
SJC05GW02	IRON	42600		UG/L	
SJC05GW02	MAGNESIUM	68400		UG/L	
SJC05GW02	MANGANESE	1890		UG/L	
SJC05GW02	NICKEL	19.2	J	UG/L	
SJC05GW02	POTASSIUM	16500		UG/L	
SJC05GW02	SILVER	11.1		UG/L	
SJC05GW02	SODIUM	619000		UG/L	
SJC05GW02	VANADIUM	2.9	J	UG/L	
SJC05GW02	ZINC	75.4		UG/L	
SJC05GW02	PENTACHLOROPHENOL	1	J	UG/L	
SJC05GW03	ALUMINUM	78.9	B	UG/L	
SJC05GW03	ARSENIC	3.1	J	UG/L	
SJC05GW03	BARIUM	264		UG/L	
SJC05GW03	CALCIUM	93600		UG/L	
SJC05GW03	COBALT	14.7	J	UG/L	
SJC05GW03	COPPER	19.3	J	UG/L	
SJC05GW03	IRON	25200		UG/L	
SJC05GW03	MAGNESIUM	118000		UG/L	
SJC05GW03	MANGANESE	1460		UG/L	
SJC05GW03	POTASSIUM	29300		UG/L	
SJC05GW03	SILVER	7.9	J	UG/L	
SJC05GW03	SODIUM	767000		UG/L	
SJC05GW03	ZINC	22.9		UG/L	
SJC05GW03	DI-N-BUTYLPHTHALATE	1	L	UG/L	
SJC05GW04	ALUMINUM	96.2	J	UG/L	
SJC05GW04	ARSENIC	15.6		UG/L	
SJC05GW04	BARIUM	159	J	UG/L	
SJC05GW04	CALCIUM	131000		UG/L	
SJC05GW04	COBALT	2.2	J	UG/L	
SJC05GW04	COPPER	18.2	J	UG/L	

TABLE 1-1

ANALYTICAL RESULTS OF RRR STUDY AT SITE 2 AND SITE 5

Sample ID	Chemical Name	Result	Qualifer	Units	Group
SJC05GW04	CYANIDE	5.4	L	UG/L	
SJC05GW04	IRON	3600		UG/L	
SJC05GW04	MAGNESIUM	242000		UG/L	
SJC05GW04	MANGANESE	300		UG/L	
SJC05GW04	NICKEL	14.5	J	UG/L	
SJC05GW04	POTASSIUM	71200		UG/L	
SJC05GW04	SODIUM	2010000		UG/L	
SJC05GW04	THALLIUM	12.7		UG/L	
SJC05GW04	VANADIUM	2.3	J	UG/L	
SJC05GW04	ZINC	25.4		UG/L	
SJC05GW04	PHENANTHRENE	1	JX	UG/L	
SJC05SS01	ALUMINUM	4520		MG/KG	
SJC05SS01	ARSENIC	5.2		MG/KG	
SJC05SS01	BARIUM	67.3		MG/KG	
SJC05SS01	BERYLLIUM	0.32	J	MG/KG	
SJC05SS01	CALCIUM	7340		MG/KG	
SJC05SS01	CHROMIUM	5.8		MG/KG	
SJC05SS01	COBALT	2.1	J	MG/KG	
SJC05SS01	COPPER	17.4		MG/KG	
SJC05SS01	IRON	7700		MG/KG	
SJC05SS01	LEAD	29.9		MG/KG	
SJC05SS01	MAGNESIUM	1540		MG/KG	
SJC05SS01	MANGANESE	245		MG/KG	
SJC05SS01	NICKEL	129		MG/KG	
SJC05SS01	POTASSIUM	912	J	MG/KG	
SJC05SS01	SODIUM	234	B	MG/KG	
SJC05SS01	VANADIUM	11.1	J	MG/KG	
SJC05SS01	ZINC	55.5		MG/KG	
SJC05SS01	4,4'-DDE	4.3		UG/KG	
SJC05SS01	4,4'-DDT	5.2	J	UG/KG	
SJC05SS01	2,4-DINITROTOLUENE	860		UG/KG	
SJC05SS01	2,6-DINITROTOLUENE	52	J	UG/KG	
SJC05SS01	BENZO(A)ANTHRACENE	64	J	UG/KG	
SJC05SS01	BENZO(A)PYRENE	81	J	UG/KG	
SJC05SS01	BENZO(B)FLUORANTHENE	110	J	UG/KG	
SJC05SS01	BENZO(K)FLUORANTHENE	51	J	UG/KG	
SJC05SS01	BIS(2-ETHYLHEXYL)PHTHALATE	48	J	UG/KG	
SJC05SS01	CHRYSENE	160	J	UG/KG	
SJC05SS01	FLUORANTHENE	160	J	UG/KG	
SJC05SS01	INDENO(1,2,3-CD)PYRENE	49	J	UG/KG	
SJC05SS01	N-NITROSODIPHENYLAMINE	120	J	UG/KG	
SJC05SS01	PHENANTHRENE	77	J	UG/KG	
SJC05SS01	PYRENE	170	J	UG/KG	
SJC05SS02	ALUMINUM	4690		MG/KG	
SJC05SS02	ARSENIC	4		MG/KG	

TABLE 1-1

ANALYTICAL RESULTS OF RRR STUDY AT SITE 2 AND SITE 5

Sample ID	Chemical Name	Result	Qualifer	Units	Group
SJC05SS02	BARIUM	42.7		MG/KG	
SJC05SS02	BERYLLIUM	0.37	J	MG/KG	
SJC05SS02	CADMIUM	0.86		MG/KG	
SJC05SS02	CALCIUM	6030		MG/KG	
SJC05SS02	CHROMIUM	5.2		MG/KG	
SJC05SS02	COBALT	3.5	B	MG/KG	
SJC05SS02	COPPER	33.3		MG/KG	
SJC05SS02	IRON	10000		MG/KG	
SJC05SS02	LEAD	60.4		MG/KG	
SJC05SS02	MAGNESIUM	1850		MG/KG	
SJC05SS02	MANGANESE	222		MG/KG	
SJC05SS02	MERCURY	0.05	J	MG/KG	
SJC05SS02	NICKEL	4.8	J	MG/KG	
SJC05SS02	POTASSIUM	1200		MG/KG	
SJC05SS02	SODIUM	63.8	J	MG/KG	
SJC05SS02	VANADIUM	11.9		MG/KG	
SJC05SS02	ZINC	105		MG/KG	
SJC05SS02	4,4'-DDD	3.9		UG/KG	
SJC05SS02	4,4'-DDE	18		UG/KG	
SJC05SS02	4,4'-DDT	6.3		UG/KG	
SJC05SS02	AROCLOR-1254	10	J	UG/KG	
SJC05SS02	ENDRIN ALDEHYDE	5.2		UG/KG	
SJC05SS02	BIS(2-ETHYLHEXYL)PHTHALATE	130	J	UG/KG	
SJC05SS02RE	METHYLENE CHLORIDE	5	J	UG/KG	
SJC05SS03	ALUMINUM	5210		MG/KG	
SJC05SS03	ARSENIC	16.7		MG/KG	
SJC05SS03	BARIUM	4640		MG/KG	
SJC05SS03	BERYLLIUM	0.27	J	MG/KG	
SJC05SS03	CADMIUM	6		MG/KG	
SJC05SS03	CALCIUM	43500		MG/KG	
SJC05SS03	CHROMIUM	15.9		MG/KG	
SJC05SS03	COBALT	5.8	J	MG/KG	
SJC05SS03	COPPER	310		MG/KG	
SJC05SS03	IRON	6670		MG/KG	
SJC05SS03	LEAD	742		MG/KG	
SJC05SS03	MAGNESIUM	2200		MG/KG	
SJC05SS03	MANGANESE	144		MG/KG	
SJC05SS03	MERCURY	0.19		MG/KG	
SJC05SS03	NICKEL	46.1		MG/KG	
SJC05SS03	POTASSIUM	626	J	MG/KG	
SJC05SS03	SODIUM	387	B	MG/KG	
SJC05SS03	VANADIUM	5.7	J	MG/KG	
SJC05SS03	ZINC	1550		MG/KG	
SJC05SS03	2,4-DINITROTOLUENE	2100		UG/KG	
SJC05SS03	2,6-DINITROTOLUENE	200	J	UG/KG	
SJC05SS03	BENZO(A)PYRENE	56	J	UG/KG	

TABLE 1-1

ANALYTICAL RESULTS OF RRR STUDY AT SITE 2 AND SITE 5

Sample ID	Chemical Name	Result	Qualifer	Units	Group
SJC05SS03	BENZO(B)FLUORANTHENE	70	J	UG/KG	
SJC05SS03	BENZO(G,H,I)PERYLENE	52	J	UG/KG	
SJC05SS03	BENZO(K)FLUORANTHENE	67	J	UG/KG	
SJC05SS03	BIS(2-ETHYLHEXYL)PHTHALATE	97	J	UG/KG	
SJC05SS03	CHRYSENE	88	J	UG/KG	
SJC05SS03	DI-N-BUTYLPHTHALATE	3400	J	UG/KG	
SJC05SS03	FLUORANTHENE	95	J	UG/KG	
SJC05SS03	N-NITROSODIPHENYLAMINE	330	J	UG/KG	
SJC05SS03	NAPHTHALENE	50	J	UG/KG	
SJC05SS03	PHENANTHRENE	92	J	UG/KG	
SJC05SS03	PYRENE	58	J	UG/KG	
SJC05SS04	ALUMINUM	4390		MG/KG	
SJC05SS04	ANTIMONY	18.6		MG/KG	
SJC05SS04	ARSENIC	8.3		MG/KG	
SJC05SS04	BARIUM	583		MG/KG	
SJC05SS04	BERYLLIUM	0.5	J	MG/KG	
SJC05SS04	CADMIUM	6.6		MG/KG	
SJC05SS04	CALCIUM	16200		MG/KG	
SJC05SS04	CHROMIUM	63.8		MG/KG	
SJC05SS04	COBALT	5.7	J	MG/KG	
SJC05SS04	COPPER	1210		MG/KG	
SJC05SS04	IRON	31400		MG/KG	
SJC05SS04	LEAD	7910		MG/KG	
SJC05SS04	MAGNESIUM	2000		MG/KG	
SJC05SS04	MANGANESE	658		MG/KG	
SJC05SS04	MERCURY	0.26		MG/KG	
SJC05SS04	NICKEL	34.3		MG/KG	
SJC05SS04	POTASSIUM	1120		MG/KG	
SJC05SS04	SILVER	1.5	J	MG/KG	
SJC05SS04	SODIUM	448	J	MG/KG	
SJC05SS04	VANADIUM	13.3		MG/KG	
SJC05SS04	ZINC	2470		MG/KG	
SJC05SS04	4,4'-DDE	5.4	J	UG/KG	
SJC05SS04	AROCLOR-1254	23	J	UG/KG	
SJC05SS04	ENDOSULFAN II	5	J	UG/KG	
SJC05SS04	ENDOSULFAN SULFATE	4	U	UG/KG	
SJC05SS04	ENDRIN	17	J	UG/KG	
SJC05SS04	ACENAPHTHYLENE	310	J	UG/KG	
SJC05SS04	ANTHRACENE	160	J	UG/KG	
SJC05SS04	BENZO(A)ANTHRACENE	700		UG/KG	
SJC05SS04	BENZO(A)PYRENE	800		UG/KG	
SJC05SS04	BENZO(B)FLUORANTHENE	1000		UG/KG	
SJC05SS04	BENZO(G,H,I)PERYLENE	700		UG/KG	
SJC05SS04	BENZO(K)FLUORANTHENE	540		UG/KG	
SJC05SS04	BIS(2-ETHYLHEXYL)PHTHALATE	76	J	UG/KG	
SJC05SS04	CHRYSENE	750		UG/KG	

TABLE 1-1

ANALYTICAL RESULTS OF RRR STUDY AT SITE 2 AND SITE 5

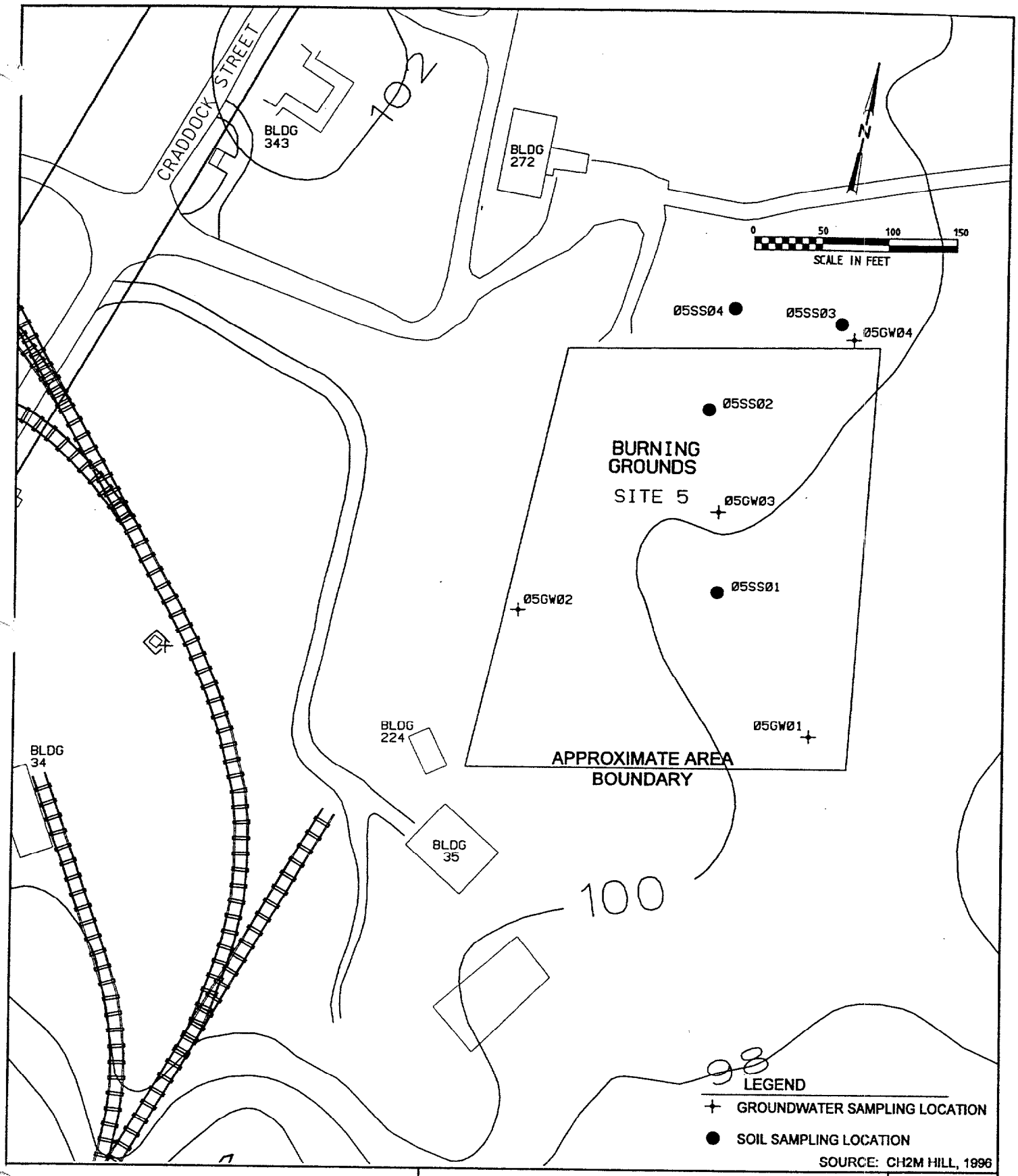
Sample ID	Chemical Name	Result	Qualifer	Units	Group
SJC05SS04	FLUORANTHENE	830		UG/KG	
SJC05SS04	INDENO(1,2,3-CD)PYRENE	580		UG/KG	
SJC05SS04	PHENANTHRENE	280	J	UG/KG	
SJC05SS04	PYRENE	1200		UG/KG	

detected in the northwest groundwater sample and 1,3,5-trinitrobenzene (0.58 ppb), 2,4,6-trinitrotoluene (0.58 ppb), and several inorganics were detected in the southeast groundwater sample.

1.3.4.2 Site 5 Results

Four surface soil and four groundwater samples were collected from the Burning Grounds (Site 5) and surrounding area (**Figure 1-3**). The analytical data from that investigation are summarized on Table 1-1. The organic compounds 4,4-DDE (4.3 ppb), 4,4-DDT (5.2 ppb) and 2,4-dinitrotoluene (860 ppb) were detected in the surface soil sample collected from the center of the site. Also, 4,4-DDD (3.9 ppb), 4,4-DDE (18 ppb), 4,4-DDT (6.3 ppb), and endrin aldehyde (5.2 ppb) were detected in soil from the northern end of the site. Several inorganic compounds were also detected. Di-n-butylphthalate (3,400 ppb) and 2,4-dinitrotoluene (2,100 ppb) were detected in the sample collected northeast of the site; several inorganic compounds were also detected. The following organic analytes were detected in the sample collected north/northwest of the site: endrin (17 ppb), endosulfan II (5 ppb), benzo(a)anthracene (700 ppb), benzo(a)pyrene (800 ppb), benzo(b)fluoranthene (1,000 ppb); benzo(g,h,i)perylene (700 ppb), benzo(k)fluoranthene (540 ppb), chrysene (750 ppb), pyrene (1,200 ppb), indeno(1,2,3-c,d)pyrene (580 ppb), and fluoranthene (830 ppb). Several inorganic compounds were also detected.

No organic analytes were detected in the four groundwater samples; however, several inorganic chemicals were detected in the groundwater samples.



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RELATIVE RISK RANKING STUDY, SURFACE SOIL AND GROUNDWATER SAMPLING LOCATIONS, SITE 5, BURNING GROUNDS, SAINT JULIENS CREEK ANNEX

FIGURE 1-3

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. Generally, the methods are more thoroughly described in the Work Plan and the Sampling and Analysis Plan (SAP) (CDM Federal, 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.

2.1 Investigation Technical Approach and Methodology

The field investigations at both sites included sampling of surface and subsurface soil, groundwater, and sediment. At site 2, a surface water sample was also collected. In addition, an investigation of site physical features such as geology and hydrogeology was conducted. The following subsections briefly describe the work accomplished and the rationale for performing the individual tasks.

2.1.1 Geophysical Investigations

Earth Resources Technology (ERT) of College Park, Maryland conducted geophysical investigations at both sites. At each site electromagnetic (EM-31) and magnetometer surveys were performed. At Site 2 the objective of the surveys was to define the areal extent of the landfill. At Site 5, two areas were surveyed: the suspected area of the cage pit and the burning grounds area. The objective of the caged pit survey was to accurately determine the location of the pit in order to aid in the selection of soil sampling locations. The objective of the burning grounds survey was to identify any electromagnetic or magnetic anomalies and to delineate the boundaries of the site. The methods are described below; however, more detail can be found in ERT's report, which is in Appendix A of this RI report.

2.1.1.1 Electromagnetic Survey

A Geonics EM-31 instrument was used to conduct the electromagnetic survey. The EM-31 unit permits the measurement of the specific conductivity of the underlying subsurface materials using the principle of mutual inductance. The method allows 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 2

At Site 2 the electromagnetic survey was conducted on a 300 by 150-ft grid established southwest of Building 130 as well as along 6 profile lines located around the north, west, and northwest, and southwest sides of the pond (**Figure 2-1**). Within the gridded area, the data were collected along three north-south trending lines and spaced 50 ft apart and along three east-west trending lines spaced 100 ft apart.

2.1.1.1.2 Site 5

At Site 5, the electromagnetic survey was conducted on a roughly 400 by 300-foot grid referenced to Building 272 (**Figure 2-2**). A portion of the site is covered by very dense vegetation (marsh reeds) and was not surveyed. Most of the grid lines were spaced every 50 ft. In the caged pit area, a 150 by 300 ft grid with 50 or 100 ft spacing was established. Following an initial survey, additional grid lines were added to create a 10-ft spacing over a 60 by 100 ft area.

2.1.1.2 Magnetometer Survey

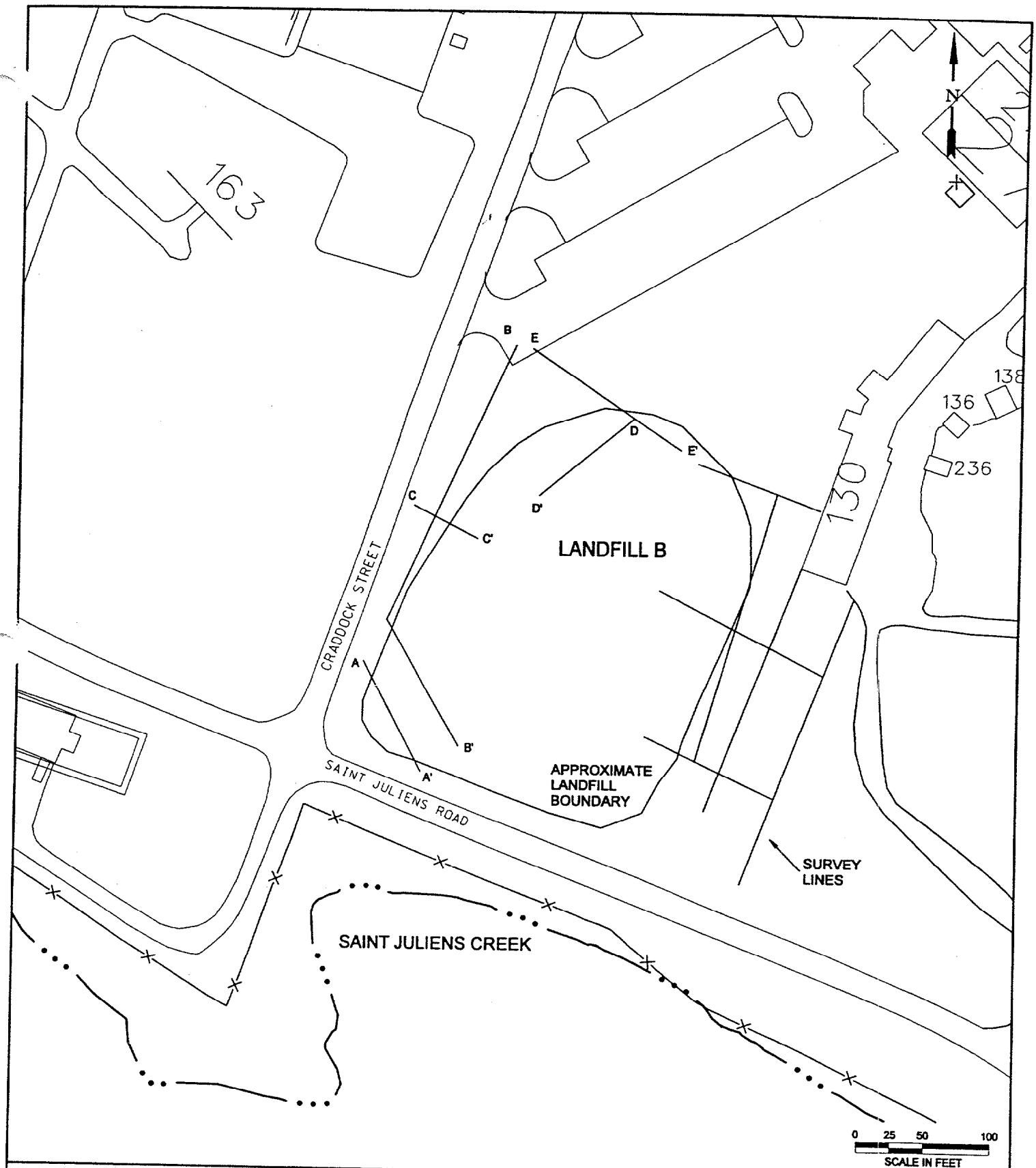
The magnetometer survey was conducted using a Geometrics Portable Cesium Magnetometer, Model G858. This instrument measures the earth's total geomagnetic field at a particular location in units of gamma. The local variations in the field are attributable to near surface buried metal objects or surface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

2.1.1.2.1 Site 2

At Site 2, the magnetometer survey was conducted on the same grid and along the same profile lines as the electromagnetic survey (see Figure 2-1 and Section 2.1.1.1.1).

2.1.1.2.2 Site 5

At Site 5 the magnetometer survey was only conducted in the caged pit area along the grid described in Section 2.1.1.1.2 (Figure 2-2).



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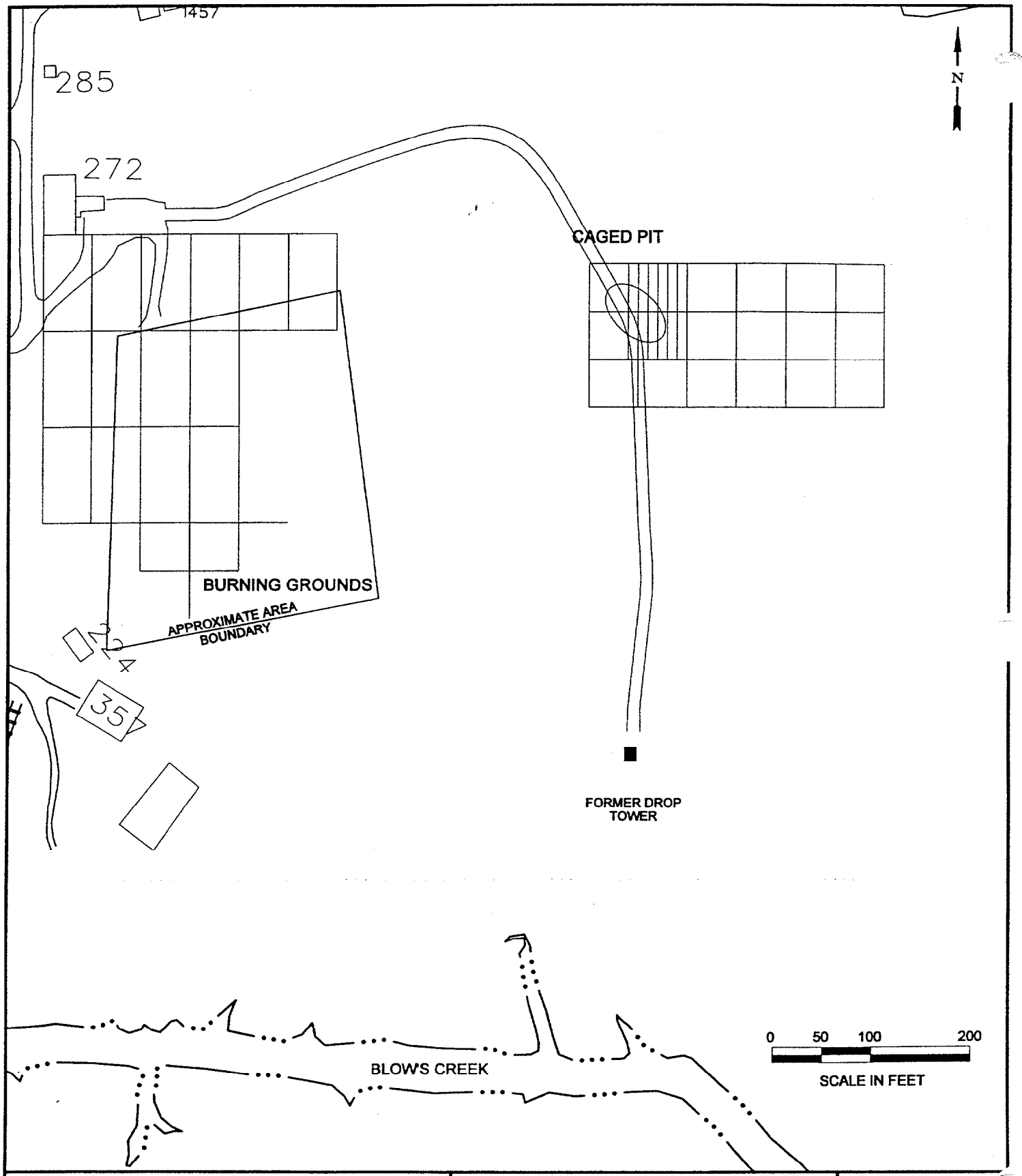
LOCATION OF GEOPHYSICAL SURVEY GRIDS AT SITE 2 SAINT JULIENS CREEK ANNEX

FIGURE 2-1



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LOCATION OF GEOPHYSICAL SURVEY GRIDS, SITE 5
SAINT JULIENS CREEK ANNEX

FIGURE 2-2

2.1.2 Surface Soil Sampling

At both sites surface soil samples were collected using a stainless steel spoon and bowl following protocol described in the work plan. The objective of the surface soil sampling was to obtain analytical data for use in determining the nature and extent of contamination and for use in the human health risk assessment. Samples were analyzed for TCL organic constituents, TAL metals, and total phosphorus. One sample from each site was selected, using field screening techniques discussed in Section 2.1.6, for nitramine analysis.

2.1.2.1 Site 2

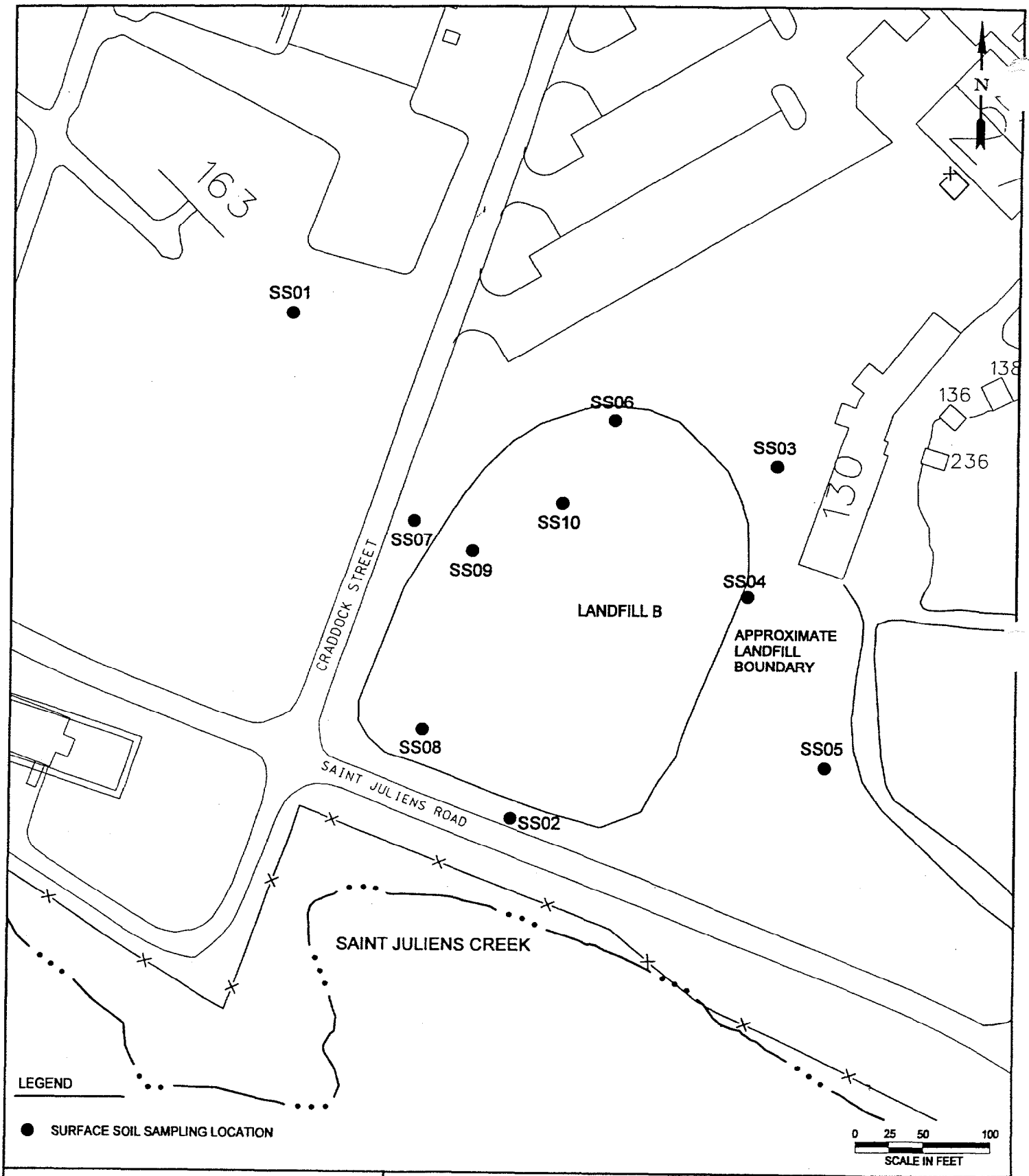
Ten surface soil samples were collected at Site 2 at the locations shown on **Figure 2-3**. Due to the potential for encountering unexploded ordnance (UXO) at the site, sampling was conducted only after the locations had been cleared by a UXO subcontractor. With the exception of SJS02-SS01 and SJS02-SS02, the samples were collected at locations considered to be potentially within the landfill boundary. Sample SJS02-SS01 was collected from an area considered to outside the site boundary on the west side of Craddock Street, and SJS02-SS02 was collected adjacent to St. Juliens Ave. on the south edge of the suspected landfill boundary. One sample, SJS02-SS06, consisted primarily of a dark granular material (not soil) that may be blasting grit.

2.1.2.2 Site 5

Nine surface soil samples were collected at Site 5 from the locations shown on **Figure 2-4**. Much of the central part of the burning grounds site consists of hard-packed gravel that facilitates the current use of the site as a storage area. The area where burning is thought to have occurred, was determined from aerial photographs and from interviews with Mr. Bryant, a NAVY employee present during the burning. Three samples (SJS05-SS01, SJS05-SS04 and SJS05-SS09) were collected outside of the area thought to be involved in the burning. Sample SJS05-SS01 was located to verify the northern extent of contamination and the locations of the other two samples were selected to demonstrate the western limits of the area of concern.

2.1.3 Subsurface Soil Sampling

The investigations at both sites included the collection of subsurface soil samples for chemical analysis and for lithologic classification. Samples collected for chemical analysis were obtained using a truck-mounted, hydraulic, direct push technology (DPT) probe.



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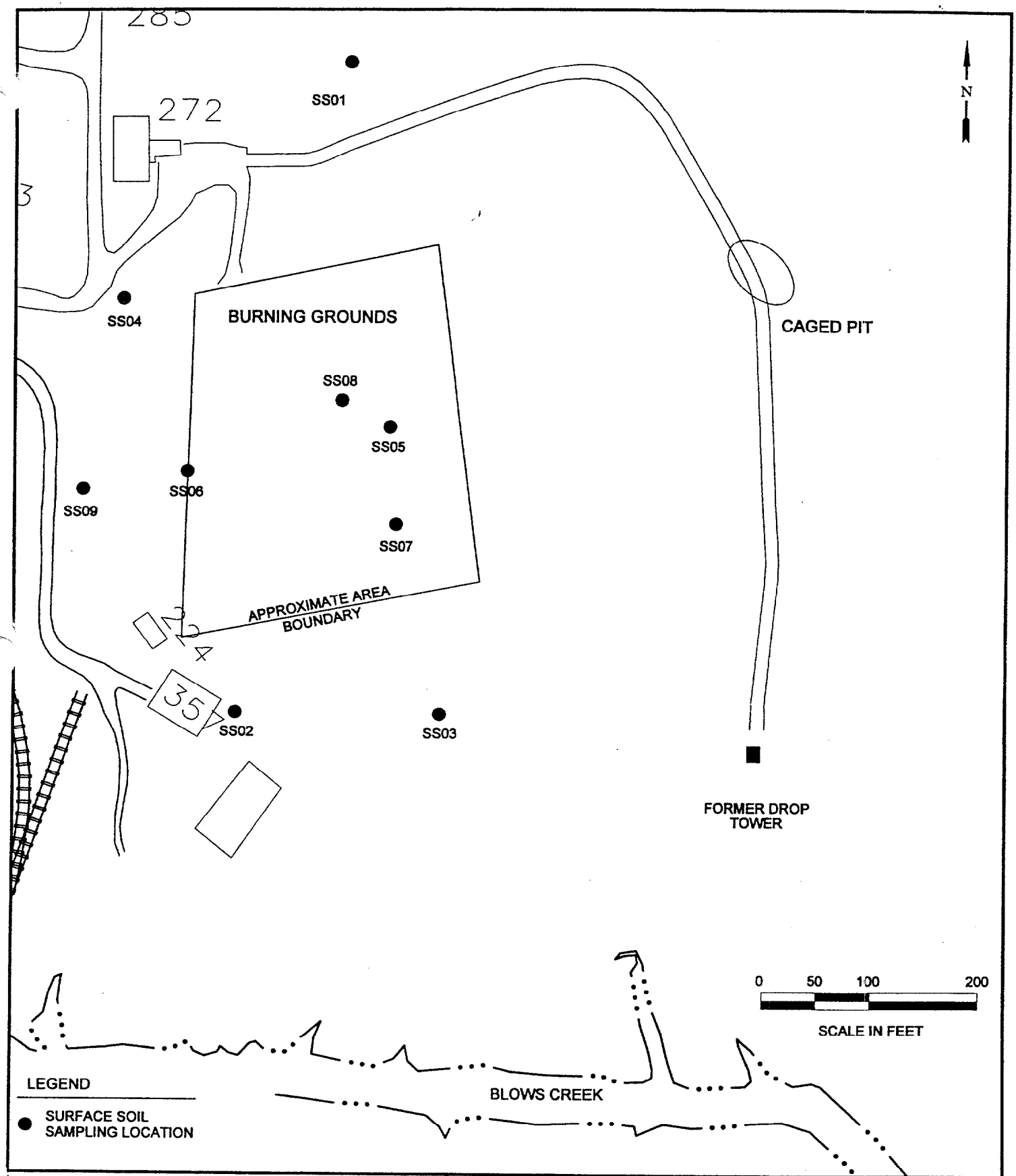
SURFACE SOIL SAMPLING LOCATIONS, SITE 2
SAINT JULIENS CREEK ANNEX

FIGURE 2-3



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SURFACE SOIL SAMPLING LOCATIONS, SITE 5
SAINT JULIENS CREEK ANNEX

FIGURE 2-4

During monitoring well installation (see Section 2.1.4) soil borings were drilled with hollow stem augers and samples were collected using standard split spoon sampling devices for soil classification. These subsurface soil sampling events are described below.

2.1.3.1 DPT Soil Sampling

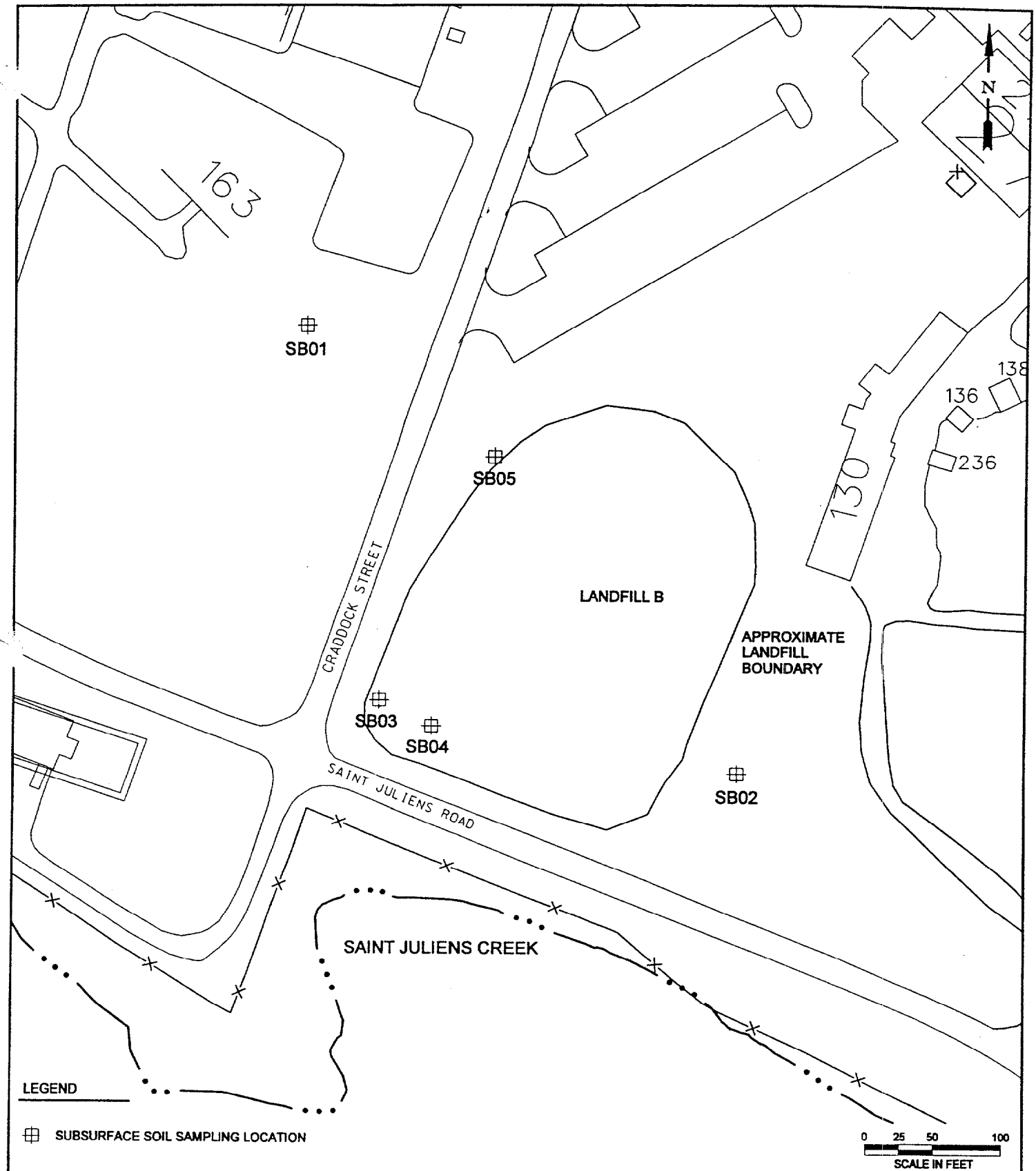
Envirosurv Inc., of Fairfax Virginia, conduct subsurface soil sampling using a hydraulic DPT probe at both sites. Soil samples were collected using a 4-ft long by 2-inch outside diameter (O.D.) MacroCore sample barrel equipped with acetate liners. Use of the liners allowed visual inspection of the soil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

2.1.3.1.1 Site 2

A total of five subsurface soil samples were collected from the locations shown on **Figure 2-5**. The sampling locations were selected to include one location thought to be outside of the landfill (SJS02-SB01), as well as samples located around the perimeter of the pond. Because of the potential for buried ordnance at the site, an ordnance clearing subcontractor was procured to scan the holes for ordnance as they were being cored. The ordnance detecting instrument was able to clear a maximum of two feet in front of the sampling barrel, therefore sampling proceeded in two-foot increments. Samples were analyzed for TCL organic constituents, TAL metals, and total phosphorus. One sample was selected, using field screening techniques described in Section 2.1.6, for nitramine analysis.

2.1.3.1.2 Site 5

Fifteen subsurface soil samples were collected with the DPT probe at three distinct areas at Site 5: The burning grounds (eight samples), the caged pit area (three samples), and a former drop tower(four samples) (see **Figure 2-6**). One sample (SJS05-SB01) was collected from an area thought to be outside of the site boundary. Samples were analyzed for TCL organic constituents, TAL metals, and total phosphorus. One sample was selected, using the field screening technique discussed in Section 2.1.6, for nitramine analysis, and five



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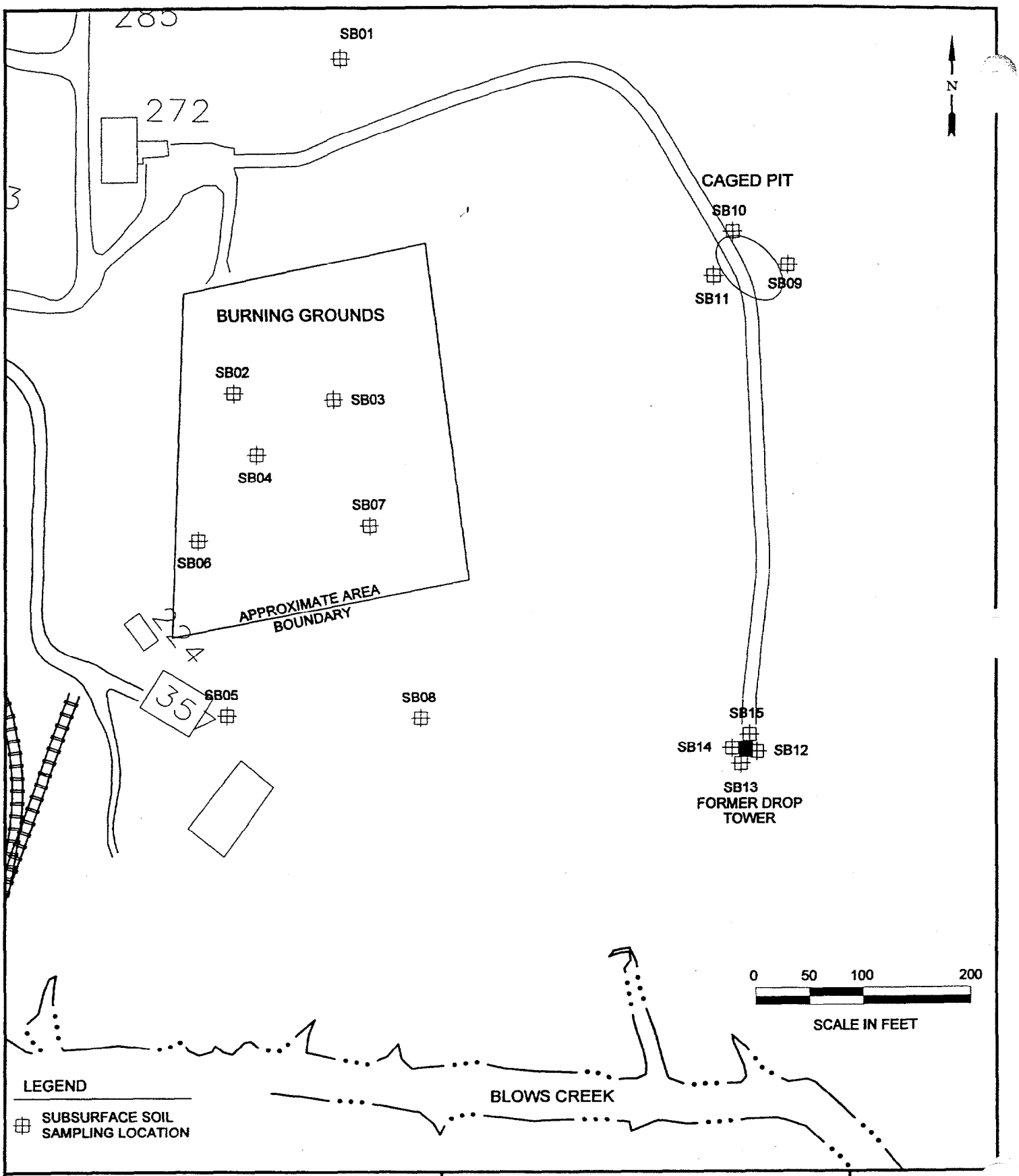
SUBSURFACE SOIL SAMPLING LOCATIONS, SITE 2
SAINT JULIENS CREEK ANNEX

FIGURE 2-5



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SUBSURFACE SOIL SAMPLING LOCATIONS, SITE 5
SAINT JULIENS CREEK ANNEX

FIGURE 2-6

subsurface samples were selected for dioxin analysis. The sample locations at the caged pit were selected based on the results of the geophysical investigation (see Appendix A and Section 2.1.1). The borings are located on around a geophysical anomaly thought to be caused by the metallic remains of the caged pit. The location of the former drop tower was determined from examining historical aerial photographs. The drop tower location is visible in the field as a slightly raised, square grass-covered area. One subsurface sample was collected midway along each edge of the square.

2.1.3.2 Split Spoon Soil Sampling

Under the direction of a CDM Federal geologist, American Environmental Drilling Services (AEDS), a drilling subcontractor, drilled and sampled soil borings at each monitoring well location at both sites. Split spoon samples were collected for soil classification from all locations. Samples were collected approximately every five feet to a depth of 14 ft during the installation of shallow monitoring wells. During installation of deep monitoring wells, split spoon samples were collected continuously from approximately the depth of the deepest sample collected at the corresponding shallow monitoring well location to the final well depth. 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

Three 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 upper portion of the Yorktown Aquifer. Where they were installed, deep monitoring wells are paired with shallow wells in order to provide an indication of the vertical profile of groundwater quality and an indication of the vertical groundwater flow direction.

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). Monitoring well construction diagrams are compiled in **Appendix D**, and well construction details are shown on **Table 2-1**.

TABLE 2-1 MONITORING WELL CONSTRUCTION DETAILS						
Monitoring Well	Borehole Depth (feet)	Isolation Casing Depth (feet)	Riser Depth (feet)	Ground Elevation (ft msl)	TOC Elevation (ft msl)	Screened Zone Elevation (ft msl)
Site 2:						
SJS02-MW1S	15.00	-	4.60	5.19	7.72	0.59 - -9.41
SJS02-MW1D	70.00	44.00	58.00	5.27	7.94	-52.73 - -62.73
SJS02-MW2S	15.00	-	3.00	4.59	6.98	1.59 - -8.41
SJS02-MW2D	67.00	45.00	54.60	4.71	7.04	-49.89 - -59.89
SJS02-MW3S	14.00	-	3.20	4.69	7.27	1.49 - -8.51
Site 5:						
SJS05-MW1S	14.00	-	3.50	6.45	9.12	2.95 - -7.05
SJS05-MW1D	58.00	30.00	45.00	6.11	8.59	-38.89 - -48.89
SJS05-MW2S	14.00	-	3.50	4.55	7.25	1.05 - -8.95
SJS05-MW2D	60.00	22.00	47.00	4.56	7.12	-42.44 - -52.44
SJS05-MW3S	14.00	-	3.20	5.57	8.68	2.37 - -7.63

Note: - All well risers and screen are Schedule 40 PVC. All screens are 010-slot.
- Isolation casings are Schedule 40 PVC.

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.

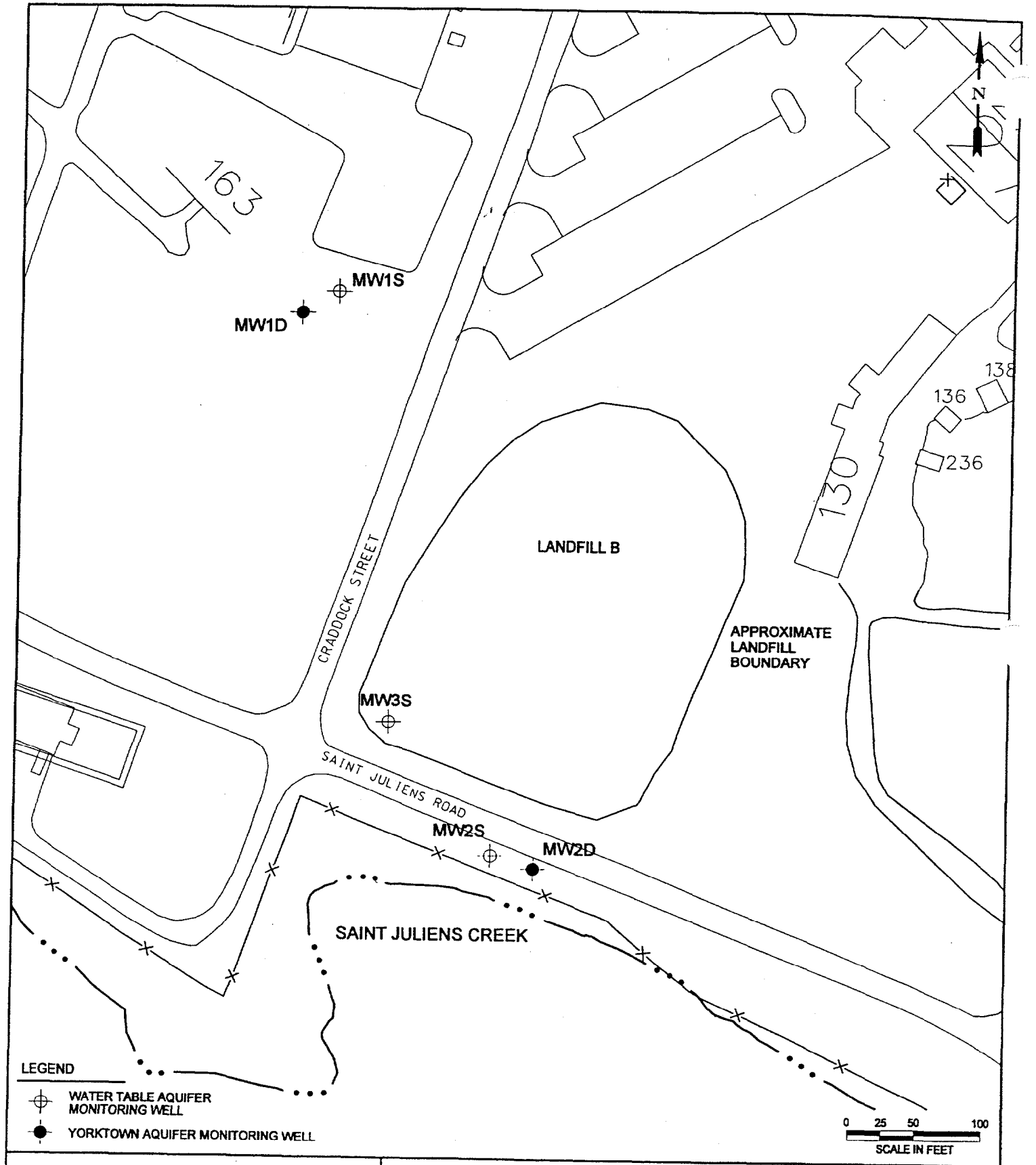
Two rounds of groundwater sampling were conducted. The first was conducted in July 1997 and the second in November 1997. During both sampling events, purging and sampling were accomplished using a decontaminated submersible Grundfos pump, and clean tubing. Samples were analyzed for TCL organic constituents, TAL metals (filtered and unfiltered), and total phosphorus. During the first sampling round, two samples were selected for nitramine analysis based on the results of field screening using techniques discussed in Section 2.1.6.

2.1.4.1 Site 2

The location of the five monitoring wells at Site 2 are shown on **Figure 2-7**. One shallow and one deep monitoring well are located at an upgradient location (SJS02-MW1S and -MW1D). Due to the potential to encounter UXO in the vicinity of SJS02-MW3S, a UXO clearing subcontractor was employed to clear the subsurface soil ahead of the drill bit to a depth of 12 ft during the well installation. The locations of monitoring wells SJS02-MW02S and -MW02D were selected to be downgradient from of the landfill. Originally, this location was planned to be on the north side of St. Juliens Creek Ave., immediately adjacent to the landfill. The location was moved due to site conditions. Consequently the wells are located between various utility lines. Monitoring wells S02-MW1D was selected for sampling and analysis for nitramine because it was not constructed in time to be field-screened for TNT.

2.1.4.2 Site 5

The location of the five monitoring wells at Site 5 are shown on **Figure 2-8**. The locations of one shallow and one deep monitoring well were selected to be upgradient of the site (SJS05-MW1S and -MW1D). Monitoring wells SJS05-MW2S and -MW2D are located downgradient from of the Burning Grounds, at a location west of that originally planned, because the originally proposed location is within a marsh. A sample from monitoring well SJS05-MW3S was selected for nitramine analysis because field screening indicated a concentration of 5-15 ppb TNT.



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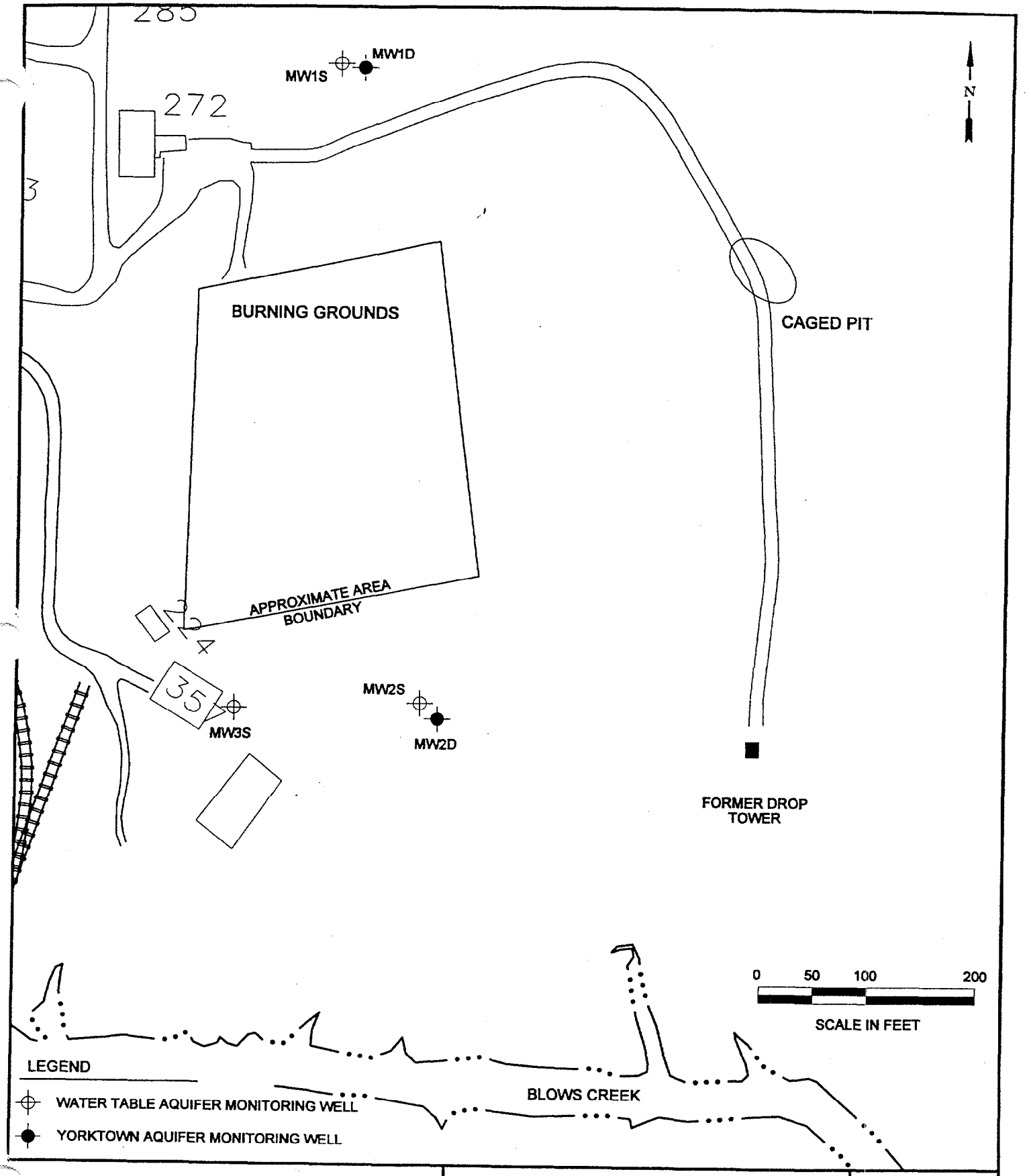
GROUNDWATER MONITORING WELL
LOCATIONS, SITE 2
SAINT JULIENS CREEK ANNEX

FIGURE
2-7



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GROUNDWATER MONITORING
WELL LOCATIONS, SITE 5
SAINT JULIENS CREEK ANNEX

FIGURE
2-8

2.1.5 Surface Water and Sediment Investigation

Three sediment and two surface water samples were proposed for both sites. Due to dry conditions, only one surface water sample, from Site 2, was collected (See Section 2.2, Deviations 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, total organic carbon and nitramine.

2.1.5.1 Site 2

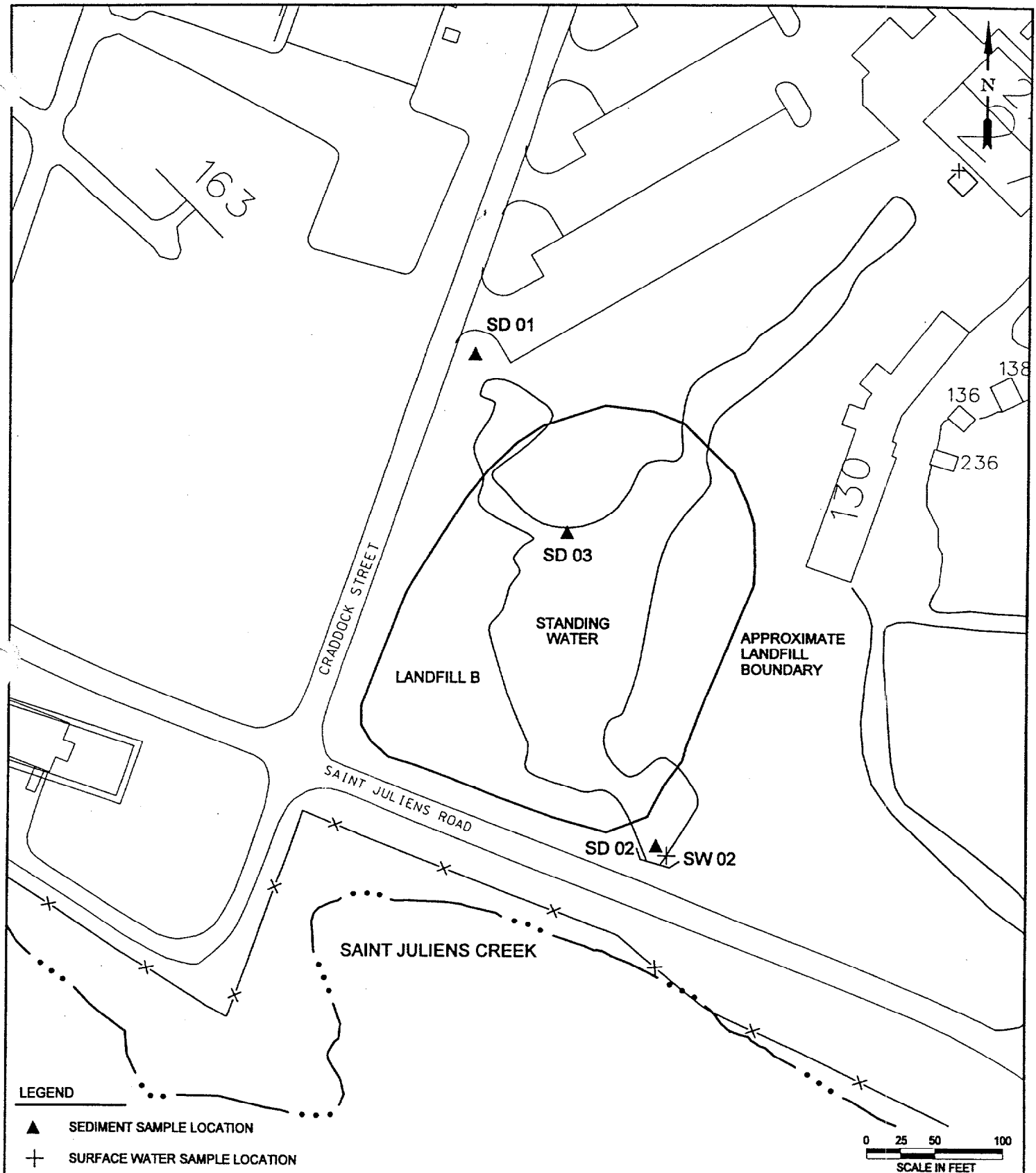
Sediment samples were collected from the following locations at Landfill B: the drainage ditch that runs along the east side of Craddock Street (SJS02-SD01, the upstream sample), from the center of the pond (SJS02-SD03), and from a point near the outfall of the pond (SJS02-SD02)(**Figure 2-9**). A surface water sample (SJS02-SW02) was also collected at the outfall location prior to collection of the sediment sample (Figure 2-9). This outfall connects the pond to St. Juliens Creek. Because the creek is influenced by tides, the direction of flow through the outfall may reverse. Therefore care was taken to collect this surface water sample while the tide was going out.

2.1.5.2 Site 5

Sediment samples were collected from the following locations at the Burning Grounds: the upstream end of the drainage ditch, at the point where it enters the marsh (SJS05-SD01), from the drainage ditch at the point that it exits the marsh (immediately downstream from the Burning Grounds (SJS05-SD02)), and at the point that the drainage ditch enters the marsh associated with Blows Creek (SJS05-SD03) about 300 ft downstream of the Burning Grounds (**Figure 2-10**). No surface water was collected from this site.

2.1.6 TNT Immunoassay Field Screening

Samples of subsurface soil, surface soil, and groundwater were analyzed in the field for trinitrotoluene (TNT) using the D TECH TNT test kit from EM Science/Strategic Diagnostics Inc. The results were used to determine which samples would be sent to the offsite laboratory for nitramine analysis. TNT is commonly found in munitions and the presence of TNT in soil is an indication of contamination from explosive wastes residue. Because TNT binds to soil particles, the field analysis included a soil extraction step using an organic solvent.



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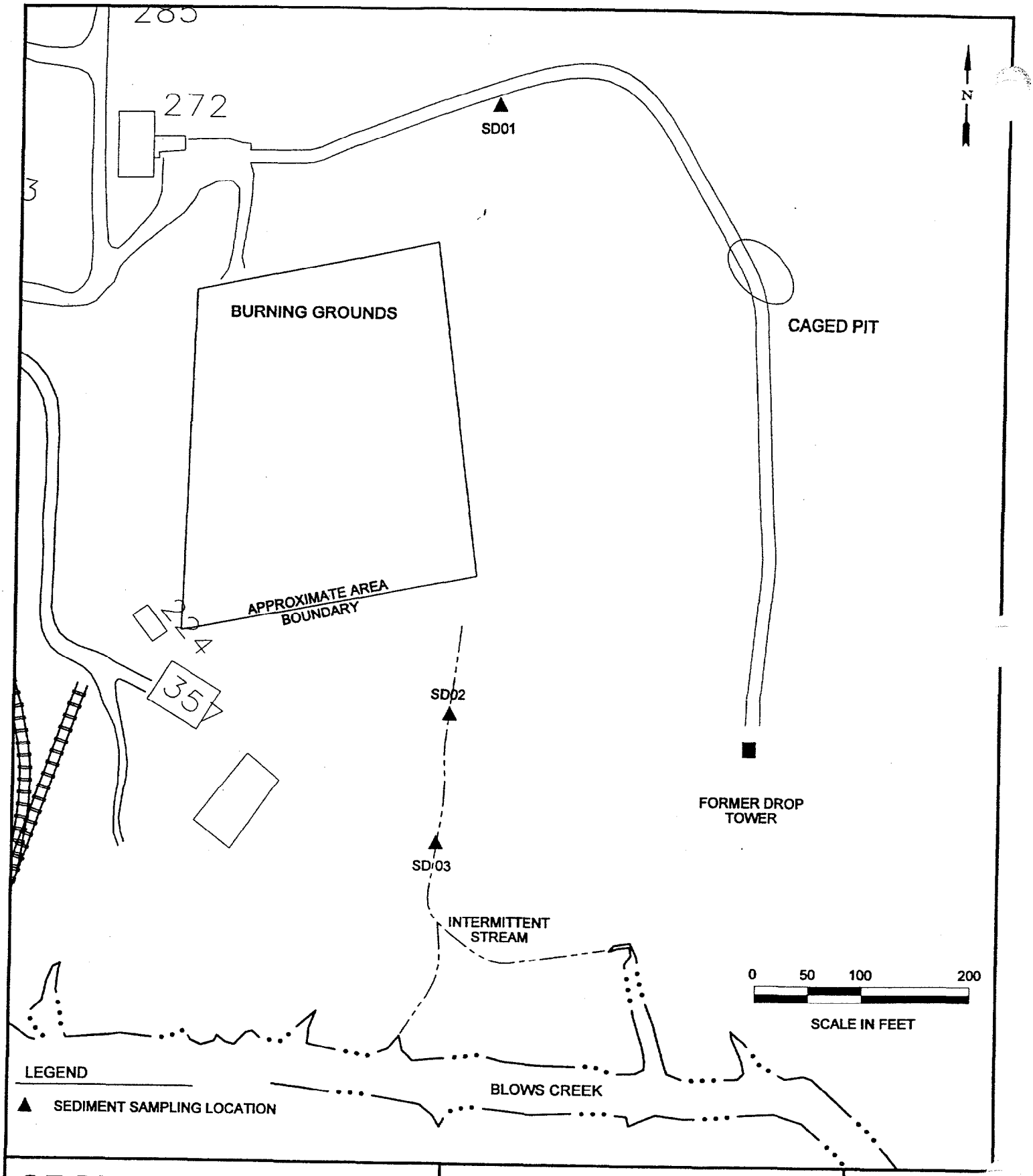
SEDIMENT AND SURFACE WATER SAMPLING LOCATIONS, SITE 2
SAINT JULIENS CREEK ANNEX

FIGURE 2-9



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SEDIMENT SAMPLING
LOCATIONS, SITE 5
SAINT JULIENS CREEK ANNEX

FIGURE
2-10

The D TECH system uses immunoassay technology which utilizes an antibody as an analytical reagent. The unique antibody selectivity is linked to a sensitive color indicator system. The color formed is inversely related to the TNT concentration. In the test kit used for this study, the antibody primarily reacts with TNT and may react to some extent to tetryl (nitramine), 1,3,5-TNB and 2-amino-4,6-DNT. The test kit provides semiquantitative results. The working range of TNT concentrations is 0.5 to 5.0 ppm for soil, and 5 to 45 ppb in water. The results of the TNT immunoassay field tests are compiled in **Appendix E.**

2.1.7 Geology and Hydrogeology

During the field investigation data were collected 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 investigation are presented in Section 3.

2.1.7.1 Geology

During the field investigation, split spoon samples were collected during monitoring well installation. At shallow monitoring well locations samples were collected at approximately five-foot intervals. At deep monitoring well locations samples were collected continuously from just below the depth of the deepest shallow well sample to the final depth. Descriptions of lithology were logged by a CDM Federal geologist. Boring logs are compiled in Appendix C. Data for the deep geology at the site were combined with that from the other RI being conducted at the same time (Site 3, Landfill C, and Site 4, Landfill D) to provide a more complete picture of the site geology.

2.1.7.2 Groundwater Levels

During the field investigation, depth to groundwater from the top PVC casing was measured 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 groundwater flow direction and gradient. The vertical flow direction 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 water level data from that aquifer with data from the other sites being investigated at the same time (Site 3, Landfill C, and Site 4, Landfill D), in order to characterize the hydrogeology of the upper portion of the Yorktown Aquifer.

2.1.7.3 Tidal Study

As part of the groundwater study at Site 2, water levels in one shallow and one deep (Upper 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 MW-02S and MW-02D, at Site 2 were selected for the study because they are located adjacent to St. Juliens Creek. 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 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 for approximately 10 hours.

2.1.8 Surveying

Following installation of all groundwater monitoring wells, the elevations of the ground surface and the top of the inner casing (toc) were measured to within 0.01 feet by Patton Harris Rust & Associates of 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 2 and Site 5 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 2 area.	Pond in center of the site.	Geophysical data not collected in the center of Site 2
Geophysical grid not extended into Wetlands area of Site 5. Ten-foot grid at caged pit.	Presence of dense vegetation requiring significant cutting of reeds in wetlands. Obtain more anomaly definition at caged pit	Geophysical data not collected in westernmost portion of the site. Increased definition of anomaly at caged pit.
Cesium proton magnetometer survey conducted at both sites	Obtain additional geophysical data in accessible areas of the sites with no additional cost.	Additional geophysical data from accessible areas of the site.
Did not collected sediment conductivity readings during sampling	Per agreement with VDEQ	Not considered to be a data gap. Sediment conductivity is not considered standard data.
Collected nine (not 10) surface soil samples from Burning Grounds Area. Changed location on several samples	Proposed sample locations were covered with 18" of gravel. Locations were moved to give more coverage in areas where original soil surface is still present. Collected some samples of gravel.	One fewer samples were collected due to large area of gravel fill. Increased area of coverage.
No surface water collected with SJS02-SD01, SJS05-SD01, and SJS05-SD02	No Surface water available.	No upstream surface water from either site, no downstream surface water data from Site 5.
All Site 2 and Site 5 sediment samples were analyzed for nitramine	Sediment samples were collected at different times (in anticipation of a rainfall event that might provide surface water)	Additional nitramine data.
Additional ground water sample (SJS02-GW01D) submitted for nitramine analysis.	Sample was not collected for field screening due to late installation of the well.	Additional nitramine analytical data.
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 collected at Sites 2 and 5 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 2 investigation are discussed in Section 3.3 and the results for Site 5 are found in Section 3.4. Information that pertains to the climate and meteorology, geology and hydrogeology of the Chesapeake region is described in the Work Plan and is not repeated in this RI report.

3.1 Base-wide Geology and Hydrogeology

Concurrent with the Site 2 and Site 5 RIs, two additional sites at St. Juliens Creek, Landfill C (Site 3) and the Landfill D (Site 4) 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 (monitoring wells) were completed at each site. Additionally, a study of the tidal influence on the groundwater levels was only conducted at Site 2 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 that dips and thickens to the east and extends approximately 20 miles east of the Base to the Atlantic ocean. These unconsolidated units overlie basement rocks which consists of Triassic sedimentary rock and Paleozoic igneous and metamorphic rocks. The depth to the basement in the St. Juliens

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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Creek Annex area is approximately 2000 ft. A more detailed description of regional geology and hydrogeology can be found in the RI Work Plan (CH2M HILL, 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 very 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). **Figure 3-2** is a contour map of the top of the Yorktown Formation. The elevation of the top of the unit drops from -8 ft mean seal level (msl) upgradient of Site 5 to -29 ft msl downgradient of Landfill D, immediately adjacent to the South Branch of the Elizabeth River and -35 ft msl along St. Juliens Creek (Site 2).

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 clay is generally between 9 and 28 feet thick and is generally underlain by

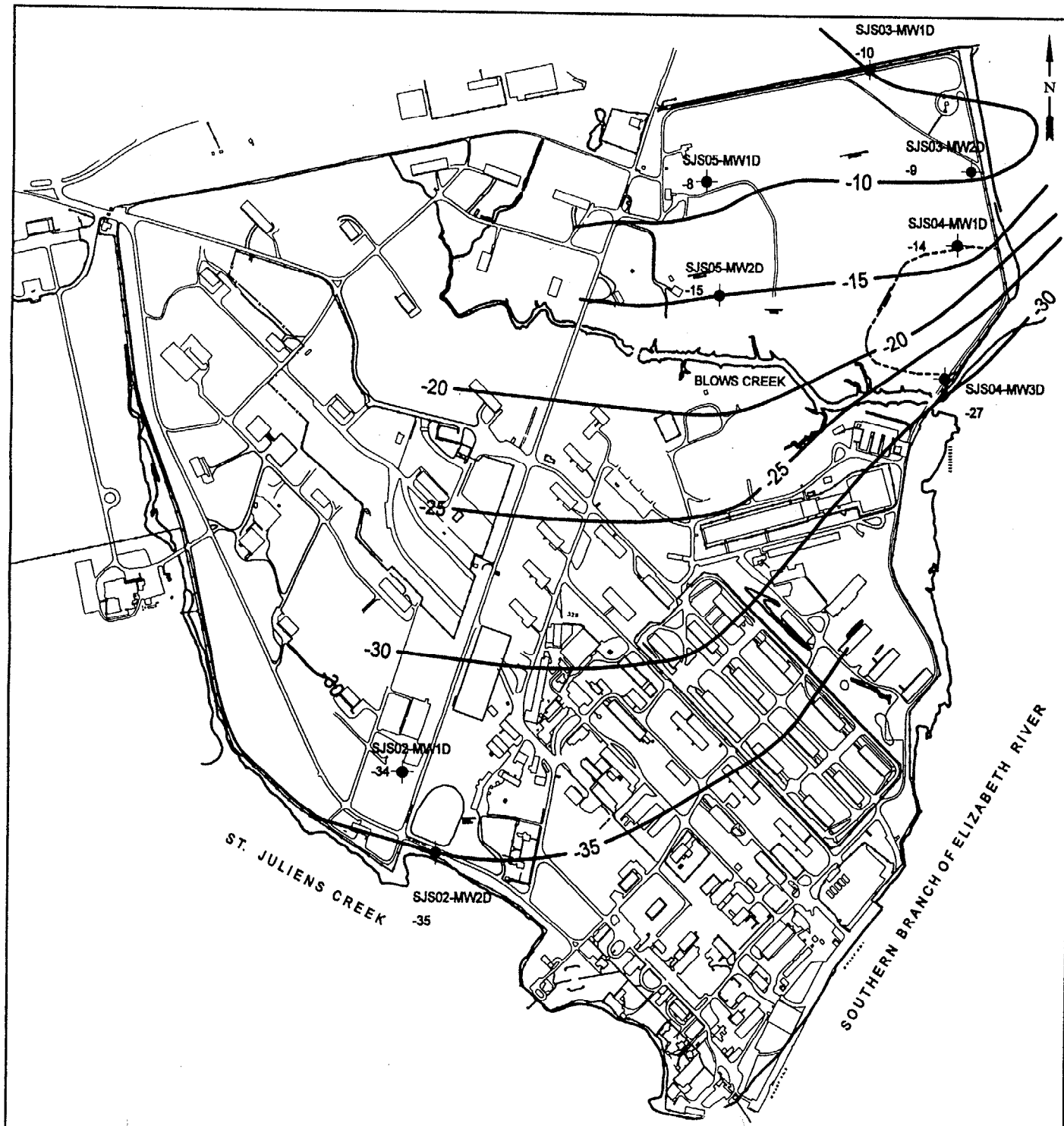

FIGURE 3-2

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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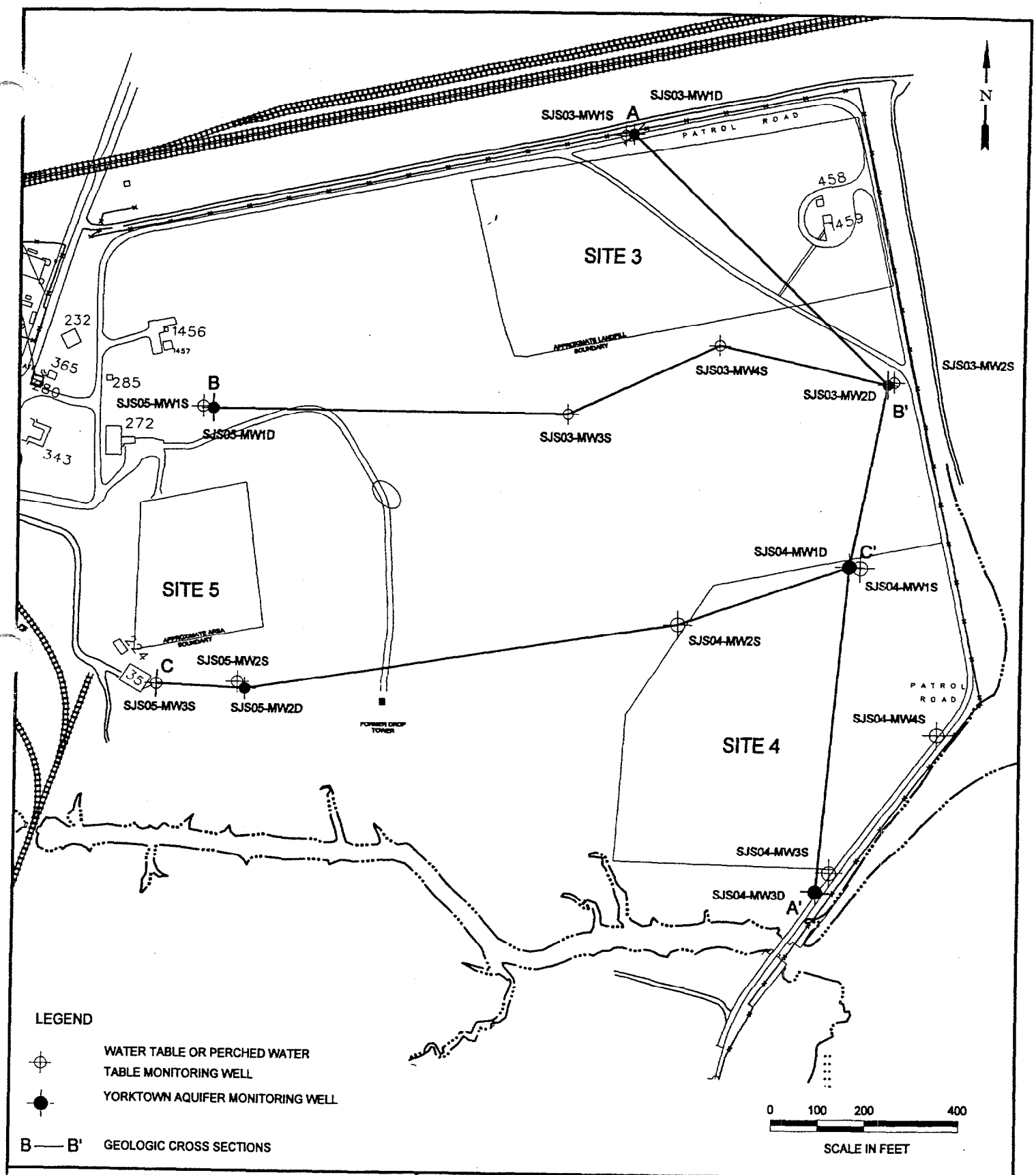

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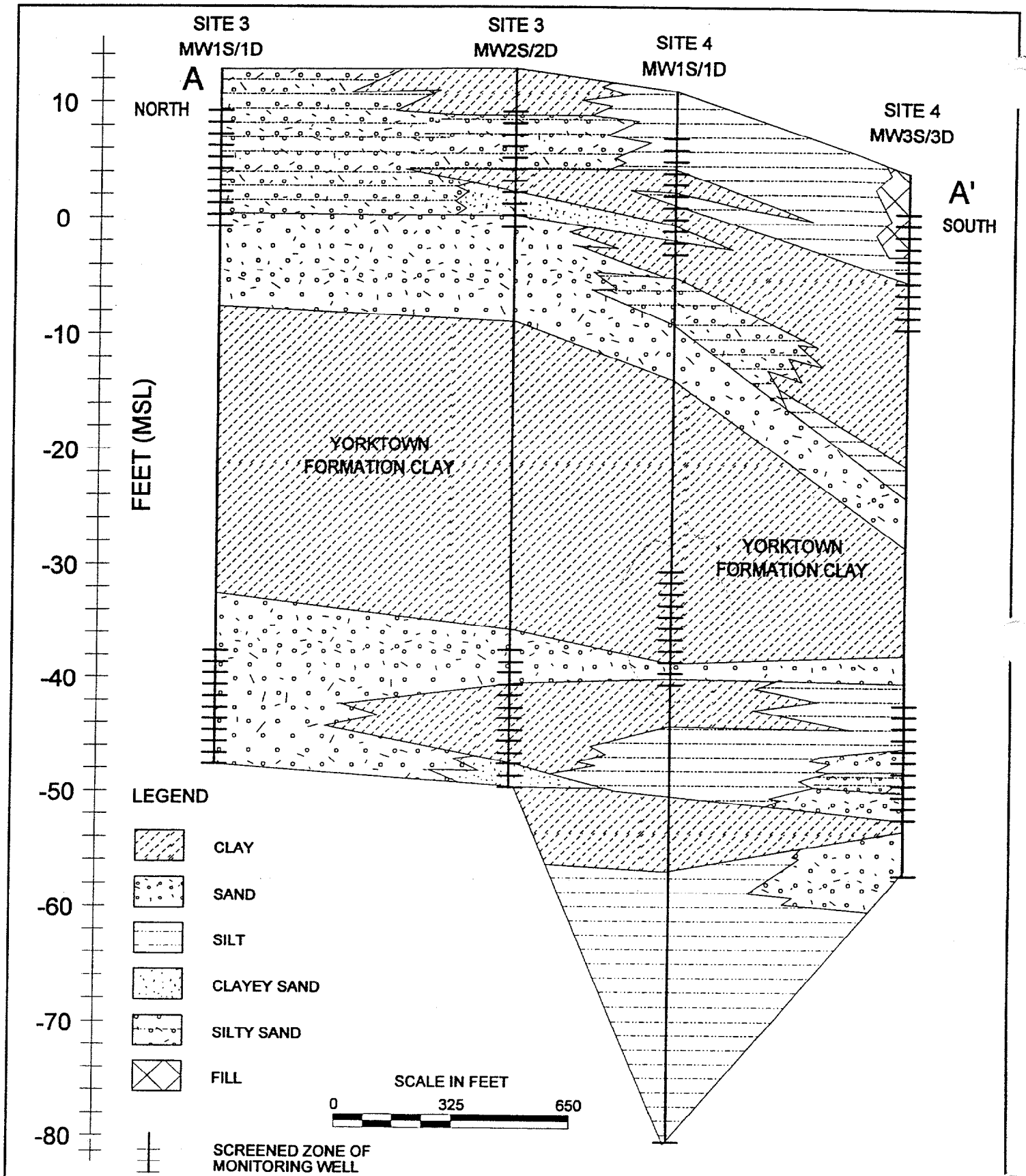
LOCATION OF GEOLOGIC CROSS SECTIONS: A - A', B - B', C - C'
SAINT JULIENS CREEK ANNEX

FIGURE 3-3



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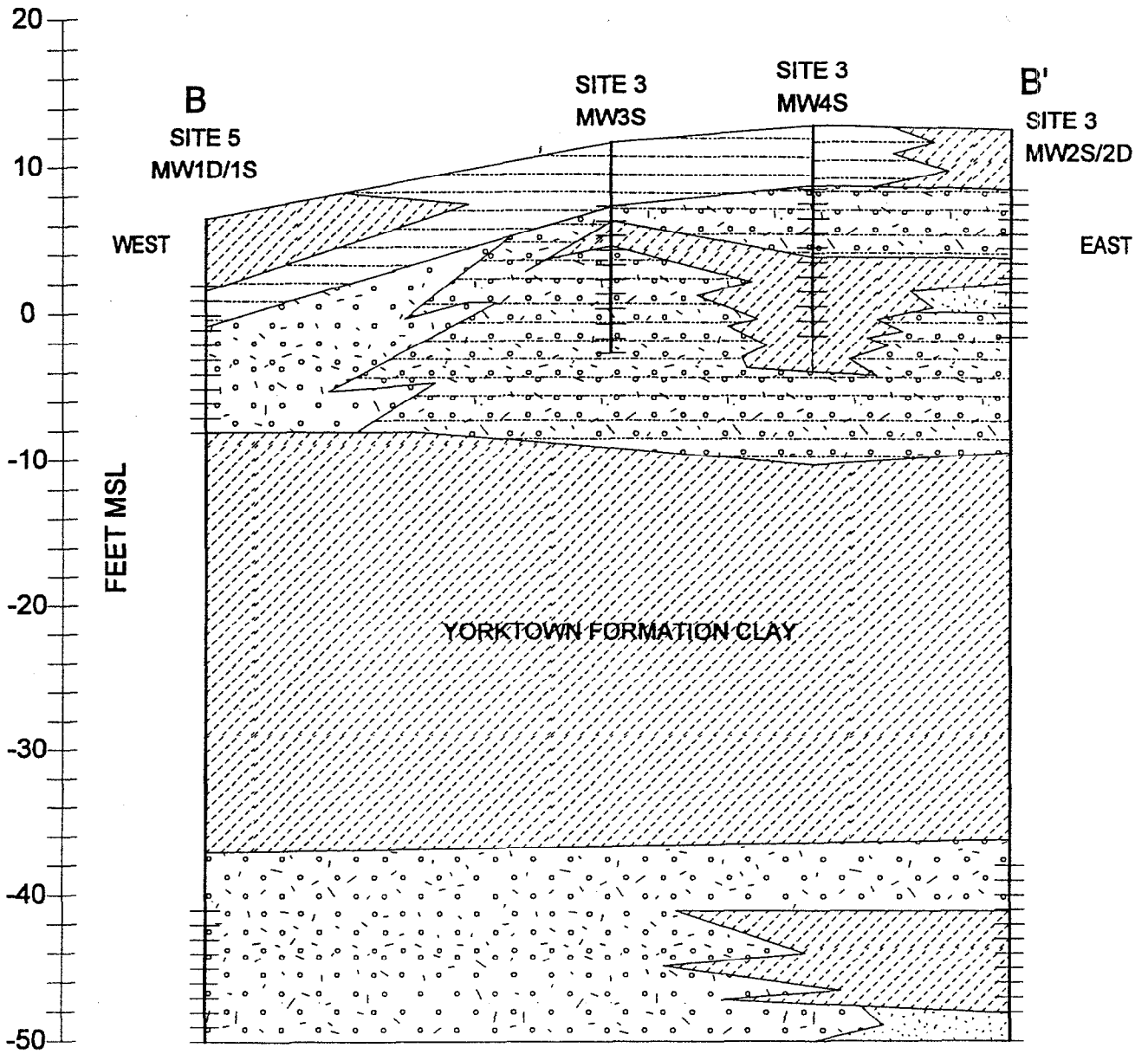
GEOLOGIC CROSS SECTION A - A'
SAINT JULIENS CREEK ANNEX

FIGURE
3-4



SCALE IN FEET

0 100 200

LEGEND

	CLAY		CLAYEY SAND
	SAND		SILTY SAND
	SILT		SCREENED ZONE OF MONITORING WELL

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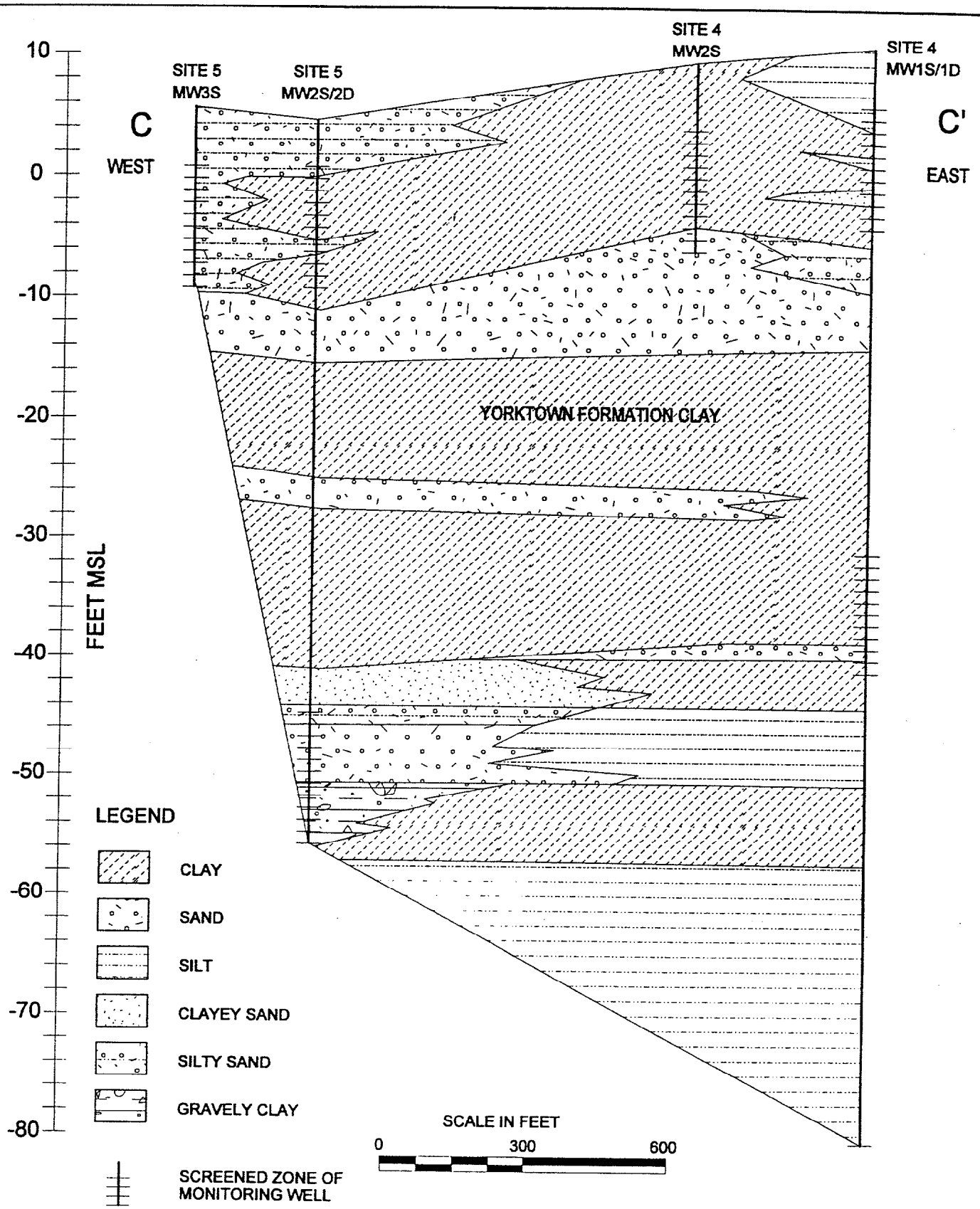
GEOLOGIC CROSS SECTION B - B'
SAINT JULIENS CREEK ANNEX

FIGURE
3-5



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GEOLOGIC CROSS SECTION C - C'
SAINT JULIENS CREEK ANNEX

FIGURE
3-6

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 in 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 the 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 Yorktown 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 (see Section 3.3.2 for Site 2 and Section 3.4.2 for Site 5).

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 Figure 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 is 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.

The horizontal flow gradient is approximately 0.0003 ft/ft south of Blows Creek, in the area 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.

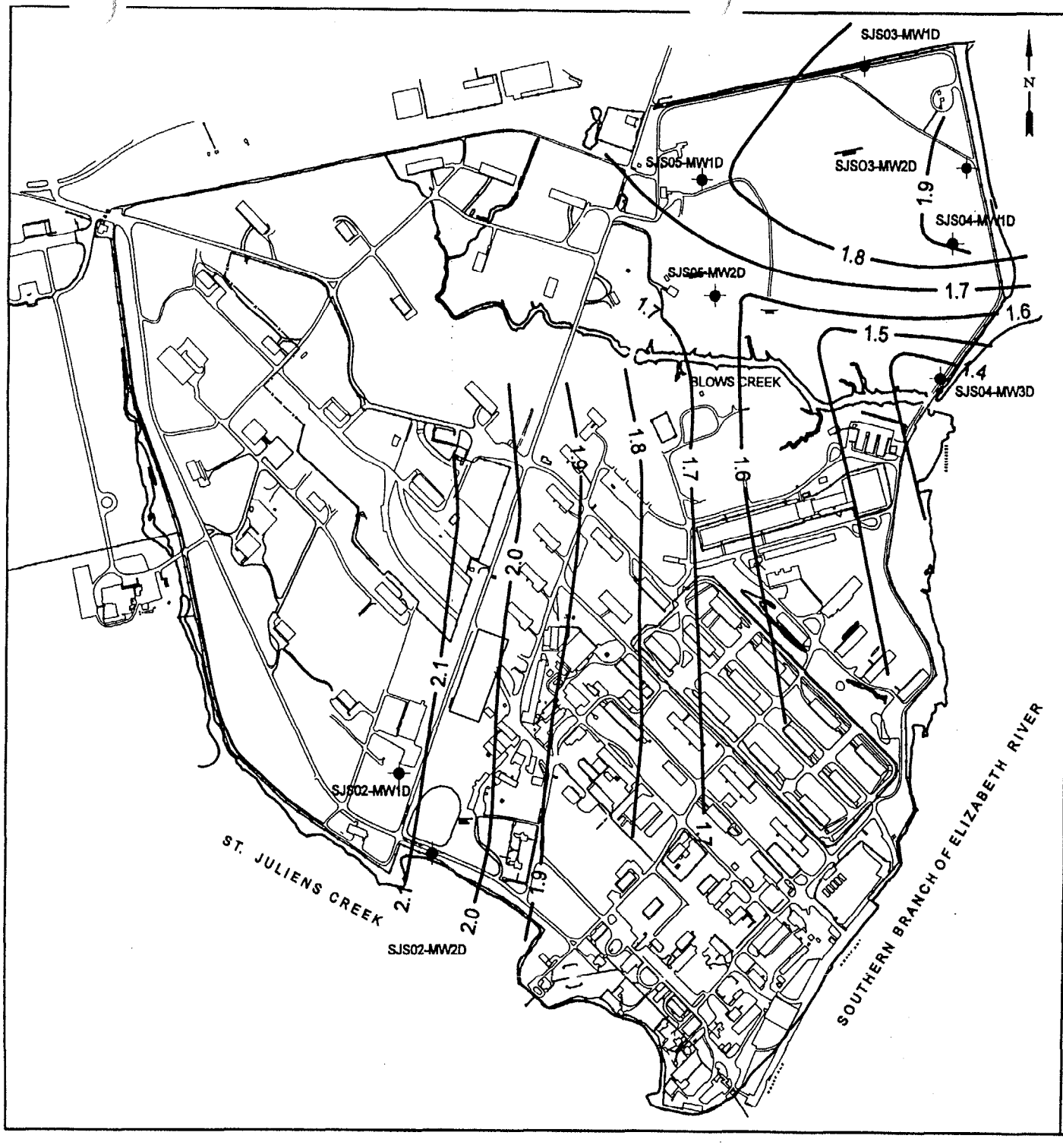

FIGURE 3-7

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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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 Figure 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 near Blows Creek. The data used to determine the vertical gradients are presented in **Appendix F.**

3.1.2.3 Water Table Aquifer

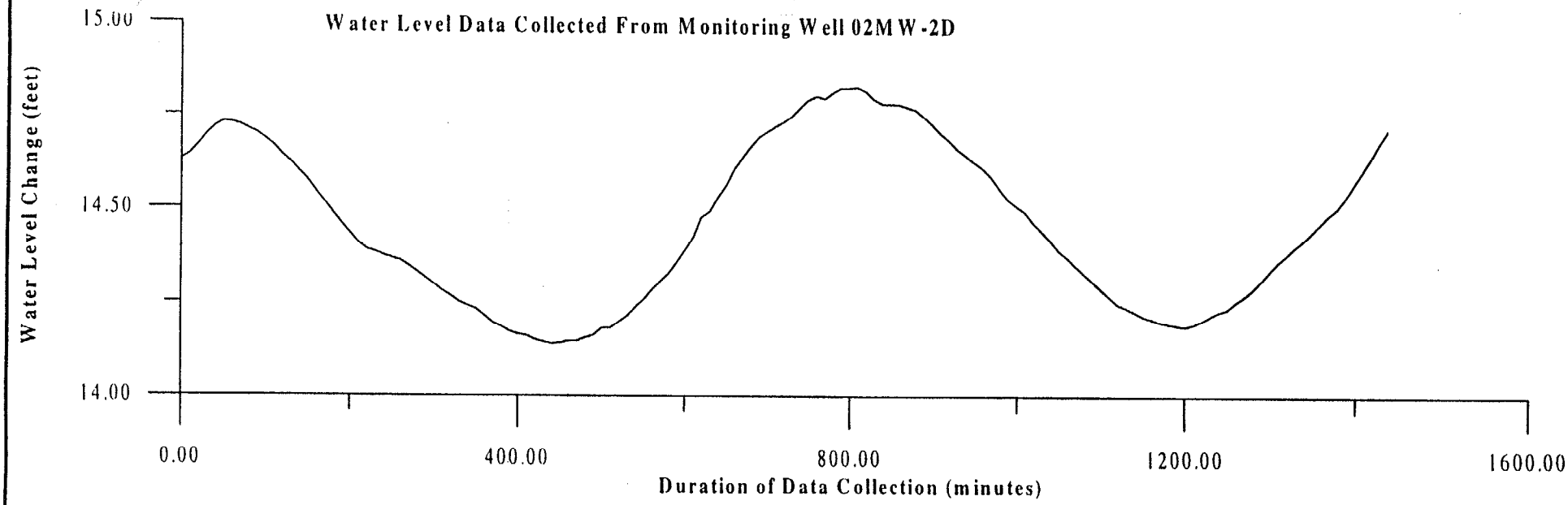
The Water Table Aquifer as described by Siudyla et al. (1981), consists of beds and lenses of sands, silty sands, clayey sands, gravel, and shells overlying the upper Yorktown Formation clay. The aquifer is very heterogeneous due to the complex marine estuarine environments in which the sediments were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

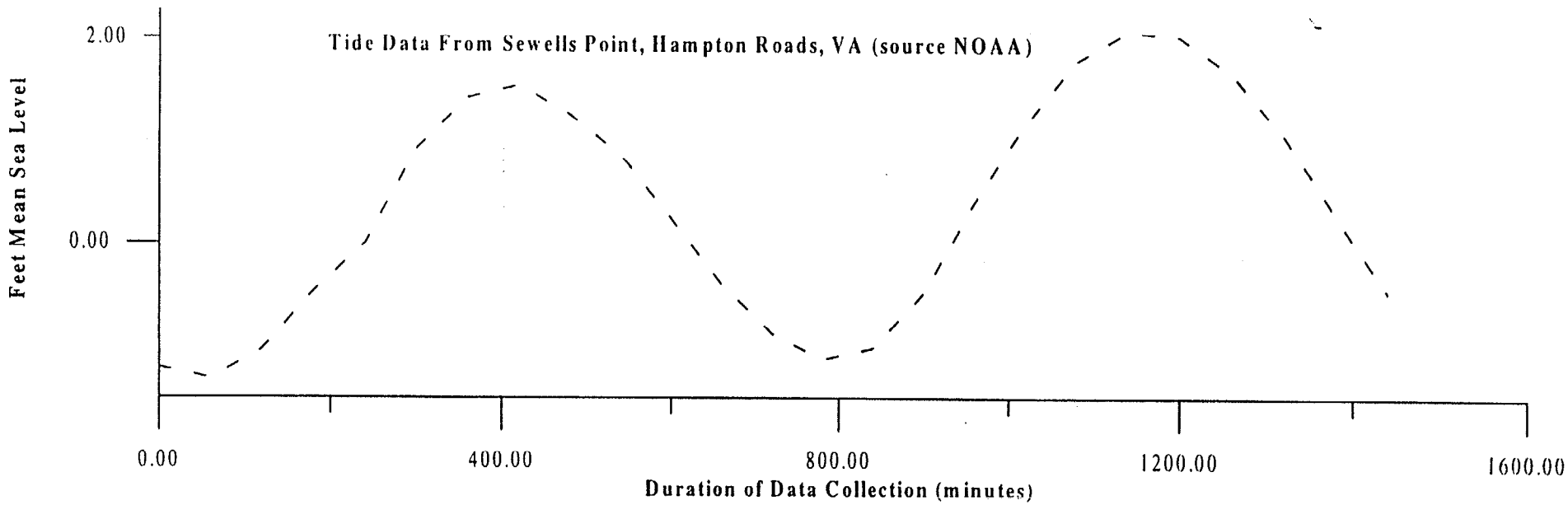
At the Base, the direction of groundwater flow within the Water Table Aquifer would be expected to be toward surface water discharge points such as the South Branch of the Elizabeth River, St. Juliens Creek , and Blows Creek. The flow directions and gradients determined at the individual sites is discussed 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 influensed 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 prior to the tidal study measurement period. The monitoring well is extremely slow to recover and, consequently, the data shows 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 calculated tidal data for St. Juliens Creek. Note that the Creek tidal data were calculated using measured 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





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

FIGURE 3-8

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

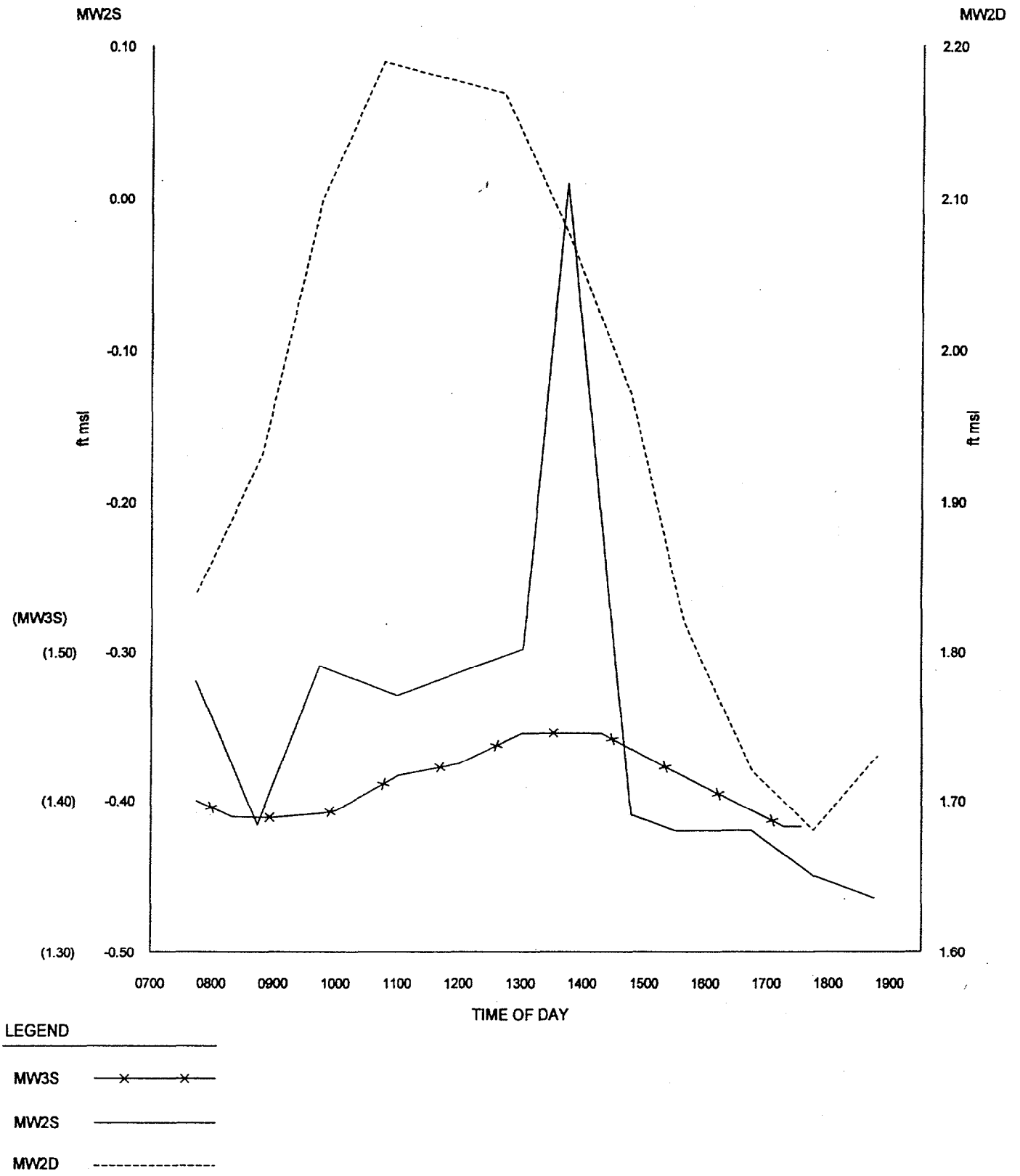
1

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

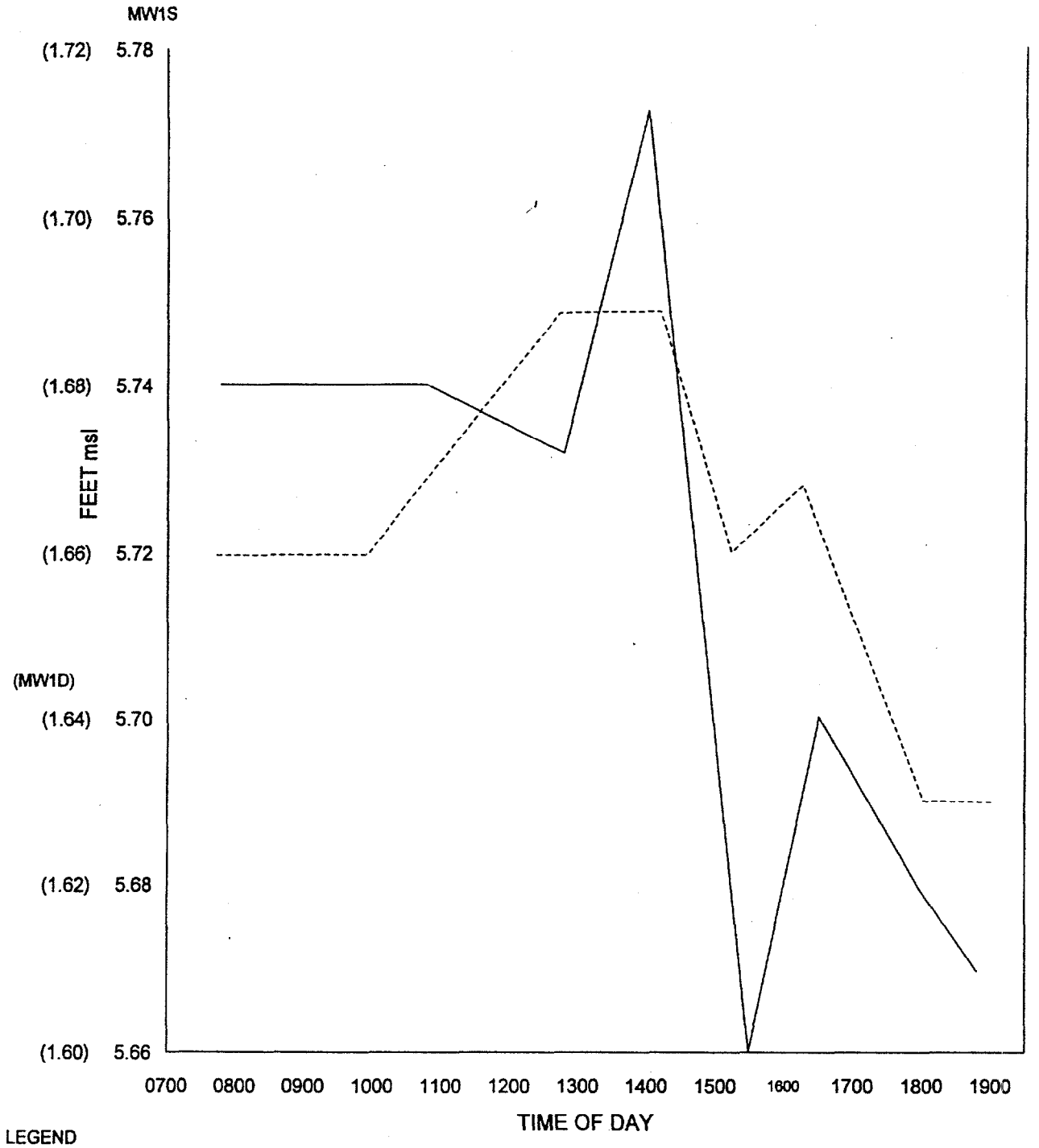
2 adjacent to St. Juliens Creek, are tidally influemced. Although the data from monitoring
3 well SJS02-MW2S are somewhat erratic, it appears that the change in water level appears to
4 approximately the same for the shallow and deep aquifers. However, the impact in the
5 Water Table Aquifer lags behind the impact in the Yorktown Aquifer by about three hours.
6 By comparing the data from the two shallow wells, it appears that at a relatively short
7 distance from the creek (approximately 130 ft) the tidal effect in the Water Table Aquifer is
8 significantly dampened. In monitoring well SJS02-MW3S, the observed change in water
9 level was 0.06 ft. as compared with 0.5 ft in SJS02-MW2S.

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

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



CDM 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



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TIDAL STUDY WATER LEVEL DATA, SITE 5, NOVEMBER 4, 1997
SAINT JULIENS CREEK ANNEX

FIGURE 3-10

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 5.1) or the Baseline Ecological Risk Assessment (BERA)(CDM Federal 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), and each site. A description of how these COPCs were derived is found in Section 5.1 of this report and in the Ecological Risk Assessment report (CDM Federal 1998). In general, COPCs are constituents detected at concentrations above USEPA Region III Risk-Based Screening (RBC) Levels, and Region III USEPA 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. The Human Health screening levels can be found in Appendices J and K.

The following discussion of analytical data considers only constituents that were detected in the samples. 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 media: 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, USGS 1975). 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 located (Norfolk, Portsmouth, Virginia Beach and Chesapeake) area in which the site is (Siudyla et al., 1981).

3.3 Site 2 Remedial Investigation Results

The results of the geologic, hydrogeologic, geophysical, and analytical investigations at Site 2 are presented and discussed below.

3.3.1 Site 2 Geology

Previous to the Site 2 RI, no site-specific geologic data were available for the site. The geologic data obtained during this investigation provides 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.

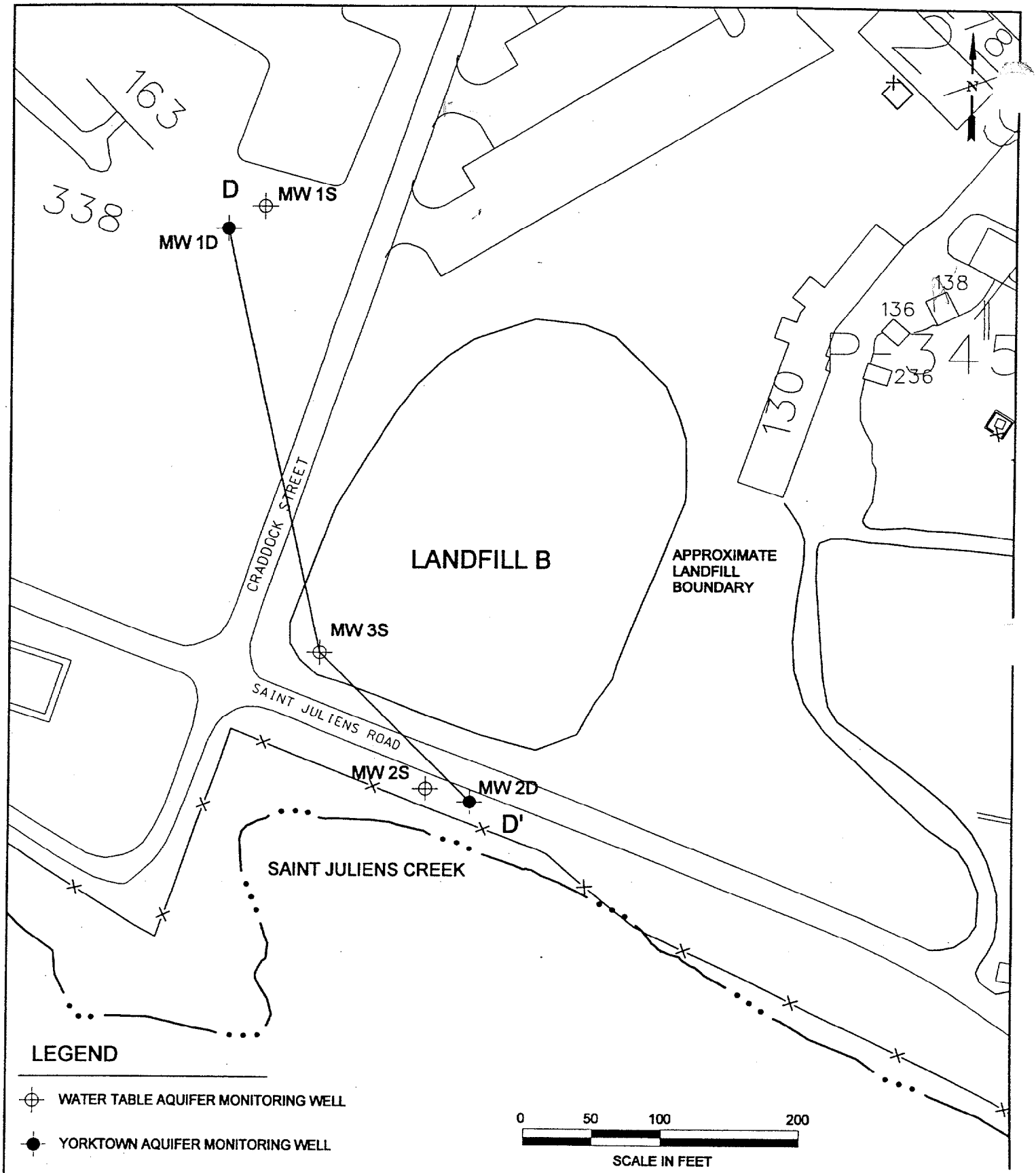
The geology of Site 2 was determined by analyzing the boring logs completed during the drilling and installation of the three shallow and two deep monitoring wells. The geologic units encountered at Site 2 during the RI are listed and described below.

3.3.1.1 Yorktown Formation

The stratigraphy at Site 2 is shown in cross-section D-D′ (**Figures 3-11 and 3-12**). The top of the Yorktown Formation is considered to be the greenish-gray clay encountered at a depth of approximately 39 ft below ground surface (an elevation of approximately -34 ft msl). The Yorktown Formation clay is approximately 11 ft thick at Site 2 and is underlain by up to 18 ft of fine sand with relatively thin clay beds encountered at the downgradient location.

3.3.1.2 Post-Pliocene Sediments

Immediately overlying the Yorktown Formation clay at this site is a 4 to 5 ft-thick medium to fine sand (Figure 3-12). This sand unit, which appears to be continuous across this site, is overlain by a 2 to 4 ft thick clay layer that pinches out to the south. This thinner clay is overlain by another 3 to 4 ft-thick layer of greenish-gray fine sand which, again, appears to be continuous across the site. Between the top of that sand and ground surface is approximately 28 ft of interbedded, generally discontinuous, silty sand, clay, clayey sand and silt beds and lenses.



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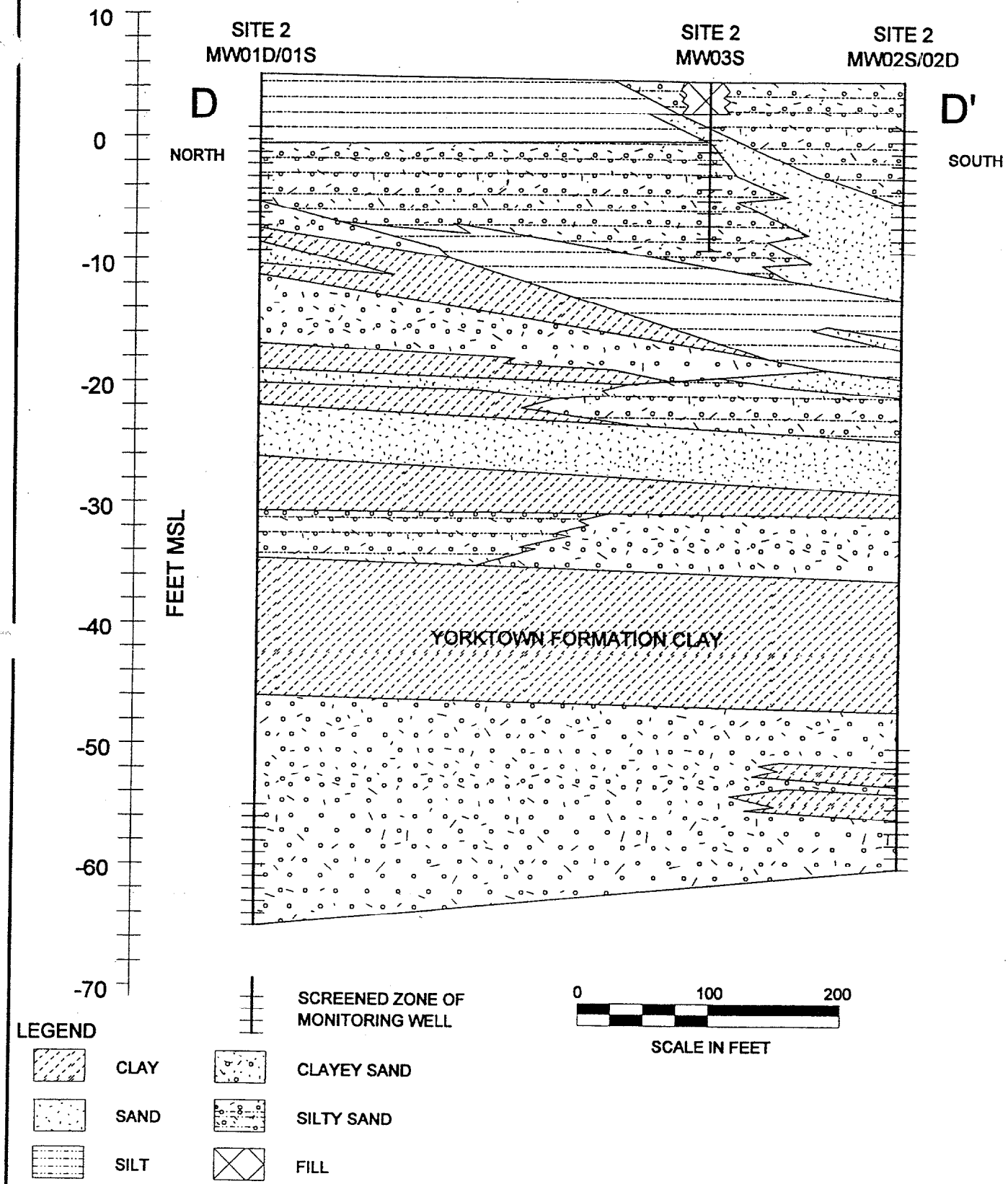
LOCATION OF GEOLOGIC
CROSS SECTION D - D'
SAINT JULIENS CREEK ANNEX

FIGURE
3-11



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GEOLOGIC CROSS
SECTION D - D'
SAINT JULIENS CREEK ANNEX

FIGURE
3-12

At monitoring well SJS02-MW3S, located immediately adjacent to the southwest corner of the landfill, the upper four feet of subsurface materials consist of fill. The subsurface materials in the vicinity of the other downgradient shallow well, SJS02-MW2S, have also been disturbed due to the number of utility lines (telephone, water, power and fiberoptic) located adjacent to the well. These materials may also be fill.

3.3.2 Site 2 Hydrogeology

Through the installation of shallow and deep monitoring wells at Site 2, the hydrostratigraphy, and some groundwater flow characteristics were determined. These data can be used for evaluation of the fate and transport of COPCs, and allows an evaluation of the completeness of the investigation with respect to monitoring the groundwater quality of waterbearing zones. The hydrostratigraphic units identified at Site 2 during the RI are listed and described in the following sections.

3.3.2.1 Yorktown Aquifer

The Yorktown Aquifer at Site 2 consists of the sand unit underlying the Yorktown Formation clay, at depths of about 50 ft. The potentiometric surface of the Yorktown Aquifer is found at an elevation of 1 to 2 ft msl. As shown on the Base-wide potentiometric surface map (Figure 3-7) the direction of groundwater flow is east, toward the Southern Branch of the Elizabeth River. The channel depth of the Elizabeth River, from Norfolk to the Turning basin at Newton Creek (upstream from St. Juliens Creek Annex) is 35 feet (NOAA, 1995). At this depth, the channel likely does not cut into the Yorktown Aquifer.

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 2 the clay is found at a depth of approximately 39 to 40 feet and has an average thickness of about 11 feet. Based on the July 1997 water level data, the vertical hydraulic gradient across this clay is approximately 0.014 ft/ft in an upward direction at the upgradient monitoring well cluster and 0.053 at the downgradient monitoring well cluster. Based on the tidal study data, the vertical gradient at the downgradient location will vary due to the tidal influence.

3.3.2.3 Water Table Aquifer

The Water Table Aquifer at Site 2 consists of the post-Pliocene sands, silts and clayey sands in the top 28 ft of the stratigraphy. The monitoring wells at the site are screened across the

potentiometric surface. The potentiometric surface of the Water Table Aquifer is found at depth of approximately 2.5 ft to -0.5 ft msl. An accurate potentiometric surface map could not be produced for the Water Table Aquifer at Site 2 for the following reasons: 1) the locations of the monitoring wells are nearly in a straight line, and, 2) the water levels are impacted by the tides, therefore the direction of groundwater flow, as well as the flow gradient, will likely change with the tides. This latter reason may explain why the July 1997 data indicate the water level in SJS02-MW1S is higher than that in SJS02-MW3S, (opposite of the November data). The locations of the monitoring wells were selected based on input from the VDEQ, and site conditions which prohibited the placement of the "downgradient" monitoring wells north of St. Juliens Creek Drive.

3.3.2.4 Intermediate Water-bearing Zone

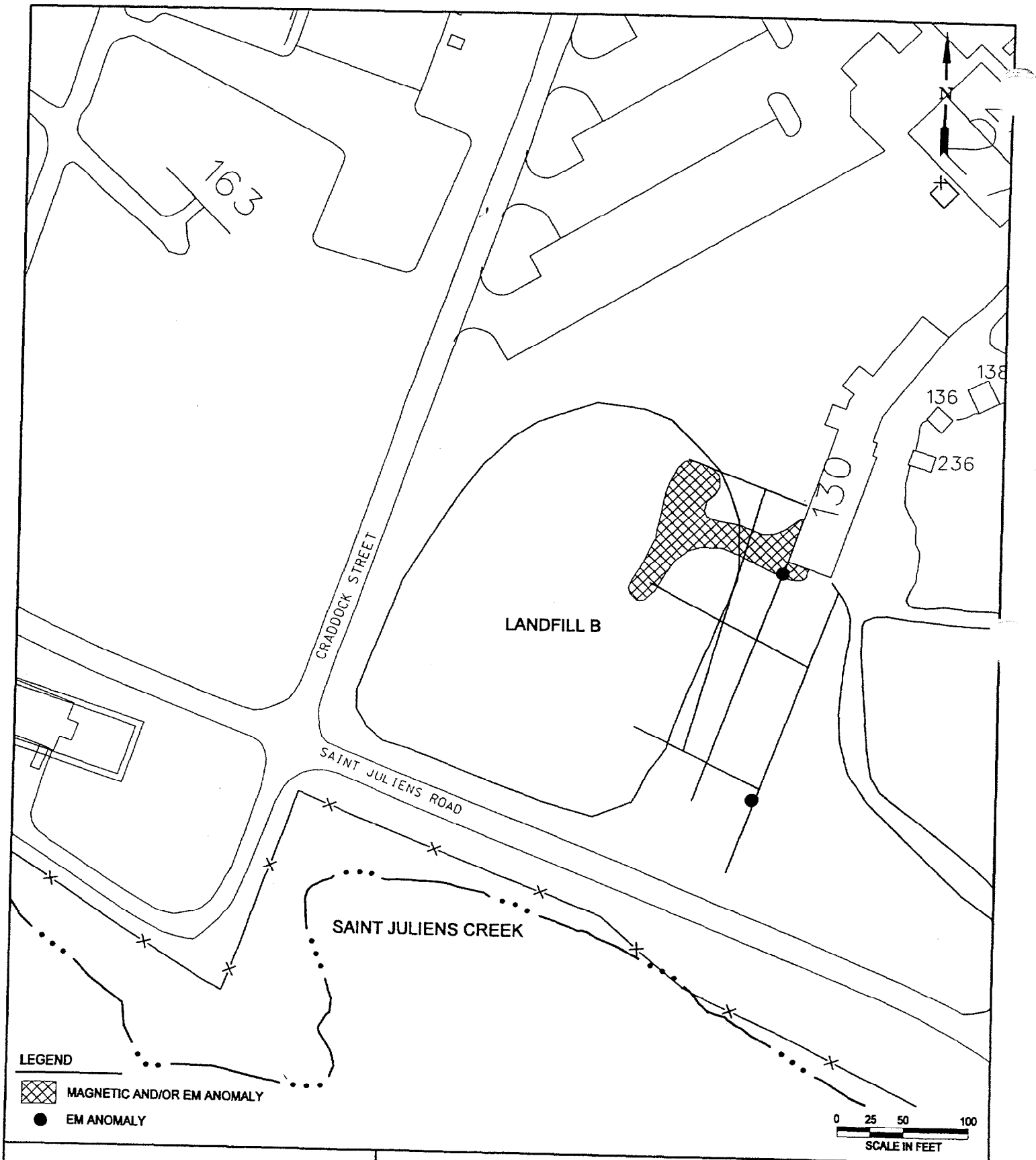
At Site 2 there is, potentially, an intermediate water-bearing zone between the Water Table Aquifer and the Yorktown Aquifer. This zone consists of a sand unit, approximately 4 to 5 ft thick, at a depth of 35 to 36 ft (an elevation of approximately -30 ft msl), that is isolated from the Yorktown Aquifer by the upper Yorktown Formation clay, and is isolated from the Water Table aquifer by relatively thinner clay beds. Based on the limited available data, it appears that this sand bed pinches out upgradient (i.e. to the northwest) (see cross section D-D', Figure 3-12). No monitoring wells were screened within this limited intermediate sand unit.

3.3.3 Site 2 Results of the Geophysical Survey

Geophysical surveys were conducted at Site 2 in order to determine the landfill boundaries. A copy of the geophysical survey report submitted by ERT for work conducted at the site is included as Appendix A to this RI report.

EM and magnetometer anomalies were identified within the survey grid established on the east site of the pond (west and south of Building 130). These anomalies are shown on **Figure 3-13**. Surface debris was encountered in the anomaly areas in the northern section of the grid, indicating that this area is a possible fill area.

The locations of the magnetic and EM profiles conducted on the west and northwest sides of the pond are shown on **Figure 3-14.** In general the magnetic anomalies and EM anomalies did not correlate well. This is probably due to the high salt content of the soil and groundwater which would mask EM anomalies. EM anomalies may be caused by the



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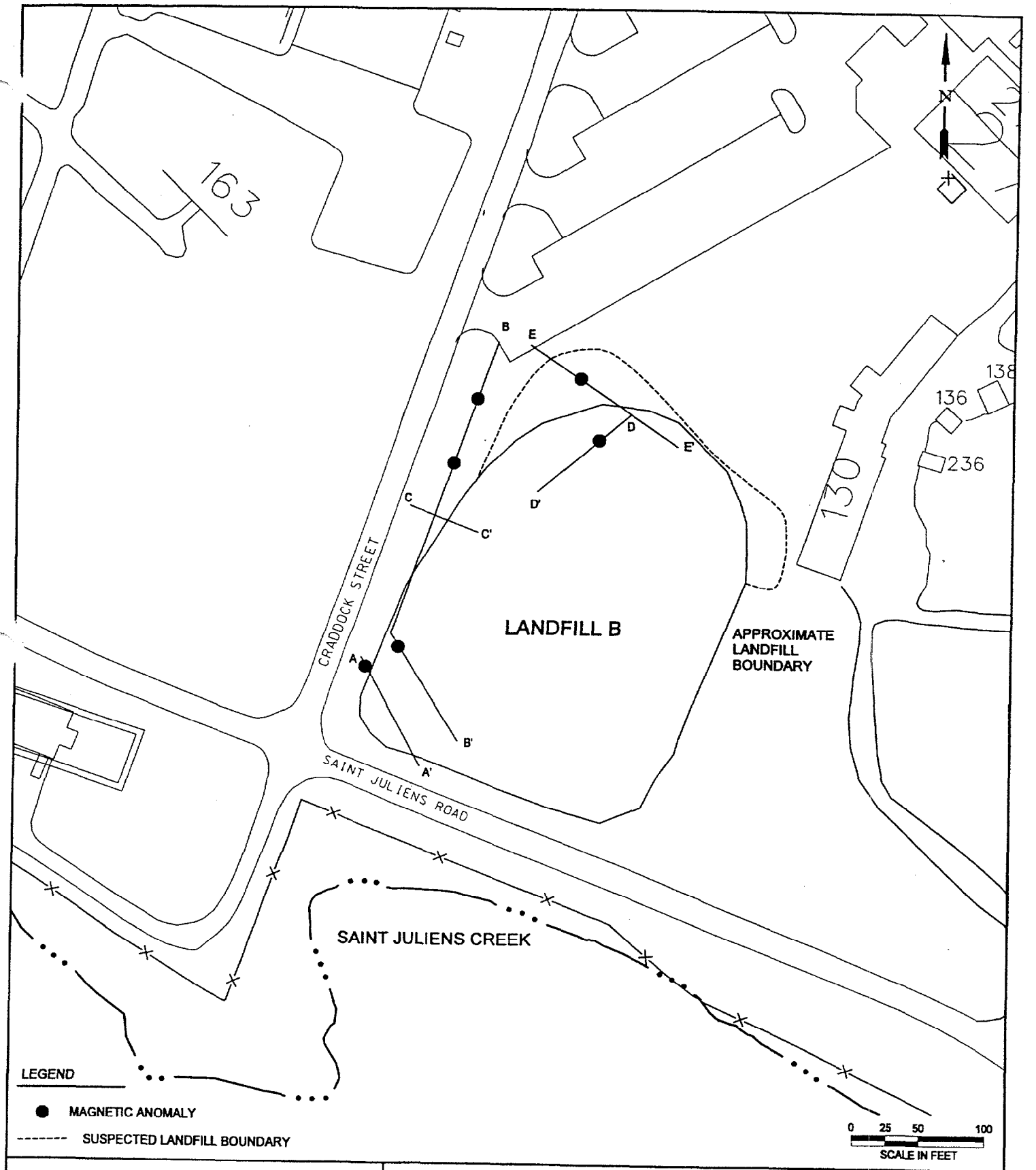
LOCATION OF MAGNETIC AND EM ANOMALIES, EAST SIDE OF SITE 2 SAINT JULIENS CREEK ANNEX

FIGURE 3-13



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LOCATION OF MAGNETIC ANOMALIES ON GEOPHYSICAL PROFILES, SITE 2 SAINT JULIENS CREEK ANNEX

FIGURE 3-14

increase or decrease of salt or clay in the soil or groundwater and would therefore not have any associated magnetic anomaly. Figure 3-14 shows the location of magnetic anomalies along the profiles. Several of these anomalies, particularly the anomalies along profiles A-A′ and B-B′, are thought to be the result of buried utility lines because of their proximity tothe edge of the road.

The geophysical surveys did not clearly identify the landfill boundaries because of site conditions which restricted the use of the EM instrument (ponded water, potentially higher salt content in the ground water). However, in that area of the site where the surveys could be conducted on a grid (east of the central pond), no evidence of landfilled material could be identified except in the northern part of the grid. The suspected boundaries of the landfill are shown on Figure 3-14.

3.3.4 Soil Analytical Results

The analytical results for subsurface and surface soil are discussed below. The discussions refer to COPCs which are derived from human health and ecological risk assessments of Site 2. The list of COPCs for subsurface and surface soil are different based on the potential exposures.

3.3.4.1 Site 2 Surface Soil

The nature and extent of the surface soil COPCs at Site 2 are discussed below.

3.3.4.1.1 Nature and Extent of COPCs at Site 2

The COPCs for surface soil at Site 2 are listed in **Table 3-3** and the distribution of organic and inorganic COPCs at Site 2 are shown in **Figures 3-15 and 3-16** respectively. **Table 3-4** presents the analytical data for the COPCs. Results of analyses for all surface soil samples from Site 2 are compiled in **Appendix G**.

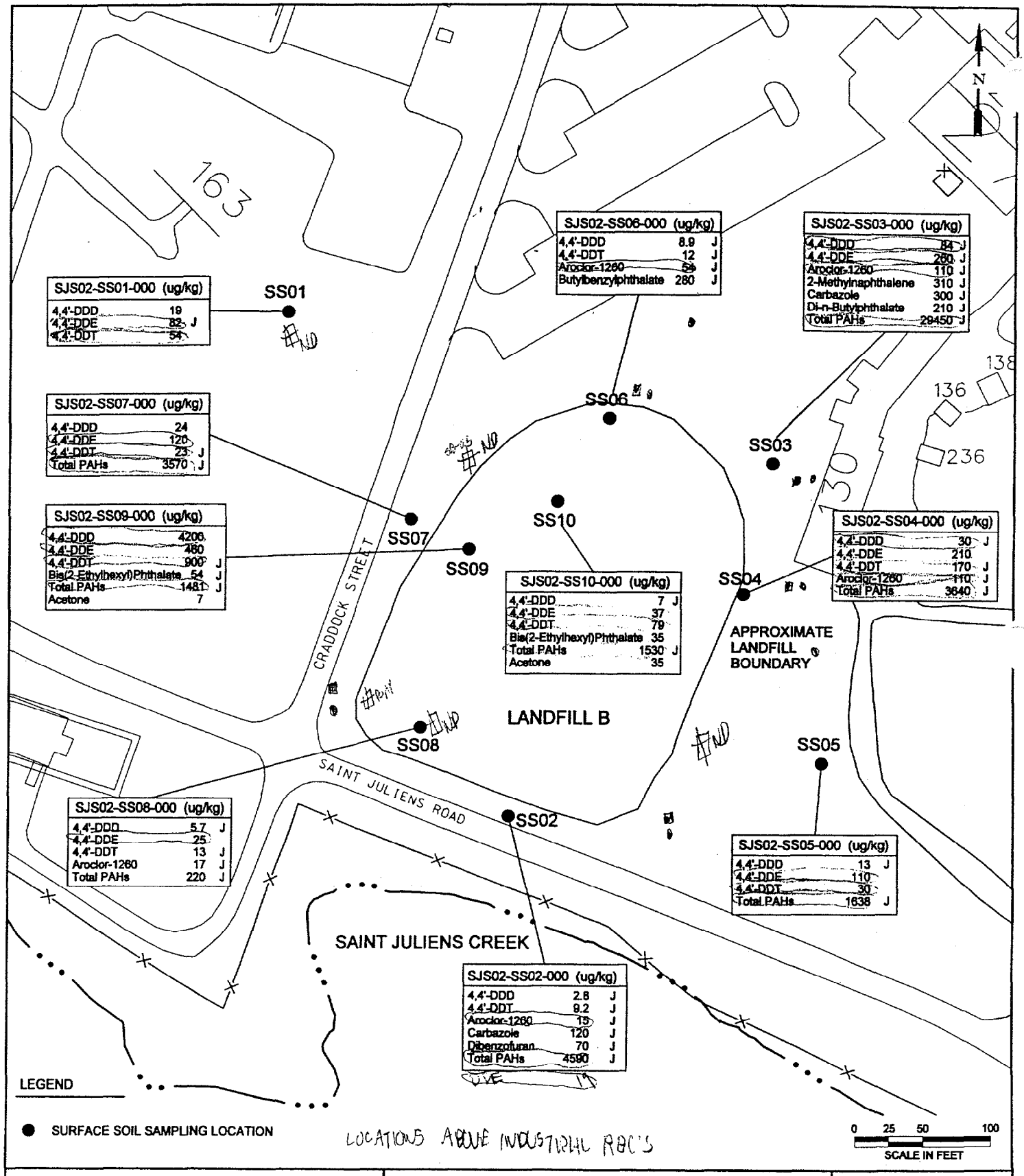
The organic COPCs detected in Site 2 surface soil include one volatile organic compound (VOC) (acetone), 20 semivolatile organic compounds (SVOCs), four pesticides, one PCB (Aroclor-1260), 16 metals, cyanide, and total phosphorus.

Acetone was detected in two samples: SJS02-SS09, located at the western edge of the landfill, at a concentraion of 7 J ug/kg, and SJS02-SS10, located within the landfill, at a concentration of 35 ug/kg.

Table 3-3
Site 2 Surface Soil COPCs

Organic Contaminants	Basis for inclusion as a COPC
4,4' - DDD	BTAG, SSL, RBC
4,4' - DDE	BTAG
4,4' - DDT	BTAG, RBC
2-Methylnaphthalene	BTAG
Acenaphthene	BTAG
Acenaphthylene	BTAG
Anthracene	BTAG
Benzo(a)Anthracene	BTAG, RBC, SSL
Benzo(a)Pyrene	BTAG, RBC
Benzo(b)Fluoranthene	BTAG, RBC
Benzo(k)Fluoranthene	BTAG
Benzo(g,h,i)Perylene	BTAG
Bis(2-ethylhexyl)Phthalate	BTAG
Butylbenzylphthalate	BTAG
Carbazole	BTAG
Chrysene	BTAG, SSL
Di-n-Butylphthalate	BTAG
Dibenzofuran	BTAG
Dieldrin	SSL
Fluoranthene	BTAG
Fluorene	BTAG
Indeno(1,2,3-cd)Pyrene	BTAG
Phenanthrene	BTAG
Pyrene	BTAG
Aroclor-1260	BTAG
Acetone	BTAG
Inorganic Contaminants	
Total Phosphorous	BTAG
Arsenic	RBC
Antimony	BTAG, RBC
Aluminum	BTAG, RBC
Barium	SSL
Beryllium	BTAG, RBC
Chromium	BTAG
Copper	BTAG, RBC
Cyanide	BTAG
Iron	BTAG, RBC
Lead	BTAG, NAVY
Manganese	BTAG, RBC
Mercury	BTAG
Nickel	BTAG, RBC, SSL
Thallium	BTAG
Vanadium	BTAG, RBC
Zinc	BTAG, RBC

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 Patnership Human Health Risk Assessment Consensus Agreements #6.A.1 through 6.A.6 and #6.B.
SSL= EPA, 1997. Soil Screening Levels as presented in Region III Updated Risk-Based Concentration Table. March, 1997.



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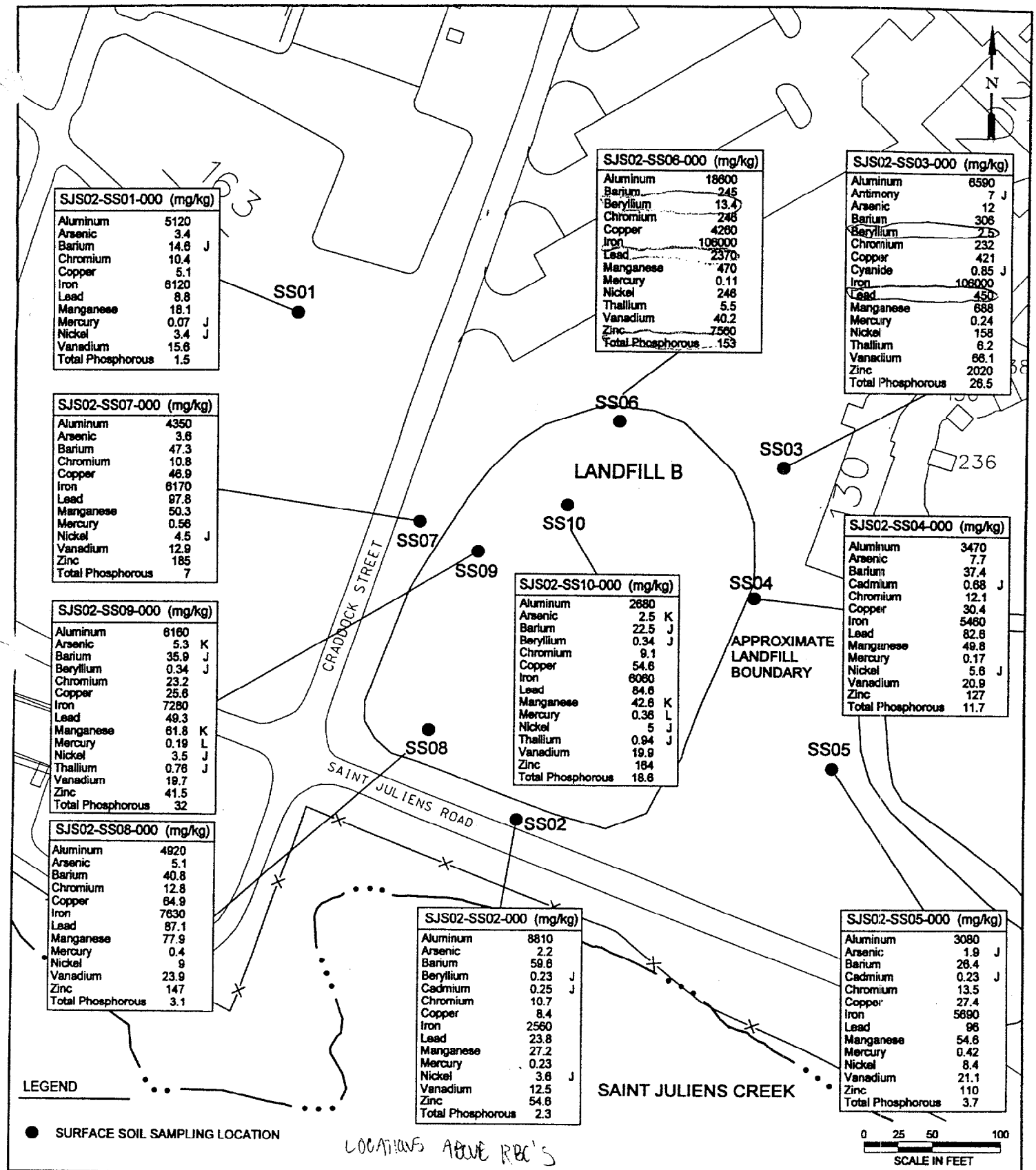
DISTRIBUTION OF ORGANIC COPCs
SURFACE SOIL, SITE 2
SAINT JULIENS CREEK ANNEX

FIGURE
3-15



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DISTRIBUTION OF INORGANIC COPCs
SURFACE SOIL, SITE 2
SAINT JULIENS CREEK ANNEX

FIGURE
3-16

TABLE 3-4

ST. JULIENS CREEK ANNEX, SITE 2
SURFACE SOIL COPC ANALYTICAL DATA

Analyte Name	SJS02-SS01-000	SJS02-SS02-000	SJS02-SS03-000	SJS02-SS04-000	SJS02-SS05-000	SJS02-SS05-000P	SJS02-SS06-000	SJS02-SS07-000	SJS02-SS08-000	SJS02-SS09-000	SJS02-SS10-000
Inorganic (mg/kg)											
Total Phosphorous	1.5	2.3	26.5	11.7	3.7	10.3	153	7	3.1	32	18.6
Aluminum	5120	8810	6590	3470	3080	3110	18600	4350	4920	6160	2680
Antimony			7 J								
Arsenic	3.4	2.2	12	7.7	1.9 J	2.3		3.6	5.1	5.3 K	2.5 K
Barium	14.6 J	59.6	306	37.4	26.4 J	27.2 J	245	47.3	40.8	35.9 J	22.5 J
Beryllium		0.23 J	2.5				13.4			0.34 J	0.34 J
Chromium	10.4	10.7	232	12.1	13.5	11.4	246	10.8	12.8	23.2	9.1
Copper	5.1	8.4	421	30.4	27.4	27.9	4260	46.9	64.9	25.6	54.6
Cyanide			0.85 J								
Iron	6120	2560	106000	5460	5690	5850	106000	6170	7630	7280	6060
Lead	8.8	23.8	450	82.6	96	96.3	2370	97.8	87.1	49.3	84.6
Manganese	18.1	27.2	688	49.8	54.6	59.6	470	50.3	77.9	61.8 K	42.6 K
Mercury	0.07 J	0.23	0.24	0.17	0.42	0.37	0.11	0.56	0.4	0.19 L	0.36 L
Nickel	3.4 J	3.6 J	158	5.6 J	8.4	11.7	246	4.5 J	9	3.5 J	5 J
Thallium			6.2				5.5			0.76 J	0.94 J
Vanadium	15.6	12.5	66.1	20.9	21.1	22.2	40.2	12.9	23.9	19.7	19.9
Zinc		54.6	2020	127	110	118	7560	185	147	41.5	164
Organic (ug/kg)											
4,4'-DDD	19	2.8 J	84 J	30 J	13 J	10	8.9 J	24	5.7 J	4200	7 J
4,4'-DDE	82 J	19	260 J	210	110	94		120	25	460	37
4,4'-DDT	54	9.2 J		170 J	30	27	12 J	23	13 J	900	79
Aroclor-1260		15 J	110 J	110 J			54 J		17 J		
2-Methylnaphthalene			310 J								
Acenaphthene		100 J	170 J								
Acenaphthylene			820 J								
Anthracene		150 J	590 J							37 J	89 J
Benzo(a)Anthracene		430	2300	290 J	180 J	220 J		390 J		140 J	120 J
Benzo(a)Pyrene		360	1400 J	370 J	160 J	190 J		340 J		130 J	130 J
Benzo(b)Fluoranthene		580	1700 J	660 J	220 J	270 J		440 J		280 J	240 J

TABLE 3-4

ST. JULIENS CREEK ANNEX, SITE 2
SURFACE SOIL COPC ANALYTICAL DATA

Analyte Name	SJS02-SS01-000	SJS02-SS02-000	SJS02-SS03-000	SJS02-SS04-000	SJS02-SS05-000	SJS02-SS05-000P	SJS02-SS06-000	SJS02-SS07-000	SJS02-SS08-000	SJS02-SS09-000	SJS02-SS10-000
Organic (ug/kg)											
Benzo(g,h,i)Perylene		160 J	890 J	280 J	78 J					76 J	160 J
Benzo(k)Fluoranthene		290 J	1100 J	320 J	150 J			270 J		87 J	120 J
Bis(2- 410										54 J	35
410000 Butylbenzylphthalate							280 J				
Carbazole		120 J	300 J								
Chrysene 700		470	2700	400 J	160 J	210 J		370 J		150 J	150 J
Di-n-Butylphthalate			210 J								
Dibenzofuran 1000		70 J									
Fluoranthene 22000		910	5000	460 J	250 J	340 J		650 J		200 J	140 J
Fluorene 22000		110 J	380 J								
Indeno(1,2,3-cd)Pyrene 1.9		180 J	800 J	310 J	86 J			210 J		88 J	110 J
Phenanthrene		850	4400		94 J			310 J		53 J	41 J
Pyrene 61000			7200	550 J	260 J	320 J		590 J	220 J	240 J	230 J
Acetone 700000										7 J	35

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.

Of the 20 SVOCs, 14 are polynuclear aromatic hydrocarbons (PAHs). The PAHs include: acenaphthene, acenaphthylene, anthracene, benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, benzo(g,h,i)perylene, chrysene, fluoranthene, fluorene, indeno(1,2,3-cd)pyrene, phenanthrene and pyrene. For presentation purposes, the concentrations of the PAHs have been totaled on Figure 3-15. One or more PAH were detected in all samples except SJS02-SS01 and -SS06. Sample SJS02-SS01 is located on the west side of Craddock Street in an area not expected to be impacted by site activities. Sample SJS02-SS06 is located within the site area, and consisted largely of material thought to be blasting grit. The highest total PAH concentration, 29,450 ug/kg, was detected in sample SJS02-SS03, located in the northern part of the landfill. In the other samples, PAHs ranged in concentration from 220 J ug/kg to 3640 J ug/kg.

The other six SVOCs that are COPCs for surface soil include: carbazole (detected in SJS02-SS02 at a concentration of 120 J ug/kg and in SJS02-SS03 at a concentration of 300 J ug/kg), bis(2-ethylhexyl)phthalate (detected in SJS02-SS09 at 54 J ug/kg and SJS02-SS10 at 35 ug/kg), butylbenzyl phthalate (detected only in SJS02-SS05 at a concentration of 280 J ug/kg), di-n-butylphthalate (detected only in SJS02-SS03 at a concentration of 210 J ug/kg) and dibenzofuran (detected only in SJS02-SS02 at a concentration of 70 J ug/kg).

The pesticide 4,4'-DDT, or its metabolites, 4,4'-DDE and 4,4'-DDD, were detected in every surface soil sample. The highest concentrations of all three pesticides were detected in sample SJS02-SS09, collected from the edge of the brush-covered area on the west side of the site. The concentrations in that sample were 4200 ug/kg, 460 ug/kg and 900 J ug/kg for 4,4'-DDD, 4,4'-DDE, and 4,4'-DDT respectively. 4,4'-DDE, 4,4'-DDD or 4,4'-DDT were found in the other samples at concentrations less than 260 ug/kg. The lowest concentrations were found in sample SJS02-SS02 (4,4'-DDD, 2.8 J ug/kg) located at the southern edge of the brush-covered area, and SJS02-SS06 (4,4'-DDE not detected and 4,4'-DDT 12 J ug/kg) , the sample consisting of blasting grit. The fourth pesticide COPC, dieldrin, was detected in SJS02-SS02 at a concentration of 3.8 ug/kg.

One PCB, Aroclor-1260 was detected in five samples (SJS02-SS02, -SS03, SS04, -SS06, and -SS08) with concentrations ranging from 15 J ug/kg (in -SS02) to 110 J ug/kg (in both -SS03 and -SS04).

One non-COPC organic constituent was detected in the surface soil: toluene which was detected in SJS02-SS06 at a concentration of 6 J ug/kg.

The metals that are COPCs for the surface soils include all of the Priority Pollutant metals except selenium and silver. The list also includes several metals that are not Priority Pollutants, including: aluminum, iron, manganese, and vanadium. 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

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.

detected in Site 2 soils at concentrations which fall within the typical ranges listed in Table 3-5 include: aluminum (detected in all the samples at concentrations ranging from 2680 mg/kg (SJS02-SS10) to 18600 mg/kg (SJS02-SS06)) arsenic (detected in all but one sample (SJS02-SS06) at concentrations ranging from 1.9 J mg/kg in SJS02-SS05 to 12 mg/kg in SJS02-SS03), antimony (detected only in SJS02-SS02 at a concentration of 7 J mg/kg),

chromium (detected in all samples at concentrations ranging from 9.1 mg/kg in SJS02-SS09 to 246 mg/kg in sample SJS02-SS06), mercury (detected in all samples at concentrations ranging from 0.07 J mg/kg in SJS02-SS01 to 0.56 mg/kg in -SS07), nickel (found in all samples at concentrations ranging from 3.4 J mg/kg in SJS02-SS01 to 246 mg/kg in SJS02-SS06), total phosphorus (detected in all samples at concentrations ranging from 1.5 mg/kg at SJS02-SS01 to 153 mg/kg in sample SJS02-SS06), thallium (detected in only four samples at a concentrations ranging from 0.76 mg/kg in SJS02-SS09 to of 6.2 mg/kg in SJS02-SS03), and vanadium (detected in all samples at concentrations ranging from 12.5 mg/kg in SJS02-SS02 to 66.1 mg/kg in SJS02-SS03).

Metal COPCs that were detected at concentrations exceeding the ranges typically found in the eastern United States soils include beryllium, copper, iron, lead, and zinc. All of the exceedences were detected in one or both of two samples: SJS02-SS03 (iron at 106,000 mg/kg and lead at 450 mg/kg) and SJS02-SS06 (beryllium at 13.4 mg/kg, copper at 4260 mg/kg, iron at 106,000 mg/kg, lead at 2370 mg/kg, and zinc at 7560 mg/kg). These two samples also contained the highest concentrations of some of the other metals COPCs, including arsenic (12 mg/kg in SJS02-SS03), antimony (7 J mg/kg in -SS03), nickel (158 mg/kg in -SS03 and 246 mg/kg in -SS06), and vanadium (66.1 mg/kg in -SS03). In most cases the concentrations of metals in these samples were significantly higher than concentrations found in other samples collected from the site.

One additional inorganic COPC, cyanide, was identified at Site 2. Cyanide was only detected in one sample, SJS02-SS03, at a concentration of 0.85 J mg/kg.

3.3.4.1.2 Discussion of Surface Soil Results

The distribution of organic COPCs, with the exception of pesticides, approximately corresponds to the suspected landfill boundaries. Sample SJS02-SS01, collected furthest from the suspected landfill boundary only contained pesticides (DDT and metabolites). All samples collected north of St. Juliens Creek Drive and east of Craddock Street contained some PAHs. Due to use of coal as fuel in industrial areas, especially those areas like St. Juliens Creek Annex that have been industrialized for a long time, the presence of PAHs in surface soil is not uncommon. However, the higher levels found in some samples, particularly SJS02-SS03 (29,450 ug/kg) are indicative of an additional source. Materials deposited in Landfill B have been described as garbage, acids, blasting grit and waste ordnance. Garbage and blasting grit could both contain PAHs. Additionally, prior to

1942, the materials in Landfill B were burned. It is possible that waste oils or other fuels were used to accelerate burning. These fuels are a potential source of PAHs.

With respect to inorganic COPCs, the distribution of the highest concentrations and greatest number of COPCs is consistent with the proximity to the landfill and type of materials sampled. Sample SJS02-SS06 is located within the landfill boundary and consisted of black sandy soil. This sample is thought to have contained blasting grit which could contain metals derived from the blasted materials (paint and metal ship hulls). Sample SJS02-SS03 was collected immediately adjacent to the landfill.

Cyanide, while probably due to landfilling activities, does not appear to be a widespread contaminant. Cyanide was only found in one sample containing numerous other inorgainc and organic COPCs (SJS02-SS03).

The analytes detected during the RI generally correlate with those detected in the RRR study. In both investigations DDT and its metabolites were detected. Alpha-chlordane and gamma-chlordane were also detected during the RRR Study, and dieldrin was detected during the RI. One PCB was detected in both studies, however,in the RRR Aroclor-1254 was detected and in the RI Aroclor-1260 was found. Surface soil samples from within the landfill boundaries was found to contain relatively high concentartions of beryllium, copper, lead and zinc in both investigations.

3.3.4.2 Site 2 Subsurface Soil

The nature and extent of the subsurface soil COPCs at Site 2 are discussed in the sections below. Subsurface soil samples at Site 2 were collected from a depth just above the top of the water table, as determined from moisture in the soil samples. At Site 2, all samples were collected from depths less than 6 ft. One sample , SJS02-SB03, was collected from a depth of 0 to 3 ft, specifically to provide data for the BERA. No attempt was made to determine the depth of landfilled materials. The depth at which the samples were collected is indicated on the data tables in this section. However, depth is not considered a factor in discussing the extent of contamination at Site 2 because of the shallow depth to ground water (less than 5 ft).

3.3.4.2.1 Nature and Extent of COPCs at Site 2

The COPCs for subsurface soil at Site 2 are listed in **Table 3-6**, and the distribution and concentration of organic and inorganic subsurface soil COPCs at Site 2 are shown in **Figures 3-17 and 3-18**, respectively. The analytical results for the subsurface soil COPCs are

Table 3-6
Site 2 Subsurface Soil COPCs

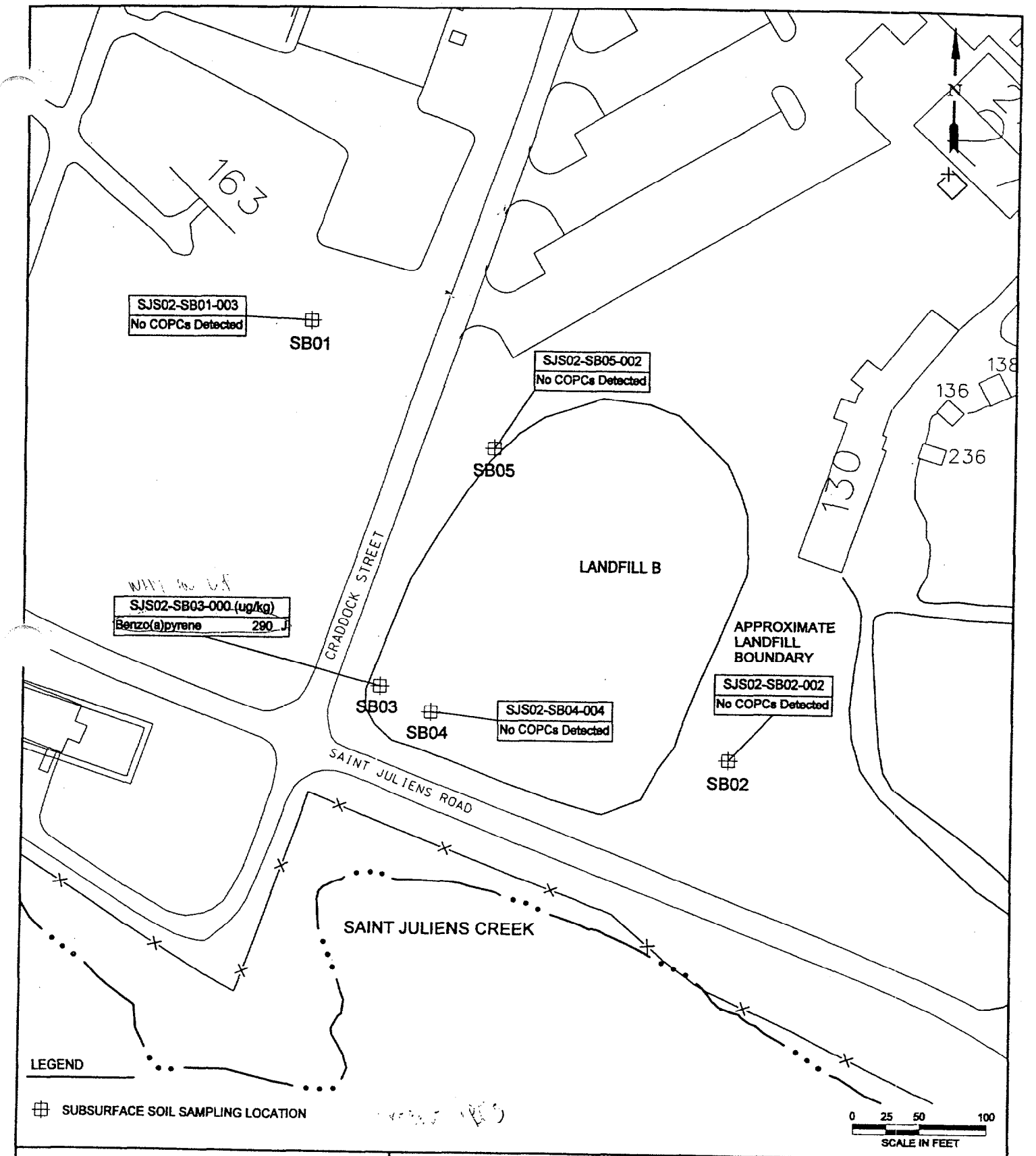
Organic Contaminants	Basis for inclusion as a COPC
Benzo(a)Pyrene	RBC
Inorganic Contaminants	RBC
Arsenic	RBC
Aluminum	RBC
Barium	SSL
Beryllium	RBC
Cadmium	RBC
Iron	RBC
Lead	RBC, NAVY
Nickel	SSL
Zinc	RBC

RBC = EPA. 1997. Region III Updated Risk-Based Concentration Table. October, 1997.
NAVY= United States Navy, 1997. Naval Base Norfolk Patnership Human Health Risk Assessment Consensus Agreements #6.A.1 through 6.A.6 and #6.B.
SSL= EPA, 1997. Soil Screening Levels as presented in Region III Updated Risk-Based Concentration Table. March, 1997.

shown in **Table 3-7**. Results for all analyses of subsurface soil samples from Site 2 are compiled in Appendix G.

The organic COPCs detected in Site 2 subsurface soil include one semivolatile organic compound (benzo(a)pyrene) and nine metals. The only organic COPC, benzo(a)pyrene, was detected in one sample (SJS02-SB03) at a concentration of 290 J ug/kg. SJS02-SB03 is located at the southwest corner of the landfill. The boring log for the adjacent monitoring well (SJS02-MW3S) notes that the top 2.8 feet of soil is fill.

A variety of other organic compounds were detected in subsurface soil at Site 2, but were not selected as COPCs. These include two volatile organic compounds (acetone, detected at a concentrations of 6 J ug/kg in SJS02-SB03 and 210 ug/kg in SJS02-SB04, and 2-butanone detected at a concentration of 43 J ug/kg in SJS02-SB04), 4,4'-DDT and transformation products detected in all samples, a PCB, Aroclor 1260 detected in SJS02-SB03 at a



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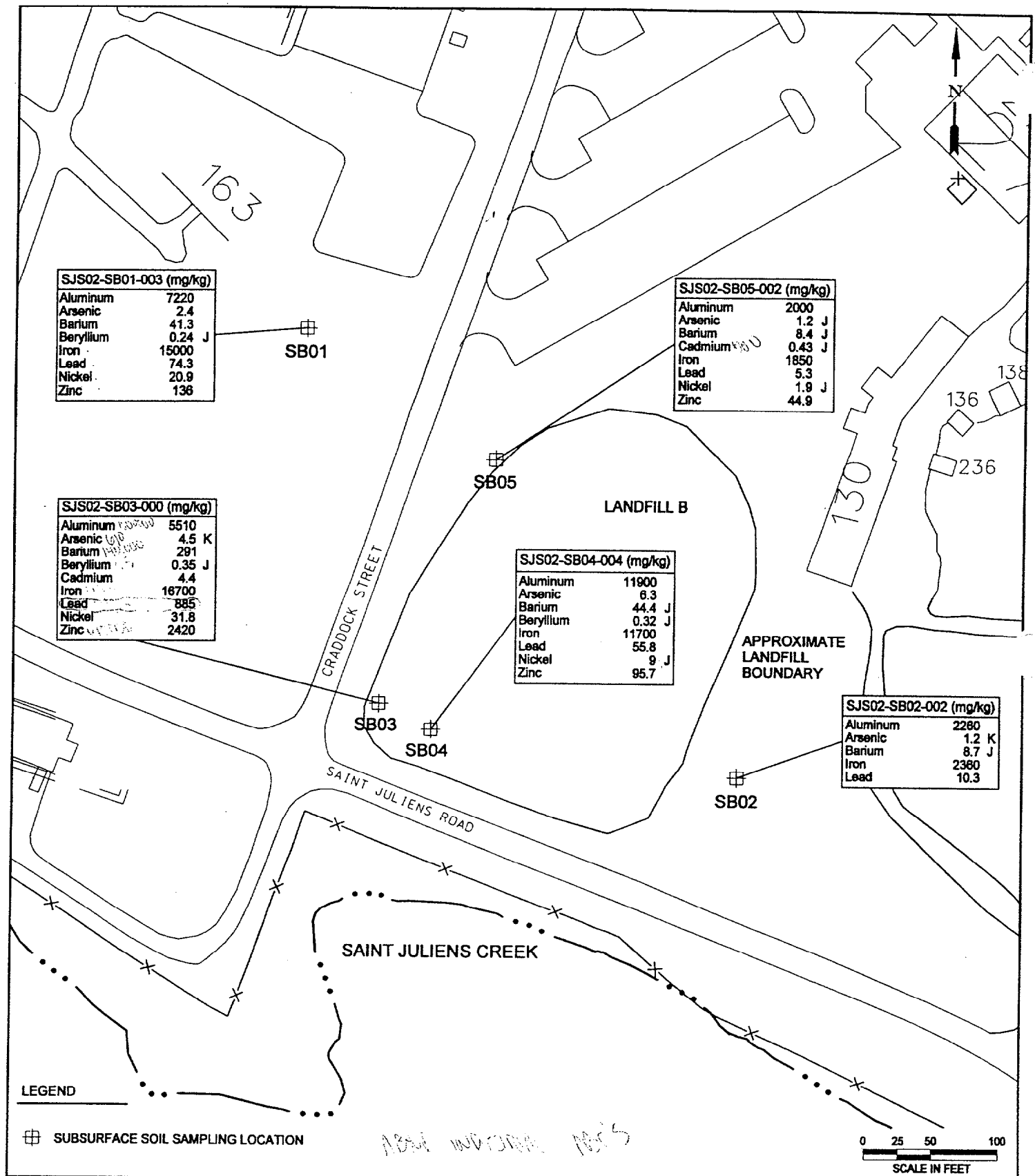
DISTRIBUTION OF ORGANIC COPCs
SUBSURFACE SOIL, SITE 2
SAINT JULIENS CREEK ANNEX

FIGURE
3-17



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DISTRIBUTION OF INORGANIC COPCs
SUBSURFACE SOIL, SITE 2
SAINT JULIENS CREEK ANNEX

FIGURE
3-18

TABLE 3-7

ST. JULIENS CREEK ANNEX, SITE 2
SUBSURFACE SOIL COPC ANALYTICAL DATA

Analyte Name	SJS02-SB01-003		SJS02-SB02-002		SJS02-SB03-000		SJS02-SB04-004		SJS02-SB04-004P		SJS02-SB05-002	
Inorganic (mg/kg)												
Aluminum	7220		2260		5510		11900		11800		2000	
Arsenic	2.4		1.2	K	4.5	K	6.3		3.9		1.2	J
Barium	41.3		8.7	J	291		44.4	J	55.3		8.4	J
Beryllium	0.24	J			0.35	J	0.32	J	0.34	J		
Cadmium					4.4						0.43	J
Iron	15000		2360		16700		11700		7190		1850	
Lead	74.3		10.3		885		55.8		20.5		5.3	
Nickel	20.9				31.8		9	J	8	J	1.9	J
Zinc	136				2420		95.7				44.9	
Organic (ug/kg)												
Benzo(a)Pyrene					290	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.

Organic:

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

concentration of 21 J ug/kg, and thirteen semivolatile organic compounds (SVOCs). One of the SVOCs is bis(2-ethylhexyl)phthalate, detected in SJS02-SB02 at a concentration of 39 ug/kg and in SJS02-SB03 at a concentration of 49 J ug/kg. The remaining twelve SVOCs are all PAHs, many of which were only detected in sample SJS02-SB03. The total PAH concentration in that sample is 3811 J ug/kg. Three PAHs, fluoranthene, phenanthrene, and pyrene were also detected in a duplicate sample of SJS02-SB04 at concentrations of 51 J ug/kg, 38 J ug/kg, and 67 J ug/kg respectively.

The metal COPCs include aluminum, arsenic, barium, beryllium, cadmium, iron, lead, nickel, and zinc. The Priority Pollutant metals include arsenic, beryllium, cadmium, lead, nickel and zinc. Arsenic was detected in all samples at concentrations ranging from 1.2 J mg/kg in SJS02-SB05 to 6.3 mg/kg in SJS02-SB04. Beryllium was detected in SJS02-SB01 (0.24 J mg/kg), in SJS02-SB03 (0.35 J mg/kg) and SJS02-SB04 and its duplicate (0.32 J mg/kg and 0.34 J mg/kg respectively). Cadmium was only detected in SJS02-SB03 (at a concentration of 4.4 mg/kg) and SJS02-SB05 (at a concentration of 0.43 J mg/kg). Lead was detected in all samples at concentrations ranging from 5.3 mg/kg in SJS02-SB05 to 885 mg/kg in SJS02-SB03. Nickel was detected in all samples except SJS02-SB02, at concentrations ranging from 1.9 J mg/kg in SJS02-SB05 to 31.8 mg/kg in SJS02-SB03. Similarly, zinc was detected in those same samples (except the duplicate) with the lowest concentration in SJS02-SB05 (44.9 mg/kg) and the highest in SJS02-SB03 (2420 mg/kg).

3.3.4.2.2 Discussion of Subsurface Soil Results

The distribution of the highest concentration and greatest number of COPCs detected in subsurface soil samples corresponds to the suspected boundaries of the landfill. The fewest number of COPCs were detected in SJS02-SB02, located at the easternmost edge of the investigation area. Sample SJS02-SB01 was collected from a location that is thought to be outside of the area that would be expected to be influenced by the landfill although the concentration of inorganic COPCs is higher in that sample than in SJS02-SB02 and SJS02-SB05. These two samples are closer to the central part of the landfill, and would be expected to contain contaminants. It is not likely that SJS02-SB01 was impacted by the landfill although the soil may be fill material unrelated to the landfill. Alternatively, the COPCs present in SJS02-SB01 (only metals) may be present naturally in the material that comprises the sample.

Generally the highest concentration and greatest number of COPCs were detected in SJS02-SB03 and SJS02-SB04, located at the southwest corner of the site. Both of these samples have likely been impacted by the landfilling activities. These are the only two samples in which a significant number of non-COPC organic constituents were detected. Because fill material was noted in a nearby boring, and subsurface soil would not naturally contain these organic constituents, it is likely that their presence is due to landfill activities.

3.3.5 Site 2 Groundwater Analytical Results

The three 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 2 are discussed below.

3.3.5.1 Nature and Extent of COPCs at Site 2

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 2 MONITORING WELLS

Monitoring well	Temperature (°C)		pH		Specific Conductance (umhos/cm²)		Dissolved Oxygen (%)		Turbidity (NTU)	
Date:	7/97	11/97	7/97	11/97	7/97	11/97	7/97	11/97	7/97	11/97
MW1S	18.6	19.3	7.12	6.01	600	778	24.7	8.77	62	7
MW1D	19.0	17.1	9.35	9.76	300	264	5.6	9.1	100	10
MW2S	22.2	20.7	5.43	6.77	6900	4150	16.9	3.28	127	16
MW2D	20.1	17.0	8.31	7.2	NR	390	6.2	2.2	0.6	0
MW3S	21.1	19.7	6.67	6.2	24000	1200	15.5	2.4	176	0

NR = Not Recorded

The COPCs for groundwater at Site 2 are listed in **Table 3-9**. The distribution of organic and inorganic groundwater COPCs at Site 2 during Round 1 are shown in **Figures 3-19 and 3-20** and during Round 2 in **Figures 3-21 and 3-22**. **Table 3-10** presents the analytical data from the Round 1 and Round 2 sampling events for all COPCs . Analytical results for all samples and analyses performed are compiled in Appendix G.

No organic COPCs were identified in groundwater samples from the Water Table Aquifer in either round of sampling.

Table 3-9
Site 2 Groundwater COPCs

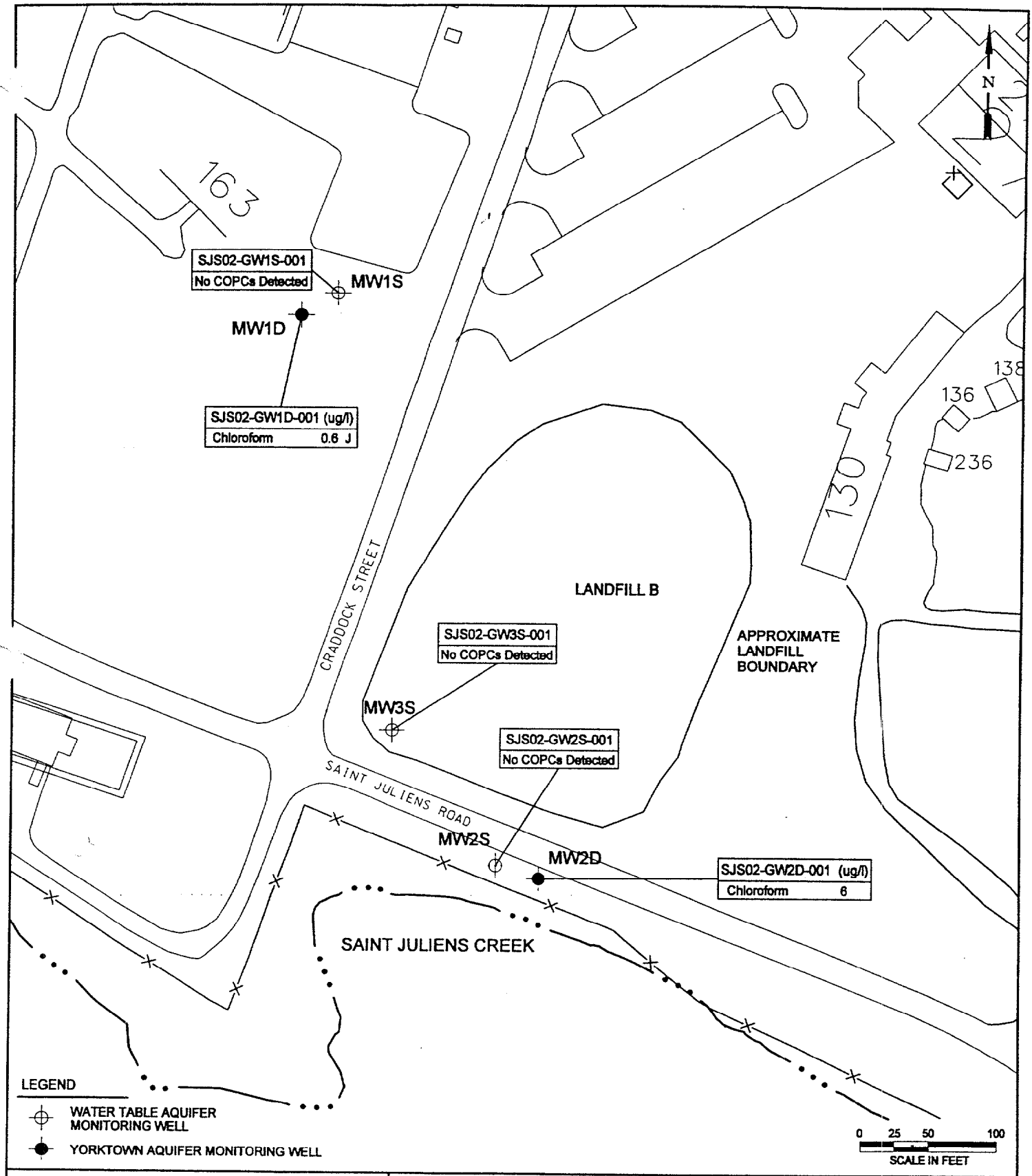
Organic Contaminants	Basis for inclusion as a COPC
Chloroform	RBC
Inorganic Contaminants	
Aluminum	RBC
Antimony	RBC
Arsenic	RBC
Barium	RBC
Iron	RBC
Lead	RBC, MCL, NAVY
Manganese	RBC
Thallium	MCL
Vanadium	RBC

RBC = EPA. 1997. Region III Updated Risk-Based Concentration Table. October, 1997.
NAVY= United States Navy, 1997. Naval Base Norfolk Patnership Human Health Risk Assessment Consensus Agreements #6.A.1 through 6.A.6 and #6.B.
MCL= EPA Maximum Contaminant Level

Nine inorganic COPCs were identified for the groundwater at Site 2: aluminum, antimony, arsenic, barium, iron, lead, manganese, thallium, and vanadium. Antimony, arsenic, beryllium, lead, nickel, and thallium are Priority Pollutant metals. Note that both filtered and unfiltered samples were analyzed for metals. As would be expected, the filtered samples typically contained fewer metals at lower concentrations. However, there are some samples in which metals were detected in the filtered samples but not the unfiltered amples.

There are no Priority Pollutant metal found in filtered samples from SJS02-GW1S. In SJS02-GW2S, thallium (9.6 J ug/L) was the only Priority Pollutant metal detected in Round 1 filtered samples, while samples from Round 2 contained no thallium. Arsenic was detected in both rounds of samples from SJS02-GW3S at similar concentrations (5.6 J ug/L in Round 1 and 6 J ug/L in Round 2).

One Priority Pollutant metals identified as a COPC was detected in both rounds of samples from unfiltered samples from SJS02-GW1S: lead (3.6 ug/L in Round 1, 1.9 ug/L in Round 2). Although arsenic was detected in the Round 1 sample (3.8 J ug/L), it was not found in



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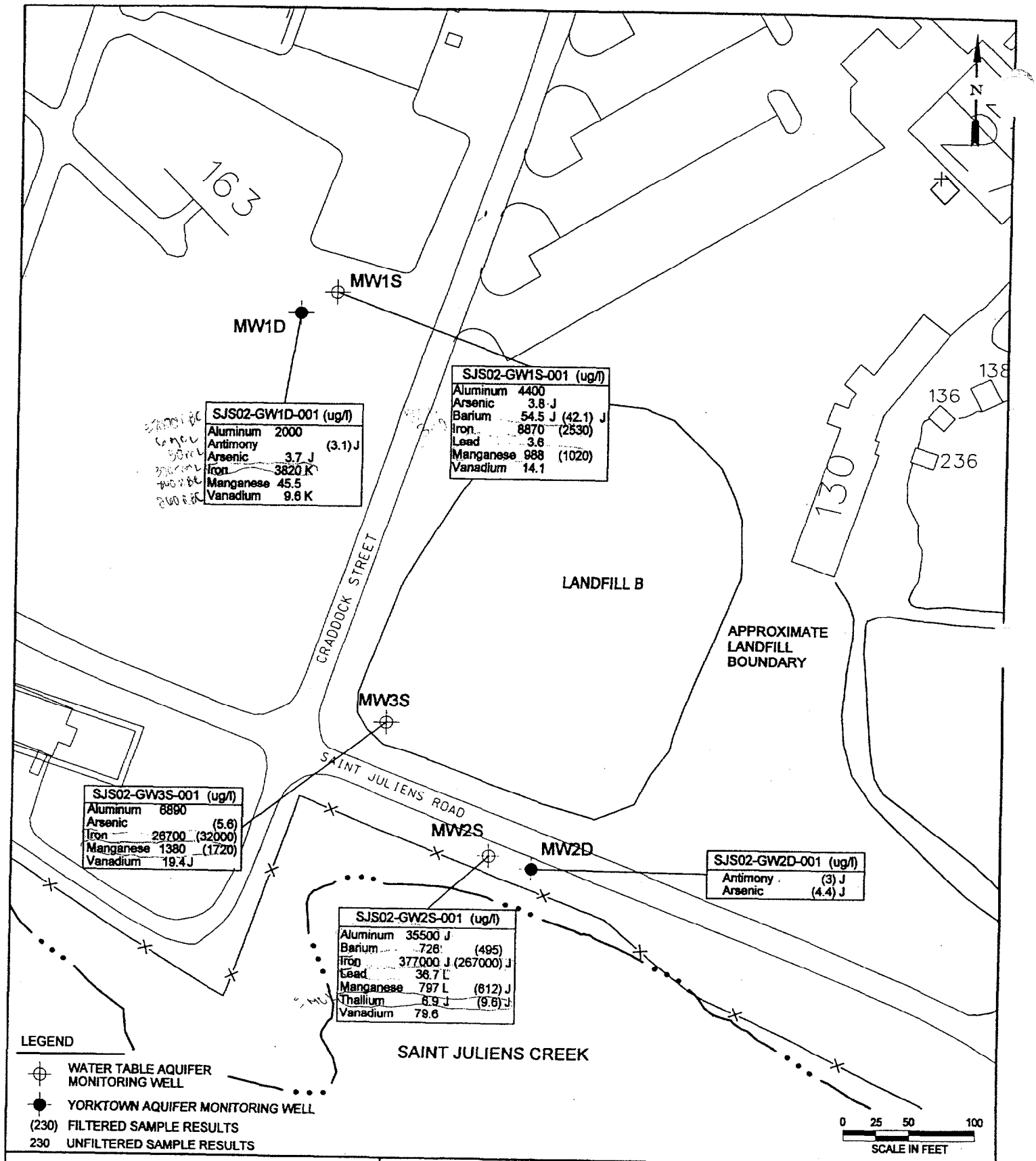
DISTRIBUTION OF ORGANIC COPCs
GROUNDWATER, SITE 2, JULY 1997
SAINT JULIENS CREEK ANNEX

FIGURE
3-19



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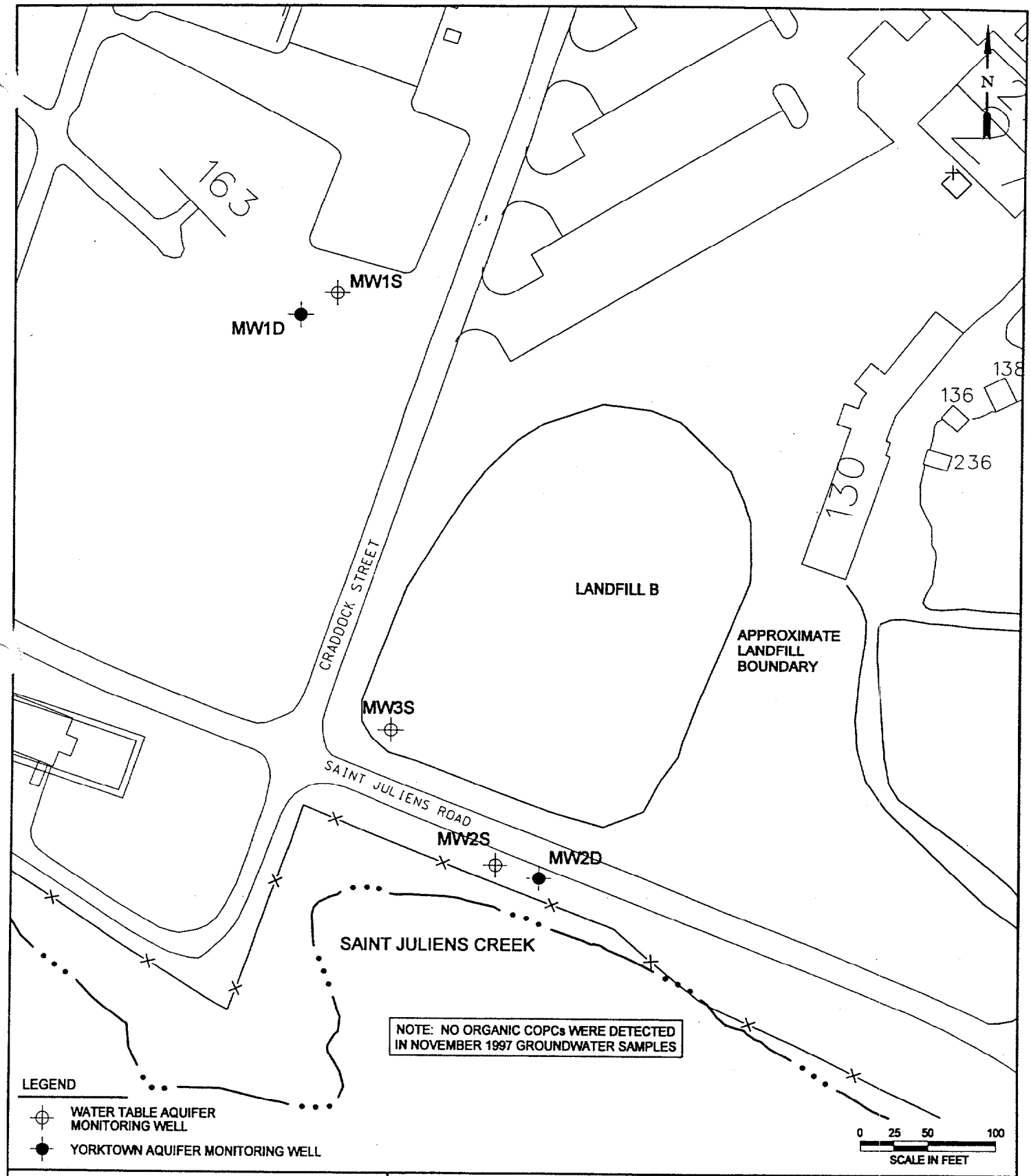
DISTRIBUTION OF INORGANIC COPCs
GROUNDWATER, SITE 2, JULY 1997
SAINT JULIENS CREEK ANNEX

FIGURE
3-20



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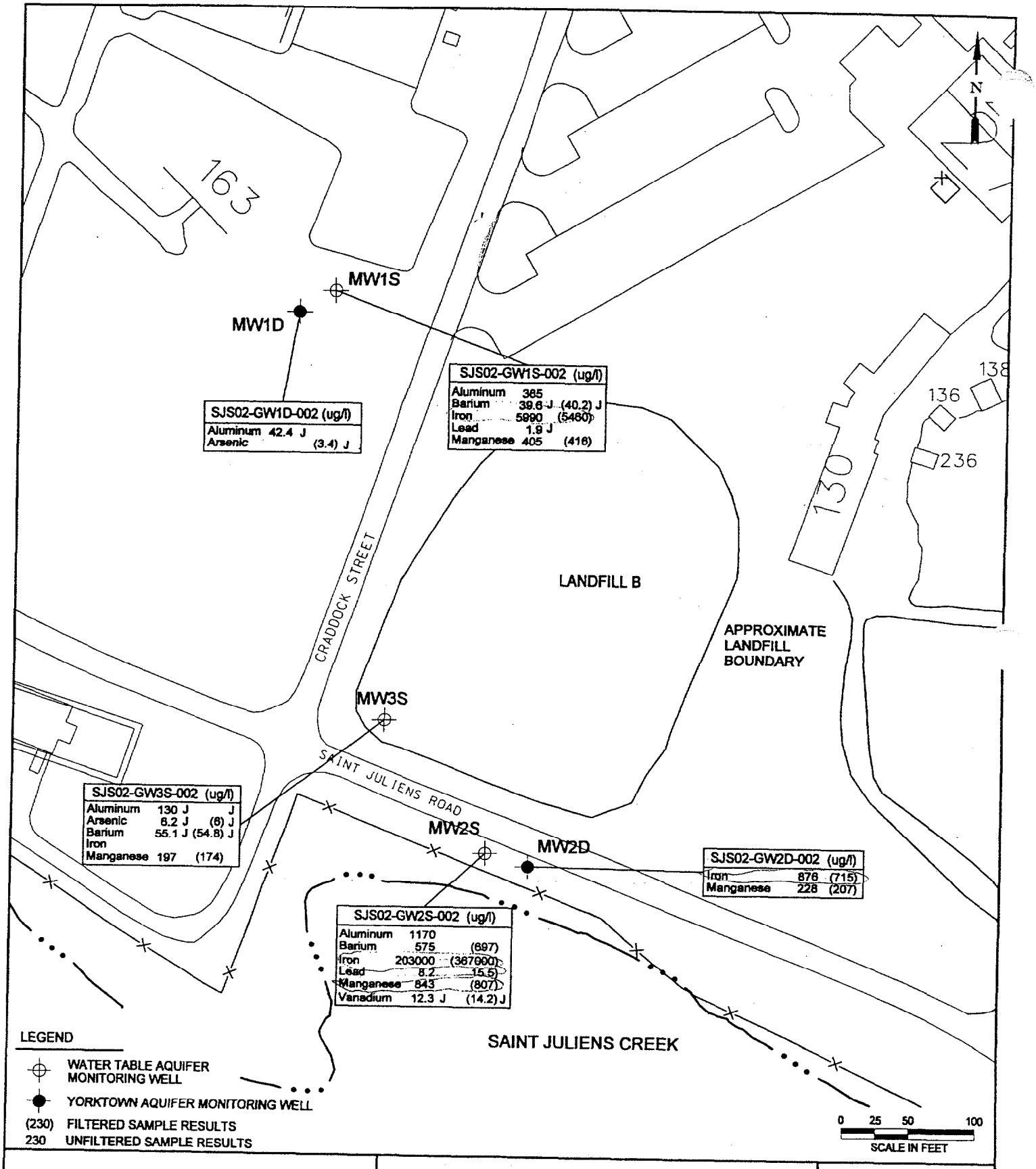
DISTRIBUTION OF ORGANIC COPCs
GROUNDWATER, SITE 2, NOVEMBER 1997
SAINT JULIENS CREEK ANNEX

FIGURE
3-21



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DISTRIBUTION OF INORGANIC COPCs
GROUNDWATER, SITE 2, NOVEMBER 1997
SAINT JULIENS CREEK ANNEX

FIGURE
3-22

TABLE 3-10

ST. JULIENS CREEK ANNEX, SITE 2
GROUNDWATER COPC ANALYTICAL DATA

Analyte Name	SJS02-GW1D-001	SJS02-GW1D-002	SJS02-GW1D-001F	SJS02-GW1D-002F	SJS02-GW1S-001	SJS02-GW1S-002	SJS02-GW1S-001F	SJS02-GW1S-002F	SJS02-GW2D-001	SJS02-GW2D-002	SJS02-GW2D-001F	SJS02-GW2D-002F
Inorganic (ug/L)												
Aluminum	2000	42.4 J			4400	365						
Arsenic	3.7 J				3.8 J							
Barium					54.5 J	39.6 J						
Iron	3820 K				8870	5990				876		
Lead					3.6	1.9 J						
Manganese	45.5				988	405				228		
Thallium												
Vanadium	9.6 K				14.1 J							
Filtered Samples												
Antimony			3.1 J								3 J	
Arsenic				3.4 J							4.4 J	
Barium							42.1 J	40.2 J				
Iron							2530	5460				715
Lead												
Manganese							1020	416				207
Thallium												
Vanadium												
Organic (ug/L)												
Antimony												
Arsenic												
Barium												
Chloroform	0.6 J								6			
Iron												
Lead												
Manganese												
Thallium												
Vanadium												

TABLE 3-10

ST. JULIENS CREEK ANNEX, SITE 2
GROUNDWATER COPC ANALYTICAL DATA

Analyte Name	SJS02-GW2D-002P		SJS02-GW2D-002FP		SJS02-GW2S-001		SJS02-GW2S-002		SJS02-GW2S-001F		SJS02-GW2S-002F		SJS02-GW3S-001		SJS02-GW3S-002		SJS02-GW3S-001F		SJS02-GW3S-002F	
Inorganic (ug/L)																				
Aluminum					35500	J	1170						6890		130	J				
Arsenic															6.2	J				
Barium					726		575								55.1	J				
Iron	786				377000	J	203000						26700		1240					
Lead					36.7	L	8.2													
Manganese	221				797	L	843						1380		197					
Thallium					6.9	J														
Vanadium					79.6		12.3	J					19.4	J						
Filtered Samples																				
Antimony																				
Arsenic																	5.6	J	6	J
Barium									495		697								54.8	J
Iron			599						267000	J	367000						32000		689	
Lead											15.5									
Manganese			200						612	J	807						1720		174	
Thallium									9.6	J										
Vanadium											14.2	J								

TABLE 3-10

ST. JULIENS CREEK ANNEX, SITE 2
GROUNDWATER COPC ANALYTICAL DATA

Analyte Name	SJS02-GW2D-002P		SJS02-GW2D-002FF		SJS02-GW2S-001		SJS02-GW2S-002		SJS02-GW2S-001F		SJS02-GW2S-002F		SJS02-GW3S-001		SJS02-GW3S-002		SJS02-GW3S-001F		SJS02-GW3S-002F	
Organic (ug/L)																				
Antimony																				
Arsenic																				
Barium																				
Chloroform																				
Iron																				
Lead																				
Manganese																				
Thallium																				
Vanadium																				

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 Round 2 sample. Two Priority Pollutant metal COPCs were detected in SJS02-GW2S during Round 1 (lead at 36.7 ug/L and thallium at 6.9 J ug/L. Only lead (8.2 ug/L) was found in the Round 2 sample. Other metal COPCs found in unfiltered samples from shallow wells include aluminum, barium, beryllium, iron, manganese, nickel and vanadium.

Chloroform is the only organic COPC for groundwater at Site 2 and it was only found in samples from the Yorktown Aquifer during Round 1. Chloroform was detected in SJS02-GW2D at a concentration of in 6 ug/L, and in SJS02-GW1D at 0.6 J ug/L. No organic COPCs were detected in the Round 2 samples.

In addition to chloroform, one non-COPC organic constituent was detected during Round 1: toluene in sample SJS02-GW1D (at a concentration of 0.3 J ug/L) and in SJS02-GW2D (at 6 ug/L). During Round 2 phenol (5 J ug/L) and carbon disulfide (0.2 J ug/L). were found in SJS02-GW1D.

The inorganic COPCs detected in the filtered samples from the deep (Yorktown Aquifer) monitoring wells include antimony (3.1 J ug/L in SJS02-GW1D and 3 J ug/L in SJS02-GW2D in Round 1), arsenic (4.4 J ug/L in SJS02-GW2D Round 1 and 3.4 J ug/L in SJS02-GW2D in Round 2) iron (715 ug/L in SJS02-GW2D in Round 2) and manganese (207 ug/L in SJS02-GW2D in Round 2).

The Round 1 unfiltered sample from SJS02-GW1D contained only one Priority Pollutant metal COPCs: arsenic at a concentration of 3.7 J ug/L. Arsenic was not found in the Round 2 sample. The Round 1 sample also contained aluminum (2000 ug/L), manganese (45.5 ug/L), iron (3820 K ug/L), total phosphorus (0.18 ug/L) and vanadium (9.6 K ug/L). In Round 2, the only inorganic COPCs detected in the sample were total phosphorus (0.87 ug/L) and aluminum (42.2 J ug/L). The decrease in number and concentrations in metals may be due to a significant drop in the turbidity of the samples (100 NTU in Round 1 and 10 NTU in Round 2).

During Round 1 the sample from the other Yorktown Aquifer monitoring well, SJS02-GW2D, contained only one inorganic COPC: total phosphorus at a concentration of 0.862 ug/L). The Round 2 sample also contained total phosphorus (1.8 ug/L) as well as iron (876

ug/L) and manganese (228 ug/L). Turbidity of both SJS02-GW2D samples was very low (0.6 NTU and 0 NTU).

3.3.5.2 Discussion of COPCs in Groundwater

There are several factors which make evaluation of the groundwater flow direction difficult (see section 3.2.2.2). However, the highest water level was measured at SJS02-MW3S, located at the southwest corner of the site. The sample from monitoring well SJS02-MW2S, the one well that is most probably downgradient of the site, contained the greatest number, and generally highest concentrations of COPCs.

The analytical data do not show any clear spatial trends. As a way to further evaluate the data, data from the site wells were compared to 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). The four cities data are shown in **Table 3-11**. The range of pH measured at the site (5.43 to 7.12) is within the range of published values (4.8 to 7.8). The measured specific conductance at SJS02-MW1S (600 to 778 umhos/cm) is within the range of published values (121 to 1569 umhos/cm). The measured specific conductance in the other two shallow wells is are well above the maximum. At SJS02-MW2S the specific conductance readings during the first and second sampling rounds were 6900 umhos/cm and 4150 umhos/cm ,respectively. In monitoring well SJS02-MW3S the readings were 24000 umhos/cm and 1200 umhos/cm. The elevated readings may be due to naturally elevated salt content or from landfill leachate.

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

Source: Siudyla et al. (1981)

The measured concentrations of manganese in all Water Table Aquifer samples are below the maximum published value (Siudyla et al. 1981) and are near the average concentrations for the published values. The iron concentrations found in SJS02-GW1S samples were well within the published range of iron concentration for Waster Table Aquifer. Samples from SJS02-GW2S, however are well above the maximum published value(377,000 ug/L for Round 1 and 20300 ug/L for Round 2). The concentrations decrease corresponds to a decrease in turbidity between sampling rounds, but the Round 2 concentration is elevate relative to published values despite having a turbidity of only 16 NTU. The measured values from SJS02-GW3S dropped considerably from Round 1 (26,700 ug/L) to round 2 (1240 ug/L). This decrease corresponds to a decrease in turbidity of the samples (127 NTU in Round 1 and 16 NTU is Round 2). The Round 2 concentration is well below the average for the aquifer (6269 ug/L). The landfill may be the source of high iron concentrations in SJS02-GW2S, however, the well is located between several utility lines, including a water line. It is possible that iron from pipes may be dissolving into the shallow groundwater and impacting iron concentrations in the samples.

During the RRR study previously conducted at the site, acetone (8 J ug/L and 24 ug/L), and 1,3,5 trinitrobenzene (0.58 ug/L) and 2,3,6-trinitrotoluene (0.58 ug/L) were detected in shallow groundwater. With respect to inorganic constituents, comparison of the groundwater analytical data obtained during this RI to data from the RRR study is difficult due to the lack of turbidity data from the RRR and the differenced in sampling techniques.

The potentiometric surface map of the Yorktown Aquifer (Figure 3-7) indicates that in the area of Site 2, flow in that aquifer is to the east. The shallow gradient and tidal influence on the water levels raises the possibility that the flow direction may reverse at times. However, based on the available data, it appears that no deep monitoring wells are located downgradient (east) of the landfill.

The greatest number of COPCs were detected in the sample that appears to be upgradient of the landfill (SJS02-GW1D). The chloroform detected in both Yorktown Aquifer wells during Round 1 was not detected in Round 2. Because the chloroform was not detected in Round 2 samples or any shallow well samples during Round 1, and because the concentrations detected are quite low, chloroform is likely due to laboratory contamination. Two Priority Pollutant metals, antimony and arsenic, were detected in the filtered sample

from the other well (SJS02-GW2D) in Round 2. These metals were not found in any other filtered or unfiltered samples from this well.

In order to further evaluate the impact, if any, that landfill activities have had on groundwater quality in the Yorktown Aquifer, 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 and manganese are well within the range of concentrations for these constituents. The pH measured in the two Yorktown Aquifer monitoring wells ranged from 9.35 (upgradient well, first sampling event) to 7.2 (SJS02-MW2D, second sampling event). All of the readings are at or above the average of the published values (7.2). The maximum published value is 8.1, while both of the readings in the upgradient well are above 9.0. pH readings collected on samples from deep monitoring wells (during development and sampling) at some of the other sites at the Annex (Site 5 and Site 3) have similarly high readings. These Base-wide data indicate that the pH of the groundwater in the Yorktown Aquifer in the St. Juliens Creek Annex area is higher than that found in the surrounding areas, but does not indicate the presence of a specific source of contamination for the aquifer.

The specific conductance measured in deep monitoring wells ranged from 264 umhos/cm to 390 umhos/cm (note that measurement was not recorded from SJS02-MW2D during the first sampling round). These readings are well below the average of the published values (830 umhos/cm).

3.3.6 Site 2 Sediment Analytical Results

Three sediment samples were collected at Site 2: one from a drainage way that leads into the central pond (SJS02-SD01), one from the northern part of the pond (SJS02-SD03), and one from the south part of the pond, near the opening of the culvert that connects the pond to St. Juliens Creek (SJS02-SD02). The nature and extent of the sediment COPCs at Site 2 are discussed below.

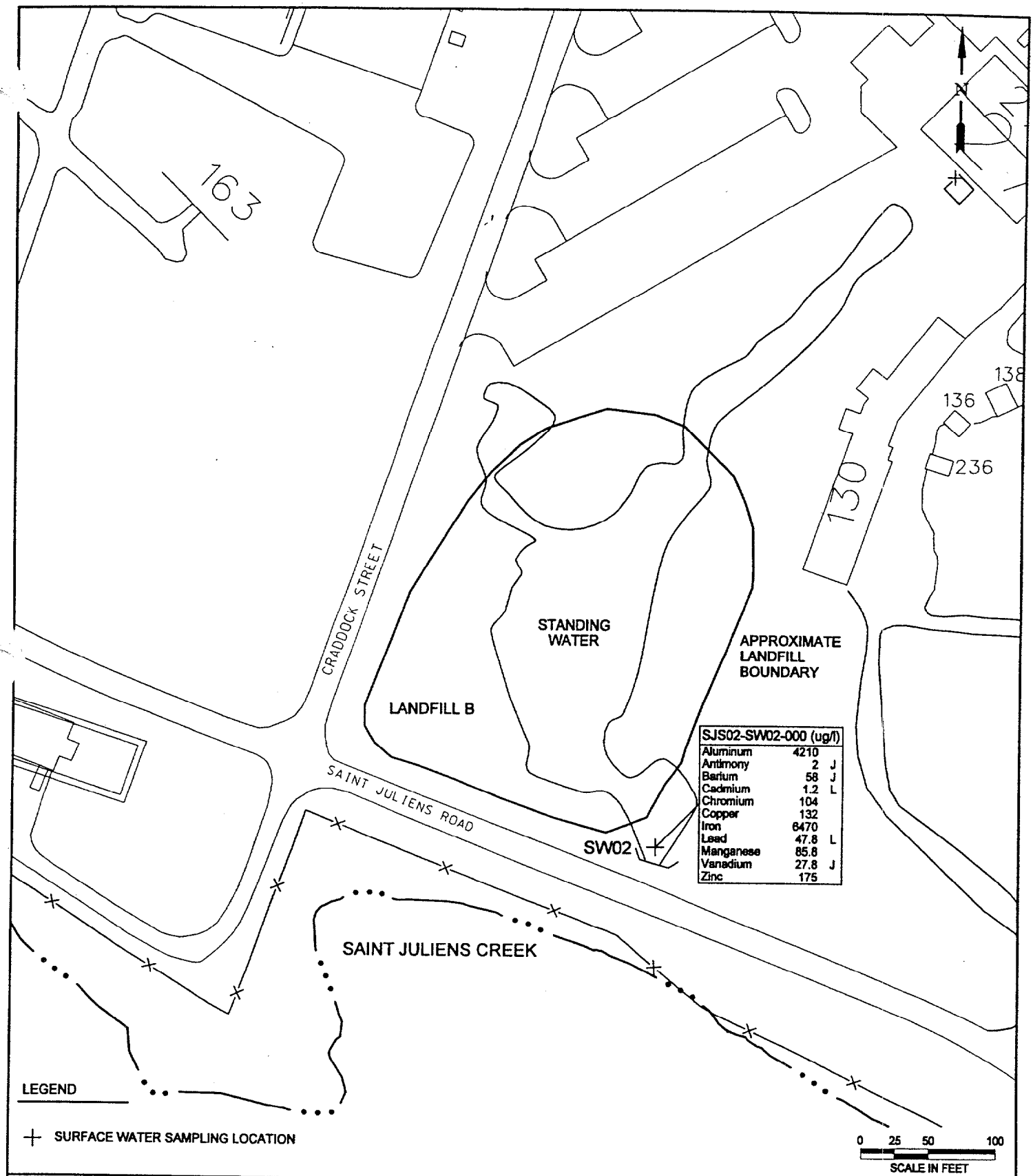
3.3.6.1 Nature and Extent of COPCs in Sediment

The COPCs for sediment at Site 2 are listed in **Table 3-12**, and the distribution of organic and inorganic subsurface soil COPCs at Site 2 are shown in **Figures 3-23 and 3-24** respectively. **Table 3-13** presents the analytical data for all COPCs. Analytical results for all samples and analyses performed at Site 2 are compiled in Appendix G.

Table 3-12
Site 2 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, RBC
Anthracene	BTAG, RBC
Benzo(a)Anthracene	BTAG
Benzo(a)Pyrene	BTAG
Benzo(k)Fluoranthene	BTAG
Chrysene	BTAG
Diethylphthalate	BTAG
Fluoranthene	BTAG
Pyrene	BTAG
1,2-Dichloroethene	BTAG
4-Methyl-2-Pentanone	BTAG
Acetone	BTAG
Carbon Disulfide	BTAG
Inorganic Contaminants	
Total Phosphorous	BTAG
Aluminum	BTAG
Arsenic	BTAG
Barium	BTAG
Beryllium	BTAG
Cobalt	BTAG
Copper	BTAG
Iron	BTAG
Lead	BTAG, NAVY
Manganese	BTAG
Mercury	BTAG
Nickel	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 Patnership Human Health Risk Assessment Consensus Agreements #6.A.1 through 6.A.6 and #6.B.



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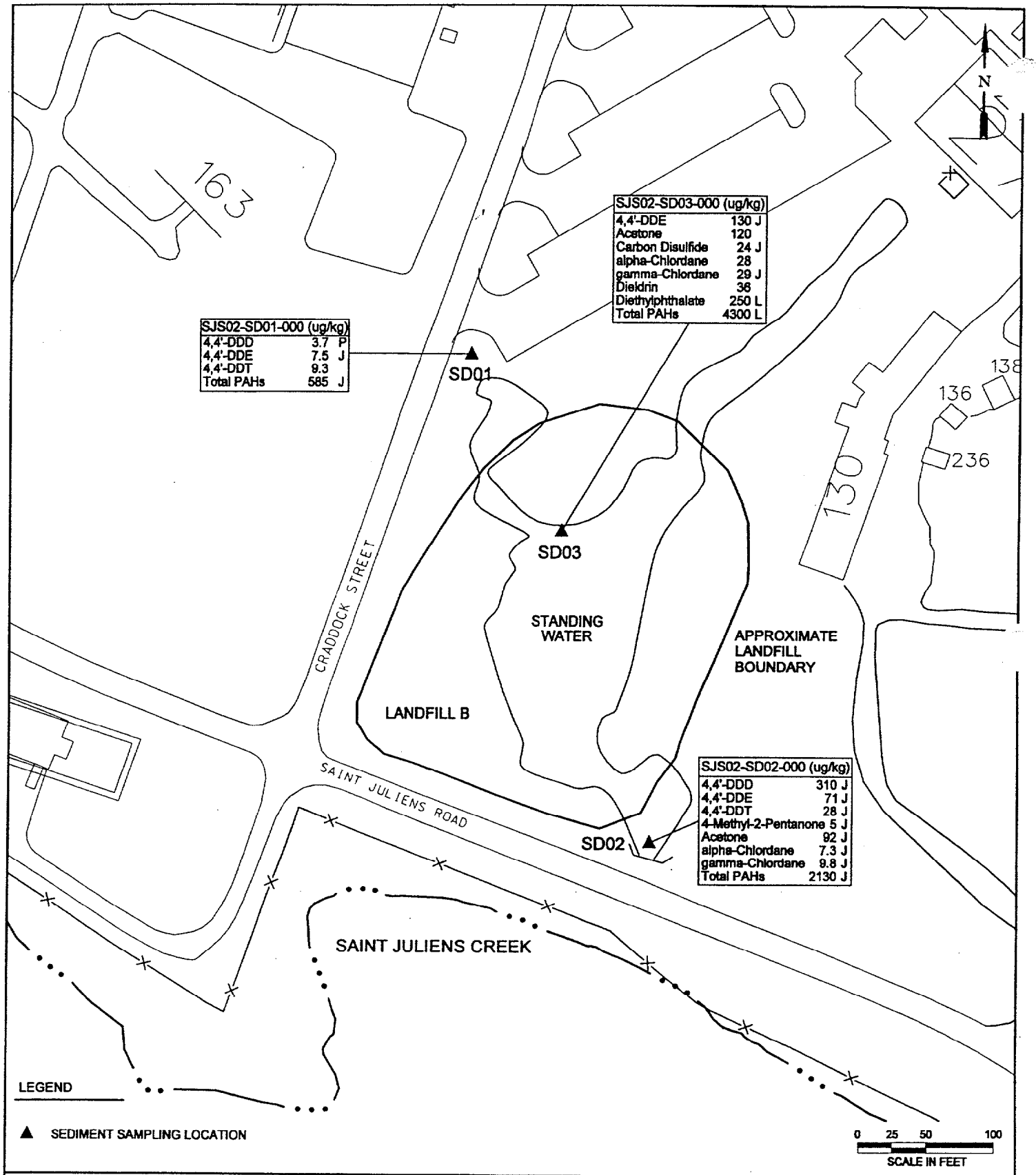
DISTRIBUTION OF INORGANIC COPCs
SURFACE WATER, SITE 2
SAINT JULIENS CREEK ANNEX

FIGURE
3-23



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DISTRIBUTION OF ORGANIC COPCs
SEDIMENT, SITE 2
SAINT JULIENS CREEK ANNEX

FIGURE
3-24

TABLE 3-13

ST. JULIENS CREEK ANNEX, SITE 2
SEDIMENT COPC ANALYTICAL DATA

Analyte Name	SJS02-SD01-000		SJS02-SD02-000		SJS02-SD03-000		SJS02-SD03-000P	
Inorganic (mg/kg)								
Total Phosphorous (as	10.5		13.5		19.1		20.2	
Aluminum	3100		10900		27200		25900	
Arsenic	2.3		5.4	K	13.1		19.4	
Barium	15.4	J	55.7	J	84.7	J	109	J
Beryllium					0.87	J	1.1	J
Cobalt					9.1	J	10.7	J
Copper	4.4	J	344		1700		2620	
Iron	3150		18500		31100		30700	
Lead	15.5		161		396		545	
Manganese	16	K	105		235		224	
Mercury			0.45		0.72		0.79	
Nickel			16.4	K	41.5		40.9	
Thallium							2.2	K
Vanadium	7.2	J	28.8		115		97.9	
Zinc	19.2		416		1140	L	1400	L
Organic (ug/kg)								
4,4'-DDD	3.7	P	310	J			210	
4,4'-DDE	7.5	J	71	J	130	J	110	J
4,4'-DDT	9.3		28	J			8.8	J
alpha-Chlordane			7.3	J	28		18	
Aroclor-1260							69	J
Dieldrin					36		30	J
gamma-Chlordane			9.8	J	29	J	21	J
Anthracene					130	L		
Benzo(a)Anthracene	87	J			440	L	240	J
Benzo(a)Pyrene	79	J			660	L	370	J
Benzo(k)fluoranthene	59	J			440	L	470	J
Chrysene	130	J			680	L	330	J
Diethylphthalate					250	L		
Fluoranthene			930	J	850	L	510	J
Pyrene	230	J	1200	J	1100	L	600	J
1,2-Dichloroethene							9	J
4-Methyl-2-Pentanone			5	J				
Acetone			92	J	120		450	
Carbon Disulfide					24	J	81	

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.

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

P = ?

The organic COPCs detected in sediments at Site 2 include four VOCs, eight SVOCs (including seven PAHs), six pesticides, and one PCB (Aroclor-1260). The inorganic COPCs includes 14 metals and total phosphorus. The VOCs that are considered COPCs include acetone (detected in SJS02-SD03 at 120 J ug/kg and 450 ug/kg in the duplicate, and SJS02-SD02 at 92 J ug/kg), carbon disulfide (detected only in SJS02-SD03 and its duplicate at concentrations of 24 J and 81 ug/kg respectively), 1,2-dichloroethene (total) (detected only in the duplicate of SJS02-SD03 at a concentration of 9 J ug/kg), and 4-methyl-2-pentanone (detected only in SJS02-SD02 at a concentration of 5 J ug/kg).

The SVOCs include diethylphthalate (detected in SJS02-SD03 at 250 L ug/kg) and the following PAHs: anthracene, benzo(a)anthracene, benzo(a)pyrene, benzo(k)fluoranthene, chrysene, fluoranthene and pyrene. On Figure 3-24 the concentrations of PAHs are presented as a total. All of the PAHs were detected in SJS02-SD03 with a total concentration of 4300 J ug/kg. Only fluoranthene and pyrene were detected in SJS02-SD02 (2130 J ug/kg). The lowest concentration of PAHs (585 J ug/kg) was detected in sample SJS02-SD01, the upstream sample.

The pesticides detected in sediment samples included 4, 4'-DDT, 4,4'-DDD, 4,4'-DDE, alpha chlordane, gamma chlordane and dieldrin. The upstream sample (SJS02-SD01) only contained 4,4'-DDT and its transformation products, at concentrations ranging from 3.7 P ug/kg for 4,4'-DDD to 9.3 ug/kg for 4,4'-DDT. Sample SJS02-SD02, located at the culvert connecting the pond to St. Juliens Creek, contained the highest total concentrations of pesticides. Pesticides in that sample include 4,4'-DDT, 4,4'-DDD, 4,4'-DDE, as well as both chlordane isomers. Concentrations ranged from 7.3 J ug/kg for alpha chlordane to 310 J ug/kg for 4,4'-DDD. The greatest number of pesticides were found in the duplicate sample of SJS02-SD03. That sample contained all of the pesticide COPCs for sediment.

The PCB, Aroclor-1260, was only detected in one sample, the duplicate of SJS02-SD03. The concentration in that sample was 69 J ug/kg.

The inorganic COPCs detected in sediments at Site 2 include: aluminum, arsenic, barium, beryllium, cobalt, copper, iron, lead, manganese, mercury, nickel, thallium, vanadium, zinc and total phosphorus (as P). Phosphorus was detected in all samples with the range of concentration from 10.5 mg/kg in the upstream sample (SJS02-SD01) to 20.2 mg/kg in the duplicate of sample SJS02-SD03. The metal COPCs include eight Priority Pollutant metals.

All eight were found in the duplicate sample of SJS02-SD03 (and all but thallium in the SJS02-SD03). These samples also had the highest concentrations of all inorganic COPCs. Some metals were detected at concentrations that are many times greater in the pond sediment samples (SJS02-SD02 and -SD03 and its duplicate) than in the sediment sample from the drainage ditch (SJS02-SD01). These metals include arsenic (ranging from 2.3 mg/kg in SJS02-SD01 to 19.4 in SJS02-SD03 duplicate), lead (ranging from 15.5 mg/kg in SJS02-SD01 to 545 mg/kg in the duplicate of SJS02-SD03), manganese (16 K mg/kg in SJS02-SD01 to 235 in SJS02-SD03), mercury (not detected upstream, 0.79 mg/kg in the duplicate of SJS02-SD03), vanadium (7.2 J mg/kg in SJS02-SD01 to 115 mg/kg in SJS02-SD03) and zinc (19.2 in SJS02-SD01 to 1400 L mg/kg in the duplicate of SJS02-SD03).

3.3.6.2 Discussion of COPCs in Sediment

The sediment from within the pond is derived from runoff from the drainage ditches along Craddock Street and runoff from the landfill surface. The concentrations of several of the metal COPCs, including arsenic, chromium, copper, lead, vanadium, zinc in the two sediment samples collected from within the central landfill pond are high relative to most of surface soil samples collected at the site. The concentration of these metals in the sediment sample collected from the drainage ditch (SJS02-SD01) are significantly lower, and generally in the same order of magnitude as the concentrations in surface soil samples collected 200 ft away from the site (SJS02-SS01). Concentrations of these metals in the other sediment samples are more similar to those found in the most contaminated surface soil samples (SJS02-SS03 and SJS02-SS06). This indicates that the contribution of sediment from the landfill is impacting the sediment quality significantly. The organic constituents found in the sediment, predominantly PAHs and pesticides, may be contributed from drainage ditch runoff.

3.3.7 Site 2 Surface Water Analytical Results

One surface water sample, collected from the central pond near the opening of the culvert that connects the pond to St. Juliens Creek, was collected at Site 2. Dry site conditions during the field investigation prevented the collection of additional samples. The nature and extent of the surface water COPCs at Site 2 are discussed below.

3.3.7.1 Nature and Extent of COPCs in Surface Water

The COPCs for surface water at Site 2 are listed in **Table 3-14**, and the distribution of inorganic surface water COPCs at Site 2 are shown in **Figure 3-25**. **Table 3-15** presents the analytical data for all COPCs. Results for all samples from Site 2 are compiled in Appendix G.

Table 3-14
Site 2 Surface Water COPCs

Organic Contaminants	**Basis for inclusion as a COPC**
Inorganic Contaminants	
Total Phosphorus	BTAG
Aluminum	BTAG
Arsenic	BTAG
Cadmium	AWQC
Chromium	AWQC, BTAG
Copper	AWQC, BTAG
Iron	AWQC, BTAG
Lead	AWQC, BTAG
Manganese	BTAG
Zinc	AWQC, BTAG

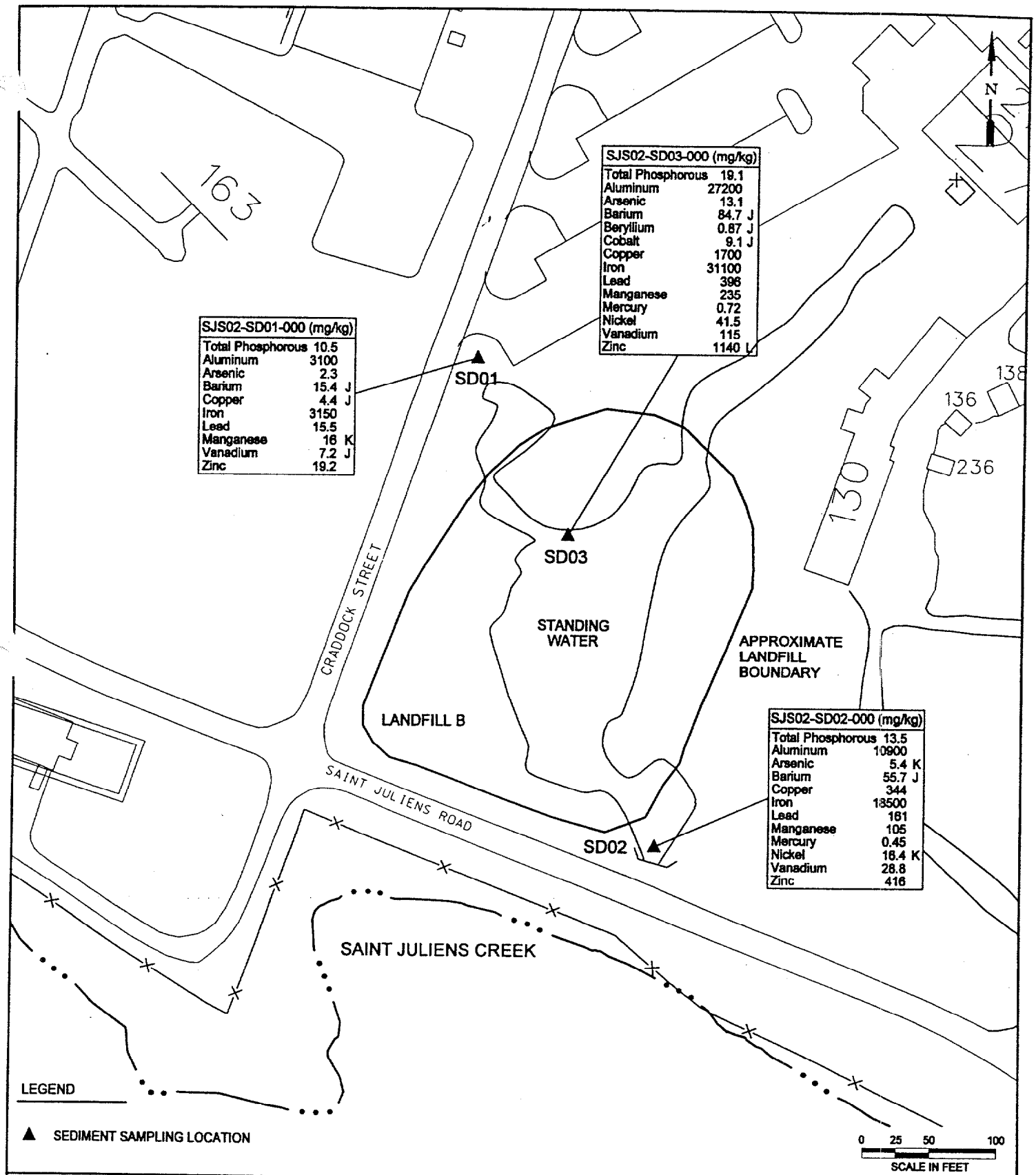
BTAG= Region III BTAG Screening Levels (August 9, 1995 Revision).
AWQC= Ambient Water Quality Criteria

No organic COPCs were identified for the surface water sample that was collected at Site 2. Nine metals and total phosphorus were identified as inorganic COPCs. The metals include aluminum, arsenic, cadmium, chromium, copper, iron, lead, managese, and zinc. Of the nine metals, six are Priority Pollutant metals: arsenic (3.1 J ug/L in the duplicate sample), cadmium (1.2 L ug/L and 1.9 L ug/L in the duplicate), chromium (104 ug/L and 166 ug/L in the duplicate), copper (132 ug/L and 203 ug/L in the duplicate), lead (47.8 ug/L and 77.9 L ug/L in the duplicate), and zinc (175 ug/L and 268 ug/L in the duplicate). In addition, antimony, barium, and vanadium were also detected in the sample.

One non-COPC organic constituent, bis(2-ethylhexyl)phthalate, was detected at a concentration of 3 J ug/L.

3.3.7.2 Discussion of COPCs in Surface Water

The source of the inorganic COPCs in surface water is very difficult to determine at this site. The sample was collected close to the culvert that connects the pond to St. Juliens Creek.



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DISTRIBUTION OF INORGANIC COPCs
SEDIMENT, SITE 2
SAINT JULIENS CREEK ANNEX

FIGURE
3-25

TABLE 3-15

ST. JULIENS CREEK ANNEX, SITE 2
SURFACE WATER COPC ANALYTICAL DATA

Analyte Name	SJS02-SW02-000		SJS02-SW02-000P	
Inorganic (ug/L)				
Total Phosphorous	0.202		0.153	
Aluminum	4210		7870	
Arsenic			3.1	J
Cadmium	1.2	L	1.9	L
Chromium	104		166	
Copper	132		203	
Iron	6470		10700	
Lead	47.8	L	77.9	L
Manganese	85.8		120	
Zinc	175		268	

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.

The sample was collected as the tide was going out; however, there is a clear tidal effect on the pond and during rising tides, the surface water flows into the pond from the creek. The pond also receives rainwater runoff from the drainage ditches along Craddock Street.

Although the surface water sample was collected prior to the sediment sample at the same location, the surface water COPCs correlate closely with the sediment COPCs that were found at relatively high concentrations at that same location. Any suspended sediment could impact (increase) the concentration of those metals in the surface water sample. These metals may also be present in the surface water as colloids.

3.4 Site 5 Remedial Investigation Results

The results of the geologic, hydrogeologic, geophysical, and analytical investigations at Site 5 are presented and discussed below.

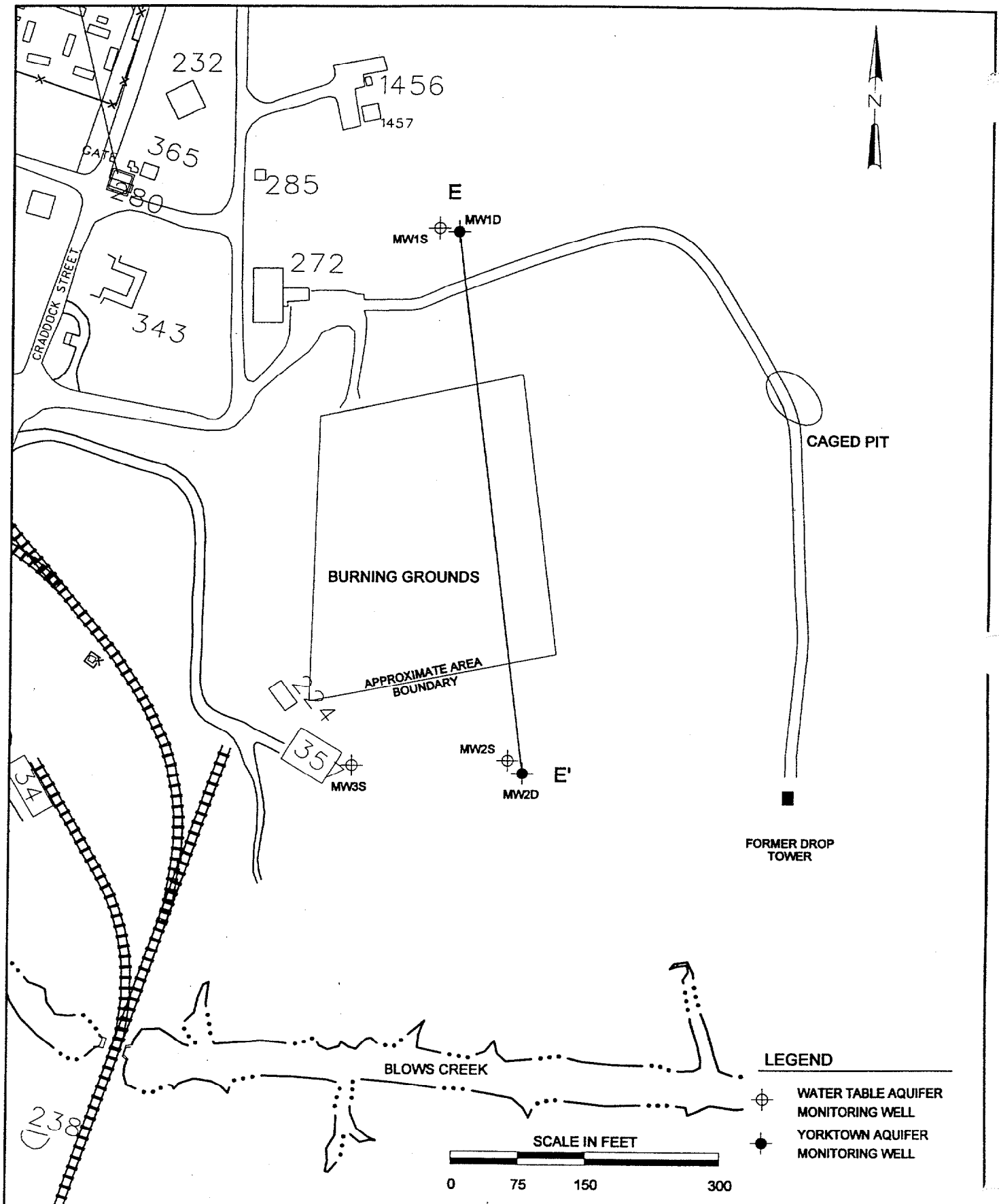
3.4.1 Site 5 Geology

Previous to the Site 5 RI, no site-specific geologic data were available for the site. The geologic data obtained during this investigation provides 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 5 was determined by analyzing the boring logs completed during the drilling and installation of the three shallow and two deep monitoring wells. The geologic units encountered at Site 5 during the RI are listed and described below.

3.4.1.1 Yorktown Formation

The stratigraphy at Site 5 is shown in cross-section E-E' (**Figure 3-26 and 3-27**). The top of the Yorktown Formation is encountered at depths ranging from approximately 14.5 ft below ground surface (an elevation of -8.5 ft msl) at the northern location to 20 ft bgs (-14 ft msl) south of the Burning Grounds. The Yorktown Formation clay averages 27 ft thick at Site 5. At SJS05-MW2D, the southern deep monitoring well, a 2-foot thick layer of fine sand was encountered, interbedded with the Yorktown Formation clay at a depth of 29 ft. The clay overlies approximately 13 ft of sand, clayey sand and silty sand. At the southern location, the sand overlies a gravely clay that included fragments of cemented coquina.



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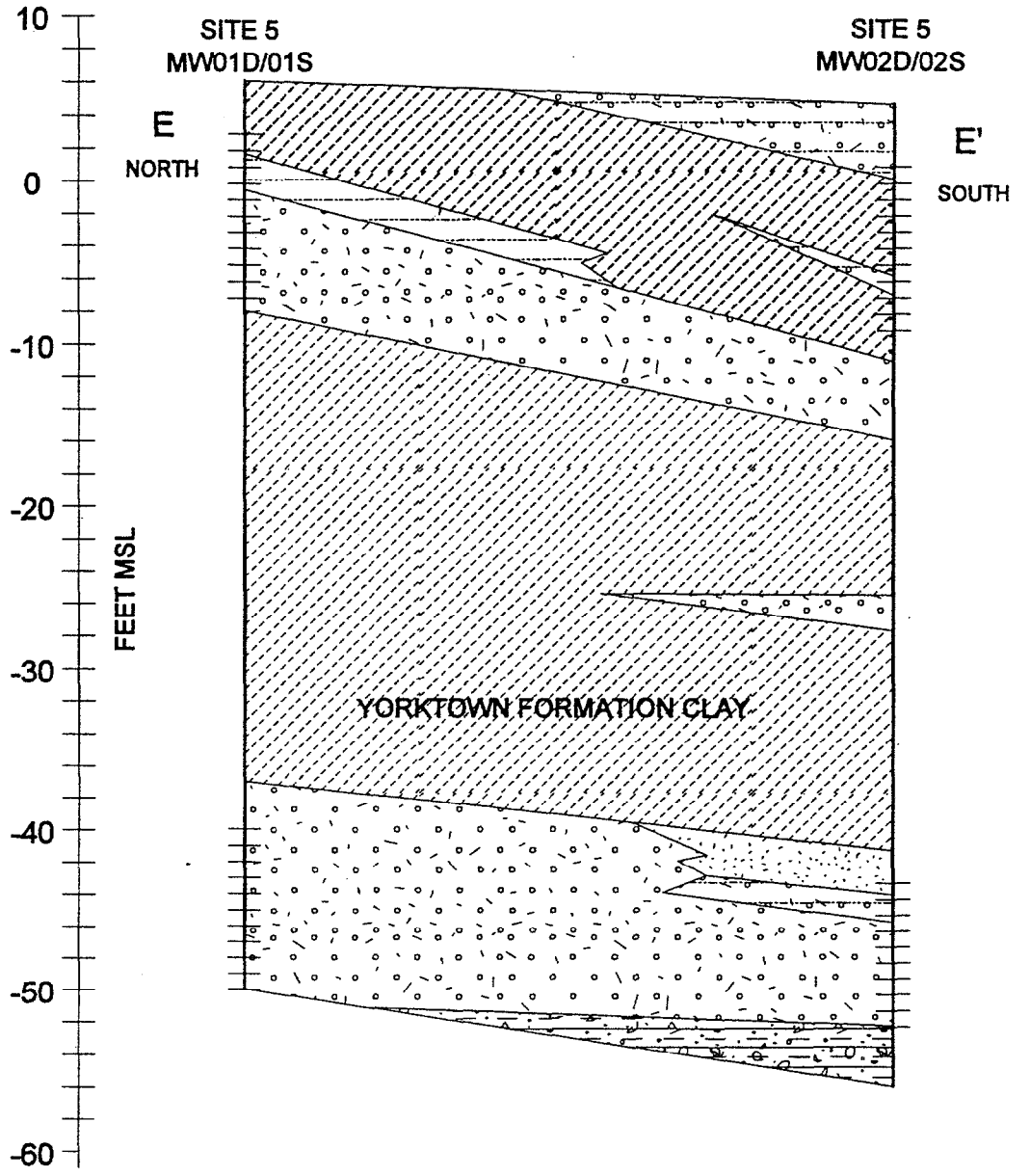
LOCATION OF GEOLOGIC CROSS SECTION E - E', SITE 5
SAINT JULIENS CREEK ANNEX

FIGURE 3-26



LEGEND

- CLAY
- CLAYEY SAND
- SAND
- SILTY SAND
- SILT
- GRAVELY CLAY
- MONITORING WELL SCREENED ZONE

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GEOLOGIC CROSS
SECTION E - E', SITE 5
SAINT JULIENS CREEK ANNEX

FIGURE
3-27

3.4.1.2 Post-Pliocene Sediments

Immediately overlying the Yorktown Formation clay at this site is 14.5 to 20 ft of sand, silty sand, silt and clay (Figure 3-27, cross-section E-E'). Immediately above the Yorktown Formation clay is a reddish, grayish, and yellowish, fine to medium sand unit that appears to be continuous across Site 5. This sand is also continuous across the base to the east (see Figure 3-6, Cross Section C-C'). At Site 5 this sand is overlain by clay and silt at the upgradient location, silty sand at the western shallow monitoring well (SJS05-MW3S) and interfingering clay and silty sand at the southeastern location (SJS05-MW2D/2S).

3.4.2 Site 5 Hydrogeology

The hydrostratigraphic units identified at Site 5 during the RI are listed and described in the following sections.

3.4.2.1 Yorktown Aquifer

The Yorktown Aquifer is encountered at depths of 43 to 46 ft at Site 5. The potentiometric surface of the Yorktown Aquifer in the area of the Burning Grounds is found at an elevation of approximately 1.6 to 1.8 ft msl. As shown on the Base-wide potentiometric surface map (Figure 3-7), the direction of groundwater flow is variable. In the northern part of the site, the flow is to the west. In the southern part of the site the flow is to the southeast, toward the South Branch of the Elizabeth River. These flow directions, depicted on Figure 3-7, represent conditions at one particular time. The potentiometric surface at monitoring well SJS05-MW1D was measured approximately hourly for eleven hours on November 4, 1997 as part of the tidal study. The data, shown in Table 3-2, shows that the maximum fluctuation during that time period was 0.06 ft. Because the horizontal flow gradient is very flat (approximately 0.0003 ft/ft), a fluctuation of even 0.06 ft could cause a significant change in groundwater flow direction. Additional data will be needed to determine if a true reversal of flow direction occurs at the site.

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 5 the clay is found at depths ranging from 14.5 to 20 feet bgs (-8.5 to -24 ft msl) and has an average thickness of about 27 feet. At the northern monitoring well cluster there is essentially no vertical hydraulic gradient across the clay. The water level data depicted in Figure 3-10 indicates that , due to the tidal fluctuations, there is a

slight gradient that changes directions with time (i.e., due to the tides). At the time of the July measurements the vertical gradient at the southern location was 0.1 ft/ft in the upward direction. However, it is expected that this may also vary in magnitude and direction based on tidal influences.

3.4.2.3 Water Table Aquifer

The Water Table Aquifer at Site 5 consists of Post-Pliocene sediments above the Yorktown Formation clay. The potentiometric surface of the Water Table Aquifer is shown in **Figure 3-28** based on water level readings collected on July 31, 1997. As indicated on the map, the direction of groundwater flow in the aquifer is toward the east and the gradient is approximately 0.0125 ft/ft. The water levels collected in November 1997, although not shown on a map, indicate a similar groundwater flow direction and gradient. The direction of groundwater flow may be controlled by discharge to a marsh that borders the site to the east.

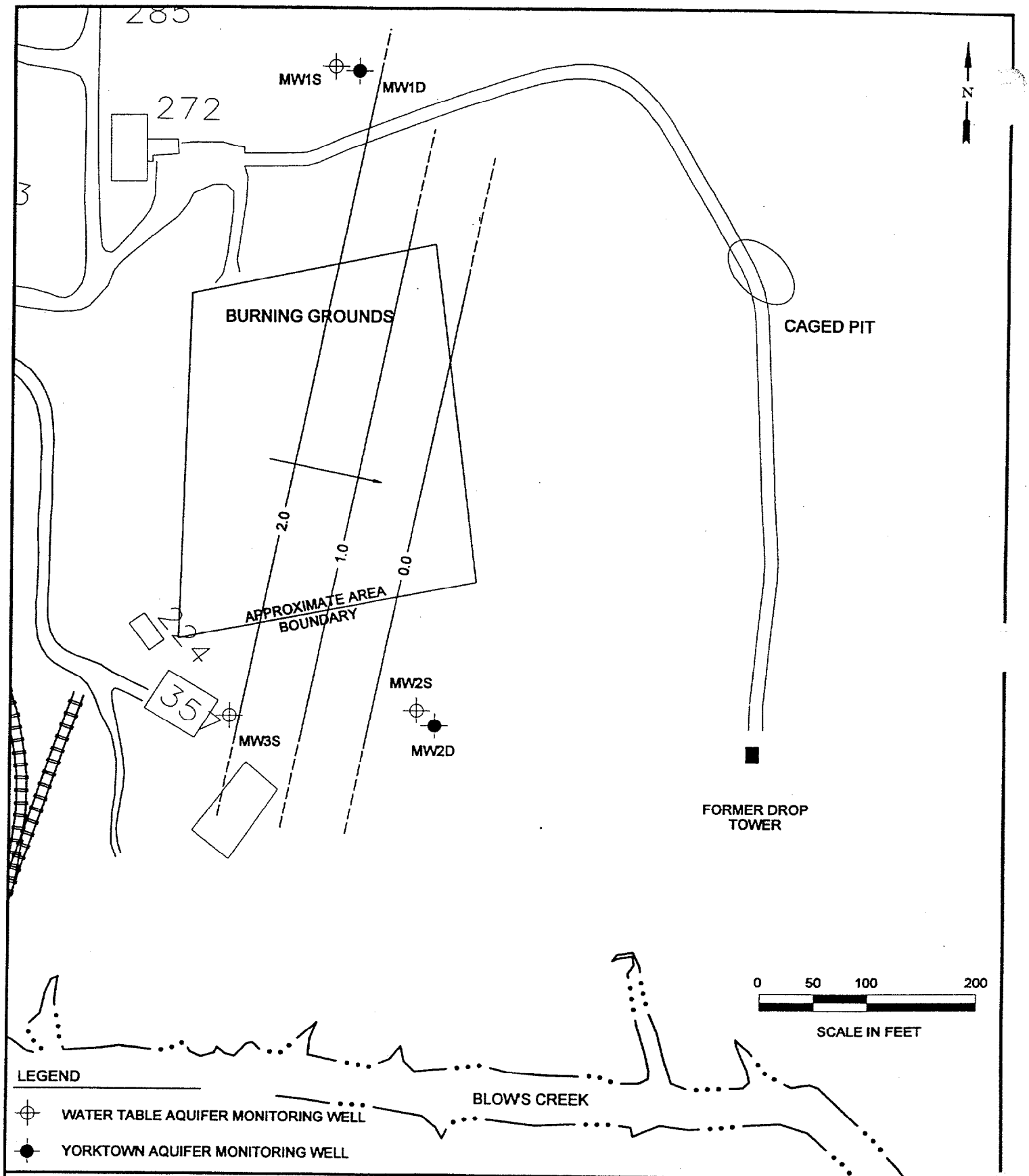
3.4.3 Site 5 Geophysical Survey Results

The results of the geophysical surveys conducted at Site 5 are presented and discussed below. A copy of the geophysical survey report submitted by ERT for work conducted at the sites is included as Appendix A to this RI report.

Geophysical surveys were conducted at two locations at Site 5: the Burning Grounds and the caged pit area. The results for each area are presented below.

3.4.3.1 Burning Grounds

The EM survey at Site 5 was conducted to determine the presence of buried metal, and as a means of determining the extent of the burning grounds. The majority of the EM anomalies identified at the Burning Grounds are associated with metallic and other objects at the surface. The only two EM anomalies that are not associated with surface materials are located about 230 ft and 200 ft south of Building 272. These anomalies are apparently caused by buried materials or changes in salt or clay content of the soil. Because of their close spatial relationship, these anomalies will be considered as one potential area of buried material, and are shown on **Figure 3-29** as one anomaly. Because the site activities did not create conditions that would change the EM characteristics of the soil, the data did not indicate the site boundaries.



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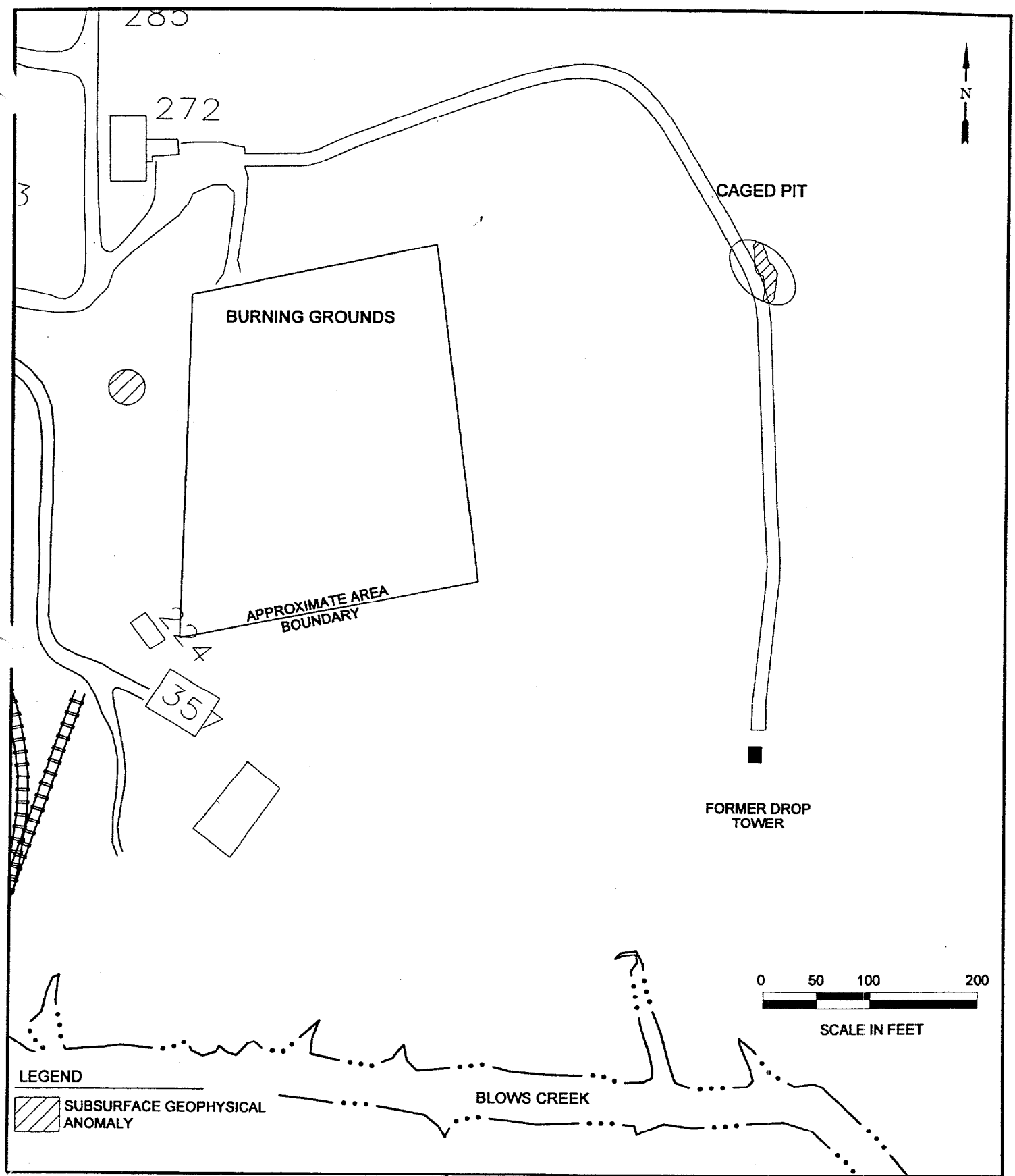
POTENTIOMETRIC SURFACE
WATER TABLE AQUIFER, SITE 5
SAINT JULIENS CREEK ANNEX

FIGURE
3-28



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LOCATION OF GEOPHYSICAL ANOMALIES, SITE 5
SAINT JULIENS CREEK ANNEX

FIGURE 3-29

3.4.3.2 Caged Pit Area

The is no surface expression of the former caged pit, therefore geophysical methods were used to locate this feature for further investigation. The magnetic and conductivity surveys conducted in the area of the caged pit identified generally coincident in-phase, conductivity and magnetic anomalies. This area, shown on Figure 3-29 is considered to be the former caged pit area. The data were used in the field to locate the subsurface soil sampling locations used to investigate this feature.

3.4.4 Site 5 Soil Analytical Results

At Site 5, surface soil was only collected in the burning ground area, while subsurface soil was collected in three area: the burning grounds, the caged pit, and the former drop tower.

The analytical results for surface and subsurface soil are discussed below. The discussions refer to COPCs which are risk-based (human health and ecological). The list of COPCs for subsurface and surface soil are different based on the potential exposures.

3.4.4.1 Site 5 Surface Soil

The nature and extent of the surface soil COPCs at Site 5 (Burning Grounds) are discussed below.

3.4.4.1.1 Nature and Extent of COPCs at Site 5

The COPCs for surface soil at Site 5, are listed in **Table 3-16** and the distribution of organic and inorganic COPCs at Site 5 are shown in **Figures 3-30 and 3-31** respectively. **Table 3-17** presents the analytical data for all COPCs in the surface soil. Results for all surface soil samples from Site 5 are compiled in Appendix G.

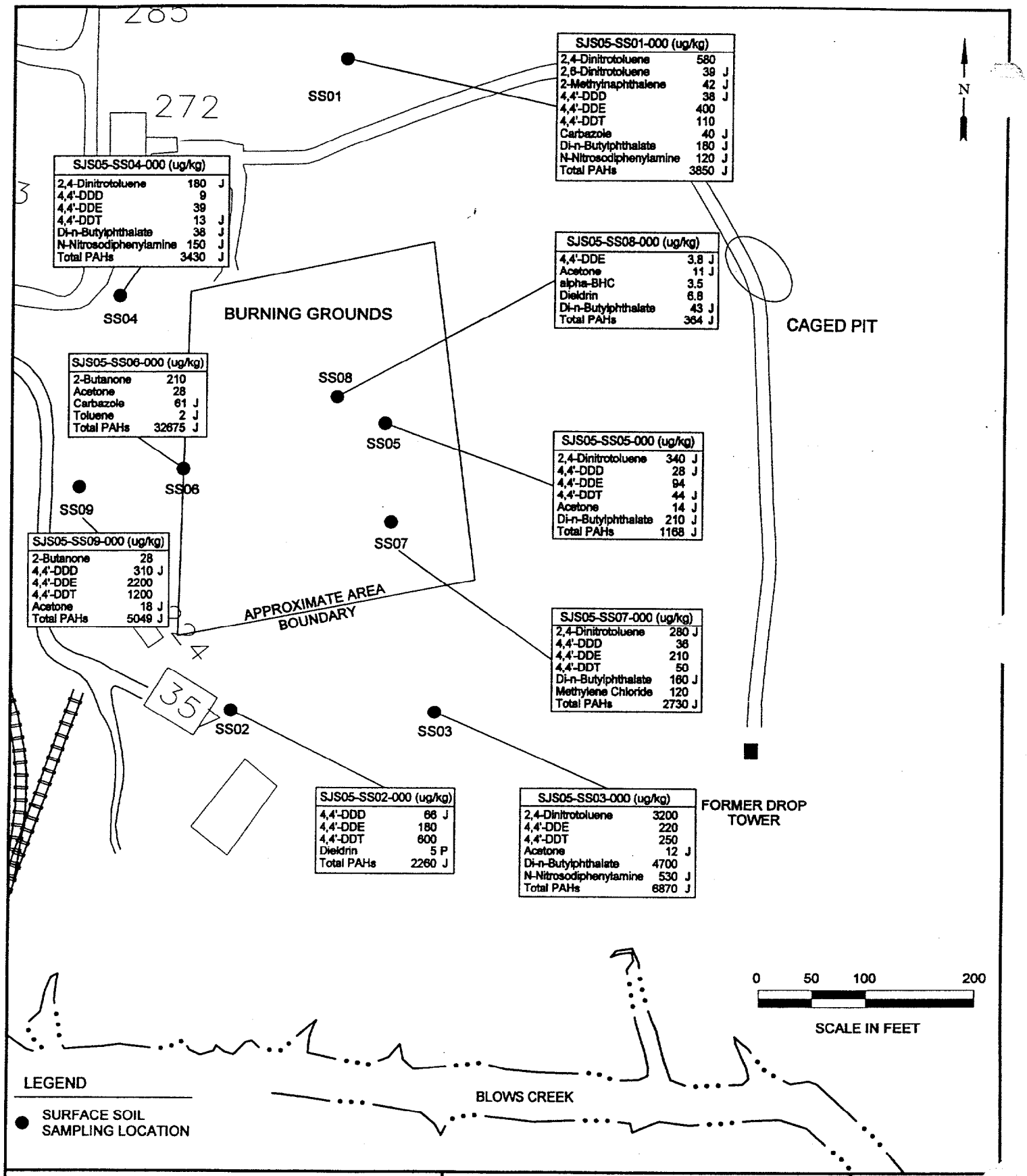
The organic COPCs detected in surface soil at Site 5 include three VOCs (acetone, 2-butanone, and methylene chloride), 16 SVOCs, and five pesticides. The inorganic COPCs include 17 metals, total phosphorus, and cyanide.

The VOC COPCs were detected six of the nine surface soil samples (SJS05-SS03, -SS05, -SS06, -SS07, -SS08, and -SS09). Acetone was detected in all of these except SJS05-SS04 and -SS07, at concentrations ranging from 12 J ug/kg in SJS05-SS03 to 28 ug/kg (SJS05-SS06). 2-Butanone was only detected in two samples, with the highest concentration (210 ug/kg) being detected in SJS05-SS06. Methylene chloride was detected only once, in SJS05-SS07, at a concentration of 120 ug/kg.

Table 3-16
Site 5 Surface Soil COPCs

Organic Contaminants	Basis for inclusion as a COPC
4,4' - DDD	BTAG
4,4' - DDE	BTAG, RBC, SSL
4,4' - DDT	BTAG, SSL
alpha-BHC	SSL
Dieldrin	SSL
2,4,Dinitrotoluene	BTAG, SSL
2,6-Dinitrotoluene	BTAG
2-Methylnaphthalene	BTAG
Benzo(a)Anthracene	BTAG, SSL
Benzo(a)Pyrene	BTAG, RBC
Benzo(b)Fluoranthene	BTAG, RBC
Benzo(k)Fluoranthene	BTAG
Benzo(g,h,i)Perylene	BTAG
Carbazole	BTAG
Chrysene	BTAG, SSL
Di-n-Butylphthalate	BTAG
Fluoranthene	BTAG
Indeno(1,2,3-cd)Pyrene	BTAG
N-Nitrosodiphenylamine	BTAG,SSL
Phenanthrene	BTAG
Pyrene	BTAG
Acetone	BTAG
2-Butanone	BTAG
Methylene Chloride	SSL
Inorganic Contaminants	
Total Phosphorous	BTAG
Aluminum	BTAG, RBC
Antimony	BTAG
Arsenic	RBC, SSL
Barium	BTAG, SSL
Beryllium	BTAG, RBC
Cadmium	BTAG
Chromium	BTAG
Copper	BTAG, RBC
Cyanide	BTAG
Iron	BTAG, RBC
Lead	BTAG, NAVY
Manganese	BTAG, RBC
Mercury	BTAG
Nickel	BTAG, 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.
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.
SSL= EPA, 1997. Soil Screening Levels as presented in Region III Updated Risk-Based Concentration Table. March, 1997.



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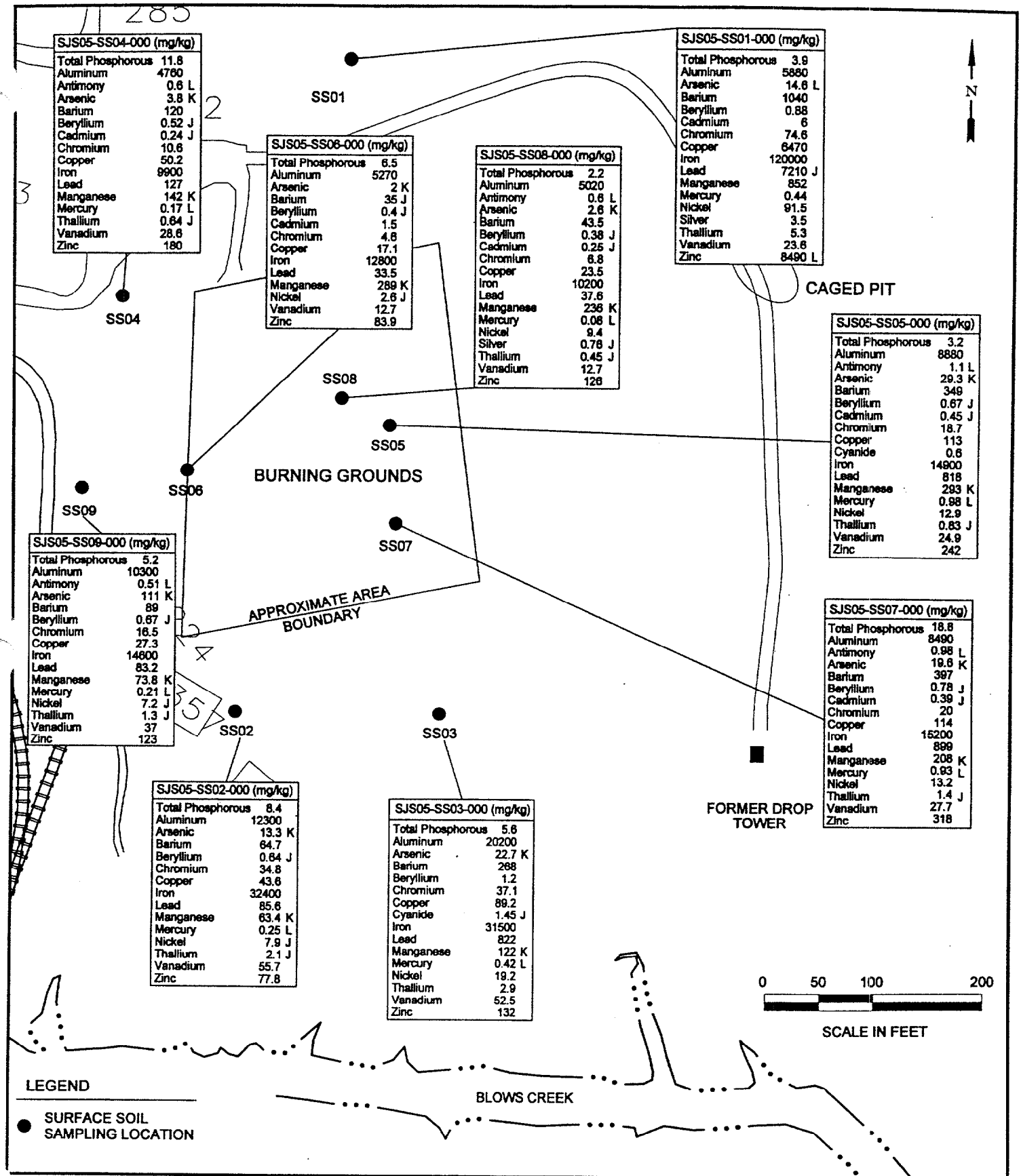
DISTRIBUTION OF ORGANIC COPCs SURFACE SOIL, SITE 5 SAINT JULIENS CREEK ANNEX

FIGURE 3-30



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DISTRIBUTION OF INORGANIC COPCs SURFACE SOIL, SITE 5 SAINT JULIENS CREEK ANNEX

FIGURE 3-31

TABLE 3-17

ST. JULIENS CREEK ANNEX, SITE 5
SURFACE SOIL COPC ANALYTICAL DATA

Analyte Name	SJS05-SS01-000		SJS05-SS02-000		SJS05-SS03-000		SJS05-SS04-000		SJS05-SS05-000		SJS05-SS06-000		SJS05-SS07-000		SJS05-SS08-000		SJS05-SS09-000	
Inorganic (mg/kg)																		
Total Phosphorous	3.9		8.4		5.6		11.8		3.2		6.5		18.8		2.2		5.2	
Aluminum	5880		12300		20200		4760		8880		5270		8490		5020		10300	
Antimony							0.6	L	1.1	L			0.98	L	0.6	L	0.51	L
Arsenic	14.6	L	13.3	K	22.7	K	3.8	K	29.3	K	2	K	19.6	K	2.6	K	111	K
Barium	1040		64.7		268		120		349		35	J	397		43.5		89	
Beryllium	0.88		0.64	J	1.2		0.52	J	0.67	J	0.4	J	0.78	J	0.38	J	0.67	J
Cadmium	6						0.24	J	0.45	J	1.5		0.39	J	0.25	J		
Chromium	74.6		34.8		37.1		10.6		18.7		4.6		20		6.8		16.5	
Copper	6470		43.6		89.2		50.2		113		17.1		114		23.5		27.3	
Cyanide					1.45	J			0.6									
Iron	120000		32400		31500		9900		14900		12800		15200		10200		14600	
Lead	7210	J	85.6		822		127		818		33.5		899		37.6		83.2	
Manganese	852		63.4	K	122	K	142	K	293	K	289	K	208	K	236	K	73.8	K
Mercury	0.44		0.25	L	0.42	L	0.17	L	0.98	L			0.93	L	0.08	L	0.21	L
Nickel	91.5		7.9	J	19.2				12.9		2.6	J	13.2		9.4		7.2	J
Silver	3.5														0.76	J		
Thallium	5.3		2.1	J	2.9		0.64	J	0.83	J			1.4	J	0.45	J	1.3	J
Vanadium	23.6		55.7		52.5		28.6		24.9		12.7		27.7		12.7		37	
Zinc	8490	L	77.8		132		180		242		83.9		318		126		123	
Organic (ug/kg)																		
4,4'-DDD	38	J	66	J			9		28	J			36				310	J
4,4'-DDE	400		180		220		39		94				210		3.8	J	2200	
4,4'-DDT	110		600		250		13	J	44	J			50				1200	
alpha-BHC															3.5			
Dieldrin			5	P											6.8			
2,4-Dinitrotoluene	580				3200		180	J	340	J			280	J				
2,6-Dinitrotoluene	39	J																
2-Methylnaphthalene	42	J																

TABLE 3-17

ST. JULIENS CREEK ANNEX, SITE 5
SURFACE SOIL COPC ANALYTICAL DATA

Analyte Name	SJS05-SS01-000		SJS05-SS02-000		SJS05-SS03-000		SJS05-SS04-000		SJS05-SS05-000		SJS05-SS06-000		SJS05-SS07-000		SJS05-SS08-000		SJS05-SS09-000	
Organic (ug/kg)																		
Benzo(a)Anthracene	390		180	J	810	J	330	J	95	J	220	J	230	J	37	J	400	
Benzo(a)Pyrene	390		140	J	480	J	290	J	73	J	120	J	190	J			340	J
Benzo(b)Fluoranthene	700		570		1900	J	480		300	J	560		490		92	JN	1100	
Benzo(g,h,i)Perylene	270	J	120	J	350	J	160	J	66	J	77	J	120	J			230	J
Benzo(k)Fluoranthene	140	J	200	J	700	J	220	J	76	J	150	J	200	J			330	J
Carbazole	40	J									61	J						
Chrysene	390		340	J	1100	J	370		160	J	450		330	J	56	J	610	
Di-n-Butylphthalate	180	J			4700		38	J	210	J			160	J	43	J		
Fluoranthene	520		260	J			470		130	J	790		350	J	63	J	500	
Indeno(1,2,3-cd)Pyrene	270	J	160	J	540	J	170	J	81	J	110	J	150	J	35	J	260	J
N-Nitrosodiphenylamine	120	J			530	J	150	J										
Phenanthrene	270	J	70	J	260	J	330	J	57	J	230	J	250	J			79	J
Pyrene	510		220	J	730	J	610		130	J	560		420		81	J	1200	
2-Butanone											210						28	
Acetone					12	J			14	J	28				11	J	18	J
Methylene Chloride													120					

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.

P = ?

JN =

Of the 17 SVOC COPCs, eleven are PAHs. The data for the PAHs is presented as a total PAH in Figures 3-30 and 3-31. PAHs were found in all samples at concentrations of total PAH ranging from 364 J ug/kg (SJS05-SS08) to 6870 J ug/kg (SJS05-SS03). Two isomers of dinitrotoluene (2,4-DNT and 2,6-DNT) were found in surface soils at the site. The most wide-spread is 2,4-DNT, detected in five samples ranging in concentration from 180 J ug/kg in SJS05-SS04 to 3200 ug/kg in SJS05-SS03. 2,6-DNT was only detected in SJS05-SS01 at a concentration of 39 ug/kg. Di-n-butylphthalate was detected in all samples except SJS05-SS02, -SS06 and -SS09, at concentrations ranging from 38 J ug/kg (SJS05-SS04) to 4700 ug/kg (SJS05-SS03). Other SVOC COPCs include carbazole (detected in SJS05-SS01 at 40 J ug/kg and SJS05-SS06 at 61 J ug/kg), and N-nitrosodiphenalamine (detected in three samples (SJS05-SS01, -SS03 and -SS04) at concentrations ranging from 120 J ug/kg to 530 J ug/kg.

Five pesticides are included as COPCs: 4,4'-DDD, 4,4'-DDE, 4,4'-DDT, alpha-BHC, and dieldrin. Two of these were detected only at low concentrations in a relatively few samples: dieldrin (5 P ug/kg in SJS05-SS02 and 6.8 ug/kg in SJS05-SS08) and alpha-BHC (3.5 ug/kg in SJS05-SS08). 4,4'-DDT or its transformation products were detected in all samples except SJS05-SS06, and sample SJS05-SS08 only contained a trace amount (3.8 J ug/kg of 4,4'-DDE). The concentrations of 4,4'-DDT ranged from 13 J in SJS05-SS04 to 1200 ug/kg in SJS05-SS09. Sample SJS05-SS09 also contained the highest concentration of 4,4'-DDE (2200 ug/kg) and 4,4'-DDD (310 J ug/kg).

In addition to the organic COPCs, other organic compounds were detected in some of the samples. These compounds included Aroclor-1260, found in SJS05-SS02 (30 J ug/kg) and SJS05-SS08 (39 ug/kg). Trace levels of tetracholorethene (TCE) were detected in SJS05-SS05 (2 J ug/kg), -SS08 (1 J ug/kg), and -SS09 (4 J ug/kg). Trace levels of toluene were also found in these same samples (ranging from 2 J ug/kg to 5 J ug/kg). Other VOCs included 1,2-dichloroethene (1 J ug/kg in SJS05-SS08) and xylene in SJS05-SS05 (3 J ug/kg). Alpha-chlordane and gamma-chlordane were both detected in SJS05-SS08.

The metals that are COPCs for the surface soils include all of the Priority Pollutant metals except selenium. The list includes several metals that are not Priority Pollutants, including: aluminum, barium, iron, manganese, and vanadium. 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 summarized by Shacklette and Boerngen (1984) and are listed in Table 3-5.

The metal COPCs that were detected in Site 5 soils at concentrations which fall within the typical ranges listed in Table 3-5 include: aluminum (detected in all the samples at concentrations ranging from 4760 mg/kg (SJS05-SS04) to 20,200 mg/kg (SJS05-SS03)), antimony (detected at concentrations ranging from 0.6 L mg/kg in SJS05-SS04 and -SS08 to 1.1 L mg/kg SJS05-SS05)), barium (found at concentraions ranging from 35 J mg/kg in SJS05-SS06 to 1040 mg/kg in SJS05-SS01), beryllium (ranging from 0.38 J mg/kg in SJS05-SS08 to 1.2 mg/kg in SJS05-SS03), chromium (detected in all samples at concentrations ranging from 4.6 mg/kg in SJS05-SS06 to 74.6 mg/kg in sample SJS05-SS01), manganese (detected in all samples at concentrations ranging from 63.4 K in SJS05-SS02 to 852 in SJS05-SS01), mercury (detected in all samples except SJS05-SS06 at concentrations ranging from 0.08 L mg/kg in SJS05-SS08 to 0.98 mg/kg in SJS05-SS05), nickel (found in all samples except SJS05-SS04 at concentrations ranging from 2.6 J mg/kg in SJS05-SS06 to 91.5 mg/kg in SJS05-SS01), total phosphorus (detected in all samples at concentrations ranging from 2.2 mg/kg at SJS05-SS08 to 18.8 mg/kg in sample SJS05-SS07), thallium (found at concentrations ranging from of 0.45 J mg/kg in SJS05-SS07 to 5.3 mg/kg in SJS05-SS01), and vanadium (detected in all samples at concentrations ranging from 12.7 mg/kg in SJS05-SS06 and -SS08 to 55.7 mg/kg in SJS05-SS02).

Two metal COPCs, cadmium and silver, are not listed in Shacklette and Boerngen's (1984) list of metals concentrations. Cadmium was found in all surface soil samples except SJS05-SS02, -SS03 and -SS09). The concentrations of cadmium detected in Site 5 surface soils ranged from 0.24 J mg/kg in SJS05-SS04 to 6.0 in SJS05-SS01. Silver was detected in two samples: SJS05-SS01 at 3.5 mg/kg and SJS05-SS08 at 0.76 J mg/kg.

Metal COPCs that were detected at concentrations exceeding the ranges typically found in the eastern United States soils include arsenic, copper, iron, lead and zinc. The concentration of arsenic only exceeded the published range in sample SJS05-SS09 (111K mg/kg). The published upper limit of observed iron concentations is open-ended (">100,000 mg/kg"). Iron concentrations in Site 5 surface soils ranged from 9900 mg/kg in SJS05-SS04 to 120000 mg/kg in SJS05-SS01 (the only sample that exceeded 100,000 mg/kg). Sample SJS05-SS01 was the only sample to exceed the published range for both copper (6470

mg/kg) and zinc (8490 mg/kg). Lead concentrations exceeded the published range in SJS05-SS01 (7210 mg/kg), -SS03 (822 mg/kg),), -SS05 (818 mg/kg), and -SS07 (899 mg/kg).

One additional inorganic COPC, cyanide, was identified at Site 2. Cyanide was only detected in two samples, SJS05-SS03 at a concentration of 1.45 J mg/kg and SJS05-SS05 at a concentration of 0.6 mg/kg.

3.4.4.1.2 Discussion of COPCs in Surface Soil

VOCs in surface soils are not present at high concentrations or in samples that would be associated with burning activities. Sample SJS05-SS06, which contains the highest concentration of VOCs, is essentially a sample of gravel that covers the former burning ground area. detected VOCs may, therefore, be the result of storage of other materials at the site.

The distribution of 2,4-DNT, a constituent of explosives, may be the best indication of the extent of contamination at the site. The samples that did not contain 2,4-DNT include SJS05-SS09 to the west of the burning grounds, SJS05-SS02, on the southwest, and two samples of the gravel that cover the former burning grounds area (SJS05-SS06 and -SS08). The ubiquitous presence of PAHs in soils of industrialized areas makes the determination of the source of the PAHs difficult. PAHs were found in two samples of gravel covering the former burning surface (SJS05-SS06 and -SS08). With the exception of these two samples, the reported burning of oils during remediation of the site is a potential source of PAHs in site surface soils.

Pesticides, like PAHs, appear to be wide-spread and are not present at concentrations indicative of spills. The presence of pesticides in surface soil samples at this may be the result of periodic past application of these chemicals to the grounds of the Base, although pesticides were reported to have been disposed at the site. Generally the concentration of pesticides are low, and they are found in samples of the gravel that ovverlying the burning ground surface. The highest concentrations of pesticides were found in sample SJS05-SS09, located in the grassy area to the west of the burning grounds, not far from the road to Building 357.

The distribution of metals found at concentrations that exceed typical values for the eastern United States indicates that lead is the most wide-spread metal COPC. The locations where the concentration of lead exceeded the published range includes all samples in which 2,4-

DNT was found in except SJS05-SS04. In that sample the lead concentration (127 mg/kg) was elevated relative to other concentrations at the site. The high concentration of arsenic in SJS05-SS09 does not appear to correspond to site activities. The arsenic in that sample may be related to past pesticide use. That sample contained the highest concentration of other pesticides. Sample SJS05-SS01 contained the highest concentration of several metals including barium, copper, iron, lead, manganese, nickel, silver, thallium and zinc. This sample is located to the north of the area described as the burning area by Mr. Bryant, a former Navy employee present during the burning activities, in an onsite interview.

3.4.4.2 Site 5 Subsurface Soil

The nature and extent of subsurface soil is described and discussed below. Subsurface soil samples at Site 5 were collected from a depth just above the top of the water table, as determined from moisture in the soil samples. At Site 5, all samples were collected from depths less than 5 ft. One sample , SJS05-SB05, was collected from a depth of 0 to 3 ft, specifically to provide data for the ecological risk assessment. Therefore, all subsurface soil samples were essentially collected from the same zone. Except when compared to surface soil data there is no attempt to discuss the variation of concentrations of COPCs with depth.

The description will be organized in three subsections corresponding the three areas in which subsurface soil samples were collected: the burning grounds, the caged pit area, and the former drop tower.

3.4.4.2.1 Nature and Extent

The COPCs for subsurface soil at Site 5 are listed in **Table 3-18,** and the distribution and concentration of organic and inorganic subsurface soil COPCs at Site 5 are shown in **Figures 3-32 and 3-33** respectively. The analytical results for the subsurface soil COPCs are shown in **Table 3-19**. Analytical results for all samples and analyses for Site 5 are compiled in Appendix G.

Burning Grounds

There are only two organic COPCs for the subsurface soil in the burning ground area: methylene chloride, a VOC, and benzo(a)pyrene, and SVOC (and PAH). Methylene chloride was detected in one sample, SJS05-SB05 at a concentration of 14 J ug/kg.

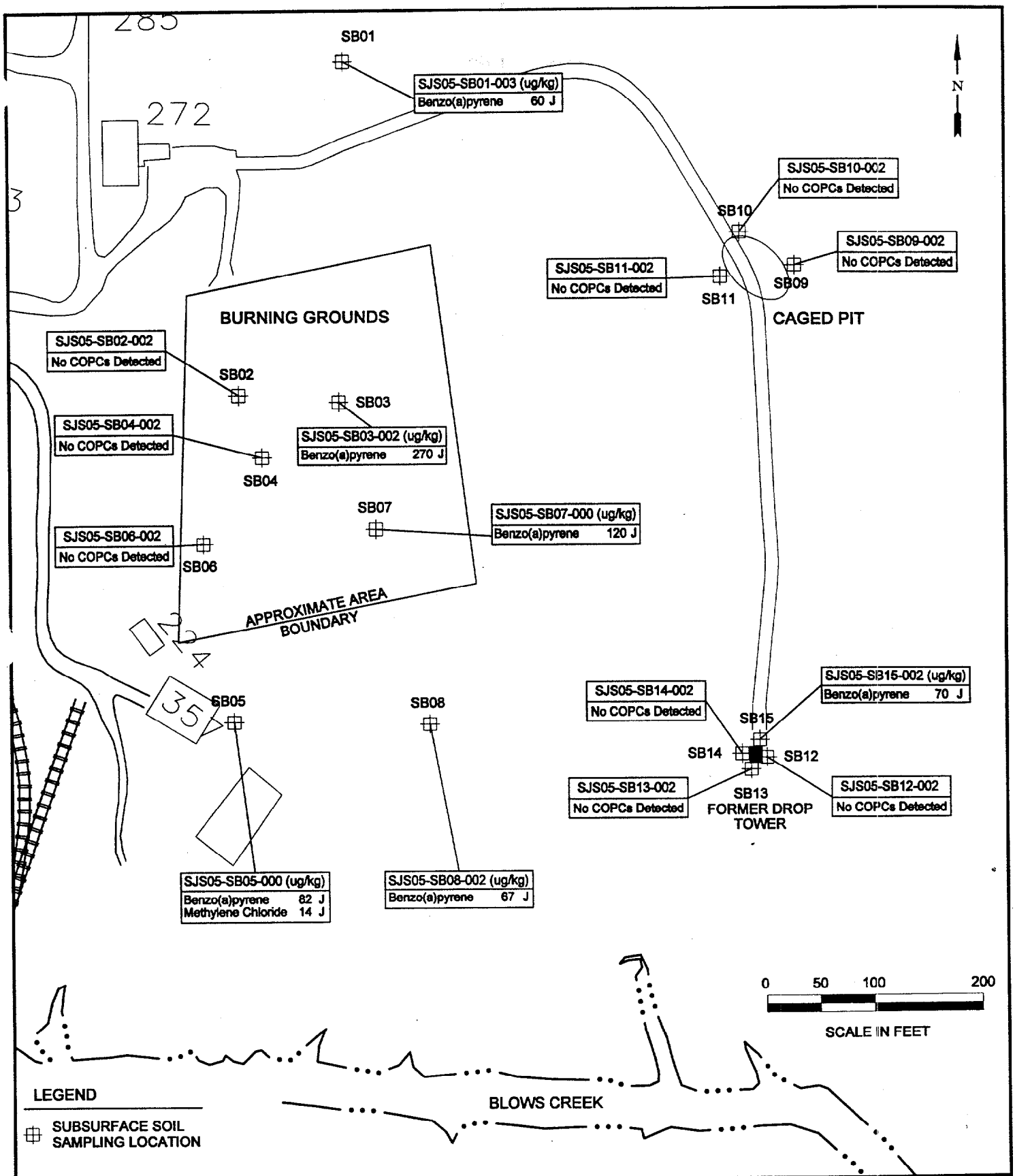
Table 3-18
Site 5 Subsurface Soil COPCs

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

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.

Benzo(a)pyrene was detected in all samples except SJS05-SB02, SJS05-SB04, and SJS05-SB06 at concentrations ranging from 60 J ug/kg at SJS05-SB01 to 270 J ug/kg at SJS05-SB03. Several other non-COPC organic constituents were detected in the subsurface soil from the burning grounds area. These included acetone (170 ug/kg at SJS05-SB01), carbon disulfide at 2 J ug/kg at SJS05-SB04 and 17 J ug/kg at SJS05-SB07, methylene chloride at 14 J (SJS05-SB05) and tetrachloroethene at 2 J ug/kg at SJS05-SB05. All other samples contained two or more PAHs. The pesticides, 4,4'-DDD, 4,4'-DDE, and 4,4'-DDT were all found at SJS05-SB05 at concentrations of 33 J ug/kg, 310 ug/kg and 620 ug/kg respectively. Several other dioxins were in samples from three locations: SJS05-SB02, SJS05-SB03,and SJS05-SB07. Total TEQ ranged from 1.16 ug/kg in SJS05-SB06 to 6.59 ug/kg in SJS05-SB03.

Metal COPCs detected in subsurface soil from the burning ground area include three Priority Pollutant metals: arsenic, beryllium, and copper. Arsenic was detected in all samples at concentrations ranging from 2.2 J mg/kg (SJS05-SB06) to 18.6 mg/kg in SJS05-SB02). Beryllium and copper were both detected all samples except SJS05-SB04 and SJS05-SB06. Concentrations of beryllium ranged from 0.36 mg/kg in SJS05-SB01 to 1.5 mg/kg in SJS05-SB07. Copper was detected at concentrations ranging from 13.6 mg/kg in SJS05-SB03

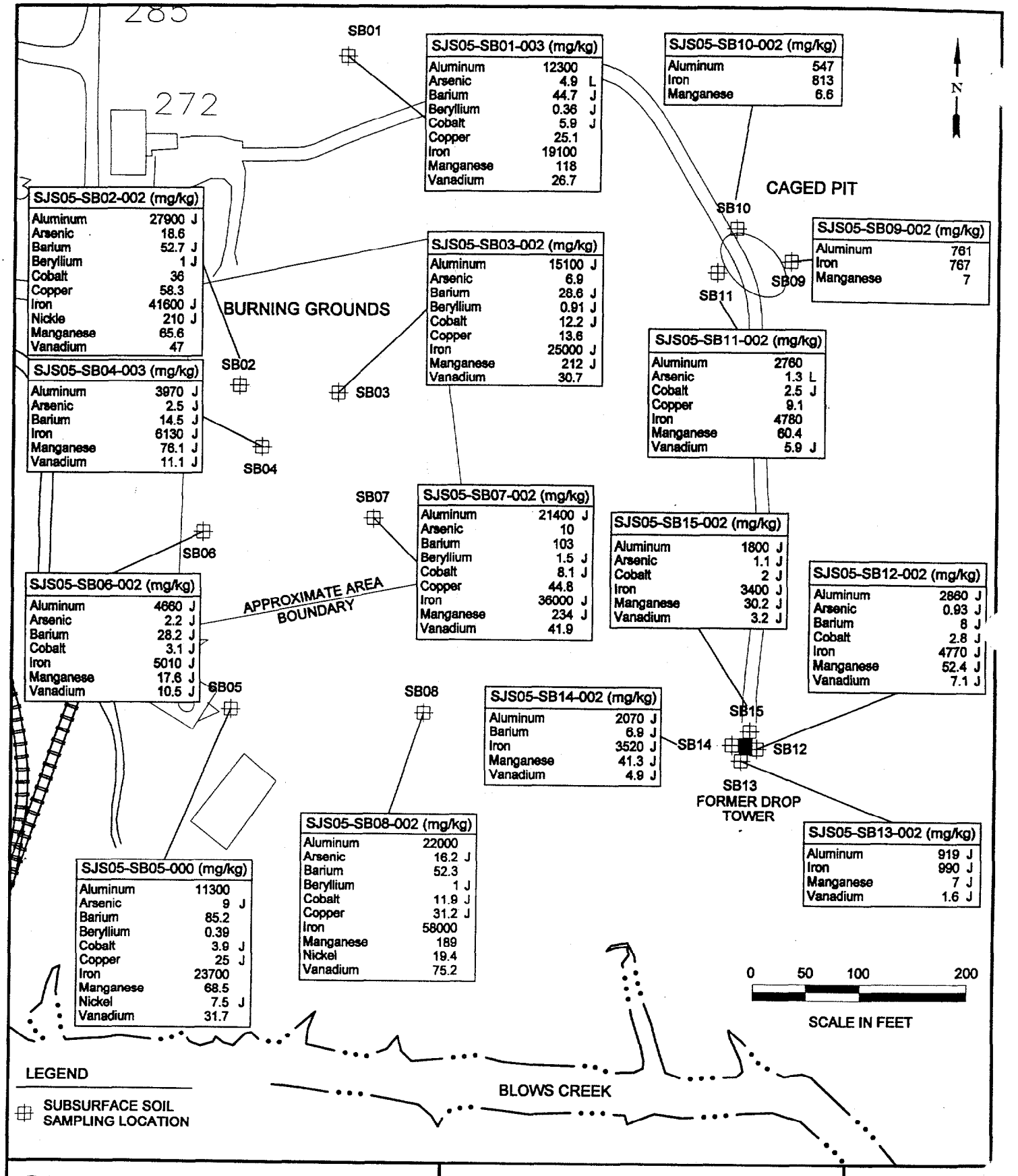


CDM Federal Programs Corporation

A Subsidiary of Camp Dresser & McKee Inc.

DISTRIBUTION OF ORGANIC COPCs, SUBSURFACE SOIL, SITE 5
SAINT JULIENS CREEK ANNEX

FIGURE 3-32



CDM Federal Programs Corporation

A Subsidiary of Camp Dresser & McKee Inc.

DISTRIBUTION OF INORGANIC COPCs, SUBSURFACE SOIL, SITE 5
SAINT JULIENS CREEK ANNEX

FIGURE 3-33

TABLE 3-19

ST. JULIENS CREEK ANNEX, SITE 5
SUBSURFACE SOIL COPC ANALYTICAL DATA

Analyte Name	SJS05-SB01-003		SJS05-SB02-002		SJS05-SB03-002		SJS05-SB04-003		SJS05-SB05-000		SJS05-SB06-002		SJS05-SB07-002		SJS05-SB07-002P		SJS05-SB08-002		SJS05-SB09-002		SJS05-SB10-002		SJS05-SB11-002		SJS05-SB11-002P		SJS05-SB12-002		SJS05-SB13-002		SJS05-SB14-002		SJS05-SB15-002	
Inorganic (mg/kg)																																		
Aluminum	12300		27900	J	15100	J	3970	J	11300		4660	J	21400	J	18800	J	22000		761		547		2760		1430		2860	J	919	J	2070	J	1800	J
Arsenic	4.9	L	18.6		6.9		2.5	J	9		2.2	J	10		10.9		16.2						1.3	L			0.93	J					1.1	J
Barium	44.7	J	52.7	J	28.6	J	14.5	J	85.2		28.2	J	103		39.8	J	52.3	J									8	J			6.9	J		
Beryllium	0.36	J	1	J	0.91	J			0.39	J			1.5	J	0.8	J	1	J																
Cobalt	5.9	J	36		12.2	J			3.9	J	3.1	J	8.1	J	21.7		11.9	J					2.5	J			2.8	J					2	J
Copper	25.1		58.3		13.6				25				44.8		20.7		31.2						9.1											
Iron	19100		41600	J	25000	J	6130	J	23700		5010	J	36000	J	34900	J	58000		767		813		4780		3000		4770	J	990	J	3520	J	3400	J
Manganese	118		210	J	212	J	76.1	J	68.5		17.6	J	234	J	269	J	189		7		6.6		60.4		86.4		52.4	J	7	J	41.3	J	30.2	J
Nickel			65.6						7.5	J					30.3		19.4																	
Vanadium	26.7		47		30.7		11.1	J	31.7		10.5	J	41.9		41.9		75.2						5.9	J			7.1	J	1.6	J	4.9	J	3.2	J
Organic (ug/kg)																																		
Benzo(a)Pyrene	60	J			270	J			82	J			120	J	250	J	67	J															70	J
Methylene Chloride									14	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.

to 58.3 mg/kg in SJS05-SB03. Non-Priority Pollutant metals detected include aluminum, barium, cobalt, iron, manganese, and vanadium. Non-COPC metals detected in the subsurface soil include cadmium, chromium, cobalt, mercury, nickel, silver, thallium, and zinc.

Caged Pit Area

The location of the former caged pit was determined through identification of a geophysical anomaly in the suspected area. Three subsurface soil samples were collected in the vicinity of the caged pit area: SJS05-SB09, -SB10, and -SB11. No organic COPCs were detected in these samples. Non-COPC organic constituents that were detected in these samples include low concentrations of benzo(b)fluoranthene (SJS05-SB10, 42 J ug/kg), fluoranthene (SJS05-SB11, 42 J ug/kg), pyrene (SJS05-SB11, 42 J ug/kg), and acetone (detected in all three samples at concentrations ranging from 11 J ug/kg to 23 ug/kg).

The inorganic COPCs detected in the subsurface soil at the caged pit include aluminum, antimony, arsenic, cobalt, copper, iron, manganese, and vanadium. Two Priority Pollutant metal COPCs were detected in one of the samples: arsenic and copper in SJS05-SB11 (1.3 L mg/kg and 9.1 mg/kg respectively). Neither of the two metals were detected in the duplicate of SJS05-SB11. Of the non-Priority Pollutant metal COPCs, aluminum (547 mg/kg, to 2760 mg/kg), iron (767 mg/kg to 4780 mg/kg) and manganese (6.6 mg/kg to 60.4 mg/kg) were detected in all three samples. The highest concentration of each of these metals was found in SJS05-SB11. That sample was also the only one that contained cobalt (2.5 J mg/kg) and vanadium (5.9 J mg/kg).

Former Drop Tower

One subsurface soil sample was collected on each of the four sides of the former drop tower. These samples include SJS05-SB12, -SB13, -SB14, and -SB15. Only SJS05-SB15 contained an organic COPC (benzo(a)pyrene at a concentration of 70 J ug/kg). This sample also contained a total of 1415 J ug/kg of PAHs, as well as three pesticides: 4,4'-DDD, 4,4'-DDE, and 4,4'-DDT (110 ug/kg, 66 J ug/kg, and 11 ug/kg respectively. These same pesticides were found at lower concentrations in SJS05-SB12 (2.6 J ug/kg, 5.9 ug/kg, and 3.7 J ug/kg).

Arsenic is the only Priority Pollutant metal COPC detected in any of the subsurface soil samples from the drop tower area (SJS05-SB12, 0.93 J mg/kg and SJS05-SB15 1.1 J mg/kg). Aluminum, iron, and manganese were detected in all samples. Vanadium was also

detected in all samples at concentrations ranging from 1.6 J mg/kg to 7.1 mg/kg. Cobalt was detected in two samples (2.8 J mg/kg in SJS05-SB12 and 2 J mg/kg in SJS05-SB15. Barium was detected in SJS05-SB12 at a concentration of 8 J mg/kg and in SJS05-SB14 at a concentration of 6.9 J mg/kg.

3.4.4.2.2 Discussion of COPCs in Subsurface Soil

Burning Ground Area

The distribution of volatile constituents in the subsurface soil does not correlate to the locations at which VOCs were detected in surface soil. The only COPC VOC was found in a sample located close to Building 35. It is possible that the presence of COPC is related to activities in that building. Althernatively, methylene chloride is a common laboratory contaminant and was found in laboratory blanks associated with other subsurface soil samples from Site 5. The methylene chloride in this sample may be present as an artifact of analysis.

Although benzo(a)pyrene was the only PAH identified as a COPC, other PAHs were detected in every sample. The presence of the PAH below ground surface is an indication that soil quality has been impacted by site activities. Most of the subsurface soil samples collected away from the burning area (those located by the caged pit and former drop tower) have either no PAHs or very low concentrations of PAH relative to what was detected in the burning ground area. The presence of PAHs in subsurface may be related to the use of oil as an accelerant in burning, espeacially during site cleanup.

Dioxins were found in the area expected to be in the burning grounds. Because dioxins from during the burning of PCBs, they may be present as a result of the burning to PCB contaminated oil. The distribution of the dioxin, considered as a indication of the area of burning, indicates that the burn area has not been defined to the east, as the easternmost samples (SJS05-SB03 and SJS05-SB07) both contained dioxin.

The pesticides found in one subsurface sample are probably due to the fact that that sample was a composite sample which included soil from 0 to 3 ft. Pesticides applied to the surface would therefore be expected to be detected.

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. With respect to metals contamination at the site, it is noteworthy that the concentration of metals in soil at location

SJS05-SS01/SB01 decreases significantly with depth. The high levels of barium, iron, lead, and zinc, decrease significantly within the top three feet.

Caged Pit Area

The distribution and concentrations of COPCs detected in the subsurface soil at the caged pit area are not indicative of contamination produced by site activities.

Former Drop Tower

Although there is little indication of significant subsurface soil contamination, the presence of PAHS at depth in SJS05-SB15 indicates the potential for undetected surface soil contamination.

3.4.5 Site 5 Groundwater Analytical Results

The three shallow (Water Table Aquifer) and two deep (Yorktown Aquifer) monitoring wells were all sampled during two sampling events: Round 1 and Round 2. During each sampling round metals analyses were performed on both filtered and unfiltered samples. The nature and extent of the groundwater COPCs at Site 5 are discussed below.

3.4.5.1 Nature and Extent of COPCs in Groundwater

Water quality parameters were measured in samples from all wells during Round 1 (July 1997) and Round 2 (November 1997) of groundwater sampling. The results are shown in **Table 3-20.**

TABLE 3-20
WATER QUALITY PARAMETERS
SITE 5 MONITORING WELLS

Monitoring well	Temperature (°C)		pH		Specific Conductance (umhos/cm^2)		Dissolved Oxygen (%)		Turbidity (NTU)	
Date:	7/97	11/97	7/97	11/97	7/97	11/97	7/97	11/97	7/97	11/97
MW1S	22.0	NR	6.21	NR	8000	NR	20.4	NR	226	NR
MW1D	17.8	16.1	9.9	9.18	450	378	12.3	5.55	45	133
MW2S	18.4	17.7	7.10	2.93①	7000	1990	14.9	1.55	51	10
MW2D	16.9	16.8	7.5	6.49	500	550	11.1	9.94	35	6
MW3S	19.1	17.5	5.93	2.76	1500	925	20.8	9.82	41	10

The COPCs for groundwater at Site 5 are listed in **Table 3-21.** The distribution of organic and inorganic groundwater COPCs at Site 2 during Round 1 are shown in **Figures 3-34 and 3-35** and during Round 2 in **Figures 3-36 and 3-37. Table 3-22** presents the analytical data

Table 3-21
Site 5 Groundwater COPCs

Organic Contaminants	Basis for inclusion as a COPC
Chloroform	RBC
Inorganic Contaminants	
Aluminum	RBC
Antimony	RBC
Arsenic	RBC
Beryllium	RBC
Iron	RBC
Lead	MCL, NAVY
Manganese	RBC
Thallium	MCL
Vanadium	RBC

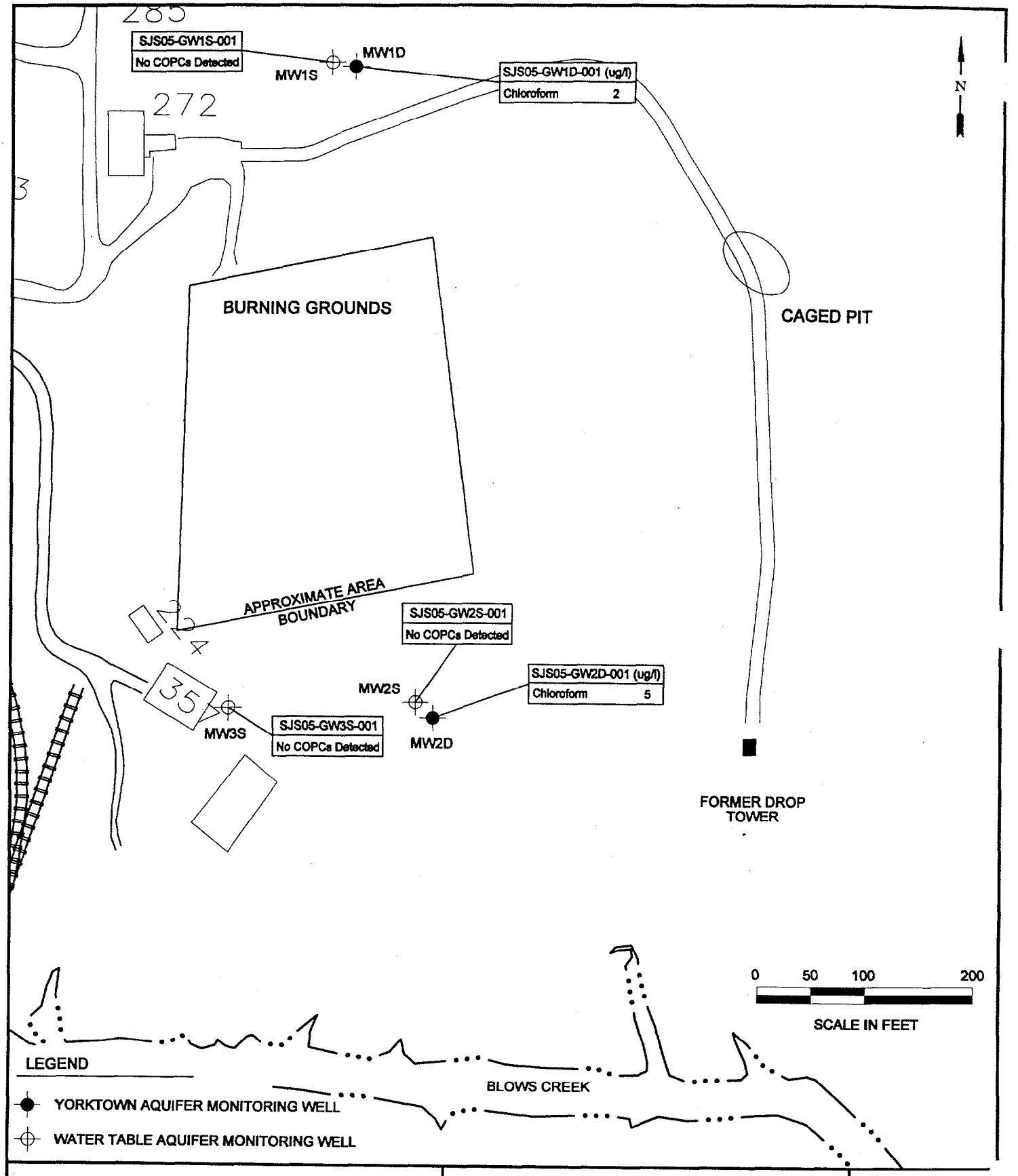
RBC = EPA. 1997. Region III Updated Risk-Based Concentration Table. October, 1997.
NAVY= United States Navy, 1997. Naval Base Norfolk Partnership Human Health Risk Assessment Consensus Agreements #6.A.1 through 6.A.6 and #6.B.
MCL= EPA Maximum Contaminant Level

from the Round 1 and Round 2 sampling events for all COPCs . Analytical results for all samples and analyses performed at Site 5 are compiled in Appendix G.

No organic COPCs were found in groundwater samples from the Water Table Aquifer in either round of sampling. Low concentrations of several non-COPC organic constituents were detected including bis-2(ethylhexyl)phthalate (1 J ug/L in SJS05-GW1S, Round 2, and 2 J ug/L in SJS02-GW3S, Round 1), toluene (0.2 J ug/L in SJS05-GW1S, Round 1), and carbon disulfide (0.8 J ug/L in SJS05-GW2S, Round 2). Because there are no consistent occurrences of these constituents, the concentrations are very low, and all are known laboratory contaminants, the presence of these organic compounds in the samples are not considered to be indicative of an impact from site activities.

Eight inorganic COPCs were identified for the groundwater: aluminum, antimony, arsenic, beryllium, iron, lead, manganese, and vanadium. Antimony, arsenic, beryllium, and lead are Priority Pollutant metals. Note that both filtered and unfiltered samples were analyzed for metals.

Two of the Priority Pollutant COPCs, arsenic and beryllium, were detected in both filtered and unfiltered samples from all the Water Table Aquifer Wells during at least one round of samples. Most of detections were found in Round 2 samples. In filtered samples,



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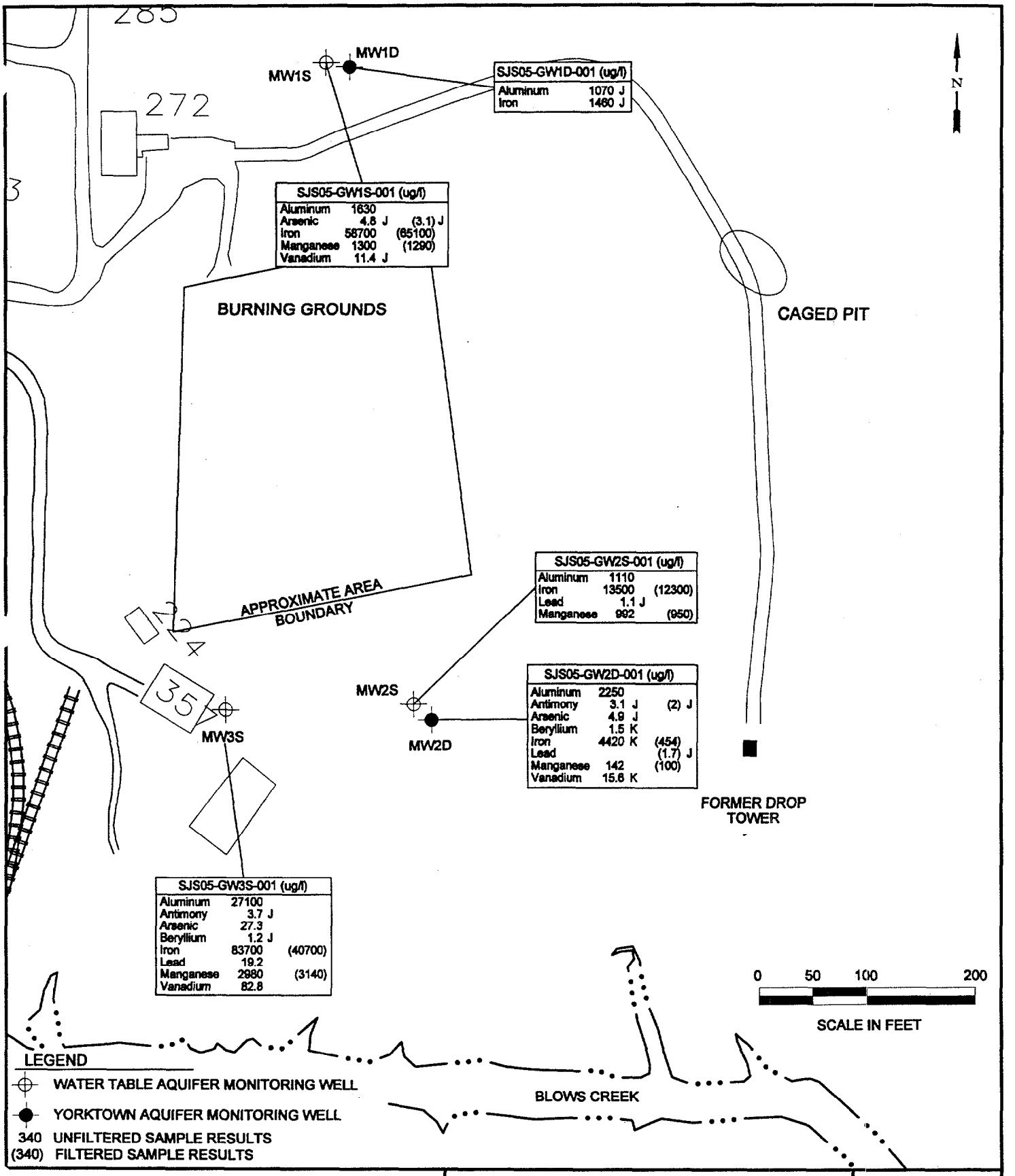
DISTRIBUTION OF ORGANIC COPCs
GROUNDWATER, SITE 5, JULY 1997
SAINT JULIENS CREEK ANNEX

FIGURE
3-34



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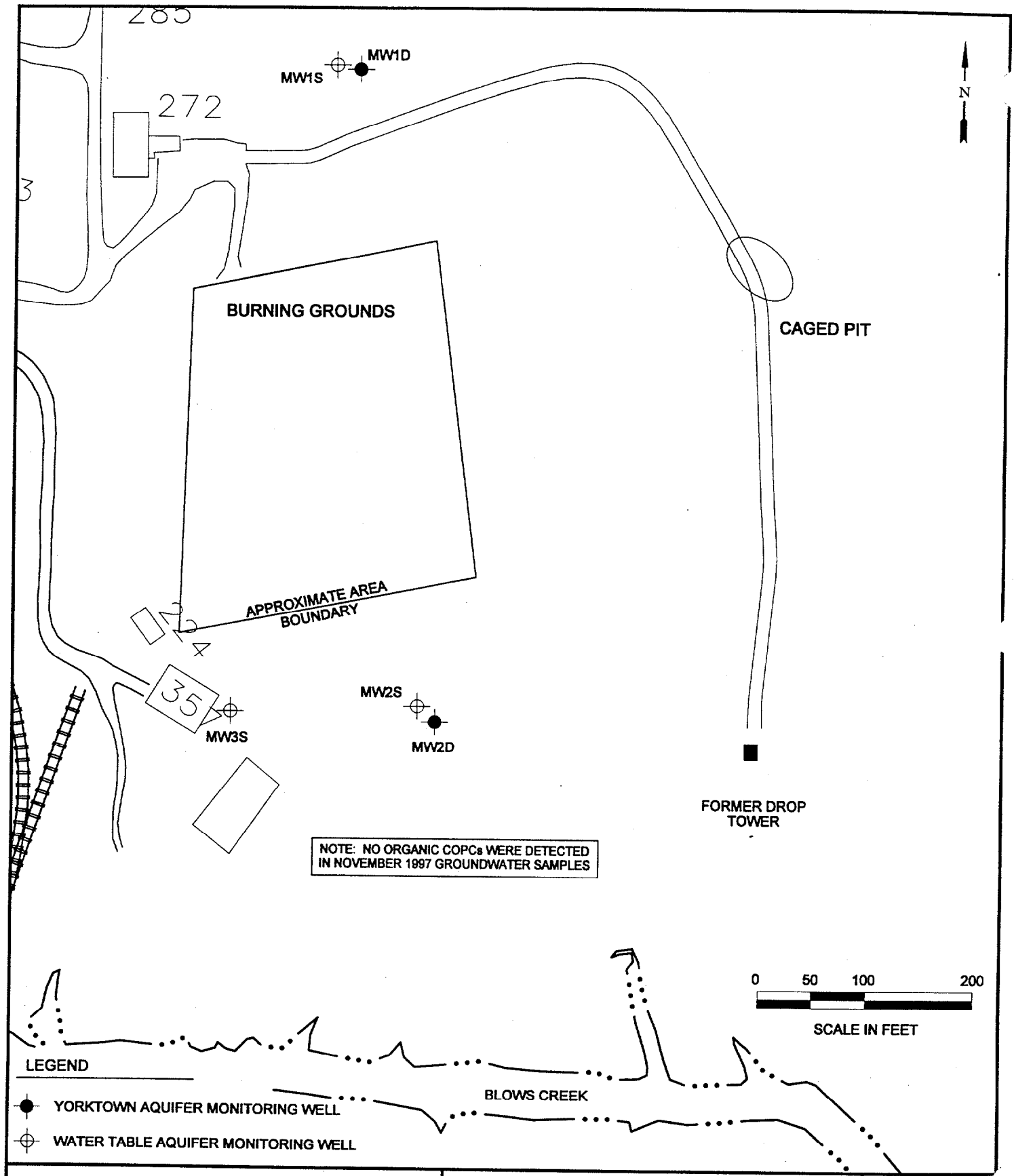
DISTRIBUTION OF INORGANIC COPCs
GROUNDWATER, SITE 5, JULY 1997
SAINT JULIENS CREEK ANNEX

FIGURE 3-35



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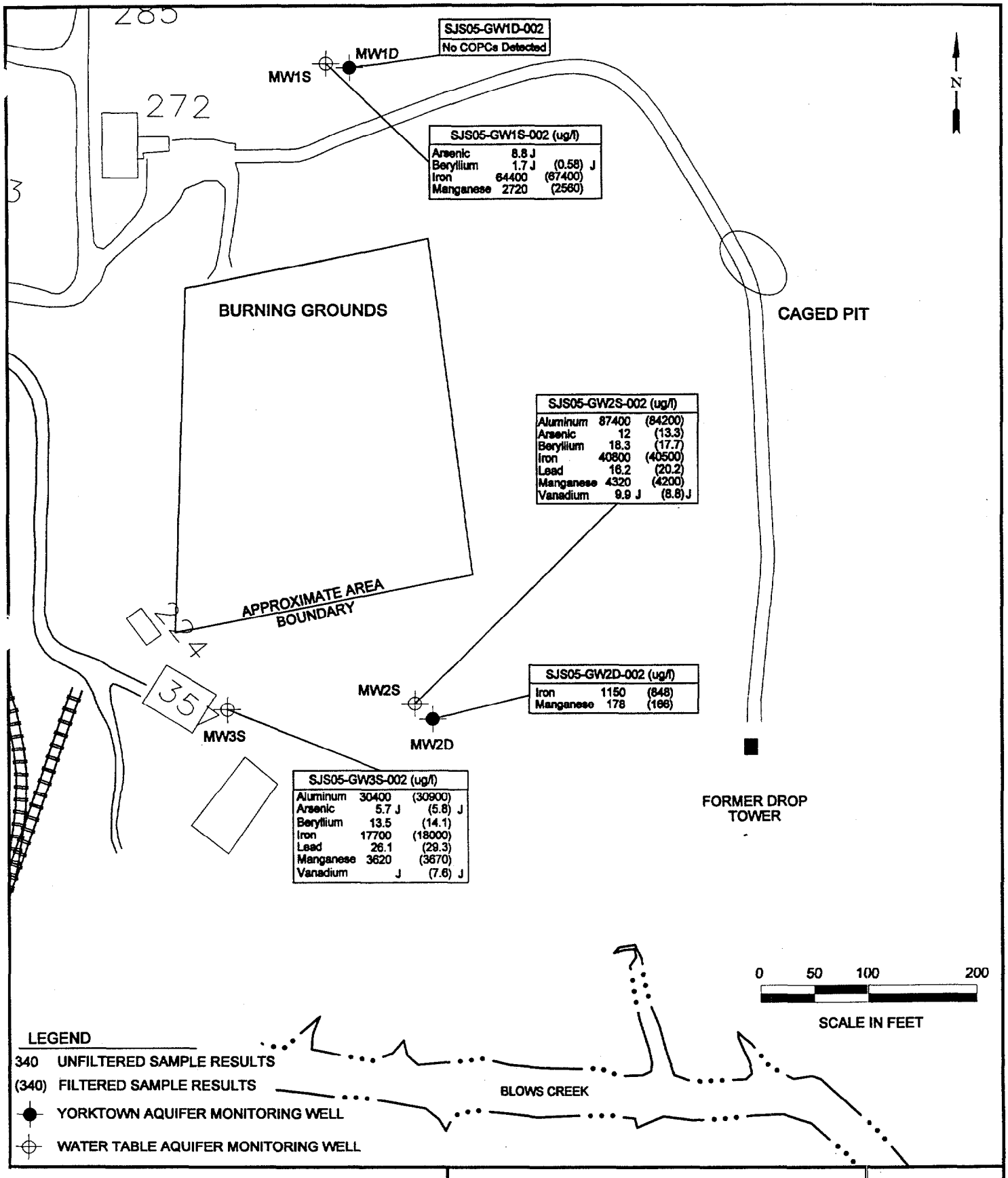
DISTRIBUTION OF ORGANIC COPCs
GROUNDWATER, SITE 5, NOVEMBER 1997
SAINT JULIENS CREEK ANNEX

FIGURE
3-36



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DISTRIBUTION OF INORGANIC COPCs
GROUNDWATER, SITE 5, NOVEMBER 1997
SAINT JULIENS CREEK ANNEX

FIGURE 3-37

TABLE 3-22

ST. JULIENS CREEK ANNEX, SITE 5
GROUNDWATER COPC ANALYTICAL DATA

Analyte Name	SJS05-GW1D-001	SJS05-GW1D-002	SJS05-GW1S-001	SJS05-GW1S-002	SJS05-GW1S-001F	SJS05-GW1S-002F	SJS05-GW2D-001	SJS05-GW2D-002	SJS05-GW2D-001F	SJS05-GW2D-002F
Inorganic (ug/L)										
Aluminum	1070 J		1630				2250			
Antimony							3.1 J			
Arsenic			4.8 J	8.8 J			4.9 J			
Beryllium				1.7 J			1.5 K			
Iron	1460 J		58700	64400			4420 K	1150		
Lead										
Manganese			1300	2720			142	178		
Thallium										
Vanadium			11.4 J				15.6 K			
Filtered Samples										
Aluminum										
Antimony									2 J	
Arsenic					3.1 J					
Beryllium						0.58 J				
Iron					65100	67400			454	848
Lead									1.7 J	
Manganese					1290	2560			100	166
Vanadium										
Organic (ug/L)										
Chloroform	2						5			

TABLE 3-22

ST. JULIENS CREEK ANNEX, SITE 5
GROUNDWATER COPC ANALYTICAL DATA

Analyte Name	SJS05-GW2S-001	SJS05-GW2S-002	SJS05-GW2S-001F	SJS05-GW2S-002F	SJS05-GW3S-001	SJS05-GW3S-001P	SJS05-GW3S-002	SJS05-GW3S-001F	SJS05-GW3S-001FP	SJS05-GW3S-002F
Inorganic (ug/L)										
Aluminum	1110	87400			27100	17100	30400			
Antimony					3.7 J	6 J				
Arsenic		12			27.3	18.4	5.7 J			
Beryllium		18.3			1.2 J		13.5			
Iron	13500	40800			83700	65200	17700			
Lead	1.1 J	16.2			19.2	13.5	26.1			
Manganese	992	4320			2980	2670	3620			
Thallium						2.1 J				
Vanadium		9.9 J			82.8	60.2				
Filtered Samples										
Aluminum				84200						30900
Antimony										5.8 J
Arsenic				13.3						14.1
Beryllium				17.7						18000
Iron			12300	40500				40700	40600	29.3
Lead				20.2						3670
Manganese			950	4200				3140	3150	7.6 J
Vanadium				8.8 J						
Organic (ug/L)										
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.

concentrations of arsenic ranged from 3.1 ug/L in SJS05-GW1S (Round 1) to 13.3 in SJS05-MW2S (Round 2). Arsenic was not detected in the SJS05-GW2S filtered sample from Round 1. Concentrations of beryllium in filtered samples ranged from 0.58 J ug/L in SJS05-GW1S (Round 2) to 17.7 ug/L in SJS05-GW2S (Round 2). Beryllium was not found in any filtered samples in Round 1 and was found in all filtered samples in Round 2. One other Priority Pollutant COPCs was detected in filtered samples during Round 2: lead (20.2 ug/L in SJS05-GW2S, and 29.3 ug/L in SJS05-GW3S).

Arsenic and beryllium were also detected in all unfiltered samples from the shallow wells. Concentrations of arsenic ranges from 4.8 ug/L in SJS05-MW1S (Round 1) to 27.3 ug/L in SJS05-MW3S (Round 1). These results do not correlate with turbidity as the turbidity of SJS05-MW1S is significantly higher (226 NTU) than in SJS05-MW3S (41 NTU). Concentrations of beryllium in unfiltered samples ranges from 1.2 J ug/L in SJS05-GW3S (Round 1) to 18.3 ug/L in SJS05-GW2S (Round 2). Beryllium was not detected in this well during Round 1. Other detections of Priority Pollutant metal COPCs in unfiltered samples include antimony (3.7 J ug/L), and lead (19.2 ug/L in SJS05-GW3S, Round 1 at 26.1 ug/L in that same sample during Round 2). In general the Round 2 samples contained metal COPCs at higher concentrations than the Round 1 samples despite lower turbidity values in SJS05-GW2S and -GW3S (not measured in Round 2 for -GW1S). The concentration of lead in samples from SJS05-GW2S increased from Round 1 to Round 2 despite the decrease in turbidity from 41 NTU (Round 1) to 10 NTU (Round 2).

Chloroform is the only organic COPC for groundwater at Site 5 and it was found in both samples from the Yorktown Aquifer collected in Round 1. In SJS05-GW1D the concentration of chloroform was 2 ug/L and in SJS05-MW2D at a concentration of 5 ug/L. In addition to chloroform, one non-COPC organic constituent, carbon disulfide (0.2 J ug/L), was detected in SJS05-GW1D.

No inorganic COPCs were detected in the filtered samples from SJS05-MW1D from either round of sampling. During Round 1, filtered samples from SJS05-MW2D contained arsenic (2 J ug/L), iron (454 ug/L), lead (1.7 J ug/L) and manganese (100 ug/L). During Round 2 iron was detected at 848 ug/L and manganese was detected at a concentration of 166 ug/L.

The Round 1 unfiltered sample from SJS05-GW1D contained only two metal COPCs: aluminum at a concentration of 1070 J ug/L, and iron at a concentration of 1460 J ug/L.

Even though the turbidity in Round 2 sample (133 NTU) was higher than in the Round 1 sample (45 NTU), no inorganic COPCs were detected in the Round 2 sample from that well. The Round 1 sample from the other Yorktown Aquifer monitoring well, SJS05-GW2D, contained seven metal COPCs: aluminum (2250 ug/L), antimony (3.1 J ug/L), arsenic (4.9 J ug/L), beryllium (1.5 K ug/L), iron (4420 K ug/L), manganese (142 ug/L) and vanadium (15.6 K ug/L). In Round 2 only iron (1150 ug/L) and manganese (178 ug/L) were detected. The decrease in number of metals detected may be related to the decrease in turbidity from 35 NTU in Round 1 to 6 NTU in Round 2.

3.4.5.2 Discussion of Results for COPCs in Groundwater

The potentiometric surface map of the Water Table aquifer at Site 5 (Figure 3-29) indicates that the direction of ground water flow in the Water Table Aquifer is to the east-southeast. Based on this map there are no Water Table Aquifer monitoring wells directly upgradient or downgradient of the site. Monitoring well SJS05-MW2S is most downgradient, and perhaps within the site, and SJS05-MW3S is side gradient or (perhaps) downgradient, depending on the boundary of the site. Based on the soil analytical data, monitoring well SJS05-MW1S may be within the area used for burning.

Although there are no organic COPCs detected within the shallow wells, there is some indication that toluene may be leaching from the subsurface soil at SJS05-SB01 into the groundwater (SJS05-GW1S).

Several inorganic COPCs were detected within the shallow groundwater; however, no clear evidence exists of a particular source area at Site 5. Areas where concentrations of metals in surface soil are particularly elevated (e.g. lead and nickel in SJS05-SS01), do not have a corresponding elevated concentration of these metals in the shallow ground water (non-detected in both rounds of unfiltered samples from SJS05-MW1S). However, there are more COPC metals in the samples collected from the southernmost wells (for both filtered and unfiltered samples) than in the northern well. This is particularly evident in the Round 2 data where four COPC metals were found in the SJS05-GW1S unfiltered sample and SJS05-GW2S and -GW3S contained 11 and 10 COPC metals respectively. This indicates that the site as a whole may be contributing COPC metals to the shallow groundwater.

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 range of pH measured in the Water Table Aquifer at the site is from 2.93 to 7.12. The low reading noted at SJS05-GW2S during Round 1 is considered anomalous, and is not considered to be indicative of true site conditions. There is no evidence from well development records from this well that the pH is low. If that value is excluded, the range of pH (5.93 to 7.12) is within the range of published values (4.8 to 7.8). The measured specific conductance at SJS05-MW1S (8000 umhos/cm) and SJS05-MW2S (7000 umhos/cm and 1990 umhos/cm) are well above the range of published values (121 to 1569 umhos/cm). The measured specific conductance in SJS05-MW3S (1500 umhos/cm and 925 umhos/cm) is within the range. The elevated readings may be due to naturally elevated salt content, high dissolved solids, or contamination from the site.

The measured concentrations of iron are generally all above the published (Siudyla et al. 1981) maximum concentration while the measured manganese concentrations are generally below the maximum, but above the average.

The potentiometric surface map of the Yorktown Aquifer (Figure 3-7) indicates that, in the area of Site 5, flow in that aquifer is to the west, south and southeast. The expected flow direction would be to the southeast and east, toward the South Branch of the Elizabeth River. An accurate determination of the groundwater flow direction is not possible without additional data points. In addition, the shallow horizontal flow gradient and tidal influence on the water levels raises the possibility that the flow direction may change throughout the day. However, the available data indicate that SJS05-MW2D is downgradient of the site while SJS05-MW1D is upgradient of the site.

Because chloroform was not detected in shallow groundwater samples, was not found in Round 2 samples, and was present at relatively low concentrations, the presence of the constituent in Yorktown Aquifer groundwater samples is considered to be due to laboratory contamination. These is no evidence that Site 5 activities a contributed to the chloroform in the samples.

No Priority Pollutant metal COPCs were detected in the upgradient Yorktown Aquifer monitoring well samples, and several in the downgradient samples, despite a lower turbidity in the downgradient samples. Although this would indicate that the site may be acting as a source for these metals, it is unlikely that the metals would migrate through the

upper Yorktown Formation clay (particularly in the absence of a strong downward flow gradient). For this reason, the site is not considered to be the source of metals in the Yorktown Aquifer, downgradient of the site.

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 and manganese are well within the range of concentrations for these constituents. The pH measured in the two Yorktown Aquifer monitoring wells range from 9.9 (upgradient well, first sampling event) to 6.49 (SJS05-MW2D, second sampling event). All of the readings except the minimum reading are above the average of the published values (7.2). The maximum published value is 8.1, while both of the readings in the upgradient well are above 9.0. Readings from deep monitoring wells (during development and sampling) at some of the other sites at the Annex (Site 2 and Site 3) have similarly high readings. These Base-wide data indicate that the pH of the groundwater in the Yorktown Aquifer in the St. Juliens Creek Annex area is higher than that found in the surrounding areas, but does not indicate the presence of a specific source of contamination for the Aquifer.

The specific conductance measured in deep monitoring wells ranged from 378 umhos/cm to 550 umhos/cm. These readings are well below the average of the published values (830 umhos/cm).

3.4.6 Site 5 Sediment Analytical Results

The sediment samples were collected from a drainage ditch that runs roughly north to south through the site. The upstream sample (SJS05-SD01) was collected immediately upstream from the marsh east of the burning grounds. Sample SJS05-SD02 was collected just downstream of the marsh and the downstream sample (SJS05-SD03) was collected at the point where the ditch broadens into a marsh just north of Blows Creek. The nature and extent of the sediment COPCs at Site 5 are discussed below.

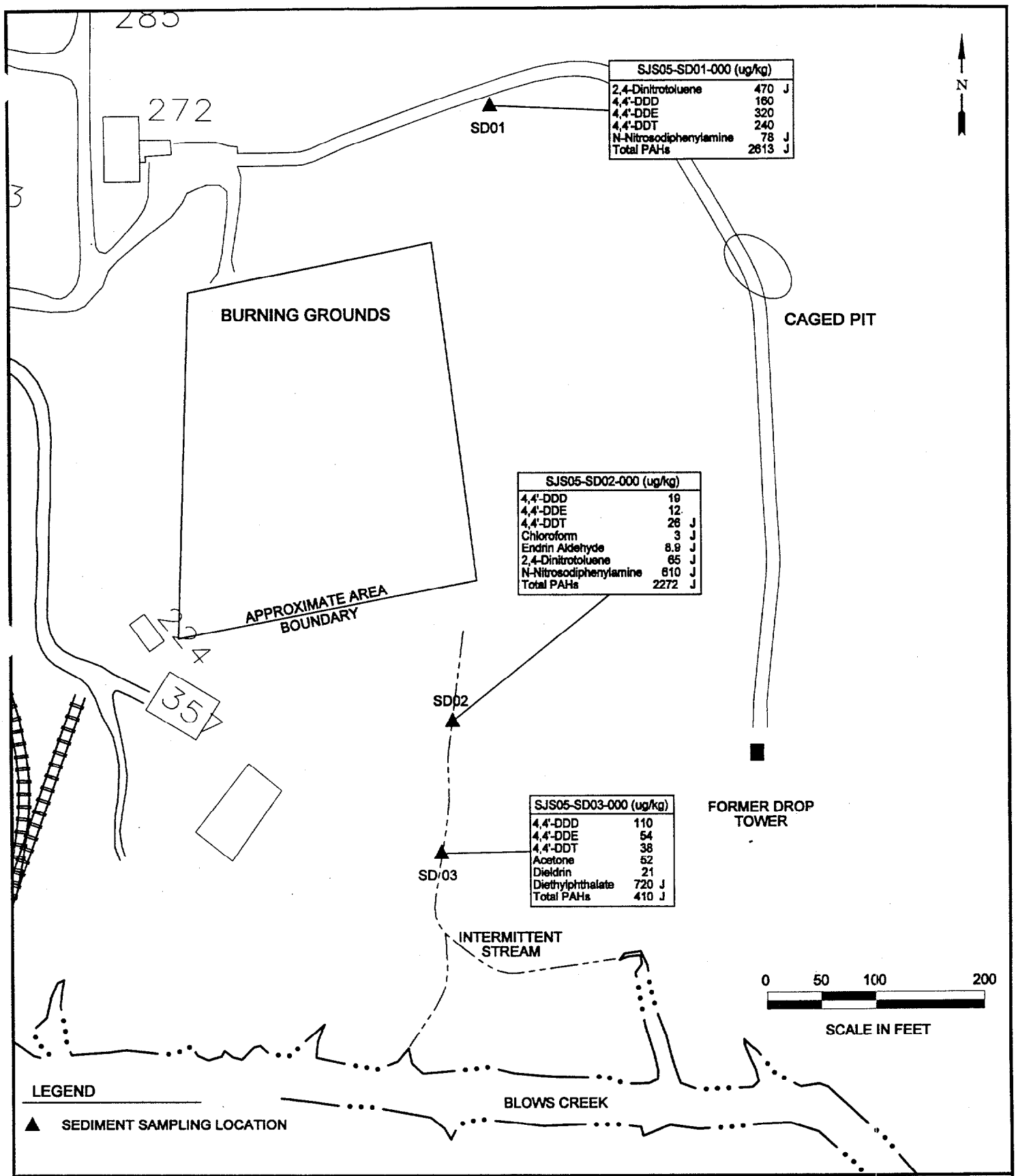
3.4.6.1 Nature and Extent of COPCs in Sediment

The COPCs for sediment at Site 5 are listed in **Table 3-23,** and the distribution of organic and inorganic subsurface soil COPCs at Site 5 are shown in **Figures 3-38 and 3-39** respectively. **Table 3-24** presents the analytical data for all COPCs. Analytical results for all samples and analyses performed for Site 5 are compiled in Appendix G.

Table 3-23
Site 5 Sediment COPCs

Organic Contaminants	Basis for inclusion as a COPC
4,4' - DDD	BTAG
4,4' - DDE	BTAG
4,4' - DDT	BTAG
Dieldrin	BTAG
Endrin Aldehyde	BTAG
2,4-Dinitrotoluene	BTAG
Acenaphthylene	BTAG
Anthracene	BTAG
Benzo(a)Anthracene	BTAG
Benzo(k)Fluoranthene	BTAG
Chrysene	BTAG
Diethylphthalate	BTAG
Fluorene	BTAG
N-Nitosodiphenylamine	BTAG
Phenanthrene	BTAG
Pyrene	BTAG
Acetone	BTAG
Chloroform	BTAG
Inorganic Contaminants	
Total Phosphorous	BTAG
Aluminum	BTAG
Arsenic	BTAG
Barium	BTAG, RBC
Beryllium	BTAG
Chromium	BTAG
Cobalt	BTAG
Copper	BTAG, RBC
Cyanide	BTAG
Iron	BTAG, RBC
Lead	BTAG
Manganese	BTAG
Mercury	BTAG
Silver	BTAG
Thallium	BTAG
Vanadium	BTAG

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



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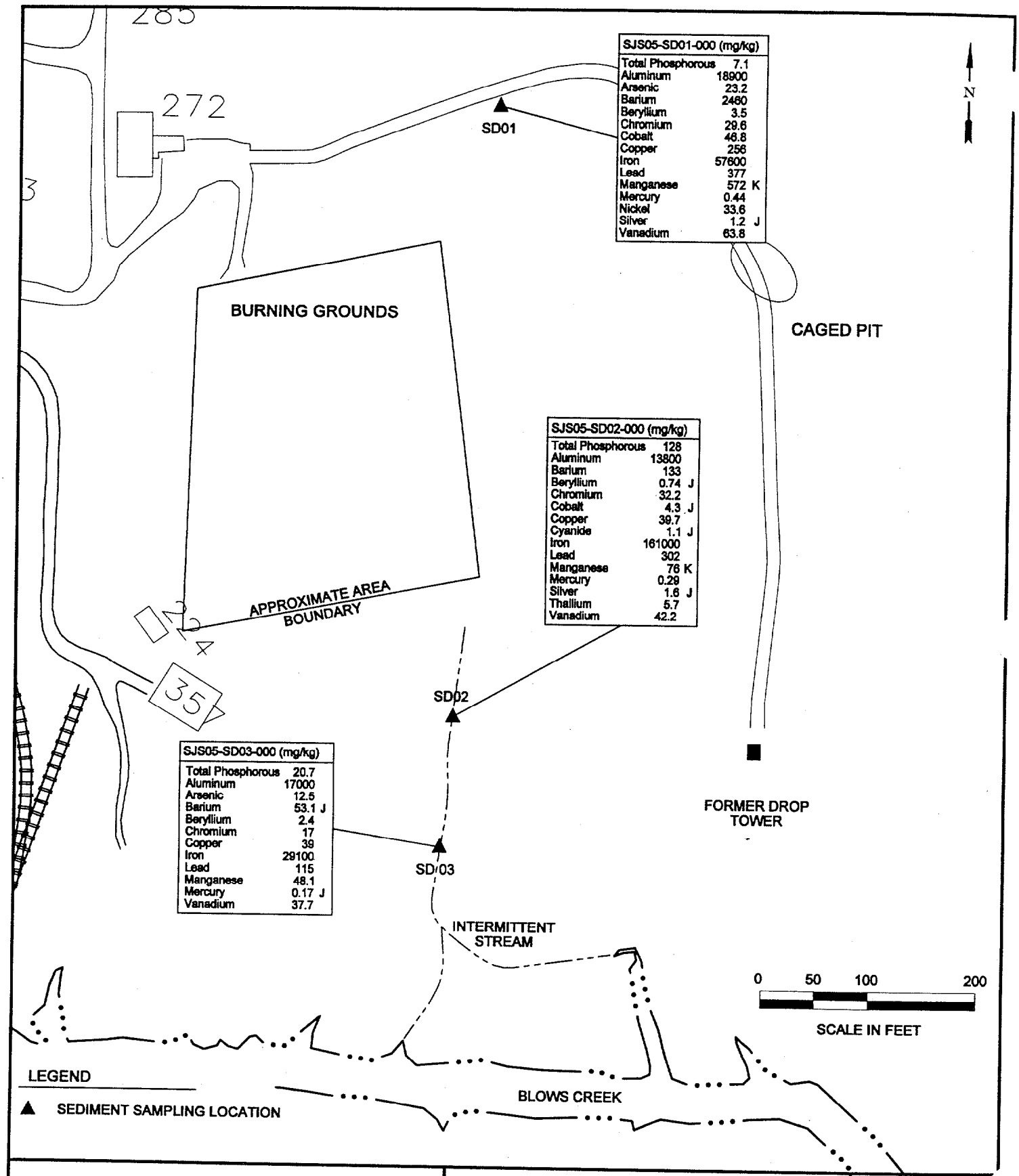
DISTRIBUTION OF ORGANIC COPCs SEDIMENT, SITE 5
SAINT JULIENS CREEK ANNEX

FIGURE 3-38



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DISTRIBUTION OF INORGANIC COPCs SEDIMENT, SITE 5
SAINT JULIENS CREEK ANNEX

FIGURE 3-39

TABLE 3-24

ST. JULIENS CREEK ANNEX, SITE 5
SEDIMENT COPC ANALYTICAL DATA

Analyte Name	SJS05-SD01-000		SJS05-SD02-000		SJS05-SD03-000	
Inorganic (mg/kg)						
Total Phosphorous	7.1		128		20.7	
Aluminum	18900		13800		17000	
Arsenic	23.2				12.5	
Barium	2460		133		53.1	J
Beryllium	3.5		0.74	J	2.4	
Chromium	29.6		32.2		17	
Cobalt	46.8		4.3	J		
Copper	256		39.7		39	
Cyanide			1.1	J		
Iron	57600		161000		29100	
Lead	377		302		115	
Manganese	572	K	76	K	48.1	
Mercury	0.44		0.29		0.17	J
Silver	1.2	J	1.6	J		
Thallium			5.7			
Vanadium	63.8		42.2		37.7	
Organic (ug/kg)						
4,4'-DDD	160		19		110	
4,4'-DDE	320		12		54	
4,4'-DDT	240		26	J	38	
Dieldrin					21	
Endrin Aldehyde			8.9	J		
2,4-Dinitrotoluene	470	J	65	J		
Acenaphthylene	140	J				
Anthracene	93	J	99	J		
Benzo(a)Anthracene	600		300	J		
Benzo(k)fluoranthene	360	J	160	J		
Chrysene	670		450	J	410	J
Diethylphthalate					720	J
Fluorene			63	J		
N-	78	J	610	J		
Phenanthrene	180	J	520	J		
Pyrene	570		680			
Acetone					52	
Chloroform			3	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.

Organic:

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

The organic COPCs detected in sediments at Site 5 include two VOCs, eleven SVOCs (including eight PAHs), and five pesticides. The inorganic COPCs includes 14 metals, total phosphorus, and cyanide. The two VOCs that are considered COPCs were each detected in just one sample: acetone was detected in SJS05-SD03 at 52 ug/kg and chloroform was detected in SJS05-SD02 at a concentrations of 3 J ug/kg.

The SVOCs include diethylphthalate (detected only in SJS02-SD03 at 720 J ug/kg), 2,4-dinitrotoluene (detected in SJS05-SD01 at a concentration of 470 J ug/L and in SJS05-SD02 at 65 J ug/kg), and N-nitrosodiphenylamine (detected in SJS05-SD01 at 78 J ug/kg and SJS05-SD02 at 610 J ug/kg), and the following PAHs: acenaphthylene, anthracene, benzo(a)anthracene, benzo(k)fluoranthene, chrysene, fluorene, phenanthrene and pyrene. On **Figure 3-38** the concentrations of PAHs are presented as a total. PAHs were detected in all samples with total COPC PAH concentrations ranging from 2613 J at SJS05-SD01 to 410 J at SJS05-SD03. Only chrysene was detected in SJS02-SD03.

The pesticides detected in sediment samples included 4, 4'-DDT, 4,4'-DDD, 4,4'-DDE, dieldrin and endrin aldehyde. Dieldrin was only detected in the downstream sample, SJS05-SD03 (21 ug/kg) and endrin aldehyde only in SJS05-SD02 (8.9 J ug/kg). All samples contained some concentration 4,4',-DDT and its transformation products. The highest concentrations were always found in the upstream sample, SJS05-SD01 (4,4'-DDD at 160 ug/kg, 4,4'-DDE at 320 ug/kg and 4,4'-DDT at 240 ug/kg). Concentrations generally decrease by an order of magnitude in the other two samples.

The inorganic COPCs detected in sediments at Site 5 include: aluminum, arsenic, barium, beryllium, chromium, cobalt, copper, iron, lead, manganese, mercury, silver, thallium, vanadium, cyanide, and total phosphorus (as P). Phosphorus was detected in all samples with the range of concentration from 7.1 mg/kg in SJS05-SD01 to 128 mg/kg in the SJS05-SD02. Cyanide was only detected in SJS05-SD02 at a concentration of 1.1 J mg/kg.

The metal COPCs include eight Priority Pollutant metals. All except thallium were detected in the upstream sample SJS05-SD01. This sample generally had the highest concentrations of metals: arsenic at 23.3 mg/kg, beryllium at 3.5 mg/kg, copper at 256 mg/kg, lead at 377 mg/kg, and mercury at 0.44 mg/kg. The other Priority Pollutant COPC metals were all found in SJS05-SD02. In that sample chromium was detected at 32.2 mg/kg, silver at a concentration of 1.6 J mg/kg and thallium at a concentration of 5.7 mg/kg.

3.4.6.2 Discussion of COPCs in Sediment

The highest concentrations of both organic and inorganic COPCs are generally found in the upstream sediment sample (SJS05-SD01). This sample was collected about 140 ft east-southeast of the surface soil sample location SJS05-SS01, where the highest metal concentrations were detected in the surface soil. It is likely that either the same source of metals contamination contributed to metals in the sediment, or surface soil has washed into the ditch, resulting in contamination of the sediment.

The highest concentration of the explosive, 2,4,-dinitrotoluene was also detected in this sample, indicating that the sample is probably within the burn area, or that the ditch receives runoff from former burn areas, north (upstream) of that location. Sample SJS05-SD01 also had the highest concentration of pesticides. This is expected as the sample is adjacent to a maintained grassy area where pesticides may have been applied. Pesticide concentrations drop off markedly downstream of the marsh.

The concentration of PAHs is also highest in the upstream sample. The source of the PAHs may be oils used to promote burning of the soils during site clean-up activities.

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 2 and 5.

4.1 Site 2 Contaminants of Potential Concern

When released into the environment organic and inorganic chemicals undergo a variety of reactions or processes that affect their transport and final fate. The processes 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 Chemical and Physical Processes Influencing Contaminant Fate and Transport

Surface and subsurface soil, groundwater, sediment and surface water samples were collected and analyzed at Site 2. Complete lists of COPCs in these media are found in Sections 3.3.4 through 3.3.7. Only those COPCs that appear to be attributable to the landfill activities at Site 2 will be discussed here (see Section 3.3.4.1.2, 3.3.4.2.2, 3.3.5.2, 3.3.6.2 and 3.3.7.2). In addition, the monitoring wells completed in the deeper Yorktown Aquifer were not found to be downgradient of the landfill, so the samples from these wells were not

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	Hydrolysis Rate Constants

Table 4-1
Chemical and Physical Fate and Transport Processes

	reactions are strongly pH dependent. Hydrolysis reactions in groundwater are typically too slow to be significant.	
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 groundwater in the direction of groundwater flow.	Effective Porosity and Average Linear Velocity
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).

included in the discussion. Numerous inorganic COPCs were found in the samples collected from Site 2; fate and transport of the priority pollutant metals and cyanide will be discussed here.

The organic COPCs in surface soil and/or subsurface soil samples at Site 2 that appear attributable to landfill activities at Site 2 include the VOC acetone, PAHs, other SVOCs including phthalates, carbazole and dibenzofuran, and the PCB aroclor-1260. Priority pollutant metal COPCs in surface soil and/or subsurface soil at Site 2 include antimony, arsenic, beryllium, cadmium, chromium, copper, lead, mercury, nickel, thallium and zinc. Cyanide was also detected but was not widespread.

No organic compounds were detected in the shallow Water Table Aquifer at Site 2. The priority pollutant metals that were found in monitoring wells completed in the Water Table Aquifer, and which were also found in Site 2 soils, include arsenic, lead and thallium. The COPCs detected in the sediments that were also found in soils at Site 2 include acetone, PAHs and phthalates. The VOC carbon disulfide is also identified as a COPC for sediment. No organic compounds were detected in the one associated surface water sample. All of

the priority pollutant metal COPCs that were detected in the soil samples were found in sediment samples except antimony. The one surface water sample that was collected contained fewer priority pollutant metal COPCs than were found in sediment samples and included arsenic, cadmium, chromium, copper, lead and zinc.

4.3 Site 2 Characteristics that Affect Fate and Transport

The physical characteristics at Site 2 that affect the persistence and migration of contamination at Site 2 include topography, surficial geology, soil and water properties, hydrology and groundwater flow. Site 2 has a large depression in the center of the landfill that contained approximately 3 ft of water at the time of sampling in June and July 1997. The depth of the water prohibited collecting soil samples in this area of the landfill. The two sediment samples collected in the ponded area exhibited mucky clays indicating that water may pond in the center of the landfill as a result of impermeable clayey material. The ponded area collects runoff from the surface of the landfill and therefore may be a sink for contaminants at Site 2. Overflow from the ponded area is directed into a culvert which runs south to St. Juliens Creek. This serves as a potential migration route for contaminants from Site 2 to St. Juliens Creek.

The surface and subsurface soils around the perimeter of the landfill are sands and silty sands. The permeable and porous nature of this subsurface material indicates a potential for migration to the shallow Water Table Aquifer. At Site 2 this aquifer was found at a depth of 4 to 5 ft bgs. The groundwater flow direction in the Water Table Aquifer has not been determined, but is influenced by the tide (see Section 3.3.2.3). Groundwater pH in the monitoring wells completed in the Water Table Aquifer at the time of groundwater sampling ranged from 6.01 to 7.12, which are relatively neutral pH values. The sandy nature of the soils around the perimeter of the landfill indicates that the subsurface environment may be relatively aerobic: however, locally, the clayey material in the ponded area would inhibit the diffusion of oxygen into the subsurface environment.

The sediment samples, which were collected around the perimeter and within the ponded area are sandy loams to mucky clays having a high total organic carbon content (TOC) of up to 71,000 mg/kg indicating they are rich in organic material. High organic carbon content in soils means an abundance of adsorption sites for contaminant adsorption. The

pH of the surface water sample collected at the outlet of the ponded area was 5.79 which is only weakly acidic.

4.4 Fate and Transport Properties of COPCs at Site 2

4.4.1 VOCs

The VOC COPCs detected at Site 2 include acetone detected in low concentrations in surface and subsurface soils (up to 210 ug/kg), sediment (up to 450 ug/kg as measured in the sediment duplicate sample) and carbon disulfide detected in low concentration in sediment (up to 81 ug/kg as measured in the sediment duplicate sample). Acetone and carbon disulfide were not detected in the shallow groundwater or surface water. The refuse deposited in the landfill at Site 2 was not reported to include solvents, and their origin at Site 2 is unknown.

The fate and transport properties of these solvents are shown on **Table 4-2**. Acetone 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 high water solubilities which would result in subsurface transport to groundwater and surface runoff to sediment and surface water. The low concentrations of acetone and carbon disulfide that remain indicate that only residual levels of contamination remain at Site 2. The clays and high organic carbon content of the sediments may explain the persistence of these volatile organics in the sediment. The highest concentrations of acetone and carbon disulfide were detected in SJS02-SD03 which had the most clay and highest organic carbon content.

The contaminant pathway for VOC releases at Site 2 is therefore direct discharge to soils, volatilization and runoff to sediments. The clays and high organic carbon content of the sediments at Site 2 may serve to retain these organics in the sediment.

4.4.2 PAHs

PAHs are contained in the types of material deposited at Site 2, which included blasting grit, and fuels used to burn refuse. 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 2. The occurrence of PAHs in the surface soils, subsurface soils and sediments is consistent with sorption as the predominant mechanism controlling PAHs at Site 2. Further

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

COPC	Spec. Density	Water Solubility (mg/l)	Henry's Law Constant (atm-m^3/mol)	Log K_{ow}	Log K_{oc}	Reference
VOC						
Acetone	0.7906	$1x10^6$	$3.97x10^{-5}$	-0.24	-0.43E	Knox et al. (1993)
Carbon Disulfide	1.2660	$2.10x10^3$	$1.33x10^{-2}$	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)
Acenaphthyene	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)
Benzo(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)
Floranthene	1.2520	$2.40x10^{-1}$	$1.69x10^{-2}$	5.22	4.62	Knox et al. (1993)
2-Methylnaphthalene	1.0058	$2.46xc10^{-1}$	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						
Bis (2-ethylhexyl) phthalate	0.9873	$3.00x10^{-1}$	$1.10x10^{-5}$	4.65	5.00	Knox et al. (1993)
Diethyl phthalate	1.1175	$8.96x10^2$	$8.46x10^{-7}$	2.35	1.84	Knox et al. (1993)
Di-n-butylphthalate	1.0460	$1.30x10^1$	$6.30x10^{-5}$	4.57	3.14	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	
Dibenzo furan	1.0886	$100x10^1$	N/A	4.17	4.00E	Knox et al. (1993)
PCBs						
Chlordane	1.6000	$5.6x10^{-2}$	$4.80x10^{-5}$	6.00	5.36	Knox et al. (1993)
Aroclor 1260	1.5660	$8.00x10^{-2}$	$7.1x10^{-3}$	6.91	6.42E	Knox et al. (1993)

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 2 is therefore direct discharge to soils and runoff to sediments with no migration to groundwater or surface water.

4.4.3 Other SVOCs

The other SVOCs detected at Site 2 include very low concentrations of carbazole and dibenzofuran in surface soils. Phthalates were also found in low concentrations in surface soil (up to 280J ug/kg) and sediment (250 ug/kg).

The high adsorption coefficients, low Henry's Law Constants and low water solubilties listed in Table 4-2 for carbazole and dibenzofuran indicate that sorption is most likely the dominant mechanism controlling these contaminants at Site 2. Biodegradation of carbazole is possible but may not compete with sorption (Fetter, 1993).

Phthalates which are used as plasticizers in vinyl products were likely contained in refuse 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 2 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 contaminant pathway for the other SVOCs released at Site 2 is therefore direct discharge to soils and runoff to sediments, with no migration to groundwater or surface water. The clays and high organic carbon content of the sediments may serve to retain these organics in the sediments.

4.4.4 PCBs

PCBs detected at Site 2 include Aroclor-1260 at concentrations up to 110J ug/kg in surface soils and 69J ug/kg in the sediment duplicate sample. No PCB wastes were reported for Site 2 so the origin of these PCBs are unknown. As shown on Table 4-2, 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 would be physical transport associated with runoff and erosion.

4.4.5 Inorganics

Antimony, arsenic, beryllium, cadmium, chromium, copper, lead, mercury, nickel, thallium, zinc and cyanide were found in surface or subsurface soils at Site 2. Cyanide was found in one surface soil sample at a concentration of 0.85 mg/kg. Blasting grit which is known to be deposited at the landfill is one possible source of these inorganics.

The very low concentration of cyanide in the surface soils at Site 2 indicates that only residual cyanide contamination remains at Site 2. Cyanide will biodegrade in soil under the aerobic conditions that are likely to exist in Site 2 soils. Cyanide is also soluble, but may be retained in the soils as a result of the high concentration of iron in the soils.

All of the metals found in soils were found in sediments, and all of these metals except beryllium, mercury and thallium were found in surface water . Samples collected from shallow monitoring wells contained all the metals detected in soils except antimony. The concentrations of metals were highest in surface soil samples SJS02-SS03 and -SS06, subsurface soil samples SJS02-SB03 and the sediment sample which is downgradient from these soil samples (SJS02-SD03). Metals concentrations were generally lower in subsurface soils compared to surface soils, with the exception of SJS02-SB03 which is a 0 to 3 ft composite sample. Both the surface water and groundwater showed measureable levels of lead (77.9 ug/L in SJS02-SW02 and 36.7 ug/L in MW-2S).

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 zinc had significant dissolved fractions.

Table 4-3 summarizes the fate and transport properties of the inorganics found at Site 2. 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 2, adsorption and dissolution appear to be the mechanisms controlling the metals at Site 2. There would also be a strong potential for bioaccumulation of metals at Site 2.

The sands at Site 2 will not strongly adsorb metals; however, the high amount of iron and manganese in Site 2 soils facilitates the adsorption of metals including arsenic and chromium. The clays and organic material associated with the sediments indicate that the sediments will strongly adsorb metals at Site 2. The high concentrations of metals in

Table 4-3

Fate and Transport Properties of Site 2 Inorganic COPCs[a]

Chemical	Common Oxidation State	Solubility	Oxidation Reduction	Photolysis	Hydrolysis	Volatilization	Sorption	Biological Processes
Antimony	+5, +3, -3	Oxides slightly soluble	Oxides slightly soluble under natural environmental conditions	--	Forms oxide	--	Coprecipitates with iron and aluminum and adsorbs to clays	Some bioaccumulation
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 alkaline pH. 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

Table 4-3

Fate and Transport Properties of Site 2 Inorganic COPCs[a]

Chemical	Common Oxidation State	Solubility	Oxidation Reduction	Photolysis	Hydrolysis	Volatilization	Sorption	Biological Processes
Cyanide	-1	High solubility	--	Some metallocyanides photolyze	--	Rapid volatilization of HCN	Adsorbed by organics but solubility dominates. Iron facilitates adsorption	--
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]	--	--	--	Strong volatility	Strong adsorption to clays, oxides and organic material	Bioaccumulates
Nickel	+2	low solubility under natural conditions	--	--	--	--	Strong coprecipitation with metal oxides	Some bioaccumulation
Thallium	+1, +3	Tl_2S solubility is 200 mg/L	--	--	--	--	Strong adsorption to clays	Strong bioaccumulation
Zinc	+2	ZnO solubility 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.
[b] Source is Fetter (1993).

surface water may be explained by suspended solids or by oxidizing conditions leading to the dissolution of metals. The conductivity of the surface water sample was 26,400 uhmos/cm indicating a high concentration of suspended solids in the sample. Under most environmental conditions, there is little soluble inorganic mercury, which explains the absence of mercury in groundwater or surface water (Fetter, 1993).

Zinc has a higher mobility than some of the other metals, explaining its occurrence in the dissolved fraction in groundwater. In general, the relatively neutral pH of the shallow groundwater and weak acidity of the surface water at Site 2 do not indicate corrosive or alkaline conditions that would rapidly dissolve metals from the solid material comprising the aquifer or sediment. The conditions present at Site 2 more likely result in a very slow leaching of metals from the surface, subsurface soils and sediments into groundwater and surface water.

There is potential for the transport of the metals in groundwater and surface water at Site 2 to the most proximal surface water which is St. Juliens Creek. St. Juliens Creek is approximately 100 ft south of the landfill.

4.5 Summary of Site 2 Contaminant Fate and Transport

The majority of the COPCs detected in the soils, sediments, surface water and groundwater at Site 2 can be classified as persistent, non-volatile and non-degradable metals (antimony, arsenic, beryllium, cadmium, 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 sediments and are relatively immobile. Concentrations in soils and sediments will persist into the future with only slow dissolution of metals to groundwater and surface water.

The volatile, soluble, degradable VOCs such as acetone and carbon disulfide were found only in trace concentrations in the soils and sediments. No data indicates that these chemicals ever reached the groundwater.

4.6 Site 5 Contaminants of Potential Concern

Surface and subsurface soil, groundwater and sediment samples were collected and analyzed at Site 5. Complete lists of COPCs in these media are found in Sections 3.4.4

through 3.4.6. Only those COPCs that appear to be attributable to actvities at the burning grounds, caged pit and former drop tower at Site 5 will be discussed here (see Section 3.4.4.1.2, 3.4.4.2.2, 3.4.5.2 and 3.4.6.2). In addition, the COPCs found in monitoring wells completed in the deeper Yorktown Aquifer are not likely related to the site because contaminants would not likely migrate through the upper Yorktown Formation clay (see Section 3.4.5.2). Numerous inorganic COPCs were found in the samples collected from Site 5; fate and transport of the priority pollutant metals and cyanide will be discussed here.

The organic COPCs in surface soil at Site 5 that appear attributable to the activities conducted at Site 5 include the VOCs acetone, 2-butanone and methylene chloride, PAHs, and other semivolatile organic compounds including 2,4-dinitrotoluene and 2,6-dinitrotoluene, which are constituents of explosives, N-nitrosodiphenylamine, carbazole and phthalates and the pesticide 4,4'-DDT and its metabolites. Additional VOCs which were not determined to be COPCs in surface soils but which relate to burning activities include trace concentrations of 1,2-dichlolorethene, tetrachloroethene, toluene and xylene. Subsurface soil samples contained trace amounts of methylene chloride and PAHs, and non-COPCs that relate to burning activities including tetrachloroethene and dioxins.

The occurrence of the priority pollutant metal COPC, lead, at Site 5 best indicates the extent of burning ground activities at Site 5 because lead was detected in high concentrations at most of the sample locations showing explosives contamination. Antimony, beryllium, cadmium, chromium, mercury, nickel, silver, thalluim and zinc are also priority pollutant metal COPCs that were found in higher concentrations in the samples where lead was higher in concentration. Only arsenic did not appear to relate to the extent of lead contamination. Cyanide was also detected in low concentrations in two samples containing measureable lead levels. Subsurface soil samples collected in the burning grounds area contained the priority pollutant metal COPCs arsenic, beryllium, copper and nickel. Lead was measureable in subsurface soils but was not determined to be a COPC.

No organic COPCs were identified for the shallow groundwater at Site 5. Acetone and toluene, two volatile organics that were detected in surface soils at Site 5, were detected in low concentrations in the shallow groundwater but were not determined to be COPCs for groundwater. The priority pollutant metal COPCs that were detected in the shallow groundwater at Site 5 include antimony, arsenic, beryllium, lead and thallium. The COPCs detected in the sediment that were also detected in Site 5 soils include acetone, PAHs,

explosive constituents, phthalates, arsenic, beryllium, chromium, copper, lead, mercury, silver, thallium and cyanide.

Section 4.1 describes the chemical and physical processes influencing contaminant fate and transport.

4.7 Site 5 Characteristics that Affect Fate and Transport

The physical characteristics at Site 5 that affect the persistence and migration of contamination at Site 5 include topography, surficial geology, soil and water properties, hydrology and groundwater flow. The surface of the burning grounds is relatively flat and covered with gravel. There is a marshy depression along the east side of the burning grounds. The entire Site 5 area slopes gently to the south towards Blows Creek. A drainage channel runs north to south through the marsh just to the east of the burning grounds and terminates in a marshy area north of Blows Creek. The surface soils of the burning grounds are gravelly material and the shallow subsurface soils (less than 5 ft bgs) are fine sands covered by clayey silts or silts and surface gravel. The surface soils of the caged pit and former drop tower are fine sands and sandy silts and the shallow subsurface soils (less than 5 ft bgs) are fine sands sometimes containing significant quantities of shells, silt or clay. The flat topography of the burning ground surface and the porous permeable nature of the sands, silts and gravel laden surface material encourages downward migration of contaminants. 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 5 is shallow and was found at a depth of 4 to 5 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 south; 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 5.93 to 7.12, which are weakly acidic to neutral pH values. The sandy nature of the surface soils, subsurface soils and aquifer implies a relatively aerobic subsurface environment.

The sediment samples, which were collected along the drainage channel at Site 5, were variable including silts at SD01, clayey silts at SD02 and sands at SD03. Total organic carbon content (TOC) was high in these sediments (up to 77,400 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 5

4.8.1 VOCs

The VOC COPCs detected at Site 5 include acetone in low concentrations in the surface soils, subsurface soils and sediment (up to 28, 170 ug/kg and 52 ug/kg, respectively), 2-butanone in low concentrations in the surface soils (210 ug/kg), and methylene chloride in low concentrations in surface soils and subsurface soils (120 ug/kg and 14J ug/kg, respectively). All these samples were collected in the burning grounds area. Tetrachloroethene, toluene and xylene were also detected in low concentrations in surface or subsurface soil samples collected from the burning grounds (up to 2J ug/kg, 5J ug/kg, 3J ug/kg, respectively). These volatile organics may be associated with fuels and solvents burned at the burning grounds. Only subsurface soil samples were collected at the caged pit or the former drop tower, and no volatile organic COPCs were identified for these areas.

The fate and transport properties of the volatile organics detected at Site 5 are shown on **Table 4-4**. All of these organics have moderate to high Henry's Law Constants indicating that they would have been subject to volatilization when deposited on the surface of the burning grounds. However, they also have moderate to high solubilities and high specific densities (1,2-DCE and PCE particularly) which would result in subsurface transport to groundwater and surface runoff to sediment and surface water. The occurrence of VOCs in sediment indicates that VOCs have migrated to sediment. The shallow groundwater data indicates that only toluene may have migrated to groundwater at Site 5. Toluene was detected in MW-1S at 0.2J ug/L.

TABLE 4-4
FATE AND TRANSPORT PROPERTIES OF SITE 5 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	1.00×10^6	3.97×10^{-5}	-0.24	-0.43E	Knox et al (1993)
Methylene Chloride	1.3266	2.00×10^{-4}	2.00×10^{-3}	1.30	0.94	Knox et al (1993)
Tetrachloroethene	1.6227	1.50×10^2	1.53×10^{-2}	3.30	3.18E	Knox et al (1993)
Toluene	0.8669	5.15×10^2	6.70×10^{-3}	2.65	2.18	Knox et al (1993)
Xylene	0.8802 to 0.864	1.58×10^2 to 1.98×10^2	5.27×10^{-3} to 7.10×10^{-3}	2.95 to 3.20	2.11 to 3.20	Knox et al (1993)
1,2-Dichloroethene (1,2-DCE)	1.2565	6.30×10^3	7.20×10^{-3}	2.09	1.77	Knox et al (1993)
PAHs						
Anthracene	1.2600	4.50×10^{-2}	6.50x10-5	4.45	4.27	Knox et al (1993)
Acenaphtylene	0.8988	3.93	2.00×10^{-4}	4.07	3.68E	Knox et al (1993)
Benzo(a) anthracene	1.2740	1.20×10^{-2}	2.30×10^{-6}	5.90	6.14	Knox et al (1993)
Benzo (a) pyrene	1.3510	3.90×10^{-3}	2.40×10^{-6}	6.00	6.00	Knox et al (1993)
Benzo (b) fluoranthene	N/A	1.40×10^{-2}	1.20×10^{-5}	6.57	5.74	Knox et al (1993)
Benzo (k) fluoranthene	N/A	5.50×10^{-4}	1.40×10^{-3}	6.85	6.64	Knox et al (1993)
Chrysene	1.2740	1.80×10^{-3}	7.26×10^{-20}	5.61	5.39	Knox et al (1993)
Floranthene	1.2520	2.40×10^{-1}	1.69×10^{-2}	5.22	4.62	Knox et al (1993)
Fluorene	1.2030	1.69	2.10×10^{-4}	4.18	3.70	Knox et al (1993)
Indeno (1,2,3-cd) pyrene	0.0620	6.20×10^{-2}	2.96×10^{-20}	7.70	7.49E	Knox et al (1993)
Phenanthrene	1.1790	1.00	3.90×10^{-5}	4.52	4.36	Knox et al (1993)
Pyrene	1.2710	1.35×10^{-1}	1.90×10^{-5}	5.09	4.81	Knox et al (1993)
OTHER SVOCs						
Carbazole	N/A	N/A	N/A	N/A	N/A	
Diethyl phthalate	1.1175	8.96×10^2	8.46×10^{-7}	2.35	1.84	Knox et al (1993)
2,4-Dinitrotoluene	1.3790	2.70×10^2	8.67×10^{-7}	1.98	1.79E	Knox et al (1993)
2,6-Dinitrotoluene	1.2833	3.00×10^2	2.17×10^{-7}	2.00	1.79E	Knox et al (1993)
N-Nitrosodiphenylamine	N/A	3.51×10^1	2.33×10^{-8}	3.13	2.76E	Knox et al (1993)
Di-n-butylphthalate	1.0460	1.30×10^1	6.30×10^{-5}	4.57	3.14	Knox et al (1993)
DIOXINS						
Tetrachloro-dibenzodioxin	1.8270	2.00×10^{-4}	5.40×10^{-23}	6.20	6.66	Knox et al (1993)
PESTICIDES						
4,4-DDD	1.4760	2.00×10^{-2}	2.16×10^{-5}	5.99	4.64E	Knox et al (1993)
4,4-DDE	N/A	4.00×10^{-2}	2.34×10^{-5}	5.77	5.39	Knox et al (1993)
4,4-DDT	1.5600	5.00×10^{-3}	4.89×10^{-5}	6.19	5.38	Knox et al (1993)

N/A = not available
E = estimated

The clays contained in the soils and sediments at Site 5 and the high organic carbon content of the sediments may serve to retain these volatile organics in the soils and sediment. The occurrence of very low concentrations of toluene in the groundwater may suggest that migration to the shallow groundwater aquifer has occurred.

4.8.2 PAHs

PAHs are contained in the types of material deposited at Site 5, which was reported to include fuels for burning. 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. acenaphthylene, anthracene, fluorene and phenanthrene, but not the pyrenes or benzofluoranthenes) (USEPA, 1983). None of the PAHs were found in shallow groundwater at Site 5, which is consistent with the low solubilities of PAHs.

The contaminant pathway for PAH releases at Site 5 is therefore direct discharge to soils and sediments with no migration to groundwater.

4.8.3 Other SVOCs

The other SVOC COPCs detected at Site 5 include up to 3,200 ug/kg and 39J ug/kg of the explosive constituents 2,4-dinitrotoluene and 2,6-dinitrotoluene, respectively, 530J ug/kg of the gasoline lubricant N-nitrosodiphenylamine, up to 61J of carbazole, and 4,700 ug/kg of the phthalate di-n-butylphthalate in surface soils. Subsurface soils showed none of these constituents. The highest concentrations of these SVOCs were found in sampling locations north of the estimated boundries of the burning grounds area shown on the map (SJS05-SS01) and south of the burning grounds (SJS05-SS03).

The moderate to 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 the dinitrotoluenes, N-nitrosodiphenylamine, carbazole and phthalates indicate that sorption is most likely the dominant mechanism controlling these contaminants at Site 5. Biodegradation is also an

important process for phthalates (USEPA, 1983). Biodegradation of the dinitrotoluene is not anticipated under natural conditions (Howard, 1989).

There is potential for the more soluble SVOCs, including the dinitrotoluenes and diethylphthalate to migrate to groundwater and surface water. However, the groundwater data do not show the presence of these compounds. The clays and organic matter present in these samples may serve to retain these SVOCs in the soils and sediment. The contaminant pathway for the releases of other SVOCs at Site 5 is therefore direct discharge to soils, runoff to sediments with no migration to groundwater.

4.8.4 Dioxins

Dioxins were not found to be COPCs in any of the media at Site 5. Dioxins are important because they are likely residues of the burning operations performed at Site 5, and because of their persistence in the environment, can indicate the locations where burning had been performed. Total TEQ for dioxins in subsurface soils ranged from 1.16 ug/kg in SJS05-SB06 to 6.59 ug/kg in SJS05-SB03, which include the soil borings in the center of the burning ground. Dioxins have very high adsorption coefficients, very low solubility and very low Henry's Law Constants, indicating that sorption will be the major mechanism controlling these contaminants at Site 5. The very high specific gravity of dioxins also indicates that they penetrate the soil surface when disposed on the ground.

The contaminant pathway for the releases of dioxins at Site 5 is therefore production as a result of burning and persistence in soils. The only mechanism for transport of dioxins at Site 5 would be physical transport associated with runoff and erosion.

4.8.5 Pesticides

Pesticides were reported to have been disposed of at Site 5. The higher concentrations of 4,4'-DDT and its metabolites 4,4'-DDD and 4,4'-DDE (at concentrations of 1,200 ug/kg, 310J ug/kg, and 2,200 ug/kg respectively) in surface soil sample SJS05-SS09 indicate that pesticides may have been disposed of in this area. These pesticides have very high adsorption coefficients, very low solubility and low Henry's Law Constants, indicating that sorption will be the major mechanism controlling these contaminants at Site 5. The very high specific gravity of pesticides also indicates that they penetrate the soil surface when disposed on the ground.

4,4-DDT and its metabolites are also very resistant to biodegradation (USEPA, 1983). When adsorbed to soil, the most probable mechanism for transport of pesticides at Site 5 would be physical transport associated with runoff and erosion.

4.8.6 Inorganics

Lead is a component of the wastes burned at the burning grounds which included black powder, smokeless powder, tetryl, other explosives and paint waste. Lead concentration was the highest in the surface soil samples SJS05-SS01 (7,210J mg/kg), SS03 (822 mg/kg), -SS05 (818 mg/kg) and SS07 (899 mg/kg). The highest concentrations of lead in the subsurface soils were found at some of these same locations, including SJS05-SB01 (88.2 mg/kg) and SJS05-SB07 (269 mg/kg). The other inorganic COPCs at Site 5,which included cyanide, were also detected in higher concentrations in surface and subsurface soils at the sample locations where lead was higher in concentration.

Priority pollutant metal COPCs were higher in sediment samples SJS05-SD01 and -SD02 compared to the most downgradient sediment sample, and therefore is some indication that metals are coming from the burning grounds. Lead ranged from 115 mg/kg to 377 mg/kg. The priority metal COPCs detected in the groundwater samples collected from the Water Table Aquifer at Site 5 include antimony, arsenic, beryllium, lead and thallium. In contrast to Site 2, many of these metals had significant dissolved concentrations, e.g. Round 2 groundwater unfiltered samples from MW-3S contained 26.1 ug/L of lead and filtered groundwater samples contained 29.2 ug/L.

Table 4-5 summarizes the fate and transport properties of the metals found at Site 5. 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 5, adsorption and dissolution appear to be the mechanisms controlling the metals at Site 5. There would also be a strong potential for bioaccumulation of metals at Site 5.

The high concentration of metals in the surface soil samples within and north of the burning grounds and in the sediments indicate that the silts, clays and organic material found in the soils and sediments at Site 5 are retaining metals. However, the high concentrations of metals in the shallow groundwater samples indicate that metals are migrating to the groundwater. The pH and redox state of the groundwater are providing

Table 4-5

Fate and Transport Properties of Site 5 Inorganic COPCs[a]

Chemical	Common Oxidation State	Solubility	Oxidation Reduction	Photolysis	Hydrolysis	Volatilization	Sorption	Biological Processes
Antimony	+5, +3, -3	Oxides slightly soluble	Oxides slightly soluble under natural environmental conditions	--	Forms oxide	--	Coprecipitates with Fe an Ae and adsorbs to clays	Some bioaccumulation
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
Cadmium	+2	Cds and Cd $(OH)_2$ Slightly Soluble	under reducing conditions forms Cds	--	Forms hydroxides	--	Strong adsorption	Strong 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

Table 4-5

Fate and Transport Properties of Site 5 Inorganic COPCs[a]

Chemical	Common Oxidation State	Solubility	Oxidation Reduction	Photolysis	Hydrolysis	Volatilization	Sorption	Biological Processes
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
Cyanide	-1	High solubility	--	Some metallocyanides photolyze	--	Rapid volatilization of HCN	Adsorbed by organics but solubility dominates. Iron facilitates adsorption	--
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]	--	--	--	Strong volatility	Strong adsorption to clays, oxides and organic material	Bioaccumulates
Nickel	+2	low solubility under natural conditions	--	--	--	--	Strong coprecipitation with metal oxides	Some bioaccumulation
Silver	+1	low solubility under natural env. conditions	forms insoluble precipitates	--	--	--	strongly adsorbed by clays, manganese iron and organics	Bioaccumulates

Table 4-5

Fate and Transport Properties of Site 5 Inorganic COPCs[a]

Chemical	Common Oxidation State	Solubility	Oxidation Reduction	Photolysis	Hydrolysis	Volatilization	Sorption	Biological Processes
Thallium	+1, +3	Tl_2S solubility is 200 mg/L	--	--	--	--	Strong adsorption to clays	Strong bioaccumulation
Zinc	+2	ZnO solubility 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.
[b] Source is Fetter (1993).

the conditions for the dissolution of metals in groundwater, as the dissolved fraction of many of the metals in Site 5 groundwater is significant.

There is potential for the transport of the dissolved metals in groundwater at Site 5 to migrate to the most proximal surface water which is Blows Creek.

4.9 Summary of Site 5 Contaminant Fate and Transport

The majority of the COPCs detected in the soils, sediments, surface water and groundwater at Site 5 can be classified as persistent, non-volatile and non-degradable metals (antimony, arsenic, beryllium, chromium, copper, lead, mercury, nickel, silver, thallium and zinc) and very slowly degradable organics that include PAHs, explosives, dioxins, pesticides 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 moderate dissolution of metals to groundwater. Transport of metals in groundwater, whether in the dissolved form or adsorbed to particulates, to Blows Creek is possible.

The volatile, soluble, degradable VOCs such as acetone, 2-butanone and toluene were found only in trace concentrations in the surface, subsurface soils and sediments. Only toluene was found in very low concentrations in groundwater indicating limited migration of VOCs to groundwater.

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 B (Site 2) and the Burning Grounds (Site 5) 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 I. 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 I. Thus, this risk assessment was performed according to published guidance and the technical approach memorandum as amended. This risk assessment was also

performed using EPA's Standard Risk Tables as prescribed in *EPA's Risk Assessment Guidance for Superfund (RAGS), Part D.*

5.1 Identification of COPCs

The identification of COPCs includes data collection, data evaluation, and data screening steps. The data collection and evaluation steps involve gathering and reviewing the available site data and identifying a set of data that is of acceptable quality for the risk assessment. The data set is then further screened against concentrations that are protective of human health to reduce the data set to those chemicals and media of potential concern. The data used for the quantitative risk analysis were all validated prior to use in the risk assessment.

Section 5.1.1 discusses the selection of data used for the quantitative risk assessment. The data were selected from the set of validated data determined usable for risk assessment. Section 5.1.2 discusses the methodology used to further reduce the risk assessment data set to the constituents and media that are of primary concern to human health. Section 5.1.3 identifies the COPCs that were quantitatively assessed in the risk assessment.

5.1.1 Data Evaluation and Selection

The analytical data were evaluated to determine its usability for risk assessment and to determine exposure point concentrations.

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. Juliens Creek Annex to the Norfolk Naval Base, Chesapeake, Virginia dated April 23, 1996 (Relative Risk data). Data collected during the RI is evaluated quantitatively. Relative risk data is evaluated in a qualitative manner.

The environmental sampling and analysis conducted for the RI at Sites 2 and 5 was designed to cover the range of potential site contaminants associated with historical site activities. Site 2 is an inactive landfill where burning and incineration of refuse was conducted. Refuse disposed at Site 2 included garbage, acids, waste ordnance, and blast grit from ship repair operations. Site 5 are the former burning grounds. 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, paint sludges, pesticides, and various types of refuse. In 1997, the surface area was burned with straw, diced, and burned again, in an effort to decontaminate the soil.

All samples collected from groundwater, surface and subsurface soil, surface water, and sediment at Sites 2 and 5 were analyzed for target compound list (TCL) organic constituents (including volatile organic compounds [VOCs], semivolatile organic compounds [SVOCs], pesticides, and polychlorinated biphenyls [PCBs]); target analyte list (TAL) inorganic constituents (including metals and cyanide); and total phosphorous. Selected samples from each medium were also analyzed for nitramines. All of the data used in the risk assessment were validated following Region III Modifications to the EPA *National Functional Guidelines*. The data were reviewed to determine their use for risk assessment. The results of this review for each media sampled are compiled in the Data Usability Worksheets in Appendices J and K.

The methodology to determine exposure point concentration is discussed below:

- When a primary and duplicate sample were collected, the maximum concentration of the primary or duplicate was used as the sample concentration. In this risk assessment, the duplicate and primary samples were not counted as separate samples and the maximum concentration between the duplicate and primary was used in this evaluation.
- One-half the sample quantitation limit (SQL) or sample detection limit (DL) was used for cases where no detectable contaminant quantities were found in a specific sample, but the contaminant was detected in the medium for that group of samples.
- Data qualified with a J (estimated value), K (biased high), or L (biased low) during data validation were treated as unqualified detected concentrations.
- Data qualified with an R (rejected) were not used in the risk assessment.
- Data qualified with a B (blank contaminated) were treated as non-detects and the blank-related concentrations are the sample quantitation limits.

Upgradient samples are not considered in derivation of the exposure point concentration.

5.1.1.1 Groundwater

Groundwater from the shallow and deep aquifers was evaluated in the risk assessments for Sites 2 and 5. Groundwater samples collected from onsite or hydraulically downgradient monitoring wells SJS02-GW02S, SJS02-GW02D, and SJS02-GW03S were evaluated in the Site 2 risk assessment. Groundwater samples collected from onsite or hydraulically downgradient monitoring wells SJS02-MW02S, SJS02-MW02D, and SJS02-MW03S were evaluated in the Site 5 risk assessment. At each site, the shallow and deep aquifer was evaluated independently in the risk assessment. Upgradient wells at Sites 2 and 5 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 2 and Section 3.4.5.1 for Site 5. Appendix F 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 ten locations at Site 2 and nine locations at Site 5. Surface soil sampling locations are shown on Figure 2-3 for Site 2 and Figure 2-4 for Site 5. Samples SJS02-SS01 and SJS05-01, which were 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 2 and Section 3.4.4.1.1 for Site 5. Appendix F presents the analytical results for the surface soil data used in the risk assessment.

5.1.1.3 Subsurface Soil

A total of five subsurface soil samples were collected from Site 2 while fifteen subsurface soil samples were collected from Site 5. Samples collected from upgradient locations were not considered as part of this risk assessment. 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 2 and Section 3.4.3.2.1 for Site 5. Appendix F 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 2, is depicted on Figure 2-9. Analytical results for this sample are presented in Appendix F. The nature and extent of COPCs in Site 2 surface water are discussed in Section 3.3.7.1.

5.1.1.5 Sediment

A total of seven sediment samples were collected from areas on and adjacent to Sites 2 and 5. Three of these samples were collected from the Site 2 area and four were collected from Site 5 and surrounding areas. Samples collected from the upstream location at each site were not considered in this risk assessment. Sediment sampling locations are shown on Figure 2-9 for Site 2 and Figure 2-10 for Site 5. Discussions of the nature and extent of COPCs are presented in Section 3.3.6.1 for Site 2 and 3.4.6.1 for Site 5. Appendix F 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 2 and 5 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 a Geoprobe[R].

For Site 2 groundwater, the concentrations of inorganic constituents in the RI study were in general of greater magnitude than the concentrations reported in the Relative Risk data. Several metals were detected in the RI study which were not detected in the Relative Risk study. However, TNT was reported in the Relative Risk Study and was not reported in the RI data. For Site 2 surface soil, most of the organic and inorganic constituents reported in the Relative Risk Study were detected in the RI study at concentrations in the same order of magnitude. Exceptions are Bis(2-ethylphlalate), which was reported at 560 ug/kg in the Relative Risk Study and at 54 in the RI report and pyrene which was reported at a much greater concentration in the RI report than the Relative Risk Study (7200 ug/kg vs. 43

ug/kg, respectively. One chlorinated organic was detected in the Relative Risk Study which was not reported in the RI data.

For Site 5 groundwater, several inorganic chemicals and di-n-butyl phthalate were detected in the Relative Risk Study which were not reported in the RI data. For the constituents detected in both studies, the concentrations are similar. For Site 5 soil, similar organic and inorganic constituents were detected in both studies, with the exception of endrin, which was detected in the Relative Risk Study but not reported in the RI data. In general, concentrations reported at similar concentrations in both studies, with the exception of some pesticides and PAHs.

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

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.

5.1.2.2 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 2 and 5.
- 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 2 and 5.

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 2 and 5 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 I. The development of site-specific sediment RBC values is presented in Appendix L. 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 I 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 I).

- In accordance with Consensus Agreement No. 6.A.5 (Appendix I), 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 I, 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 2.10 for Site 2 and Tables 2.1 through 2.9 for Site 5, which are located in Appendices J and K, 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 2 and 5, respectively. No chemicals were re-included as COPCs for Site 2 or 5 groundwater based on the criteria discussed in Section 5.1.2.4. Contaminants that were selected as COPCs for Site 2 groundwater are noted on Tables 2.1 and 2.2 in the groundwater section of Appendix J. For the shallow aquifer at Site 2, these chemicals include aluminum, arsenic, barium, beryllium, chromium, iron, lead, manganese, thallium, and vanadium. Manganese and chloroform were detected at levels above screening criterion in the deep aquifer at Site 2. Contaminants that were selected as COPCs for Site 5 groundwater are noted in Tables 2.1 and 2.2 of Appendix K. These contaminants include aluminum, antimony, arsenic, beryllium, cadmium, chromium, cobalt, iron, lead, manganese, nickel, thallium, vanadium, and zinc in the shallow aquifer at Site 5. Antimony, arsenic, beryllium, iron, manganese, and chloroform were detected at levels above the screening criterion in the deep aquifer at Site 5.

5.1.3.2 Surface Soil

Tables 2.3 through 8.11 in the surface soil sections of Appendices J and K present the COPC selection process and noncancer and cancer risk calculations for the surface soil at Sites 2 and 5. 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 2 or 5 surface soil based on the criteria discussed in Section 5.1.2.4.

Contaminants that exceeded residential surface soil RBCs in Site 2 surface soils include 4,4-DDD, aluminum, antimony, arsenic, benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, beryllium, iron, manganese, nickel, vanadium, and zinc. Barium, benzo(a)anthracene, chrysene, nickel, and 4,4-DDD were all detected at concentrations in excess of soil to groundwater SSLs in Site 2 surface soils. No analytes were detected in excess of soil to air SSLs in Site 2 surface soils.

At Site 5, 4,4-DDE, aluminum, arsenic, barium, benzo(a)pyrene, benzo(b)fluoranthene, beryllium, cadmium, iron, manganese, vanadium, and zinc exceeded residential surface soil RBCs. 2,4-Dinitrotoluene, 4,4-DDE, 4,4-DDT, alpha-BHC, arsenic, barium, benzo(a)anthracene, chrysene, dieldrin, methylene chloride, nickel were all detected at concentrations in excess of soil to groundwater SSLs in Site 5 surface soils. No analytes were detected in excess of soil to air SSLs in Site 5 surface soils.

5.1.3.3 Subsurface Soil

Tables 2.6 through 8.12 in the subsurface soil section of Appendices J and K present the COPC selection process and non-cancer and cancer risk calculations for the constituents in the subsurface soil at Sites 2 and 5. 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 2 or 5 subsurface soil based on the criteria discussed in Section 5.1.2.4.

Aluminum, arsenic, benzo(a)anthracene, beryllium, cadmium, iron, and zinc were all detected in Site 2 subsurface soils at concentrations in excess of residential soil RBCs. Barium and nickel were detected in Site 2 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, manganese, and vanadium were all detected in Site 5 subsurface soils at concentrations in excess of residential surface soil RBCs. Arsenic, barium, nickel, and methylene chloride 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 J and K present the COPC selection process for the sediment at Sites 2 and 5. No chemicals were detected in excess of sediment RBC values at Site 2. Iron was the only analyte detected in excess of sediment RBC values at Site 5. Lead was detected at Site 2 at a concentration in excess of the 400 mg/kg screening value stipulated in Partnering Agreement #6.A.6 which is presented in Appendix P. No chemicals were re-included as COPCs for Site 2 or 5 sediment 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 J summarize the COPC selection process and the noncancer and cancer risk calculations for the surface water at Site 2. Cadmium, chromium, copper, iron, lead, 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 2 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 2 is a swampy former landfill covered with brush, trees, and grass; Site 5, a former burning ground, is an open field. 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 2 and 5, 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 H). 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 J for Site 2, and as Table 1 in Appendix K for Site 5).

The Site 2 conceptual model includes exposure to the following media: shallow groundwater, deep groundwater, surface soil, subsurface soil, sediment, and surface water. The receptors associated with each Site 2 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 2 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).

Receptors for Site 5 are identical to those identified at Site 2, but without the surface water exposure media.

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 H, 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 3.5 in Appendices J and K 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:

$$I = C \times CR \times EF \times Ed \times 1/BW \times 1/AT = (mg/kg - day)$$

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 4.17 in Appendices J and K present the exposure equations and exposure assumptions, respectively, used for different scenarios at Sites 2 and 5.

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 M.

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 2 and 5 are presented in Appendix O. 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 5.5 in Appendices J and K present the toxicity values for all non-carcinogenic constituents detected at Sites 2 and 5. Tables 6.1 through 6.4 in Appendices J and K present toxicity values for all carcinogenic compounds detected at Sites 2 and 5.

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.

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 (1989) 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 2 and 5 are listed in Tables 5.1 through 5.5 in Appendices J and K.

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 $(mg/kg\text{-}day)^{-1}$, 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 2 and 5 are listed in Tables 6.1 through 6.4 in Appendices J and K.

5.3.2.3 Chemicals for Which no EPA Toxicity Values Are Available

Most of the chemicals detected at Sites 2 and 5 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 7.17 in Appendices J and K present the media-specific non-cancer hazards to current and future receptors at Sites 2 and 5.

5.4.2 Carcinogemic 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 Appendices J and K present the media-specific cancer risks (CR) to current and potential future receptors at Sites 2 and 5.

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 10.6 in Appendix J and Tables 9.1 through 10.7 in Appendix K summarize the media-specific cancer risks (CR) and HQ for the current and potential future receptors at Sites 2 and 5.

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 P.

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.B.6 stipulates a lead screening level of 400 ppm for surface soil and sediment (Appendix I). For Site 2, the maximum concentration of lead detected in soil is 2,370 mg/kg and is considered a COPC. At Site 5, the maximum detected concentration of lead is 7,210 mg/kg and is considered a COPC. The maximum concentration of lead detected in sediment at Site 2 (545 mg/kg) is above the screening level, and therefore, lead is a COPC for sediment at Site 2 . Lead is not a COPC at Site 5 for sediment.

For the IEUBK model, default values for lead in air, dietary ingestion, dust, and maternal contribution were used. Because lead was not detected in deep groundwater at Sites 2 and 5, 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 exceedance probability distribution graph are presented in Appendix N and summarized as follows:

	Sites 2 and 5		
	Maximum Soil Concentration		Max Sediment Concentration
Year	Blood Lead Level (ug/dL)		Blood Lead Level (ug/dL)
	Site 2	Site 5	Site 2
0.5 -1	12.9	24.6	5.8
1 - 2	14.8	28.3	6.5
2 - 3	14.0	27.0	6.1
3 - 4	13.6	26.7	5.8
4 - 5	11.4	23.4	4.9
5 - 6	9.8	20.5	4.2
6 - 7	8.7	18.5	3.7

A blood lead level of 10 ug/dL is the benchmark to evaluate lead exposure. Based on the above assumptions and the maximum soil concentration of 2,370 mg/kg, projected blood lead levels of 38.87% of the exposed child population (0 to 84 months of age) would be expected to be below 10 ug/dL at Site 2. At Site 5, based on the maximum soil concentration of 7,210 mg/kg, projected blood lead levels of 4.26% of the exposed child population would be expected to be below 10ug/dL. For sediment at Site 2, based on a maximum sediment concentration of 545 mg/kg, projected blood lead levels of 92.25% of the child population (0-84 months of age) would be expected to be below 10 ug/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 2 and 5 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 P and are summarized below.

For surface soil at Site 2, women of child-bearing age would have blood lead concentrations in the range of 5.26 to 5.76 ug/dL based on a maximum lead concentration of 734 mg/kg. For subsurface soil at Site 2, blood lead levels are predicted in the range of 3.03 to 3.53 ug/dL based on a maximum lead concentration of 885 mg/kg. For sediment, blood lead levels are predicted in the range of 2.5.2 to 3.02 ug/dL based on a maximum lead concentration of 545 mg/kg. For surface soil at Site 5, women of child-bearing age would

have blood lead concentrations in the range of 12.53 to 13.03 ug/dL based on a maximum lead concentration 7,210 mg/kg.

5.4.4 Analysis of Total Risk – Site 2

Tables 9.1 through 10.7 in Appendix J summarize the cumulative human health cancer risks and noncancer hazards associated with exposure to all media at Site 2.

For Site 2, all groundwater, surface water, and sediment 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 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, adolescent trespasser, adult 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 trespasser, adolescent trespasser, adult trespasser, child resident, and adult resident. 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. Five compounds (barium, nickel, benzo (a) anthracene, chrysene, and 4,4-DDD) 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 4.6 (RME) and 1.3 (CT). The RME non-cancer hazard estimate for the adolescent trespasser is outside of EPA's risk range 1.4, but the CT estimate is within EPA's

risk range 0.4. The RME non-cancer hazard estimate for the adult trespasser is outside of EPA's risk range 2.3, but the CT estimate is within EPA's risk range 0.6. The non-cancer hazard estimates for the child resident are 31 (RME) and 8.6 (CT). The non-cancer hazard estimates for the adult resident are 8.5 (RME) and 2.3 (CT). The non-cancer hazard estimates for the construction worker are 9.5 (RME) and 2.8 (CT). The non-cancer hazard estimates for the groundskeeper are 5.0 (RME) and 1.3 (CT). Iron and vanadium are the risk drivers for these exceedences.

The RME cancer risk estimates for the trespasser (child, adolescent, adult) in Site 2 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 trespasser are 1.4E-4 (RME) and 2.1E-5 (CT). The risk estimates for the adolescent trespasser are 1.0E-4 (RME) and 1.5E-5 (CT). The risk estimates for the adult trespasser are 1.0E-4 (RME) and 1.6E-5 (CT). Carcinogenic risk estimates for the child resident are 9.4E-4 (RME) and 2.4E-4(CT). Carcinogenic risk estimates for the adult resident are 1.6E-3 (RME) and 1.4E-4(CT). Beryllium is the carcinogenic risk driver for Site 2 surface soils. The cancer risk estimates for the groundskeeper 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, 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 soil to air. No compounds exceed the SSLs. Note, however, that there are several compounds which were detected in subsurface soil which do not have generic 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 (1.2), while the CT value was within EPA's range (0.6). Iron is the risk driver for Site 2 subsurface soils. Carcinogenic risks for this scenario are within EPA's risk range.

The analysis of surface water includes an evaluation of the trespasser and future residential scenarios. All risks and hazards for theses scenarios are within EPA's risk range. Since only one surface water sample was collected at Site 2, 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 2 sediments. Based on the results of the IEUBK model and the adult lead exposure model, lead may be a problem in sediment at Site 2.

5.4.5 Analysis of Total Risk – Site 5

Tables 9.1 through 10.6 in Appendix K summarize the cumulative human health cancer risks and noncancer hazards associated with exposure to all media at Site 5.

For Site 5, 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 resident. For surface soil, non-carcinogenic risks are outside of EPA's range for the child trespasser, child and adult resident, construction worker, and groundskeeper. RME estimates of carcinogenic risk in surface soil are outside of EPA's risk range for residents (child, adult) and groundskeeper. For subsurface soil, non-carcinogenic risk estimates are outside EPA's risk range for the construction worker. For sediment, non-carcinogenic risk is outside of EPA's risk range for the child trespasser, child resident, and adult resident. 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 adult resident exceeded EPA's risk range for the RME estimate. For the adult resident, the non-carcinogenic risks were 1.3 (RME) and 0.9 (CT). Iron and arsenic were the risk drivers for this scenario.

The analysis of surface soil includes inter-media screening for transfer of contaminants from surface soil to shallow groundwater. Barium, nickel, 2,4-DNT, arsenic, benzo(a)anthracene, chrysene, n-nitrosodiphenylamine, alpha-BHC, dieldrin, 4,4-DDE, and 4,4-DDT 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 the adolescent and adult trespasser these pathways were within EPA's risk range. For the child trespasser and construction worker scenarios, the RME estimates exceeded EPA's risk range, but the CT estimates were within EPA's range. The non-carcinogenic hazard estimates for the child trespasser are 2.8 (RME) and 0.8 (CT). The non-carcinogenic hazard estimates for the construction worker are 3.2 (RME) and 0.9 (CT). Non-carcinogenic risk estimates for the child and adult resident, and groundskeeper were outside of EPA's risk range. The non-carcinogenic hazard estimates for the child resident are 19 (RME) and 5.2 (CT). The non-carcinogenic hazard estimates for residential adult are 5.8 (RME) and 1.6 (CT). The non-carcinogenic hazard estimates for the groundskeeper are 3.5 (RME) and 1.0 (CT). Iron is the risk driver for these scenarios.

The cancer risk estimates for the trespasser (child, adolescent, adult) construction worker, and groundskeeper for Site 5 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 2.2E-4 (RME) and 5.2E-5 (CT). The carcinogenic risk estimates for the child resident are 2.0E-4 (RME) and 5.0E-5 (CT). Exposure to arsenic 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, nickel, and methylene chloride were detected at concentrations which exceeded 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 soil 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 (3.9) and CT (1.1) are outside EPA's risk range. Iron is the risk driver for this scenario.

The analysis of sediment includes an evaluation of the trespasser (adult, adolescent, and child) and future residential (adult and child) scenarios. Non-carcinogenic risk for the child trespasser, child resident, and adult resident exceeded EPA's risk range. For the child trespasser and adult resident, the RME non-carcinogenic risk estimate was outside of EPA's

risk range, but the CT estimate was within EPA's range. For the child trespasser non-carcinogenic risk estimates were 1.3 (RME) and 0.7 (CT). For the adult resident non-carcinogenic risk estimates were 1.6 (RME) and 0.8 (CT). For the child resident, the non-carcinogenic risk estimates were 8.7 (RME) and 4.5 (CT). Iron, the only COPC, was the risk driver for these scenarios.

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
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

Steps Involved in Risk Assessment Process Contributing to Uncertainty	
Risk Assessment Component	**Potential for Uncertainty**
	• 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 2 and 5 combined.

Another source of uncertainty at Sites 2 and 5 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 exceeeded 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. There is some variation between the results which can be considered 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 2 and 5. Once this data is available, 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 2 (Landfill B) and Site 5 (Burning Grounds) at the St. Juliens Creek Annex in Chesapeake, Virginia . This baseline risk assessment, which characterizes the current and future human health risks at Sites 2 and 5 if no additional remediation is implemented, was conducted to assess the potential human health impacts from the site under current conditions.

For Site 2, current and future risks and hazards are within or below EPA's risk range for groundwater, surface water, and sediment for all exposure scenarios (RME and CT). For surface soil, the evaluation for the child trespasser, adolescent trespasser, adult trespasser, residential child, residential adult, groundskeeper and the construction worker results in non-carcinogenic risk estimates outside EPA's risk range. For the adolescent and adult trespasser, EPA's risk range was exceeded for the RME evaluation, but not for the CT evaluation. RME carcinogenic risk estimates for the trespasser (child, adolescent, adult) and resident (child, adult) are outside of EPA's risk range. The CT evaluation for the three trespasser 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 5, 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 RME risk estimates are outside of EPA's risk range for the adult resident, but within EPA's risk range for the child resident. For surface soil, the evaluation for the child trespasser, resident (child, adult), groundskeeper and construction worker results in non-carcinogenic risk estimates outside EPA's risk range. For the child trespasser, EPA's risk range was exceeded for the RME evaluation, but not for the CT evaluation. RME estimates of carcinogenic risk from Site 5 surface soils exceeded EPA's risk range for the residential child and adult and groundskeeper. 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 sediment, EPA's non-carcinogenic risk range was exceeded for the child trespasser, the child resident, and the adult resident. 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 2 and 5 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 soils at Sites 2 and 5 and sediment at Site 2.

6 Summary of Results

CDM Federal has performed a Remedial Investigation and Risk Assessment of two sites, Site 2, Landfill B, and Site 5, the Burning Grounds, at the St. Juliens Creek Annex in Chesapeake Virginia. This section summarizes the findings, conclusions and recommendations that have come from these studies. The work performed and the findings for the Site 2 investigations are presented in Section 6.1 and the Site 5 investigations and recommendations are summarized in Section 6.2. The summary and conclusions of the Human Health Risk Assessment are found in Section 5 of this report. The Baseline Ecological Risk Assessement is submitted as a separate document.

6.1 Site 2 Summary and Recommendations

Site 2 (Landfill B) is an inactive unlined landfill located at the corner of Saint Juliens Drive and Craddock Street in the southwestern section of the facility. The landfill operations were active from 1921 to 1947. Initially, refuse was burned onsite and used to fill in an adjacent swampy area. In 1942, an incinerator was installed and took the place of the open burning. The area has since become swampy and is covered with brush, trees, and grass. A pond is located in the center of the landfill. Refuse disposed of at Landfill B comprises garbage, acids, blast grit, and waste ordnance.

This Section briefly summarizes the work performed at Site 2 (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 2

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 electromagnetic and magnetometer surveys of the area in an attempt to define the landfill boundaries. Nature

and extent of contamination was investigated by collecting ten surface soil, five subsurface soil, one surface water and three sediment samples. Three 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 findings 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 2 includes sands and clays of the Pliocene Yorktown Formation, and silts, sand and clay of the post-Pliocene sediments. The top of the Yorktown Formation is considered to be the 11-ft thick greenish-gray clay encountered at a depth of approximately 39 ft below ground surface. The Yorktown Formation clay is underlain by up to 18 ft of fine sand with relatively thin clay beds encountered at the downgradient location. The overall thickness of Yorktown Formation encountered at Site 2 is 28 ft.

Overlying the Yorktown Formation clay at this site is a 4 to 5 ft-thick medium to fine sand. This sand unit is overlain by a 2 to 4 ft thick clay layer that pinches out to the south. This thinner clay is overlain by another 3 to 4 ft-thick layer of greenish-gray fine sand. Between the top of that sand and ground surface is approximately 28 ft of interbedded, generally discontinuous, silty sand, clay, clayey sand and silt beds and lenses.

Fill material was encountered in the upper 4 ft at SJS02-MW3S, located adjacent to the southwest corner of the landfill, and is suspected in the other downgradient shallow well, SJS02-MW2S due to the number of utility lines located adjacent to the well.

The hydrostratigraphic units identified at Site 2 during the RI include the Yorktown Aquifer, the Yorktown Clay Aquitard, an Intermediate Water-bearing Zone, and a Water Table Aquifer.

The Yorktown Aquifer at Site 2 consists of the sand unit underlying the Yorktown Formation clay, at depths of about 50 ft. The potentiometric surface of the Yorktown

Aquifer is found at an elevation of 1 to 2 ft msl and the direction of groundwater flow is east, toward the Southern Branch of the Elizabeth River.

The upper clay of the Yorktown Formation serves as a confining unit to the Yorktown Aquifer at this site. At Site 2 the clay is found at a depth of approximately 39 to 40 feet and has an average thickness of about 11 feet. The vertical hydraulic gradient across this clay is approximately 0.067 ft/ft in an upward direction at the upgradient monitoring well cluster. Based on the November water level data, the vertical gradient at the downgradient location is also upward, and may vary due to the tidal influence. The vertical gradients measured during the November field study ranged from approximately 0.046 ft/ft to 0.039 ft/ft.

At Site 2 there is, potentially, an intermediate water-bearing zone between the Water Table Aquifer and the Yorktown Aquifer. This zone consists of a sand unit, approximately 4 to 5 ft thick, at a depth of 35 to 36 ft, that is isolated from the Yorktown Aquifer by the upper Yorktown Formation clay, and is isolated from the Water Table aquifer by relatively thinner clay beds. No monitoring wells were screened within this limited intermediate sand unit.

The Water Table Aquifer at Site 2 consists of the post-Pliocene sands, silts and clayey sands in the top 28 ft of the stratigraphy. The potentiometric surface of the Water Table Aquifer is found at depths of approximately 2.5 ft to -0.5 ft msl, but an accurate potentiometric surface map could not be produced for the Water Table Aquifer at Site 2 because of the locations of the monitoring wells and tidal impacts.

6.1.2.2 Summary of Geophysical Investigation

EM and magnetometer surveys were conducted at Site 2 in order to determine the landfill boundaries. Anomalies were identified within the survey grid established on the east side of the pond (west and south of Building 130) and surface debris was encountered in the anomaly areas in the northern section of the grid, indicating that this area is a possible fill area.

Magnetic and EM profiles were conducted on the west and northwest sides of the pond. In general, magnetic anomalies and EM anomalies did not correlate well. This is probably due to the high salt content of the soil and groundwater which would mask EM anomalies. Several of the magnetic anomolies are thought to be the result of buried utility lines.

The geophysical surveys did not clearly identify the landfill boundaries because of site conditions which restricted the use of the EM instrument (ponded water, potentially higher salt content in the ground water). However, where the surveys were conducted on a grid no evidence of landfilled material was identified except in the northern part of the grid

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. The COPCs were developed for each media at each site.

Surface Soil

The distribution of organic COPCs in surface soils approximately corresponds to the suspected landfill boundaries with the exception of pesticides. Sample SJS02-SS01, collected furthest from the suspected landfill boundary contained only pesticides. All samples collected north of St. Juliens Creek Drive and east of Craddock Street contained some PAHs. Although the site is in an industrialized area where some level of PAH would be expected, the concentrations of PAH in some samples indicate that the landfill has contributed as a source. Garbage, blasting grit, or fuels used to accelerate burning, could contain PAHs. The landfill also is a probable source of other SVOCs (carbazole, dibenzofuran, and phthalates) in surface soils.

Similarly, the distribution of the highest concentrations and greatest number of inorganic COPCs is consistent with the proximity to the landfill and type of materials sampled. Sample SJS02-SS06, suspected of containing blasting grit, and sample SJS02-SS03, located immediately adjacent to the landfill boundary contained particularly high concentrations of chromium, copper, iron, lead, manganese, nickel, vanadium, and zinc.

Cyanide, while probably due to landfilling activities, does not appear to be a widespread contaminant.

Subsurface Soil

As with surface soil, the distribution of the highest concentration and greatest number of COPCs detected in subsurface soil samples corresponds to the suspected boundaries of the landfill.

Generally the highest concentration and greatest number of COPCs were detected in SJS02-SB03 and SJS02-SB04, located at the southwest corner of the site. A nearby monitoring well boring encountered fill in the upper four feet in that area. Both of these samples have likely been affested by the landfilling activities. These are the only two samples in which a significant number of non-COPC organic constituents were detected and their presence is considered to be due to landfill activities.

The highest concentrations of some inorganic COPCs were found in SJS02-SB01, a sample collected bout 200 ft away from the suspected landfill boundary. The source of those metals may be fill material used in that area (unrelated to Landfill B).

Groundwater

Two groundwater sampling events were conducted: Round 1 in July 1997, and Round 2 in November 1997. Although the groundwater flow direction could not be determined, the sample from monitoring well SJS02-MW2S, the one well that is most probably downgradient of the site, contained the greatest number, and generally highest concentrations of COPCs.

The analytical data do not show any clear spatial trends with respect to COPCs. The measured specific conductance in the two shallow wells located closest to the landfill are well above published values for the Water Table Aquifer. At SJS02-MW2S, the specific conductance readings during the first and second sampling rounds were 6900 umhos/cm and 4150 umhos/cm ,respectively. In monitoring well SJS02-MW3S the readings were 24000 umhos/cm and 1200 umhos/cm. The elevated readings may be due to naturally elevated salt content or from landfill leachate.

The measured concentrations of iron found in samples from SJS02-GW1S (located upgradient from the landfill) were well within the published range of iron concentration for the Water Table Aquifer. Samples from SJS02-GW2S, however are well above the maximum published value (377,000 ug/L for Round 1 and 20300 ug/L for Round 2). The concentrations decrease corresponds to a decrease in turbidity between sampling rounds, but the Round 2 concentration is elevated relative to published values despite having a turbidity of only 16 NTU. The landfill may be the source of high iron concentrations in SJS02-GW2S; however, it is possible that iron from pipes related to the adjacent utility lines

may be dissolving into the shallow groundwater and impacting iron concentrations in the samples.

Based on the limited available data, it appears that no deep monitoring wells are located downgradient (east) of the landfill. The greatest number of COPCs were detected in the sample that appears to be upgradient of the landfill (SJS02-GW1D). The chloroform detected in both Yorktown Aquifer wells during Round 1 is considered to be a laboratory contaminant and not due to the landfill. Two Priority Pollutant metals, antimony and arsenic, were detected in the filtered sample from well SJS02-GW2D in Round 2. These metals were not found in any other filtered or unfiltered samples from this well.

The pH measured in the two Yorktown Aquifer monitoring wells ranged from 7.2 to 9.35, all above published values for the aquifer. pH readings collected on samples from deep monitoring wells (during development and sampling) at some of the other sites at the Annex (Site 5 and Site 3) have similarly high readings. These Base-wide data indicate that the pH of the groundwater in the Yorktown Aquifer in the St. Juliens Creek Annex area is higher than that found in the surrounding areas, but does not indicate the presence of a specific source of contamination for the aquifer.

Surface Water

The source of the inorganic COPCs in surface water is very difficult to determine at this site because the sample was collected close to the culvert that connects the pond to St. Juliens Creek. The sample was collected as the tide was going out, however there is a clear tidal effect on the pond and during rising tides, the surface water flows into the pond from the creek. The pond also receives rainwater runoff from the drainage ditches along Craddock Street. The surface water COPCs correlate closely with the sediment COPCs that were found at relatively high concentrations at that same location. The presence of the COPCs in the sample may be due to contaminants coming from the creek, suspended solids in the samples, or dissolved metals leached from the landfill or sediments.

Sediment

The concentrations of several of the metal COPCs, including arsenic, chromium, copper, lead, vanadium, zinc in the two sediment samples collected from within the central landfill pond are high relative to most of the surface soil samples collected at the site. Concentrations of these metals in the these samples are similar to those found in the most

contaminated surface soil samples (SJS02-SS03 and SJS02-SS06) indicating that the contribution of sediment from the landfill is impacting the pond sediment quality. The concentration of these metals in the sediment sample collected from the drainage ditch (SJS02-SD01) are significantly lower. The organic constituents found in the sediment, predominantly PAHs and pesticides, may be contributed from drainage ditch runoff.

6.1.3 Summary of Fate and Transport

The majority of the COPCs detected in the soils, sediments, surface water and groundwater at Site 2 can be classified as persistent, non-volatile and non-degradable metals (antimony, arsenic, beryllium, cadmium, 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 sediments and are relatively immobile. Concentrations in soils and sediments will persist into the future with only slow dissolution of metals to groundwater and surface water.

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

6.1.4 Conclusion and Recommendations

The objective of the Remedial Investigation at Site 2 was to delineate Landfill B, identify the impact of landfilling activities on environmental media, and determine the extent of any impact that was identified. The extent of the landfill was delineated by the combination of the geophysical survey and soil boring data. In general, the distribution and nature of the COPCs identified for the site is consistent with the delineated boundaries and the site history.

The presence of metals in the surface soil and sediment, and the presence of PAHs and other SVOCs in subsurface soil, surface soils and sediments are consistent with landfill activities. The landfill is not considered to be the source of pesticides found in surface soil and sediment samples. The presence of PCBs in some sediment and surface water samples is not explained as PCBs were not reported to have been disposed in the landfill. Similarly, the VOCs detected at low concentrations in soil and sediments were not reported to have been disposed in the landfill, and the source of these VOCs is not known.

It does not appear that Priority Pollutant metals or organic COPCs are leaching to groundwater, although iron concentrations in the Water Table Aquifer are higher than published values for the aquifer. The direction of groundwater flow has not been determined for the Water Table Aquifer, and therefore it is not possible to determine which samples have been collected downgradient of the landfill. The tides impact the water levels in the shallow aquifer and may impact the direction of groundwater flow.

Similarly, the direction of groundwater flow in the Yorktown Aquifer has not been determined accurately and also fluctuates with the tides. It appears from the limited data that no monitoring wells were installed downgradient from the landfill, and therefore the potential impact on groundwater quality in that aquifer has not been fully evaluated.

For Site 2, current and future risks and hazards are within or below EPA's acceptable risk range for groundwater, surface water, and sediment for all exposure scenarios (RME and CT). For surface soil, the evaluation for the child trespasser, adolescent trespasser, adult trespasser, residential child, residential adult, groundskeeper and the construction worker results in non-carcinogenic risk estimates above EPA's acceptable risk range. For the adolescent and adult trespasser, EPA's acceptable risk range was exceeded for the RME evaluation, but not for the CT evaluation. RME carcinogenic risk estimates for the trespasser (child, adolescent, adult) and resident (child, adult) are outside of EPA's risk range. The CT evaluation for the three trespasser 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 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 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) Collect and anlayze surface water samples originally scheduled for the RI.

4) Install additional groundwater monitoring wells in the shallow aquifer to determine the direction of groundwater flow and monitor groundwater in the shallow aquifer.

5) Install an additional Yorktown Aquifer groundwater monitoring well , downgradient of the site to monitor groundwater quality in that aquifer.

6.2 Site 5 Summary and Recommendations

Site 5 (the Burning Grounds) is located off of Craddock Street in the northern part of the facility. Wastes disposed of at the site include black powder, smokeless powder, explosive D, Composition A-3, tetryl, TNT, fuses, carbon tetrachloride, trichloroethylene (TCE), paint sludges, pesticides, and various types of refuse. The site currently consists of an open field with areas overgrown with high reeds. A significant part of the area is covered with a thick (18-inch) layer of gravel. In 1977, the surface of the area was covered with straw, burned (possibly with oil as an accelerant), diced, and burned again, in an effort to decontaminate the soil. Two related subsites were also investigated: a former caged pit and a drop tower.

This section briefly summarizes the work performed at Site 5 (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 5

The objectives of the remedial investigation was to delineate the boundary of the burning ground, locate the former caged pit, determine the nature and extent of contamination at the burning ground, drop tower and caged pit, 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 and magnetometer surveys of the burning ground and caged pit areas in an attempt to define the boundaries of the burning grounds and locate the caged pit. Nature and extent of contamination was investigated by collecting nine surface soil, eight subsurface soil, and three sediment samples from the Burning Ground area, three subsurface soil samples from the caged pit area and four subsurface soil samples from the drop tower area. Three shallow and two deep monitoring wells were installed (in the Burning Ground area) 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 5 includes sands and clays of the Pliocene Yorktown Formation, and silts, sand and clay of the post-Pliocene sediments.

The stiff clay that comprises the top of the Yorktown Formation, is encountered at a depths ranging from approximately 14.5 ft to 20 ft below ground surface and has an average thickness of 27 ft. At SJS05-MW2D, a 2-foot thick layer of fine sand was encountered, interbedded with the Yorktown Formation clay at a depth of 29 ft. The clay overlies approximately 13 ft of sand, clayey sand and silty sand.

Overlying the Yorktown Formation clay at this site is 14.5 to 20 ft of sand, silty sand, silt and clay. Above the Yorktown Formation clay is a fine to medium sand unit that appears to be continuous across Site 5. This sand is overlain by clay and silt to the north, silty sand at the western shallow monitoring well and interfingering clay and silty sand at the southeastern location.

The hydrostratigraphic units identified at Site 5 include the Yorktown aquifer, the Yorktown Formation clay aquitard and the Water Table Aquifer. The Yorktown Aquifer is encountered at depths of 43 to 46 ft, at Site 5. The potentiometric is found at an elevation of approximately 1.6 to 1.8 ft msl and the direction of groundwater flow varies. Although the

expected groundwater flow direction is to the east (toward the South Branch of the Elizabeth River, the potentiometric surface map indicates that in the northern part of the site, the flow is to the west. In the southern part of the site the flow is to the southeast, toward the South Branch of the Elizabeth River. Water level data indicate that the potentiometric surface will vary with the tides; therefore, the flow direction may vary with the tides. The horizontal flow gradient is very flat (approximately 0.0003 ft/ft), but there are not enough data to determine if a true reversal of flow direction occurs at the site.

The upper clay of the Yorktown Formation serves as a confining unit to the Yorktown Aquifer at this site. At the northern monitoring well cluster there is essentially no vertical hydraulic gradient across the clay. At the time of the July measurements, the vertical gradient at the southern location was 0.06 ft/ft in the upward direction. It is expected, however, that the gradient may vary in magnitude and direction based on tidal influences.

The Water Table Aquifer consists of Post-Pliocene sediments overlying the Yorktown Formation clay. The direction of groundwater flow in the aquifer is toward the east and the gradient is approximately 0.0125 ft/ft. The direction of groundwater flow may be controlled by discharge to a marsh that borders the site to the east.

6.2.2.2 Summary of Geophysical Investigation

Geophysical surveys were conducted at two locations at Site 5: the Burning Grounds and the caged pit area. The majority of the EM anomalies identified at the Burning Grounds are associated with metallic and other objects at the surface. The only two EM anomalies that are not associated with surface materials are located about 230 ft and 200 ft south of Building 272. These anomalies are apparently caused by buried materials or changes in salt or clay content of the soil. Because the site activities did not create conditions that would change the EM characteristics of the soil, the data did not indicate the site boundaries.

The magnetic and conductivity surveys conducted in the area of the caged pit identified coincident in-phase, conductivity and magnetic anomalies, considered to be buried debris from the former caged pit. The data were used to locate the subsurface soil sampling locations used to investigate this feature.

6.2.2.3 Nature and Extent of COPCs

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

Surface Soil

VOCs in surface soils are not present at high concentrations or in samples that would be associated with burning activities. The presence of gravel in a sample that covers the former burning ground area may indicate that VOCs are present as a result of storage of heavy equipment and other materials at the site.

The distribution of 2,4-DNT, a constituent of explosives, may be the best indication of the extent of contamination and the site boundaries. The samples that did not contain 2,4-DNT include SJS05-SS09 to the west of the burning grounds, SJS05-SS02, on the southwest, and two samples of the gravel that cover the former burning grounds area (SJS05-SS06 and -SS08). PAHs were found in all surface soil samples including two samples of gravel covering the former burning surface. The source of the PAHs may be deposition of airborne PAHs from industry in the area, oils used to remediate the site in 1977, or from materials stored at the site after burning activities ceased.

Pesticides appear to be widespread and are generally present at low concentrations. The presence of pesticides in surface soil may be the result of periodic past application of these chemicals to the grounds of the Base, although pesticides were reported to have also been disposed at the site. The concentrations of pesticides in sample SJS05-SS09, located in the grassy area to the west of the burning grounds, are particularly higher than concentrations in other samples.

Lead is the most widespread Priority Pollutant metal COPC. The locations of elevated lead concentrations correlates well with the presence of 2,4-DNT. The high concentration of arsenic in SJS05-SS09 does not appear to correspond to site activities and may be related to pesticides. Sample SJS05-SS01, the northernmost sample, contained the highest concentration of several metals including barium, copper, iron, lead, manganese, nickel, silver, thallium and zinc.

Based on the distribution of inorganic and organic COPCs in surface soil, the extent of site impacts in surface soil has not been defined to the north, west and south.

Subsurface Soil

In the Burning Ground area distribution of volatile constituents in the subsurface soil does not correlate to the location in which VOCs were detected in surface soil. The only COPC VOC was found in a sample located close to Building 35. It is possible that the presence of COPCs is related to activities in that building or as a laboratory contamination.

Although benzo(a)pyrene was the only PAH identified as a COPC, other PAHs were detected in every sample. The presence of the PAH below ground surface is an indication that soil quality has been impacted by site activities, most likely the use of oil as an accelerant. Most of the subsurface soil samples collected away from the burning area (those located by the caged pit and former drop tower) have either no PAHs or very low concentrations of PAH relative to what was detected in the burning ground area.

Dioxins were found in subsurface soil of the Burning Ground area, and may be present as a result of the burning of PCB contaminated oil. The distribution of the dioxin, considered as an indication of the area of burning, indicates that the burn area has not been defined to the east, as the easternmost samples (SJS05-SB03 and SJS05-SB07) both contained dioxin.

The subsurface soils so not appear to contaminated with pesticides.

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. The concentration of metals in soil at location SJS05-SS01/SB01 decreases significantly with depth. The high levels of barium, iron, lead, and zinc, decrease significantly within the top three feet.

The distribution and concentrations of COPCs detected in the subsurface soil at the caged pit area are not indicative of contamination produced by site activities.

Although there is little indication of significant subsurface soil contamination in the former drop tower area, the presence of PAHs at depth in SJS05-SB15 indicates the potential for undetected surface soil contamination.

Groundwater

During the RI the direction of groundwater flow in the Water Table Aquifer was determined to be to the east-southeast. Therefore there are no Water Table Aquifer monitoring wells directly upgradient or downgradient of the site. The soil analytical data

indicate that monitoring well SJS05-MW1S may be within the area used for burning. Monitoring well SJS05-MW2S is most downgradient, and perhaps within the site, and SJS05-MW3S is side gradient or (perhaps) downgradient, depending on the boundary of the site.

Two groundwater sampling events were conducted: Round 1 in July 1997, and Round 2 in November 1997. Although there are no organic COPCs detected within the shallow wells, there is some indication that toluene may be leaching from the subsurface soil at SJS05-SB01 into the groundwater (SJS05-GW1S).

Although there are several inorganic COPCs detected within the shallow groundwater, there is no clear evidence of a particular source area at Site 5. Areas where concentrations of metals in surface soil are particularly elevated (e.g. lead and nickel in SJS05-SS01), do not show a corresponding elevated concentration of these metals in the shallow groundwater. However, there are more COPC metals in the samples collected from the southernmost wells (for both filtered and unfiltered samples) than in the northern well. This indicates that the site as a whole may be contributing COPC metals to the shallow groundwater.

The measured specific conductance at SJS05-MW1S (8000 umhos/cm) and SJS05-MW2S (7000 umhos/cm and 1990 umhos/cm) are well above the range of published values (121 to 1569 umhos/cm) for the aquifer (Siudyla et al. 1981). The elevated readings may be due to naturally elevated salt content, high dissolved solids, or contamination from the site.

The measured concentrations of iron are generally all above the published (Siudyla et al. 1981) maximum concentration for the aquifer.

The potentiometric surface of the Yorktown Aquifer indicates that in the area of Site 5, flow in that aquifer is to the west, south and southeast. Although the lack of data points and tidal influence make the direction of groundwater flow somewhat uncertain, it appears that SJS05-MW2D may be downgradient of the site while SJS05-MW1D is upgradient of the site.

There is no indication that Site 5 is the source of chloroform detected in Round 1 samples from these wells. No chloroform was found in shallow wells or in Round 2 samples from the Yorktown wells. There are no Priority Pollutant COPCs in the upgradient Yorktown Aquifer monitoring well samples, and several in the downgradient samples, despite a lower turbidity in the downgradient samples. Although this would indicate that the site may be

acting as a source for these metals, it is unlikely that the metals would migrate through the upper Yorktown Formation clay (particularly in the absence of a strong downward flow gradient). For this reason, the site is not considered to be the source of metals in the Yorktown Aquifer, downgradient of the site.

The pH measured in the two Yorktown Aquifer monitoring wells range from 6.49 to 9.9. pH readings from deep monitoring wells (during development and sampling) at some of the other sites at the Annex (Site 2 and Site 3) have similarly high readings. These Base-wide data indicate that the pH of the groundwater in the Yorktown Aquifer in the St. Juliens Creek Annex area is higher than that found in the surrounding areas, but does not indicate the presence of a specific source of contamination for the aquifer at Site 5.

Sediment

The highest concentrations of both organic and inorganic COPCs are generally found in the upstream sediment sample (SJS05-SD01). This sample was collected from a drainage ditch about 140 ft east-southeast of the surface soil sample location SJS05-SS01. It is likely that the source of metals contamination in the surface soil sample also contributed to the concentrations in the sediment or that surface soil has washed into the ditch, resulting in contamination of the sediment. This sediment sample also had the highest concentration of the explosive, 2,4,-dinitrotoluene indicating that the sample is probably within the burn area, or that the ditch receives runoff from former burn areas, north (upstream) of that location. The highest concentration of pesticides was also found in this sample, however this would be expected as the sample is adjacent to a maintained grassy area where pesticides may have been applied. Pesticide concentrations drop off markedly downstream of the marsh.

The concentration of PAHs is also highest in the upstream sample. The source of the PAHs may be oils used to promote burning of the soils during site clean-up activities.

6.2.3 Summary of Fate and Transport

The majority of the COPCs detected in the soils, sediments, surface water and groundwater at Site 5 can be classified as persistent, non-volatile and non-degradable metals (antimony, arsenic, beryllium, chromium, copper, lead, mercury, nickel, silver, thallium and zinc) and very slowly degradable organics that include PAHs, explosives, dioxins, pesticides 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 moderate dissolution of metals to groundwater. Transport of metals in groundwater, whether in the dissolved or particulate form, to Blows Creek is possible.

The volatile, soluble, degradable VOCs such as acetone, 2-butanone and toluene were found only in trace concentrations in the surface, subsurface soils and sediments. Only toluene was found in very low concentrations in groundwater indicating limited migration of VOCs to groundwater.

6.2.4 Conclusion and Recommendations

The objective of the Remedial Investigation at Site 5 was to delineate the Burning Grounds and the former caged pit area, identify the impact of site activities on environmental media, and determine the extent of any impact that is identified.

Organic and inorganic COPCs were identified for all media at the site. Explosive constituents, PAHs, and lead in the surface soil and PAHs and dioxin in the subsurface soil are good indicators of the extent of contamination due to site activities. Based on the distribution of these constituents in the various media, the extent of contamination (and the extent of the site boundaries) have not been determined.

Although there are no organic COPCs in shallow groundwater, there are several inorganic COPCs in the dissolved fraction of the Water Table Aquifer samples that indicate the site may be acting as a source. The extent of this contamination has not been determined as there are no Water Table Aquifer monitoring wells located directly downgradient of the site, or at the downgradient edge of contamination. Although there are more dissolved metals in the Yorktown Aquifer monitoring wells at this site than at other sites on the Base, it is considered unlikely that these metals are migrating through the confining clay of the Yorktown Aquitard, particularly without a strong downward vertical gradient.

The former caged pit area was identified using geophysical techniques. Results of the subsurface soil sampling and analysis do not indicate contamination related to site activities.

At the former drop tower area, there is some indication of subsurface soil contamination from PAHs.

For Site 5, current and future risks and hazards are within EPA's acceptable risk range for shallow groundwater for all exposure scenarios (RME and CT). For deep groundwater, non-carcinogenic RME risk estimates are above of EPA's acceptable risk range for the adult resident, but within EPA's acceptable risk range for the child resident. For surface soil, the evaluation for the child trespasser, resident (child, adult), groundskeeper and construction worker results in non-carcinogenic risk estimates above EPA's acceptable risk range. For the child trespasser, EPA's acceptable risk range was exceeded for the RME evaluation, but not for the CT evaluation. RME estimates of carcinogenic risk from Site 5 surface soils exceeded EPA's acceptable risk range for the residential child and adult and groundskeeper. The CT evaluation for these scenarios produced a risk which was within EPA's acceptable risk range. For subsurface soil, risk estimates are above EPA's acceptable risk range for the construction worker. For sediment, EPA's non-carcinogenic risk range was exceeded for the child trespasser, the child resident, and the adult resident. 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 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

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

4) Install additional Water Table Aquifer wells upgradient and downgradient of the site.

5) Install one additional Yorktown Aquifer Monitoring well to determine the direction of groundwater flow more accurately and to provide additional data on the water quality of that aquifer.

6) Conduct additional surface soil sampling to the north, east, and south of the Burning Grounds to define the extent of surface soil contamination.

7) Conduct surface soil sampling in the former drop tower area to determine the extent of potential surface soil contamination.

8) Conduct additional subsurface soil sampling, particularly to the east of the Burning Grounds to determine the extent of contamination.

7 References

Barker, W.J., and E.D. Bjorken. 1978. *Geology of the Norfolk South Quadrangle, Virginia.* Department of Conservation and Economic Development, Division of Mineral Resources.

CH2M HILL, Inc. *Work Plan, Remedial Investigation and Feasibility Study, Landfill C (Site 3) and Landfill D (Site 4), St. Juliens Creek Annex, Chesapeake Virginia.* May 1997.

EPA. 1989a. *Exposure Factors Handbook.* U.S. Environmental Protection Agency, Office of Health and Environmental Assessment, Washington, D.C.

EPA. 1989b. *Risk Assessment Guidance for Superfund, Vol. I, Human Health Evaluation Manual.* Interim Final, Dec. 1989. EPA/540/1-89/002. U.S. Environmental Protection Agency, Office of Emergency and Remedial Response, Washington, D.C.

EPA. 1994a. *Health Effects Assessment Summary Tables.* FY-1994 Annual. EPA 540/R-94/020. Office of Solid Waste and Emergency Response, U.S. Environmental Protection Agency, Washington, D.C.

EPA. 1994b. *Region 3 Interim Ecological Risk Assessment Guidelines.* Draft dated July 27, 1994. U.S. Environmental Protection Agency, Region III, Philadelphia, PA.

EPA. 1995. *Integrated Risk Information System.* U.S. Environmental Protection Agency, Office of Environmental Assessment, Environmental Criteria and Assessment Office, Cincinnati, OH.

EPA. 1983. "Treatability Manual, Vol. I, Treatability Data"; Office of Research and Development, Washington, D.C. EPA-6600/6-85/001a.

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

Feter, C.W. 1993. *Contaminant Hydrogology.* Macmillan Publishing Co., NY, NY, 458 pp.

Howard, P.H. 1989. Handbook of Fate and Exposure Data.

Knox, R.c., G.M. Long, and J.K. Sheldon. 1992. *Practical Enviromental Bioremediation.* Lewis Publishers, 149 pp.

National Oceanographic and Atmospheric Administration. 1995. Nautical Chart 12206, Virginia-North Carolina Intra-Coastal Waterway, Norfolk to Albemarle Sound via North Landing River or Great Dismal Swamp Canal. U.S. Department of Commerce. Edition 28.

Oaks, R.Q. 1964. *Post Miocene Stratigraphy and Morphology, Outer Coastal Plain, Southeastern Virginia.* Technical Report No. 5, Dept. of Geology, Yale University, Under Contract NONR609(40), Geography Branch, Office of Naval Research.

Reidy, P.J., W.J. Lyman, and D.C. Noonan. 1989. Assessing UST Corrective Action Technologies: Site Assessment and Selections of Saturated Zone Treatment Technologies. Prepared for USEPA Risk Reduction Engineering Laboratory, Edison, NJ.

Shacklette, H.T. and J.G. Boerngen. 1984. *Element Concentrations in Soils and Other Surficical Materials of the Conterminous United States.* U.S. Geological Survey Professional Paper 1270. Washington, D.C.

Siudyla, E.A., A.E. May, and D.W. Hawthorne. 1981. *Groundwater Resources of the Four Cities Area, Virginia.* Commonwealth of Virginia, State Water Control Board, Bureau of Water Control Management, Tidewater Regional Office. Planning Bulletin No. 33.

APPENDIX A

Surface Geophysical Survey

APPENDIX B

Geoprobe Soil Sample Descriptions

DESCRIPTIONS OF DPT SUBSURFACE SOIL SAMPLES		
SITE 2 AND SITE 5		
Sample	**Depth (in feet)**	**Description**
Site 2		
SJS02-SB01	0 - 5	Water at 5 feet.
SJS02-SB02	0 - 4	Yellowish-grey, silty sand (SM). Water at 4 feet.
SJS02-SB03	0 - 3	Silty sand (SM). Composite sample.
SJS02-SB04	0 - 6	Very moist at 6 feet.
SJS02-SB05	0 - 4	Yellowish-grey sand, water at 4 feet.
Site 5		
SJS05-SB01		
	0 - 2	Top soil. Silt (ML), dark grey, glass and brick fragment.
	2 - 8	Dark greenish grey, clayey silt, micaceous. Very moist. Wood chip at 8 feet. Water at 5.5 feet in hole.
SJS05-SB02		
	0 - 2	No sample.
	2 - 4	Dark grey clayey silt (ML)
SJS05-SB03		
	0 - 3	Light grey fine sand (low recovery). Gravel. Dry.
	3 - 4	Dark grey clayey silt. Moist.
SJS05-SB04		
	0 - 3	No sample (Gravel).
	3 - 4	Brown and black mottled silt (ML).
	4 - 5	Dark greenish grey fine sand.
SJS05-SB05		
		Not recorded.
SJS05-SB06		
	0 - 1	Gravel.
	1 - 5	Yellow fine to med. sand. Very moist to saturated.
SJS05-SB07		
	0 - 1.5	Gravel.
	1.5 - 4	Dark greenish grey silt (ML), little clay.
	4 - 5	No sample.
	5 - 8	Dark greenish-grey v. fine sand (SP-ML). Water at 5 feet, in sand.
SJS05-SB08		
	0 - 2	Yellowish-grey sand. Dry.
	2 - 4	Brown silt, wet at 4 feet.
SJS05-SB09		
	0 - 0.5	Brown topsoil.
	0.5 - 1.5	Shells, tr. fine sand and silt.
	1.5 - 4	Dark yellowish brown fine sand.

APPENDIX C

Monitoring Well Boring Logs

CH2M HILL

PROJECT NUMBER	BORING NUMBER	SHEET
6207-028	MW-15 SJS02	1 OF 1

SOIL BORING LOG

PROJECT St. Juliens Creek Annex LOCATION Land Fill B Site 2

ELEVATION Ground 5.19 / TOC 7.72 msl (ft) 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 7/2/97 FINISH 7/01/97 LOGGER S. Bilney (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
		SB				Began Drilling 0800
	3-5	S-1	24/24"	1-2-2-1	3-4.4' Sandy silt trace gravel (GM) + organics interbedded with the Clay trace sand (ML) color greenish grey 10Y 5/1 trace lightolive brown 2.5Y 5/6 4.4-5' Silty F. Sand with organics (SM) (roots) moist very dark greyish brown 10YR 3/2	OVM - 0ppm
5	5-7	S-2	9/24	2-2-3-3	Silty F. Sand wet subrounded well sorted trace organics (SM) greyish brown 2.5Y 5/2	5' Hit water very wet OVM - 0ppm
	10-12	S-3	24/24	2-3-4-1	Silty F. Sand wet subrounded (SM) Color bands - olive yellow 2.5Y 6/6 reddish yellow 7.5YR 6/8 11.8-12' Soft silty clay (CL) grey N 5/1 Bottom of augers V. soft wet silty clay trace sand grey N 5/ (CL)	OVM - 0ppm Driller reports - Material got softer at 11.5' BGS
15					Bottom of Boring 15' BGS	0925 finished Drilling

Figure 1
SOIL BORING LOG, FORM D1586

CH2M HILL

PROJECT NUMBER	BORING NUMBER	SHEET	OF
CT02E	SJSO2 MW01D	1	3

SOIL BORING LOG

PROJECT NAVYCLEAN II / ST. JULIENS CREEK ANNEX LOCATION SITE 2 MW01D

ELEVATION GROUND: 5.27 TOC: 7.94 DRILLING CONTRACTOR AEDS

DRILLING METHOD AND EQUIPMENT INGERSOLL RAND A300 RIG / 8 1/4" and 4 1/4" HSA / 6" 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 2 MW01S FOR 0-12' INTERVAL	
5						
10						
		SP	1.4	22-1-2	SAND, f-med (SP), Strong brown (7.5YR 5/8), Wet. to 14.0'	
		CL			CLAY (CL) Bluish grey (GLEY 5/1). Sand in end of spoon.	
15		SP	1.5	2-1-1-2	SAND, med-fine. Same as @12'.	
		CL			CLAY, DK. Greenish grey (GLEY 4/1)	
			0.6	2-3-2-2	SAND and CLAY as above. Poor sample recovery.	
			.2	7-7-8-8		
20		SP	1.6	4-4-3-4	SAND (SP) fine, DK. bluish grey (GLEY 4/1). Wet. Little clay in thin (<0.5") layers. Increasing clay content to 22.8'	
		CL	2.0	4-3-3-4	22.8 CLAY (CL) DK greenish grey (GLEY 4/1) Blocky.	
		SP			SAND (SP)	
25		CL	1.7	5-4-4-5	CLAY, sandy to 27.2'	
			2.0	5-6-6-7	27.2'	
		SP			SAND, fine (SP) shell fragments. Little med. sand	
			NOT Recd.	4-5-5-5	SAND, as above. Tr. organics and shells little clay.	
30						

CH2MHILL

PROJECT NUMBER	BORING NUMBER	SHEET
CTO 28	SJS02 MWO1D	2 OF 3

SOIL BORING LOG

PROJECT NAVYCLEANII/ST JULIENS CREEK LOCATION SITE 2 MWO1D

ELEVATION . DRILLING CONTRACTOR AEPS

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		SP	2.0	5-4-45	SAND, as above	
					31. CLAY little to no sand.	
		CL	2.0	4-3-3-5	CLAY, (CL) with 0.25-3.0" thick layers of fine sand. Greenish gray (GLEY 5/1)	
35			2.0	5-4-4-5		
		SW	2.0	3-3-5-5	SAND, (SW) med - coarse sand, (SW) fining downward to silt and clay (CL) at 38'. tr. organics and shell fragments	
			2.0	3-2-2-3		Stopped drilling 7/9/97 Set 6" PVC isolation casing to 44'. Start sampling at 46' 7/11/97
40		CL	2.0	3-3-2-3	CLAY, greenish grey (GLEY 5/1) Sandy to 40.5' Little organics and mica	
			2.0	3-3-4-5	clay, as above, tr v. fine sand. Few shell fragments	
45			2.0	3-2-2-2		
			2.0	3-3-4-3	Some brown organic. Clay is DK. greenish gray (GLEY 3/1). Little mica.	
			2.0	4-3-3-3		
50			2.0	3-3-2-3		
			2.0	3-2-2-3	clay, as above	
55			1.0	3-3-2-3		
		SP	0.7	5-5-6-6	SAND, (SP), v. fine to fine DK greenish grey (GLEY 3/1)	Losing water to fm. at 56'.
60			0.6	6-5-5-6	Fine sand, as above, Little mica	

CH2M HILL

PROJECT NUMBER	BORING NUMBER	SHEET
CT02E	MW01D SJS02	3 OF 3

SOIL BORING LOG

PROJECT NAVY CLEAN II / ST. JULIENS CREEK ANNEX LOCATION SITE 2 MW01D

ELEVATION . DRILLING CONTRACTOR AEDS

DRILLING METHOD AND EQUIPMENT See p. 1

WATER LEVELS START FINISH LOGGER L. FRANCO

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			1.0	6-6-5-6	SAND as above, with trace med. sand	
		SP	0.5	6-6-6-5	SAND, as above, some med. sand	
65			1.5	7-7-6-7		
			1.5	7-6-6-7		END SAMPLING at 65!
					BORING TERMINATED 68'	
70						
75						

CH2M HILL

PROJECT NUMBER	BORING NUMBER	SHEET	OF
CT028	SJX02-MW2D	1	3

SOIL BORING LOG

PROJECT NAVYCLEAN II/ST. JULIENS CREEK LOCATION SITE 2 MW02D

ELEVATION GROUND: 4.71/TOC: 7.04 DRILLING CONTRACTOR AEDS

DRILLING METHOD AND EQUIPMENT INGERSO A300 RIG/8 1/4" ID HSA / 4 1/4" HSA / 6" MUD ROTARY

WATER LEVELS START 1230 7/12/97 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 2 MW02S FOR 0-12' INTERVAL	START DRILLING 1230 7/7
5						
10						
		CL	1.9	4-4-5-5	CLAY (CL) and SAND (SP) 50%, Moist. Greenish grey (GLEY 5/1) Sand is med-fine grained. Some orang mottling	
15			1.4	3-3-4-4		
			2.0	3-4-4-5		
		ML	1.25	3-5-5-7	SILT (ML) clayey. DK greenish grey (GLEY 3/1) Some organics, Rubbery texture.	
20		SM	2.0	3-5-5-7	SAND (SM). some sandy silt.	
		ML	2.0	4-5-5-5	SILT. Some to little fine sand. On a 1"-layer of fine sand at 23.8'.	
		SC			SAND (SC) clayey 25.3'	
25		SM	1.7	4-5-5-5	SAND (SM) silty, fine DK Greenish Grey (GLEY 3/1)	
			2.0	1-1-2-4	Abundant wood fragments. 4" layer of sandy silt. 28.5'	
30		SP	NOT Recvd.	3-3-2-3	SAND, (SP) fine. Light greenish Grey (GLEY 7/1)	

CH2M HILL

PROJECT NUMBER	BORING NUMBER	SHEET	OF
CT025	SJS02-MW02D	2	3

SOIL BORING LOG

PROJECT NAVY CLEAN II/ST. JULIENS CREEK ANNEX LOCATION SITE 2 MW02D

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		SP	2.0	2-1-1-2	SAND (SP) f. v. wet little med sand	
			Not record	1-1/12"-1	33.0	
		CL			CLAY (CL) Shell fragment	
35		SP	2.0	2-2-1-2	SAND, as at 30'. Loose	
			Not Rec.	2-2-3-2		
			Not Rec	2-2-1-2	clay in nose of split spoon at 40'	
40		CL	1.0	2-2-1-2	CLAY, DK greenish (GLEY 4/1) soft	Will set PVC 6" PS protection cas. @45'.
				2-2-3-2	clay, as above, med. stiff. organics	Stopped drilling at 1191 1800 7/7/
45			1.0	2-2-3-2		Start drilling with 8 1/4" HSA 0720 7/8/97. with PVC plug. charged augers with water t prevent find sand from comm into augers.
			0.3	Not Recorded		
			2.0	3-4-4-5	Clay, as above, stiff	
50			2.0	3-3-2-2	tr. fine sand 50-51' Inc. sand to 51.5'	Start drilling at 50' 6" mud rotary. 7/12/97 OVM headspace 4.2 ppm
		SP	1.5	2-3-3-2	SAND (SP) fine with little med. Some shell fragments, DK greenish grey (GLEY 4/1). Loose.	
55			1.0	3-2-2-3	abundant shell fragments 55.7	Losing water to fm. at 54'
		CL	0.6	5-5-4-5	CLAY (CL) DK greenish grey (GLEY 3/1). Little shell sand organics. Stiff.	
		SP			SAND f-v. fine to mi. car. DK greenish grey (GLEY 3/1) 58.0	
		CL	1.6	6-6-5-6	CLAY 59.5	
60		ML			SILT and fin SAND, Some m. Sand	

CH2M HILL

PROJECT NUMBER	BORING NUMBER	
CT025	SJS02-MW02D	SHEET 3 OF 3

SOIL BORING LOG

PROJECT NAVY CLEAN II/ST. JULIENS CREEK ANNEX LOCATION SITE 2 MW02D

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		SP	0.6	5-6-6-5	SAND (SP) as above. Dk greenish grey (GLEY 3/1).	Drillers add bentonite to wa at 60'.
			0.5	7-7-6-7	Some med. sand. Little shell fragments	Stopped Drilling and sam @64' 7/12/97 1245
					BORING TERMINATED @ 64'	
65						
70						

CH2M HILL

PROJECT NUMBER	BORING NUMBER	SHEET
6207-028	SJS02 MW-25	1 OF 1

SOIL BORING LOG

PROJECT St Juliens Creek Annex LOCATION Landfill B Site 2

ELEVATION Ground 9.59/TOC 6.98 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 6/30/97 FINISH 6/30/97 LOGGER S. Bussey (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
						1045 Begin drilling
	3-5'	S-1	17/24	1-2-2-1	Silty v. fine - fine sand trace clay (SM) trace shells + organics moist mottled dark greenish grey 10Y 4/1 light yellowish brown 2.5Y 6/4 + grey 2.5Y 6/1	OVM 0 ppm
5	5-7'	S-2	24/24	3-3-1-3	Same as above moist	OVM 0 ppm
10	10-12'	S-3	10"/24"	3-3-4-5	Silty clay with F. Sand (CL) trace organics soft greenish grey 10Y 6/1 wet	Slight petroleum Smell OVM 0 ppm
15					Bottom of Boring 15' BGS	1140 Complete drilling install well material

Figure 1
SOIL BORING LOG, FORM D1586

CH2M HILL

PROJECT NUMBER	BORING NUMBER	SHEET
6207-028	MW-35 SJ502	1 OF 1

SOIL BORING LOG

PROJECT St Juliens Creek Annex LOCATION Landfill B Site 2

ELEVATION GROUND: 4.69/TOC: 7.27 ft msl DRILLING CONTRACTOR American Environmental Drilling Services

DRILLING METHOD AND EQUIPMENT 6¼" ID Hollow Stem Auger - Ingersoll Rand A-300 Drill Rig

WATER LEVELS _____ START 6/30/97 FINISH 6/30/97 LOGGER S. Bonney (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
						Began drilling 0820
2	2-4	S-1	24"/24"	2-3-3-2	2.-2.8 Fill Silty gravel + Sand (GM) dry Black 2.5Y 2.5/1 2.8-4' Silty F. Sand (SM) moist light olive Brown 2.5Y 5/4 4:- Silty Clay w/ F. Sand (CL) wet dark grey (N4/)	Fill Material ended 2.8' BG O/M - 0ppm
4						
5	4-6	S-2	16"/24"	1-3-3-4	Silty F - Med. Sand (SM) Color bands wet greenish grey 5GY 5/1, light yellowish brown 2.5Y 6/4 Olive yellow 2.5Y 6/6	O/M - 0ppm
6						
10	10-12	S-3	23"/24"	3/2/5/4	Silty F. Sand (SM) wet well sorted Subrounded Color bands grey N 5/ + light yellowish brown 2.5Y 6/4	O/M 0ppm
12.						
14						
15					Bottom of Boring 14' BGS	0930 finished drilling

Figure 1
SOIL BORING LOG, FORM D1586

CH2M HILL

PROJECT NUMBER	BORING NUMBER	SHEET	OF
6207-028	SJS05 MW-15	1	1

SOIL BORING LOG

PROJECT St Juliens Creek Annex LOCATION Burning Grounds - Site 5

ELEVATION Ground: 6.45/TOC: 9.12 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 Bodney (CDM)

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
						1105 Begin Drilling
	3-5	S-1	24/24	1-2-3-1	Dark greenish gray 5GY 4/1 Silty Clay trace of organics (CL) moist very soft. at 5' organic peat layer in tip of split spoon	0 vm - 0 ppm
5	5-7	S-2	10/24	1-2-3-3	Silt with F. Sand - some organics (Roots + wreeds) (ML) very dark gray 10YR 3/1 layer of F. Sand (SP) in bottom of spoon 2.5Y 6/3 light yellowish brown	water in borehole ~ 5' OVM - 0 ppm
10						For deeper sample see Boring log for MW-1D
14					Bottom of Boring 14' BGS	1140 Finish drilling begin well construction

Figure 1
SOIL BORING LOG, FORM D1586

CH2M HILL

PROJECT NUMBER	BORING NUMBER	SHEET
01026	ST5CFMW01D	1 OF 2

SOIL BORING LOG

PROJECT NAVYCLEANII / ST. JULIEN'S CREEK ANNEX LOCATION SITE 5 MW01D

ELEVATION GROUND: 6.11 / TOC: 8.59 DRILLING CONTRACTOR AEDS

DRILLING METHOD AND EQUIPMENT INGERSOLL RAND A300 / HSA: 8 1/4" and 4 1/4" / 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 SITES MW01S FOR 0-10' INTERVAL	6/28/97 1440 Start sampling with 4 1/4" ID HSA 2' split spoon.
5						
10		SP	1.0	3-3-3-4	SAND, v. fine to fine (SP). Gray (5Y 6/1) wet. Loose.	
			1.2	3-3-4-3	SAND, (SP) med. Gray (5Y 6/1) and light yellowish brown (5Y 6/4)	
15		CL	2.0	2-2-1-2	14.5 CLAY (CL) soft (GLEY 5/1) Greenish grey. tr. f. sand.	
			2.0	1-1-1-1	16'-16.6': CLAY, fine sand as above @16.6': CLAY (CL) Dry. Dk grey (2.5Y 4/1)	
			2.0	1/12"-1-1	clay, as above, v. soft. Stiffer 19.7-20'. f. sand at 19.3. wet.	
20			2.0	1-1-1-1	CLAY (CL) as above. Soft	
			2.0	1-1-2-1		
25			2.0	1-1-1-1	CLAY (CL) as above, Little organics soft	
			2.0	1-1-1-2		
30			2.0	1-1-1-1	CLAY. Soft. GRAY (2.5YR 5/1).	

CH2M HILL

PROJECT NUMBER	BORING NUMBER		
CT02E	SJJS05-MWID	SHEET	2 OF 2

SOIL BORING LOG

PROJECT NAVYCLEAN II/ST. JULIENS CREEK ANNEX LOCATION SITE 5 MWOID

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			2.0	1-1-1-1	CLAY, as above, soft.	
			2.0	1-1-1-1		
35		CL	2.0	1-1-1-1		
			2.0	1-2-1-1	CLAY, as above GRAY (5Y 5/1). Shell fragments	
			2.0	1-1-1-1	Clay, as above, soft	Stop 4 1/4" HSA at 40'. Set 6" PVC isol Casing to 30'. Through 8
40			2.0	5-5-4-5	Clay, (CL) ½ Dark greenish grey (GLEY 4/1), stiff	Start drilling with 5" mud ro 7/10/97. at 40'.
		SP	2.0	3-3-2-3	43' SAND (50%) and clay (50%) minor shell fragments. Dk greenish gray (GLEY 4/1). tr. c-m sand. Trace	
45			0.3	5-3-3-5	angular gravel SAND (SP) as above fine. little silt, trace organics + shells med-fine.	
			0.6	3-2-2-3	Increasing Shell fragments	End Sampling at 50' 7/10/97
			0.5	3-3-2-3	Sand, as above	Start Drilling 7/11/97 at 50-52
50			0.7	3-3-2-3	Sand, as above. tr. med sand Greenish grey (GLEY 5/1). tr. clay	
			0.6	6-7-7-6	trace clay	
55			0.4	6-5-5-6	trace clay	Added bentonite to water to keep hole open 54-56'. End sampling at 56'. 0915
					Boring terminated at 56'	
60						

REV 11/89 FORM

CH2M HILL

PROJECT NUMBER	BORING NUMBER	SHEET
6207-028	MW-2S SJ505	1 OF 1

SOIL BORING LOG

PROJECT St Juliens Creek Annex LOCATION Burning Grounds Site 5

ELEVATION Ground: 4.55/TOC 7.25 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 7/01/97 FINISH 7/01/97 LOGGER S Budney (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
						Started Drilling 1305
3	3-5	S-1	24"/24"	2-2-3-1	Silty med. Sand (SM) interbedded with silty clay (CL) at 5' getting into v. soft silty clay - color bands at 3.5' wet at approx 3.8' dark greenish gray 10Y 4/1	Sands are from 3.5-4.9' OVM - 0ppm
5	5-7'	S-2	24/24	1-3-4-1	5-6.4 Silty Clay very soft to soft harder with depth (CL) trace organics throughout the spoon. dark greenish gray 10Y 3/1 wet 6.4-7' Silty Sandy clay (same color) (CL)	OVM - 0ppm
7						
10	10-12	S-3	24/24	3-2-4-1	10-11 - Silty Clay with trace Sand and organics (CL) Soft dark greenish gray 10Y 3/1 11-11.5 Same as above increasing sand and organics 11.5-12 Silty F. Sand with trace clay and organics wet (SM) V. dark gray 2.5Y 3/1	OVM - 0 ppm
					to light brownish gray 2.5Y 6/2 Bottom of Boring 14' BGS	1420 Complete drilling - Begin well construction

Figure 1
SOIL BORING LOG, FORM D1586

CH2M HILL

PROJECT NUMBER	BORING NUMBER	
CT028	ST505-MW2D	SHEET 1 OF 2

SOIL BORING LOG

PROJECT NAVY CLEAN II ST. JULIENS CREEK LOCATION SITE 5 MW02D

ELEVATION GROUND: 4.56' TOC' 7.12 DRILLING CONTRACTOR AEDS

DRILLING METHOD AND EQUIPMENT HSA (4 1/4 and 8 1/4") / 6" MUD ROTARY / INGERSOL RAND A300 RIG

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 5 MW02S FOR 0-10' INTERVAL	0935 6/29/97 Start Auger to 10' with 4 1/4" HSA.
5						
10		CL	1.8	1/12"-1-1	CLAY (CL), soft, moist-wet. DK. grey (5Y 4/1).	0 ppm on OVM
			2.0	1/12"-1-1	Same as above, tr. med. sand.	
15			1.75	1-1-1-1		
		ML			SILT (ML) Dk reddish Brown (5YR 2.5/2) sand lens	
		SP	0.4	1-1-1-1	SAND (SP), fine grained wet. grey (GLEY 5/1).	
			1.8	1-1-1-1	SAND, fine, Greyish brown (10YR 5/2) Clay in end of Split spoon	
20		CL	1.2	1-1-1-1	CLAY, greenish grey (GLEY 6/1) trace sand (CL)	SET 6" PVC ISOLATION CASING to 22' (2' INTO CLAY) THROUGH 8 1/4" HSA
			1.5	2-2-1-2	Clay, as above stiff, moist (not wet) trace organics.	
25						NO SAMPLE COLLECTED 24-2
30		SP	2.0	2-2-2-3	0.2' of sand from 28.8 to 29' 29.5	START SAMPLING 28-30' 7/1 MUD ROTARY 6"

CH2M HILL

PROJECT NUMBER	BORING NUMBER	SHEET
CTO 28	ST505-MW02D	2 OF 2

SOIL BORING LOG

PROJECT ST JULIENS CREEK ANNEX LOCATION SITE 5 MW02D

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	1.5	3-4-5-5	SAND, v. fine, some clay, tr. med sand. DK GREENISH GREY (GLEY 4/1). clayey lenses 1-2" thick	START DRILLING at 30' 0800 7/13/97.
		CL	2.0	2-3-3-3	CLAY (CL) DK greenish grey (GLEY 4/1). Tr. v. fine sand in <1mm partings.	
35			2.0	2-2-2-2	increasing sand, but still a minor component.	
			2.0	3-2-3-2	CLAY, as above, v. soft	
			2.0	2-3-3-2	Trace shells, organics	
40			2.0	3-3-3-3	decreasing sandy partings at 40 ft.	
			2.0	3-3-3-3		
45			2.0	1-2-2-2	CLAY as above to 45.7'	
		SC	0.3	2-2-3-2	SAND, clayey (SC), v. fine to fine little shell fragments Decreasing shell fragments	
		SM	1.6	3-3-4-3	SAND, some silt (SM) v. fine to fine, little clay	
50		SP	1.6	3-2-2-3	SAND, v. fine to fine, trace med. DK greenish grey (GLEY 4/1)	
		SW	1.5	5-5-6-5	SAND, fine to med (SW) tr. coarse angular sandstone pebble at 53.5' clay with m-c sand at 53.7'	
55		----	1.5	5-5-4-5	SAND, c-m (SW) to 54.5. Sandy/Gravelly clays to 55.8	
		GW/CL	1.6	6-5-5-6	Limestone Gravel to 56'. Alternating layers (3-4") of Gravelly CLAY and clayey GRAVEL DK greenish grey (GLEY 4/1). Gravel is Coquina.	SAMPLING ENDED AT 58' DRILLED W. TH 6" MUD ROTARY TO 60' TO SET WELL.
60					Boring terminated at 60'.	

CH2M HILL

PROJECT NUMBER	BORING NUMBER	SHEET	OF
6207-027	MW-35 SJS65	1	1

SOIL BORING LOG

PROJECT St Juliens Creek Annex LOCATION Site 5 Burning Grounds

ELEVATION Ground 557/TOC 5.68 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 6/29/97 FINISH 6/29/97 LOGGER S. Burney (CDM Fede

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	2-3	S-1	12/12	2|3|5(0")	(SM) Silty F. Sand 13" of wood in recovery and in bottom of split spoon Dry Hard mottled lightyellowish brown 2.5Y6/3 and yellowish brown 10YR 5/8	1530 Start Drilling Refusal on wood at 3' (RR tie OVM 0 ppm
4					No Sample	
6	4-6	S-2	6"/24	2|1|3|1	Silty ~~Fine~~ Sand (SM) Wet Subrounded Olive Brown 2.5Y 4/3	OVM 0 ppm
8						
10	10-12	S-3	24/24	2|3|1|3	Silty F Sand (SM) Wet ~~V. Soft~~ SS well sorted Olive yellow 2.5Y 6/6	OVM - 0 ppm
12					Cuttings on auger 12-14'- dark greenish grey 5GY 4/1 Silty Clay w/ F. Sand V. Soft	
14					Bottom of Boring 14' BGS	1640 Install well. 1710 Complete well

Figure 1
SOIL BORING LOG, FORM D1586

APPENDIX D

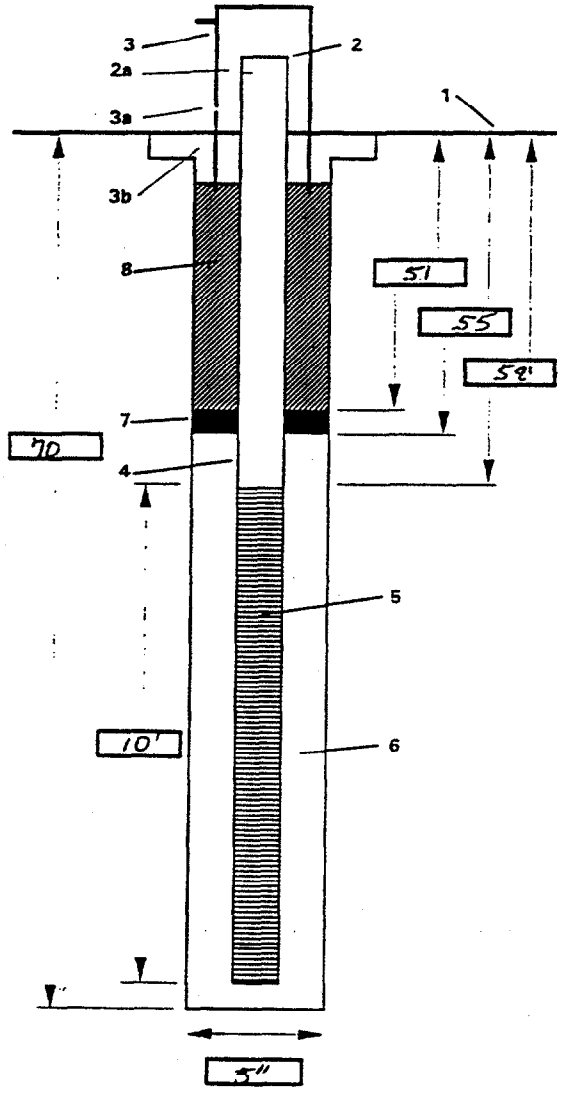
Monitoring Well Construction Diagrams

PROJECT NUMBER	BORING NUMBER	
6207-028	SJ502-MW1D	SHEET 1 OF

CH2M HILL

WELL COMPLETION DIAGRAM

PROJECT: St Juliens Creek Annex LOCATION: Landfill B/Site 2
ELEVATION: TOC 7.99 ft msl DRILLING CONTRACTOR: AEDS
DRILLING METHOD AND EQUIPMENT USED: HSA - 8¼" ID / MUD ROTARY - 5" R.T
WATER LEVELS: START: END: LOGGER: L. FRANCE



1- Ground elevation at well: 5.27 ft msl

2- Top of casing elevation: 7.94 ft msl
a) vent hole? YES

3- Wellhead protection cover type: Stick-up
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, Sch 40, 010-Slot

6- Type screen filter
a) Quantity used: Medium Sand (primary) 70 to 56.5'. Fine Sand 56.5 to 55'

7- Type of seal
a) Quantity used: Bentonite Pellet

8- Grout
a) Grout mix used: Cement/Bentonite
b) Method of placement: Pump/tremmie
c) Quantity of well casing grout

Development method: Purge/Surge

Development time

Estimated purge volume: 210 gallons

Comments: 6" PVC isolation casing to 49' BGS. ~~Are~~ 0.4" PVC Plug at bottom

ABOVDIAG.XLS

PROJECT NUMBER	BORING NUMBER	
6207-028	MW-15 SJS02	SHEET 1 OF 1

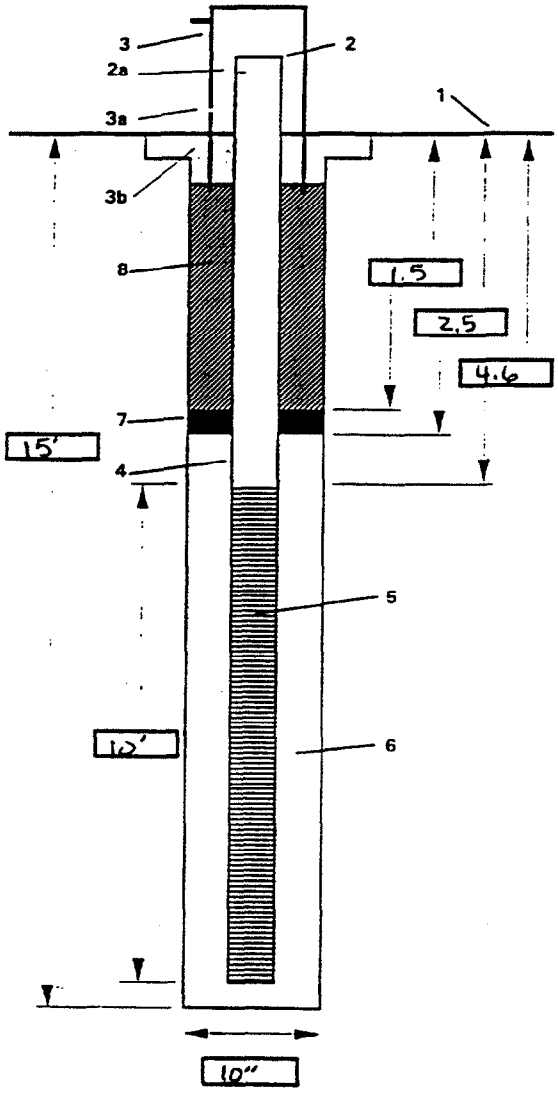
WELL COMPLETION DIAGRAM

PROJECT: St Juliens Creek Annex LOCATION: Landfill B - Site 2

ELEVATION: TOC: 7.72 ft DRILLING CONTRACTOR: American Environmental Drilling Services

DRILLING METHOD AND EQUIPMENT USED: 6 1/4" I.D. hollow Stem Augers Ingersoll Rand A-300 Drill Rig

WATER LEVELS: START: 7/01/97 END: 7/12/97 LOGGER: S Bowen (CDM Federal)



1- Ground elevation at well: 5.19 ft msl

2- Top of casing elevation: 7.72 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" Dia PVC
Screen - 4.6 - 14.6

6- Type screen filter
a) Quantity used: Med. Sand 4.5 cubic ft

7- Type of seal
a) Quantity used: Bentonite 1.5'-2.5' 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: 4 hrs on 7/12/97

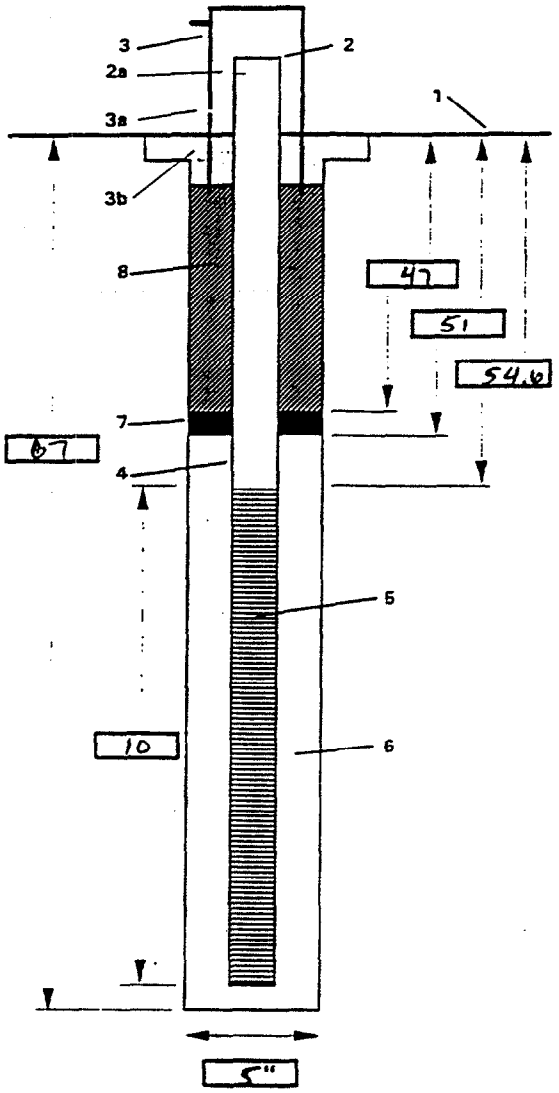
Estimated purge volume: 55 gal

Comments: Bottom of well 15.1' BGS

PROJECT NUMBER	BORING NUMBER	
6207 028	SJS02-MW2D	SHEET 1 OF 1

WELL COMPLETION DIAGRAM

PROJECT : NAVY CLEAN ST. JULIENS CREEK LOCATION : SITE 2 MW2D
ELEVATION : TOP OF PVC 7.04 DRILLING CONTRACTOR : AEDS
DRILLING METHOD AND EQUIPMENT USED : HSA - 8 1/4" ID / Mud rotary - 5" Bit
WATER LEVELS : START : END : LOGGER : L. FRANCK



1- Ground elevation at well 4.71 ft msl

2- Top of casing elevation 7.04 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) 67-~~64.6~~ 52'
fine sand (Secondary) 52-51'

7- Type of seal
a) Quantity used Bentonite Pellet 51-47'

8- Grout
a) Grout mix used Cement/Bentonite
b) Method of placement Pump/tremmie
c) Quantity of well casing grout

Development method Purge/Surge

Development time 3 1/2 Hrs

Estimated purge volume ~145 gallons

Comments 6" PVC isolation casing to 45'
0.4" bottom plug.

ABOVDIAG XLS

PROJECT NUMBER	BORING NUMBER	SHEET	OF
6207-028	MW-25 SJS02	1	1

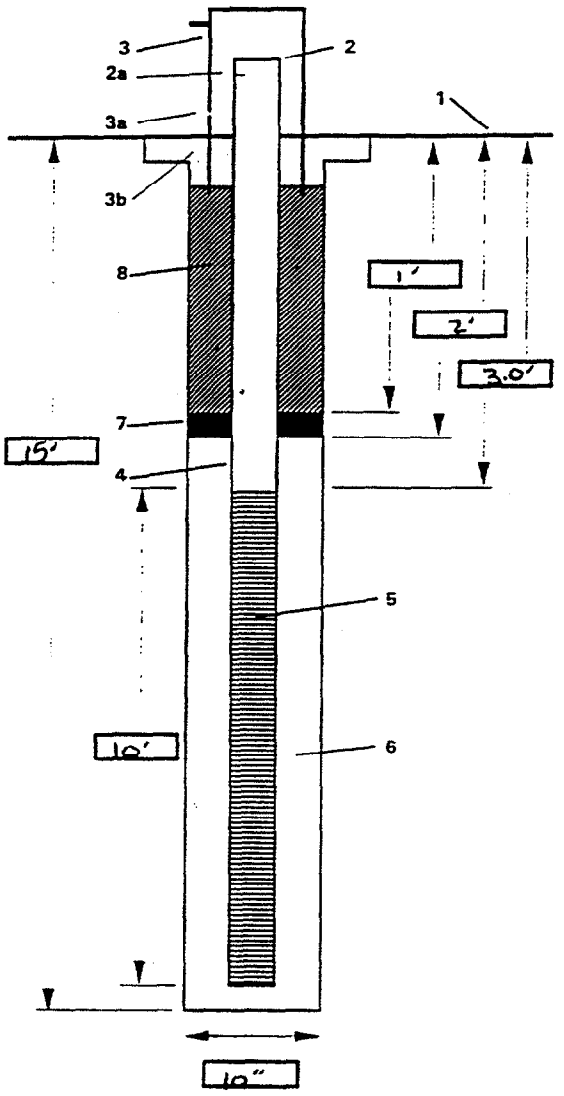
WELL COMPLETION DIAGRAM

PROJECT: St Juliens Creek Annex LOCATION: Landfill B Site 2

ELEVATION: TOC ~~4.59 ft msl~~ 6.98 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: LOGGER: S Swaney (CH2M Federal)



1- Ground elevation at well: 4.59 ft msl

2- Top of casing elevation: 6.98 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" PVC

5- Type/slot size of screen: 0.010 slot 2" Dia PVC
Screen 3.0' - 13.0'

6- Type screen filter
a) Quantity used: Med. Sand ~6 cubic Ft.

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: 1 hour 7/14/97 + 1/2 hour 7/16/97

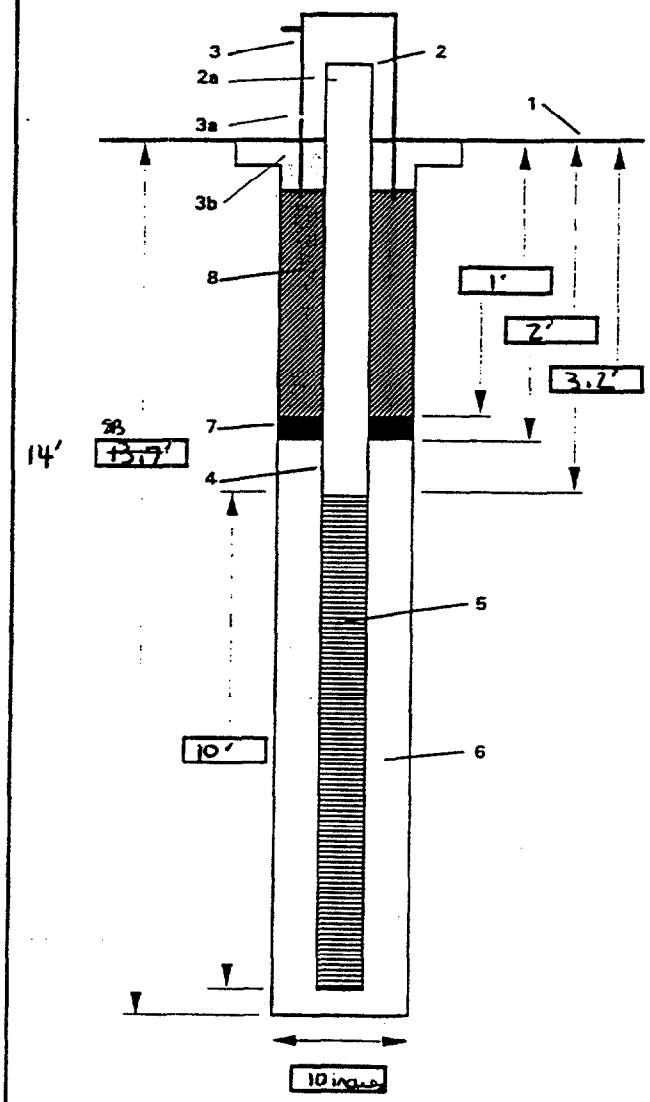
Estimated purge volume: 13 1/2 gal

Comments: Bottom of well 13.5'

PROJECT NUMBER	BORING NUMBER	SHEET	OF
6207-028	MW-35 SJS02	1	1

WELL COMPLETION DIAGRAM

PROJECT: St Juliens Creek Annex
LOCATION: Landfill B Site 2
ELEVATION: TOC 7.29 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: 7/7/97 LOGGER: S Bowman (CDM Federal)



1- Ground elevation at well: 4.69 ft msl

2- Top of casing elevation: 7.27 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" Dia. PVC 3.2' - 13.2' BGS

6- Type screen filter
a) Quantity used: ~5 cubic feet med sand

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: NA
c) Quantity of well casing grout: NA

Development method: Pump + Surge

Development time: 4 hours on 7/07/97

Estimated purge volume: 165 gal.

Comments: Bottom of well 13.7' BGS

ABOVDIAG.XLS

PROJECT NUMBER	BORING NUMBER		
6207-028	SJ505-MW1D	SHEET 1	OF 1

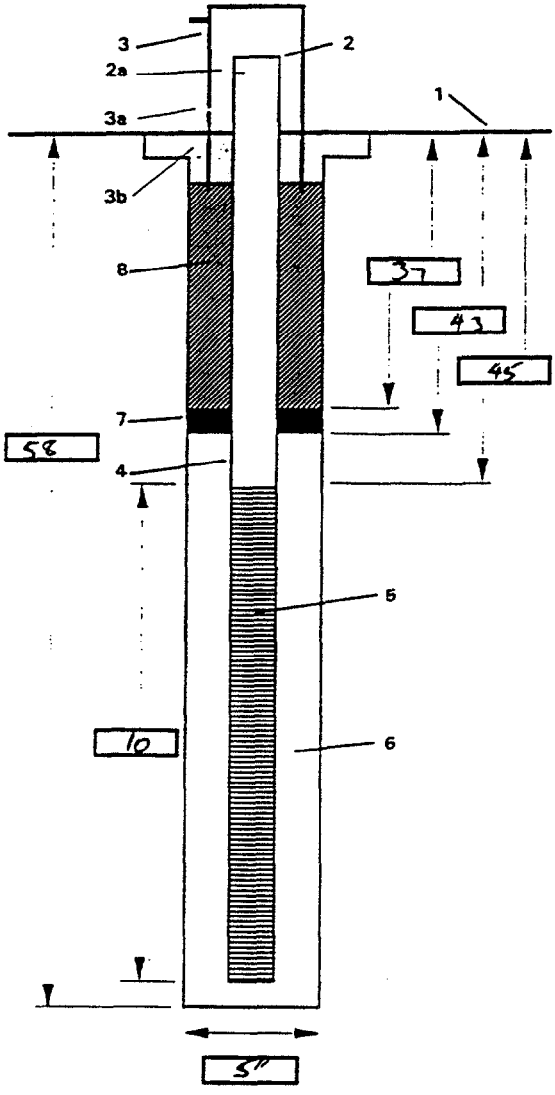
WELL COMPLETION DIAGRAM

PROJECT: NAVY CLEMENT ST JULIENS CREEK LOCATION: SITE 5 MW1D

ELEVATION: TOC 8.59 ft MSL DRILLING CONTRACTOR: AEDS

DRILLING METHOD AND EQUIPMENT USED: 8 1/4 HSA MUD ROTARY WITH 5"-DIAM BIT

WATER LEVELS: START: END: LOGGER: L. FRANCE



1- Ground elevation at well: 6.11 ft msl

2- Top of casing elevation: 8.59 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: 2" PVC Sch. 40

5- Type/slot size of screen: 2" PVC 010-slot

6- Type screen filter
a) Quantity used: Medium sand (primary) 43-45'
fine sand (2ndary) –

7- Type of seal
a) Quantity used: Bentonit Pellet 37-43'

8- Grout
a) Grout mix used: Cement/Bentonite
b) Method of placement: pump tremmie pipe
c) Quantity of well casing grout:

Development method: Purge + Surge

Development time: 4.5 hours

Estimated purge volume: 210 gallons

Comments: 6" PVC isolation casing to 30'

ABOVDIAG.XLS

PROJECT NUMBER	BORING NUMBER	SHEET	OF
6207-028	MW-15 SJS05	1	1

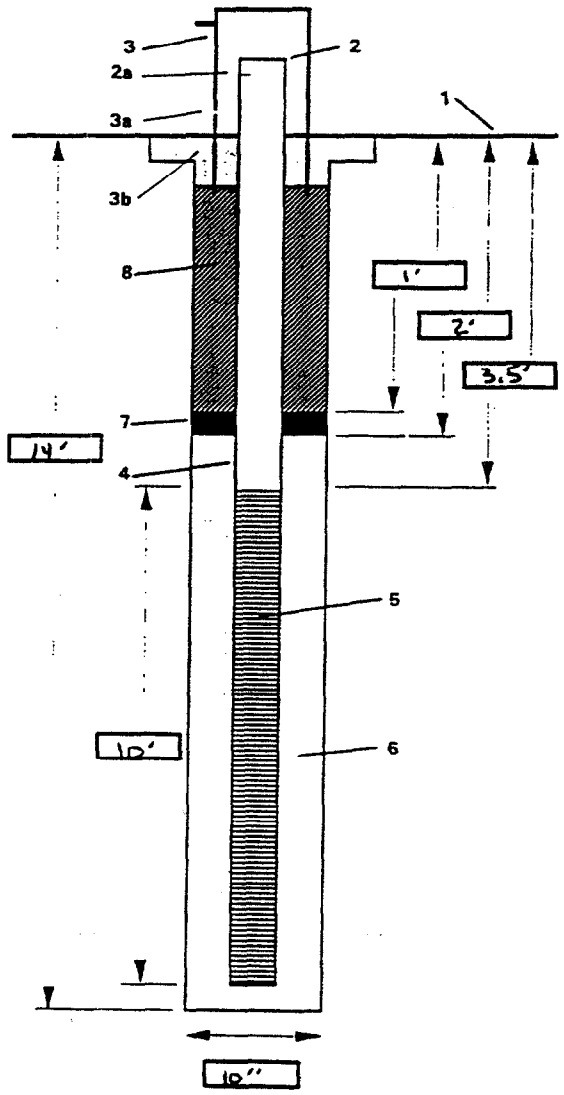
WELL COMPLETION DIAGRAM

PROJECT: St Juliens Creek Annex LOCATION: Burning Grounds - Site 5

ELEVATION: TOC: 9.12 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: 7/08/97 LOGGER: S. Buckley (CDM Federal)



1- Ground elevation at well: 6.45 ft msl

2- Top of casing elevation: 9.12 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" 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: 4 hrs on 7/08/97

Estimated purge volume: 55 gal

Comments: Bottom of well 13.9' BGS

ABOVDIAG.XLS

PROJECT NUMBER	BORING NUMBER		
6207-02E	SJS05-MW 2D	SHEET 1	OF 1

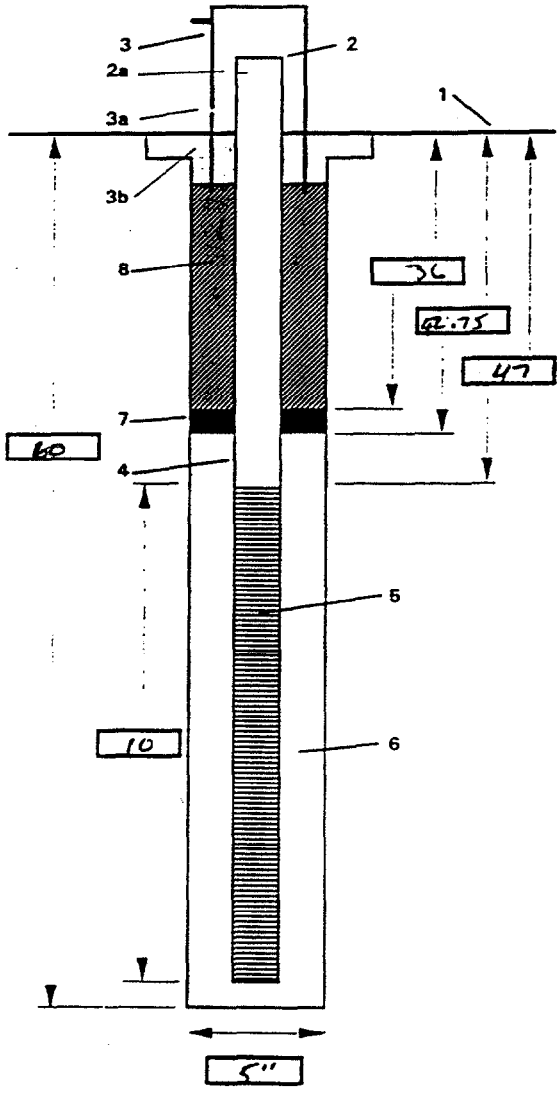
WELL COMPLETION DIAGRAM

PROJECT: NAVY CLEANII St. Juliens Creek Annex LOCATION: SITE 5 MW2D

ELEVATION: TOC 7.12 ft msl DRILLING CONTRACTOR: AEDS

DRILLING METHOD AND EQUIPMENT USED: 8 1/4" HSA, 5" Bit and MUD ROTARY

WATER LEVELS: START: ~~7/10/97~~ 6/25/97 END: 7/1/97 LOGGER: L. FRANCE



1- Ground elevation at well: 4.56 ft msl

2- Top of casing elevation: 7.12 ft msl
a) vent hole? Yes

3- Wellhead protection cover type: STIFCK-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 60-44.5

7- Type of seal: Primary Sand 44.5-42.75'
a) Quantity used: Bentonite Pelled 42.75-36'

8- Grout
a) Grout mix used: Cement/Bentonite
b) Method of placement: Pumped/tremmie
c) Quantity of well casing grout:

Development method: Purge + Surge

Development time: 4 Hours

Estimated purge volume: 175 gallons

Comments: 6" PVC isolation Casing to 22'

ABOVDIAG XLS

PROJECT NUMBER	BORING NUMBER	
6207-028	MW-25 SJS05	SHEET 1 OF 1

CH2M HILL

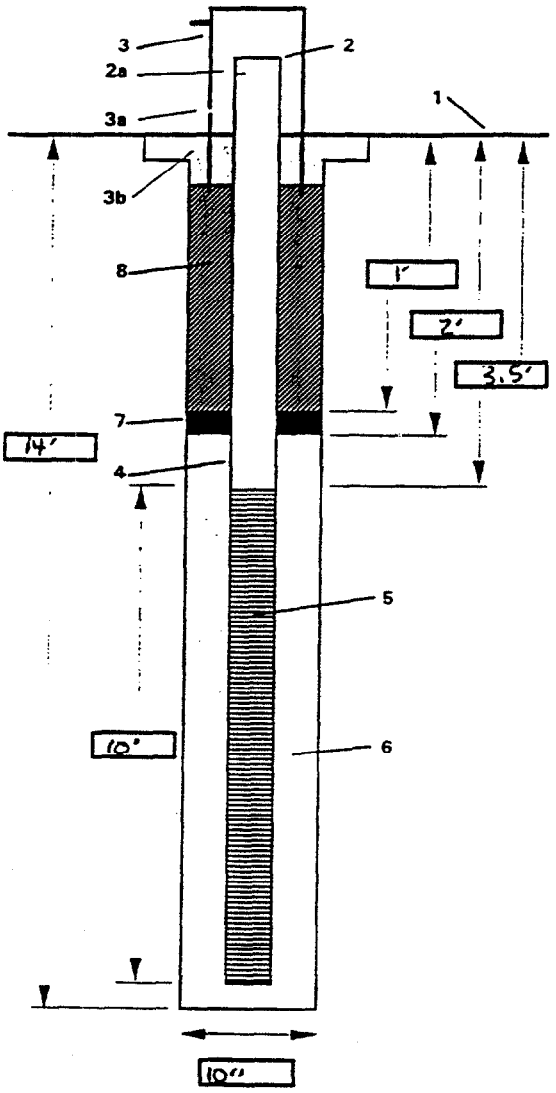
WELL COMPLETION DIAGRAM

PROJECT : St Juliens Creek Annex LOCATION : Burning Ground-Site 5

ELEVATION : 7.25 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 : 7/08/97 LOGGER : J Budwey (CH2M Federal)



1- Ground elevation at well 4.55 ft msl

2- Top of casing elevation 7.25 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 2" Dia 0.010 Slot PVC
Screen 3.5 - 13.5'

6- Type screen filter
a) Quantity used Mod. Sand - 5 cubic ft.

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 20 min on 7/08/97

Estimated purge volume 30 gal

Comments Bottom of well 13.9' BGS

PROJECT NUMBER	BORING NUMBER	SHEET	OF
6207-027	MW-3S SJS05	1	1

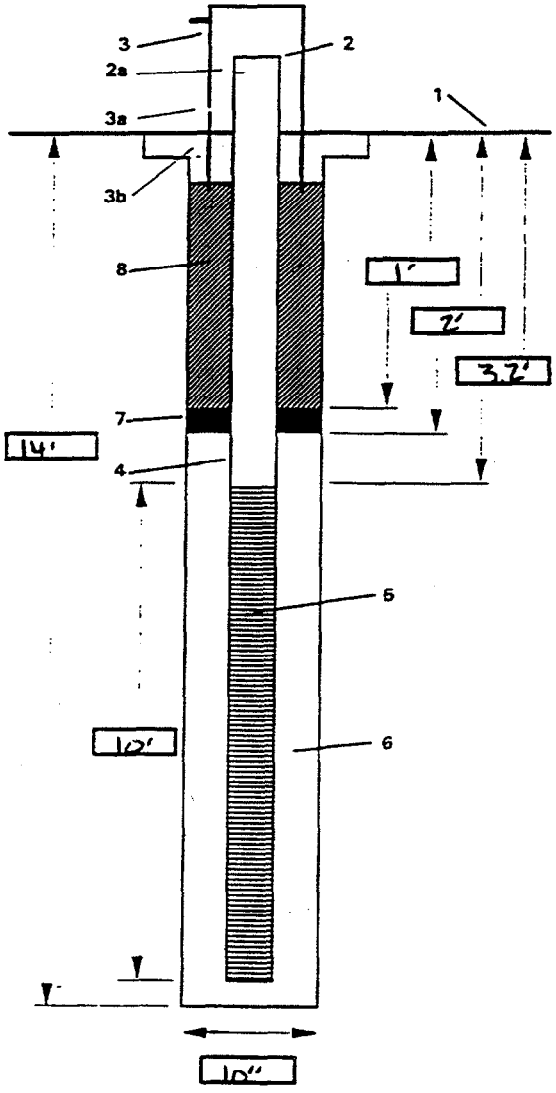
WELL COMPLETION DIAGRAM

PROJECT: St Juliens Creek Annex LOCATION: Site 5 Burning Grounds

ELEVATION: TOC. 8.68 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: 6/29/97 END: 7/09/97 LOGGER: S. Burney (CH2M Federal)



1- Ground elevation at well: 5.57 ft msl

2- Top of casing elevation: 8.68 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" Dia PVC
   Screen 3.2 - 13.2'

6- Type screen filter
   a) Quantity used: Med Sand - 5 cu. ft

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: NA
   c) Quantity of well casing grout: NA

Development method: Purge + Surge

Development time: 2 hrs on 7/09/97

Estimated purge volume: 55 gal

Comments: Bottom of well 13.7'

ABOVDIAG XLS

APPENDIX E

Immunoassay Screening Results

RESULTS FOR TNT IMMUNOASSAY ANALYSIS - SOIL
LANDFILLB (SITE 2) AND BURNING GROUNDS (SITE 5)
ST. JULIEN'S CREEK ANNEX

Site	Sample No.	Collection Date	Test Date	Reference Sample (QC Range = 210 - 230) Result	Within QC?	Test Sample Results Qualitative	Quantitative*
2	SJS02-SS04-000	6/25	6/25	217	yes	LO	< 0.5 ppm
	SJS02-SS03-000	6/25	6/25	217	yes	LO	< 0.5 ppm
	SJS02-SS03-000 D	6/25	6/25	211	yes	LO	< 0.5 ppm
	SJS02-SS02-000	6/25	6/25	212	yes	LO	< 0.5 ppm
	SJS02-SS04-000	6/25	6/25	227	yes	LO	< 0.5 ppm
	SJS02-SS05-000	6/25	6/25	221	yes	LO	< 0.5 ppm
	SJS02-SS07-000	6/25	6/25	227	yes	LO	< 0.5 ppm
	METHOD BLANK	6/25	6/25	220	yes	LO	< 0.5 ppm
	SJS02-SB01-003	6/25	6/25	225	yes	**1%**	**0.5 - 1.5 ppm**
	SJS02-SS09-000	6/25	6/25	224	yes	LO	< 0.5 ppm
	SJS02-SS09-000 D	6/25	6/25	229	yes	LO	< 0.5 ppm
	SJS02-SB02-002	6/25	6/25	224	yes	LO	< 0.5 ppm
	SJS02-SB03-000	6/25	6/25	211	yes	LO	< 0.5 ppm
	SJS02-SB-05-002	6/25	6/25	221	yes	LO	< 0.5 ppm
	SJS02SB-05-002 D	6/25	6/25	213	yes	LO	< 0.5 ppm
	SJS02-SS01-000	6/25	6/25	230	yes	LO	< 0.5 ppm
	SJS02-SS06-000	6/25	6/25	223	yes	LO	< 0.5 ppm
	SJS02-SS08-000	6/25	6/25	215	yes	LO	< 0.5 ppm
	SJS02-SS10-000	6/25	6/25	215	yes	LO	< 0.5 ppm
5	SJS05-SB01-003	6/24	6/24	229	yes	LO	< 0.5 ppm
	SJS05-SB03-002	6/24	6/24	224	yes	LO	< 0.5 ppm
	SJS05-SB09-002	6/24	6/24	219	yes	LO	< 0.5 ppm
	SJS05-SB10-002	6/24	6/24	213	yes	LO	< 0.5 ppm
	SJS05-SB11-002	6/24	6/24	229	yes	LO	< 0.5 ppm
	SJS05-SB12-002	6/24	6/24	216	yes	LO	< 0.5 ppm
	SJS05-SB13-002	6/24	6/24	229	yes	LO	< 0.5 ppm
	SJS05-SB15-002	6/24	6/24	230	yes	LO	< 0.5 ppm
	SJS05-SB07-002	6/24	6/24	219	yes	LO	< 0.5 ppm
	SJS05-SS01-000	6/24	6/24	210	yes	LO	< 0.5 ppm
	SJS05-SB14-002	6/24	6/25	215	yes	**HI**	**> 5.0 ppm**
	SJS05-SB02-002	6/25	6/25	214	yes	LO	< 0.5 ppm
	SJS05-SB04-003	6/25	6/25	224	yes	LO	< 0.5 ppm
	SJS05-SB06-002	6/25	6/25	229	yes	LO	< 0.5 ppm
	SJS05-SB08-002	6/25	6/25	223	yes	LO	< 0.5 ppm
	METHOD BLANK	6/26	6/26	216	yes	LO	< 0.5 ppm
	SJS05-SB03-000	6/25	6/26	215	yes	LO	< 0.5 ppm
	SJS05-SS05-000	6/26	6/26	221	yes	LO	< 0.5 ppm
	SJS05-SS05-000 D	6/26	6/26	230	yes	LO	< 0.5 ppm
	SJS05-SS02-000	6/26	6/26	213	yes	LO	< 0.5 ppm
	SJS05-SS03-000	6/26	6/26	220	yes	LO	< 0.5 ppm
	SJS05-SS05-000	6/26	6/26	230	yes	LO	< 0.5 ppm
	SJS05-SS06-000	6/26	6/26	229	yes	LO	< 0.5 ppm
	SJS05-SS08-000	6/26	6/26	220	yes	LO	< 0.5 ppm
	SJS05-SS09-000	6/26	6/26	226	yes	LO	< 0.5 ppm

* Approximate range of TNT in ppm.

RESULTS FOR TNT IMMUNOASSAY ANALYSIS - GROUNDWATER
LANDFILL B (SITE 2) AND BURNING GROUNDS (SITE 5)
ST. JULIEN'S CREEK ANNEX

Site	Sample No.	Collection Date	Test Date	Reference Sample (QC Range = 210 - 230)		Test Sample Results	
				Result	Within QC?	Qualitative	Quantitative*
2	SJS02-GW1S-001	7/17	7/17	213	yes	LO	< 0.5 ppm
	SJS02-GW2D-001	7/17	7/17	212	yes	LO	< 0.5 ppm
	SJS02-GW3S-001	7/17	7/17	214	yes	LO	< 0.5 ppm
	SJS02-GW3S-001 D	7/17	7/17	224	yes	**14%**	**5 - 15 ppb**
	SJS02-GW2S-001	7/31	7/31	216	yes	LO	< 0.5 ppm
5	SJS05-GW1S-001	7/17	7/17	228	yes	LO	< 0.5 ppm
	SJS05-GW2S-001	7/17	7/17	227	yes	LO	< 0.5 ppm
	SJS05-GW3S-001	7/17	7/17	225	yes	**3%**	**5 - 15 ppb**
	SJS05-GW1D-001	7/31	7/31	222	yes	LO	< 0.5 ppm
	SJS05-GW2S-001	7/31	7/31	215	yes	LO	< 0.5 ppm

* Approximate range of TNT in ppb.

APPENDIX F

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 G

Site 2 and Site 5 Analytical Data

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS02-GW1D-001	CTOTP	Total Phosphorous (as P)	0.18	0.084	mg/L		8/22/97
SJS02-GW1D-001	EXPLO	1,3,5-Trinitrobenzene		25	ug/L	U	8/9/97
SJS02-GW1D-001	EXPLO	1,3-Dinitrobenzene		25	ug/L	U	8/9/97
SJS02-GW1D-001	EXPLO	2,4,6-Trinitrotoluene		25	ug/L	U	8/9/97
SJS02-GW1D-001	EXPLO	2,4-Dinitrotoluene		25	ug/L	U	8/9/97
SJS02-GW1D-001	EXPLO	2,6-Dinitrotoluene		25	ug/L	U	8/9/97
SJS02-GW1D-001	EXPLO	2-am-4,6-Dinitrotoluene		25	ug/L	U	8/9/97
SJS02-GW1D-001	EXPLO	2-Nitrotoluene		25	ug/L	U	8/9/97
SJS02-GW1D-001	EXPLO	3-Nitrotoluene		25	ug/L	U	8/9/97
SJS02-GW1D-001	EXPLO	4-am-2,6-Dinitrotoluene		25	ug/L	U	8/9/97
SJS02-GW1D-001	EXPLO	4-Nitrotoluene		25	ug/L	U	8/9/97
SJS02-GW1D-001	EXPLO	HMX		25	ug/L	U	8/9/97
SJS02-GW1D-001	EXPLO	Nitrobenzene		25	ug/L	U	8/9/97
SJS02-GW1D-001	EXPLO	RDX		25	ug/L	U	8/9/97
SJS02-GW1D-001	EXPLO	TETRYL		25	ug/L	U	8/9/97
SJS02-GW1D-001	MCYAN	Aluminum	2000	29	ug/L		8/7/97
SJS02-GW1D-001	MCYAN	Antimony		2	ug/L	U	8/6/97
SJS02-GW1D-001	MCYAN	Arsenic	3.7	3	ug/L	J	8/6/97
SJS02-GW1D-001	MCYAN	Barium	18.2	1	ug/L	B	8/7/97
SJS02-GW1D-001	MCYAN	Beryllium		1	ug/L	U	8/7/97
SJS02-GW1D-001	MCYAN	Cadmium		0.5	ug/L	U	8/6/97
SJS02-GW1D-001	MCYAN	Calcium	57900	46	ug/L		8/7/97
SJS02-GW1D-001	MCYAN	Chromium	11.8	4	ug/L	B	8/7/97
SJS02-GW1D-001	MCYAN	Cobalt		8	ug/L	U	8/7/97
SJS02-GW1D-001	MCYAN	Copper		6	ug/L	U	8/7/97
SJS02-GW1D-001	MCYAN	Cyanide		5	ug/L	U	8/5/97
SJS02-GW1D-001	MCYAN	Iron	3820	5	ug/L	K	8/7/97
SJS02-GW1D-001	MCYAN	Lead	2.7	1	ug/L	B	8/6/97
SJS02-GW1D-001	MCYAN	Magnesium	5200	45	ug/L		8/7/97
SJS02-GW1D-001	MCYAN	Manganese	45.5	1	ug/L		8/7/97
SJS02-GW1D-001	MCYAN	Mercury		0.13	ug/L	U	8/6/97
SJS02-GW1D-001	MCYAN	Nickel		7	ug/L	U	8/7/97
SJS02-GW1D-001	MCYAN	Potassium	5520	97	ug/L		8/7/97
SJS02-GW1D-001	MCYAN	Selenium		3	ug/L	U	8/6/97
SJS02-GW1D-001	MCYAN	Silver	3.6	3	ug/L	B	8/6/97
SJS02-GW1D-001	MCYAN	Sodium	11400	28	ug/L		8/7/97
SJS02-GW1D-001	MCYAN	Thallium		2	ug/L	U	8/7/97
SJS02-GW1D-001	MCYAN	Vanadium	9.6	4	ug/L	K	8/7/97
SJS02-GW1D-001	MCYAN	Zinc	18.9	3	ug/L	B	8/7/97
SJS02-GW1D-001	PSPCB	4,4'-DDD		0.1	ug/L	U	8/21/97
SJS02-GW1D-001	PSPCB	4,4'-DDE		0.1	ug/L	U	8/21/97
SJS02-GW1D-001	PSPCB	4,4'-DDT		0.1	ug/L	U	8/21/97
SJS02-GW1D-001	PSPCB	Aldrin		0.05	ug/L	U	8/21/97
SJS02-GW1D-001	PSPCB	alpha-BHC		0.05	ug/L	U	8/21/97
SJS02-GW1D-001	PSPCB	alpha-Chlordane		0.05	ug/L	U	8/21/97
SJS02-GW1D-001	PSPCB	Aroclor-1016		1	ug/L	U	8/21/97
SJS02-GW1D-001	PSPCB	Aroclor-1221		2	ug/L	U	8/21/97
SJS02-GW1D-001	PSPCB	Aroclor-1232		1	ug/L	U	8/21/97
SJS02-GW1D-001	PSPCB	Aroclor-1242		1	ug/L	U	8/21/97
SJS02-GW1D-001	PSPCB	Aroclor-1248		1	ug/L	U	8/21/97
SJS02-GW1D-001	PSPCB	Aroclor-1254		1	ug/L	U	8/21/97
SJS02-GW1D-001	PSPCB	Aroclor-1260		1	ug/L	U	8/21/97
SJS02-GW1D-001	PSPCB	beta-BHC		0.05	ug/L	U	8/21/97
SJS02-GW1D-001	PSPCB	delta-BHC		0.05	ug/L	U	8/21/97
SJS02-GW1D-001	PSPCB	Dieldrin		0.1	ug/L	U	8/21/97
SJS02-GW1D-001	PSPCB	Endosulfan I		0.05	ug/L	U	8/21/97
SJS02-GW1D-001	PSPCB	Endosulfan II		0.1	ug/L	U	8/21/97
SJS02-GW1D-001	PSPCB	Endosulfan Sulfate		0.1	ug/L	U	8/21/97
SJS02-GW1D-001	PSPCB	Endrin		0.1	ug/L	U	8/21/97
SJS02-GW1D-001	PSPCB	Endrin Aldehyde		0.1	ug/L	U	8/21/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS02-GW1D-001	PSPCB	Endrin Ketone		0.1	ug/L	U	8/2
SJS02-GW1D-001	PSPCB	gamma-BHC		0.05	ug/L	U	8/2
SJS02-GW1D-001	PSPCB	gamma-Chlordane		0.05	ug/L	U	8/21/97
SJS02-GW1D-001	PSPCB	Heptachlor		0.05	ug/L	U	8/21/97
SJS02-GW1D-001	PSPCB	Heptachlor Epoxide		0.05	ug/L	U	8/21/97
SJS02-GW1D-001	PSPCB	Methoxychlor		0.5	ug/L	U	8/21/97
SJS02-GW1D-001	PSPCB	Toxaphene		5	ug/L	U	8/21/97
SJS02-GW1D-001	SVTCL	1,2,4-Trichlorobenzene		10	ug/L	U	8/14/97
SJS02-GW1D-001	SVTCL	1,2-Dichlorobenzene		10	ug/L	U	8/14/97
SJS02-GW1D-001	SVTCL	1,3-Dichlorobenzene		10	ug/L	U	8/14/97
SJS02-GW1D-001	SVTCL	1,4-Dichlorobenzene		10	ug/L	U	8/14/97
SJS02-GW1D-001	SVTCL	2,2'-oxybis(1-Chloropropane		10	ug/L	U	8/14/97
SJS02-GW1D-001	SVTCL	2,4,5-Trichlorophenol		25	ug/L	U	8/14/97
SJS02-GW1D-001	SVTCL	2,4,6-Trichlorophenol		10	ug/L	U	8/14/97
SJS02-GW1D-001	SVTCL	2,4-Dichlorophenol		10	ug/L	U	8/14/97
SJS02-GW1D-001	SVTCL	2,4-Dimethylphenol		10	ug/L	U	8/14/97
SJS02-GW1D-001	SVTCL	2,4-Dinitrophenol		25	ug/L	UJ	8/14/97
SJS02-GW1D-001	SVTCL	2,4-Dinitrotoluene		10	ug/L	U	8/14/97
SJS02-GW1D-001	SVTCL	2,6-Dinitrotoluene		10	ug/L	U	8/14/97
SJS02-GW1D-001	SVTCL	2-Chloronaphthalene		10	ug/L	U	8/14/97
SJS02-GW1D-001	SVTCL	2-Chlorophenol		10	ug/L	U	8/14/97
SJS02-GW1D-001	SVTCL	2-Methylnaphthalene		10	ug/L	U	8/14/97
SJS02-GW1D-001	SVTCL	2-Methylphenol		10	ug/L	U	8/14/97
SJS02-GW1D-001	SVTCL	2-Nitroaniline		25	ug/L	U	8/14/97
SJS02-GW1D-001	SVTCL	2-Nitrophenol		10	ug/L	U	8/14/97
SJS02-GW1D-001	SVTCL	3,3'-Dichlorobenzidine		10	ug/L	U	8/14/97
SJS02-GW1D-001	SVTCL	3-Nitroaniline		25	ug/L	U	8/14/97
SJS02-GW1D-001	SVTCL	4,6-Dinitro-2-Methylphenol		25	ug/L	U	8/14/97
SJS02-GW1D-001	SVTCL	4-Bromophenol-phenylether		10	ug/L	U	8/14/97
SJS02-GW1D-001	SVTCL	4-Chloro-3-Methylphenol		10	ug/L	U	8/1
SJS02-GW1D-001	SVTCL	4-Chloroaniline		10	ug/L	U	8/1
SJS02-GW1D-001	SVTCL	4-Chlorophenyl-phenylether		10	ug/L	U	8/14/97
SJS02-GW1D-001	SVTCL	4-Methylphenol		10	ug/L	U	8/14/97
SJS02-GW1D-001	SVTCL	4-Nitroaniline		25	ug/L	U	8/14/97
SJS02-GW1D-001	SVTCL	4-Nitrophenol		25	ug/L	U	8/14/97
SJS02-GW1D-001	SVTCL	Acenaphthene		10	ug/L	U	8/14/97
SJS02-GW1D-001	SVTCL	Acenaphthylene		10	ug/L	U	8/14/97
SJS02-GW1D-001	SVTCL	Anthracene		10	ug/L	U	8/14/97
SJS02-GW1D-001	SVTCL	Benzo(a)anthracene		10	ug/L	U	8/14/97
SJS02-GW1D-001	SVTCL	Benzo(a)pyrene		10	ug/L	U	8/14/97
SJS02-GW1D-001	SVTCL	Benzo(b)fluoranthene		10	ug/L	U	8/14/97
SJS02-GW1D-001	SVTCL	Benzo(g,h,i)perylene		10	ug/L	U	8/14/97
SJS02-GW1D-001	SVTCL	Benzo(k)fluoranthene		10	ug/L	U	8/14/97
SJS02-GW1D-001	SVTCL	bis(2-Chloroethoxy)methan		10	ug/L	U	8/14/97
SJS02-GW1D-001	SVTCL	bis(2-chloroethyl)ether		10	ug/L	U	8/14/97
SJS02-GW1D-001	SVTCL	bis(2-Ethylhexyl)phthalate		10	ug/L	U	8/14/97
SJS02-GW1D-001	SVTCL	Butylbenzylphthalate		10	ug/L	U	8/14/97
SJS02-GW1D-001	SVTCL	Carbazole		10	ug/L	U	8/14/97
SJS02-GW1D-001	SVTCL	Chrysene		10	ug/L	U	8/14/97
SJS02-GW1D-001	SVTCL	Di-n-butylphthalate		10	ug/L	U	8/14/97
SJS02-GW1D-001	SVTCL	Di-n-Octyl Phthalate		10	ug/L	U	8/14/97
SJS02-GW1D-001	SVTCL	Dibenzo(a,h)anthracene		10	ug/L	U	8/14/97
SJS02-GW1D-001	SVTCL	Dibenzofuran		10	ug/L	U	8/14/97
SJS02-GW1D-001	SVTCL	Diethylphthalate		10	ug/L	U	8/14/97
SJS02-GW1D-001	SVTCL	Dimethyl Phthalate		10	ug/L	U	8/14/97
SJS02-GW1D-001	SVTCL	Fluoranthene		10	ug/L	U	8/14/97
SJS02-GW1D-001	SVTCL	Fluorene		10	ug/L	U	8/14/97
SJS02-GW1D-001	SVTCL	Hexachlorobenzene		10	ug/L	U	8/14/97
SJS02-GW1D-001	SVTCL	Hexachlorobutadiene		10	ug/L	U	8/1
SJS02-GW1D-001	SVTCL	Hexachlorocyclopentadien		10	ug/L	U	8/14

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS02-GW1D-001	SVTCL	Hexachloroethane		10	ug/L	U	8/14/97
SJS02-GW1D-001	SVTCL	Indeno(1,2,3-cd)pyrene		10	ug/L	U	8/14/97
SJS02-GW1D-001	SVTCL	Isophorone		10	ug/L	U	8/14/97
SJS02-GW1D-001	SVTCL	N-Nitroso-Di-n-Propylamine		10	ug/L	U	8/14/97
SJS02-GW1D-001	SVTCL	N-Nitrosodiphenylamine		10	ug/L	U	8/14/97
SJS02-GW1D-001	SVTCL	Naphthalene		10	ug/L	U	8/14/97
SJS02-GW1D-001	SVTCL	Nitrobenzene		10	ug/L	U	8/14/97
SJS02-GW1D-001	SVTCL	Pentachlorophenol		25	ug/L	U	8/14/97
SJS02-GW1D-001	SVTCL	Phenanthrene		10	ug/L	U	8/14/97
SJS02-GW1D-001	SVTCL	Phenol		10	ug/L	U	8/14/97
SJS02-GW1D-001	SVTCL	Pyrene		10	ug/L	U	8/14/97
SJS02-GW1D-001	VCLOW	1,1,1-Trichloroethane		1	ug/L	U	8/5/97
SJS02-GW1D-001	VCLOW	1,1,2,2-Tetrachloroethane		1	ug/L	U	8/5/97
SJS02-GW1D-001	VCLOW	1,1,2-Trichloroethane		1	ug/L	U	8/5/97
SJS02-GW1D-001	VCLOW	1,1-Dichloroethane		1	ug/L	U	8/5/97
SJS02-GW1D-001	VCLOW	1,1-Dichloroethene		1	ug/L	U	8/5/97
SJS02-GW1D-001	VCLOW	1,2,4-Trichlorobenzene		1	ug/L	U	8/5/97
SJS02-GW1D-001	VCLOW	1,2-Dibromo-3-chloropropa		1	ug/L	U	8/5/97
SJS02-GW1D-001	VCLOW	1,2-Dibromoethane		1	ug/L	U	8/5/97
SJS02-GW1D-001	VCLOW	1,2-Dichlorobenzene		1	ug/L	U	8/5/97
SJS02-GW1D-001	VCLOW	1,2-Dichloroethane		1	ug/L	U	8/5/97
SJS02-GW1D-001	VCLOW	1,2-Dichloropropane		1	ug/L	U	8/5/97
SJS02-GW1D-001	VCLOW	1,3-Dichlorobenzene		1	ug/L	U	8/5/97
SJS02-GW1D-001	VCLOW	1,4-Dichlorobenzene		1	ug/L	U	8/5/97
SJS02-GW1D-001	VCLOW	2-Hexanone		5	ug/L	U	8/5/97
SJS02-GW1D-001	VCLOW	4-Methyl-2-Pentanone		5	ug/L	U	8/5/97
SJS02-GW1D-001	VCLOW	Acetone		5	ug/L	U	8/5/97
SJS02-GW1D-001	VCLOW	Benzene		1	ug/L	U	8/5/97
SJS02-GW1D-001	VCLOW	Bromochloromethane		1	ug/L	U	8/5/97
SJS02-GW1D-001	VCLOW	Bromodichloromethane		1	ug/L	U	8/5/97
SJS02-GW1D-001	VCLOW	Bromoform		1	ug/L	U	8/5/97
SJS02-GW1D-001	VCLOW	Bromomethane		1	ug/L	U	8/5/97
SJS02-GW1D-001	VCLOW	Carbon Disulfide		1	ug/L	U	8/5/97
SJS02-GW1D-001	VCLOW	Carbon Tetrachloride		1	ug/L	U	8/5/97
SJS02-GW1D-001	VCLOW	Chlorobenzene		1	ug/L	U	8/5/97
SJS02-GW1D-001	VCLOW	Chloroethane		1	ug/L	U	8/5/97
SJS02-GW1D-001	VCLOW	Chloroform	0.6	1	ug/L	J	8/5/97
SJS02-GW1D-001	VCLOW	Chloromethane		1	ug/L	U	8/5/97
SJS02-GW1D-001	VCLOW	cis-1,2-Dichloroethene		1	ug/L	U	8/5/97
SJS02-GW1D-001	VCLOW	cis-1,3-Dichloropropene		1	ug/L	U	8/5/97
SJS02-GW1D-001	VCLOW	Dibromochloromethane		1	ug/L	U	8/5/97
SJS02-GW1D-001	VCLOW	Ethylbenzene		1	ug/L	U	8/5/97
SJS02-GW1D-001	VCLOW	Methylene Chloride	3	1	ug/L	B	8/5/97
SJS02-GW1D-001	VCLOW	Styrene		1	ug/L	U	8/5/97
SJS02-GW1D-001	VCLOW	Tetrachloroethene		1	ug/L	U	8/5/97
SJS02-GW1D-001	VCLOW	Toluene	0.3	1	ug/L	J	8/5/97
SJS02-GW1D-001	VCLOW	Total Xylenes		1	ug/L	U	8/5/97
SJS02-GW1D-001	VCLOW	Trans-1,2-Dichloroethene		1	ug/L	U	8/5/97
SJS02-GW1D-001	VCLOW	trans-1,3-Dichloropropene		1	ug/L	U	8/5/97
SJS02-GW1D-001	VCLOW	Trichloroethene		1	ug/L	U	8/5/97
SJS02-GW1D-001	VCLOW	Vinyl Chloride		1	ug/L	U	8/5/97
SJS02-GW1D-001F	METAL	Aluminum	79.2	29	ug/L	B	8/7/97
SJS02-GW1D-001F	METAL	Antimony	3.1	1	ug/L	J	8/6/97
SJS02-GW1D-001F	METAL	Arsenic		3	ug/L	U	8/6/97
SJS02-GW1D-001F	METAL	Barium	11.7	1	ug/L	B	8/7/97
SJS02-GW1D-001F	METAL	Beryllium		1	ug/L	U	8/7/97
SJS02-GW1D-001F	METAL	Cadmium		0.5	ug/L	U	8/6/97
SJS02-GW1D-001F	METAL	Calcium	55900	46	ug/L		8/7/97
SJS02-GW1D-001F	METAL	Chromium		7	ug/L	U	8/7/97
SJS02-GW1D-001F	METAL	Cobalt		8	ug/L	U	8/7/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS02-GW1D-001F	METAL	Copper		6	ug/L	U	8/
SJS02-GW1D-001F	METAL	Iron	30.4	5	ug/L	B	8/
SJS02-GW1D-001F	METAL	Lead		1	ug/L	U	8/6/97
SJS02-GW1D-001F	METAL	Magnesium	4790	45	ug/L	J	8/7/97
SJS02-GW1D-001F	METAL	Manganese	3.3	1	ug/L	B	8/7/97
SJS02-GW1D-001F	METAL	Mercury		0.12	ug/L	U	8/6/97
SJS02-GW1D-001F	METAL	Nickel		7	ug/L	U	8/7/97
SJS02-GW1D-001F	METAL	Potassium	5330	97	ug/L		8/7/97
SJS02-GW1D-001F	METAL	Selenium		3	ug/L	U	8/6/97
SJS02-GW1D-001F	METAL	Silver	3.4	3	ug/L	B	8/6/97
SJS02-GW1D-001F	METAL	Sodium	11800	28	ug/L		8/7/97
SJS02-GW1D-001F	METAL	Thallium		2	ug/L	U	8/7/97
SJS02-GW1D-001F	METAL	Vanadium		9	ug/L	U	8/7/97
SJS02-GW1D-001F	METAL	Zinc	9	3	ug/L	B	8/7/97
SJS02-GW1S-001	CTOTP	Total Phosphorous (as P)	0.146	0.05	mg/L		7/30/97
SJS02-GW1S-001	MCYAN	Aluminum	4400	29	ug/L		7/28/97
SJS02-GW1S-001	MCYAN	Antimony		2	ug/L	U	7/29/97
SJS02-GW1S-001	MCYAN	Arsenic	3.8	3	ug/L	J	7/29/97
SJS02-GW1S-001	MCYAN	Barium	54.5	1	ug/L	J	7/28/97
SJS02-GW1S-001	MCYAN	Beryllium		1	ug/L	U	7/28/97
SJS02-GW1S-001	MCYAN	Cadmium		0.5	ug/L	U	7/29/97
SJS02-GW1S-001	MCYAN	Calcium	75600	46	ug/L		7/28/97
SJS02-GW1S-001	MCYAN	Chromium	13.2	4	ug/L	K	7/28/97
SJS02-GW1S-001	MCYAN	Cobalt	13.2	3	ug/L	J	7/28/97
SJS02-GW1S-001	MCYAN	Copper		6	ug/L	U	7/28/97
SJS02-GW1S-001	MCYAN	Cyanide		5	ug/L	U	7/22/97
SJS02-GW1S-001	MCYAN	Iron	8870	5	ug/L		7/28/97
SJS02-GW1S-001	MCYAN	Lead	3.6	1	ug/L		7/29/97
SJS02-GW1S-001	MCYAN	Magnesium	21400	45	ug/L		7/28/97
SJS02-GW1S-001	MCYAN	Manganese	988	1	ug/L		7/2
SJS02-GW1S-001	MCYAN	Mercury		0.13	ug/L	U	7/2
SJS02-GW1S-001	MCYAN	Nickel	14.8	4	ug/L	K	7/28/97
SJS02-GW1S-001	MCYAN	Potassium	4720	97	ug/L	J	7/28/97
SJS02-GW1S-001	MCYAN	Selenium		3	ug/L	UL	7/29/97
SJS02-GW1S-001	MCYAN	Silver	4.7	3	ug/L	B	7/29/97
SJS02-GW1S-001	MCYAN	Sodium	44600	28	ug/L		7/28/97
SJS02-GW1S-001	MCYAN	Thallium		2	ug/L	U	7/29/97
SJS02-GW1S-001	MCYAN	Vanadium	14.1	4	ug/L	J	7/28/97
SJS02-GW1S-001	MCYAN	Zinc	28	3	ug/L	B	7/28/97
SJS02-GW1S-001	PSPCB	4,4'-DDD		0.1	ug/L	U	7/31/97
SJS02-GW1S-001	PSPCB	4,4'-DDE		0.1	ug/L	U	7/31/97
SJS02-GW1S-001	PSPCB	4,4'-DDT		0.1	ug/L	U	7/31/97
SJS02-GW1S-001	PSPCB	Aldrin		0.05	ug/L	U	7/31/97
SJS02-GW1S-001	PSPCB	alpha-BHC		0.05	ug/L	U	7/31/97
SJS02-GW1S-001	PSPCB	alpha-Chlordane		0.05	ug/L	U	7/31/97
SJS02-GW1S-001	PSPCB	Aroclor-1016		1	ug/L	U	7/31/97
SJS02-GW1S-001	PSPCB	Aroclor-1221		2	ug/L	U	7/31/97
SJS02-GW1S-001	PSPCB	Aroclor-1232		1	ug/L	U	7/31/97
SJS02-GW1S-001	PSPCB	Aroclor-1242		1	ug/L	U	7/31/97
SJS02-GW1S-001	PSPCB	Aroclor-1248		1	ug/L	U	7/31/97
SJS02-GW1S-001	PSPCB	Aroclor-1254		1	ug/L	U	7/31/97
SJS02-GW1S-001	PSPCB	Aroclor-1260		1	ug/L	U	7/31/97
SJS02-GW1S-001	PSPCB	beta-BHC		0.05	ug/L	U	7/31/97
SJS02-GW1S-001	PSPCB	delta-BHC		0.05	ug/L	U	7/31/97
SJS02-GW1S-001	PSPCB	Dieldrin		0.1	ug/L	U	7/31/97
SJS02-GW1S-001	PSPCB	Endosulfan I		0.05	ug/L	U	7/31/97
SJS02-GW1S-001	PSPCB	Endosulfan II		0.1	ug/L	U	7/31/97
SJS02-GW1S-001	PSPCB	Endosulfan Sulfate		0.1	ug/L	U	7/31/97
SJS02-GW1S-001	PSPCB	Endrin		0.1	ug/L	U	7/3
SJS02-GW1S-001	PSPCB	Endrin Aldehyde		0.1	ug/L	U	7/3

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS02-GW1S-001	PSPCB	Endrin Ketone		0.1	ug/L	U	7/31/97
SJS02-GW1S-001	PSPCB	gamma-BHC		0.05	ug/L	U	7/31/97
SJS02-GW1S-001	PSPCB	gamma-Chlordane		0.05	ug/L	U	7/31/97
SJS02-GW1S-001	PSPCB	Heptachlor		0.05	ug/L	U	7/31/97
SJS02-GW1S-001	PSPCB	Heptachlor Epoxide		0.05	ug/L	U	7/31/97
SJS02-GW1S-001	PSPCB	Methoxychlor		0.5	ug/L	U	7/31/97
SJS02-GW1S-001	PSPCB	Toxaphene		5	ug/L	U	7/31/97
SJS02-GW1S-001	SVTCL	1,2,4-Trichlorobenzene		10	ug/L	U	7/30/97
SJS02-GW1S-001	SVTCL	1,2-Dichlorobenzene		10	ug/L	U	7/30/97
SJS02-GW1S-001	SVTCL	1,3-Dichlorobenzene		10	ug/L	U	7/30/97
SJS02-GW1S-001	SVTCL	1,4-Dichlorobenzene		10	ug/L	U	7/30/97
SJS02-GW1S-001	SVTCL	2,2'-oxybis(1-Chloropropane		10	ug/L	U	7/30/97
SJS02-GW1S-001	SVTCL	2,4,5-Trichlorophenol		25	ug/L	U	7/30/97
SJS02-GW1S-001	SVTCL	2,4,6-Trichlorophenol		10	ug/L	U	7/30/97
SJS02-GW1S-001	SVTCL	2,4-Dichlorophenol		10	ug/L	U	7/30/97
SJS02-GW1S-001	SVTCL	2,4-Dimethylphenol		10	ug/L	U	7/30/97
SJS02-GW1S-001	SVTCL	2,4-Dinitrophenol		25	ug/L	U	7/30/97
SJS02-GW1S-001	SVTCL	2,4-Dinitrotoluene		10	ug/L	U	7/30/97
SJS02-GW1S-001	SVTCL	2,6-Dinitrotoluene		10	ug/L	U	7/30/97
SJS02-GW1S-001	SVTCL	2-Chloronaphthalene		10	ug/L	U	7/30/97
SJS02-GW1S-001	SVTCL	2-Chlorophenol		10	ug/L	U	7/30/97
SJS02-GW1S-001	SVTCL	2-Methylnaphthalene		10	ug/L	U	7/30/97
SJS02-GW1S-001	SVTCL	2-Methylphenol		10	ug/L	U	7/30/97
SJS02-GW1S-001	SVTCL	2-Nitroaniline		25	ug/L	U	7/30/97
SJS02-GW1S-001	SVTCL	2-Nitrophenol		10	ug/L	U	7/30/97
SJS02-GW1S-001	SVTCL	3,3'-Dichlorobenzidine		10	ug/L	U	7/30/97
SJS02-GW1S-001	SVTCL	3-Nitroaniline		25	ug/L	U	7/30/97
SJS02-GW1S-001	SVTCL	4,6-Dinitro-2-Methylphenol		25	ug/L	U	7/30/97
SJS02-GW1S-001	SVTCL	4-Bromophenyl phenylether		10	ug/L	U	7/30/97
SJS02-GW1S-001	SVTCL	4-Chloro-3-Methylphenol		10	ug/L	U	7/30/97
SJS02-GW1S-001	SVTCL	4-Chloroaniline		10	ug/L	U	7/30/97
SJS02-GW1S-001	SVTCL	4-Chlorophenyl-phenylether		10	ug/L	U	7/30/97
SJS02-GW1S-001	SVTCL	4-Methylphenol		10	ug/L	U	7/30/97
SJS02-GW1S-001	SVTCL	4-Nitroaniline		25	ug/L	U	7/30/97
SJS02-GW1S-001	SVTCL	4-Nitrophenol		25	ug/L	U	7/30/97
SJS02-GW1S-001	SVTCL	Acenaphthene		10	ug/L	U	7/30/97
SJS02-GW1S-001	SVTCL	Acenaphthylene		10	ug/L	U	7/30/97
SJS02-GW1S-001	SVTCL	Anthracene		10	ug/L	U	7/30/97
SJS02-GW1S-001	SVTCL	Benzo(a)Anthracene		10	ug/L	U	7/30/97
SJS02-GW1S-001	SVTCL	Benzo(a)Pyrene		10	ug/L	U	7/30/97
SJS02-GW1S-001	SVTCL	Benzo(b)Fluoranthene		10	ug/L	U	7/30/97
SJS02-GW1S-001	SVTCL	Benzo(g,h,i)Perylene		10	ug/L	U	7/30/97
SJS02-GW1S-001	SVTCL	Benzo(k)fluoranthene		10	ug/L	U	7/30/97
SJS02-GW1S-001	SVTCL	Bis(2-chloroethoxy)Methane		10	ug/L	U	7/30/97
SJS02-GW1S-001	SVTCL	Bis(2-chloroethyl)Ether		10	ug/L	U	7/30/97
SJS02-GW1S-001	SVTCL	Bis(2-Ethylhexyl)Phthalate		10	ug/L	U	7/30/97
SJS02-GW1S-001	SVTCL	Butylbenzylphthalate		10	ug/L	U	7/30/97
SJS02-GW1S-001	SVTCL	Carbazole		10	ug/L	U	7/30/97
SJS02-GW1S-001	SVTCL	Chrysene		10	ug/L	U	7/30/97
SJS02-GW1S-001	SVTCL	Di-n-Butylphthalate		10	ug/L	U	7/30/97
SJS02-GW1S-001	SVTCL	Di-n-Octyl Phthalate		10	ug/L	U	7/30/97
SJS02-GW1S-001	SVTCL	Dibenz(a,h)Anthracene		10	ug/L	U	7/30/97
SJS02-GW1S-001	SVTCL	Dibenzofuran		10	ug/L	U	7/30/97
SJS02-GW1S-001	SVTCL	Diethylphthalate		10	ug/L	U	7/30/97
SJS02-GW1S-001	SVTCL	Dimethyl Phthalate		10	ug/L	U	7/30/97
SJS02-GW1S-001	SVTCL	Fluoranthene		10	ug/L	U	7/30/97
SJS02-GW1S-001	SVTCL	Fluorene		10	ug/L	U	7/30/97
SJS02-GW1S-001	SVTCL	Hexachlorobenzene		10	ug/L	U	7/30/97
SJS02-GW1S-001	SVTCL	Hexachlorobutadiene		10	ug/L	U	7/30/97
SJS02-GW1S-001	SVTCL	Hexachlorocyclopentadien		10	ug/L	U	7/30/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS02-GW1S-001	SVTCL	Hexachloroethane		10	ug/L	U	7/
SJS02-GW1S-001	SVTCL	Indeno(1,2,3-cd)Pyrene		10	ug/L	U	7/
SJS02-GW1S-001	SVTCL	Isophorone		10	ug/L	U	7/30/97
SJS02-GW1S-001	SVTCL	N-Nitroso-Di-n-Propylamine		10	ug/L	U	7/30/97
SJS02-GW1S-001	SVTCL	N-Nitrosodiphenylamine		10	ug/L	U	7/30/97
SJS02-GW1S-001	SVTCL	Naphthalene		10	ug/L	U	7/30/97
SJS02-GW1S-001	SVTCL	Nitrobenzene		10	ug/L	U	7/30/97
SJS02-GW1S-001	SVTCL	Pentachlorophenol		25	ug/L	U	7/30/97
SJS02-GW1S-001	SVTCL	Phenanthrene		10	ug/L	U	7/30/97
SJS02-GW1S-001	SVTCL	Phenol		10	ug/L	U	7/30/97
SJS02-GW1S-001	SVTCL	Pyrene		10	ug/L	U	7/30/97
SJS02-GW1S-001	VCLOW	1,1,1-Trichloroethane		1	ug/L	U	7/25/97
SJS02-GW1S-001	VCLOW	1,1,2,2-Tetrachloroethane		1	ug/L	U	7/25/97
SJS02-GW1S-001	VCLOW	1,1,2-Trichloroethane		1	ug/L	U	7/25/97
SJS02-GW1S-001	VCLOW	1,1-Dichloroethane		1	ug/L	U	7/25/97
SJS02-GW1S-001	VCLOW	1,1-Dichloroethene		1	ug/L	U	7/25/97
SJS02-GW1S-001	VCLOW	1,2,4-Trichlorobenzene		1	ug/L	U	7/25/97
SJS02-GW1S-001	VCLOW	1,2-Dibromo-3-chloropropa		1	ug/L	U	7/25/97
SJS02-GW1S-001	VCLOW	1,2-Dibromoethane		1	ug/L	U	7/25/97
SJS02-GW1S-001	VCLOW	1,2-Dichlorobenzene		1	ug/L	U	7/25/97
SJS02-GW1S-001	VCLOW	1,2-Dichloroethane		1	ug/L	U	7/25/97
SJS02-GW1S-001	VCLOW	1,2-Dichloropropane		1	ug/L	U	7/25/97
SJS02-GW1S-001	VCLOW	1,3-Dichlorobenzene		1	ug/L	U	7/25/97
SJS02-GW1S-001	VCLOW	1,4-Dichlorobenzene		1	ug/L	U	7/25/97
SJS02-GW1S-001	VCLOW	2-Hexanone		5	ug/L	U	7/25/97
SJS02-GW1S-001	VCLOW	4-Methyl-2-Pentanone		5	ug/L	U	7/25/97
SJS02-GW1S-001	VCLOW	Acetone	7	5	ug/L	B	7/25/97
SJS02-GW1S-001	VCLOW	Benzene		1	ug/L	U	7/25/97
SJS02-GW1S-001	VCLOW	Bromochloromethane		1	ug/L	U	7/25/97
SJS02-GW1S-001	VCLOW	Bromodichloromethane		1	ug/L	U	7/
SJS02-GW1S-001	VCLOW	Bromoform		1	ug/L	U	7/
SJS02-GW1S-001	VCLOW	Bromomethane		1	ug/L	U	7/25/97
SJS02-GW1S-001	VCLOW	Carbon Disulfide		1	ug/L	U	7/25/97
SJS02-GW1S-001	VCLOW	Carbon Tetrachloride		1	ug/L	U	7/25/97
SJS02-GW1S-001	VCLOW	Chlorobenzene		1	ug/L	U	7/25/97
SJS02-GW1S-001	VCLOW	Chloroethane		1	ug/L	U	7/25/97
SJS02-GW1S-001	VCLOW	Chloroform		1	ug/L	U	7/25/97
SJS02-GW1S-001	VCLOW	Chloromethane		1	ug/L	U	7/25/97
SJS02-GW1S-001	VCLOW	cis-1,2-Dichloroethene		1	ug/L	U	7/25/97
SJS02-GW1S-001	VCLOW	cis-1,3-Dichloropropene		1	ug/L	U	7/25/97
SJS02-GW1S-001	VCLOW	Dibromochloromethane		1	ug/L	U	7/25/97
SJS02-GW1S-001	VCLOW	Ethylbenzene		1	ug/L	U	7/25/97
SJS02-GW1S-001	VCLOW	Methylene Chloride	2	1	ug/L	B	7/25/97
SJS02-GW1S-001	VCLOW	Styrene		1	ug/L	U	7/25/97
SJS02-GW1S-001	VCLOW	Tetrachloroethene		1	ug/L	U	7/25/97
SJS02-GW1S-001	VCLOW	Toluene		1	ug/L	U	7/25/97
SJS02-GW1S-001	VCLOW	Total Xylenes		1	ug/L	U	7/25/97
SJS02-GW1S-001	VCLOW	Trans-1,2-Dichloroethene		1	ug/L	U	7/25/97
SJS02-GW1S-001	VCLOW	Trans-1,3-Dichloropropene		1	ug/L	U	7/25/97
SJS02-GW1S-001	VCLOW	Trichloroethene		1	ug/L	U	7/25/97
SJS02-GW1S-001	VCLOW	Vinyl Chloride		1	ug/L	U	7/25/97
SJS02-GW1S-001F	METAL	Aluminum		44	ug/L	U	7/28/97
SJS02-GW1S-001F	METAL	Antimony		2	ug/L	U	7/29/97
SJS02-GW1S-001F	METAL	Arsenic		3	ug/L	U	7/29/97
SJS02-GW1S-001F	METAL	Barium	42.1	1	ug/L	J	7/28/97
SJS02-GW1S-001F	METAL	Beryllium		1	ug/L	U	7/28/97
SJS02-GW1S-001F	METAL	Cadmium		0.5	ug/L	U	7/29/97
SJS02-GW1S-001F	METAL	Calcium	67700	46	ug/L		7/28/97
SJS02-GW1S-001F	METAL	Chromium		7	ug/L	U	7/
SJS02-GW1S-001F	METAL	Cobalt	8.1	3	ug/L	J	7/

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS02-GW1S-001F	METAL	Copper		6	ug/L	U	7/28/97
SJS02-GW1S-001F	METAL	Iron	2530	5	ug/L		7/28/97
SJS02-GW1S-001F	METAL	Lead		1	ug/L	U	7/29/97
SJS02-GW1S-001F	METAL	Magnesium	21000	45	ug/L		7/28/97
SJS02-GW1S-001F	METAL	Manganese	1020	1	ug/L		7/28/97
SJS02-GW1S-001F	METAL	Mercury		0.12	ug/L	U	7/29/97
SJS02-GW1S-001F	METAL	Nickel	16.8	4	ug/L	K	7/28/97
SJS02-GW1S-001F	METAL	Potassium	4170	97	ug/L	J	7/28/97
SJS02-GW1S-001F	METAL	Selenium		3	ug/L	U	7/29/97
SJS02-GW1S-001F	METAL	Silver	2.8	3	ug/L	J	7/29/97
SJS02-GW1S-001F	METAL	Sodium	43900	28	ug/L		7/28/97
SJS02-GW1S-001F	METAL	Thallium		2	ug/L	U	7/29/97
SJS02-GW1S-001F	METAL	Vanadium		9	ug/L	U	7/28/97
SJS02-GW1S-001F	METAL	Zinc	17.8	3	ug/L	B	7/28/97
SJS02-GW2D-001	CTOTP	Total Phosphorous (as P)	0.862	0.125	mg/L		7/30/97
SJS02-GW2D-001	MCYAN	Aluminum	45.8	29	ug/L	B	7/28/97
SJS02-GW2D-001	MCYAN	Antimony		2	ug/L	U	7/29/97
SJS02-GW2D-001	MCYAN	Arsenic	4.5	3	ug/L	B	7/29/97
SJS02-GW2D-001	MCYAN	Barium	18.3	1	ug/L	B	7/28/97
SJS02-GW2D-001	MCYAN	Beryllium		1	ug/L	U	7/28/97
SJS02-GW2D-001	MCYAN	Cadmium		0.5	ug/L	U	7/29/97
SJS02-GW2D-001	MCYAN	Calcium	49500	46	ug/L		7/28/97
SJS02-GW2D-001	MCYAN	Chromium		7	ug/L	U	7/28/97
SJS02-GW2D-001	MCYAN	Cobalt		8	ug/L	U	7/28/97
SJS02-GW2D-001	MCYAN	Copper		6	ug/L	U	7/28/97
SJS02-GW2D-001	MCYAN	Cyanide		5	ug/L	UL	8/5/97
SJS02-GW2D-001	MCYAN	Iron	87.4	5	ug/L	B	7/28/97
SJS02-GW2D-001	MCYAN	Lead		1	ug/L	U	7/29/97
SJS02-GW2D-001	MCYAN	Magnesium	13600	45	ug/L		7/28/97
SJS02-GW2D-001	MCYAN	Manganese	49.4	1	ug/L	B	7/28/97
SJS02-GW2D-001	MCYAN	Mercury		0.12	ug/L	U	7/29/97
SJS02-GW2D-001	MCYAN	Nickel		7	ug/L	U	7/28/97
SJS02-GW2D-001	MCYAN	Potassium	8800	97	ug/L	B	7/28/97
SJS02-GW2D-001	MCYAN	Selenium		3	ug/L	UL	7/29/97
SJS02-GW2D-001	MCYAN	Silver	2.9	3	ug/L	B	7/29/97
SJS02-GW2D-001	MCYAN	Sodium	19100	28	ug/L		7/28/97
SJS02-GW2D-001	MCYAN	Thallium		2	ug/L	U	7/29/97
SJS02-GW2D-001	MCYAN	Vanadium		9	ug/L	U	7/28/97
SJS02-GW2D-001	MCYAN	Zinc		5	ug/L	U	7/28/97
SJS02-GW2D-001	PSPCB	4,4'-DDD		0.1	ug/L	U	7/31/97
SJS02-GW2D-001	PSPCB	4,4'-DDE		0.1	ug/L	U	7/31/97
SJS02-GW2D-001	PSPCB	4,4'-DDT		0.1	ug/L	U	7/31/97
SJS02-GW2D-001	PSPCB	Aldrin		0.05	ug/L	U	7/31/97
SJS02-GW2D-001	PSPCB	alpha-BHC		0.05	ug/L	U	7/31/97
SJS02-GW2D-001	PSPCB	alpha-Chlordane		0.05	ug/L	U	7/31/97
SJS02-GW2D-001	PSPCB	Aroclor-1016		1	ug/L	U	7/31/97
SJS02-GW2D-001	PSPCB	Aroclor-1221		2	ug/L	U	7/31/97
SJS02-GW2D-001	PSPCB	Aroclor-1232		1	ug/L	U	7/31/97
SJS02-GW2D-001	PSPCB	Aroclor-1242		1	ug/L	U	7/31/97
SJS02-GW2D-001	PSPCB	Aroclor-1248		1	ug/L	U	7/31/97
SJS02-GW2D-001	PSPCB	Aroclor-1254		1	ug/L	U	7/31/97
SJS02-GW2D-001	PSPCB	Aroclor-1260		1	ug/L	U	7/31/97
SJS02-GW2D-001	PSPCB	beta-BHC		0.05	ug/L	U	7/31/97
SJS02-GW2D-001	PSPCB	delta-BHC		0.05	ug/L	U	7/31/97
SJS02-GW2D-001	PSPCB	Dieldrin		0.1	ug/L	U	7/31/97
SJS02-GW2D-001	PSPCB	Endosulfan I		0.05	ug/L	U	7/31/97
SJS02-GW2D-001	PSPCB	Endosulfan II		0.1	ug/L	U	7/31/97
SJS02-GW2D-001	PSPCB	Endosulfan Sulfate		0.1	ug/L	U	7/31/97
SJS02-GW2D-001	PSPCB	Endrin		0.1	ug/L	U	7/31/97
SJS02-GW2D-001	PSPCB	Endrin Aldehyde		0.1	ug/L	U	7/31/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS02-GW2D-001	PSPCB	Endrin Ketone		0.1	ug/L	U	7/3
SJS02-GW2D-001	PSPCB	gamma-BHC		0.05	ug/L	U	7/3
SJS02-GW2D-001	PSPCB	gamma-Chlordane		0.05	ug/L	U	7/31/97
SJS02-GW2D-001	PSPCB	Heptachlor		0.05	ug/L	U	7/31/97
SJS02-GW2D-001	PSPCB	Heptachlor Epoxide		0.05	ug/L	U	7/31/97
SJS02-GW2D-001	PSPCB	Methoxychlor		0.5	ug/L	U	7/31/97
SJS02-GW2D-001	PSPCB	Toxaphene		5	ug/L	U	7/31/97
SJS02-GW2D-001	SVTCL	1,2,4-Trichlorobenzene		10	ug/L	U	7/31/97
SJS02-GW2D-001	SVTCL	1,2-Dichlorobenzene		10	ug/L	U	7/31/97
SJS02-GW2D-001	SVTCL	1,3-Dichlorobenzene		10	ug/L	U	7/31/97
SJS02-GW2D-001	SVTCL	1,4-Dichlorobenzene		10	ug/L	U	7/31/97
SJS02-GW2D-001	SVTCL	2,2'-oxybis(1-Chloropropane		10	ug/L	U	7/31/97
SJS02-GW2D-001	SVTCL	2,4,5-Trichlorophenol		25	ug/L	U	7/31/97
SJS02-GW2D-001	SVTCL	2,4,6-Trichlorophenol		10	ug/L	U	7/31/97
SJS02-GW2D-001	SVTCL	2,4-Dichlorophenol		10	ug/L	U	7/31/97
SJS02-GW2D-001	SVTCL	2,4-Dimethylphenol		10	ug/L	U	7/31/97
SJS02-GW2D-001	SVTCL	2,4-Dinitrophenol		25	ug/L	U	7/31/97
SJS02-GW2D-001	SVTCL	2,4-Dinitrotoluene		10	ug/L	U	7/31/97
SJS02-GW2D-001	SVTCL	2,6-Dinitrotoluene		10	ug/L	U	7/31/97
SJS02-GW2D-001	SVTCL	2-Chloronaphthalene		10	ug/L	U	7/31/97
SJS02-GW2D-001	SVTCL	2-Chlorophenol		10	ug/L	U	7/31/97
SJS02-GW2D-001	SVTCL	2-Methylnaphthalene		10	ug/L	U	7/31/97
SJS02-GW2D-001	SVTCL	2-Methylphenol		10	ug/L	U	7/31/97
SJS02-GW2D-001	SVTCL	2-Nitroaniline		25	ug/L	U	7/31/97
SJS02-GW2D-001	SVTCL	2-Nitrophenol		10	ug/L	U	7/31/97
SJS02-GW2D-001	SVTCL	3,3'-Dichlorobenzidine		10	ug/L	U	7/31/97
SJS02-GW2D-001	SVTCL	3-Nitroaniline		25	ug/L	U	7/31/97
SJS02-GW2D-001	SVTCL	4,6-Dinitro-2-Methylphenol		25	ug/L	U	7/31/97
SJS02-GW2D-001	SVTCL	4-Bromophenyl phenylether		10	ug/L	U	7/31/97
SJS02-GW2D-001	SVTCL	4-Chloro-3-Methylphenol		10	ug/L	U	7/3
SJS02-GW2D-001	SVTCL	4-Chloroaniline		10	ug/L	U	7/3
SJS02-GW2D-001	SVTCL	4-Chlorophenyl-phenylether		10	ug/L	U	7/31/97
SJS02-GW2D-001	SVTCL	4-Methylphenol		10	ug/L	U	7/31/97
SJS02-GW2D-001	SVTCL	4-Nitroaniline		25	ug/L	U	7/31/97
SJS02-GW2D-001	SVTCL	4-Nitrophenol		25	ug/L	U	7/31/97
SJS02-GW2D-001	SVTCL	Acenaphthene		10	ug/L	U	7/31/97
SJS02-GW2D-001	SVTCL	Acenaphthylene		10	ug/L	U	7/31/97
SJS02-GW2D-001	SVTCL	Anthracene		10	ug/L	U	7/31/97
SJS02-GW2D-001	SVTCL	Benzo(a)Anthracene		10	ug/L	U	7/31/97
SJS02-GW2D-001	SVTCL	Benzo(a)Pyrene		10	ug/L	U	7/31/97
SJS02-GW2D-001	SVTCL	Benzo(b)Fluoranthene		10	ug/L	U	7/31/97
SJS02-GW2D-001	SVTCL	Benzo(g,h,i)Perylene		10	ug/L	U	7/31/97
SJS02-GW2D-001	SVTCL	Benzo(k)fluoranthene		10	ug/L	U	7/31/97
SJS02-GW2D-001	SVTCL	Bis(2-chloroethoxy)Methane		10	ug/L	U	7/31/97
SJS02-GW2D-001	SVTCL	Bis(2-chloroethyl)Ether		10	ug/L	U	7/31/97
SJS02-GW2D-001	SVTCL	Bis(2-Ethylhexyl)Phthalate		10	ug/L	U	7/31/97
SJS02-GW2D-001	SVTCL	Butylbenzylphthalate		10	ug/L	U	7/31/97
SJS02-GW2D-001	SVTCL	Carbazole		10	ug/L	U	7/31/97
SJS02-GW2D-001	SVTCL	Chrysene		10	ug/L	U	7/31/97
SJS02-GW2D-001	SVTCL	Di-n-Butylphthalate		10	ug/L	U	7/31/97
SJS02-GW2D-001	SVTCL	Di-n-Octyl Phthalate		10	ug/L	U	7/31/97
SJS02-GW2D-001	SVTCL	Dibenz(a,h)Anthracene		10	ug/L	U	7/31/97
SJS02-GW2D-001	SVTCL	Dibenzofuran		10	ug/L	U	7/31/97
SJS02-GW2D-001	SVTCL	Diethylphthalate		10	ug/L	U	7/31/97
SJS02-GW2D-001	SVTCL	Dimethyl Phthalate		10	ug/L	U	7/31/97
SJS02-GW2D-001	SVTCL	Fluoranthene		10	ug/L	U	7/31/97
SJS02-GW2D-001	SVTCL	Fluorene		10	ug/L	U	7/31/97
SJS02-GW2D-001	SVTCL	Hexachlorobenzene		10	ug/L	U	7/31/97
SJS02-GW2D-001	SVTCL	Hexachlorobutadiene		10	ug/L	U	7/3
SJS02-GW2D-001	SVTCL	Hexachlorocyclopentadien		10	ug/L	U	7/3

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS02-GW2D-001	SVTCL	Hexachloroethane		10	ug/L	U	7/31/97
SJS02-GW2D-001	SVTCL	Indeno(1,2,3-cd)Pyrene		10	ug/L	U	7/31/97
SJS02-GW2D-001	SVTCL	Isophorone		10	ug/L	U	7/31/97
SJS02-GW2D-001	SVTCL	N-Nitroso-Di-n-Propylamine		10	ug/L	U	7/31/97
SJS02-GW2D-001	SVTCL	N-Nitrosodiphenylamine		10	ug/L	U	7/31/97
SJS02-GW2D-001	SVTCL	Naphthalene		10	ug/L	U	7/31/97
SJS02-GW2D-001	SVTCL	Nitrobenzene		10	ug/L	U	7/31/97
SJS02-GW2D-001	SVTCL	Pentachlorophenol		25	ug/L	U	7/31/97
SJS02-GW2D-001	SVTCL	Phenanthrene		10	ug/L	U	7/31/97
SJS02-GW2D-001	SVTCL	Phenol		10	ug/L	U	7/31/97
SJS02-GW2D-001	SVTCL	Pyrene		10	ug/L	U	7/31/97
SJS02-GW2D-001	VCLOW	1,1,1-Trichloroethane		1	ug/L	U	7/25/97
SJS02-GW2D-001	VCLOW	1,1,2,2-Tetrachloroethane		1	ug/L	U	7/25/97
SJS02-GW2D-001	VCLOW	1,1,2-Trichloroethane		1	ug/L	U	7/25/97
SJS02-GW2D-001	VCLOW	1,1-Dichloroethane		1	ug/L	U	7/25/97
SJS02-GW2D-001	VCLOW	1,1-Dichloroethene		1	ug/L	U	7/25/97
SJS02-GW2D-001	VCLOW	1,2,4-Trichlorobenzene		1	ug/L	U	7/25/97
SJS02-GW2D-001	VCLOW	1,2-Dibromo-3-chloropropa		1	ug/L	U	7/25/97
SJS02-GW2D-001	VCLOW	1,2-Dibromoethane		1	ug/L	U	7/25/97
SJS02-GW2D-001	VCLOW	1,2-Dichlorobenzene		1	ug/L	U	7/25/97
SJS02-GW2D-001	VCLOW	1,2-Dichloroethane		1	ug/L	U	7/25/97
SJS02-GW2D-001	VCLOW	1,2-Dichloropropane		1	ug/L	U	7/25/97
SJS02-GW2D-001	VCLOW	1,3-Dichlorobenzene		1	ug/L	U	7/25/97
SJS02-GW2D-001	VCLOW	1,4-Dichlorobenzene		1	ug/L	U	7/25/97
SJS02-GW2D-001	VCLOW	2-Hexanone		5	ug/L	U	7/25/97
SJS02-GW2D-001	VCLOW	4-Methyl-2-Pentanone		5	ug/L	U	7/25/97
SJS02-GW2D-001	VCLOW	Benzene		1	ug/L	U	7/25/97
SJS02-GW2D-001	VCLOW	Bromochloromethane		1	ug/L	U	7/25/97
SJS02-GW2D-001	VCLOW	Bromodichloromethane		1	ug/L	U	7/25/97
SJS02-GW2D-001	VCLOW	Bromoform		1	ug/L	U	7/25/97
SJS02-GW2D-001	VCLOW	Bromomethane		1	ug/L	U	7/25/97
SJS02-GW2D-001	VCLOW	Carbon Disulfide		1	ug/L	U	7/25/97
SJS02-GW2D-001	VCLOW	Carbon Tetrachloride		1	ug/L	U	7/25/97
SJS02-GW2D-001	VCLOW	Chlorobenzene		1	ug/L	U	7/25/97
SJS02-GW2D-001	VCLOW	Chloroethane		1	ug/L	U	7/25/97
SJS02-GW2D-001	VCLOW	Chloroform	6	1	ug/L		7/25/97
SJS02-GW2D-001	VCLOW	Chloromethane		1	ug/L	U	7/25/97
SJS02-GW2D-001	VCLOW	cis-1,2-Dichloroethene		1	ug/L	U	7/25/97
SJS02-GW2D-001	VCLOW	cis-1,3-Dichloropropene		1	ug/L	U	7/25/97
SJS02-GW2D-001	VCLOW	Dibromochloromethane		1	ug/L	U	7/25/97
SJS02-GW2D-001	VCLOW	Ethylbenzene		1	ug/L	U	7/25/97
SJS02-GW2D-001	VCLOW	Methylene Chloride	3	1	ug/L	B	7/25/97
SJS02-GW2D-001	VCLOW	Styrene		1	ug/L	U	7/25/97
SJS02-GW2D-001	VCLOW	Tetrachloroethene		1	ug/L	U	7/25/97
SJS02-GW2D-001	VCLOW	Toluene		1	ug/L	U	7/25/97
SJS02-GW2D-001	VCLOW	Total Xylenes		1	ug/L	U	7/25/97
SJS02-GW2D-001	VCLOW	Trans-1,2-Dichloroethene		1	ug/L	U	7/25/97
SJS02-GW2D-001	VCLOW	Trans-1,3-Dichloropropene		1	ug/L	U	7/25/97
SJS02-GW2D-001	VCLOW	Trichloroethene		1	ug/L	U	7/25/97
SJS02-GW2D-001	VCLOW	Vinyl Chloride		1	ug/L	U	7/25/97
SJS02-GW2D-001F	METAL	Aluminum		44	ug/L	U	7/28/97
SJS02-GW2D-001F	METAL	Antimony	3	1	ug/L	J	7/29/97
SJS02-GW2D-001F	METAL	Arsenic	4.4	3	ug/L	J	7/29/97
SJS02-GW2D-001F	METAL	Barium	18.3	1	ug/L	B	7/28/97
SJS02-GW2D-001F	METAL	Beryllium		1	ug/L	U	7/28/97
SJS02-GW2D-001F	METAL	Cadmium		0.5	ug/L	U	7/29/97
SJS02-GW2D-001F	METAL	Calcium	49300	46	ug/L		7/28/97
SJS02-GW2D-001F	METAL	Chromium		7	ug/L	U	7/28/97
SJS02-GW2D-001F	METAL	Cobalt		8	ug/L	U	7/28/97
SJS02-GW2D-001F	METAL	Copper		6	ug/L	U	7/28/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Ana
SJS02-GW2D-001F	METAL	Iron	45.3	5	ug/L	B	7/2
SJS02-GW2D-001F	METAL	Lead	1.5	1	ug/L	B	7/2
SJS02-GW2D-001F	METAL	Magnesium	13200	45	ug/L		7/28/97
SJS02-GW2D-001F	METAL	Manganese	43.9	1	ug/L	B	7/28/97
SJS02-GW2D-001F	METAL	Mercury		0.12	ug/L	U	7/29/97
SJS02-GW2D-001F	METAL	Nickel		7	ug/L	U	7/28/97
SJS02-GW2D-001F	METAL	Potassium	8800	97	ug/L	B	7/28/97
SJS02-GW2D-001F	METAL	Selenium		3	ug/L	U	7/29/97
SJS02-GW2D-001F	METAL	Silver	3.2	3	ug/L	B	7/29/97
SJS02-GW2D-001F	METAL	Sodium	19600	28	ug/L		7/28/97
SJS02-GW2D-001F	METAL	Thallium		2	ug/L	U	7/29/97
SJS02-GW2D-001F	METAL	Vanadium		9	ug/L	U	7/28/97
SJS02-GW2D-001F	METAL	Zinc	11.1	3	ug/L	B	7/28/97
SJS02-GW2S-001	CTOTP	Total Phosphorous (as P)	0.338	0.05	mg/L		7/31/97
SJS02-GW2S-001	MCYAN	Aluminum	35500	29	ug/L	J	8/11/97
SJS02-GW2S-001	MCYAN	Arsenic		3	ug/L	U	8/8/97
SJS02-GW2S-001	MCYAN	Barium	726	1	ug/L		8/11/97
SJS02-GW2S-001	MCYAN	Beryllium	1.4	1	ug/L	B	8/11/97
SJS02-GW2S-001	MCYAN	Cadmium		0.5	ug/L	UL	8/8/97
SJS02-GW2S-001	MCYAN	Calcium	110000	46	ug/L	J	8/11/97
SJS02-GW2S-001	MCYAN	Chromium	56.3	4	ug/L	J	8/11/97
SJS02-GW2S-001	MCYAN	Cobalt		8	ug/L	U	8/11/97
SJS02-GW2S-001	MCYAN	Copper	21.4	2	ug/L	B	8/11/97
SJS02-GW2S-001	MCYAN	Cyanide		5	ug/L	U	7/25/97
SJS02-GW2S-001	MCYAN	Iron	377000	5	ug/L	J	8/11/97
SJS02-GW2S-001	MCYAN	Lead	36.7	1	ug/L	L	8/8/97
SJS02-GW2S-001	MCYAN	Magnesium	123000	45	ug/L	J	8/11/97
SJS02-GW2S-001	MCYAN	Manganese	797	1	ug/L	L	8/11/97
SJS02-GW2S-001	MCYAN	Mercury	0.64	0.1	ug/L	B	8/7
SJS02-GW2S-001	MCYAN	Nickel	9.3	4	ug/L	J	8/1
SJS02-GW2S-001	MCYAN	Potassium	14100	97	ug/L		8/11/
SJS02-GW2S-001	MCYAN	Silver	1.5	3	ug/L	J	8/8/97
SJS02-GW2S-001	MCYAN	Sodium	883000	28	ug/L	J	8/11/97
SJS02-GW2S-001	MCYAN	Thallium	6.9	2	ug/L	J	8/8/97
SJS02-GW2S-001	MCYAN	Vanadium	79.6	4	ug/L		8/11/97
SJS02-GW2S-001	MCYAN	Zinc	74.9	3	ug/L	B	8/11/97
SJS02-GW2S-001	PSPCB	4,4'-DDD		0.1	ug/L	U	8/9/97
SJS02-GW2S-001	PSPCB	4,4'-DDE		0.1	ug/L	U	8/9/97
SJS02-GW2S-001	PSPCB	4,4'-DDT		0.1	ug/L	U	8/9/97
SJS02-GW2S-001	PSPCB	Aldrin		0.05	ug/L	U	8/9/97
SJS02-GW2S-001	PSPCB	alpha-BHC		0.05	ug/L	U	8/9/97
SJS02-GW2S-001	PSPCB	alpha-Chlordane		0.05	ug/L	U	8/9/97
SJS02-GW2S-001	PSPCB	Aroclor-1016		1	ug/L	U	8/9/97
SJS02-GW2S-001	PSPCB	Aroclor-1221		2	ug/L	U	8/9/97
SJS02-GW2S-001	PSPCB	Aroclor-1232		1	ug/L	U	8/9/97
SJS02-GW2S-001	PSPCB	Aroclor-1242		1	ug/L	U	8/9/97
SJS02-GW2S-001	PSPCB	Aroclor-1248		1	ug/L	U	8/9/97
SJS02-GW2S-001	PSPCB	Aroclor-1254		1	ug/L	U	8/9/97
SJS02-GW2S-001	PSPCB	Aroclor-1260		1	ug/L	U	8/9/97
SJS02-GW2S-001	PSPCB	beta-BHC		0.05	ug/L	U	8/9/97
SJS02-GW2S-001	PSPCB	delta-BHC		0.05	ug/L	U	8/9/97
SJS02-GW2S-001	PSPCB	Dieldrin		0.1	ug/L	U	8/9/97
SJS02-GW2S-001	PSPCB	Endosulfan I		0.05	ug/L	U	8/9/97
SJS02-GW2S-001	PSPCB	Endosulfan II		0.1	ug/L	U	8/9/97
SJS02-GW2S-001	PSPCB	Endosulfan Sulfate		0.1	ug/L	U	8/9/97
SJS02-GW2S-001	PSPCB	Endrin		0.1	ug/L	U	8/9/97
SJS02-GW2S-001	PSPCB	Endrin Aldehyde		0.1	ug/L	U	8/9/97
SJS02-GW2S-001	PSPCB	Endrin Ketone		0.1	ug/L	U	8/9
SJS02-GW2S-001	PSPCB	gamma-BHC		0.05	ug/L	U	8/
SJS02-GW2S-001	PSPCB	gamma-Chlordane		0.05	ug/L	U	8/9/

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS02-GW2S-001	PSPCB	Heptachlor		0.05	ug/L	U	8/9/97
SJS02-GW2S-001	PSPCB	Heptachlor Epoxide		0.05	ug/L	U	8/9/97
SJS02-GW2S-001	PSPCB	Methoxychlor		0.5	ug/L	U	8/9/97
SJS02-GW2S-001	PSPCB	Toxaphene		5	ug/L	U	8/9/97
SJS02-GW2S-001	SVTCL	1,2,4-Trichlorobenzene		10	ug/L	U	8/8/97
SJS02-GW2S-001	SVTCL	1,2-Dichlorobenzene		10	ug/L	U	8/8/97
SJS02-GW2S-001	SVTCL	1,3-Dichlorobenzene		10	ug/L	U	8/8/97
SJS02-GW2S-001	SVTCL	1,4-Dichlorobenzene		10	ug/L	U	8/8/97
SJS02-GW2S-001	SVTCL	2,2'-oxybis(1-Chloropropane		10	ug/L	U	8/8/97
SJS02-GW2S-001	SVTCL	2,4,5-Trichlorophenol		25	ug/L	U	8/8/97
SJS02-GW2S-001	SVTCL	2,4,6-Trichlorophenol		10	ug/L	U	8/8/97
SJS02-GW2S-001	SVTCL	2,4-Dichlorophenol		10	ug/L	U	8/8/97
SJS02-GW2S-001	SVTCL	2,4-Dimethylphenol		10	ug/L	U	8/8/97
SJS02-GW2S-001	SVTCL	2,4-Dinitrophenol		25	ug/L	U	8/8/97
SJS02-GW2S-001	SVTCL	2,4-Dinitrotoluene		10	ug/L	U	8/8/97
SJS02-GW2S-001	SVTCL	2,6-Dinitrotoluene		10	ug/L	U	8/8/97
SJS02-GW2S-001	SVTCL	2-Chloronaphthalene		10	ug/L	U	8/8/97
SJS02-GW2S-001	SVTCL	2-Chlorophenol		10	ug/L	U	8/8/97
SJS02-GW2S-001	SVTCL	2-Methylnaphthalene		10	ug/L	U	8/8/97
SJS02-GW2S-001	SVTCL	2-Methylphenol		10	ug/L	U	8/8/97
SJS02-GW2S-001	SVTCL	2-Nitroaniline		25	ug/L	U	8/8/97
SJS02-GW2S-001	SVTCL	2-Nitrophenol		10	ug/L	U	8/8/97
SJS02-GW2S-001	SVTCL	3,3'-Dichlorobenzidine		10	ug/L	U	8/8/97
SJS02-GW2S-001	SVTCL	3-Nitroaniline		25	ug/L	U	8/8/97
SJS02-GW2S-001	SVTCL	4,6-Dinitro-2-Methylphenol		25	ug/L	U	8/8/97
SJS02-GW2S-001	SVTCL	4-Bromophenol-phenylether		10	ug/L	U	8/8/97
SJS02-GW2S-001	SVTCL	4-Chloro-3-Methylphenol		10	ug/L	U	8/8/97
SJS02-GW2S-001	SVTCL	4-Chloroaniline		10	ug/L	U	8/8/97
SJS02-GW2S-001	SVTCL	4-Chlorophenyl-phenylether		10	ug/L	U	8/8/97
SJS02-GW2S-001	SVTCL	4-Methylphenol		10	ug/L	U	8/8/97
SJS02-GW2S-001	SVTCL	4-Nitroaniline		25	ug/L	U	8/8/97
SJS02-GW2S-001	SVTCL	4-Nitrophenol		25	ug/L	U	8/8/97
SJS02-GW2S-001	SVTCL	Acenaphthene		10	ug/L	U	8/8/97
SJS02-GW2S-001	SVTCL	Acenaphthylene		10	ug/L	U	8/8/97
SJS02-GW2S-001	SVTCL	Anthracene		10	ug/L	U	8/8/97
SJS02-GW2S-001	SVTCL	Benzo(a)anthracene		10	ug/L	U	8/8/97
SJS02-GW2S-001	SVTCL	Benzo(a)pyrene		10	ug/L	U	8/8/97
SJS02-GW2S-001	SVTCL	Benzo(b)fluoranthene		10	ug/L	U	8/8/97
SJS02-GW2S-001	SVTCL	Benzo(g,h,i)perylene		10	ug/L	U	8/8/97
SJS02-GW2S-001	SVTCL	Benzo(k)fluoranthene		10	ug/L	U	8/8/97
SJS02-GW2S-001	SVTCL	bis(2-Chloroethoxy)methan		10	ug/L	U	8/8/97
SJS02-GW2S-001	SVTCL	bis(2-chloroethyl)ether		10	ug/L	U	8/8/97
SJS02-GW2S-001	SVTCL	bis(2-Ethylhexyl)phthalate		10	ug/L	U	8/8/97
SJS02-GW2S-001	SVTCL	Butylbenzylphthalate		10	ug/L	U	8/8/97
SJS02-GW2S-001	SVTCL	Carbazole		10	ug/L	U	8/8/97
SJS02-GW2S-001	SVTCL	Chrysene		10	ug/L	U	8/8/97
SJS02-GW2S-001	SVTCL	Di-n-butylphthalate		10	ug/L	U	8/8/97
SJS02-GW2S-001	SVTCL	Di-n-Octyl Phthalate		10	ug/L	U	8/8/97
SJS02-GW2S-001	SVTCL	Dibenzo(a,h)anthracene		10	ug/L	U	8/8/97
SJS02-GW2S-001	SVTCL	Dibenzofuran		10	ug/L	U	8/8/97
SJS02-GW2S-001	SVTCL	Diethylphthalate		10	ug/L	U	8/8/97
SJS02-GW2S-001	SVTCL	Dimethyl Phthalate		10	ug/L	U	8/8/97
SJS02-GW2S-001	SVTCL	Fluoranthene		10	ug/L	U	8/8/97
SJS02-GW2S-001	SVTCL	Fluorene		10	ug/L	U	8/8/97
SJS02-GW2S-001	SVTCL	Hexachlorobenzene		10	ug/L	U	8/8/97
SJS02-GW2S-001	SVTCL	Hexachlorobutadiene		10	ug/L	U	8/8/97
SJS02-GW2S-001	SVTCL	Hexachlorocyclopentadien		10	ug/L	U	8/8/97
SJS02-GW2S-001	SVTCL	Hexachloroethane		10	ug/L	U	8/8/97
SJS02-GW2S-001	SVTCL	Indeno(1,2,3-cd)pyrene		10	ug/L	U	8/8/97
SJS02-GW2S-001	SVTCL	Isophorone		10	ug/L	U	8/8/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Ana
SJS02-GW2S-001	SVTCL	N-Nitroso-Di-n-Propylamine		10	ug/L	U	8
SJS02-GW2S-001	SVTCL	N-Nitrosodiphenylamine		10	ug/L	U	8
SJS02-GW2S-001	SVTCL	Naphthalene		10	ug/L	U	8/8/97
SJS02-GW2S-001	SVTCL	Nitrobenzene		10	ug/L	U	8/8/97
SJS02-GW2S-001	SVTCL	Pentachlorophenol		25	ug/L	U	8/8/97
SJS02-GW2S-001	SVTCL	Phenanthrene		10	ug/L	U	8/8/97
SJS02-GW2S-001	SVTCL	Phenol		10	ug/L	U	8/8/97
SJS02-GW2S-001	SVTCL	Pyrene		10	ug/L	U	8/8/97
SJS02-GW2S-001	VCLOW	1,1,1-Trichloroethane		1	ug/L	U	7/27/97
SJS02-GW2S-001	VCLOW	1,1,2,2-Tetrachloroethane		1	ug/L	U	7/27/97
SJS02-GW2S-001	VCLOW	1,1,2-Trichloroethane		1	ug/L	U	7/27/97
SJS02-GW2S-001	VCLOW	1,1-Dichloroethane		1	ug/L	U	7/27/97
SJS02-GW2S-001	VCLOW	1,1-Dichloroethene		1	ug/L	U	7/27/97
SJS02-GW2S-001	VCLOW	1,2,4-Trichlorobenzene		1	ug/L	U	7/27/97
SJS02-GW2S-001	VCLOW	1,2-Dibromo-3-chloropropa		1	ug/L	U	7/27/97
SJS02-GW2S-001	VCLOW	1,2-Dibromoethane		1	ug/L	U	7/27/97
SJS02-GW2S-001	VCLOW	1,2-Dichlorobenzene		1	ug/L	U	7/27/97
SJS02-GW2S-001	VCLOW	1,2-Dichloroethane		1	ug/L	U	7/27/97
SJS02-GW2S-001	VCLOW	1,2-Dichloropropane		1	ug/L	U	7/27/97
SJS02-GW2S-001	VCLOW	1,3-Dichlorobenzene		1	ug/L	U	7/27/97
SJS02-GW2S-001	VCLOW	1,4-Dichlorobenzene		1	ug/L	U	7/27/97
SJS02-GW2S-001	VCLOW	2-Hexanone		5	ug/L	U	7/27/97
SJS02-GW2S-001	VCLOW	4-Methyl-2-Pentanone		5	ug/L	U	7/27/97
SJS02-GW2S-001	VCLOW	Acetone	10	5	ug/L	B	7/27/97
SJS02-GW2S-001	VCLOW	Benzene		1	ug/L	U	7/27/97
SJS02-GW2S-001	VCLOW	Bromochloromethane		1	ug/L	U	7/27/97
SJS02-GW2S-001	VCLOW	Bromodichloromethane		1	ug/L	U	7/27/97
SJS02-GW2S-001	VCLOW	Bromoform		1	ug/L	U	7/27/97
SJS02-GW2S-001	VCLOW	Bromomethane		1	ug/L	U	7/2
SJS02-GW2S-001	VCLOW	Carbon Disulfide		1	ug/L	U	7/
SJS02-GW2S-001	VCLOW	Carbon Tetrachloride		1	ug/L	U	7/2
SJS02-GW2S-001	VCLOW	Chlorobenzene		1	ug/L	U	7/27/97
SJS02-GW2S-001	VCLOW	Chloroethane		1	ug/L	U	7/27/97
SJS02-GW2S-001	VCLOW	Chloroform		1	ug/L	U	7/27/97
SJS02-GW2S-001	VCLOW	Chloromethane		1	ug/L	U	7/27/97
SJS02-GW2S-001	VCLOW	cis-1,2-Dichloroethene		1	ug/L	U	7/27/97
SJS02-GW2S-001	VCLOW	cis-1,3-Dichloropropene		1	ug/L	U	7/27/97
SJS02-GW2S-001	VCLOW	Dibromochloromethane		1	ug/L	U	7/27/97
SJS02-GW2S-001	VCLOW	Ethylbenzene		1	ug/L	U	7/27/97
SJS02-GW2S-001	VCLOW	Methylene Chloride	1	1	ug/L	B	7/27/97
SJS02-GW2S-001	VCLOW	Styrene		1	ug/L	U	7/27/97
SJS02-GW2S-001	VCLOW	Tetrachloroethene		1	ug/L	U	7/27/97
SJS02-GW2S-001	VCLOW	Toluene		1	ug/L	U	7/27/97
SJS02-GW2S-001	VCLOW	Total Xylenes		1	ug/L	U	7/27/97
SJS02-GW2S-001	VCLOW	Trans-1,2-Dichloroethene		1	ug/L	U	7/27/97
SJS02-GW2S-001	VCLOW	trans-1,3-Dichloropropene		1	ug/L	U	7/27/97
SJS02-GW2S-001	VCLOW	Trichloroethene		1	ug/L	U	7/27/97
SJS02-GW2S-001	VCLOW	Vinyl Chloride		1	ug/L	U	7/27/97
SJS02-GW2S-001F	METAL	Aluminum		44	ug/L	U	8/11/97
SJS02-GW2S-001F	METAL	Antimony		2	ug/L	UL	8/13/97
SJS02-GW2S-001F	METAL	Arsenic		3	ug/L	UL	8/8/97
SJS02-GW2S-001F	METAL	Barium	495	1	ug/L		8/11/97
SJS02-GW2S-001F	METAL	Beryllium		1	ug/L	U	8/11/97
SJS02-GW2S-001F	METAL	Cadmium		0.5	ug/L	UL	8/8/97
SJS02-GW2S-001F	METAL	Calcium	90200	46	ug/L	J	8/11/97
SJS02-GW2S-001F	METAL	Chromium		7	ug/L	U	8/11/97
SJS02-GW2S-001F	METAL	Cobalt		8	ug/L	U	8/11/97
SJS02-GW2S-001F	METAL	Copper		6	ug/L	U	8/1
SJS02-GW2S-001F	METAL	Iron	267000	5	ug/L	J	8/
SJS02-GW2S-001F	METAL	Lead		1	ug/L	U	8/8

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS02-GW2S-001F	METAL	Magnesium	99800	45	ug/L	J	8/11/97
SJS02-GW2S-001F	METAL	Manganese	612	1	ug/L	J	8/11/97
SJS02-GW2S-001F	METAL	Mercury	0.38	0.1	ug/L	B	8/7/97
SJS02-GW2S-001F	METAL	Nickel		7	ug/L	U	8/11/97
SJS02-GW2S-001F	METAL	Potassium	9980	97	ug/L		8/11/97
SJS02-GW2S-001F	METAL	Silver	2	3	ug/L	J	8/8/97
SJS02-GW2S-001F	METAL	Sodium	720000	28	ug/L	J	8/11/97
SJS02-GW2S-001F	METAL	Thallium	9.6	2	ug/L	J	8/8/97
SJS02-GW2S-001F	METAL	Vanadium		9	ug/L	U	8/11/97
SJS02-GW2S-001F	METAL	Zinc	33.8	3	ug/L	B	8/11/97
SJS02-GW3S-001	CTOTP	Total Phosphorous (as P)	0.105	0.05	mg/L		7/30/97
SJS02-GW3S-001	EXPLO	1,3,5-Trinitrobenzene		25	ug/L	U	8/9/97
SJS02-GW3S-001	EXPLO	1,3-Dinitrobenzene		25	ug/L	U	8/9/97
SJS02-GW3S-001	EXPLO	2,4,6-Trinitrotoluene		25	ug/L	U	8/9/97
SJS02-GW3S-001	EXPLO	2,4-Dinitrotoluene		25	ug/L	U	8/9/97
SJS02-GW3S-001	EXPLO	2,6-Dinitrotoluene		25	ug/L	U	8/9/97
SJS02-GW3S-001	EXPLO	2-am-4,6-Dinitrotoluene		25	ug/L	U	8/9/97
SJS02-GW3S-001	EXPLO	2-Nitrotoluene		25	ug/L	U	8/9/97
SJS02-GW3S-001	EXPLO	3-Nitrotoluene		25	ug/L	U	8/9/97
SJS02-GW3S-001	EXPLO	4-am-2,6-Dinitrotoluene		25	ug/L	U	8/9/97
SJS02-GW3S-001	EXPLO	4-Nitrotoluene		25	ug/L	U	8/9/97
SJS02-GW3S-001	EXPLO	HMX		25	ug/L	U	8/9/97
SJS02-GW3S-001	EXPLO	Nitrobenzene		25	ug/L	U	8/9/97
SJS02-GW3S-001	EXPLO	RDX		25	ug/L	U	8/9/97
SJS02-GW3S-001	EXPLO	TETRYL		25	ug/L	U	8/9/97
SJS02-GW3S-001	MCYAN	Aluminum	6890	29	ug/L		7/28/97
SJS02-GW3S-001	MCYAN	Antimony		2	ug/L	U	7/29/97
SJS02-GW3S-001	MCYAN	Arsenic	10.5	3	ug/L	B	7/29/97
SJS02-GW3S-001	MCYAN	Barium	127	1	ug/L	B	7/28/97
SJS02-GW3S-001	MCYAN	Beryllium		1	ug/L	U	7/28/97
SJS02-GW3S-001	MCYAN	Cadmium		0.5	ug/L	U	7/29/97
SJS02-GW3S-001	MCYAN	Calcium	86300	46	ug/L		7/28/97
SJS02-GW3S-001	MCYAN	Chromium	12	4	ug/L	K	7/28/97
SJS02-GW3S-001	MCYAN	Cobalt		8	ug/L	U	7/28/97
SJS02-GW3S-001	MCYAN	Copper		6	ug/L	U	7/28/97
SJS02-GW3S-001	MCYAN	Cyanide		5	ug/L	UL	8/5/97
SJS02-GW3S-001	MCYAN	Iron	26700	5	ug/L		7/28/97
SJS02-GW3S-001	MCYAN	Lead	4.8	1	ug/L	B	7/29/97
SJS02-GW3S-001	MCYAN	Magnesium	67600	45	ug/L		7/28/97
SJS02-GW3S-001	MCYAN	Manganese	1380	1	ug/L		7/28/97
SJS02-GW3S-001	MCYAN	Mercury	0.14	0.1	ug/L	B	7/29/97
SJS02-GW3S-001	MCYAN	Nickel		7	ug/L	U	7/28/97
SJS02-GW3S-001	MCYAN	Potassium	21900	97	ug/L		7/28/97
SJS02-GW3S-001	MCYAN	Selenium		3	ug/L	UL	7/29/97
SJS02-GW3S-001	MCYAN	Silver	4.6	3	ug/L	B	7/29/97
SJS02-GW3S-001	MCYAN	Sodium	295000	28	ug/L		7/28/97
SJS02-GW3S-001	MCYAN	Thallium		2	ug/L	U	7/29/97
SJS02-GW3S-001	MCYAN	Vanadium	19.4	4	ug/L	J	7/28/97
SJS02-GW3S-001	MCYAN	Zinc	23.4	3	ug/L	B	7/28/97
SJS02-GW3S-001	PSPCB	4,4'-DDD		0.1	ug/L	U	7/31/97
SJS02-GW3S-001	PSPCB	4,4'-DDE		0.1	ug/L	U	7/31/97
SJS02-GW3S-001	PSPCB	4,4'-DDT		0.1	ug/L	U	7/31/97
SJS02-GW3S-001	PSPCB	Aldrin		0.05	ug/L	U	7/31/97
SJS02-GW3S-001	PSPCB	alpha-BHC		0.05	ug/L	U	7/31/97
SJS02-GW3S-001	PSPCB	alpha-Chlordane		0.05	ug/L	U	7/31/97
SJS02-GW3S-001	PSPCB	Aroclor-1016		1	ug/L	U	7/31/97
SJS02-GW3S-001	PSPCB	Aroclor-1221		2	ug/L	U	7/31/97
SJS02-GW3S-001	PSPCB	Aroclor-1232		1	ug/L	U	7/31/97
SJS02-GW3S-001	PSPCB	Aroclor-1242		1	ug/L	U	7/31/97
SJS02-GW3S-001	PSPCB	Aroclor-1248		1	ug/L	U	7/31/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS02-GW3S-001	PSPCB	Aroclor-1254		1	ug/L	U	7/3
SJS02-GW3S-001	PSPCB	Aroclor-1260		1	ug/L	U	7/3
SJS02-GW3S-001	PSPCB	beta-BHC		0.05	ug/L	U	7/31/97
SJS02-GW3S-001	PSPCB	delta-BHC		0.05	ug/L	U	7/31/97
SJS02-GW3S-001	PSPCB	Dieldrin		0.1	ug/L	U	7/31/97
SJS02-GW3S-001	PSPCB	Endosulfan I		0.05	ug/L	U	7/31/97
SJS02-GW3S-001	PSPCB	Endosulfan II		0.1	ug/L	U	7/31/97
SJS02-GW3S-001	PSPCB	Endosulfan Sulfate		0.1	ug/L	U	7/31/97
SJS02-GW3S-001	PSPCB	Endrin		0.1	ug/L	U	7/31/97
SJS02-GW3S-001	PSPCB	Endrin Aldehyde		0.1	ug/L	U	7/31/97
SJS02-GW3S-001	PSPCB	Endrin Ketone		0.1	ug/L	U	7/31/97
SJS02-GW3S-001	PSPCB	gamma-BHC		0.05	ug/L	U	7/31/97
SJS02-GW3S-001	PSPCB	gamma-Chlordane		0.05	ug/L	U	7/31/97
SJS02-GW3S-001	PSPCB	Heptachlor		0.05	ug/L	U	7/31/97
SJS02-GW3S-001	PSPCB	Heptachlor Epoxide		0.05	ug/L	U	7/31/97
SJS02-GW3S-001	PSPCB	Methoxychlor		0.5	ug/L	U	7/31/97
SJS02-GW3S-001	PSPCB	Toxaphene		5	ug/L	U	7/31/97
SJS02-GW3S-001	SVTCL	1,2,4-Trichlorobenzene		10	ug/L	U	7/31/97
SJS02-GW3S-001	SVTCL	1,2-Dichlorobenzene		10	ug/L	U	7/31/97
SJS02-GW3S-001	SVTCL	1,3-Dichlorobenzene		10	ug/L	U	7/31/97
SJS02-GW3S-001	SVTCL	1,4-Dichlorobenzene		10	ug/L	U	7/31/97
SJS02-GW3S-001	SVTCL	2,2'-oxybis(1-Chloropropane		10	ug/L	U	7/31/97
SJS02-GW3S-001	SVTCL	2,4,5-Trichlorophenol		25	ug/L	U	7/31/97
SJS02-GW3S-001	SVTCL	2,4,6-Trichlorophenol		10	ug/L	U	7/31/97
SJS02-GW3S-001	SVTCL	2,4-Dichlorophenol		10	ug/L	U	7/31/97
SJS02-GW3S-001	SVTCL	2,4-Dimethylphenol		10	ug/L	U	7/31/97
SJS02-GW3S-001	SVTCL	2,4-Dinitrophenol		25	ug/L	U	7/31/97
SJS02-GW3S-001	SVTCL	2,4-Dinitrotoluene		10	ug/L	U	7/31/97
SJS02-GW3S-001	SVTCL	2,6-Dinitrotoluene		10	ug/L	U	7/31
SJS02-GW3S-001	SVTCL	2-Chloronaphthalene		10	ug/L	U	7/3
SJS02-GW3S-001	SVTCL	2-Chlorophenol		10	ug/L	U	7/3
SJS02-GW3S-001	SVTCL	2-Methylnaphthalene		10	ug/L	U	7/31/97
SJS02-GW3S-001	SVTCL	2-Methylphenol		10	ug/L	U	7/31/97
SJS02-GW3S-001	SVTCL	2-Nitroaniline		25	ug/L	U	7/31/97
SJS02-GW3S-001	SVTCL	2-Nitrophenol		10	ug/L	U	7/31/97
SJS02-GW3S-001	SVTCL	3,3'-Dichlorobenzidine		10	ug/L	U	7/31/97
SJS02-GW3S-001	SVTCL	3-Nitroaniline		25	ug/L	U	7/31/97
SJS02-GW3S-001	SVTCL	4,6-Dinitro-2-Methylphenol		25	ug/L	U	7/31/97
SJS02-GW3S-001	SVTCL	4-Bromophenyl phenylether		10	ug/L	U	7/31/97
SJS02-GW3S-001	SVTCL	4-Chloro-3-Methylphenol		10	ug/L	U	7/31/97
SJS02-GW3S-001	SVTCL	4-Chloroaniline		10	ug/L	U	7/31/97
SJS02-GW3S-001	SVTCL	4-Chlorophenyl-phenylether		10	ug/L	U	7/31/97
SJS02-GW3S-001	SVTCL	4-Methylphenol		10	ug/L	U	7/31/97
SJS02-GW3S-001	SVTCL	4-Nitroaniline		25	ug/L	U	7/31/97
SJS02-GW3S-001	SVTCL	4-Nitrophenol		25	ug/L	U	7/31/97
SJS02-GW3S-001	SVTCL	Acenaphthene		10	ug/L	U	7/31/97
SJS02-GW3S-001	SVTCL	Acenaphthylene		10	ug/L	U	7/31/97
SJS02-GW3S-001	SVTCL	Anthracene		10	ug/L	U	7/31/97
SJS02-GW3S-001	SVTCL	Benzo(a)Anthracene		10	ug/L	U	7/31/97
SJS02-GW3S-001	SVTCL	Benzo(a)Pyrene		10	ug/L	U	7/31/97
SJS02-GW3S-001	SVTCL	Benzo(b)Fluoranthene		10	ug/L	U	7/31/97
SJS02-GW3S-001	SVTCL	Benzo(g,h,i)Perylene		10	ug/L	U	7/31/97
SJS02-GW3S-001	SVTCL	Benzo(k)fluoranthene		10	ug/L	U	7/31/97
SJS02-GW3S-001	SVTCL	Bis(2-chloroethoxy)Methane		10	ug/L	U	7/31/97
SJS02-GW3S-001	SVTCL	Bis(2-chloroethyl)Ether		10	ug/L	U	7/31/97
SJS02-GW3S-001	SVTCL	Bis(2-Ethylhexyl)Phthalate		10	ug/L	U	7/31/97
SJS02-GW3S-001	SVTCL	Butylbenzylphthalate		10	ug/L	U	7/31/97
SJS02-GW3S-001	SVTCL	Carbazole		10	ug/L	U	7/31
SJS02-GW3S-001	SVTCL	Chrysene		10	ug/L	U	7/3
SJS02-GW3S-001	SVTCL	Di-n-Butylphthalate		10	ug/L	U	7/31

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS02-GW3S-001	SVTCL	Di-n-Octyl Phthalate		10	ug/L	U	7/31/97
SJS02-GW3S-001	SVTCL	Dibenz(a,h)Anthracene		10	ug/L	U	7/31/97
SJS02-GW3S-001	SVTCL	Dibenzofuran		10	ug/L	U	7/31/97
SJS02-GW3S-001	SVTCL	Diethylphthalate		10	ug/L	U	7/31/97
SJS02-GW3S-001	SVTCL	Dimethyl Phthalate		10	ug/L	U	7/31/97
SJS02-GW3S-001	SVTCL	Fluoranthene		10	ug/L	U	7/31/97
SJS02-GW3S-001	SVTCL	Fluorene		10	ug/L	U	7/31/97
SJS02-GW3S-001	SVTCL	Hexachlorobenzene		10	ug/L	U	7/31/97
SJS02-GW3S-001	SVTCL	Hexachlorobutadiene		10	ug/L	U	7/31/97
SJS02-GW3S-001	SVTCL	Hexachlorocyclopentadien		10	ug/L	U	7/31/97
SJS02-GW3S-001	SVTCL	Hexachloroethane		10	ug/L	U	7/31/97
SJS02-GW3S-001	SVTCL	Indeno(1,2,3-cd)Pyrene		10	ug/L	U	7/31/97
SJS02-GW3S-001	SVTCL	Isophorone		10	ug/L	U	7/31/97
SJS02-GW3S-001	SVTCL	N-Nitroso-Di-n-Propylamine		10	ug/L	U	7/31/97
SJS02-GW3S-001	SVTCL	N-Nitrosodiphenylamine		10	ug/L	U	7/31/97
SJS02-GW3S-001	SVTCL	Naphthalene		10	ug/L	U	7/31/97
SJS02-GW3S-001	SVTCL	Nitrobenzene		10	ug/L	U	7/31/97
SJS02-GW3S-001	SVTCL	Pentachlorophenol		25	ug/L	U	7/31/97
SJS02-GW3S-001	SVTCL	Phenanthrene		10	ug/L	U	7/31/97
SJS02-GW3S-001	SVTCL	Phenol		10	ug/L	U	7/31/97
SJS02-GW3S-001	SVTCL	Pyrene		10	ug/L	U	7/31/97
SJS02-GW3S-001	VCLOW	1,1,1-Trichloroethane		1	ug/L	U	7/25/97
SJS02-GW3S-001	VCLOW	1,1,2,2-Tetrachloroethane		1	ug/L	U	7/25/97
SJS02-GW3S-001	VCLOW	1,1,2-Trichloroethane		1	ug/L	U	7/25/97
SJS02-GW3S-001	VCLOW	1,1-Dichloroethane		1	ug/L	U	7/25/97
SJS02-GW3S-001	VCLOW	1,1-Dichloroethene		1	ug/L	U	7/25/97
SJS02-GW3S-001	VCLOW	1,2,4-Trichlorobenzene		1	ug/L	U	7/25/97
SJS02-GW3S-001	VCLOW	1,2-Dibromo-3-chloropropa		1	ug/L	U	7/25/97
SJS02-GW3S-001	VCLOW	1,2-Dibromoethane		1	ug/L	U	7/25/97
SJS02-GW3S-001	VCLOW	1,2-Dichlorobenzene		1	ug/L	U	7/25/97
SJS02-GW3S-001	VCLOW	1,2-Dichloroethane		1	ug/L	U	7/25/97
SJS02-GW3S-001	VCLOW	1,2-Dichloropropane		1	ug/L	U	7/25/97
SJS02-GW3S-001	VCLOW	1,3-Dichlorobenzene		1	ug/L	U	7/25/97
SJS02-GW3S-001	VCLOW	1,4-Dichlorobenzene		1	ug/L	U	7/25/97
SJS02-GW3S-001	VCLOW	2-Hexanone		5	ug/L	U	7/25/97
SJS02-GW3S-001	VCLOW	4-Methyl-2-Pentanone		5	ug/L	U	7/25/97
SJS02-GW3S-001	VCLOW	Acetone	5	5	ug/L	B	7/25/97
SJS02-GW3S-001	VCLOW	Benzene		1	ug/L	U	7/25/97
SJS02-GW3S-001	VCLOW	Bromochloromethane		1	ug/L	U	7/25/97
SJS02-GW3S-001	VCLOW	Bromodichloromethane		1	ug/L	U	7/25/97
SJS02-GW3S-001	VCLOW	Bromoform		1	ug/L	U	7/25/97
SJS02-GW3S-001	VCLOW	Bromomethane		1	ug/L	U	7/25/97
SJS02-GW3S-001	VCLOW	Carbon Disulfide		1	ug/L	U	7/25/97
SJS02-GW3S-001	VCLOW	Carbon Tetrachloride		1	ug/L	U	7/25/97
SJS02-GW3S-001	VCLOW	Chlorobenzene		1	ug/L	U	7/25/97
SJS02-GW3S-001	VCLOW	Chloroethane		1	ug/L	U	7/25/97
SJS02-GW3S-001	VCLOW	Chloroform		1	ug/L	U	7/25/97
SJS02-GW3S-001	VCLOW	Chloromethane		1	ug/L	U	7/25/97
SJS02-GW3S-001	VCLOW	cis-1,2-Dichloroethene		1	ug/L	U	7/25/97
SJS02-GW3S-001	VCLOW	cis-1,3-Dichloropropene		1	ug/L	U	7/25/97
SJS02-GW3S-001	VCLOW	Dibromochloromethane		1	ug/L	U	7/25/97
SJS02-GW3S-001	VCLOW	Ethylbenzene		1	ug/L	U	7/25/97
SJS02-GW3S-001	VCLOW	Methylene Chloride	2	1	ug/L	B	7/25/97
SJS02-GW3S-001	VCLOW	Styrene		1	ug/L	U	7/25/97
SJS02-GW3S-001	VCLOW	Tetrachloroethene		1	ug/L	U	7/25/97
SJS02-GW3S-001	VCLOW	Toluene		1	ug/L	U	7/25/97
SJS02-GW3S-001	VCLOW	Total Xylenes		1	ug/L	U	7/25/97
SJS02-GW3S-001	VCLOW	Trans-1,2-Dichloroethene		1	ug/L	U	7/25/97
SJS02-GW3S-001	VCLOW	Trans-1,3-Dichloropropene		1	ug/L	U	7/25/97
SJS02-GW3S-001	VCLOW	Trichloroethene		1	ug/L	U	7/25/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anc
SJS02-GW3S-001	VCLOW	Vinyl Chloride		1	ug/L	U	7/
SJS02-GW3S-001F	METAL	Aluminum		44	ug/L	U	7/
SJS02-GW3S-001F	METAL	Antimony		2	ug/L	U	7/29/97
SJS02-GW3S-001F	METAL	Arsenic	5.6	3	ug/L	J	7/29/97
SJS02-GW3S-001F	METAL	Barium	110	1	ug/L	B	7/28/97
SJS02-GW3S-001F	METAL	Beryllium		1	ug/L	U	7/28/97
SJS02-GW3S-001F	METAL	Cadmium		0.5	ug/L	U	7/29/97
SJS02-GW3S-001F	METAL	Calcium	90800	46	ug/L		7/28/97
SJS02-GW3S-001F	METAL	Chromium		7	ug/L	U	7/28/97
SJS02-GW3S-001F	METAL	Cobalt	9.1	3	ug/L	J	7/28/97
SJS02-GW3S-001F	METAL	Copper		6	ug/L	U	7/28/97
SJS02-GW3S-001F	METAL	Iron	32000	5	ug/L		7/28/97
SJS02-GW3S-001F	METAL	Lead		1	ug/L	U	7/29/97
SJS02-GW3S-001F	METAL	Magnesium	83100	45	ug/L		7/28/97
SJS02-GW3S-001F	METAL	Manganese	1720	1	ug/L		7/28/97
SJS02-GW3S-001F	METAL	Mercury	0.13	0.1	ug/L	B	7/29/97
SJS02-GW3S-001F	METAL	Nickel		7	ug/L	U	7/28/97
SJS02-GW3S-001F	METAL	Potassium	25400	97	ug/L		7/28/97
SJS02-GW3S-001F	METAL	Selenium		3	ug/L	U	7/29/97
SJS02-GW3S-001F	METAL	Silver	3.1	3	ug/L	B	7/29/97
SJS02-GW3S-001F	METAL	Sodium	375000	28	ug/L		7/28/97
SJS02-GW3S-001F	METAL	Thallium		2	ug/L	U	7/29/97
SJS02-GW3S-001F	METAL	Vanadium		9	ug/L	U	7/28/97
SJS02-GW3S-001F	METAL	Zinc	8.7	3	ug/L	B	7/28/97
SJS02-GW3S-001P	EXPLO	1,3,5-Trinitrobenzene		25	ug/L	U	8/9/97
SJS02-GW3S-001P	EXPLO	1,3-Dinitrobenzene		25	ug/L	U	8/9/97
SJS02-GW3S-001P	EXPLO	2,4,6-Trinitrotoluene		25	ug/L	U	8/9/97
SJS02-GW3S-001P	EXPLO	2,4-Dinitrotoluene		25	ug/L	U	8/9/97
SJS02-GW3S-001P	EXPLO	2,6-Dinitrotoluene		25	ug/L	U	8/
SJS02-GW3S-001P	EXPLO	2-am-4,6-Dinitrotoluene		25	ug/L	U	8/
SJS02-GW3S-001P	EXPLO	2-Nitrotoluene		25	ug/L	U	8/
SJS02-GW3S-001P	EXPLO	3-Nitrotoluene		25	ug/L	U	8/9/97
SJS02-GW3S-001P	EXPLO	4-am-2,6-Dinitrotoluene		25	ug/L	U	8/9/97
SJS02-GW3S-001P	EXPLO	4-Nitrotoluene		25	ug/L	U	8/9/97
SJS02-GW3S-001P	EXPLO	HMX		25	ug/L	U	8/9/97
SJS02-GW3S-001P	EXPLO	Nitrobenzene		25	ug/L	U	8/9/97
SJS02-GW3S-001P	EXPLO	RDX		25	ug/L	U	8/9/97
SJS02-GW3S-001P	EXPLO	TETRYL		25	ug/L	U	8/9/97
SJS02-SB01-003	CTOTP	Total Phosphorous (as P)	4.5	1.5	mg/kg		7/16/97
SJS02-SB01-003	MCYAN	Aluminum	7220	8.11	mg/kg		7/8/97
SJS02-SB01-003	MCYAN	Antimony		0.37	mg/kg	U	7/9/97
SJS02-SB01-003	MCYAN	Arsenic	2.4	0.55	mg/kg		7/9/97
SJS02-SB01-003	MCYAN	Barium	41.3	0.37	mg/kg		7/8/97
SJS02-SB01-003	MCYAN	Beryllium	0.24	0.18	mg/kg	J	7/8/97
SJS02-SB01-003	MCYAN	Cadmium		0.09	mg/kg	U	7/9/97
SJS02-SB01-003	MCYAN	Calcium	2540	16.04	mg/kg		7/8/97
SJS02-SB01-003	MCYAN	Chromium	16.7	1.29	mg/kg		7/8/97
SJS02-SB01-003	MCYAN	Cobalt	2.9	1.48	mg/kg	J	7/8/97
SJS02-SB01-003	MCYAN	Copper	33.7	1.11	mg/kg		7/8/97
SJS02-SB01-003	MCYAN	Cyanide		0.6	mg/kg	U	7/3/97
SJS02-SB01-003	MCYAN	Iron	15000	3.13	mg/kg		7/8/97
SJS02-SB01-003	MCYAN	Lead	74.3	0.18	mg/kg		7/9/97
SJS02-SB01-003	MCYAN	Magnesium	876	33.37	mg/kg	J	7/8/97
SJS02-SB01-003	MCYAN	Manganese	114	0.37	mg/kg		7/8/97
SJS02-SB01-003	MCYAN	Mercury	0.28	0.06	mg/kg		7/10/97
SJS02-SB01-003	MCYAN	Nickel	20.9	1.29	mg/kg		7/8/97
SJS02-SB01-003	MCYAN	Potassium	479	40.93	mg/kg	J	7/8/97
SJS02-SB01-003	MCYAN	Selenium		0.55	mg/kg	U	7/
SJS02-SB01-003	MCYAN	Silver	1.1	0.18	mg/kg	B	7/
SJS02-SB01-003	MCYAN	Sodium	77.2	10.69	mg/kg	B	7/8/

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS02-SB01-003	MCYAN	Thallium	0.5	0.37	mg/kg	J	7/9/97
SJS02-SB01-003	MCYAN	Vanadium	24	1.66	mg/kg		7/8/97
SJS02-SB01-003	MCYAN	Zinc	136	0.92	mg/kg		7/8/97
SJS02-SB01-003	PSPCB	4,4'-DDD	3	4.6	ug/kg	J	7/18/97
SJS02-SB01-003	PSPCB	4,4'-DDE	32	4.6	ug/kg		7/18/97
SJS02-SB01-003	PSPCB	4,4'-DDT	4.4	4.6	ug/kg	J	7/18/97
SJS02-SB01-003	PSPCB	Aldrin		2.3	ug/kg	U	7/18/97
SJS02-SB01-003	PSPCB	alpha-BHC		2.3	ug/kg	U	7/18/97
SJS02-SB01-003	PSPCB	alpha-Chlordane		2.3	ug/kg	U	7/18/97
SJS02-SB01-003	PSPCB	Aroclor-1016		46	ug/kg	U	7/18/97
SJS02-SB01-003	PSPCB	Aroclor-1221		92	ug/kg	U	7/18/97
SJS02-SB01-003	PSPCB	Aroclor-1232		46	ug/kg	U	7/18/97
SJS02-SB01-003	PSPCB	Aroclor-1242		46	ug/kg	U	7/18/97
SJS02-SB01-003	PSPCB	Aroclor-1248		46	ug/kg	U	7/18/97
SJS02-SB01-003	PSPCB	Aroclor-1254		46	ug/kg	U	7/18/97
SJS02-SB01-003	PSPCB	Aroclor-1260		46	ug/kg	U	7/18/97
SJS02-SB01-003	PSPCB	beta-BHC		2.3	ug/kg	U	7/18/97
SJS02-SB01-003	PSPCB	delta-BHC		2.3	ug/kg	U	7/18/97
SJS02-SB01-003	PSPCB	Dieldrin		4.6	ug/kg	U	7/18/97
SJS02-SB01-003	PSPCB	Endosulfan I		2.3	ug/kg	U	7/18/97
SJS02-SB01-003	PSPCB	Endosulfan II		4.6	ug/kg	U	7/18/97
SJS02-SB01-003	PSPCB	Endosulfan Sulfate		4.6	ug/kg	U	7/18/97
SJS02-SB01-003	PSPCB	Endrin		4.6	ug/kg	U	7/18/97
SJS02-SB01-003	PSPCB	Endrin Aldehyde		4.6	ug/kg	U	7/18/97
SJS02-SB01-003	PSPCB	Endrin Ketone		4.6	ug/kg	U	7/18/97
SJS02-SB01-003	PSPCB	gamma-BHC		2.3	ug/kg	U	7/18/97
SJS02-SB01-003	PSPCB	gamma-Chlordane		2.3	ug/kg	U	7/18/97
SJS02-SB01-003	PSPCB	Heptachlor		2.3	ug/kg	U	7/18/97
SJS02-SB01-003	PSPCB	Heptachlor Epoxide		2.3	ug/kg	U	7/18/97
SJS02-SB01-003	PSPCB	Methoxychlor		23	ug/kg	U	7/18/97
SJS02-SB01-003	PSPCB	Toxaphene		230	ug/kg	U	7/18/97
SJS02-SB01-003	SVTCL	1,2,4-Trichlorobenzene		460	ug/kg	U	7/10/97
SJS02-SB01-003	SVTCL	1,2-Dichlorobenzene		460	ug/kg	U	7/10/97
SJS02-SB01-003	SVTCL	1,3-Dichlorobenzene		460	ug/kg	U	7/10/97
SJS02-SB01-003	SVTCL	1,4-Dichlorobenzene		460	ug/kg	U	7/10/97
SJS02-SB01-003	SVTCL	2,2'-oxybis(1-Chloropropane		460	ug/kg	U	7/10/97
SJS02-SB01-003	SVTCL	2,4,5-Trichlorophenol		1100	ug/kg	U	7/10/97
SJS02-SB01-003	SVTCL	2,4,6-Trichlorophenol		460	ug/kg	U	7/10/97
SJS02-SB01-003	SVTCL	2,4-Dichlorophenol		460	ug/kg	U	7/10/97
SJS02-SB01-003	SVTCL	2,4-Dimethylphenol		460	ug/kg	U	7/10/97
SJS02-SB01-003	SVTCL	2,4-Dinitrophenol		1100	ug/kg	U	7/10/97
SJS02-SB01-003	SVTCL	2,4-Dinitrotoluene		460	ug/kg	U	7/10/97
SJS02-SB01-003	SVTCL	2,6-Dinitrotoluene		460	ug/kg	U	7/10/97
SJS02-SB01-003	SVTCL	2-Chloronaphthalene		460	ug/kg	U	7/10/97
SJS02-SB01-003	SVTCL	2-Chlorophenol		460	ug/kg	U	7/10/97
SJS02-SB01-003	SVTCL	2-Methylnaphthalene		460	ug/kg	U	7/10/97
SJS02-SB01-003	SVTCL	2-Methylphenol		460	ug/kg	U	7/10/97
SJS02-SB01-003	SVTCL	2-Nitroaniline		1100	ug/kg	U	7/10/97
SJS02-SB01-003	SVTCL	2-Nitrophenol		460	ug/kg	U	7/10/97
SJS02-SB01-003	SVTCL	3,3'-Dichlorobenzidine		460	ug/kg	U	7/10/97
SJS02-SB01-003	SVTCL	3-Nitroaniline		1100	ug/kg	U	7/10/97
SJS02-SB01-003	SVTCL	4,6-Dinitro-2-Methylphenol		1100	ug/kg	U	7/10/97
SJS02-SB01-003	SVTCL	4-Bromophenyl phenylether		460	ug/kg	U	7/10/97
SJS02-SB01-003	SVTCL	4-Chloro-3-Methylphenol		460	ug/kg	U	7/10/97
SJS02-SB01-003	SVTCL	4-Chloroaniline		460	ug/kg	U	7/10/97
SJS02-SB01-003	SVTCL	4-Chlorophenyl-phenylether		460	ug/kg	U	7/10/97
SJS02-SB01-003	SVTCL	4-Methylphenol		460	ug/kg	U	7/10/97
SJS02-SB01-003	SVTCL	4-Nitroaniline		1100	ug/kg	U	7/10/97
SJS02-SB01-003	SVTCL	4-Nitrophenol		1100	ug/kg	U	7/10/97
SJS02-SB01-003	SVTCL	Acenaphthene		460	ug/kg	U	7/10/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS02-SB01-003	SVTCL	Acenaphthylene		460	ug/kg	U	7/1
SJS02-SB01-003	SVTCL	Anthracene		460	ug/kg	U	7/1
SJS02-SB01-003	SVTCL	Benzo(a)Anthracene		460	ug/kg	U	7/10/97
SJS02-SB01-003	SVTCL	Benzo(a)Pyrene		460	ug/kg	U	7/10/97
SJS02-SB01-003	SVTCL	Benzo(b)Fluoranthene		460	ug/kg	U	7/10/97
SJS02-SB01-003	SVTCL	Benzo(g,h,i)Perylene		460	ug/kg	U	7/10/97
SJS02-SB01-003	SVTCL	Benzo(k)Fluoranthene		460	ug/kg	U	7/10/97
SJS02-SB01-003	SVTCL	Bis(2-chloroethoxy)Methane		460	ug/kg	U	7/10/97
SJS02-SB01-003	SVTCL	Bis(2-chloroethyl)Ether		460	ug/kg	U	7/10/97
SJS02-SB01-003	SVTCL	Bis(2-Ethylhexyl)Phthalate	94	460	ug/kg	B	7/10/97
SJS02-SB01-003	SVTCL	Butylbenzylphthalate		460	ug/kg	U	7/10/97
SJS02-SB01-003	SVTCL	Carbazole		460	ug/kg	U	7/10/97
SJS02-SB01-003	SVTCL	Chrysene		460	ug/kg	U	7/10/97
SJS02-SB01-003	SVTCL	Di-n-Butylphthalate		460	ug/kg	U	7/10/97
SJS02-SB01-003	SVTCL	Di-n-Octyl Phthalate		460	ug/kg	U	7/10/97
SJS02-SB01-003	SVTCL	Dibenz(a,h)Anthracene		460	ug/kg	U	7/10/97
SJS02-SB01-003	SVTCL	Dibenzofuran		460	ug/kg	U	7/10/97
SJS02-SB01-003	SVTCL	Diethylphthalate		460	ug/kg	U	7/10/97
SJS02-SB01-003	SVTCL	Dimethyl Phthalate		460	ug/kg	U	7/10/97
SJS02-SB01-003	SVTCL	Fluoranthene		460	ug/kg	U	7/10/97
SJS02-SB01-003	SVTCL	Fluorene		460	ug/kg	U	7/10/97
SJS02-SB01-003	SVTCL	Hexachlorobenzene		460	ug/kg	U	7/10/97
SJS02-SB01-003	SVTCL	Hexachlorobutadiene		460	ug/kg	U	7/10/97
SJS02-SB01-003	SVTCL	Hexachlorocyclopentadien		460	ug/kg	U	7/10/97
SJS02-SB01-003	SVTCL	Hexachloroethane		460	ug/kg	U	7/10/97
SJS02-SB01-003	SVTCL	Indeno(1,2,3-cd)Pyrene		460	ug/kg	U	7/10/97
SJS02-SB01-003	SVTCL	Isophorone		460	ug/kg	U	7/10/97
SJS02-SB01-003	SVTCL	N-Nitroso-Di-n-Propylamine		460	ug/kg	U	7/10/97
SJS02-SB01-003	SVTCL	N-Nitrosodiphenylamine		460	ug/kg	U	7/10/97
SJS02-SB01-003	SVTCL	Naphthalene		460	ug/kg	U	7/1
SJS02-SB01-003	SVTCL	Nitrobenzene		460	ug/kg	U	7/10/
SJS02-SB01-003	SVTCL	Pentachlorophenol		1100	ug/kg	U	7/10/97
SJS02-SB01-003	SVTCL	Phenanthrene		460	ug/kg	U	7/10/97
SJS02-SB01-003	SVTCL	Phenol		460	ug/kg	U	7/10/97
SJS02-SB01-003	SVTCL	Pyrene		460	ug/kg	U	7/10/97
SJS02-SB01-003	VCTCL	1,1,1-Trichloroethane		14	ug/kg	U	7/2/97
SJS02-SB01-003	VCTCL	1,1,2,2-Tetrachloroethane		14	ug/kg	U	7/2/97
SJS02-SB01-003	VCTCL	1,1,2-Trichloroethane		14	ug/kg	U	7/2/97
SJS02-SB01-003	VCTCL	1,1-Dichloroethane		14	ug/kg	U	7/2/97
SJS02-SB01-003	VCTCL	1,1-Dichloroethene		14	ug/kg	U	7/2/97
SJS02-SB01-003	VCTCL	1,2-Dichloroethane		14	ug/kg	U	7/2/97
SJS02-SB01-003	VCTCL	1,2-Dichloroethene (total)		14	ug/kg	U	7/2/97
SJS02-SB01-003	VCTCL	1,2-Dichloropropane		14	ug/kg	U	7/2/97
SJS02-SB01-003	VCTCL	2-Butanone		14	ug/kg	U	7/2/97
SJS02-SB01-003	VCTCL	2-Hexanone		14	ug/kg	U	7/2/97
SJS02-SB01-003	VCTCL	4-Methyl-2-Pentanone		14	ug/kg	U	7/2/97
SJS02-SB01-003	VCTCL	Acetone	28	14	ug/kg	B	7/2/97
SJS02-SB01-003	VCTCL	Benzene		14	ug/kg	U	7/2/97
SJS02-SB01-003	VCTCL	Bromodichloromethane		14	ug/kg	U	7/2/97
SJS02-SB01-003	VCTCL	Bromoform		14	ug/kg	U	7/2/97
SJS02-SB01-003	VCTCL	Bromomethane		14	ug/kg	U	7/2/97
SJS02-SB01-003	VCTCL	Carbon Disulfide		14	ug/kg	U	7/2/97
SJS02-SB01-003	VCTCL	Carbon Tetrachloride		14	ug/kg	U	7/2/97
SJS02-SB01-003	VCTCL	Chlorobenzene		14	ug/kg	U	7/2/97
SJS02-SB01-003	VCTCL	Chloroethane		14	ug/kg	U	7/2/97
SJS02-SB01-003	VCTCL	Chloroform		14	ug/kg	U	7/2/97
SJS02-SB01-003	VCTCL	Chloromethane		14	ug/kg	U	7/2/97
SJS02-SB01-003	VCTCL	cis-1,3-Dichloropropene		14	ug/kg	U	7/2
SJS02-SB01-003	VCTCL	Dibromochloromethane		14	ug/kg	U	7/
SJS02-SB01-003	VCTCL	Ethylbenzene		14	ug/kg	U	7/2

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS02-SB01-003	VCTCL	Methylene Chloride	43	14	ug/kg	B	7/2/97
SJS02-SB01-003	VCTCL	Styrene		14	ug/kg	U	7/2/97
SJS02-SB01-003	VCTCL	Tetrachloroethene		14	ug/kg	U	7/2/97
SJS02-SB01-003	VCTCL	Toluene		14	ug/kg	U	7/2/97
SJS02-SB01-003	VCTCL	Total Xylenes		14	ug/kg	U	7/2/97
SJS02-SB01-003	VCTCL	Trans-1,3-Dichloropropene		14	ug/kg	U	7/2/97
SJS02-SB01-003	VCTCL	Trichloroethene		14	ug/kg	U	7/2/97
SJS02-SB01-003	VCTCL	Vinyl Chloride		14	ug/kg	U	7/2/97
SJS02-SB02-002	CTOTP	Total Phosphorous (as P)	19.9	6.8	mg/kg		7/17/97
SJS02-SB02-002	MCYAN	Aluminum	2260	7.86	mg/kg		7/8/97
SJS02-SB02-002	MCYAN	Arsenic	1.2	0.54	mg/kg	K	7/8/97
SJS02-SB02-002	MCYAN	Barium	8.7	0.36	mg/kg	J	7/8/97
SJS02-SB02-002	MCYAN	Beryllium		0.18	mg/kg	U	7/8/97
SJS02-SB02-002	MCYAN	Cadmium		0.09	mg/kg	U	7/8/97
SJS02-SB02-002	MCYAN	Calcium	569	15.55	mg/kg	J	7/8/97
SJS02-SB02-002	MCYAN	Chromium	5.3	1.25	mg/kg		7/8/97
SJS02-SB02-002	MCYAN	Cobalt		1.43	mg/kg	U	7/8/97
SJS02-SB02-002	MCYAN	Copper	3.8	1.07	mg/kg	J	7/8/97
SJS02-SB02-002	MCYAN	Cyanide		0.55	mg/kg	U	7/3/97
SJS02-SB02-002	MCYAN	Iron	2360	3.04	mg/kg		7/8/97
SJS02-SB02-002	MCYAN	Lead	10.3	0.18	mg/kg		7/8/97
SJS02-SB02-002	MCYAN	Magnesium	243	32.34	mg/kg	B	7/8/97
SJS02-SB02-002	MCYAN	Manganese	11.9	0.36	mg/kg	K	7/8/97
SJS02-SB02-002	MCYAN	Mercury	0.06	0.05	mg/kg	L	7/10/97
SJS02-SB02-002	MCYAN	Nickel		1.25	mg/kg	U	7/8/97
SJS02-SB02-002	MCYAN	Potassium	196	39.67	mg/kg	J	7/8/97
SJS02-SB02-002	MCYAN	Selenium		0.54	mg/kg	U	7/8/97
SJS02-SB02-002	MCYAN	Silver		0.18	mg/kg	U	7/8/97
SJS02-SB02-002	MCYAN	Sodium	27.9	10.36	mg/kg	B	7/8/97
SJS02-SB02-002	MCYAN	Thallium		0.36	mg/kg	U	7/8/97
SJS02-SB02-002	MCYAN	Vanadium	6.5	1.61	mg/kg	J	7/8/97
SJS02-SB02-002	MCYAN	Zinc	14.7	0.89	mg/kg	B	7/8/97
SJS02-SB02-002	PSPCB	4,4'-DDD	22	3.6	ug/kg		7/22/97
SJS02-SB02-002	PSPCB	4,4'-DDE	40	3.6	ug/kg		7/22/97
SJS02-SB02-002	PSPCB	4,4'-DDT	6.3	3.6	ug/kg		7/22/97
SJS02-SB02-002	PSPCB	Aldrin		1.9	ug/kg	U	7/22/97
SJS02-SB02-002	PSPCB	alpha-BHC		1.9	ug/kg	U	7/22/97
SJS02-SB02-002	PSPCB	alpha-Chlordane		1.9	ug/kg	U	7/22/97
SJS02-SB02-002	PSPCB	Aroclor-1016		36	ug/kg	U	7/22/97
SJS02-SB02-002	PSPCB	Aroclor-1221		74	ug/kg	U	7/22/97
SJS02-SB02-002	PSPCB	Aroclor-1232		36	ug/kg	U	7/22/97
SJS02-SB02-002	PSPCB	Aroclor-1242		36	ug/kg	U	7/22/97
SJS02-SB02-002	PSPCB	Aroclor-1248		36	ug/kg	U	7/22/97
SJS02-SB02-002	PSPCB	Aroclor-1254		36	ug/kg	U	7/22/97
SJS02-SB02-002	PSPCB	Aroclor-1260		36	ug/kg	U	7/22/97
SJS02-SB02-002	PSPCB	beta-BHC		1.9	ug/kg	U	7/22/97
SJS02-SB02-002	PSPCB	delta-BHC		1.9	ug/kg	U	7/22/97
SJS02-SB02-002	PSPCB	Dieldrin		3.6	ug/kg	U	7/22/97
SJS02-SB02-002	PSPCB	Endosulfan I		1.9	ug/kg	U	7/22/97
SJS02-SB02-002	PSPCB	Endosulfan II		3.6	ug/kg	U	7/22/97
SJS02-SB02-002	PSPCB	Endosulfan Sulfate		3.6	ug/kg	U	7/22/97
SJS02-SB02-002	PSPCB	Endrin		3.6	ug/kg	U	7/22/97
SJS02-SB02-002	PSPCB	Endrin Aldehyde		3.6	ug/kg	U	7/22/97
SJS02-SB02-002	PSPCB	Endrin Ketone		3.6	ug/kg	U	7/22/97
SJS02-SB02-002	PSPCB	gamma-BHC		1.9	ug/kg	U	7/22/97
SJS02-SB02-002	PSPCB	gamma-Chlordane		1.9	ug/kg	U	7/22/97
SJS02-SB02-002	PSPCB	Heptachlor		1.9	ug/kg	U	7/22/97
SJS02-SB02-002	PSPCB	Heptachlor Epoxide		1.9	ug/kg	U	7/22/97
SJS02-SB02-002	PSPCB	Methoxychlor		19	ug/kg	U	7/22/97
SJS02-SB02-002	PSPCB	Toxaphene		190	ug/kg	U	7/22/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS02-SB02-002	SVTCL	1,2,4-Trichlorobenzene		360	ug/kg	U	7/2
SJS02-SB02-002	SVTCL	1,2-Dichlorobenzene		360	ug/kg	U	7/2
SJS02-SB02-002	SVTCL	1,3-Dichlorobenzene		360	ug/kg	U	7/20/97
SJS02-SB02-002	SVTCL	1,4-Dichlorobenzene		360	ug/kg	U	7/20/97
SJS02-SB02-002	SVTCL	2,2'-oxybis(1-Chloropropane		360	ug/kg	U	7/20/97
SJS02-SB02-002	SVTCL	2,4,5-Trichlorophenol		900	ug/kg	U	7/20/97
SJS02-SB02-002	SVTCL	2,4,6-Trichlorophenol		360	ug/kg	U	7/20/97
SJS02-SB02-002	SVTCL	2,4-Dichlorophenol		360	ug/kg	U	7/20/97
SJS02-SB02-002	SVTCL	2,4-Dimethylphenol		360	ug/kg	U	7/20/97
SJS02-SB02-002	SVTCL	2,4-Dinitrophenol		900	ug/kg	U	7/20/97
SJS02-SB02-002	SVTCL	2,4-Dinitrotoluene		360	ug/kg	U	7/20/97
SJS02-SB02-002	SVTCL	2,6-Dinitrotoluene		360	ug/kg	U	7/20/97
SJS02-SB02-002	SVTCL	2-Chloronaphthalene		360	ug/kg	U	7/20/97
SJS02-SB02-002	SVTCL	2-Chlorophenol		360	ug/kg	U	7/20/97
SJS02-SB02-002	SVTCL	2-Methylnaphthalene		360	ug/kg	U	7/20/97
SJS02-SB02-002	SVTCL	2-Methylphenol		360	ug/kg	U	7/20/97
SJS02-SB02-002	SVTCL	2-Nitroaniline		900	ug/kg	U	7/20/97
SJS02-SB02-002	SVTCL	2-Nitrophenol		360	ug/kg	U	7/20/97
SJS02-SB02-002	SVTCL	3,3'-Dichlorobenzidine		360	ug/kg	U	7/20/97
SJS02-SB02-002	SVTCL	3-Nitroaniline		900	ug/kg	U	7/20/97
SJS02-SB02-002	SVTCL	4,6-Dinitro-2-Methylphenol		900	ug/kg	U	7/20/97
SJS02-SB02-002	SVTCL	4-Bromophenyl phenylether		360	ug/kg	U	7/20/97
SJS02-SB02-002	SVTCL	4-Chloro-3-Methylphenol		360	ug/kg	U	7/20/97
SJS02-SB02-002	SVTCL	4-Chloroaniline		360	ug/kg	U	7/20/97
SJS02-SB02-002	SVTCL	4-Chlorophenyl-phenylether		360	ug/kg	U	7/20/97
SJS02-SB02-002	SVTCL	4-Methylphenol		360	ug/kg	U	7/20/97
SJS02-SB02-002	SVTCL	4-Nitroaniline		900	ug/kg	U	7/20/97
SJS02-SB02-002	SVTCL	4-Nitrophenol		900	ug/kg	U	7/20/97
SJS02-SB02-002	SVTCL	Acenaphthene		360	ug/kg	U	7/20
SJS02-SB02-002	SVTCL	Acenaphthylene		360	ug/kg	U	7/2
SJS02-SB02-002	SVTCL	Anthracene		360	ug/kg	U	7/20
SJS02-SB02-002	SVTCL	Benzo(a)Anthracene		360	ug/kg	U	7/20/97
SJS02-SB02-002	SVTCL	Benzo(a)Pyrene		360	ug/kg	U	7/20/97
SJS02-SB02-002	SVTCL	Benzo(b)Fluoranthene		360	ug/kg	U	7/20/97
SJS02-SB02-002	SVTCL	Benzo(g,h,i)Perylene		360	ug/kg	U	7/20/97
SJS02-SB02-002	SVTCL	Benzo(k)Fluoranthene		360	ug/kg	U	7/20/97
SJS02-SB02-002	SVTCL	Bis(2-chloroethoxy)Methane		360	ug/kg	U	7/20/97
SJS02-SB02-002	SVTCL	Bis(2-chloroethyl)Ether		360	ug/kg	U	7/20/97
SJS02-SB02-002	SVTCL	Bis(2-Ethylhexyl)Phthalate	39	360	ug/kg		7/20/97
SJS02-SB02-002	SVTCL	Butylbenzylphthalate		360	ug/kg	U	7/20/97
SJS02-SB02-002	SVTCL	Carbazole		360	ug/kg	U	7/20/97
SJS02-SB02-002	SVTCL	Chrysene		360	ug/kg	U	7/20/97
SJS02-SB02-002	SVTCL	Di-n-Butylphthalate		360	ug/kg	U	7/20/97
SJS02-SB02-002	SVTCL	Di-n-Octyl Phthalate		360	ug/kg	U	7/20/97
SJS02-SB02-002	SVTCL	Dibenz(a,h)Anthracene		360	ug/kg	U	7/20/97
SJS02-SB02-002	SVTCL	Dibenzofuran		360	ug/kg	U	7/20/97
SJS02-SB02-002	SVTCL	Diethylphthalate		360	ug/kg	U	7/20/97
SJS02-SB02-002	SVTCL	Dimethyl Phthalate		360	ug/kg	U	7/20/97
SJS02-SB02-002	SVTCL	Fluoranthene		360	ug/kg	U	7/20/97
SJS02-SB02-002	SVTCL	Fluorene		360	ug/kg	U	7/20/97
SJS02-SB02-002	SVTCL	Hexachlorobenzene		360	ug/kg	U	7/20/97
SJS02-SB02-002	SVTCL	Hexachlorobutadiene		360	ug/kg	U	7/20/97
SJS02-SB02-002	SVTCL	Hexachlorocyclopentadien		360	ug/kg	U	7/20/97
SJS02-SB02-002	SVTCL	Hexachloroethane		360	ug/kg	U	7/20/97
SJS02-SB02-002	SVTCL	Indeno(1,2,3-cd)Pyrene		360	ug/kg	U	7/20/97
SJS02-SB02-002	SVTCL	Isophorone		360	ug/kg	U	7/20/97
SJS02-SB02-002	SVTCL	N-Nitroso-Di-n-Propylamine		360	ug/kg	U	7/20/97
SJS02-SB02-002	SVTCL	N-Nitrosodiphenylamine		360	ug/kg	U	7/20
SJS02-SB02-002	SVTCL	Naphthalene		360	ug/kg	U	7/2
SJS02-SB02-002	SVTCL	Nitrobenzene		360	ug/kg	U	7/20

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS02-SB02-002	SVTCL	Pentachlorophenol		900	ug/kg	U	7/20/97
SJS02-SB02-002	SVTCL	Phenanthrene		360	ug/kg	U	7/20/97
SJS02-SB02-002	SVTCL	Phenol		360	ug/kg	U	7/20/97
SJS02-SB02-002	SVTCL	Pyrene		360	ug/kg	U	7/20/97
SJS02-SB02-002	VCTCL	1,1,1-Trichloroethane		11	ug/kg	U	7/9/97
SJS02-SB02-002	VCTCL	1,1,2,2-Tetrachloroethane		11	ug/kg	U	7/9/97
SJS02-SB02-002	VCTCL	1,1,2-Trichloroethane		11	ug/kg	U	7/9/97
SJS02-SB02-002	VCTCL	1,1-Dichloroethane		11	ug/kg	U	7/9/97
SJS02-SB02-002	VCTCL	1,1-Dichloroethene		11	ug/kg	U	7/9/97
SJS02-SB02-002	VCTCL	1,2-Dichloroethane		11	ug/kg	U	7/9/97
SJS02-SB02-002	VCTCL	1,2-Dichloroethene (total)		11	ug/kg	U	7/9/97
SJS02-SB02-002	VCTCL	1,2-Dichloropropane		11	ug/kg	U	7/9/97
SJS02-SB02-002	VCTCL	2-Butanone		11	ug/kg	U	7/9/97
SJS02-SB02-002	VCTCL	2-Hexanone		11	ug/kg	U	7/9/97
SJS02-SB02-002	VCTCL	4-Methyl-2-Pentanone		11	ug/kg	U	7/9/97
SJS02-SB02-002	VCTCL	Acetone		11	ug/kg	U	7/9/97
SJS02-SB02-002	VCTCL	Benzene		11	ug/kg	U	7/9/97
SJS02-SB02-002	VCTCL	Bromodichloromethane		11	ug/kg	U	7/9/97
SJS02-SB02-002	VCTCL	Bromoform		11	ug/kg	U	7/9/97
SJS02-SB02-002	VCTCL	Bromomethane		11	ug/kg	U	7/9/97
SJS02-SB02-002	VCTCL	Carbon Disulfide		11	ug/kg	U	7/9/97
SJS02-SB02-002	VCTCL	Carbon Tetrachloride		11	ug/kg	U	7/9/97
SJS02-SB02-002	VCTCL	Chlorobenzene		11	ug/kg	U	7/9/97
SJS02-SB02-002	VCTCL	Chloroethane		11	ug/kg	U	7/9/97
SJS02-SB02-002	VCTCL	Chloroform		11	ug/kg	U	7/9/97
SJS02-SB02-002	VCTCL	Chloromethane		11	ug/kg	U	7/9/97
SJS02-SB02-002	VCTCL	cis-1,3-Dichloropropene		11	ug/kg	U	7/9/97
SJS02-SB02-002	VCTCL	Dibromochloromethane		11	ug/kg	U	7/9/97
SJS02-SB02-002	VCTCL	Ethylbenzene		11	ug/kg	U	7/9/97
SJS02-SB02-002	VCTCL	Methylene Chloride	10	11	ug/kg	B	7/9/97
SJS02-SB02-002	VCTCL	Styrene		11	ug/kg	U	7/9/97
SJS02-SB02-002	VCTCL	Tetrachloroethene		11	ug/kg	U	7/9/97
SJS02-SB02-002	VCTCL	Toluene		11	ug/kg	U	7/9/97
SJS02-SB02-002	VCTCL	Total Xylenes		11	ug/kg	U	7/9/97
SJS02-SB02-002	VCTCL	Trans-1,3-Dichloropropene		11	ug/kg	U	7/9/97
SJS02-SB02-002	VCTCL	Trichloroethene		11	ug/kg	U	7/9/97
SJS02-SB02-002	VCTCL	Vinyl Chloride		11	ug/kg	U	7/9/97
SJS02-SB03-000	CTOTP	Total Phosphorous (as P)	11.6	3.3	mg/kg		7/17/97
SJS02-SB03-000	MCYAN	Aluminum	5510	8.33	mg/kg		7/8/97
SJS02-SB03-000	MCYAN	Arsenic	4.5	0.57	mg/kg	K	7/8/97
SJS02-SB03-000	MCYAN	Barium	291	0.38	mg/kg		7/8/97
SJS02-SB03-000	MCYAN	Beryllium	0.35	0.19	mg/kg	J	7/8/97
SJS02-SB03-000	MCYAN	Cadmium	4.4	0.09	mg/kg		7/8/97
SJS02-SB03-000	MCYAN	Calcium	1720	16.47	mg/kg	J	7/8/97
SJS02-SB03-000	MCYAN	Chromium	30.8	1.33	mg/kg		7/8/97
SJS02-SB03-000	MCYAN	Cobalt	3.6	1.51	mg/kg	J	7/8/97
SJS02-SB03-000	MCYAN	Copper	433	1.14	mg/kg		7/8/97
SJS02-SB03-000	MCYAN	Cyanide		0.52	mg/kg	U	7/3/97
SJS02-SB03-000	MCYAN	Iron	16700	3.22	mg/kg		7/8/97
SJS02-SB03-000	MCYAN	Lead	885	0.19	mg/kg		7/8/97
SJS02-SB03-000	MCYAN	Magnesium	711	34.26	mg/kg	J	7/8/97
SJS02-SB03-000	MCYAN	Manganese	134	0.38	mg/kg	K	7/8/97
SJS02-SB03-000	MCYAN	Mercury	0.55	0.05	mg/kg	L	7/10/97
SJS02-SB03-000	MCYAN	Nickel	31.8	1.33	mg/kg		7/8/97
SJS02-SB03-000	MCYAN	Potassium	289	42.02	mg/kg	J	7/8/97
SJS02-SB03-000	MCYAN	Selenium		0.57	mg/kg	U	7/8/97
SJS02-SB03-000	MCYAN	Silver	0.9	0.19	mg/kg	B	7/8/97
SJS02-SB03-000	MCYAN	Sodium	48.5	10.98	mg/kg	B	7/8/97
SJS02-SB03-000	MCYAN	Thallium	1.1	0.38	mg/kg	J	7/8/97
SJS02-SB03-000	MCYAN	Vanadium	27.5	1.7	mg/kg		7/8/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Ana
SJS02-SB03-000	MCYAN	Zinc	2420	0.95	mg/kg		7
SJS02-SB03-000	PSPCB	4,4'-DDD	5.6	3.5	ug/kg		7/2
SJS02-SB03-000	PSPCB	4,4'-DDE	110	35	ug/kg		7/23/97
SJS02-SB03-000	PSPCB	4,4'-DDT	20	3.5	ug/kg	J	7/23/97
SJS02-SB03-000	PSPCB	Aldrin		1.8	ug/kg	U	7/23/97
SJS02-SB03-000	PSPCB	alpha-BHC		1.8	ug/kg	U	7/23/97
SJS02-SB03-000	PSPCB	alpha-Chlordane		1.8	ug/kg	U	7/23/97
SJS02-SB03-000	PSPCB	Aroclor-1016		35	ug/kg	U	7/23/97
SJS02-SB03-000	PSPCB	Aroclor-1221		71	ug/kg	U	7/23/97
SJS02-SB03-000	PSPCB	Aroclor-1232		35	ug/kg	U	7/23/97
SJS02-SB03-000	PSPCB	Aroclor-1242		35	ug/kg	U	7/23/97
SJS02-SB03-000	PSPCB	Aroclor-1248		35	ug/kg	U	7/23/97
SJS02-SB03-000	PSPCB	Aroclor-1254		35	ug/kg	U	7/23/97
SJS02-SB03-000	PSPCB	Aroclor-1260	21	35	ug/kg	J	7/23/97
SJS02-SB03-000	PSPCB	beta-BHC		1.8	ug/kg	U	7/23/97
SJS02-SB03-000	PSPCB	delta-BHC		1.8	ug/kg	U	7/23/97
SJS02-SB03-000	PSPCB	Dieldrin		3.5	ug/kg	U	7/23/97
SJS02-SB03-000	PSPCB	Endosulfan I		1.8	ug/kg	U	7/23/97
SJS02-SB03-000	PSPCB	Endosulfan II		3.5	ug/kg	U	7/23/97
SJS02-SB03-000	PSPCB	Endosulfan Sulfate		3.5	ug/kg	U	7/23/97
SJS02-SB03-000	PSPCB	Endrin		3.5	ug/kg	U	7/23/97
SJS02-SB03-000	PSPCB	Endrin Aldehyde		3.5	ug/kg	U	7/23/97
SJS02-SB03-000	PSPCB	Endrin Ketone		3.5	ug/kg	U	7/23/97
SJS02-SB03-000	PSPCB	gamma-BHC		1.8	ug/kg	U	7/23/97
SJS02-SB03-000	PSPCB	gamma-Chlordane		1.8	ug/kg	U	7/23/97
SJS02-SB03-000	PSPCB	Heptachlor		1.8	ug/kg	U	7/23/97
SJS02-SB03-000	PSPCB	Heptachlor Epoxide		1.8	ug/kg	U	7/23/97
SJS02-SB03-000	PSPCB	Methoxychlor		18	ug/kg	U	7/23/97
SJS02-SB03-000	PSPCB	Toxaphene		180	ug/kg	U	7/2
SJS02-SB03-000	SVTCL	1,2,4-Trichlorobenzene		350	ug/kg	U	7/2
SJS02-SB03-000	SVTCL	1,2-Dichlorobenzene		350	ug/kg	U	7/20
SJS02-SB03-000	SVTCL	1,3-Dichlorobenzene		350	ug/kg	U	7/20/97
SJS02-SB03-000	SVTCL	1,4-Dichlorobenzene		350	ug/kg	U	7/20/97
SJS02-SB03-000	SVTCL	2,2'-oxybis(1-Chloropropane		350	ug/kg	U	7/20/97
SJS02-SB03-000	SVTCL	2,4,5-Trichlorophenol		870	ug/kg	U	7/20/97
SJS02-SB03-000	SVTCL	2,4,6-Trichlorophenol		350	ug/kg	U	7/20/97
SJS02-SB03-000	SVTCL	2,4-Dichlorophenol		350	ug/kg	U	7/20/97
SJS02-SB03-000	SVTCL	2,4-Dimethylphenol		350	ug/kg	U	7/20/97
SJS02-SB03-000	SVTCL	2,4-Dinitrophenol		870	ug/kg	U	7/20/97
SJS02-SB03-000	SVTCL	2,4-Dinitrotoluene		350	ug/kg	U	7/20/97
SJS02-SB03-000	SVTCL	2,6-Dinitrotoluene		350	ug/kg	U	7/20/97
SJS02-SB03-000	SVTCL	2-Chloronaphthalene		350	ug/kg	U	7/20/97
SJS02-SB03-000	SVTCL	2-Chlorophenol		350	ug/kg	U	7/20/97
SJS02-SB03-000	SVTCL	2-Methylnaphthalene		350	ug/kg	U	7/20/97
SJS02-SB03-000	SVTCL	2-Methylphenol		350	ug/kg	U	7/20/97
SJS02-SB03-000	SVTCL	2-Nitroaniline		870	ug/kg	U	7/20/97
SJS02-SB03-000	SVTCL	2-Nitrophenol		350	ug/kg	U	7/20/97
SJS02-SB03-000	SVTCL	3,3'-Dichlorobenzidine		350	ug/kg	U	7/20/97
SJS02-SB03-000	SVTCL	3-Nitroaniline		870	ug/kg	U	7/20/97
SJS02-SB03-000	SVTCL	4,6-Dinitro-2-Methylphenol		870	ug/kg	U	7/20/97
SJS02-SB03-000	SVTCL	4-Bromophenyl phenylether		350	ug/kg	U	7/20/97
SJS02-SB03-000	SVTCL	4-Chloro-3-Methylphenol		350	ug/kg	U	7/20/97
SJS02-SB03-000	SVTCL	4-Chloroaniline		350	ug/kg	U	7/20/97
SJS02-SB03-000	SVTCL	4-Chlorophenyl-phenylether		350	ug/kg	U	7/20/97
SJS02-SB03-000	SVTCL	4-Methylphenol		350	ug/kg	U	7/20/97
SJS02-SB03-000	SVTCL	4-Nitroaniline		870	ug/kg	U	7/20/97
SJS02-SB03-000	SVTCL	4-Nitrophenol		870	ug/kg	U	7/20/97
SJS02-SB03-000	SVTCL	Acenaphthene		350	ug/kg	U	7/2
SJS02-SB03-000	SVTCL	Acenaphthylene		350	ug/kg	U	7/2
SJS02-SB03-000	SVTCL	Anthracene	45	350	ug/kg	J	7/20

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS02-SB03-000	SVTCL	Benzo(a)Anthracene	290	350	ug/kg	J	7/20/97
SJS02-SB03-000	SVTCL	Benzo(a)Pyrene	290	350	ug/kg	J	7/20/97
SJS02-SB03-000	SVTCL	Benzo(b)Fluoranthene	530	350	ug/kg		7/20/97
SJS02-SB03-000	SVTCL	Benzo(g,h,i)Perylene	170	350	ug/kg	J	7/20/97
SJS02-SB03-000	SVTCL	Benzo(k)Fluoranthene	210	350	ug/kg	J	7/20/97
SJS02-SB03-000	SVTCL	Bis(2-chloroethoxy)Methane		350	ug/kg	U	7/20/97
SJS02-SB03-000	SVTCL	Bis(2-chloroethyl)Ether		350	ug/kg	U	7/20/97
SJS02-SB03-000	SVTCL	Bis(2-Ethylhexyl)Phthalate	49	350	ug/kg	J	7/20/97
SJS02-SB03-000	SVTCL	Butylbenzylphthalate		350	ug/kg	U	7/20/97
SJS02-SB03-000	SVTCL	Carbazole		350	ug/kg	U	7/20/97
SJS02-SB03-000	SVTCL	Chrysene	360	350	ug/kg		7/20/97
SJS02-SB03-000	SVTCL	Di-n-Butylphthalate		350	ug/kg	U	7/20/97
SJS02-SB03-000	SVTCL	Di-n-Octyl Phthalate		350	ug/kg	U	7/20/97
SJS02-SB03-000	SVTCL	Dibenz(a,h)Anthracene	55	350	ug/kg	J	7/20/97
SJS02-SB03-000	SVTCL	Dibenzofuran		350	ug/kg	U	7/20/97
SJS02-SB03-000	SVTCL	Diethylphthalate		350	ug/kg	U	7/20/97
SJS02-SB03-000	SVTCL	Dimethyl Phthalate		350	ug/kg	U	7/20/97
SJS02-SB03-000	SVTCL	Fluoranthene	640	350	ug/kg		7/20/97
SJS02-SB03-000	SVTCL	Fluorene		350	ug/kg	U	7/20/97
SJS02-SB03-000	SVTCL	Hexachlorobenzene		350	ug/kg	U	7/20/97
SJS02-SB03-000	SVTCL	Hexachlorobutadiene		350	ug/kg	U	7/20/97
SJS02-SB03-000	SVTCL	Hexachlorocyclopentadien		350	ug/kg	U	7/20/97
SJS02-SB03-000	SVTCL	Hexachloroethane		350	ug/kg	U	7/20/97
SJS02-SB03-000	SVTCL	Indeno(1,2,3-cd)Pyrene	200	350	ug/kg	J	7/20/97
SJS02-SB03-000	SVTCL	Isophorone		350	ug/kg	U	7/20/97
SJS02-SB03-000	SVTCL	N-Nitroso-Di-n-Propylamine		350	ug/kg	U	7/20/97
SJS02-SB03-000	SVTCL	N-Nitrosodiphenylamine		350	ug/kg	U	7/20/97
SJS02-SB03-000	SVTCL	Naphthalene		350	ug/kg	U	7/20/97
SJS02-SB03-000	SVTCL	Nitrobenzene		350	ug/kg	U	7/20/97
SJS02-SB03-000	SVTCL	Pentachlorophenol		870	ug/kg	U	7/20/97
SJS02-SB03-000	SVTCL	Phenanthrene	410	350	ug/kg		7/20/97
SJS02-SB03-000	SVTCL	Phenol		350	ug/kg	U	7/20/97
SJS02-SB03-000	SVTCL	Pyrene	590	350	ug/kg		7/20/97
SJS02-SB03-000	VCTCL	1,1,1-Trichloroethane		11	ug/kg	U	7/8/97
SJS02-SB03-000	VCTCL	1,1,2,2-Tetrachloroethane		11	ug/kg	U	7/8/97
SJS02-SB03-000	VCTCL	1,1,2-Trichloroethane		11	ug/kg	U	7/8/97
SJS02-SB03-000	VCTCL	1,1-Dichloroethane		11	ug/kg	U	7/8/97
SJS02-SB03-000	VCTCL	1,1-Dichloroethene		11	ug/kg	U	7/8/97
SJS02-SB03-000	VCTCL	1,2-Dichloroethane		11	ug/kg	U	7/8/97
SJS02-SB03-000	VCTCL	1,2-Dichloroethene (total)		11	ug/kg	U	7/8/97
SJS02-SB03-000	VCTCL	1,2-Dichloropropane		11	ug/kg	U	7/8/97
SJS02-SB03-000	VCTCL	2-Butanone		11	ug/kg	U	7/8/97
SJS02-SB03-000	VCTCL	2-Hexanone		11	ug/kg	U	7/8/97
SJS02-SB03-000	VCTCL	4-Methyl-2-Pentanone		11	ug/kg	U	7/8/97
SJS02-SB03-000	VCTCL	Acetone	6	11	ug/kg	J	7/8/97
SJS02-SB03-000	VCTCL	Benzene		11	ug/kg	U	7/8/97
SJS02-SB03-000	VCTCL	Bromodichloromethane		11	ug/kg	U	7/8/97
SJS02-SB03-000	VCTCL	Bromoform		11	ug/kg	U	7/8/97
SJS02-SB03-000	VCTCL	Bromomethane		11	ug/kg	U	7/8/97
SJS02-SB03-000	VCTCL	Carbon Disulfide		11	ug/kg	U	7/8/97
SJS02-SB03-000	VCTCL	Carbon Tetrachloride		11	ug/kg	U	7/8/97
SJS02-SB03-000	VCTCL	Chlorobenzene		11	ug/kg	U	7/8/97
SJS02-SB03-000	VCTCL	Chloroethane		11	ug/kg	U	7/8/97
SJS02-SB03-000	VCTCL	Chloroform		11	ug/kg	U	7/8/97
SJS02-SB03-000	VCTCL	Chloromethane		11	ug/kg	U	7/8/97
SJS02-SB03-000	VCTCL	cis-1,3-Dichloropropene		11	ug/kg	U	7/8/97
SJS02-SB03-000	VCTCL	Dibromochloromethane		11	ug/kg	U	7/8/97
SJS02-SB03-000	VCTCL	Ethylbenzene		11	ug/kg	U	7/8/97
SJS02-SB03-000	VCTCL	Methylene Chloride	7	11	ug/kg	B	7/8/97
SJS02-SB03-000	VCTCL	Styrene		11	ug/kg	U	7/8/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date An
SJS02-SB03-000	VCTCL	Tetrachloroethene		11	ug/kg	U	[illegible]
SJS02-SB03-000	VCTCL	Toluene		11	ug/kg	U	7/[illegible]
SJS02-SB03-000	VCTCL	Total Xylenes		11	ug/kg	U	7/8/97
SJS02-SB03-000	VCTCL	Trans-1,3-Dichloropropene		11	ug/kg	U	7/8/97
SJS02-SB03-000	VCTCL	Trichloroethene		11	ug/kg	U	7/8/97
SJS02-SB03-000	VCTCL	Vinyl Chloride		11	ug/kg	U	7/8/97
SJS02-SB04-004	CTOTP	Total Phosphorous (as P)	7.6	1.7	mg/kg		7/16/97
SJS02-SB04-004	MCYAN	Aluminum	11900	11.04	mg/kg		7/8/97
SJS02-SB04-004	MCYAN	Antimony	0.63	0.5	mg/kg	J	7/9/97
SJS02-SB04-004	MCYAN	Arsenic	6.3	0.75	mg/kg		7/9/97
SJS02-SB04-004	MCYAN	Barium	44.4	0.5	mg/kg	J	7/8/97
SJS02-SB04-004	MCYAN	Beryllium	0.32	0.25	mg/kg	J	7/8/97
SJS02-SB04-004	MCYAN	Cadmium	0.47	0.13	mg/kg	B	7/9/97
SJS02-SB04-004	MCYAN	Calcium	2970	21.84	mg/kg		7/8/97
SJS02-SB04-004	MCYAN	Chromium	21.6	1.76	mg/kg		7/8/97
SJS02-SB04-004	MCYAN	Cobalt	4	2.01	mg/kg	J	7/8/97
SJS02-SB04-004	MCYAN	Copper	60.5	1.51	mg/kg		7/8/97
SJS02-SB04-004	MCYAN	Cyanide		0.68	mg/kg	U	7/3/97
SJS02-SB04-004	MCYAN	Iron	11700	4.27	mg/kg		7/8/97
SJS02-SB04-004	MCYAN	Lead	55.8	0.25	mg/kg		7/9/97
SJS02-SB04-004	MCYAN	Magnesium	1610	45.43	mg/kg		7/8/97
SJS02-SB04-004	MCYAN	Manganese	70.7	0.5	mg/kg		7/8/97
SJS02-SB04-004	MCYAN	Mercury	0.24	0.06	mg/kg		7/10/97
SJS02-SB04-004	MCYAN	Nickel	9	1.76	mg/kg	J	7/8/97
SJS02-SB04-004	MCYAN	Potassium	968	55.72	mg/kg	J	7/8/97
SJS02-SB04-004	MCYAN	Selenium		0.75	mg/kg	U	7/9/97
SJS02-SB04-004	MCYAN	Silver	1.5	0.25	mg/kg	B	7/9/97
SJS02-SB04-004	MCYAN	Sodium	657	14.56	mg/kg	J	7/8/97
SJS02-SB04-004	MCYAN	Thallium		0.5	mg/kg	U	7/[illegible]
SJS02-SB04-004	MCYAN	Vanadium	20.5	2.26	mg/kg		7[illegible]
SJS02-SB04-004	MCYAN	Zinc	95.7	1.26	mg/kg		7/[illegible]
SJS02-SB04-004	PSPCB	4,4'-DDD	83	7.5	ug/kg		7/22/97
SJS02-SB04-004	PSPCB	4,4'-DDE	33	7.5	ug/kg	J	7/22/97
SJS02-SB04-004	PSPCB	4,4'-DDT	6.9	7.5	ug/kg	J	7/22/97
SJS02-SB04-004	PSPCB	Aldrin		3.9	ug/kg	U	7/22/97
SJS02-SB04-004	PSPCB	alpha-BHC		3.9	ug/kg	U	7/22/97
SJS02-SB04-004	PSPCB	alpha-Chlordane		3.9	ug/kg	U	7/22/97
SJS02-SB04-004	PSPCB	Aroclor-1016		75	ug/kg	U	7/22/97
SJS02-SB04-004	PSPCB	Aroclor-1221		150	ug/kg	U	7/22/97
SJS02-SB04-004	PSPCB	Aroclor-1232		75	ug/kg	U	7/22/97
SJS02-SB04-004	PSPCB	Aroclor-1242		75	ug/kg	U	7/22/97
SJS02-SB04-004	PSPCB	Aroclor-1248		75	ug/kg	U	7/22/97
SJS02-SB04-004	PSPCB	Aroclor-1254		75	ug/kg	U	7/22/97
SJS02-SB04-004	PSPCB	Aroclor-1260		75	ug/kg	U	7/22/97
SJS02-SB04-004	PSPCB	beta-BHC		3.9	ug/kg	U	7/22/97
SJS02-SB04-004	PSPCB	delta-BHC		3.9	ug/kg	U	7/22/97
SJS02-SB04-004	PSPCB	Dieldrin		7.5	ug/kg	U	7/22/97
SJS02-SB04-004	PSPCB	Endosulfan I		3.9	ug/kg	U	7/22/97
SJS02-SB04-004	PSPCB	Endosulfan II		7.5	ug/kg	U	7/22/97
SJS02-SB04-004	PSPCB	Endosulfan Sulfate		7.5	ug/kg	U	7/22/97
SJS02-SB04-004	PSPCB	Endrin		7.5	ug/kg	U	7/22/97
SJS02-SB04-004	PSPCB	Endrin Aldehyde		7.5	ug/kg	U	7/22/97
SJS02-SB04-004	PSPCB	Endrin Ketone		7.5	ug/kg	U	7/22/97
SJS02-SB04-004	PSPCB	gamma-BHC		3.9	ug/kg	U	7/22/97
SJS02-SB04-004	PSPCB	gamma-Chlordane		3.9	ug/kg	U	7/22/97
SJS02-SB04-004	PSPCB	Heptachlor		3.9	ug/kg	U	7/22/97
SJS02-SB04-004	PSPCB	Heptachlor Epoxide		3.9	ug/kg	U	7/22/97
SJS02-SB04-004	PSPCB	Methoxychlor		39	ug/kg	U	7/2[illegible]
SJS02-SB04-004	PSPCB	Toxaphene		390	ug/kg	U	7/[illegible]
SJS02-SB04-004	SVTCL	1,2,4-Trichlorobenzene		370	ug/kg	U	7/1[illegible]

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS02-SB04-004	SVTCL	1,2-Dichlorobenzene		370	ug/kg	U	7/10/97
SJS02-SB04-004	SVTCL	1,3-Dichlorobenzene		370	ug/kg	U	7/10/97
SJS02-SB04-004	SVTCL	1,4-Dichlorobenzene		370	ug/kg	U	7/10/97
SJS02-SB04-004	SVTCL	2,2'-oxybis(1-Chloropropane		370	ug/kg	U	7/10/97
SJS02-SB04-004	SVTCL	2,4,5-Trichlorophenol		930	ug/kg	U	7/10/97
SJS02-SB04-004	SVTCL	2,4,6-Trichlorophenol		370	ug/kg	U	7/10/97
SJS02-SB04-004	SVTCL	2,4-Dichlorophenol		370	ug/kg	U	7/10/97
SJS02-SB04-004	SVTCL	2,4-Dimethylphenol		370	ug/kg	U	7/10/97
SJS02-SB04-004	SVTCL	2,4-Dinitrophenol		930	ug/kg	U	7/10/97
SJS02-SB04-004	SVTCL	2,4-Dinitrotoluene		370	ug/kg	U	7/10/97
SJS02-SB04-004	SVTCL	2,6-Dinitrotoluene		370	ug/kg	U	7/10/97
SJS02-SB04-004	SVTCL	2-Chloronaphthalene		370	ug/kg	U	7/10/97
SJS02-SB04-004	SVTCL	2-Chlorophenol		370	ug/kg	U	7/10/97
SJS02-SB04-004	SVTCL	2-Methylnaphthalene		370	ug/kg	U	7/10/97
SJS02-SB04-004	SVTCL	2-Methylphenol		370	ug/kg	U	7/10/97
SJS02-SB04-004	SVTCL	2-Nitroaniline		930	ug/kg	U	7/10/97
SJS02-SB04-004	SVTCL	2-Nitrophenol		370	ug/kg	U	7/10/97
SJS02-SB04-004	SVTCL	3,3'-Dichlorobenzidine		370	ug/kg	U	7/10/97
SJS02-SB04-004	SVTCL	3-Nitroaniline		930	ug/kg	UJ	7/10/97
SJS02-SB04-004	SVTCL	4,6-Dinitro-2-Methylphenol		930	ug/kg	U	7/10/97
SJS02-SB04-004	SVTCL	4-Bromophenyl phenylether		370	ug/kg	U	7/10/97
SJS02-SB04-004	SVTCL	4-Chloro-3-Methylphenol		370	ug/kg	U	7/10/97
SJS02-SB04-004	SVTCL	4-Chloroaniline		370	ug/kg	U	7/10/97
SJS02-SB04-004	SVTCL	4-Chlorophenyl-phenylether		370	ug/kg	U	7/10/97
SJS02-SB04-004	SVTCL	4-Methylphenol		370	ug/kg	U	7/10/97
SJS02-SB04-004	SVTCL	4-Nitroaniline		930	ug/kg	U	7/10/97
SJS02-SB04-004	SVTCL	4-Nitrophenol		930	ug/kg	U	7/10/97
SJS02-SB04-004	SVTCL	Acenaphthene		370	ug/kg	U	7/10/97
SJS02-SB04-004	SVTCL	Acenaphthylene		370	ug/kg	U	7/10/97
SJS02-SB04-004	SVTCL	Anthracene		370	ug/kg	U	7/10/97
SJS02-SB04-004	SVTCL	Benzo(a)Anthracene		370	ug/kg	U	7/10/97
SJS02-SB04-004	SVTCL	Benzo(a)Pyrene		370	ug/kg	U	7/10/97
SJS02-SB04-004	SVTCL	Benzo(b)Fluoranthene		370	ug/kg	U	7/10/97
SJS02-SB04-004	SVTCL	Benzo(g,h,i)Perylene		370	ug/kg	U	7/10/97
SJS02-SB04-004	SVTCL	Benzo(k)Fluoranthene		370	ug/kg	U	7/10/97
SJS02-SB04-004	SVTCL	Bis(2-chloroethoxy)Methane		370	ug/kg	U	7/10/97
SJS02-SB04-004	SVTCL	Bis(2-chloroethyl)Ether		370	ug/kg	U	7/10/97
SJS02-SB04-004	SVTCL	Bis(2-Ethylhexyl)Phthalate	91	370	ug/kg	B	7/10/97
SJS02-SB04-004	SVTCL	Butylbenzylphthalate		370	ug/kg	U	7/10/97
SJS02-SB04-004	SVTCL	Carbazole		370	ug/kg	U	7/10/97
SJS02-SB04-004	SVTCL	Chrysene		370	ug/kg	U	7/10/97
SJS02-SB04-004	SVTCL	Di-n-Butylphthalate		370	ug/kg	U	7/10/97
SJS02-SB04-004	SVTCL	Di-n-Octyl Phthalate		370	ug/kg	U	7/10/97
SJS02-SB04-004	SVTCL	Dibenz(a,h)Anthracene		370	ug/kg	U	7/10/97
SJS02-SB04-004	SVTCL	Dibenzofuran		370	ug/kg	U	7/10/97
SJS02-SB04-004	SVTCL	Diethylphthalate		370	ug/kg	U	7/10/97
SJS02-SB04-004	SVTCL	Dimethyl Phthalate		370	ug/kg	U	7/10/97
SJS02-SB04-004	SVTCL	Fluoranthene		370	ug/kg	U	7/10/97
SJS02-SB04-004	SVTCL	Fluorene		370	ug/kg	U	7/10/97
SJS02-SB04-004	SVTCL	Hexachlorobenzene		370	ug/kg	U	7/10/97
SJS02-SB04-004	SVTCL	Hexachlorobutadiene		370	ug/kg	U	7/10/97
SJS02-SB04-004	SVTCL	Hexachlorocyclopentadien		370	ug/kg	U	7/10/97
SJS02-SB04-004	SVTCL	Hexachloroethane		370	ug/kg	U	7/10/97
SJS02-SB04-004	SVTCL	Indeno(1,2,3-cd)Pyrene		370	ug/kg	U	7/10/97
SJS02-SB04-004	SVTCL	Isophorone		370	ug/kg	U	7/10/97
SJS02-SB04-004	SVTCL	N-Nitroso-Di-n-Propylamine		370	ug/kg	U	7/10/97
SJS02-SB04-004	SVTCL	N-Nitrosodiphenylamine		370	ug/kg	U	7/10/97
SJS02-SB04-004	SVTCL	Naphthalene		370	ug/kg	U	7/10/97
SJS02-SB04-004	SVTCL	Nitrobenzene		370	ug/kg	U	7/10/97
SJS02-SB04-004	SVTCL	Pentachlorophenol		930	ug/kg	U	7/10/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Ana
SJS02-SB04-004	SVTCL	Phenanthrene		370	ug/kg	U	7/
SJS02-SB04-004	SVTCL	Phenol		370	ug/kg	U	7/
SJS02-SB04-004	SVTCL	Pyrene		370	ug/kg	U	7/10/97
SJS02-SB04-004	VCTCL	1,1,1-Trichloroethane		16	ug/kg	U	7/6/97
SJS02-SB04-004	VCTCL	1,1,2,2-Tetrachloroethane		16	ug/kg	U	7/6/97
SJS02-SB04-004	VCTCL	1,1,2-Trichloroethane		16	ug/kg	U	7/6/97
SJS02-SB04-004	VCTCL	1,1-Dichloroethane		16	ug/kg	U	7/6/97
SJS02-SB04-004	VCTCL	1,1-Dichloroethene		16	ug/kg	U	7/6/97
SJS02-SB04-004	VCTCL	1,2-Dichloroethane		16	ug/kg	U	7/6/97
SJS02-SB04-004	VCTCL	1,2-Dichloroethene (total)		16	ug/kg	U	7/6/97
SJS02-SB04-004	VCTCL	1,2-Dichloropropane		16	ug/kg	U	7/6/97
SJS02-SB04-004	VCTCL	2-Butanone	43	16	ug/kg	J	7/6/97
SJS02-SB04-004	VCTCL	2-Hexanone		16	ug/kg	U	7/6/97
SJS02-SB04-004	VCTCL	4-Methyl-2-Pentanone		16	ug/kg	U	7/6/97
SJS02-SB04-004	VCTCL	Acetone	210	16	ug/kg		7/6/97
SJS02-SB04-004	VCTCL	Benzene		16	ug/kg	U	7/6/97
SJS02-SB04-004	VCTCL	Bromodichloromethane		16	ug/kg	U	7/6/97
SJS02-SB04-004	VCTCL	Bromoform		16	ug/kg	U	7/6/97
SJS02-SB04-004	VCTCL	Bromomethane		16	ug/kg	U	7/6/97
SJS02-SB04-004	VCTCL	Carbon Disulfide		16	ug/kg	U	7/6/97
SJS02-SB04-004	VCTCL	Carbon Tetrachloride		16	ug/kg	U	7/6/97
SJS02-SB04-004	VCTCL	Chlorobenzene		16	ug/kg	U	7/6/97
SJS02-SB04-004	VCTCL	Chloroethane		16	ug/kg	U	7/6/97
SJS02-SB04-004	VCTCL	Chloroform		16	ug/kg	U	7/6/97
SJS02-SB04-004	VCTCL	Chloromethane		16	ug/kg	U	7/6/97
SJS02-SB04-004	VCTCL	cis-1,3-Dichloropropene		16	ug/kg	U	7/6/97
SJS02-SB04-004	VCTCL	Dibromochloromethane		16	ug/kg	U	7/6/97
SJS02-SB04-004	VCTCL	Ethylbenzene		16	ug/kg	U	7/6/97
SJS02-SB04-004	VCTCL	Methylene Chloride	12	16	ug/kg	B	7/6/97
SJS02-SB04-004	VCTCL	Styrene		16	ug/kg	U	7
SJS02-SB04-004	VCTCL	Tetrachloroethene		16	ug/kg	U	7/
SJS02-SB04-004	VCTCL	Toluene		16	ug/kg	U	7/6/97
SJS02-SB04-004	VCTCL	Total Xylenes		16	ug/kg	U	7/6/97
SJS02-SB04-004	VCTCL	Trans-1,3-Dichloropropene		16	ug/kg	U	7/6/97
SJS02-SB04-004	VCTCL	Trichloroethene		16	ug/kg	U	7/6/97
SJS02-SB04-004	VCTCL	Vinyl Chloride		16	ug/kg	U	7/6/97
SJS02-SB04-004P	CTOTP	Total Phosphorous (as P)	2.8	1.5	mg/kg		7/16/97
SJS02-SB04-004P	MCYAN	Aluminum	11800	9.26	mg/kg		7/8/97
SJS02-SB04-004P	MCYAN	Antimony	0.43	0.42	mg/kg	J	7/9/97
SJS02-SB04-004P	MCYAN	Arsenic	3.9	0.63	mg/kg		7/9/97
SJS02-SB04-004P	MCYAN	Barium	55.3	0.42	mg/kg		7/8/97
SJS02-SB04-004P	MCYAN	Beryllium	0.34	0.21	mg/kg	J	7/8/97
SJS02-SB04-004P	MCYAN	Cadmium		0.11	mg/kg	U	7/9/97
SJS02-SB04-004P	MCYAN	Calcium	2050	18.31	mg/kg		7/8/97
SJS02-SB04-004P	MCYAN	Chromium	19.3	1.47	mg/kg		7/8/97
SJS02-SB04-004P	MCYAN	Cobalt	2.6	1.68	mg/kg	J	7/8/97
SJS02-SB04-004P	MCYAN	Copper	9.7	1.26	mg/kg		7/8/97
SJS02-SB04-004P	MCYAN	Cyanide		0.59	mg/kg	U	7/3/97
SJS02-SB04-004P	MCYAN	Iron	7190	3.58	mg/kg		7/8/97
SJS02-SB04-004P	MCYAN	Lead	20.5	0.21	mg/kg		7/9/97
SJS02-SB04-004P	MCYAN	Magnesium	800	38.09	mg/kg	J	7/8/97
SJS02-SB04-004P	MCYAN	Manganese	28	0.42	mg/kg		7/8/97
SJS02-SB04-004P	MCYAN	Mercury	0.19	0.06	mg/kg		7/10/97
SJS02-SB04-004P	MCYAN	Nickel	8	1.47	mg/kg	J	7/8/97
SJS02-SB04-004P	MCYAN	Potassium	565	46.72	mg/kg	J	7/8/97
SJS02-SB04-004P	MCYAN	Selenium		0.63	mg/kg	U	7/9/97
SJS02-SB04-004P	MCYAN	Silver	1	0.21	mg/kg	B	7/9/97
SJS02-SB04-004P	MCYAN	Sodium	373	12.21	mg/kg	J	7/
SJS02-SB04-004P	MCYAN	Thallium		0.42	mg/kg	U	7
SJS02-SB04-004P	MCYAN	Vanadium	21.5	1.89	mg/kg		7/

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS02-SB04-004P	IMCYAN	Zinc	23.9	1.05	mg/kg	B	7/8/97
SJS02-SB04-004P	PSPCB	4,4'-DDD	62	7.3	ug/kg		7/22/97
SJS02-SB04-004P	PSPCB	4,4'-DDE	26	7.3	ug/kg		7/22/97
SJS02-SB04-004P	PSPCB	4,4'-DDT	4.8	7.3	ug/kg	J	7/22/97
SJS02-SB04-004P	PSPCB	Aldrin		3.8	ug/kg	U	7/22/97
SJS02-SB04-004P	PSPCB	alpha-BHC		3.8	ug/kg	U	7/22/97
SJS02-SB04-004P	PSPCB	alpha-Chlordane		3.8	ug/kg	U	7/22/97
SJS02-SB04-004P	PSPCB	Aroclor-1016		73	ug/kg	U	7/22/97
SJS02-SB04-004P	PSPCB	Aroclor-1221		150	ug/kg	U	7/22/97
SJS02-SB04-004P	PSPCB	Aroclor-1232		73	ug/kg	U	7/22/97
SJS02-SB04-004P	PSPCB	Aroclor-1242		73	ug/kg	U	7/22/97
SJS02-SB04-004P	PSPCB	Aroclor-1248		73	ug/kg	U	7/22/97
SJS02-SB04-004P	PSPCB	Aroclor-1254		73	ug/kg	U	7/22/97
SJS02-SB04-004P	PSPCB	Aroclor-1260		73	ug/kg	U	7/22/97
SJS02-SB04-004P	PSPCB	beta-BHC		3.8	ug/kg	U	7/22/97
SJS02-SB04-004P	PSPCB	delta-BHC		3.8	ug/kg	U	7/22/97
SJS02-SB04-004P	PSPCB	Dieldrin		7.3	ug/kg	U	7/22/97
SJS02-SB04-004P	PSPCB	Endosulfan I		3.8	ug/kg	U	7/22/97
SJS02-SB04-004P	PSPCB	Endosulfan II		7.3	ug/kg	U	7/22/97
SJS02-SB04-004P	PSPCB	Endosulfan Sulfate		7.3	ug/kg	U	7/22/97
SJS02-SB04-004P	PSPCB	Endrin		7.3	ug/kg	U	7/22/97
SJS02-SB04-004P	PSPCB	Endrin Aldehyde		7.3	ug/kg	U	7/22/97
SJS02-SB04-004P	PSPCB	Endrin Ketone		7.3	ug/kg	U	7/22/97
SJS02-SB04-004P	PSPCB	gamma-BHC		3.8	ug/kg	U	7/22/97
SJS02-SB04-004P	PSPCB	gamma-Chlordane		3.8	ug/kg	U	7/22/97
SJS02-SB04-004P	PSPCB	Heptachlor		3.8	ug/kg	U	7/22/97
SJS02-SB04-004P	PSPCB	Heptachlor Epoxide		3.8	ug/kg	U	7/22/97
SJS02-SB04-004P	PSPCB	Methoxychlor		38	ug/kg	U	7/22/97
SJS02-SB04-004P	PSPCB	Toxaphene		380	ug/kg	U	7/22/97
SJS02-SB04-004P	SVTCL	1,2,4-Trichlorobenzene		370	ug/kg	U	7/10/97
SJS02-SB04-004P	SVTCL	1,2-Dichlorobenzene		370	ug/kg	U	7/10/97
SJS02-SB04-004P	SVTCL	1,3-Dichlorobenzene		370	ug/kg	U	7/10/97
SJS02-SB04-004P	SVTCL	1,4-Dichlorobenzene		370	ug/kg	U	7/10/97
SJS02-SB04-004P	SVTCL	2,2'-oxybis(1-Chloropropane		370	ug/kg	U	7/10/97
SJS02-SB04-004P	SVTCL	2,4,5-Trichlorophenol		920	ug/kg	U	7/10/97
SJS02-SB04-004P	SVTCL	2,4,6-Trichlorophenol		370	ug/kg	U	7/10/97
SJS02-SB04-004P	SVTCL	2,4-Dichlorophenol		370	ug/kg	U	7/10/97
SJS02-SB04-004P	SVTCL	2,4-Dimethylphenol		370	ug/kg	U	7/10/97
SJS02-SB04-004P	SVTCL	2,4-Dinitrophenol		920	ug/kg	U	7/10/97
SJS02-SB04-004P	SVTCL	2,4-Dinitrotoluene		370	ug/kg	U	7/10/97
SJS02-SB04-004P	SVTCL	2,6-Dinitrotoluene		370	ug/kg	U	7/10/97
SJS02-SB04-004P	SVTCL	2-Chloronaphthalene		370	ug/kg	U	7/10/97
SJS02-SB04-004P	SVTCL	2-Chlorophenol		370	ug/kg	U	7/10/97
SJS02-SB04-004P	SVTCL	2-Methylnaphthalene		370	ug/kg	U	7/10/97
SJS02-SB04-004P	SVTCL	2-Methylphenol		370	ug/kg	U	7/10/97
SJS02-SB04-004P	SVTCL	2-Nitroaniline		920	ug/kg	U	7/10/97
SJS02-SB04-004P	SVTCL	2-Nitrophenol		370	ug/kg	U	7/10/97
SJS02-SB04-004P	SVTCL	3,3'-Dichlorobenzidine		370	ug/kg	U	7/10/97
SJS02-SB04-004P	SVTCL	3-Nitroaniline		920	ug/kg	U	7/10/97
SJS02-SB04-004P	SVTCL	4,6-Dinitro-2-Methylphenol		920	ug/kg	U	7/10/97
SJS02-SB04-004P	SVTCL	4-Bromophenyl phenylether		370	ug/kg	U	7/10/97
SJS02-SB04-004P	SVTCL	4-Chloro-3-Methylphenol		370	ug/kg	U	7/10/97
SJS02-SB04-004P	SVTCL	4-Chloroaniline		370	ug/kg	U	7/10/97
SJS02-SB04-004P	SVTCL	4-Chlorophenyl-phenylether		370	ug/kg	U	7/10/97
SJS02-SB04-004P	SVTCL	4-Methylphenol		370	ug/kg	U	7/10/97
SJS02-SB04-004P	SVTCL	4-Nitroaniline		920	ug/kg	U	7/10/97
SJS02-SB04-004P	SVTCL	4-Nitrophenol		920	ug/kg	U	7/10/97
SJS02-SB04-004P	SVTCL	Acenaphthene		370	ug/kg	U	7/10/97
SJS02-SB04-004P	SVTCL	Acenaphthylene		370	ug/kg	U	7/10/97
SJS02-SB04-004P	SVTCL	Anthracene		370	ug/kg	U	7/10/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS02-SB04-004P	SVTCL	Benzo(a)Anthracene		370	ug/kg	U	7/1
SJS02-SB04-004P	SVTCL	Benzo(a)Pyrene		370	ug/kg	U	7/1
SJS02-SB04-004P	SVTCL	Benzo(b)Fluoranthene		370	ug/kg	U	7/10/97
SJS02-SB04-004P	SVTCL	Benzo(g,h,i)Perylene		370	ug/kg	U	7/10/97
SJS02-SB04-004P	SVTCL	Benzo(k)Fluoranthene		370	ug/kg	U	7/10/97
SJS02-SB04-004P	SVTCL	Bis(2-chloroethoxy)Methane		370	ug/kg	U	7/10/97
SJS02-SB04-004P	SVTCL	Bis(2-chloroethyl)Ether		370	ug/kg	U	7/10/97
SJS02-SB04-004P	SVTCL	Bis(2-Ethylhexyl)Phthalate	53	370	ug/kg	B	7/10/97
SJS02-SB04-004P	SVTCL	Butylbenzylphthalate		370	ug/kg	U	7/10/97
SJS02-SB04-004P	SVTCL	Carbazole		370	ug/kg	U	7/10/97
SJS02-SB04-004P	SVTCL	Chrysene		370	ug/kg	U	7/10/97
SJS02-SB04-004P	SVTCL	Di-n-Butylphthalate		370	ug/kg	U	7/10/97
SJS02-SB04-004P	SVTCL	Di-n-Octyl Phthalate		370	ug/kg	U	7/10/97
SJS02-SB04-004P	SVTCL	Dibenz(a,h)Anthracene		370	ug/kg	U	7/10/97
SJS02-SB04-004P	SVTCL	Dibenzofuran		370	ug/kg	U	7/10/97
SJS02-SB04-004P	SVTCL	Diethylphthalate		370	ug/kg	U	7/10/97
SJS02-SB04-004P	SVTCL	Dimethyl Phthalate		370	ug/kg	U	7/10/97
SJS02-SB04-004P	SVTCL	Fluoranthene	51	370	ug/kg	J	7/10/97
SJS02-SB04-004P	SVTCL	Fluorene		370	ug/kg	U	7/10/97
SJS02-SB04-004P	SVTCL	Hexachlorobenzene		370	ug/kg	U	7/10/97
SJS02-SB04-004P	SVTCL	Hexachlorobutadiene		370	ug/kg	U	7/10/97
SJS02-SB04-004P	SVTCL	Hexachlorocyclopentadien		370	ug/kg	U	7/10/97
SJS02-SB04-004P	SVTCL	Hexachloroethane		370	ug/kg	U	7/10/97
SJS02-SB04-004P	SVTCL	Indeno(1,2,3-cd)Pyrene		370	ug/kg	U	7/10/97
SJS02-SB04-004P	SVTCL	Isophorone		370	ug/kg	U	7/10/97
SJS02-SB04-004P	SVTCL	N-Nitroso-Di-n-Propylamine		370	ug/kg	U	7/10/97
SJS02-SB04-004P	SVTCL	N-Nitrosodiphenylamine		370	ug/kg	U	7/10/97
SJS02-SB04-004P	SVTCL	Naphthalene		370	ug/kg	U	7/10/97
SJS02-SB04-004P	SVTCL	Nitrobenzene		370	ug/kg	U	7/10/97
SJS02-SB04-004P	SVTCL	Pentachlorophenol		920	ug/kg	U	7/1
SJS02-SB04-004P	SVTCL	Phenanthrene	38	370	ug/kg	J	7/1
SJS02-SB04-004P	SVTCL	Phenol		370	ug/kg	U	7/10/97
SJS02-SB04-004P	SVTCL	Pyrene	67	370	ug/kg	J	7/10/97
SJS02-SB04-004P	VCTCL	1,1,1-Trichloroethane		12	ug/kg	U	7/6/97
SJS02-SB04-004P	VCTCL	1,1,2,2-Tetrachloroethane		12	ug/kg	U	7/6/97
SJS02-SB04-004P	VCTCL	1,1,2-Trichloroethane		12	ug/kg	U	7/6/97
SJS02-SB04-004P	VCTCL	1,1-Dichloroethane		12	ug/kg	U	7/6/97
SJS02-SB04-004P	VCTCL	1,1-Dichloroethene		12	ug/kg	U	7/6/97
SJS02-SB04-004P	VCTCL	1,2-Dichloroethane		12	ug/kg	U	7/6/97
SJS02-SB04-004P	VCTCL	1,2-Dichloroethene (total)		12	ug/kg	U	7/6/97
SJS02-SB04-004P	VCTCL	1,2-Dichloropropane		12	ug/kg	U	7/6/97
SJS02-SB04-004P	VCTCL	2-Butanone	31	12	ug/kg	J	7/6/97
SJS02-SB04-004P	VCTCL	2-Hexanone		12	ug/kg	U	7/6/97
SJS02-SB04-004P	VCTCL	4-Methyl-2-Pentanone		12	ug/kg	U	7/6/97
SJS02-SB04-004P	VCTCL	Acetone	160	12	ug/kg		7/6/97
SJS02-SB04-004P	VCTCL	Benzene		12	ug/kg	U	7/6/97
SJS02-SB04-004P	VCTCL	Bromodichloromethane		12	ug/kg	U	7/6/97
SJS02-SB04-004P	VCTCL	Bromoform		12	ug/kg	U	7/6/97
SJS02-SB04-004P	VCTCL	Bromomethane		12	ug/kg	U	7/6/97
SJS02-SB04-004P	VCTCL	Carbon Disulfide		12	ug/kg	U	7/6/97
SJS02-SB04-004P	VCTCL	Carbon Tetrachloride		12	ug/kg	U	7/6/97
SJS02-SB04-004P	VCTCL	Chlorobenzene		12	ug/kg	U	7/6/97
SJS02-SB04-004P	VCTCL	Chloroethane		12	ug/kg	U	7/6/97
SJS02-SB04-004P	VCTCL	Chloroform		12	ug/kg	U	7/6/97
SJS02-SB04-004P	VCTCL	Chloromethane		12	ug/kg	U	7/6/97
SJS02-SB04-004P	VCTCL	cis-1,3-Dichloropropene		12	ug/kg	U	7/6/97
SJS02-SB04-004P	VCTCL	Dibromochloromethane		12	ug/kg	U	7/6/97
SJS02-SB04-004P	VCTCL	Ethylbenzene		12	ug/kg	U	7/6/97
SJS02-SB04-004P	VCTCL	Methylene Chloride	6	12	ug/kg	B	7
SJS02-SB04-004P	VCTCL	Styrene		12	ug/kg	U	7/

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS02-SB04-004P	VCTCL	Tetrachloroethene		12	ug/kg	U	7/6/97
SJS02-SB04-004P	VCTCL	Toluene		12	ug/kg	U	7/6/97
SJS02-SB04-004P	VCTCL	Total Xylenes		12	ug/kg	U	7/6/97
SJS02-SB04-004P	VCTCL	Trans-1,3-Dichloropropene		12	ug/kg	U	7/6/97
SJS02-SB04-004P	VCTCL	Trichloroethene		12	ug/kg	U	7/6/97
SJS02-SB04-004P	VCTCL	Vinyl Chloride		12	ug/kg	U	7/6/97
SJS02-SB05-002	CTOTP	Total Phosphorous (as P)	4.1	1.4	mg/kg		7/16/97
SJS02-SB05-002	MCYAN	Aluminum	2000	7.27	mg/kg		7/8/97
SJS02-SB05-002	MCYAN	Antimony		0.33	mg/kg	U	7/9/97
SJS02-SB05-002	MCYAN	Arsenic	1.2	0.5	mg/kg	J	7/9/97
SJS02-SB05-002	MCYAN	Barium	8.4	0.33	mg/kg	J	7/8/97
SJS02-SB05-002	MCYAN	Beryllium		0.17	mg/kg	U	7/8/97
SJS02-SB05-002	MCYAN	Cadmium	0.43	0.08	mg/kg	J	7/9/97
SJS02-SB05-002	MCYAN	Calcium	346	14.38	mg/kg	B	7/8/97
SJS02-SB05-002	MCYAN	Chromium	4.6	1.16	mg/kg		7/8/97
SJS02-SB05-002	MCYAN	Cobalt		1.32	mg/kg	U	7/8/97
SJS02-SB05-002	MCYAN	Copper	7.1	0.99	mg/kg		7/8/97
SJS02-SB05-002	MCYAN	Cyanide		0.54	mg/kg	U	7/3/97
SJS02-SB05-002	MCYAN	Iron	1850	2.81	mg/kg		7/8/97
SJS02-SB05-002	MCYAN	Lead	5.3	0.17	mg/kg		7/9/97
SJS02-SB05-002	MCYAN	Magnesium	250	29.92	mg/kg	J	7/8/97
SJS02-SB05-002	MCYAN	Manganese	8.2	0.33	mg/kg		7/8/97
SJS02-SB05-002	MCYAN	Mercury	0.08	0.05	mg/kg	J	7/10/97
SJS02-SB05-002	MCYAN	Nickel	1.9	1.16	mg/kg	J	7/8/97
SJS02-SB05-002	MCYAN	Potassium	229	36.69	mg/kg	J	7/8/97
SJS02-SB05-002	MCYAN	Selenium		0.5	mg/kg	U	7/9/97
SJS02-SB05-002	MCYAN	Silver	0.87	0.17	mg/kg	B	7/9/97
SJS02-SB05-002	MCYAN	Sodium	95	9.59	mg/kg	B	7/8/97
SJS02-SB05-002	MCYAN	Thallium		0.33	mg/kg	U	7/9/97
SJS02-SB05-002	MCYAN	Vanadium	5.3	1.49	mg/kg	J	7/8/97
SJS02-SB05-002	MCYAN	Zinc	44.9	0.83	mg/kg		7/8/97
SJS02-SB05-002	PSPCB	4,4'-DDD		3.5	ug/kg	U	7/18/97
SJS02-SB05-002	PSPCB	4,4'-DDE	31	3.5	ug/kg		7/18/97
SJS02-SB05-002	PSPCB	4,4'-DDT	36	3.5	ug/kg	J	7/18/97
SJS02-SB05-002	PSPCB	Aldrin		1.8	ug/kg	U	7/18/97
SJS02-SB05-002	PSPCB	alpha-BHC		1.8	ug/kg	U	7/18/97
SJS02-SB05-002	PSPCB	alpha-Chlordane		1.8	ug/kg	U	7/18/97
SJS02-SB05-002	PSPCB	Aroclor-1016		35	ug/kg	U	7/18/97
SJS02-SB05-002	PSPCB	Aroclor-1221		71	ug/kg	U	7/18/97
SJS02-SB05-002	PSPCB	Aroclor-1232		35	ug/kg	U	7/18/97
SJS02-SB05-002	PSPCB	Aroclor-1242		35	ug/kg	U	7/18/97
SJS02-SB05-002	PSPCB	Aroclor-1248		35	ug/kg	U	7/18/97
SJS02-SB05-002	PSPCB	Aroclor-1254		35	ug/kg	U	7/18/97
SJS02-SB05-002	PSPCB	Aroclor-1260		35	ug/kg	U	7/18/97
SJS02-SB05-002	PSPCB	beta-BHC		1.8	ug/kg	U	7/18/97
SJS02-SB05-002	PSPCB	delta-BHC		1.8	ug/kg	U	7/18/97
SJS02-SB05-002	PSPCB	Dieldrin		3.5	ug/kg	U	7/18/97
SJS02-SB05-002	PSPCB	Endosulfan I		1.8	ug/kg	U	7/18/97
SJS02-SB05-002	PSPCB	Endosulfan II		3.5	ug/kg	U	7/18/97
SJS02-SB05-002	PSPCB	Endosulfan Sulfate		3.5	ug/kg	U	7/18/97
SJS02-SB05-002	PSPCB	Endrin		3.5	ug/kg	U	7/18/97
SJS02-SB05-002	PSPCB	Endrin Aldehyde		3.5	ug/kg	U	7/18/97
SJS02-SB05-002	PSPCB	Endrin Ketone		3.5	ug/kg	U	7/18/97
SJS02-SB05-002	PSPCB	gamma-BHC		1.8	ug/kg	U	7/18/97
SJS02-SB05-002	PSPCB	gamma-Chlordane		1.8	ug/kg	U	7/18/97
SJS02-SB05-002	PSPCB	Heptachlor		1.8	ug/kg	U	7/18/97
SJS02-SB05-002	PSPCB	Heptachlor Epoxide		1.8	ug/kg	U	7/18/97
SJS02-SB05-002	PSPCB	Methoxychlor		18	ug/kg	U	7/18/97
SJS02-SB05-002	PSPCB	Toxaphene		180	ug/kg	U	7/18/97
SJS02-SB05-002	SVTCL	1,2,4-Trichlorobenzene		350	ug/kg	U	7/10/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS02-SB05-002	SVTCL	1,2-Dichlorobenzene		350	ug/kg	U	7/
SJS02-SB05-002	SVTCL	1,3-Dichlorobenzene		350	ug/kg	U	7/
SJS02-SB05-002	SVTCL	1,4-Dichlorobenzene		350	ug/kg	U	7/10/97
SJS02-SB05-002	SVTCL	2,2'-oxybis(1-Chloropropane		350	ug/kg	U	7/10/97
SJS02-SB05-002	SVTCL	2,4,5-Trichlorophenol		880	ug/kg	U	7/10/97
SJS02-SB05-002	SVTCL	2,4,6-Trichlorophenol		350	ug/kg	U	7/10/97
SJS02-SB05-002	SVTCL	2,4-Dichlorophenol		350	ug/kg	U	7/10/97
SJS02-SB05-002	SVTCL	2,4-Dimethylphenol		350	ug/kg	U	7/10/97
SJS02-SB05-002	SVTCL	2,4-Dinitrophenol		880	ug/kg	U	7/10/97
SJS02-SB05-002	SVTCL	2,4-Dinitrotoluene		350	ug/kg	U	7/10/97
SJS02-SB05-002	SVTCL	2,6-Dinitrotoluene		350	ug/kg	U	7/10/97
SJS02-SB05-002	SVTCL	2-Chloronaphthalene		350	ug/kg	U	7/10/97
SJS02-SB05-002	SVTCL	2-Chlorophenol		350	ug/kg	U	7/10/97
SJS02-SB05-002	SVTCL	2-Methylnaphthalene		350	ug/kg	U	7/10/97
SJS02-SB05-002	SVTCL	2-Methylphenol		350	ug/kg	U	7/10/97
SJS02-SB05-002	SVTCL	2-Nitroaniline		880	ug/kg	U	7/10/97
SJS02-SB05-002	SVTCL	2-Nitrophenol		350	ug/kg	U	7/10/97
SJS02-SB05-002	SVTCL	3,3'-Dichlorobenzidine		350	ug/kg	U	7/10/97
SJS02-SB05-002	SVTCL	3-Nitroaniline		880	ug/kg	UJ	7/10/97
SJS02-SB05-002	SVTCL	4,6-Dinitro-2-Methylphenol		880	ug/kg	U	7/10/97
SJS02-SB05-002	SVTCL	4-Bromophenyl phenylether		350	ug/kg	U	7/10/97
SJS02-SB05-002	SVTCL	4-Chloro-3-Methylphenol		350	ug/kg	U	7/10/97
SJS02-SB05-002	SVTCL	4-Chloroaniline		350	ug/kg	U	7/10/97
SJS02-SB05-002	SVTCL	4-Chlorophenyl-phenylether		350	ug/kg	U	7/10/97
SJS02-SB05-002	SVTCL	4-Methylphenol		350	ug/kg	U	7/10/97
SJS02-SB05-002	SVTCL	4-Nitroaniline		880	ug/kg	U	7/10/97
SJS02-SB05-002	SVTCL	4-Nitrophenol		880	ug/kg	U	7/10/97
SJS02-SB05-002	SVTCL	Acenaphthene		350	ug/kg	U	7/10/97
SJS02-SB05-002	SVTCL	Acenaphthylene		350	ug/kg	U	7/10/97
SJS02-SB05-002	SVTCL	Anthracene		350	ug/kg	U	7/
SJS02-SB05-002	SVTCL	Benzo(a)Anthracene		350	ug/kg	U	7/
SJS02-SB05-002	SVTCL	Benzo(a)Pyrene		350	ug/kg	U	7/10/97
SJS02-SB05-002	SVTCL	Benzo(b)Fluoranthene		350	ug/kg	U	7/10/97
SJS02-SB05-002	SVTCL	Benzo(g,h,i)Perylene		350	ug/kg	U	7/10/97
SJS02-SB05-002	SVTCL	Benzo(k)Fluoranthene		350	ug/kg	U	7/10/97
SJS02-SB05-002	SVTCL	Bis(2-chloroethoxy)Methane		350	ug/kg	U	7/10/97
SJS02-SB05-002	SVTCL	Bis(2-chloroethyl)Ether		350	ug/kg	U	7/10/97
SJS02-SB05-002	SVTCL	Bis(2-Ethylhexyl)Phthalate	39	350	ug/kg	B	7/10/97
SJS02-SB05-002	SVTCL	Butylbenzylphthalate		350	ug/kg	U	7/10/97
SJS02-SB05-002	SVTCL	Carbazole		350	ug/kg	U	7/10/97
SJS02-SB05-002	SVTCL	Chrysene		350	ug/kg	U	7/10/97
SJS02-SB05-002	SVTCL	Di-n-Butylphthalate		350	ug/kg	U	7/10/97
SJS02-SB05-002	SVTCL	Di-n-Octyl Phthalate		350	ug/kg	U	7/10/97
SJS02-SB05-002	SVTCL	Dibenz(a,h)Anthracene		350	ug/kg	U	7/10/97
SJS02-SB05-002	SVTCL	Dibenzofuran		350	ug/kg	U	7/10/97
SJS02-SB05-002	SVTCL	Diethylphthalate		350	ug/kg	U	7/10/97
SJS02-SB05-002	SVTCL	Dimethyl Phthalate		350	ug/kg	U	7/10/97
SJS02-SB05-002	SVTCL	Fluoranthene		350	ug/kg	U	7/10/97
SJS02-SB05-002	SVTCL	Fluorene		350	ug/kg	U	7/10/97
SJS02-SB05-002	SVTCL	Hexachlorobenzene		350	ug/kg	U	7/10/97
SJS02-SB05-002	SVTCL	Hexachlorobutadiene		350	ug/kg	U	7/10/97
SJS02-SB05-002	SVTCL	Hexachlorocyclopentadien		350	ug/kg	U	7/10/97
SJS02-SB05-002	SVTCL	Hexachloroethane		350	ug/kg	U	7/10/97
SJS02-SB05-002	SVTCL	Indeno(1,2,3-cd)Pyrene		350	ug/kg	U	7/10/97
SJS02-SB05-002	SVTCL	Isophorone		350	ug/kg	U	7/10/97
SJS02-SB05-002	SVTCL	N-Nitroso-Di-n-Propylamine		350	ug/kg	U	7/10/97
SJS02-SB05-002	SVTCL	N-Nitrosodiphenylamine		350	ug/kg	U	7/10/97
SJS02-SB05-002	SVTCL	Naphthalene		350	ug/kg	U	7/10/97
SJS02-SB05-002	SVTCL	Nitrobenzene		350	ug/kg	U	7/
SJS02-SB05-002	SVTCL	Pentachlorophenol		880	ug/kg	U	7/

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS02-SB05-002	SVTCL	Phenanthrene		350	ug/kg	U	7/10/97
SJS02-SB05-002	SVTCL	Phenol		350	ug/kg	U	7/10/97
SJS02-SB05-002	SVTCL	Pyrene		350	ug/kg	U	7/10/97
SJS02-SB05-002	VCTCL	1,1,1-Trichloroethane		11	ug/kg	U	7/6/97
SJS02-SB05-002	VCTCL	1,1,2,2-Tetrachloroethane		11	ug/kg	U	7/6/97
SJS02-SB05-002	VCTCL	1,1,2-Trichloroethane		11	ug/kg	U	7/6/97
SJS02-SB05-002	VCTCL	1,1-Dichloroethane		11	ug/kg	U	7/6/97
SJS02-SB05-002	VCTCL	1,1-Dichloroethene		11	ug/kg	U	7/6/97
SJS02-SB05-002	VCTCL	1,2-Dichloroethane		11	ug/kg	U	7/6/97
SJS02-SB05-002	VCTCL	1,2-Dichloroethene (total)		11	ug/kg	U	7/6/97
SJS02-SB05-002	VCTCL	1,2-Dichloropropane		11	ug/kg	U	7/6/97
SJS02-SB05-002	VCTCL	2-Butanone		11	ug/kg	U	7/6/97
SJS02-SB05-002	VCTCL	2-Hexanone		11	ug/kg	U	7/6/97
SJS02-SB05-002	VCTCL	4-Methyl-2-Pentanone		11	ug/kg	U	7/6/97
SJS02-SB05-002	VCTCL	Acetone	6	11	ug/kg	B	7/6/97
SJS02-SB05-002	VCTCL	Benzene		11	ug/kg	U	7/6/97
SJS02-SB05-002	VCTCL	Bromodichloromethane		11	ug/kg	U	7/6/97
SJS02-SB05-002	VCTCL	Bromoform		11	ug/kg	U	7/6/97
SJS02-SB05-002	VCTCL	Bromomethane		11	ug/kg	U	7/6/97
SJS02-SB05-002	VCTCL	Carbon Disulfide		11	ug/kg	U	7/6/97
SJS02-SB05-002	VCTCL	Carbon Tetrachloride		11	ug/kg	U	7/6/97
SJS02-SB05-002	VCTCL	Chlorobenzene		11	ug/kg	U	7/6/97
SJS02-SB05-002	VCTCL	Chloroethane		11	ug/kg	U	7/6/97
SJS02-SB05-002	VCTCL	Chloroform		11	ug/kg	U	7/6/97
SJS02-SB05-002	VCTCL	Chloromethane		11	ug/kg	U	7/6/97
SJS02-SB05-002	VCTCL	cis-1,3-Dichloropropene		11	ug/kg	U	7/6/97
SJS02-SB05-002	VCTCL	Dibromochloromethane		11	ug/kg	U	7/6/97
SJS02-SB05-002	VCTCL	Ethylbenzene		11	ug/kg	U	7/6/97
SJS02-SB05-002	VCTCL	Methylene Chloride	4	11	ug/kg	B	7/6/97
SJS02-SB05-002	VCTCL	Styrene		11	ug/kg	U	7/6/97
SJS02-SB05-002	VCTCL	Tetrachloroethene		11	ug/kg	U	7/6/97
SJS02-SB05-002	VCTCL	Toluene		11	ug/kg	U	7/6/97
SJS02-SB05-002	VCTCL	Total Xylenes		11	ug/kg	U	7/6/97
SJS02-SB05-002	VCTCL	Trans-1,3-Dichloropropene		11	ug/kg	U	7/6/97
SJS02-SB05-002	VCTCL	Trichloroethene		11	ug/kg	U	7/6/97
SJS02-SB05-002	VCTCL	Vinyl Chloride		11	ug/kg	U	7/6/97
SJS02-SD01-000	CTOTC	Total Organic Carbon	2050	54.3	mg/kg		7/29/97
SJS02-SD01-000	CTOTP	Total Phosphorous (as P)	10.5	1.4	mg/kg		7/29/97
SJS02-SD01-000	EXPLO	1,3,5-Trinitrobenzene		540	ug/L	U	8/7/97
SJS02-SD01-000	EXPLO	1,3-Dinitrobenzene		540	ug/L	U	8/7/97
SJS02-SD01-000	EXPLO	2,4,6-Trinitrotoluene		540	ug/L	U	8/7/97
SJS02-SD01-000	EXPLO	2,4-Dinitrotoluene		540	ug/L	U	8/7/97
SJS02-SD01-000	EXPLO	2,6-Dinitrotoluene		540	ug/L	U	8/7/97
SJS02-SD01-000	EXPLO	2-am-4,6-Dinitrotoluene		540	ug/L	U	8/7/97
SJS02-SD01-000	EXPLO	2-Nitrotoluene		540	ug/L	U	8/7/97
SJS02-SD01-000	EXPLO	3-Nitrotoluene		540	ug/L	U	8/7/97
SJS02-SD01-000	EXPLO	4-am-2,6-Dinitrotoluene		540	ug/L	U	8/7/97
SJS02-SD01-000	EXPLO	4-Nitrotoluene		540	ug/L	U	8/7/97
SJS02-SD01-000	EXPLO	HMX		540	ug/L	U	8/7/97
SJS02-SD01-000	EXPLO	Nitrobenzene		540	ug/L	U	8/7/97
SJS02-SD01-000	EXPLO	RDX		540	ug/L	U	8/7/97
SJS02-SD01-000	EXPLO	TETRYL		540	ug/L	U	8/7/97
SJS02-SD01-000	MCYAN	Aluminum	3100	9.19	mg/kg		7/25/97
SJS02-SD01-000	MCYAN	Antimony		0.42	mg/kg	UL	7/25/97
SJS02-SD01-000	MCYAN	Arsenic	2.3	0.63	mg/kg		7/25/97
SJS02-SD01-000	MCYAN	Barium	15.4	0.42	mg/kg	J	7/25/97
SJS02-SD01-000	MCYAN	Beryllium		0.21	mg/kg	U	7/25/97
SJS02-SD01-000	MCYAN	Cadmium	0.14	0.1	mg/kg	J	7/25/97
SJS02-SD01-000	MCYAN	Calcium	393	18.17	mg/kg	J	7/25/97
SJS02-SD01-000	MCYAN	Chromium	6.5	1.46	mg/kg		7/25/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Ana
SJS02-SD01-000	MCYAN	Cobalt		1.67	mg/kg	U	7/
SJS02-SD01-000	MCYAN	Copper	4.4	1.25	mg/kg	J	7/
SJS02-SD01-000	MCYAN	Cyanide		0.54	mg/kg	U	7/22/97
SJS02-SD01-000	MCYAN	Iron	3150	3.55	mg/kg		7/25/97
SJS02-SD01-000	MCYAN	Lead	15.5	0.21	mg/kg		7/25/97
SJS02-SD01-000	MCYAN	Magnesium	309	37.79	mg/kg	J	7/25/97
SJS02-SD01-000	MCYAN	Manganese	16	0.42	mg/kg	K	7/25/97
SJS02-SD01-000	MCYAN	Mercury		0.05	mg/kg	U	8/1/97
SJS02-SD01-000	MCYAN	Nickel	1.8	1.46	mg/kg	B	7/25/97
SJS02-SD01-000	MCYAN	Potassium	228	46.35	mg/kg	J	7/25/97
SJS02-SD01-000	MCYAN	Selenium		0.63	mg/kg	UL	7/25/97
SJS02-SD01-000	MCYAN	Silver		0.21	mg/kg	U	7/25/97
SJS02-SD01-000	MCYAN	Sodium	33.7	12.11	mg/kg	B	7/25/97
SJS02-SD01-000	MCYAN	Thallium		0.42	mg/kg	U	7/25/97
SJS02-SD01-000	MCYAN	Vanadium	7.2	1.88	mg/kg	J	7/25/97
SJS02-SD01-000	MCYAN	Zinc	19.2	1.04	mg/kg		7/25/97
SJS02-SD01-000	PSPCB	4,4'-DDD	3.7	3.3	ug/kg	P	8/5/97
SJS02-SD01-000	PSPCB	4,4'-DDE	7.5	3.3	ug/kg	J	8/5/97
SJS02-SD01-000	PSPCB	4,4'-DDT	9.3	3.3	ug/kg		8/5/97
SJS02-SD01-000	PSPCB	Aldrin		1.7	ug/kg	U	8/5/97
SJS02-SD01-000	PSPCB	alpha-BHC		1.7	ug/kg	U	8/5/97
SJS02-SD01-000	PSPCB	alpha-Chlordane		1.7	ug/kg	U	8/5/97
SJS02-SD01-000	PSPCB	Aroclor-1016		33	ug/kg	U	8/5/97
SJS02-SD01-000	PSPCB	Aroclor-1221		67	ug/kg	U	8/5/97
SJS02-SD01-000	PSPCB	Aroclor-1232		33	ug/kg	U	8/5/97
SJS02-SD01-000	PSPCB	Aroclor-1242		33	ug/kg	U	8/5/97
SJS02-SD01-000	PSPCB	Aroclor-1248		33	ug/kg	U	8/5/97
SJS02-SD01-000	PSPCB	Aroclor-1254		33	ug/kg	U	8/5/97
SJS02-SD01-000	PSPCB	Aroclor-1260		33	ug/kg	U	8/
SJS02-SD01-000	PSPCB	beta-BHC		1.7	ug/kg	U	8/
SJS02-SD01-000	PSPCB	delta-BHC		1.7	ug/kg	U	8/5/
SJS02-SD01-000	PSPCB	Dieldrin		3.3	ug/kg	U	8/5/97
SJS02-SD01-000	PSPCB	Endosulfan I		1.7	ug/kg	U	8/5/97
SJS02-SD01-000	PSPCB	Endosulfan II		3.3	ug/kg	U	8/5/97
SJS02-SD01-000	PSPCB	Endosulfan Sulfate		3.3	ug/kg	U	8/5/97
SJS02-SD01-000	PSPCB	Endrin		3.3	ug/kg	U	8/5/97
SJS02-SD01-000	PSPCB	Endrin Aldehyde		3.3	ug/kg	U	8/5/97
SJS02-SD01-000	PSPCB	Endrin Ketone		3.3	ug/kg	U	8/5/97
SJS02-SD01-000	PSPCB	gamma-BHC		1.7	ug/kg	U	8/5/97
SJS02-SD01-000	PSPCB	gamma-Chlordane		1.7	ug/kg	U	8/5/97
SJS02-SD01-000	PSPCB	Heptachlor		1.7	ug/kg	U	8/5/97
SJS02-SD01-000	PSPCB	Heptachlor Epoxide		1.7	ug/kg	U	8/5/97
SJS02-SD01-000	PSPCB	Methoxychlor		17	ug/kg	U	8/5/97
SJS02-SD01-000	PSPCB	Toxaphene		170	ug/kg	U	8/5/97
SJS02-SD01-000	SVTCL	1,2,4-Trichlorobenzene		330	ug/kg	U	8/9/97
SJS02-SD01-000	SVTCL	1,2-Dichlorobenzene		330	ug/kg	U	8/9/97
SJS02-SD01-000	SVTCL	1,3-Dichlorobenzene		330	ug/kg	U	8/9/97
SJS02-SD01-000	SVTCL	1,4-Dichlorobenzene		330	ug/kg	U	8/9/97
SJS02-SD01-000	SVTCL	2,2'-oxybis(1-Chloropropane		330	ug/kg	U	8/9/97
SJS02-SD01-000	SVTCL	2,4,5-Trichlorophenol		840	ug/kg	U	8/9/97
SJS02-SD01-000	SVTCL	2,4,6-Trichlorophenol		330	ug/kg	U	8/9/97
SJS02-SD01-000	SVTCL	2,4-Dichlorophenol		330	ug/kg	U	8/9/97
SJS02-SD01-000	SVTCL	2,4-Dimethylphenol		330	ug/kg	U	8/9/97
SJS02-SD01-000	SVTCL	2,4-Dinitrophenol		840	ug/kg	UJ	8/9/97
SJS02-SD01-000	SVTCL	2,4-Dinitrotoluene		330	ug/kg	U	8/9/97
SJS02-SD01-000	SVTCL	2,6-Dinitrotoluene		330	ug/kg	U	8/9/97
SJS02-SD01-000	SVTCL	2-Chloronaphthalene		330	ug/kg	U	8/9/97
SJS02-SD01-000	SVTCL	2-Chlorophenol		330	ug/kg	U	8/
SJS02-SD01-000	SVTCL	2-Methylnaphthalene		330	ug/kg	U	8/
SJS02-SD01-000	SVTCL	2-Methylphenol		330	ug/kg	U	8/9/

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS02-SD01-000	SVTCL	2-Nitroaniline		840	ug/kg	U	8/9/97
SJS02-SD01-000	SVTCL	2-Nitrophenol		330	ug/kg	U	8/9/97
SJS02-SD01-000	SVTCL	3,3'-Dichlorobenzidine		330	ug/kg	U	8/9/97
SJS02-SD01-000	SVTCL	3-Nitroaniline		840	ug/kg	U	8/9/97
SJS02-SD01-000	SVTCL	4,6-Dinitro-2-Methylphenol		840	ug/kg	U	8/9/97
SJS02-SD01-000	SVTCL	4-Bromophenyl phenylether		330	ug/kg	U	8/9/97
SJS02-SD01-000	SVTCL	4-Chloro-3-Methylphenol		330	ug/kg	U	8/9/97
SJS02-SD01-000	SVTCL	4-Chloroaniline		330	ug/kg	U	8/9/97
SJS02-SD01-000	SVTCL	4-Chlorophenyl-phenylether		330	ug/kg	U	8/9/97
SJS02-SD01-000	SVTCL	4-Methylphenol		330	ug/kg	U	8/9/97
SJS02-SD01-000	SVTCL	4-Nitroaniline		840	ug/kg	U	8/9/97
SJS02-SD01-000	SVTCL	4-Nitrophenol		840	ug/kg	U	8/9/97
SJS02-SD01-000	SVTCL	Acenaphthene		330	ug/kg	U	8/9/97
SJS02-SD01-000	SVTCL	Acenaphthylene		330	ug/kg	U	8/9/97
SJS02-SD01-000	SVTCL	Anthracene		330	ug/kg	U	8/9/97
SJS02-SD01-000	SVTCL	Benzo(a)Anthracene	87	330	ug/kg	J	8/9/97
SJS02-SD01-000	SVTCL	Benzo(a)Pyrene	79	330	ug/kg	J	8/9/97
SJS02-SD01-000	SVTCL	Benzo(b)Fluoranthene	160	330	ug/kg	J	8/9/97
SJS02-SD01-000	SVTCL	Benzo(g,h,i)Perylene	86	330	ug/kg	J	8/9/97
SJS02-SD01-000	SVTCL	Benzo(k)fluoranthene	59	330	ug/kg	J	8/9/97
SJS02-SD01-000	SVTCL	Bis(2-chloroethoxy)Methane		330	ug/kg	U	8/9/97
SJS02-SD01-000	SVTCL	Bis(2-chloroethyl)Ether		330	ug/kg	U	8/9/97
SJS02-SD01-000	SVTCL	Bis(2-Ethylhexyl)Phthalate	49	130	ug/kg	B	8/9/97
SJS02-SD01-000	SVTCL	Butylbenzylphthalate	47	330	ug/kg	J	8/9/97
SJS02-SD01-000	SVTCL	Carbazole		330	ug/kg	U	8/9/97
SJS02-SD01-000	SVTCL	Chrysene	130	330	ug/kg	J	8/9/97
SJS02-SD01-000	SVTCL	Di-n-Butylphthalate	41	330	ug/kg	B	8/9/97
SJS02-SD01-000	SVTCL	Di-n-Octyl Phthalate		330	ug/kg	U	8/9/97
SJS02-SD01-000	SVTCL	Dibenz(a,h)Anthracene		330	ug/kg	U	8/9/97
SJS02-SD01-000	SVTCL	Dibenzofuran		330	ug/kg	U	8/9/97
SJS02-SD01-000	SVTCL	Diethylphthalate		330	ug/kg	U	8/9/97
SJS02-SD01-000	SVTCL	Dimethyl Phthalate		330	ug/kg	U	8/9/97
SJS02-SD01-000	SVTCL	Fluoranthene		330	ug/kg	U	8/9/97
SJS02-SD01-000	SVTCL	Fluorene		330	ug/kg	U	8/9/97
SJS02-SD01-000	SVTCL	Hexachlorobenzene		330	ug/kg	U	8/9/97
SJS02-SD01-000	SVTCL	Hexachlorobutadiene		330	ug/kg	U	8/9/97
SJS02-SD01-000	SVTCL	Hexachlorocyclopentadien		330	ug/kg	UJ	8/9/97
SJS02-SD01-000	SVTCL	Hexachloroethane		330	ug/kg	U	8/9/97
SJS02-SD01-000	SVTCL	Indeno(1,2,3-cd)Pyrene	84	330	ug/kg	J	8/9/97
SJS02-SD01-000	SVTCL	Isophorone		330	ug/kg	U	8/9/97
SJS02-SD01-000	SVTCL	N-Nitroso-Di-n-Propylamine		330	ug/kg	U	8/9/97
SJS02-SD01-000	SVTCL	N-Nitrosodiphenylamine		330	ug/kg	U	8/9/97
SJS02-SD01-000	SVTCL	Naphthalene		330	ug/kg	U	8/9/97
SJS02-SD01-000	SVTCL	Nitrobenzene		330	ug/kg	U	8/9/97
SJS02-SD01-000	SVTCL	Pentachlorophenol		840	ug/kg	U	8/9/97
SJS02-SD01-000	SVTCL	Phenanthrene	47	330	ug/kg	J	8/9/97
SJS02-SD01-000	SVTCL	Phenol		330	ug/kg	U	8/9/97
SJS02-SD01-000	SVTCL	Pyrene	230	330	ug/kg	J	8/9/97
SJS02-SD01-000	VCTCL	1,1,1-Trichloroethane		11	ug/kg	U	7/18/97
SJS02-SD01-000	VCTCL	1,1,2,2-Tetrachloroethane		11	ug/kg	U	7/18/97
SJS02-SD01-000	VCTCL	1,1,2-Trichloroethane		11	ug/kg	U	7/18/97
SJS02-SD01-000	VCTCL	1,1-Dichloroethane		11	ug/kg	U	7/18/97
SJS02-SD01-000	VCTCL	1,1-Dichloroethene		11	ug/kg	U	7/18/97
SJS02-SD01-000	VCTCL	1,2-Dichloroethane		11	ug/kg	U	7/18/97
SJS02-SD01-000	VCTCL	1,2-Dichloroethene (total)		11	ug/kg	U	7/18/97
SJS02-SD01-000	VCTCL	1,2-Dichloropropane		11	ug/kg	U	7/18/97
SJS02-SD01-000	VCTCL	2-Butanone		11	ug/kg	U	7/18/97
SJS02-SD01-000	VCTCL	2-Hexanone		11	ug/kg	U	7/18/97
SJS02-SD01-000	VCTCL	4-Methyl-2-Pentanone		11	ug/kg	U	7/18/97
SJS02-SD01-000	VCTCL	Acetone		11	ug/kg	U	7/18/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Ana
SJS02-SD01-000	VCTCL	Benzene		11	ug/kg	U	7/1
SJS02-SD01-000	VCTCL	Bromodichloromethane		11	ug/kg	U	7/1
SJS02-SD01-000	VCTCL	Bromoform		11	ug/kg	U	7/18/97
SJS02-SD01-000	VCTCL	Bromomethane		11	ug/kg	U	7/18/97
SJS02-SD01-000	VCTCL	Carbon Disulfide		11	ug/kg	U	7/18/97
SJS02-SD01-000	VCTCL	Carbon Tetrachloride		11	ug/kg	U	7/18/97
SJS02-SD01-000	VCTCL	Chlorobenzene		11	ug/kg	U	7/18/97
SJS02-SD01-000	VCTCL	Chloroethane		11	ug/kg	U	7/18/97
SJS02-SD01-000	VCTCL	Chloroform		11	ug/kg	U	7/18/97
SJS02-SD01-000	VCTCL	Chloromethane		11	ug/kg	U	7/18/97
SJS02-SD01-000	VCTCL	cis-1,3-Dichloropropene		11	ug/kg	U	7/18/97
SJS02-SD01-000	VCTCL	Dibromochloromethane		11	ug/kg	U	7/18/97
SJS02-SD01-000	VCTCL	Ethylbenzene		11	ug/kg	U	7/18/97
SJS02-SD01-000	VCTCL	Methylene Chloride	22	11	ug/kg	B	7/18/97
SJS02-SD01-000	VCTCL	Styrene		11	ug/kg	U	7/18/97
SJS02-SD01-000	VCTCL	Tetrachloroethene		11	ug/kg	U	7/18/97
SJS02-SD01-000	VCTCL	Toluene		11	ug/kg	U	7/18/97
SJS02-SD01-000	VCTCL	Total Xylenes		11	ug/kg	U	7/18/97
SJS02-SD01-000	VCTCL	Trans-1,3-Dichloropropene		11	ug/kg	U	7/18/97
SJS02-SD01-000	VCTCL	Trichloroethene		11	ug/kg	U	7/18/97
SJS02-SD01-000	VCTCL	Vinyl Chloride		11	ug/kg	U	7/18/97
SJS02-SD02-000	CTOTC	Total Organic Carbon	44000	140	mg/kg		7/29/97
SJS02-SD02-000	CTOTP	Total Phosphorous (as P)	13.5	3.4	mg/kg		8/4/97
SJS02-SD02-000	MCYAN	Aluminum	10900	22.35	mg/kg		7/25/97
SJS02-SD02-000	MCYAN	Antimony	3.3	1.02	mg/kg	B	7/25/97
SJS02-SD02-000	MCYAN	Arsenic	5.4	1.52	mg/kg	K	7/25/97
SJS02-SD02-000	MCYAN	Barium	55.7	1.02	mg/kg	J	7/25/97
SJS02-SD02-000	MCYAN	Beryllium	1.1	0.51	mg/kg	B	7/25/97
SJS02-SD02-000	MCYAN	Cadmium	4	0.25	mg/kg		7/2
SJS02-SD02-000	MCYAN	Calcium	2300	44.18	mg/kg	J	7/2
SJS02-SD02-000	MCYAN	Chromium	277	3.56	mg/kg		7/25/
SJS02-SD02-000	MCYAN	Cobalt		4.06	mg/kg	U	7/25/97
SJS02-SD02-000	MCYAN	Copper	344	3.05	mg/kg		7/25/97
SJS02-SD02-000	MCYAN	Cyanide		1.4	mg/kg	U	7/22/97
SJS02-SD02-000	MCYAN	Iron	18500	8.63	mg/kg		7/25/97
SJS02-SD02-000	MCYAN	Lead	161	0.51	mg/kg		7/25/97
SJS02-SD02-000	MCYAN	Magnesium	4710	91.92	mg/kg		7/25/97
SJS02-SD02-000	MCYAN	Manganese	105	1.02	mg/kg		7/25/97
SJS02-SD02-000	MCYAN	Mercury	0.45	0.14	mg/kg		8/1/97
SJS02-SD02-000	MCYAN	Nickel	16.4	3.56	mg/kg	K	7/25/97
SJS02-SD02-000	MCYAN	Potassium	2000	112.75	mg/kg	J	7/25/97
SJS02-SD02-000	MCYAN	Selenium		1.52	mg/kg	U	7/25/97
SJS02-SD02-000	MCYAN	Silver		0.51	mg/kg	U	7/25/97
SJS02-SD02-000	MCYAN	Sodium	11800	29.46	mg/kg		7/25/97
SJS02-SD02-000	MCYAN	Thallium		1.02	mg/kg	U	7/25/97
SJS02-SD02-000	MCYAN	Vanadium	28.8	4.57	mg/kg		7/25/97
SJS02-SD02-000	MCYAN	Zinc	416	2.54	mg/kg		7/25/97
SJS02-SD02-000	PSPCB	4,4'-DDD	310	110	ug/kg	J	8/6/97
SJS02-SD02-000	PSPCB	4,4'-DDE	71	11	ug/kg	J	8/5/97
SJS02-SD02-000	PSPCB	4,4'-DDT	28	11	ug/kg	J	8/5/97
SJS02-SD02-000	PSPCB	Aldrin		5.4	ug/kg	UJ	8/5/97
SJS02-SD02-000	PSPCB	alpha-BHC		5.4	ug/kg	UJ	8/5/97
SJS02-SD02-000	PSPCB	alpha-Chlordane	7.3	5.4	ug/kg	J	8/5/97
SJS02-SD02-000	PSPCB	Aroclor-1016		110	ug/kg	UJ	8/5/97
SJS02-SD02-000	PSPCB	Aroclor-1221		210	ug/kg	UJ	8/5/97
SJS02-SD02-000	PSPCB	Aroclor-1232		110	ug/kg	UJ	8/5/97
SJS02-SD02-000	PSPCB	Aroclor-1242		110	ug/kg	UJ	8/5/97
SJS02-SD02-000	PSPCB	Aroclor-1248		110	ug/kg	UJ	8/5
SJS02-SD02-000	PSPCB	Aroclor-1254		110	ug/kg	J	8/
SJS02-SD02-000	PSPCB	Aroclor-1260		110	ug/kg	UJ	8/5/

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS02-SD02-000	PSPCB	beta-BHC		5.4	ug/kg	UJ	8/5/97
SJS02-SD02-000	PSPCB	delta-BHC		5.4	ug/kg	UJ	8/5/97
SJS02-SD02-000	PSPCB	Dieldrin		11	ug/kg	UJ	8/5/97
SJS02-SD02-000	PSPCB	Endosulfan I		5.4	ug/kg	UJ	8/5/97
SJS02-SD02-000	PSPCB	Endosulfan II		11	ug/kg	UJ	8/5/97
SJS02-SD02-000	PSPCB	Endosulfan Sulfate		11	ug/kg	UJ	8/5/97
SJS02-SD02-000	PSPCB	Endrin		11	ug/kg	UJ	8/5/97
SJS02-SD02-000	PSPCB	Endrin Aldehyde		11	ug/kg	UJ	8/5/97
SJS02-SD02-000	PSPCB	Endrin Ketone		11	ug/kg	UJ	8/5/97
SJS02-SD02-000	PSPCB	gamma-BHC		5.4	ug/kg	UJ	8/5/97
SJS02-SD02-000	PSPCB	gamma-Chlordane	9.8	5.4	ug/kg	J	8/5/97
SJS02-SD02-000	PSPCB	Heptachlor		5.4	ug/kg	UJ	8/5/97
SJS02-SD02-000	PSPCB	Heptachlor Epoxide		5.4	ug/kg	UJ	8/5/97
SJS02-SD02-000	PSPCB	Methoxychlor		54	ug/kg	UJ	8/5/97
SJS02-SD02-000	PSPCB	Toxaphene		540	ug/kg	UJ	8/5/97
SJS02-SD02-000	SVTCL	1,2,4-Trichlorobenzene		9100	ug/kg	UJ	8/9/97
SJS02-SD02-000	SVTCL	1,2-Dichlorobenzene		9100	ug/kg	UJ	8/9/97
SJS02-SD02-000	SVTCL	1,3-Dichlorobenzene		9100	ug/kg	UJ	8/9/97
SJS02-SD02-000	SVTCL	1,4-Dichlorobenzene		9100	ug/kg	UJ	8/9/97
SJS02-SD02-000	SVTCL	2,2'-oxybis(1-Chloropropane		9100	ug/kg	UJ	8/9/97
SJS02-SD02-000	SVTCL	2,4,5-Trichlorophenol		23000	ug/kg	UJ	8/9/97
SJS02-SD02-000	SVTCL	2,4,6-Trichlorophenol		9100	ug/kg	UJ	8/9/97
SJS02-SD02-000	SVTCL	2,4-Dichlorophenol		9100	ug/kg	UJ	8/9/97
SJS02-SD02-000	SVTCL	2,4-Dimethylphenol		9100	ug/kg	UJ	8/9/97
SJS02-SD02-000	SVTCL	2,4-Dinitrophenol		23000	ug/kg	UJ	8/9/97
SJS02-SD02-000	SVTCL	2,4-Dinitrotoluene		9100	ug/kg	UJ	8/9/97
SJS02-SD02-000	SVTCL	2,6-Dinitrotoluene		9100	ug/kg	UJ	8/9/97
SJS02-SD02-000	SVTCL	2-Chloronaphthalene		9100	ug/kg	UJ	8/9/97
SJS02-SD02-000	SVTCL	2-Chlorophenol		9100	ug/kg	UJ	8/9/97
SJS02-SD02-000	SVTCL	2-Methylnaphthalene		9100	ug/kg	UJ	8/9/97
SJS02-SD02-000	SVTCL	2-Methylphenol		9100	ug/kg	UJ	8/9/97
SJS02-SD02-000	SVTCL	2-Nitroaniline		23000	ug/kg	UJ	8/9/97
SJS02-SD02-000	SVTCL	2-Nitrophenol		9100	ug/kg	UJ	8/9/97
SJS02-SD02-000	SVTCL	3,3'-Dichlorobenzidine		9100	ug/kg	UJ	8/9/97
SJS02-SD02-000	SVTCL	3-Nitroaniline		23000	ug/kg	UJ	8/9/97
SJS02-SD02-000	SVTCL	4,6-Dinitro-2-Methylphenol		23000	ug/kg	UJ	8/9/97
SJS02-SD02-000	SVTCL	4-Bromophenyl phenylether		9100	ug/kg	UJ	8/9/97
SJS02-SD02-000	SVTCL	4-Chloro-3-Methylphenol		9100	ug/kg	UJ	8/9/97
SJS02-SD02-000	SVTCL	4-Chloroaniline		9100	ug/kg	UJ	8/9/97
SJS02-SD02-000	SVTCL	4-Chlorophenyl-phenylether		9100	ug/kg	UJ	8/9/97
SJS02-SD02-000	SVTCL	4-Methylphenol		9100	ug/kg	UJ	8/9/97
SJS02-SD02-000	SVTCL	4-Nitroaniline		23000	ug/kg	UJ	8/9/97
SJS02-SD02-000	SVTCL	4-Nitrophenol		23000	ug/kg	UJ	8/9/97
SJS02-SD02-000	SVTCL	Acenaphthene		9100	ug/kg	UJ	8/9/97
SJS02-SD02-000	SVTCL	Acenaphthylene		9100	ug/kg	UJ	8/9/97
SJS02-SD02-000	SVTCL	Anthracene		9100	ug/kg	UJ	8/9/97
SJS02-SD02-000	SVTCL	Benzo(a)Anthracene		9100	ug/kg	UJ	8/9/97
SJS02-SD02-000	SVTCL	Benzo(a)Pyrene		9100	ug/kg	UJ	8/9/97
SJS02-SD02-000	SVTCL	Benzo(b)Fluoranthene	1200	9100	ug/kg	J	8/9/97
SJS02-SD02-000	SVTCL	Benzo(g,h,i)Perylene		9100	ug/kg	UJ	8/9/97
SJS02-SD02-000	SVTCL	Benzo(k)fluoranthene		9100	ug/kg	UJ	8/9/97
SJS02-SD02-000	SVTCL	Bis(2-chloroethoxy)Methane		9100	ug/kg	UJ	8/9/97
SJS02-SD02-000	SVTCL	Bis(2-chloroethyl)Ether		9100	ug/kg	UJ	8/9/97
SJS02-SD02-000	SVTCL	Bis(2-Ethylhexyl)Phthalate		9100	ug/kg	UJ	8/9/97
SJS02-SD02-000	SVTCL	Butylbenzylphthalate		9100	ug/kg	UJ	8/9/97
SJS02-SD02-000	SVTCL	Carbazole		9100	ug/kg	UJ	8/9/97
SJS02-SD02-000	SVTCL	Chrysene		9100	ug/kg	UJ	8/9/97
SJS02-SD02-000	SVTCL	Di-n-Butylphthalate		9100	ug/kg	UJ	8/9/97
SJS02-SD02-000	SVTCL	Di-n-Octyl Phthalate		9100	ug/kg	UJ	8/9/97
SJS02-SD02-000	SVTCL	Dibenz(a,h)Anthracene		9100	ug/kg	UJ	8/9/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date An
SJS02-SD02-000	SVTCL	Dibenzofuran		9100	ug/kg	UJ	8
SJS02-SD02-000	SVTCL	Diethylphthalate		9100	ug/kg	UJ	8.
SJS02-SD02-000	SVTCL	Dimethyl Phthalate		9100	ug/kg	UJ	8/9/97
SJS02-SD02-000	SVTCL	Fluoranthene	930	9100	ug/kg	J	8/9/97
SJS02-SD02-000	SVTCL	Fluorene		9100	ug/kg	UJ	8/9/97
SJS02-SD02-000	SVTCL	Hexachlorobenzene		9100	ug/kg	UJ	8/9/97
SJS02-SD02-000	SVTCL	Hexachlorobutadiene		9100	ug/kg	UJ	8/9/97
SJS02-SD02-000	SVTCL	Hexachlorocyclopentadien'		9100	ug/kg	UJ	8/9/97
SJS02-SD02-000	SVTCL	Hexachloroethane		9100	ug/kg	UJ	8/9/97
SJS02-SD02-000	SVTCL	Indeno(1,2,3-cd)Pyrene		9100	ug/kg	UJ	8/9/97
SJS02-SD02-000	SVTCL	Isophorone		9100	ug/kg	UJ	8/9/97
SJS02-SD02-000	SVTCL	N-Nitroso-Di-n-Propylamine		9100	ug/kg	UJ	8/9/97
SJS02-SD02-000	SVTCL	N-Nitrosodiphenylamine		9100	ug/kg	UJ	8/9/97
SJS02-SD02-000	SVTCL	Naphthalene		9100	ug/kg	UJ	8/9/97
SJS02-SD02-000	SVTCL	Nitrobenzene		9100	ug/kg	UJ	8/9/97
SJS02-SD02-000	SVTCL	Pentachlorophenol		23000	ug/kg	UJ	8/9/97
SJS02-SD02-000	SVTCL	Phenanthrene		9100	ug/kg	UJ	8/9/97
SJS02-SD02-000	SVTCL	Phenol		9100	ug/kg	UJ	8/9/97
SJS02-SD02-000	SVTCL	Pyrene	1200	9100	ug/kg	J	8/9/97
SJS02-SD02-000	VCTCL	1,1,1-Trichloroethane		31	ug/kg	U	7/21/97
SJS02-SD02-000	VCTCL	1,1,2,2-Tetrachloroethane		31	ug/kg	U	7/21/97
SJS02-SD02-000	VCTCL	1,1,2-Trichloroethane		31	ug/kg	U	7/21/97
SJS02-SD02-000	VCTCL	1,1-Dichloroethane		31	ug/kg	U	7/21/97
SJS02-SD02-000	VCTCL	1,1-Dichloroethene		31	ug/kg	U	7/21/97
SJS02-SD02-000	VCTCL	1,2-Dichloroethane		31	ug/kg	U	7/21/97
SJS02-SD02-000	VCTCL	1,2-Dichloroethene (total)		31	ug/kg	U	7/21/97
SJS02-SD02-000	VCTCL	1,2-Dichloropropane		31	ug/kg	U	7/21/97
SJS02-SD02-000	VCTCL	2-Butanone		31	ug/kg	U	7/21/97
SJS02-SD02-000	VCTCL	2-Hexanone		31	ug/kg	U	7/2
SJS02-SD02-000	VCTCL	4-Methyl-2-Pentanone	5	31	ug/kg	J	7/
SJS02-SD02-000	VCTCL	Acetone	92	31	ug/kg	J	7/21
SJS02-SD02-000	VCTCL	Benzene		31	ug/kg	U	7/21/97
SJS02-SD02-000	VCTCL	Bromodichloromethane		31	ug/kg	U	7/21/97
SJS02-SD02-000	VCTCL	Bromoform		31	ug/kg	U	7/21/97
SJS02-SD02-000	VCTCL	Bromomethane		31	ug/kg	U	7/21/97
SJS02-SD02-000	VCTCL	Carbon Disulfide		31	ug/kg	U	7/21/97
SJS02-SD02-000	VCTCL	Carbon Tetrachloride		31	ug/kg	U	7/21/97
SJS02-SD02-000	VCTCL	Chlorobenzene		31	ug/kg	U	7/21/97
SJS02-SD02-000	VCTCL	Chloroethane		31	ug/kg	U	7/21/97
SJS02-SD02-000	VCTCL	Chloroform		31	ug/kg	U	7/21/97
SJS02-SD02-000	VCTCL	Chloromethane		31	ug/kg	U	7/21/97
SJS02-SD02-000	VCTCL	cis-1,3-Dichloropropene		31	ug/kg	U	7/21/97
SJS02-SD02-000	VCTCL	Dibromochloromethane		31	ug/kg	U	7/21/97
SJS02-SD02-000	VCTCL	Ethylbenzene		31	ug/kg	U	7/21/97
SJS02-SD02-000	VCTCL	Methylene Chloride	69	31	ug/kg	B	7/21/97
SJS02-SD02-000	VCTCL	Styrene		31	ug/kg	U	7/21/97
SJS02-SD02-000	VCTCL	Tetrachloroethene		31	ug/kg	U	7/21/97
SJS02-SD02-000	VCTCL	Toluene		31	ug/kg	U	7/21/97
SJS02-SD02-000	VCTCL	Total Xylenes		31	ug/kg	U	7/21/97
SJS02-SD02-000	VCTCL	Trans-1,3-Dichloropropene		31	ug/kg	U	7/21/97
SJS02-SD02-000	VCTCL	Trichloroethene		31	ug/kg	U	7/21/97
SJS02-SD02-000	VCTCL	Vinyl Chloride		31	ug/kg	U	7/21/97
SJS02-SD03-000	CTOTC	Total Organic Carbon	71000	207	mg/kg	L	7/16/97
SJS02-SD03-000	CTOTP	Total Phosphorous (as P)	19.1	5	mg/kg		7/18/97
SJS02-SD03-000	EXPLO	1,3,5-Trinitrobenzene		2000	ug/L	U	7/9/97
SJS02-SD03-000	EXPLO	1,3-Dinitrobenzene		2000	ug/L	U	7/9/97
SJS02-SD03-000	EXPLO	2,4,6-Trinitrotoluene		2000	ug/L	U	7/9/97
SJS02-SD03-000	EXPLO	2,4-Dinitrotoluene		2000	ug/L	U	7/
SJS02-SD03-000	EXPLO	2,6-Dinitrotoluene		2000	ug/L	U	7
SJS02-SD03-000	EXPLO	2-am-4,6-Dinitrotoluene		2000	ug/L	U	7/9

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS02-SD03-000	EXPLO	2-Nitrotoluene		2000	ug/L	U	7/9/97
SJS02-SD03-000	EXPLO	3-Nitrotoluene		2000	ug/L	U	7/9/97
SJS02-SD03-000	EXPLO	4-am-2,6-Dinitrotoluene		2000	ug/L	U	7/9/97
SJS02-SD03-000	EXPLO	4-Nitrotoluene		2000	ug/L	U	7/9/97
SJS02-SD03-000	EXPLO	HMX		2000	ug/L	U	7/9/97
SJS02-SD03-000	EXPLO	Nitrobenzene		2000	ug/L	U	7/9/97
SJS02-SD03-000	EXPLO	RDX		2000	ug/L	U	7/9/97
SJS02-SD03-000	EXPLO	TETRYL		2000	ug/L	U	7/9/97
SJS02-SD03-000	MCYAN	Aluminum	27200	33.36	mg/kg		7/11/97
SJS02-SD03-000	MCYAN	Antimony	16.3	1.52	mg/kg	L	7/16/97
SJS02-SD03-000	MCYAN	Arsenic	13.1	2.27	mg/kg		7/16/97
SJS02-SD03-000	MCYAN	Barium	84.7	1.52	mg/kg	J	7/11/97
SJS02-SD03-000	MCYAN	Beryllium	0.87	0.76	mg/kg	J	7/11/97
SJS02-SD03-000	MCYAN	Cadmium	2.5	0.38	mg/kg	J	7/16/97
SJS02-SD03-000	MCYAN	Calcium	24300	65.96	mg/kg	J	7/11/97
SJS02-SD03-000	MCYAN	Chromium	1640	5.31	mg/kg		7/11/97
SJS02-SD03-000	MCYAN	Cobalt	9.1	6.07	mg/kg	J	7/11/97
SJS02-SD03-000	MCYAN	Copper	1700	4.55	mg/kg		7/11/97
SJS02-SD03-000	MCYAN	Cyanide		2.1	mg/kg	U	7/8/97
SJS02-SD03-000	MCYAN	Iron	31100	12.89	mg/kg		7/11/97
SJS02-SD03-000	MCYAN	Lead	396	0.76	mg/kg		7/16/97
SJS02-SD03-000	MCYAN	Magnesium	6890	137.24	mg/kg	J	7/11/97
SJS02-SD03-000	MCYAN	Manganese	235	1.52	mg/kg		7/11/97
SJS02-SD03-000	MCYAN	Mercury	0.72	0.19	mg/kg		7/15/97
SJS02-SD03-000	MCYAN	Nickel	41.5	5.31	mg/kg		7/11/97
SJS02-SD03-000	MCYAN	Potassium	3830	168.32	mg/kg		7/11/97
SJS02-SD03-000	MCYAN	Selenium		2.27	mg/kg	U	7/16/97
SJS02-SD03-000	MCYAN	Silver	1.8	0.76	mg/kg	B	7/16/97
SJS02-SD03-000	MCYAN	Sodium	17800	43.98	mg/kg		7/11/97
SJS02-SD03-000	MCYAN	Thallium		1.52	mg/kg	U	7/16/97
SJS02-SD03-000	MCYAN	Vanadium	115	6.82	mg/kg		7/11/97
SJS02-SD03-000	MCYAN	Zinc	1140	3.79	mg/kg	L	7/11/97
SJS02-SD03-000	PSPCB	4,4'-DDE	130	12	ug/kg	J	7/27/97
SJS02-SD03-000	PSPCB	4,4'-DDT		12	ug/kg	U	7/27/97
SJS02-SD03-000	PSPCB	Aldrin		6	ug/kg	U	7/27/97
SJS02-SD03-000	PSPCB	alpha-BHC		6	ug/kg	U	7/27/97
SJS02-SD03-000	PSPCB	alpha-Chlordane	28	6	ug/kg		7/27/97
SJS02-SD03-000	PSPCB	Aroclor-1016		120	ug/kg	U	7/27/97
SJS02-SD03-000	PSPCB	Aroclor-1221		240	ug/kg	U	7/27/97
SJS02-SD03-000	PSPCB	Aroclor-1232		120	ug/kg	U	7/27/97
SJS02-SD03-000	PSPCB	Aroclor-1242		120	ug/kg	U	7/27/97
SJS02-SD03-000	PSPCB	Aroclor-1248		120	ug/kg	U	7/27/97
SJS02-SD03-000	PSPCB	Aroclor-1254		120	ug/kg	U	7/27/97
SJS02-SD03-000	PSPCB	Aroclor-1260		120	ug/kg	U	7/27/97
SJS02-SD03-000	PSPCB	beta-BHC		6	ug/kg	U	7/27/97
SJS02-SD03-000	PSPCB	delta-BHC		6	ug/kg	U	7/27/97
SJS02-SD03-000	PSPCB	Dieldrin	36	12	ug/kg		7/27/97
SJS02-SD03-000	PSPCB	Endosulfan I		6	ug/kg	U	7/27/97
SJS02-SD03-000	PSPCB	Endosulfan II		12	ug/kg	U	7/27/97
SJS02-SD03-000	PSPCB	Endosulfan Sulfate		12	ug/kg	U	7/27/97
SJS02-SD03-000	PSPCB	Endrin		12	ug/kg	U	7/27/97
SJS02-SD03-000	PSPCB	Endrin Aldehyde		12	ug/kg	U	7/27/97
SJS02-SD03-000	PSPCB	Endrin Ketone		12	ug/kg	U	7/27/97
SJS02-SD03-000	PSPCB	gamma-BHC		6	ug/kg	U	7/27/97
SJS02-SD03-000	PSPCB	gamma-Chlordane	29	6	ug/kg	J	7/27/97
SJS02-SD03-000	PSPCB	Heptachlor		6	ug/kg	U	7/27/97
SJS02-SD03-000	PSPCB	Heptachlor Epoxide		6	ug/kg	U	7/27/97
SJS02-SD03-000	PSPCB	Methoxychlor		60	ug/kg	U	7/27/97
SJS02-SD03-000	PSPCB	Toxaphene		600	ug/kg	U	7/27/97
SJS02-SD03-000	SVTCL	1,2,4-Trichlorobenzene		1300	ug/kg	UL	7/21/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date An
SJS02-SD03-000	SVTCL	1,2-Dichlorobenzene		1300	ug/kg	UL	7/
SJS02-SD03-000	SVTCL	1,3-Dichlorobenzene		1300	ug/kg	UL	7/
SJS02-SD03-000	SVTCL	1,4-Dichlorobenzene		1300	ug/kg	UL	7/21/97
SJS02-SD03-000	SVTCL	2,2'-oxybis(1-Chloropropane		1300	ug/kg	UL	7/21/97
SJS02-SD03-000	SVTCL	2,4,5-Trichlorophenol		3300	ug/kg	UL	7/21/97
SJS02-SD03-000	SVTCL	2,4,6-Trichlorophenol		1300	ug/kg	UL	7/21/97
SJS02-SD03-000	SVTCL	2,4-Dichlorophenol		1300	ug/kg	UL	7/21/97
SJS02-SD03-000	SVTCL	2,4-Dimethylphenol		1300	ug/kg	UL	7/21/97
SJS02-SD03-000	SVTCL	2,4-Dinitrotoluene		1300	ug/kg	UL	7/21/97
SJS02-SD03-000	SVTCL	2,6-Dinitrotoluene		1300	ug/kg	UL	7/21/97
SJS02-SD03-000	SVTCL	2-Chloronaphthalene		1300	ug/kg	UL	7/21/97
SJS02-SD03-000	SVTCL	2-Chlorophenol		1300	ug/kg	UL	7/21/97
SJS02-SD03-000	SVTCL	2-Methylnaphthalene		1300	ug/kg	UL	7/21/97
SJS02-SD03-000	SVTCL	2-Methylphenol		1300	ug/kg	UL	7/21/97
SJS02-SD03-000	SVTCL	2-Nitroaniline		3300	ug/kg	UL	7/21/97
SJS02-SD03-000	SVTCL	2-Nitrophenol		1300	ug/kg	UL	7/21/97
SJS02-SD03-000	SVTCL	3,3'-Dichlorobenzidine		1300	ug/kg	UL	7/21/97
SJS02-SD03-000	SVTCL	3-Nitroaniline		3300	ug/kg	UL	7/21/97
SJS02-SD03-000	SVTCL	4,6-Dinitro-2-Methylphenol		3300	ug/kg	UL	7/21/97
SJS02-SD03-000	SVTCL	4-Bromophenyl phenylether		1300	ug/kg	UL	7/21/97
SJS02-SD03-000	SVTCL	4-Chloro-3-Methylphenol		1300	ug/kg	UL	7/21/97
SJS02-SD03-000	SVTCL	4-Chloroaniline		1300	ug/kg	UL	7/21/97
SJS02-SD03-000	SVTCL	4-Chlorophenyl-phenylether		1300	ug/kg	UL	7/21/97
SJS02-SD03-000	SVTCL	4-Methylphenol		1300	ug/kg	UL	7/21/97
SJS02-SD03-000	SVTCL	4-Nitroaniline		3300	ug/kg	UL	7/21/97
SJS02-SD03-000	SVTCL	4-Nitrophenol		3300	ug/kg	UL	7/21/97
SJS02-SD03-000	SVTCL	Acenaphthene		1300	ug/kg	UL	7/21/97
SJS02-SD03-000	SVTCL	Acenaphthylene		1300	ug/kg	UL	7/21/97
SJS02-SD03-000	SVTCL	Anthracene	130	1300	ug/kg	L	7/
SJS02-SD03-000	SVTCL	Benzo(a)Anthracene	440	1300	ug/kg	L	7/
SJS02-SD03-000	SVTCL	Benzo(a)Pyrene	660	1300	ug/kg	L	7/2
SJS02-SD03-000	SVTCL	Benzo(b)Fluoranthene	1300	1300	ug/kg	L	7/21/97
SJS02-SD03-000	SVTCL	Benzo(g,h,i)Perylene	580	1300	ug/kg	L	7/21/97
SJS02-SD03-000	SVTCL	Benzo(k)Fluoranthene	440	1300	ug/kg	L	7/21/97
SJS02-SD03-000	SVTCL	Bis(2-chloroethoxy)Methane		1300	ug/kg	UL	7/21/97
SJS02-SD03-000	SVTCL	Bis(2-chloroethyl)Ether		1300	ug/kg	UL	7/21/97
SJS02-SD03-000	SVTCL	Bis(2-Ethylhexyl)Phthalate	360	1300	ug/kg	B	7/21/97
SJS02-SD03-000	SVTCL	Butylbenzylphthalate		1300	ug/kg	UL	7/21/97
SJS02-SD03-000	SVTCL	Carbazole		1300	ug/kg	UL	7/21/97
SJS02-SD03-000	SVTCL	Chrysene	680	1300	ug/kg	L	7/21/97
SJS02-SD03-000	SVTCL	Di-n-Butylphthalate		1300	ug/kg	UL	7/21/97
SJS02-SD03-000	SVTCL	Di-n-Octyl Phthalate		1300	ug/kg	UL	7/21/97
SJS02-SD03-000	SVTCL	Dibenz(a,h)Anthracene		1300	ug/kg	UL	7/21/97
SJS02-SD03-000	SVTCL	Dibenzofuran		1300	ug/kg	UL	7/21/97
SJS02-SD03-000	SVTCL	Diethylphthalate	250	1300	ug/kg	L	7/21/97
SJS02-SD03-000	SVTCL	Dimethyl Phthalate		1300	ug/kg	UL	7/21/97
SJS02-SD03-000	SVTCL	Fluoranthene	850	1300	ug/kg	L	7/21/97
SJS02-SD03-000	SVTCL	Fluorene		1300	ug/kg	UL	7/21/97
SJS02-SD03-000	SVTCL	Hexachlorobenzene		1300	ug/kg	UL	7/21/97
SJS02-SD03-000	SVTCL	Hexachlorobutadiene		1300	ug/kg	UL	7/21/97
SJS02-SD03-000	SVTCL	Hexachlorocyclopentadien		1300	ug/kg	UL	7/21/97
SJS02-SD03-000	SVTCL	Hexachloroethane		1300	ug/kg	UL	7/21/97
SJS02-SD03-000	SVTCL	Indeno(1,2,3-cd)Pyrene	530	1300	ug/kg	L	7/21/97
SJS02-SD03-000	SVTCL	Isophorone		1300	ug/kg	UL	7/21/97
SJS02-SD03-000	SVTCL	N-Nitroso-Di-n-Propylamine		1300	ug/kg	UL	7/21/97
SJS02-SD03-000	SVTCL	N-Nitrosodiphenylamine		1300	ug/kg	UL	7/21/97
SJS02-SD03-000	SVTCL	Naphthalene		1300	ug/kg	UL	7/21/97
SJS02-SD03-000	SVTCL	Nitrobenzene		1300	ug/kg	UL	7/2
SJS02-SD03-000	SVTCL	Pentachlorophenol		3300	ug/kg	UL	7/
SJS02-SD03-000	SVTCL	Phenanthrene	190	1300	ug/kg	L	7/21

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS02-SD03-000	SVTCL	Phenol		1300	ug/kg	UL	7/21/97
SJS02-SD03-000	SVTCL	Pyrene	1100	1300	ug/kg	L	7/21/97
SJS02-SD03-000	VCTCL	1,1,1-Trichloroethane		32	ug/kg	U	7/8/97
SJS02-SD03-000	VCTCL	1,1,2,2-Tetrachloroethane		32	ug/kg	U	7/8/97
SJS02-SD03-000	VCTCL	1,1,2-Trichloroethane		32	ug/kg	U	7/8/97
SJS02-SD03-000	VCTCL	1,1-Dichloroethane		32	ug/kg	U	7/8/97
SJS02-SD03-000	VCTCL	1,1-Dichloroethene		32	ug/kg	U	7/8/97
SJS02-SD03-000	VCTCL	1,2-Dichloroethane		32	ug/kg	U	7/8/97
SJS02-SD03-000	VCTCL	1,2-Dichloroethene (total)		32	ug/kg	U	7/8/97
SJS02-SD03-000	VCTCL	1,2-Dichloropropane		32	ug/kg	U	7/8/97
SJS02-SD03-000	VCTCL	2-Butanone		32	ug/kg	U	7/8/97
SJS02-SD03-000	VCTCL	2-Hexanone		32	ug/kg	U	7/8/97
SJS02-SD03-000	VCTCL	4-Methyl-2-Pentanone		32	ug/kg	U	7/8/97
SJS02-SD03-000	VCTCL	Acetone	120	32	ug/kg		7/8/97
SJS02-SD03-000	VCTCL	Benzene		32	ug/kg	U	7/8/97
SJS02-SD03-000	VCTCL	Bromodichloromethane		32	ug/kg	U	7/8/97
SJS02-SD03-000	VCTCL	Bromoform		32	ug/kg	U	7/8/97
SJS02-SD03-000	VCTCL	Bromomethane		32	ug/kg	U	7/8/97
SJS02-SD03-000	VCTCL	Carbon Disulfide	24	32	ug/kg	J	7/8/97
SJS02-SD03-000	VCTCL	Carbon Tetrachloride		32	ug/kg	U	7/8/97
SJS02-SD03-000	VCTCL	Chlorobenzene		32	ug/kg	U	7/8/97
SJS02-SD03-000	VCTCL	Chloroethane		32	ug/kg	U	7/8/97
SJS02-SD03-000	VCTCL	Chloroform		32	ug/kg	U	7/8/97
SJS02-SD03-000	VCTCL	Chloromethane		32	ug/kg	U	7/8/97
SJS02-SD03-000	VCTCL	cis-1,3-Dichloropropene		32	ug/kg	U	7/8/97
SJS02-SD03-000	VCTCL	Dibromochloromethane		32	ug/kg	U	7/8/97
SJS02-SD03-000	VCTCL	Ethylbenzene		32	ug/kg	U	7/8/97
SJS02-SD03-000	VCTCL	Methylene Chloride	93	32	ug/kg	B	7/8/97
SJS02-SD03-000	VCTCL	Styrene		32	ug/kg	U	7/8/97
SJS02-SD03-000	VCTCL	Tetrachloroethene		32	ug/kg	U	7/8/97
SJS02-SD03-000	VCTCL	Toluene		32	ug/kg	U	7/8/97
SJS02-SD03-000	VCTCL	Total Xylenes		32	ug/kg	U	7/8/97
SJS02-SD03-000	VCTCL	Trans-1,3-Dichloropropene		32	ug/kg	U	7/8/97
SJS02-SD03-000	VCTCL	Trichloroethene		32	ug/kg	U	7/8/97
SJS02-SD03-000	VCTCL	Vinyl Chloride		32	ug/kg	U	7/8/97
SJS02-SD03-000P	CTOTC	Total Organic Carbon	64600	203	mg/kg	L	7/16/97
SJS02-SD03-000P	CTOTP	Total Phosphorous (as P)	20.2	5.1	mg/kg		7/18/97
SJS02-SD03-000P	EXPLO	1,3,5-Trinitrobenzene		2200	ug/L	U	7/9/97
SJS02-SD03-000P	EXPLO	1,3-Dinitrobenzene		2200	ug/L	U	7/9/97
SJS02-SD03-000P	EXPLO	2,4,6-Trinitrotoluene		2200	ug/L	U	7/9/97
SJS02-SD03-000P	EXPLO	2,4-Dinitrotoluene		2200	ug/L	U	7/9/97
SJS02-SD03-000P	EXPLO	2,6-Dinitrotoluene		2200	ug/L	U	7/9/97
SJS02-SD03-000P	EXPLO	2-am-4,6-Dinitrotoluene		2200	ug/L	U	7/9/97
SJS02-SD03-000P	EXPLO	2-Nitrotoluene		2200	ug/L	U	7/9/97
SJS02-SD03-000P	EXPLO	3-Nitrotoluene		2200	ug/L	U	7/9/97
SJS02-SD03-000P	EXPLO	4-am-2,6-Dinitrotoluene		2200	ug/L	U	7/9/97
SJS02-SD03-000P	EXPLO	4-Nitrotoluene		2200	ug/L	U	7/9/97
SJS02-SD03-000P	EXPLO	HMX		2200	ug/L	U	7/9/97
SJS02-SD03-000P	EXPLO	Nitrobenzene		2200	ug/L	U	7/9/97
SJS02-SD03-000P	EXPLO	RDX		2200	ug/L	U	7/9/97
SJS02-SD03-000P	EXPLO	TETRYL		2200	ug/L	U	7/9/97
SJS02-SD03-000P	MCYAN	Aluminum	25900	32.52	mg/kg		7/11/97
SJS02-SD03-000P	MCYAN	Antimony	27.6	1.48	mg/kg	L	7/16/97
SJS02-SD03-000P	MCYAN	Arsenic	19.4	2.22	mg/kg		7/16/97
SJS02-SD03-000P	MCYAN	Barium	109	1.48	mg/kg	J	7/11/97
SJS02-SD03-000P	MCYAN	Beryllium	1.1	0.74	mg/kg	J	7/11/97
SJS02-SD03-000P	MCYAN	Cadmium	2.1	0.37	mg/kg	J	7/16/97
SJS02-SD03-000P	MCYAN	Calcium	11600	64.3	mg/kg	J	7/11/97
SJS02-SD03-000P	MCYAN	Chromium	2630	5.17	mg/kg		7/11/97
SJS02-SD03-000P	MCYAN	Cobalt	10.7	5.91	mg/kg	J	7/11/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date An
SJS02-SD03-000P	MCYAN	Copper	2620	4.43	mg/kg		7/
SJS02-SD03-000P	MCYAN	Cyanide		2	mg/kg	U	7/
SJS02-SD03-000P	MCYAN	Iron	30700	12.56	mg/kg		7/11/97
SJS02-SD03-000P	MCYAN	Lead	545	0.74	mg/kg		7/16/97
SJS02-SD03-000P	MCYAN	Magnesium	6480	133.78	mg/kg	J	7/11/97
SJS02-SD03-000P	MCYAN	Manganese	224	1.48	mg/kg		7/11/97
SJS02-SD03-000P	MCYAN	Mercury	0.79	0.18	mg/kg		7/15/97
SJS02-SD03-000P	MCYAN	Nickel	40.9	5.17	mg/kg		7/11/97
SJS02-SD03-000P	MCYAN	Potassium	3380	164.08	mg/kg	J	7/11/97
SJS02-SD03-000P	MCYAN	Selenium		2.22	mg/kg	U	7/16/97
SJS02-SD03-000P	MCYAN	Silver	1.5	0.74	mg/kg	B	7/16/97
SJS02-SD03-000P	MCYAN	Sodium	16300	42.87	mg/kg		7/11/97
SJS02-SD03-000P	MCYAN	Thallium	2.2	1.48	mg/kg	K	7/16/97
SJS02-SD03-000P	MCYAN	Vanadium	97.9	6.65	mg/kg		7/11/97
SJS02-SD03-000P	MCYAN	Zinc	1400	3.7	mg/kg	L	7/11/97
SJS02-SD03-000P	PSPCB	4,4'-DDD	210	13	ug/kg		7/27/97
SJS02-SD03-000P	PSPCB	4,4'-DDE	110	13	ug/kg	J	7/27/97
SJS02-SD03-000P	PSPCB	4,4'-DDT	8.8	13	ug/kg	J	7/27/97
SJS02-SD03-000P	PSPCB	Aldrin		6.8	ug/kg	U	7/27/97
SJS02-SD03-000P	PSPCB	alpha-BHC		6.8	ug/kg	U	7/27/97
SJS02-SD03-000P	PSPCB	alpha-Chlordane	18	6.8	ug/kg		7/27/97
SJS02-SD03-000P	PSPCB	Aroclor-1016		130	ug/kg	U	7/27/97
SJS02-SD03-000P	PSPCB	Aroclor-1221		270	ug/kg	U	7/27/97
SJS02-SD03-000P	PSPCB	Aroclor-1232		130	ug/kg	U	7/27/97
SJS02-SD03-000P	PSPCB	Aroclor-1242		130	ug/kg	U	7/27/97
SJS02-SD03-000P	PSPCB	Aroclor-1248		130	ug/kg	U	7/27/97
SJS02-SD03-000P	PSPCB	Aroclor-1254		130	ug/kg	U	7/27/97
SJS02-SD03-000P	PSPCB	Aroclor-1260	69	130	ug/kg	J	7/27/97
SJS02-SD03-000P	PSPCB	beta-BHC		6.8	ug/kg	U	7/2
SJS02-SD03-000P	PSPCB	delta-BHC		6.8	ug/kg	U	7/
SJS02-SD03-000P	PSPCB	Dieldrin	30	13	ug/kg	J	7/2
SJS02-SD03-000P	PSPCB	Endosulfan I		6.8	ug/kg	U	7/27/97
SJS02-SD03-000P	PSPCB	Endosulfan II		13	ug/kg	U	7/27/97
SJS02-SD03-000P	PSPCB	Endosulfan Sulfate		13	ug/kg	U	7/27/97
SJS02-SD03-000P	PSPCB	Endrin		13	ug/kg	U	7/27/97
SJS02-SD03-000P	PSPCB	Endrin Aldehyde		13	ug/kg	U	7/27/97
SJS02-SD03-000P	PSPCB	Endrin Ketone		13	ug/kg	U	7/27/97
SJS02-SD03-000P	PSPCB	gamma-BHC		6.8	ug/kg	U	7/27/97
SJS02-SD03-000P	PSPCB	gamma-Chlordane	21	6.8	ug/kg	J	7/27/97
SJS02-SD03-000P	PSPCB	Heptachlor		6.8	ug/kg	U	7/27/97
SJS02-SD03-000P	PSPCB	Heptachlor Epoxide		6.8	ug/kg	U	7/27/97
SJS02-SD03-000P	PSPCB	Methoxychlor		68	ug/kg	U	7/27/97
SJS02-SD03-000P	PSPCB	Toxaphene		680	ug/kg	U	7/27/97
SJS02-SD03-000P	SVTCL	1,2,4-Trichlorobenzene		1400	ug/kg	U	7/23/97
SJS02-SD03-000P	SVTCL	1,2-Dichlorobenzene		1400	ug/kg	U	7/23/97
SJS02-SD03-000P	SVTCL	1,3-Dichlorobenzene		1400	ug/kg	U	7/23/97
SJS02-SD03-000P	SVTCL	1,4-Dichlorobenzene		1400	ug/kg	U	7/23/97
SJS02-SD03-000P	SVTCL	2,2'-oxybis(1-Chloropropane		1400	ug/kg	U	7/23/97
SJS02-SD03-000P	SVTCL	2,4,5-Trichlorophenol		3600	ug/kg	UL	7/23/97
SJS02-SD03-000P	SVTCL	2,4,6-Trichlorophenol		1400	ug/kg	UL	7/23/97
SJS02-SD03-000P	SVTCL	2,4-Dichlorophenol		1400	ug/kg	UL	7/23/97
SJS02-SD03-000P	SVTCL	2,4-Dimethylphenol		1400	ug/kg	UL	7/23/97
SJS02-SD03-000P	SVTCL	2,4-Dinitrophenol		3600	ug/kg	UL	7/23/97
SJS02-SD03-000P	SVTCL	2,4-Dinitrotoluene		1400	ug/kg	U	7/23/97
SJS02-SD03-000P	SVTCL	2,6-Dinitrotoluene		1400	ug/kg	U	7/23/97
SJS02-SD03-000P	SVTCL	2-Chloronaphthalene		1400	ug/kg	U	7/23/97
SJS02-SD03-000P	SVTCL	2-Chlorophenol		1400	ug/kg	UL	7/23/97
SJS02-SD03-000P	SVTCL	2-Methylnaphthalene		1400	ug/kg	U	7/2
SJS02-SD03-000P	SVTCL	2-Methylphenol		1400	ug/kg	UL	7/
SJS02-SD03-000P	SVTCL	2-Nitroaniline		3600	ug/kg	U	7/23,

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS02-SD03-000P	SVTCL	2-Nitrophenol		1400	ug/kg	UL	7/23/97
SJS02-SD03-000P	SVTCL	3,3'-Dichlorobenzidine		1400	ug/kg	U	7/23/97
SJS02-SD03-000P	SVTCL	3-Nitroaniline		3600	ug/kg	U	7/23/97
SJS02-SD03-000P	SVTCL	4,6-Dinitro-2-Methylphenol		3600	ug/kg	UL	7/23/97
SJS02-SD03-000P	SVTCL	4-Bromophenyl phenylether		1400	ug/kg	U	7/23/97
SJS02-SD03-000P	SVTCL	4-Chloro-3-Methylphenol		1400	ug/kg	UL	7/23/97
SJS02-SD03-000P	SVTCL	4-Chloroaniline		1400	ug/kg	U	7/23/97
SJS02-SD03-000P	SVTCL	4-Chlorophenyl-phenylether		1400	ug/kg	U	7/23/97
SJS02-SD03-000P	SVTCL	4-Methylphenol		1400	ug/kg	UL	7/23/97
SJS02-SD03-000P	SVTCL	4-Nitroaniline		3600	ug/kg	U	7/23/97
SJS02-SD03-000P	SVTCL	4-Nitrophenol		3600	ug/kg	UL	7/23/97
SJS02-SD03-000P	SVTCL	Acenaphthene		1400	ug/kg	U	7/23/97
SJS02-SD03-000P	SVTCL	Acenaphthylene		1400	ug/kg	U	7/23/97
SJS02-SD03-000P	SVTCL	Anthracene		1400	ug/kg	U	7/23/97
SJS02-SD03-000P	SVTCL	Benzo(a)Anthracene	240	1400	ug/kg	J	7/23/97
SJS02-SD03-000P	SVTCL	Benzo(a)Pyrene	370	1400	ug/kg	J	7/23/97
SJS02-SD03-000P	SVTCL	Benzo(b)Fluoranthene	740	1400	ug/kg	J	7/23/97
SJS02-SD03-000P	SVTCL	Benzo(g,h,i)Perylene	310	1400	ug/kg	J	7/23/97
SJS02-SD03-000P	SVTCL	Benzo(k)Fluoranthene	470	1400	ug/kg	J	7/23/97
SJS02-SD03-000P	SVTCL	Bis(2-chloroethoxy)Methane		1400	ug/kg	U	7/23/97
SJS02-SD03-000P	SVTCL	Bis(2-chloroethyl)Ether		1400	ug/kg	U	7/23/97
SJS02-SD03-000P	SVTCL	Bis(2-Ethylhexyl)Phthalate	230	1400	ug/kg	B	7/23/97
SJS02-SD03-000P	SVTCL	Butylbenzylphthalate		1400	ug/kg	U	7/23/97
SJS02-SD03-000P	SVTCL	Carbazole		1400	ug/kg	U	7/23/97
SJS02-SD03-000P	SVTCL	Chrysene	330	1400	ug/kg	J	7/23/97
SJS02-SD03-000P	SVTCL	Di-n-Butylphthalate		1400	ug/kg	U	7/23/97
SJS02-SD03-000P	SVTCL	Di-n-Octyl Phthalate		1400	ug/kg	U	7/23/97
SJS02-SD03-000P	SVTCL	Dibenz(a,h)Anthracene		1400	ug/kg	U	7/23/97
SJS02-SD03-000P	SVTCL	Dibenzofuran		1400	ug/kg	U	7/23/97
SJS02-SD03-000P	SVTCL	Diethylphthalate		1400	ug/kg	U	7/23/97
SJS02-SD03-000P	SVTCL	Dimethyl Phthalate		1400	ug/kg	U	7/23/97
SJS02-SD03-000P	SVTCL	Fluoranthene	510	1400	ug/kg	J	7/23/97
SJS02-SD03-000P	SVTCL	Fluorene		1400	ug/kg	U	7/23/97
SJS02-SD03-000P	SVTCL	Hexachlorobenzene		1400	ug/kg	U	7/23/97
SJS02-SD03-000P	SVTCL	Hexachlorobutadiene		1400	ug/kg	U	7/23/97
SJS02-SD03-000P	SVTCL	Hexachlorocyclopentadien		1400	ug/kg	U	7/23/97
SJS02-SD03-000P	SVTCL	Hexachloroethane		1400	ug/kg	U	7/23/97
SJS02-SD03-000P	SVTCL	Indeno(1,2,3-cd)Pyrene	260	1400	ug/kg	J	7/23/97
SJS02-SD03-000P	SVTCL	Isophorone		1400	ug/kg	U	7/23/97
SJS02-SD03-000P	SVTCL	N-Nitroso-Di-n-Propylamine		1400	ug/kg	U	7/23/97
SJS02-SD03-000P	SVTCL	N-Nitrosodiphenylamine		1400	ug/kg	U	7/23/97
SJS02-SD03-000P	SVTCL	Naphthalene		1400	ug/kg	U	7/23/97
SJS02-SD03-000P	SVTCL	Nitrobenzene		1400	ug/kg	U	7/23/97
SJS02-SD03-000P	SVTCL	Pentachlorophenol		3600	ug/kg	UL	7/23/97
SJS02-SD03-000P	SVTCL	Phenanthrene		1400	ug/kg	U	7/23/97
SJS02-SD03-000P	SVTCL	Phenol		1400	ug/kg	UL	7/23/97
SJS02-SD03-000P	SVTCL	Pyrene	600	1400	ug/kg	J	7/23/97
SJS02-SD03-000P	VCTCL	1,1,1-Trichloroethane		37	ug/kg	U	7/8/97
SJS02-SD03-000P	VCTCL	1,1,2,2-Tetrachloroethane		37	ug/kg	U	7/8/97
SJS02-SD03-000P	VCTCL	1,1,2-Trichloroethane		37	ug/kg	U	7/8/97
SJS02-SD03-000P	VCTCL	1,1-Dichloroethane		37	ug/kg	U	7/8/97
SJS02-SD03-000P	VCTCL	1,1-Dichloroethene		37	ug/kg	U	7/8/97
SJS02-SD03-000P	VCTCL	1,2-Dichloroethane		37	ug/kg	U	7/8/97
SJS02-SD03-000P	VCTCL	1,2-Dichloroethene (total)	9	37	ug/kg	J	7/8/97
SJS02-SD03-000P	VCTCL	1,2-Dichloropropane		37	ug/kg	U	7/8/97
SJS02-SD03-000P	VCTCL	2-Butanone		37	ug/kg	U	7/8/97
SJS02-SD03-000P	VCTCL	2-Hexanone		37	ug/kg	U	7/8/97
SJS02-SD03-000P	VCTCL	4-Methyl-2-Pentanone		37	ug/kg	U	7/8/97
SJS02-SD03-000P	VCTCL	Acetone	450	37	ug/kg		7/8/97
SJS02-SD03-000P	VCTCL	Benzene		37	ug/kg	U	7/8/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Ana
SJS02-SD03-000P	VCTCL	Bromodichloromethane		37	ug/kg	U	7
SJS02-SD03-000P	VCTCL	Bromoform		37	ug/kg	U	7
SJS02-SD03-000P	VCTCL	Bromomethane		37	ug/kg	U	7/8/97
SJS02-SD03-000P	VCTCL	Carbon Disulfide	81	37	ug/kg		7/8/97
SJS02-SD03-000P	VCTCL	Carbon Tetrachloride		37	ug/kg	U	7/8/97
SJS02-SD03-000P	VCTCL	Chlorobenzene		37	ug/kg	U	7/8/97
SJS02-SD03-000P	VCTCL	Chloroethane		37	ug/kg	U	7/8/97
SJS02-SD03-000P	VCTCL	Chloroform		37	ug/kg	U	7/8/97
SJS02-SD03-000P	VCTCL	Chloromethane		37	ug/kg	U	7/8/97
SJS02-SD03-000P	VCTCL	cis-1,3-Dichloropropene		37	ug/kg	U	7/8/97
SJS02-SD03-000P	VCTCL	Dibromochloromethane		37	ug/kg	U	7/8/97
SJS02-SD03-000P	VCTCL	Ethylbenzene		37	ug/kg	U	7/8/97
SJS02-SD03-000P	VCTCL	Methylene Chloride	140	37	ug/kg	B	7/8/97
SJS02-SD03-000P	VCTCL	Styrene		37	ug/kg	U	7/8/97
SJS02-SD03-000P	VCTCL	Tetrachloroethene		37	ug/kg	U	7/8/97
SJS02-SD03-000P	VCTCL	Toluene		37	ug/kg	U	7/8/97
SJS02-SD03-000P	VCTCL	Total Xylenes		37	ug/kg	U	7/8/97
SJS02-SD03-000P	VCTCL	Trans-1,3-Dichloropropene		37	ug/kg	U	7/8/97
SJS02-SD03-000P	VCTCL	Trichloroethene		37	ug/kg	U	7/8/97
SJS02-SD03-000P	VCTCL	Vinyl Chloride		37	ug/kg	U	7/8/97
SJS02-SS01-000	CTOTP	Total Phosphorous (as P)	1.5	1.3	mg/kg		7/16/97
SJS02-SS01-000	MCYAN	Aluminum	5120	8.43	mg/kg		7/8/97
SJS02-SS01-000	MCYAN	Antimony		0.38	mg/kg	U	7/9/97
SJS02-SS01-000	MCYAN	Arsenic	3.4	0.58	mg/kg		7/9/97
SJS02-SS01-000	MCYAN	Barium	14.6	0.38	mg/kg	J	7/8/97
SJS02-SS01-000	MCYAN	Beryllium		0.19	mg/kg	U	7/8/97
SJS02-SS01-000	MCYAN	Cadmium		0.1	mg/kg	U	7/9/97
SJS02-SS01-000	MCYAN	Calcium	541	16.68	mg/kg	J	7/8/97
SJS02-SS01-000	MCYAN	Chromium	10.4	1.34	mg/kg		7/8
SJS02-SS01-000	MCYAN	Cobalt	1.7	1.53	mg/kg	J	7
SJS02-SS01-000	MCYAN	Copper	5.1	1.15	mg/kg		7/
SJS02-SS01-000	MCYAN	Cyanide		0.53	mg/kg	U	7/3/97
SJS02-SS01-000	MCYAN	Iron	6120	3.26	mg/kg		7/8/97
SJS02-SS01-000	MCYAN	Lead	8.8	0.19	mg/kg		7/9/97
SJS02-SS01-000	MCYAN	Magnesium	496	34.69	mg/kg	J	7/8/97
SJS02-SS01-000	MCYAN	Manganese	18.1	0.38	mg/kg		7/8/97
SJS02-SS01-000	MCYAN	Mercury	0.07	0.05	mg/kg	J	7/10/97
SJS02-SS01-000	MCYAN	Nickel	3.4	1.34	mg/kg	J	7/8/97
SJS02-SS01-000	MCYAN	Potassium	398	42.55	mg/kg	J	7/8/97
SJS02-SS01-000	MCYAN	Selenium		0.58	mg/kg	U	7/9/97
SJS02-SS01-000	MCYAN	Silver	0.9	0.19	mg/kg	B	7/9/97
SJS02-SS01-000	MCYAN	Sodium	42.4	11.12	mg/kg	B	7/8/97
SJS02-SS01-000	MCYAN	Thallium		0.38	mg/kg	U	7/9/97
SJS02-SS01-000	MCYAN	Vanadium	15.6	1.73	mg/kg		7/8/97
SJS02-SS01-000	MCYAN	Zinc	13.2	0.96	mg/kg	B	7/8/97
SJS02-SS01-000	PSPCB	4,4'-DDD	19	7.4	ug/kg		7/21/97
SJS02-SS01-000	PSPCB	4,4'-DDE	82	7.4	ug/kg	J	7/21/97
SJS02-SS01-000	PSPCB	4,4'-DDT	54	7.4	ug/kg		7/21/97
SJS02-SS01-000	PSPCB	Aldrin		3.8	ug/kg	U	7/21/97
SJS02-SS01-000	PSPCB	alpha-BHC		3.8	ug/kg	U	7/21/97
SJS02-SS01-000	PSPCB	alpha-Chlordane		3.8	ug/kg	U	7/21/97
SJS02-SS01-000	PSPCB	Aroclor-1016		74	ug/kg	U	7/21/97
SJS02-SS01-000	PSPCB	Aroclor-1221		150	ug/kg	U	7/21/97
SJS02-SS01-000	PSPCB	Aroclor-1232		74	ug/kg	U	7/21/97
SJS02-SS01-000	PSPCB	Aroclor-1242		74	ug/kg	U	7/21/97
SJS02-SS01-000	PSPCB	Aroclor-1248		74	ug/kg	U	7/21/97
SJS02-SS01-000	PSPCB	Aroclor-1254		74	ug/kg	U	7/21/97
SJS02-SS01-000	PSPCB	Aroclor-1260		74	ug/kg	U	7/21
SJS02-SS01-000	PSPCB	beta-BHC		3.8	ug/kg	U	7/
SJS02-SS01-000	PSPCB	delta-BHC		3.8	ug/kg	U	7/21

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS02-SS01-000	PSPCB	Dieldrin		7.4	ug/kg	U	7/21/97
SJS02-SS01-000	PSPCB	Endosulfan I		3.8	ug/kg	U	7/21/97
SJS02-SS01-000	PSPCB	Endosulfan II		7.4	ug/kg	U	7/21/97
SJS02-SS01-000	PSPCB	Endosulfan Sulfate		7.4	ug/kg	U	7/21/97
SJS02-SS01-000	PSPCB	Endrin		7.4	ug/kg	U	7/21/97
SJS02-SS01-000	PSPCB	Endrin Aldehyde		7.4	ug/kg	U	7/21/97
SJS02-SS01-000	PSPCB	Endrin Ketone		7.4	ug/kg	U	7/21/97
SJS02-SS01-000	PSPCB	gamma-BHC		3.8	ug/kg	U	7/21/97
SJS02-SS01-000	PSPCB	gamma-Chlordane		3.8	ug/kg	U	7/21/97
SJS02-SS01-000	PSPCB	Heptachlor		3.8	ug/kg	U	7/21/97
SJS02-SS01-000	PSPCB	Heptachlor Epoxide		3.8	ug/kg	U	7/21/97
SJS02-SS01-000	PSPCB	Methoxychlor		38	ug/kg	U	7/21/97
SJS02-SS01-000	PSPCB	Toxaphene		380	ug/kg	U	7/21/97
SJS02-SS01-000	SVTCL	1,2,4-Trichlorobenzene		370	ug/kg	U	7/10/97
SJS02-SS01-000	SVTCL	1,2-Dichlorobenzene		370	ug/kg	U	7/10/97
SJS02-SS01-000	SVTCL	1,3-Dichlorobenzene		370	ug/kg	U	7/10/97
SJS02-SS01-000	SVTCL	1,4-Dichlorobenzene		370	ug/kg	U	7/10/97
SJS02-SS01-000	SVTCL	2,2'-oxybis(1-Chloropropane		370	ug/kg	U	7/10/97
SJS02-SS01-000	SVTCL	2,4,5-Trichlorophenol		920	ug/kg	U	7/10/97
SJS02-SS01-000	SVTCL	2,4,6-Trichlorophenol		370	ug/kg	U	7/10/97
SJS02-SS01-000	SVTCL	2,4-Dichlorophenol		370	ug/kg	U	7/10/97
SJS02-SS01-000	SVTCL	2,4-Dimethylphenol		370	ug/kg	U	7/10/97
SJS02-SS01-000	SVTCL	2,4-Dinitrophenol		920	ug/kg	U	7/10/97
SJS02-SS01-000	SVTCL	2,4-Dinitrotoluene		370	ug/kg	U	7/10/97
SJS02-SS01-000	SVTCL	2,6-Dinitrotoluene		370	ug/kg	U	7/10/97
SJS02-SS01-000	SVTCL	2-Chloronaphthalene		370	ug/kg	U	7/10/97
SJS02-SS01-000	SVTCL	2-Chlorophenol		370	ug/kg	U	7/10/97
SJS02-SS01-000	SVTCL	2-Methylnaphthalene		370	ug/kg	U	7/10/97
SJS02-SS01-000	SVTCL	2-Methylphenol		370	ug/kg	U	7/10/97
SJS02-SS01-000	SVTCL	2-Nitroaniline		920	ug/kg	U	7/10/97
SJS02-SS01-000	SVTCL	2-Nitrophenol		370	ug/kg	U	7/10/97
SJS02-SS01-000	SVTCL	3,3'-Dichlorobenzidine		370	ug/kg	U	7/10/97
SJS02-SS01-000	SVTCL	3-Nitroaniline		920	ug/kg	UJ	7/10/97
SJS02-SS01-000	SVTCL	4,6-Dinitro-2-Methylphenol		920	ug/kg	U	7/10/97
SJS02-SS01-000	SVTCL	4-Bromophenyl phenylether		370	ug/kg	U	7/10/97
SJS02-SS01-000	SVTCL	4-Chloro-3-Methylphenol		370	ug/kg	U	7/10/97
SJS02-SS01-000	SVTCL	4-Chloroaniline		370	ug/kg	U	7/10/97
SJS02-SS01-000	SVTCL	4-Chlorophenyl-phenylether		370	ug/kg	U	7/10/97
SJS02-SS01-000	SVTCL	4-Methylphenol		370	ug/kg	U	7/10/97
SJS02-SS01-000	SVTCL	4-Nitroaniline		920	ug/kg	U	7/10/97
SJS02-SS01-000	SVTCL	4-Nitrophenol		920	ug/kg	U	7/10/97
SJS02-SS01-000	SVTCL	Acenaphthene		370	ug/kg	U	7/10/97
SJS02-SS01-000	SVTCL	Acenaphthylene		370	ug/kg	U	7/10/97
SJS02-SS01-000	SVTCL	Anthracene		370	ug/kg	U	7/10/97
SJS02-SS01-000	SVTCL	Benzo(a)Anthracene		370	ug/kg	U	7/10/97
SJS02-SS01-000	SVTCL	Benzo(a)Pyrene		370	ug/kg	U	7/10/97
SJS02-SS01-000	SVTCL	Benzo(b)Fluoranthene		370	ug/kg	U	7/10/97
SJS02-SS01-000	SVTCL	Benzo(g,h,i)Perylene		370	ug/kg	U	7/10/97
SJS02-SS01-000	SVTCL	Benzo(k)Fluoranthene		370	ug/kg	U	7/10/97
SJS02-SS01-000	SVTCL	Bis(2-chloroethoxy)Methane		370	ug/kg	U	7/10/97
SJS02-SS01-000	SVTCL	Bis(2-chloroethyl)Ether		370	ug/kg	U	7/10/97
SJS02-SS01-000	SVTCL	Bis(2-Ethylhexyl)Phthalate	49	370	ug/kg	B	7/10/97
SJS02-SS01-000	SVTCL	Butylbenzylphthalate		370	ug/kg	U	7/10/97
SJS02-SS01-000	SVTCL	Carbazole		370	ug/kg	U	7/10/97
SJS02-SS01-000	SVTCL	Chrysene		370	ug/kg	U	7/10/97
SJS02-SS01-000	SVTCL	Di-n-Butylphthalate		370	ug/kg	U	7/10/97
SJS02-SS01-000	SVTCL	Di-n-Octyl Phthalate		370	ug/kg	U	7/10/97
SJS02-SS01-000	SVTCL	Dibenz(a,h)Anthracene		370	ug/kg	U	7/10/97
SJS02-SS01-000	SVTCL	Dibenzofuran		370	ug/kg	U	7/10/97
SJS02-SS01-000	SVTCL	Diethylphthalate		370	ug/kg	U	7/10/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Ana
SJS02-SS01-000	SVTCL	Dimethyl Phthalate		370	ug/kg	U	7/
SJS02-SS01-000	SVTCL	Fluoranthene		370	ug/kg	U	7/
SJS02-SS01-000	SVTCL	Fluorene		370	ug/kg	U	7/10/97
SJS02-SS01-000	SVTCL	Hexachlorobenzene		370	ug/kg	U	7/10/97
SJS02-SS01-000	SVTCL	Hexachlorobutadiene		370	ug/kg	U	7/10/97
SJS02-SS01-000	SVTCL	Hexachlorocyclopentadien		370	ug/kg	U	7/10/97
SJS02-SS01-000	SVTCL	Hexachloroethane		370	ug/kg	U	7/10/97
SJS02-SS01-000	SVTCL	Indeno(1,2,3-cd)Pyrene		370	ug/kg	U	7/10/97
SJS02-SS01-000	SVTCL	Isophorone		370	ug/kg	U	7/10/97
SJS02-SS01-000	SVTCL	N-Nitroso-Di-n-Propylamine		370	ug/kg	U	7/10/97
SJS02-SS01-000	SVTCL	N-Nitrosodiphenylamine		370	ug/kg	U	7/10/97
SJS02-SS01-000	SVTCL	Naphthalene		370	ug/kg	U	7/10/97
SJS02-SS01-000	SVTCL	Nitrobenzene		370	ug/kg	U	7/10/97
SJS02-SS01-000	SVTCL	Pentachlorophenol		920	ug/kg	U	7/10/97
SJS02-SS01-000	SVTCL	Phenanthrene		370	ug/kg	U	7/10/97
SJS02-SS01-000	SVTCL	Phenol		370	ug/kg	U	7/10/97
SJS02-SS01-000	SVTCL	Pyrene		370	ug/kg	U	7/10/97
SJS02-SS01-000	VCTCL	1,1,1-Trichloroethane		11	ug/kg	U	7/6/97
SJS02-SS01-000	VCTCL	1,1,2,2-Tetrachloroethane		11	ug/kg	U	7/6/97
SJS02-SS01-000	VCTCL	1,1,2-Trichloroethane		11	ug/kg	U	7/6/97
SJS02-SS01-000	VCTCL	1,1-Dichloroethane		11	ug/kg	U	7/6/97
SJS02-SS01-000	VCTCL	1,1-Dichloroethene		11	ug/kg	U	7/6/97
SJS02-SS01-000	VCTCL	1,2-Dichloroethane		11	ug/kg	U	7/6/97
SJS02-SS01-000	VCTCL	1,2-Dichloroethene (total)		11	ug/kg	U	7/6/97
SJS02-SS01-000	VCTCL	1,2-Dichloropropane		11	ug/kg	U	7/6/97
SJS02-SS01-000	VCTCL	2-Butanone		11	ug/kg	U	7/6/97
SJS02-SS01-000	VCTCL	2-Hexanone		11	ug/kg	U	7/6/97
SJS02-SS01-000	VCTCL	4-Methyl-2-Pentanone		11	ug/kg	U	7/6/97
SJS02-SS01-000	VCTCL	Acetone		11	ug/kg	U	7/
SJS02-SS01-000	VCTCL	Benzene		11	ug/kg	U	7/
SJS02-SS01-000	VCTCL	Bromodichloromethane		11	ug/kg	U	7/
SJS02-SS01-000	VCTCL	Bromoform		11	ug/kg	U	7/6/97
SJS02-SS01-000	VCTCL	Bromomethane		11	ug/kg	U	7/6/97
SJS02-SS01-000	VCTCL	Carbon Disulfide		11	ug/kg	U	7/6/97
SJS02-SS01-000	VCTCL	Carbon Tetrachloride		11	ug/kg	U	7/6/97
SJS02-SS01-000	VCTCL	Chlorobenzene		11	ug/kg	U	7/6/97
SJS02-SS01-000	VCTCL	Chloroethane		11	ug/kg	U	7/6/97
SJS02-SS01-000	VCTCL	Chloroform		11	ug/kg	U	7/6/97
SJS02-SS01-000	VCTCL	Chloromethane		11	ug/kg	U	7/6/97
SJS02-SS01-000	VCTCL	cis-1,3-Dichloropropene		11	ug/kg	U	7/6/97
SJS02-SS01-000	VCTCL	Dibromochloromethane		11	ug/kg	U	7/6/97
SJS02-SS01-000	VCTCL	Ethylbenzene		11	ug/kg	U	7/6/97
SJS02-SS01-000	VCTCL	Methylene Chloride	5	11	ug/kg	B	7/6/97
SJS02-SS01-000	VCTCL	Styrene		11	ug/kg	U	7/6/97
SJS02-SS01-000	VCTCL	Tetrachloroethene		11	ug/kg	U	7/6/97
SJS02-SS01-000	VCTCL	Toluene		11	ug/kg	U	7/6/97
SJS02-SS01-000	VCTCL	Total Xylenes		11	ug/kg	U	7/6/97
SJS02-SS01-000	VCTCL	Trans-1,3-Dichloropropene		11	ug/kg	U	7/6/97
SJS02-SS01-000	VCTCL	Trichloroethene		11	ug/kg	U	7/6/97
SJS02-SS01-000	VCTCL	Vinyl Chloride		11	ug/kg	U	7/6/97
SJS02-SS02-000	CTOTP	Total Phosphorous (as P)	2.3	1.3	mg/kg		7/16/97
SJS02-SS02-000	MCYAN	Aluminum	8810	7.74	mg/kg		7/8/97
SJS02-SS02-000	MCYAN	Antimony		0.35	mg/kg	U	7/9/97
SJS02-SS02-000	MCYAN	Arsenic	2.2	0.53	mg/kg		7/9/97
SJS02-SS02-000	MCYAN	Barium	59.6	0.35	mg/kg		7/8/97
SJS02-SS02-000	MCYAN	Beryllium	0.23	0.18	mg/kg	J	7/8/97
SJS02-SS02-000	MCYAN	Cadmium	0.25	0.09	mg/kg	J	7/9/97
SJS02-SS02-000	MCYAN	Calcium	1060	15.31	mg/kg		7/
SJS02-SS02-000	MCYAN	Chromium	10.7	1.23	mg/kg		7/
SJS02-SS02-000	MCYAN	Cobalt		1.41	mg/kg	U	7/6/

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS02-SS02-000	MCYAN	Copper	8.4	1.06	mg/kg		7/8/97
SJS02-SS02-000	MCYAN	Cyanide		0.51	mg/kg	U	7/3/97
SJS02-SS02-000	MCYAN	Iron	2560	2.99	mg/kg		7/8/97
SJS02-SS02-000	MCYAN	Lead	23.8	0.18	mg/kg		7/9/97
SJS02-SS02-000	MCYAN	Magnesium	478	31.85	mg/kg	J	7/8/97
SJS02-SS02-000	MCYAN	Manganese	27.2	0.35	mg/kg		7/8/97
SJS02-SS02-000	MCYAN	Mercury	0.23	0.05	mg/kg		7/10/97
SJS02-SS02-000	MCYAN	Nickel	3.6	1.23	mg/kg	J	7/8/97
SJS02-SS02-000	MCYAN	Potassium	562	39.07	mg/kg	J	7/8/97
SJS02-SS02-000	MCYAN	Selenium	1	0.53	mg/kg		7/9/97
SJS02-SS02-000	MCYAN	Silver	0.71	0.18	mg/kg	B	7/9/97
SJS02-SS02-000	MCYAN	Sodium	76.1	10.21	mg/kg	B	7/8/97
SJS02-SS02-000	MCYAN	Thallium		0.35	mg/kg	U	7/9/97
SJS02-SS02-000	MCYAN	Vanadium	12.5	1.58	mg/kg		7/8/97
SJS02-SS02-000	MCYAN	Zinc	54.6	0.88	mg/kg		7/8/97
SJS02-SS02-000	PSPCB	4,4'-DDD	2.8	3.6	ug/kg	J	7/23/97
SJS02-SS02-000	PSPCB	4,4'-DDE	19	3.6	ug/kg		7/23/97
SJS02-SS02-000	PSPCB	4,4'-DDT	9.2	3.6	ug/kg	J	7/23/97
SJS02-SS02-000	PSPCB	Aldrin		1.8	ug/kg	U	7/23/97
SJS02-SS02-000	PSPCB	alpha-BHC		1.8	ug/kg	U	7/23/97
SJS02-SS02-000	PSPCB	alpha-Chlordane		1.8	ug/kg	U	7/23/97
SJS02-SS02-000	PSPCB	Aroclor-1016		36	ug/kg	U	7/23/97
SJS02-SS02-000	PSPCB	Aroclor-1221		72	ug/kg	U	7/23/97
SJS02-SS02-000	PSPCB	Aroclor-1232		36	ug/kg	U	7/23/97
SJS02-SS02-000	PSPCB	Aroclor-1242		36	ug/kg	U	7/23/97
SJS02-SS02-000	PSPCB	Aroclor-1248		36	ug/kg	U	7/23/97
SJS02-SS02-000	PSPCB	Aroclor-1254		36	ug/kg	U	7/23/97
SJS02-SS02-000	PSPCB	Aroclor-1260	15	36	ug/kg	J	7/23/97
SJS02-SS02-000	PSPCB	beta-BHC		1.8	ug/kg	U	7/23/97
SJS02-SS02-000	PSPCB	delta-BHC		1.8	ug/kg	U	7/23/97
SJS02-SS02-000	PSPCB	Dieldrin	3.8	3.6	ug/kg	J	7/23/97
SJS02-SS02-000	PSPCB	Endosulfan I		1.8	ug/kg	U	7/23/97
SJS02-SS02-000	PSPCB	Endosulfan II		3.6	ug/kg	U	7/23/97
SJS02-SS02-000	PSPCB	Endosulfan Sulfate		3.6	ug/kg	U	7/23/97
SJS02-SS02-000	PSPCB	Endrin		3.6	ug/kg	U	7/23/97
SJS02-SS02-000	PSPCB	Endrin Aldehyde		3.6	ug/kg	U	7/23/97
SJS02-SS02-000	PSPCB	Endrin Ketone		3.6	ug/kg	U	7/23/97
SJS02-SS02-000	PSPCB	gamma-BHC		1.8	ug/kg	U	7/23/97
SJS02-SS02-000	PSPCB	gamma-Chlordane		1.8	ug/kg	U	7/23/97
SJS02-SS02-000	PSPCB	Heptachlor		1.8	ug/kg	U	7/23/97
SJS02-SS02-000	PSPCB	Heptachlor Epoxide		1.8	ug/kg	U	7/23/97
SJS02-SS02-000	PSPCB	Methoxychlor		18	ug/kg	U	7/23/97
SJS02-SS02-000	PSPCB	Toxaphene		180	ug/kg	U	7/23/97
SJS02-SS02-000	SVTCL	1,2,4-Trichlorobenzene		350	ug/kg	U	7/10/97
SJS02-SS02-000	SVTCL	1,2-Dichlorobenzene		350	ug/kg	U	7/10/97
SJS02-SS02-000	SVTCL	1,3-Dichlorobenzene		350	ug/kg	U	7/10/97
SJS02-SS02-000	SVTCL	1,4-Dichlorobenzene		350	ug/kg	U	7/10/97
SJS02-SS02-000	SVTCL	2,2'-oxybis(1-Chloropropane		350	ug/kg	U	7/10/97
SJS02-SS02-000	SVTCL	2,4,5-Trichlorophenol		890	ug/kg	U	7/10/97
SJS02-SS02-000	SVTCL	2,4,6-Trichlorophenol		350	ug/kg	U	7/10/97
SJS02-SS02-000	SVTCL	2,4-Dichlorophenol		350	ug/kg	U	7/10/97
SJS02-SS02-000	SVTCL	2,4-Dimethylphenol		350	ug/kg	U	7/10/97
SJS02-SS02-000	SVTCL	2,4-Dinitrophenol		890	ug/kg	U	7/10/97
SJS02-SS02-000	SVTCL	2,4-Dinitrotoluene		350	ug/kg	U	7/10/97
SJS02-SS02-000	SVTCL	2,6-Dinitrotoluene		350	ug/kg	U	7/10/97
SJS02-SS02-000	SVTCL	2-Chloronaphthalene		350	ug/kg	U	7/10/97
SJS02-SS02-000	SVTCL	2-Chlorophenol		350	ug/kg	U	7/10/97
SJS02-SS02-000	SVTCL	2-Methylnaphthalene		350	ug/kg	U	7/10/97
SJS02-SS02-000	SVTCL	2-Methylphenol		350	ug/kg	U	7/10/97
SJS02-SS02-000	SVTCL	2-Nitroaniline		890	ug/kg	U	7/10/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Ana
SJS02-SS02-000	SVTCL	2-Nitrophenol		350	ug/kg	U	7/
SJS02-SS02-000	SVTCL	3,3'-Dichlorobenzidine		350	ug/kg	U	7/
SJS02-SS02-000	SVTCL	3-Nitroaniline		890	ug/kg	U	7/10/97
SJS02-SS02-000	SVTCL	4,6-Dinitro-2-Methylphenol		890	ug/kg	U	7/10/97
SJS02-SS02-000	SVTCL	4-Bromophenyl phenylether		350	ug/kg	U	7/10/97
SJS02-SS02-000	SVTCL	4-Chloro-3-Methylphenol		350	ug/kg	U	7/10/97
SJS02-SS02-000	SVTCL	4-Chloroaniline		350	ug/kg	U	7/10/97
SJS02-SS02-000	SVTCL	4-Chlorophenyl-phenylether		350	ug/kg	U	7/10/97
SJS02-SS02-000	SVTCL	4-Methylphenol		350	ug/kg	U	7/10/97
SJS02-SS02-000	SVTCL	4-Nitroaniline		890	ug/kg	U	7/10/97
SJS02-SS02-000	SVTCL	4-Nitrophenol		890	ug/kg	U	7/10/97
SJS02-SS02-000	SVTCL	Acenaphthene	100	350	ug/kg	J	7/10/97
SJS02-SS02-000	SVTCL	Acenaphthylene		350	ug/kg	U	7/10/97
SJS02-SS02-000	SVTCL	Anthracene	150	350	ug/kg	J	7/10/97
SJS02-SS02-000	SVTCL	Benzo(a)Anthracene	430	350	ug/kg		7/10/97
SJS02-SS02-000	SVTCL	Benzo(a)Pyrene	360	350	ug/kg		7/10/97
SJS02-SS02-000	SVTCL	Benzo(b)Fluoranthene	580	350	ug/kg		7/10/97
SJS02-SS02-000	SVTCL	Benzo(g,h,i)Perylene	160	350	ug/kg	J	7/10/97
SJS02-SS02-000	SVTCL	Benzo(k)Fluoranthene	290	350	ug/kg	J	7/10/97
SJS02-SS02-000	SVTCL	Bis(2-chloroethoxy)Methane		350	ug/kg	U	7/10/97
SJS02-SS02-000	SVTCL	Bis(2-chloroethyl)Ether		350	ug/kg	U	7/10/97
SJS02-SS02-000	SVTCL	Bis(2-Ethylhexyl)Phthalate	140	350	ug/kg	B	7/10/97
SJS02-SS02-000	SVTCL	Butylbenzylphthalate		350	ug/kg	U	7/10/97
SJS02-SS02-000	SVTCL	Carbazole	120	350	ug/kg	J	7/10/97
SJS02-SS02-000	SVTCL	Chrysene	470	350	ug/kg		7/10/97
SJS02-SS02-000	SVTCL	Di-n-Butylphthalate		350	ug/kg	U	7/10/97
SJS02-SS02-000	SVTCL	Di-n-Octyl Phthalate		350	ug/kg	U	7/10/97
SJS02-SS02-000	SVTCL	Dibenz(a,h)Anthracene	54	350	ug/kg	J	7/10/97
SJS02-SS02-000	SVTCL	Dibenzofuran	70	350	ug/kg	J	7/1
SJS02-SS02-000	SVTCL	Diethylphthalate		350	ug/kg	U	7/1
SJS02-SS02-000	SVTCL	Dimethyl Phthalate		350	ug/kg	U	7/1
SJS02-SS02-000	SVTCL	Fluoranthene	910	350	ug/kg		7/10/97
SJS02-SS02-000	SVTCL	Fluorene	110	350	ug/kg	J	7/10/97
SJS02-SS02-000	SVTCL	Hexachlorobenzene		350	ug/kg	U	7/10/97
SJS02-SS02-000	SVTCL	Hexachlorobutadiene		350	ug/kg	U	7/10/97
SJS02-SS02-000	SVTCL	Hexachlorocyclopentadien		350	ug/kg	U	7/10/97
SJS02-SS02-000	SVTCL	Hexachloroethane		350	ug/kg	U	7/10/97
SJS02-SS02-000	SVTCL	Indeno(1,2,3-cd)Pyrene	180	350	ug/kg	J	7/10/97
SJS02-SS02-000	SVTCL	Isophorone		350	ug/kg	U	7/10/97
SJS02-SS02-000	SVTCL	N-Nitroso-Di-n-Propylamine		350	ug/kg	U	7/10/97
SJS02-SS02-000	SVTCL	N-Nitrosodiphenylamine		350	ug/kg	U	7/10/97
SJS02-SS02-000	SVTCL	Naphthalene	52	350	ug/kg	J	7/10/97
SJS02-SS02-000	SVTCL	Nitrobenzene		350	ug/kg	U	7/10/97
SJS02-SS02-000	SVTCL	Pentachlorophenol		890	ug/kg	U	7/10/97
SJS02-SS02-000	SVTCL	Phenanthrene	850	350	ug/kg		7/10/97
SJS02-SS02-000	SVTCL	Phenol		350	ug/kg	U	7/10/97
SJS02-SS02-000	SVTCL	Pyrene		350	ug/kg	U	7/10/97
SJS02-SS02-000	VCTCL	1,1,1-Trichloroethane		11	ug/kg	U	7/7/97
SJS02-SS02-000	VCTCL	1,1,2,2-Tetrachloroethane		11	ug/kg	U	7/7/97
SJS02-SS02-000	VCTCL	1,1,2-Trichloroethane		11	ug/kg	U	7/7/97
SJS02-SS02-000	VCTCL	1,1-Dichloroethane		11	ug/kg	U	7/7/97
SJS02-SS02-000	VCTCL	1,1-Dichloroethene		11	ug/kg	U	7/7/97
SJS02-SS02-000	VCTCL	1,2-Dichloroethane		11	ug/kg	U	7/7/97
SJS02-SS02-000	VCTCL	1,2-Dichloroethene (total)		11	ug/kg	U	7/7/97
SJS02-SS02-000	VCTCL	1,2-Dichloropropane		11	ug/kg	U	7/7/97
SJS02-SS02-000	VCTCL	2-Butanone		11	ug/kg	U	7/7/97
SJS02-SS02-000	VCTCL	2-Hexanone		11	ug/kg	U	7/7/97
SJS02-SS02-000	VCTCL	4-Methyl-2-Pentanone		11	ug/kg	U	7/
SJS02-SS02-000	VCTCL	Acetone	11	11	ug/kg	B	7/
SJS02-SS02-000	VCTCL	Benzene		11	ug/kg	U	7/7/

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS02-SS02-000	VCTCL	Bromodichloromethane		11	ug/kg	U	7/7/97
SJS02-SS02-000	VCTCL	Bromoform		11	ug/kg	U	7/7/97
SJS02-SS02-000	VCTCL	Bromomethane		11	ug/kg	U	7/7/97
SJS02-SS02-000	VCTCL	Carbon Disulfide		11	ug/kg	U	7/7/97
SJS02-SS02-000	VCTCL	Carbon Tetrachloride		11	ug/kg	U	7/7/97
SJS02-SS02-000	VCTCL	Chlorobenzene		11	ug/kg	U	7/7/97
SJS02-SS02-000	VCTCL	Chloroethane		11	ug/kg	U	7/7/97
SJS02-SS02-000	VCTCL	Chloroform		11	ug/kg	U	7/7/97
SJS02-SS02-000	VCTCL	Chloromethane		11	ug/kg	U	7/7/97
SJS02-SS02-000	VCTCL	cis-1,3-Dichloropropene		11	ug/kg	U	7/7/97
SJS02-SS02-000	VCTCL	Dibromochloromethane		11	ug/kg	U	7/7/97
SJS02-SS02-000	VCTCL	Ethylbenzene		11	ug/kg	U	7/7/97
SJS02-SS02-000	VCTCL	Methylene Chloride	26	11	ug/kg	B	7/7/97
SJS02-SS02-000	VCTCL	Styrene		11	ug/kg	U	7/7/97
SJS02-SS02-000	VCTCL	Tetrachloroethene		11	ug/kg	U	7/7/97
SJS02-SS02-000	VCTCL	Toluene		11	ug/kg	U	7/7/97
SJS02-SS02-000	VCTCL	Total Xylenes		11	ug/kg	U	7/7/97
SJS02-SS02-000	VCTCL	Trans-1,3-Dichloropropene		11	ug/kg	U	7/7/97
SJS02-SS02-000	VCTCL	Trichloroethene		11	ug/kg	U	7/7/97
SJS02-SS02-000	VCTCL	Vinyl Chloride		11	ug/kg	U	7/7/97
SJS02-SS03-000	CTOTP	Total Phosphorous (as P)	26.5	3.2	mg/kg		7/16/97
SJS02-SS03-000	MCYAN	Aluminum	6590	8.53	mg/kg		7/8/97
SJS02-SS03-000	MCYAN	Antimony	7	0.39	mg/kg	J	7/9/97
SJS02-SS03-000	MCYAN	Arsenic	12	0.58	mg/kg		7/9/97
SJS02-SS03-000	MCYAN	Barium	306	0.39	mg/kg		7/8/97
SJS02-SS03-000	MCYAN	Beryllium	2.5	0.19	mg/kg		7/8/97
SJS02-SS03-000	MCYAN	Cadmium		0.1	mg/kg	U	7/9/97
SJS02-SS03-000	MCYAN	Calcium	2450	16.87	mg/kg		7/8/97
SJS02-SS03-000	MCYAN	Chromium	232	1.36	mg/kg		7/8/97
SJS02-SS03-000	MCYAN	Cobalt	20.4	1.55	mg/kg		7/8/97
SJS02-SS03-000	MCYAN	Copper	421	1.16	mg/kg		7/8/97
SJS02-SS03-000	MCYAN	Cyanide	0.85	0.5	mg/kg	J	7/3/97
SJS02-SS03-000	MCYAN	Iron	106000	3.3	mg/kg		7/8/97
SJS02-SS03-000	MCYAN	Lead	450	0.19	mg/kg		7/9/97
SJS02-SS03-000	MCYAN	Magnesium	869	35.1	mg/kg	J	7/8/97
SJS02-SS03-000	MCYAN	Manganese	688	0.39	mg/kg		7/8/97
SJS02-SS03-000	MCYAN	Mercury	0.24	0.05	mg/kg		7/10/97
SJS02-SS03-000	MCYAN	Nickel	158	1.36	mg/kg		7/8/97
SJS02-SS03-000	MCYAN	Potassium	426	43.05	mg/kg	J	7/8/97
SJS02-SS03-000	MCYAN	Selenium		0.58	mg/kg	U	7/9/97
SJS02-SS03-000	MCYAN	Silver	2.1	0.19	mg/kg	B	7/9/97
SJS02-SS03-000	MCYAN	Sodium	166	11.25	mg/kg	B	7/8/97
SJS02-SS03-000	MCYAN	Thallium	6.2	0.39	mg/kg		7/9/97
SJS02-SS03-000	MCYAN	Vanadium	66.1	1.75	mg/kg		7/8/97
SJS02-SS03-000	MCYAN	Zinc	2020	0.97	mg/kg		7/8/97
SJS02-SS03-000	PSPCB	4,4'-DDD	84	17	ug/kg	J	7/22/97
SJS02-SS03-000	PSPCB	4,4'-DDE	260	17	ug/kg	J	7/22/97
SJS02-SS03-000	PSPCB	Aldrin		8.9	ug/kg	U	7/22/97
SJS02-SS03-000	PSPCB	alpha-BHC		8.9	ug/kg	U	7/22/97
SJS02-SS03-000	PSPCB	alpha-Chlordane		8.9	ug/kg	U	7/22/97
SJS02-SS03-000	PSPCB	Aroclor-1016		170	ug/kg	U	7/22/97
SJS02-SS03-000	PSPCB	Aroclor-1221		350	ug/kg	U	7/22/97
SJS02-SS03-000	PSPCB	Aroclor-1232		170	ug/kg	U	7/22/97
SJS02-SS03-000	PSPCB	Aroclor-1242		170	ug/kg	U	7/22/97
SJS02-SS03-000	PSPCB	Aroclor-1248		170	ug/kg	U	7/22/97
SJS02-SS03-000	PSPCB	Aroclor-1254		170	ug/kg	U	7/22/97
SJS02-SS03-000	PSPCB	Aroclor-1260	110	170	ug/kg	J	7/22/97
SJS02-SS03-000	PSPCB	beta-BHC		8.9	ug/kg	U	7/22/97
SJS02-SS03-000	PSPCB	delta-BHC		8.9	ug/kg	U	7/22/97
SJS02-SS03-000	PSPCB	Dieldrin		17	ug/kg	U	7/22/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anc
SJS02-SS03-000	PSPCB	Endosulfan I		8.9	ug/kg	U	7/
SJS02-SS03-000	PSPCB	Endosulfan II		17	ug/kg	U	7/2
SJS02-SS03-000	PSPCB	Endosulfan Sulfate		17	ug/kg	U	7/22/97
SJS02-SS03-000	PSPCB	Endrin		17	ug/kg	U	7/22/97
SJS02-SS03-000	PSPCB	Endrin Aldehyde		17	ug/kg	U	7/22/97
SJS02-SS03-000	PSPCB	Endrin Ketone		17	ug/kg	U	7/22/97
SJS02-SS03-000	PSPCB	gamma-BHC		8.9	ug/kg	U	7/22/97
SJS02-SS03-000	PSPCB	gamma-Chlordane		8.9	ug/kg	U	7/22/97
SJS02-SS03-000	PSPCB	Heptachlor		8.9	ug/kg	U	7/22/97
SJS02-SS03-000	PSPCB	Heptachlor Epoxide		8.9	ug/kg	U	7/22/97
SJS02-SS03-000	PSPCB	Methoxychlor		89	ug/kg	U	7/22/97
SJS02-SS03-000	PSPCB	Toxaphene		890	ug/kg	U	7/22/97
SJS02-SS03-000	SVTCL	1,2,4-Trichlorobenzene		1700	ug/kg	U	7/17/97
SJS02-SS03-000	SVTCL	1,2-Dichlorobenzene		1700	ug/kg	U	7/17/97
SJS02-SS03-000	SVTCL	1,3-Dichlorobenzene		1700	ug/kg	U	7/17/97
SJS02-SS03-000	SVTCL	1,4-Dichlorobenzene		1700	ug/kg	U	7/17/97
SJS02-SS03-000	SVTCL	2,2'-oxybis(1-Chloropropane		1700	ug/kg	U	7/17/97
SJS02-SS03-000	SVTCL	2,4,5-Trichlorophenol		4300	ug/kg	U	7/17/97
SJS02-SS03-000	SVTCL	2,4,6-Trichlorophenol		1700	ug/kg	U	7/17/97
SJS02-SS03-000	SVTCL	2,4-Dichlorophenol		1700	ug/kg	U	7/17/97
SJS02-SS03-000	SVTCL	2,4-Dimethylphenol		1700	ug/kg	U	7/17/97
SJS02-SS03-000	SVTCL	2,4-Dinitrophenol		4300	ug/kg	U	7/17/97
SJS02-SS03-000	SVTCL	2,4-Dinitrotoluene		1700	ug/kg	U	7/17/97
SJS02-SS03-000	SVTCL	2,6-Dinitrotoluene		1700	ug/kg	U	7/17/97
SJS02-SS03-000	SVTCL	2-Chloronaphthalene		1700	ug/kg	U	7/17/97
SJS02-SS03-000	SVTCL	2-Chlorophenol		1700	ug/kg	U	7/17/97
SJS02-SS03-000	SVTCL	2-Methylnaphthalene	310	1700	ug/kg	J	7/17/97
SJS02-SS03-000	SVTCL	2-Methylphenol		1700	ug/kg	U	7/17/97
SJS02-SS03-000	SVTCL	2-Nitroaniline		4300	ug/kg	U	7/1
SJS02-SS03-000	SVTCL	2-Nitrophenol		1700	ug/kg	U	7/1
SJS02-SS03-000	SVTCL	3,3'-Dichlorobenzidine		1700	ug/kg	U	7/17/
SJS02-SS03-000	SVTCL	3-Nitroaniline		4300	ug/kg	U	7/17/97
SJS02-SS03-000	SVTCL	4,6-Dinitro-2-Methylphenol		4300	ug/kg	U	7/17/97
SJS02-SS03-000	SVTCL	4-Bromophenyl phenylether		1700	ug/kg	U	7/17/97
SJS02-SS03-000	SVTCL	4-Chloro-3-Methylphenol		1700	ug/kg	U	7/17/97
SJS02-SS03-000	SVTCL	4-Chloroaniline		1700	ug/kg	U	7/17/97
SJS02-SS03-000	SVTCL	4-Chlorophenyl-phenylether		1700	ug/kg	U	7/17/97
SJS02-SS03-000	SVTCL	4-Methylphenol		1700	ug/kg	U	7/17/97
SJS02-SS03-000	SVTCL	4-Nitroaniline		4300	ug/kg	U	7/17/97
SJS02-SS03-000	SVTCL	4-Nitrophenol		4300	ug/kg	U	7/17/97
SJS02-SS03-000	SVTCL	Acenaphthene	170	1700	ug/kg	J	7/17/97
SJS02-SS03-000	SVTCL	Acenaphthylene	820	1700	ug/kg	J	7/17/97
SJS02-SS03-000	SVTCL	Anthracene	590	1700	ug/kg	J	7/17/97
SJS02-SS03-000	SVTCL	Benzo(a)Anthracene	2300	1700	ug/kg		7/17/97
SJS02-SS03-000	SVTCL	Benzo(a)Pyrene	1400	1700	ug/kg	J	7/17/97
SJS02-SS03-000	SVTCL	Benzo(b)Fluoranthene	1700	1700	ug/kg	J	7/17/97
SJS02-SS03-000	SVTCL	Benzo(g,h,i)Perylene	890	1700	ug/kg	J	7/17/97
SJS02-SS03-000	SVTCL	Benzo(k)Fluoranthene	1100	1700	ug/kg	J	7/17/97
SJS02-SS03-000	SVTCL	Bis(2-chloroethoxy)Methane		1700	ug/kg	U	7/17/97
SJS02-SS03-000	SVTCL	Bis(2-chloroethyl)Ether		1700	ug/kg	U	7/17/97
SJS02-SS03-000	SVTCL	Bis(2-Ethylhexyl)Phthalate		1700	ug/kg	U	7/17/97
SJS02-SS03-000	SVTCL	Butylbenzylphthalate		1700	ug/kg	U	7/17/97
SJS02-SS03-000	SVTCL	Carbazole	300	1700	ug/kg	J	7/17/97
SJS02-SS03-000	SVTCL	Chrysene	2700	1700	ug/kg		7/17/97
SJS02-SS03-000	SVTCL	Di-n-Butylphthalate	210	1700	ug/kg	J	7/17/97
SJS02-SS03-000	SVTCL	Di-n-Octyl Phthalate		1700	ug/kg	U	7/17/97
SJS02-SS03-000	SVTCL	Dibenz(a,h)Anthracene		1700	ug/kg	U	7/17/97
SJS02-SS03-000	SVTCL	Dibenzofuran		1700	ug/kg	U	7/17
SJS02-SS03-000	SVTCL	Diethylphthalate		1700	ug/kg	U	7/1
SJS02-SS03-000	SVTCL	Dimethyl Phthalate		1700	ug/kg	U	7/17/

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS02-SS03-000	SVTCL	Fluoranthene	5000	1700	ug/kg		7/17/97
SJS02-SS03-000	SVTCL	Fluorene	380	1700	ug/kg	J	7/17/97
SJS02-SS03-000	SVTCL	Hexachlorobenzene		1700	ug/kg	U	7/17/97
SJS02-SS03-000	SVTCL	Hexachlorobutadiene		1700	ug/kg	U	7/17/97
SJS02-SS03-000	SVTCL	Hexachlorocyclopentadien		1700	ug/kg	U	7/17/97
SJS02-SS03-000	SVTCL	Hexachloroethane		1700	ug/kg	U	7/17/97
SJS02-SS03-000	SVTCL	Indeno(1,2,3-cd)Pyrene	800	1700	ug/kg	J	7/17/97
SJS02-SS03-000	SVTCL	Isophorone		1700	ug/kg	U	7/17/97
SJS02-SS03-000	SVTCL	N-Nitroso-Di-n-Propylamine		1700	ug/kg	U	7/17/97
SJS02-SS03-000	SVTCL	N-Nitrosodiphenylamine		1700	ug/kg	U	7/17/97
SJS02-SS03-000	SVTCL	Naphthalene		1700	ug/kg	U	7/17/97
SJS02-SS03-000	SVTCL	Nitrobenzene		1700	ug/kg	U	7/17/97
SJS02-SS03-000	SVTCL	Pentachlorophenol		4300	ug/kg	U	7/17/97
SJS02-SS03-000	SVTCL	Phenanthrene	4400	1700	ug/kg		7/17/97
SJS02-SS03-000	SVTCL	Phenol		1700	ug/kg	U	7/17/97
SJS02-SS03-000	SVTCL	Pyrene	7200	1700	ug/kg		7/17/97
SJS02-SS03-000	VCTCL	1,1,1-Trichloroethane		10	ug/kg	U	7/6/97
SJS02-SS03-000	VCTCL	1,1,2,2-Tetrachloroethane		10	ug/kg	U	7/6/97
SJS02-SS03-000	VCTCL	1,1,2-Trichloroethane		10	ug/kg	U	7/6/97
SJS02-SS03-000	VCTCL	1,1-Dichloroethane		10	ug/kg	U	7/6/97
SJS02-SS03-000	VCTCL	1,1-Dichloroethene		10	ug/kg	U	7/6/97
SJS02-SS03-000	VCTCL	1,2-Dichloroethane		10	ug/kg	U	7/6/97
SJS02-SS03-000	VCTCL	1,2-Dichloroethene (total)		10	ug/kg	U	7/6/97
SJS02-SS03-000	VCTCL	1,2-Dichloropropane		10	ug/kg	U	7/6/97
SJS02-SS03-000	VCTCL	2-Butanone		10	ug/kg	U	7/6/97
SJS02-SS03-000	VCTCL	2-Hexanone		10	ug/kg	U	7/6/97
SJS02-SS03-000	VCTCL	4-Methyl-2-Pentanone		10	ug/kg	U	7/6/97
SJS02-SS03-000	VCTCL	Acetone	3	10	ug/kg	B	7/6/97
SJS02-SS03-000	VCTCL	Benzene		10	ug/kg	U	7/6/97
SJS02-SS03-000	VCTCL	Bromodichloromethane		10	ug/kg	U	7/6/97
SJS02-SS03-000	VCTCL	Bromoform		10	ug/kg	U	7/6/97
SJS02-SS03-000	VCTCL	Bromomethane		10	ug/kg	U	7/6/97
SJS02-SS03-000	VCTCL	Carbon Disulfide		10	ug/kg	U	7/6/97
SJS02-SS03-000	VCTCL	Carbon Tetrachloride		10	ug/kg	U	7/6/97
SJS02-SS03-000	VCTCL	Chlorobenzene		10	ug/kg	U	7/6/97
SJS02-SS03-000	VCTCL	Chloroethane		10	ug/kg	U	7/6/97
SJS02-SS03-000	VCTCL	Chloroform		10	ug/kg	U	7/6/97
SJS02-SS03-000	VCTCL	Chloromethane		10	ug/kg	U	7/6/97
SJS02-SS03-000	VCTCL	cis-1,3-Dichloropropene		10	ug/kg	U	7/6/97
SJS02-SS03-000	VCTCL	Dibromochloromethane		10	ug/kg	U	7/6/97
SJS02-SS03-000	VCTCL	Ethylbenzene		10	ug/kg	U	7/6/97
SJS02-SS03-000	VCTCL	Methylene Chloride	17	10	ug/kg	B	7/6/97
SJS02-SS03-000	VCTCL	Styrene		10	ug/kg	U	7/6/97
SJS02-SS03-000	VCTCL	Tetrachloroethene		10	ug/kg	U	7/6/97
SJS02-SS03-000	VCTCL	Toluene		10	ug/kg	U	7/6/97
SJS02-SS03-000	VCTCL	Total Xylenes		10	ug/kg	U	7/6/97
SJS02-SS03-000	VCTCL	Trans-1,3-Dichloropropene		10	ug/kg	U	7/6/97
SJS02-SS03-000	VCTCL	Trichloroethene		10	ug/kg	U	7/6/97
SJS02-SS03-000	VCTCL	Vinyl Chloride		10	ug/kg	U	7/6/97
SJS02-SS04-000	CTOTP	Total Phosphorous (as P)	11.7	3.2	mg/kg		7/16/97
SJS02-SS04-000	MCYAN	Aluminum	3470	7.42	mg/kg		7/8/97
SJS02-SS04-000	MCYAN	Antimony	0.41	0.34	mg/kg	B	7/9/97
SJS02-SS04-000	MCYAN	Arsenic	7.7	0.51	mg/kg		7/9/97
SJS02-SS04-000	MCYAN	Barium	37.4	0.34	mg/kg		7/8/97
SJS02-SS04-000	MCYAN	Beryllium		0.17	mg/kg	U	7/8/97
SJS02-SS04-000	MCYAN	Cadmium	0.68	0.08	mg/kg	J	7/9/97
SJS02-SS04-000	MCYAN	Calcium	1800	14.66	mg/kg		7/8/97
SJS02-SS04-000	MCYAN	Chromium	12.1	1.18	mg/kg		7/8/97
SJS02-SS04-000	MCYAN	Cobalt		1.35	mg/kg	U	7/8/97
SJS02-SS04-000	MCYAN	Copper	30.4	1.01	mg/kg		7/8/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Ana
SJS02-SS04-000	MCYAN	Cyanide		0.52	mg/kg	U	7
SJS02-SS04-000	MCYAN	Iron	5460	2.87	mg/kg		7/
SJS02-SS04-000	MCYAN	Lead	82.6	0.17	mg/kg		7/9/97
SJS02-SS04-000	MCYAN	Magnesium	433	30.51	mg/kg	J	7/8/97
SJS02-SS04-000	MCYAN	Manganese	49.8	0.34	mg/kg		7/8/97
SJS02-SS04-000	MCYAN	Mercury	0.17	0.05	mg/kg		7/10/97
SJS02-SS04-000	MCYAN	Nickel	5.6	1.18	mg/kg	J	7/8/97
SJS02-SS04-000	MCYAN	Potassium	367	37.42	mg/kg	J	7/8/97
SJS02-SS04-000	MCYAN	Selenium		0.51	mg/kg	U	7/9/97
SJS02-SS04-000	MCYAN	Silver	0.74	0.17	mg/kg	B	7/9/97
SJS02-SS04-000	MCYAN	Sodium	37.9	9.78	mg/kg	B	7/8/97
SJS02-SS04-000	MCYAN	Thallium		0.34	mg/kg	U	7/9/97
SJS02-SS04-000	MCYAN	Vanadium	20.9	1.52	mg/kg		7/8/97
SJS02-SS04-000	MCYAN	Zinc	127	0.84	mg/kg		7/8/97
SJS02-SS04-000	PSPCB	4,4'-DDD	30	17	ug/kg	J	7/22/97
SJS02-SS04-000	PSPCB	4,4'-DDE	210	17	ug/kg		7/22/97
SJS02-SS04-000	PSPCB	4,4'-DDT	170	17	ug/kg	J	7/22/97
SJS02-SS04-000	PSPCB	Aldrin		8.8	ug/kg	U	7/22/97
SJS02-SS04-000	PSPCB	alpha-BHC		8.8	ug/kg	U	7/22/97
SJS02-SS04-000	PSPCB	alpha-Chlordane		8.8	ug/kg	U	7/22/97
SJS02-SS04-000	PSPCB	Aroclor-1016		170	ug/kg	U	7/22/97
SJS02-SS04-000	PSPCB	Aroclor-1221		350	ug/kg	U	7/22/97
SJS02-SS04-000	PSPCB	Aroclor-1232		170	ug/kg	U	7/22/97
SJS02-SS04-000	PSPCB	Aroclor-1242		170	ug/kg	U	7/22/97
SJS02-SS04-000	PSPCB	Aroclor-1248		170	ug/kg	U	7/22/97
SJS02-SS04-000	PSPCB	Aroclor-1254		170	ug/kg	U	7/22/97
SJS02-SS04-000	PSPCB	Aroclor-1260	110	170	ug/kg	J	7/22/97
SJS02-SS04-000	PSPCB	beta-BHC		8.8	ug/kg	U	7/22/97
SJS02-SS04-000	PSPCB	delta-BHC		8.8	ug/kg	U	7/22
SJS02-SS04-000	PSPCB	Dieldrin		17	ug/kg	U	7/2
SJS02-SS04-000	PSPCB	Endosulfan I		8.8	ug/kg	U	7/22
SJS02-SS04-000	PSPCB	Endosulfan II		17	ug/kg	U	7/22/97
SJS02-SS04-000	PSPCB	Endosulfan Sulfate		17	ug/kg	U	7/22/97
SJS02-SS04-000	PSPCB	Endrin		17	ug/kg	U	7/22/97
SJS02-SS04-000	PSPCB	Endrin Aldehyde		17	ug/kg	U	7/22/97
SJS02-SS04-000	PSPCB	Endrin Ketone		17	ug/kg	U	7/22/97
SJS02-SS04-000	PSPCB	gamma-BHC		8.8	ug/kg	U	7/22/97
SJS02-SS04-000	PSPCB	gamma-Chlordane		8.8	ug/kg	U	7/22/97
SJS02-SS04-000	PSPCB	Heptachlor		8.8	ug/kg	U	7/22/97
SJS02-SS04-000	PSPCB	Heptachlor Epoxide		8.8	ug/kg	U	7/22/97
SJS02-SS04-000	PSPCB	Methoxychlor		88	ug/kg	U	7/22/97
SJS02-SS04-000	PSPCB	Toxaphene		880	ug/kg	U	7/22/97
SJS02-SS04-000	SVTCL	1,2,4-Trichlorobenzene		1700	ug/kg	U	7/10/97
SJS02-SS04-000	SVTCL	1,2-Dichlorobenzene		1700	ug/kg	U	7/10/97
SJS02-SS04-000	SVTCL	1,3-Dichlorobenzene		1700	ug/kg	U	7/10/97
SJS02-SS04-000	SVTCL	1,4-Dichlorobenzene		1700	ug/kg	U	7/10/97
SJS02-SS04-000	SVTCL	2,2'-oxybis(1-Chloropropane		1700	ug/kg	U	7/10/97
SJS02-SS04-000	SVTCL	2,4,5-Trichlorophenol		4300	ug/kg	U	7/10/97
SJS02-SS04-000	SVTCL	2,4,6-Trichlorophenol		1700	ug/kg	U	7/10/97
SJS02-SS04-000	SVTCL	2,4-Dichlorophenol		1700	ug/kg	U	7/10/97
SJS02-SS04-000	SVTCL	2,4-Dimethylphenol		1700	ug/kg	U	7/10/97
SJS02-SS04-000	SVTCL	2,4-Dinitrophenol		4300	ug/kg	U	7/10/97
SJS02-SS04-000	SVTCL	2,4-Dinitrotoluene		1700	ug/kg	U	7/10/97
SJS02-SS04-000	SVTCL	2,6-Dinitrotoluene		1700	ug/kg	U	7/10/97
SJS02-SS04-000	SVTCL	2-Chloronaphthalene		1700	ug/kg	U	7/10/97
SJS02-SS04-000	SVTCL	2-Chlorophenol		1700	ug/kg	U	7/10/97
SJS02-SS04-000	SVTCL	2-Methylnaphthalene		1700	ug/kg	U	7/10/97
SJS02-SS04-000	SVTCL	2-Methylphenol		1700	ug/kg	U	7/10
SJS02-SS04-000	SVTCL	2-Nitroaniline		4300	ug/kg	U	7/1
SJS02-SS04-000	SVTCL	2-Nitrophenol		1700	ug/kg	U	7/10/

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS02-SS04-000	SVTCL	3,3'-Dichlorobenzidine		1700	ug/kg	U	7/10/97
SJS02-SS04-000	SVTCL	3-Nitroaniline		4300	ug/kg	U	7/10/97
SJS02-SS04-000	SVTCL	4,6-Dinitro-2-Methylphenol		4300	ug/kg	U	7/10/97
SJS02-SS04-000	SVTCL	4-Bromophenyl phenylether		1700	ug/kg	U	7/10/97
SJS02-SS04-000	SVTCL	4-Chloro-3-Methylphenol		1700	ug/kg	U	7/10/97
SJS02-SS04-000	SVTCL	4-Chloroaniline		1700	ug/kg	U	7/10/97
SJS02-SS04-000	SVTCL	4-Chlorophenyl-phenylether		1700	ug/kg	U	7/10/97
SJS02-SS04-000	SVTCL	4-Methylphenol		1700	ug/kg	U	7/10/97
SJS02-SS04-000	SVTCL	4-Nitroaniline		4300	ug/kg	U	7/10/97
SJS02-SS04-000	SVTCL	4-Nitrophenol		4300	ug/kg	U	7/10/97
SJS02-SS04-000	SVTCL	Acenaphthene		1700	ug/kg	U	7/10/97
SJS02-SS04-000	SVTCL	Acenaphthylene		1700	ug/kg	U	7/10/97
SJS02-SS04-000	SVTCL	Anthracene		1700	ug/kg	U	7/10/97
SJS02-SS04-000	SVTCL	Benzo(a)Anthracene	290	1700	ug/kg	J	7/10/97
SJS02-SS04-000	SVTCL	Benzo(a)Pyrene	370	1700	ug/kg	J	7/10/97
SJS02-SS04-000	SVTCL	Benzo(b)Fluoranthene	660	1700	ug/kg	J	7/10/97
SJS02-SS04-000	SVTCL	Benzo(g,h,i)Perylene	280	1700	ug/kg	J	7/10/97
SJS02-SS04-000	SVTCL	Benzo(k)Fluoranthene	320	1700	ug/kg	J	7/10/97
SJS02-SS04-000	SVTCL	Bis(2-chloroethoxy)Methane		1700	ug/kg	U	7/10/97
SJS02-SS04-000	SVTCL	Bis(2-chloroethyl)Ether		1700	ug/kg	U	7/10/97
SJS02-SS04-000	SVTCL	Bis(2-Ethylhexyl)Phthalate		1700	ug/kg	U	7/10/97
SJS02-SS04-000	SVTCL	Butylbenzylphthalate		1700	ug/kg	U	7/10/97
SJS02-SS04-000	SVTCL	Carbazole		1700	ug/kg	U	7/10/97
SJS02-SS04-000	SVTCL	Chrysene	400	1700	ug/kg	J	7/10/97
SJS02-SS04-000	SVTCL	Di-n-Butylphthalate		1700	ug/kg	U	7/10/97
SJS02-SS04-000	SVTCL	Di-n-Octyl Phthalate		1700	ug/kg	U	7/10/97
SJS02-SS04-000	SVTCL	Dibenz(a,h)Anthracene		1700	ug/kg	U	7/10/97
SJS02-SS04-000	SVTCL	Dibenzofuran		1700	ug/kg	U	7/10/97
SJS02-SS04-000	SVTCL	Diethylphthalate		1700	ug/kg	U	7/10/97
SJS02-SS04-000	SVTCL	Dimethyl Phthalate		1700	ug/kg	U	7/10/97
SJS02-SS04-000	SVTCL	Fluoranthene	460	1700	ug/kg	J	7/10/97
SJS02-SS04-000	SVTCL	Fluorene		1700	ug/kg	U	7/10/97
SJS02-SS04-000	SVTCL	Hexachlorobenzene		1700	ug/kg	U	7/10/97
SJS02-SS04-000	SVTCL	Hexachlorobutadiene		1700	ug/kg	U	7/10/97
SJS02-SS04-000	SVTCL	Hexachlorocyclopentadien		1700	ug/kg	U	7/10/97
SJS02-SS04-000	SVTCL	Hexachloroethane		1700	ug/kg	U	7/10/97
SJS02-SS04-000	SVTCL	Indeno(1,2,3-cd)Pyrene	310	1700	ug/kg	J	7/10/97
SJS02-SS04-000	SVTCL	Isophorone		1700	ug/kg	U	7/10/97
SJS02-SS04-000	SVTCL	N-Nitroso-Di-n-Propylamine		1700	ug/kg	U	7/10/97
SJS02-SS04-000	SVTCL	N-Nitrosodiphenylamine		1700	ug/kg	U	7/10/97
SJS02-SS04-000	SVTCL	Naphthalene		1700	ug/kg	U	7/10/97
SJS02-SS04-000	SVTCL	Nitrobenzene		1700	ug/kg	U	7/10/97
SJS02-SS04-000	SVTCL	Pentachlorophenol		4300	ug/kg	U	7/10/97
SJS02-SS04-000	SVTCL	Phenanthrene		1700	ug/kg	U	7/10/97
SJS02-SS04-000	SVTCL	Phenol		1700	ug/kg	U	7/10/97
SJS02-SS04-000	SVTCL	Pyrene	550	1700	ug/kg	J	7/10/97
SJS02-SS04-000	VCTCL	1,1,1-Trichloroethane		10	ug/kg	U	7/7/97
SJS02-SS04-000	VCTCL	1,1,2,2-Tetrachloroethane		10	ug/kg	U	7/7/97
SJS02-SS04-000	VCTCL	1,1,2-Trichloroethane		10	ug/kg	U	7/7/97
SJS02-SS04-000	VCTCL	1,1-Dichloroethane		10	ug/kg	U	7/7/97
SJS02-SS04-000	VCTCL	1,1-Dichloroethene		10	ug/kg	U	7/7/97
SJS02-SS04-000	VCTCL	1,2-Dichloroethane		10	ug/kg	U	7/7/97
SJS02-SS04-000	VCTCL	1,2-Dichloroethene (total)		10	ug/kg	U	7/7/97
SJS02-SS04-000	VCTCL	1,2-Dichloropropane		10	ug/kg	U	7/7/97
SJS02-SS04-000	VCTCL	2-Butanone		10	ug/kg	U	7/7/97
SJS02-SS04-000	VCTCL	2-Hexanone		10	ug/kg	U	7/7/97
SJS02-SS04-000	VCTCL	4-Methyl-2-Pentanone		10	ug/kg	U	7/7/97
SJS02-SS04-000	VCTCL	Acetone	9	10	ug/kg	B	7/7/97
SJS02-SS04-000	VCTCL	Benzene		10	ug/kg	U	7/7/97
SJS02-SS04-000	VCTCL	Bromodichloromethane		10	ug/kg	U	7/7/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Ana
SJS02-SS04-000	VCTCL	Bromoform		10	ug/kg	U	7
SJS02-SS04-000	VCTCL	Bromomethane		10	ug/kg	U	7,
SJS02-SS04-000	VCTCL	Carbon Disulfide		10	ug/kg	U	7/7/97
SJS02-SS04-000	VCTCL	Carbon Tetrachloride		10	ug/kg	U	7/7/97
SJS02-SS04-000	VCTCL	Chlorobenzene		10	ug/kg	U	7/7/97
SJS02-SS04-000	VCTCL	Chloroethane		10	ug/kg	U	7/7/97
SJS02-SS04-000	VCTCL	Chloroform		10	ug/kg	U	7/7/97
SJS02-SS04-000	VCTCL	Chloromethane		10	ug/kg	U	7/7/97
SJS02-SS04-000	VCTCL	cis-1,3-Dichloropropene		10	ug/kg	U	7/7/97
SJS02-SS04-000	VCTCL	Dibromochloromethane		10	ug/kg	U	7/7/97
SJS02-SS04-000	VCTCL	Ethylbenzene		10	ug/kg	U	7/7/97
SJS02-SS04-000	VCTCL	Methylene Chloride	25	10	ug/kg	B	7/7/97
SJS02-SS04-000	VCTCL	Styrene		10	ug/kg	U	7/7/97
SJS02-SS04-000	VCTCL	Tetrachloroethene		10	ug/kg	U	7/7/97
SJS02-SS04-000	VCTCL	Toluene		10	ug/kg	U	7/7/97
SJS02-SS04-000	VCTCL	Total Xylenes		10	ug/kg	U	7/7/97
SJS02-SS04-000	VCTCL	Trans-1,3-Dichloropropene		10	ug/kg	U	7/7/97
SJS02-SS04-000	VCTCL	Trichloroethene		10	ug/kg	U	7/7/97
SJS02-SS04-000	VCTCL	Vinyl Chloride		10	ug/kg	U	7/7/97
SJS02-SS05-000	CTOTP	Total Phosphorous (as P)	3.7	1.3	mg/kg		7/16/97
SJS02-SS05-000	MCYAN	Aluminum	3080	7.88	mg/kg		7/8/97
SJS02-SS05-000	MCYAN	Antimony	0.48	0.36	mg/kg	B	7/9/97
SJS02-SS05-000	MCYAN	Arsenic	1.9	0.54	mg/kg	J	7/9/97
SJS02-SS05-000	MCYAN	Barium	26.4	0.36	mg/kg	J	7/8/97
SJS02-SS05-000	MCYAN	Beryllium		0.18	mg/kg	U	7/8/97
SJS02-SS05-000	MCYAN	Cadmium	0.23	0.09	mg/kg	J	7/9/97
SJS02-SS05-000	MCYAN	Calcium	1220	15.57	mg/kg		7/8/97
SJS02-SS05-000	MCYAN	Chromium	13.5	1.25	mg/kg		7/8/97
SJS02-SS05-000	MCYAN	Cobalt		1.43	mg/kg	U	7/
SJS02-SS05-000	MCYAN	Copper	27.4	1.07	mg/kg		7,
SJS02-SS05-000	MCYAN	Cyanide		0.53	mg/kg	U	7/
SJS02-SS05-000	MCYAN	Iron	5690	3.04	mg/kg		7/8/97
SJS02-SS05-000	MCYAN	Lead	96	0.18	mg/kg		7/9/97
SJS02-SS05-000	MCYAN	Magnesium	459	32.4	mg/kg	J	7/8/97
SJS02-SS05-000	MCYAN	Manganese	54.6	0.36	mg/kg		7/8/97
SJS02-SS05-000	MCYAN	Mercury	0.42	0.05	mg/kg		7/10/97
SJS02-SS05-000	MCYAN	Nickel	8.4	1.25	mg/kg		7/8/97
SJS02-SS05-000	MCYAN	Potassium	360	39.73	mg/kg	J	7/8/97
SJS02-SS05-000	MCYAN	Selenium		0.54	mg/kg	U	7/9/97
SJS02-SS05-000	MCYAN	Silver	0.69	0.18	mg/kg	B	7/9/97
SJS02-SS05-000	MCYAN	Sodium	34	10.38	mg/kg	B	7/8/97
SJS02-SS05-000	MCYAN	Thallium		0.36	mg/kg	U	7/9/97
SJS02-SS05-000	MCYAN	Vanadium	21.1	1.61	mg/kg		7/8/97
SJS02-SS05-000	MCYAN	Zinc	110	0.89	mg/kg		7/8/97
SJS02-SS05-000	PSPCB	4,4'-DDD	13	17	ug/kg	J	7/22/97
SJS02-SS05-000	PSPCB	4,4'-DDE	110	17	ug/kg		7/22/97
SJS02-SS05-000	PSPCB	4,4'-DDT	30	17	ug/kg		7/22/97
SJS02-SS05-000	PSPCB	Aldrin		8.9	ug/kg	U	7/22/97
SJS02-SS05-000	PSPCB	alpha-BHC		8.9	ug/kg	U	7/22/97
SJS02-SS05-000	PSPCB	alpha-Chlordane		8.9	ug/kg	U	7/22/97
SJS02-SS05-000	PSPCB	Aroclor-1016		170	ug/kg	U	7/22/97
SJS02-SS05-000	PSPCB	Aroclor-1221		350	ug/kg	U	7/22/97
SJS02-SS05-000	PSPCB	Aroclor-1232		170	ug/kg	U	7/22/97
SJS02-SS05-000	PSPCB	Aroclor-1242		170	ug/kg	U	7/22/97
SJS02-SS05-000	PSPCB	Aroclor-1248		170	ug/kg	U	7/22/97
SJS02-SS05-000	PSPCB	Aroclor-1254		170	ug/kg	U	7/22/97
SJS02-SS05-000	PSPCB	Aroclor-1260		170	ug/kg	U	7/22/97
SJS02-SS05-000	PSPCB	beta-BHC		8.9	ug/kg	U	7/2
SJS02-SS05-000	PSPCB	delta-BHC		8.9	ug/kg	U	7/
SJS02-SS05-000	PSPCB	Dieldrin		17	ug/kg	U	7/22/

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS02-SS05-000	PSPCB	Endosulfan I		8.9	ug/kg	U	7/22/97
SJS02-SS05-000	PSPCB	Endosulfan II		17	ug/kg	U	7/22/97
SJS02-SS05-000	PSPCB	Endosulfan Sulfate		17	ug/kg	U	7/22/97
SJS02-SS05-000	PSPCB	Endrin		17	ug/kg	U	7/22/97
SJS02-SS05-000	PSPCB	Endrin Aldehyde		17	ug/kg	U	7/22/97
SJS02-SS05-000	PSPCB	Endrin Ketone		17	ug/kg	U	7/22/97
SJS02-SS05-000	PSPCB	gamma-BHC		8.9	ug/kg	U	7/22/97
SJS02-SS05-000	PSPCB	gamma-Chlordane		8.9	ug/kg	U	7/22/97
SJS02-SS05-000	PSPCB	Heptachlor		8.9	ug/kg	U	7/22/97
SJS02-SS05-000	PSPCB	Heptachlor Epoxide		8.9	ug/kg	U	7/22/97
SJS02-SS05-000	PSPCB	Methoxychlor		89	ug/kg	U	7/22/97
SJS02-SS05-000	PSPCB	Toxaphene		890	ug/kg	U	7/22/97
SJS02-SS05-000	SVTCL	1,2,4-Trichlorobenzene		700	ug/kg	U	7/10/97
SJS02-SS05-000	SVTCL	1,2-Dichlorobenzene		700	ug/kg	U	7/10/97
SJS02-SS05-000	SVTCL	1,3-Dichlorobenzene		700	ug/kg	U	7/10/97
SJS02-SS05-000	SVTCL	1,4-Dichlorobenzene		700	ug/kg	U	7/10/97
SJS02-SS05-000	SVTCL	2,2'-oxybis(1-Chloropropane		700	ug/kg	U	7/10/97
SJS02-SS05-000	SVTCL	2,4,5-Trichlorophenol		1800	ug/kg	U	7/10/97
SJS02-SS05-000	SVTCL	2,4,6-Trichlorophenol		700	ug/kg	U	7/10/97
SJS02-SS05-000	SVTCL	2,4-Dichlorophenol		700	ug/kg	U	7/10/97
SJS02-SS05-000	SVTCL	2,4-Dimethylphenol		700	ug/kg	U	7/10/97
SJS02-SS05-000	SVTCL	2,4-Dinitrophenol		1800	ug/kg	U	7/10/97
SJS02-SS05-000	SVTCL	2,4-Dinitrotoluene		700	ug/kg	U	7/10/97
SJS02-SS05-000	SVTCL	2,6-Dinitrotoluene		700	ug/kg	U	7/10/97
SJS02-SS05-000	SVTCL	2-Chloronaphthalene		700	ug/kg	U	7/10/97
SJS02-SS05-000	SVTCL	2-Chlorophenol		700	ug/kg	U	7/10/97
SJS02-SS05-000	SVTCL	2-Methylnaphthalene		700	ug/kg	U	7/10/97
SJS02-SS05-000	SVTCL	2-Methylphenol		700	ug/kg	U	7/10/97
SJS02-SS05-000	SVTCL	2-Nitroaniline		1800	ug/kg	U	7/10/97
SJS02-SS05-000	SVTCL	2-Nitrophenol		700	ug/kg	U	7/10/97
SJS02-SS05-000	SVTCL	3,3'-Dichlorobenzidine		700	ug/kg	U	7/10/97
SJS02-SS05-000	SVTCL	3-Nitroaniline		1800	ug/kg	U	7/10/97
SJS02-SS05-000	SVTCL	4,6-Dinitro-2-Methylphenol		1800	ug/kg	U	7/10/97
SJS02-SS05-000	SVTCL	4-Bromophenyl phenylether		700	ug/kg	U	7/10/97
SJS02-SS05-000	SVTCL	4-Chloro-3-Methylphenol		700	ug/kg	U	7/10/97
SJS02-SS05-000	SVTCL	4-Chloroaniline		700	ug/kg	U	7/10/97
SJS02-SS05-000	SVTCL	4-Chlorophenyl-phenylether		700	ug/kg	U	7/10/97
SJS02-SS05-000	SVTCL	4-Methylphenol		700	ug/kg	U	7/10/97
SJS02-SS05-000	SVTCL	4-Nitroaniline		1800	ug/kg	U	7/10/97
SJS02-SS05-000	SVTCL	4-Nitrophenol		1800	ug/kg	U	7/10/97
SJS02-SS05-000	SVTCL	Acenaphthene		700	ug/kg	U	7/10/97
SJS02-SS05-000	SVTCL	Acenaphthylene		700	ug/kg	U	7/10/97
SJS02-SS05-000	SVTCL	Anthracene		700	ug/kg	U	7/10/97
SJS02-SS05-000	SVTCL	Benzo(a)Anthracene	180	700	ug/kg	J	7/10/97
SJS02-SS05-000	SVTCL	Benzo(a)Pyrene	160	700	ug/kg	J	7/10/97
SJS02-SS05-000	SVTCL	Benzo(b)Fluoranthene	220	700	ug/kg	J	7/10/97
SJS02-SS05-000	SVTCL	Benzo(g,h,i)Perylene	78	700	ug/kg	J	7/10/97
SJS02-SS05-000	SVTCL	Benzo(k)Fluoranthene	150	700	ug/kg	J	7/10/97
SJS02-SS05-000	SVTCL	Bis(2-chloroethoxy)Methane		700	ug/kg	U	7/10/97
SJS02-SS05-000	SVTCL	Bis(2-chloroethyl)Ether		700	ug/kg	U	7/10/97
SJS02-SS05-000	SVTCL	Bis(2-Ethylhexyl)Phthalate	72	700	ug/kg	B	7/10/97
SJS02-SS05-000	SVTCL	Butylbenzylphthalate		700	ug/kg	U	7/10/97
SJS02-SS05-000	SVTCL	Carbazole		700	ug/kg	U	7/10/97
SJS02-SS05-000	SVTCL	Chrysene	160	700	ug/kg	J	7/10/97
SJS02-SS05-000	SVTCL	Di-n-Butylphthalate		700	ug/kg	U	7/10/97
SJS02-SS05-000	SVTCL	Di-n-Octyl Phthalate		700	ug/kg	U	7/10/97
SJS02-SS05-000	SVTCL	Dibenz(a,h)Anthracene		700	ug/kg	U	7/10/97
SJS02-SS05-000	SVTCL	Dibenzofuran		700	ug/kg	U	7/10/97
SJS02-SS05-000	SVTCL	Diethylphthalate		700	ug/kg	U	7/10/97
SJS02-SS05-000	SVTCL	Dimethyl Phthalate		700	ug/kg	U	7/10/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS02-SS05-000	SVTCL	Fluoranthene	250	700	ug/kg	J	7/
SJS02-SS05-000	SVTCL	Fluorene		700	ug/kg	U	7/
SJS02-SS05-000	SVTCL	Hexachlorobenzene		700	ug/kg	U	7/10/97
SJS02-SS05-000	SVTCL	Hexachlorobutadiene		700	ug/kg	U	7/10/97
SJS02-SS05-000	SVTCL	Hexachlorocyclopentadien		700	ug/kg	U	7/10/97
SJS02-SS05-000	SVTCL	Hexachloroethane		700	ug/kg	U	7/10/97
SJS02-SS05-000	SVTCL	Indeno(1,2,3-cd)Pyrene	86	700	ug/kg	J	7/10/97
SJS02-SS05-000	SVTCL	Isophorone		700	ug/kg	U	7/10/97
SJS02-SS05-000	SVTCL	N-Nitroso-Di-n-Propylamine		700	ug/kg	U	7/10/97
SJS02-SS05-000	SVTCL	N-Nitrosodiphenylamine		700	ug/kg	U	7/10/97
SJS02-SS05-000	SVTCL	Naphthalene		700	ug/kg	U	7/10/97
SJS02-SS05-000	SVTCL	Nitrobenzene		700	ug/kg	U	7/10/97
SJS02-SS05-000	SVTCL	Pentachlorophenol		1800	ug/kg	U	7/10/97
SJS02-SS05-000	SVTCL	Phenanthrene	94	700	ug/kg	J	7/10/97
SJS02-SS05-000	SVTCL	Phenol		700	ug/kg	U	7/10/97
SJS02-SS05-000	SVTCL	Pyrene	260	700	ug/kg	J	7/10/97
SJS02-SS05-000	VCTCL	1,1,1-Trichloroethane		11	ug/kg	U	7/8/97
SJS02-SS05-000	VCTCL	1,1,2,2-Tetrachloroethane		11	ug/kg	U	7/8/97
SJS02-SS05-000	VCTCL	1,1,2-Trichloroethane		11	ug/kg	U	7/8/97
SJS02-SS05-000	VCTCL	1,1-Dichloroethane		11	ug/kg	U	7/8/97
SJS02-SS05-000	VCTCL	1,1-Dichloroethene		11	ug/kg	U	7/8/97
SJS02-SS05-000	VCTCL	1,2-Dichloroethane		11	ug/kg	U	7/8/97
SJS02-SS05-000	VCTCL	1,2-Dichloroethene (total)		11	ug/kg	U	7/8/97
SJS02-SS05-000	VCTCL	1,2-Dichloropropane		11	ug/kg	U	7/8/97
SJS02-SS05-000	VCTCL	2-Butanone		11	ug/kg	U	7/8/97
SJS02-SS05-000	VCTCL	2-Hexanone		11	ug/kg	U	7/8/97
SJS02-SS05-000	VCTCL	4-Methyl-2-Pentanone		11	ug/kg	U	7/8/97
SJS02-SS05-000	VCTCL	Acetone		11	ug/kg	U	7/8/97
SJS02-SS05-000	VCTCL	Benzene		11	ug/kg	U	7/8/97
SJS02-SS05-000	VCTCL	Bromodichloromethane		11	ug/kg	U	7
SJS02-SS05-000	VCTCL	Bromoform		11	ug/kg	U	7,
SJS02-SS05-000	VCTCL	Bromomethane		11	ug/kg	U	7/8/97
SJS02-SS05-000	VCTCL	Carbon Disulfide		11	ug/kg	U	7/8/97
SJS02-SS05-000	VCTCL	Carbon Tetrachloride		11	ug/kg	U	7/8/97
SJS02-SS05-000	VCTCL	Chlorobenzene		11	ug/kg	U	7/8/97
SJS02-SS05-000	VCTCL	Chloroethane		11	ug/kg	U	7/8/97
SJS02-SS05-000	VCTCL	Chloroform		11	ug/kg	U	7/8/97
SJS02-SS05-000	VCTCL	Chloromethane		11	ug/kg	U	7/8/97
SJS02-SS05-000	VCTCL	cis-1,3-Dichloropropene		11	ug/kg	U	7/8/97
SJS02-SS05-000	VCTCL	Dibromochloromethane		11	ug/kg	U	7/8/97
SJS02-SS05-000	VCTCL	Ethylbenzene		11	ug/kg	U	7/8/97
SJS02-SS05-000	VCTCL	Methylene Chloride	24	11	ug/kg	B	7/8/97
SJS02-SS05-000	VCTCL	Styrene		11	ug/kg	U	7/8/97
SJS02-SS05-000	VCTCL	Tetrachloroethene		11	ug/kg	U	7/8/97
SJS02-SS05-000	VCTCL	Toluene		11	ug/kg	U	7/8/97
SJS02-SS05-000	VCTCL	Total Xylenes		11	ug/kg	U	7/8/97
SJS02-SS05-000	VCTCL	Trans-1,3-Dichloropropene		11	ug/kg	U	7/8/97
SJS02-SS05-000	VCTCL	Trichloroethene		11	ug/kg	U	7/8/97
SJS02-SS05-000	VCTCL	Vinyl Chloride		11	ug/kg	U	7/8/97
SJS02-SS05-000P	CTOTP	Total Phosphorous (as P)	10.3	1.3	mg/kg		7/16/97
SJS02-SS05-000P	MCYAN	Aluminum	3110	8.64	mg/kg		7/8/97
SJS02-SS05-000P	MCYAN	Antimony	0.5	0.39	mg/kg	B	7/9/97
SJS02-SS05-000P	MCYAN	Arsenic	2.3	0.59	mg/kg		7/9/97
SJS02-SS05-000P	MCYAN	Barium	27.2	0.39	mg/kg	J	7/8/97
SJS02-SS05-000P	MCYAN	Beryllium		0.2	mg/kg	U	7/8/97
SJS02-SS05-000P	MCYAN	Cadmium	0.27	0.1	mg/kg	J	7/9/97
SJS02-SS05-000P	MCYAN	Calcium	1310	17.09	mg/kg		7/8/97
SJS02-SS05-000P	MCYAN	Chromium	11.4	1.38	mg/kg		7/8/97
SJS02-SS05-000P	MCYAN	Cobalt	2.1	1.57	mg/kg	J	7
SJS02-SS05-000P	MCYAN	Copper	27.9	1.18	mg/kg		7/

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS02-SS05-000P	IMCYAN	Cyanide		0.53	mg/kg	U	7/3/97
SJS02-SS05-000P	IMCYAN	Iron	5850	3.34	mg/kg		7/8/97
SJS02-SS05-000P	IMCYAN	Lead	96.3	0.2	mg/kg		7/9/97
SJS02-SS05-000P	IMCYAN	Magnesium	520	35.56	mg/kg	J	7/8/97
SJS02-SS05-000P	IMCYAN	Manganese	59.6	0.39	mg/kg		7/8/97
SJS02-SS05-000P	IMCYAN	Mercury	0.37	0.05	mg/kg		7/10/97
SJS02-SS05-000P	IMCYAN	Nickel	11.7	1.38	mg/kg		7/8/97
SJS02-SS05-000P	IMCYAN	Potassium	407	43.61	mg/kg	J	7/8/97
SJS02-SS05-000P	IMCYAN	Selenium		0.59	mg/kg	U	7/9/97
SJS02-SS05-000P	IMCYAN	Silver	0.99	0.2	mg/kg	B	7/9/97
SJS02-SS05-000P	IMCYAN	Sodium	46.5	11.39	mg/kg	B	7/8/97
SJS02-SS05-000P	IMCYAN	Thallium		0.39	mg/kg	U	7/9/97
SJS02-SS05-000P	IMCYAN	Vanadium	22.2	1.77	mg/kg		7/8/97
SJS02-SS05-000P	IMCYAN	Zinc	118	0.98	mg/kg		7/8/97
SJS02-SS05-000P	PSPCB	4,4'-DDD	10	7	ug/kg		7/21/97
SJS02-SS05-000P	PSPCB	4,4'-DDE	94	7	ug/kg		7/21/97
SJS02-SS05-000P	PSPCB	4,4'-DDT	27	7	ug/kg		7/21/97
SJS02-SS05-000P	PSPCB	Aldrin		3.6	ug/kg	U	7/21/97
SJS02-SS05-000P	PSPCB	alpha-BHC		3.6	ug/kg	U	7/21/97
SJS02-SS05-000P	PSPCB	alpha-Chlordane		3.6	ug/kg	U	7/21/97
SJS02-SS05-000P	PSPCB	Aroclor-1016		70	ug/kg	U	7/21/97
SJS02-SS05-000P	PSPCB	Aroclor-1221		140	ug/kg	U	7/21/97
SJS02-SS05-000P	PSPCB	Aroclor-1232		70	ug/kg	U	7/21/97
SJS02-SS05-000P	PSPCB	Aroclor-1242		70	ug/kg	U	7/21/97
SJS02-SS05-000P	PSPCB	Aroclor-1248		70	ug/kg	U	7/21/97
SJS02-SS05-000P	PSPCB	Aroclor-1254		70	ug/kg	U	7/21/97
SJS02-SS05-000P	PSPCB	Aroclor-1260		70	ug/kg	U	7/21/97
SJS02-SS05-000P	PSPCB	beta-BHC		3.6	ug/kg	U	7/21/97
SJS02-SS05-000P	PSPCB	delta-BHC		3.6	ug/kg	U	7/21/97
SJS02-SS05-000P	PSPCB	Dieldrin		7	ug/kg	U	7/21/97
SJS02-SS05-000P	PSPCB	Endosulfan I		3.6	ug/kg	U	7/21/97
SJS02-SS05-000P	PSPCB	Endosulfan II		7	ug/kg	U	7/21/97
SJS02-SS05-000P	PSPCB	Endosulfan Sulfate		7	ug/kg	U	7/21/97
SJS02-SS05-000P	PSPCB	Endrin		7	ug/kg	U	7/21/97
SJS02-SS05-000P	PSPCB	Endrin Aldehyde		7	ug/kg	U	7/21/97
SJS02-SS05-000P	PSPCB	Endrin Ketone		7	ug/kg	U	7/21/97
SJS02-SS05-000P	PSPCB	gamma-BHC		3.6	ug/kg	U	7/21/97
SJS02-SS05-000P	PSPCB	gamma-Chlordane		3.6	ug/kg	U	7/21/97
SJS02-SS05-000P	PSPCB	Heptachlor		3.6	ug/kg	U	7/21/97
SJS02-SS05-000P	PSPCB	Heptachlor Epoxide		3.6	ug/kg	U	7/21/97
SJS02-SS05-000P	PSPCB	Methoxychlor		36	ug/kg	U	7/21/97
SJS02-SS05-000P	PSPCB	Toxaphene		360	ug/kg	U	7/21/97
SJS02-SS05-000P	SVTCL	1,2,4-Trichlorobenzene		1700	ug/kg	U	7/10/97
SJS02-SS05-000P	SVTCL	1,2-Dichlorobenzene		1700	ug/kg	U	7/10/97
SJS02-SS05-000P	SVTCL	1,3-Dichlorobenzene		1700	ug/kg	U	7/10/97
SJS02-SS05-000P	SVTCL	1,4-Dichlorobenzene		1700	ug/kg	U	7/10/97
SJS02-SS05-000P	SVTCL	2,2'-oxybis(1-Chloropropane		1700	ug/kg	U	7/10/97
SJS02-SS05-000P	SVTCL	2,4,5-Trichlorophenol		4400	ug/kg	U	7/10/97
SJS02-SS05-000P	SVTCL	2,4,6-Trichlorophenol		1700	ug/kg	U	7/10/97
SJS02-SS05-000P	SVTCL	2,4-Dichlorophenol		1700	ug/kg	U	7/10/97
SJS02-SS05-000P	SVTCL	2,4-Dimethylphenol		1700	ug/kg	U	7/10/97
SJS02-SS05-000P	SVTCL	2,4-Dinitrophenol		4400	ug/kg	U	7/10/97
SJS02-SS05-000P	SVTCL	2,4-Dinitrotoluene		1700	ug/kg	U	7/10/97
SJS02-SS05-000P	SVTCL	2,6-Dinitrotoluene		1700	ug/kg	U	7/10/97
SJS02-SS05-000P	SVTCL	2-Chloronaphthalene		1700	ug/kg	U	7/10/97
SJS02-SS05-000P	SVTCL	2-Chlorophenol		1700	ug/kg	U	7/10/97
SJS02-SS05-000P	SVTCL	2-Methylnaphthalene		1700	ug/kg	U	7/10/97
SJS02-SS05-000P	SVTCL	2-Methylphenol		1700	ug/kg	U	7/10/97
SJS02-SS05-000P	SVTCL	2-Nitroaniline		4400	ug/kg	U	7/10/97
SJS02-SS05-000P	SVTCL	2-Nitrophenol		1700	ug/kg	U	7/10/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS02-SS05-000P	SVTCL	3,3'-Dichlorobenzidine		1700	ug/kg	U	7/1
SJS02-SS05-000P	SVTCL	3-Nitroaniline		4400	ug/kg	U	7/
SJS02-SS05-000P	SVTCL	4,6-Dinitro-2-Methylphenol		4400	ug/kg	U	7/10/97
SJS02-SS05-000P	SVTCL	4-Bromophenyl phenylether		1700	ug/kg	U	7/10/97
SJS02-SS05-000P	SVTCL	4-Chloro-3-Methylphenol		1700	ug/kg	U	7/10/97
SJS02-SS05-000P	SVTCL	4-Chloroaniline		1700	ug/kg	U	7/10/97
SJS02-SS05-000P	SVTCL	4-Chlorophenyl-phenylether		1700	ug/kg	U	7/10/97
SJS02-SS05-000P	SVTCL	4-Methylphenol		1700	ug/kg	U	7/10/97
SJS02-SS05-000P	SVTCL	4-Nitroaniline		4400	ug/kg	U	7/10/97
SJS02-SS05-000P	SVTCL	4-Nitrophenol		4400	ug/kg	U	7/10/97
SJS02-SS05-000P	SVTCL	Acenaphthene		1700	ug/kg	U	7/10/97
SJS02-SS05-000P	SVTCL	Acenaphthylene		1700	ug/kg	U	7/10/97
SJS02-SS05-000P	SVTCL	Anthracene		1700	ug/kg	U	7/10/97
SJS02-SS05-000P	SVTCL	Benzo(a)Anthracene	220	1700	ug/kg	J	7/10/97
SJS02-SS05-000P	SVTCL	Benzo(a)Pyrene	190	1700	ug/kg	J	7/10/97
SJS02-SS05-000P	SVTCL	Benzo(b)Fluoranthene	270	1700	ug/kg	J	7/10/97
SJS02-SS05-000P	SVTCL	Benzo(g,h,i)Perylene		1700	ug/kg	U	7/10/97
SJS02-SS05-000P	SVTCL	Benzo(k)Fluoranthene		1700	ug/kg	U	7/10/97
SJS02-SS05-000P	SVTCL	Bis(2-chloroethoxy)Methane		1700	ug/kg	U	7/10/97
SJS02-SS05-000P	SVTCL	Bis(2-chloroethyl)Ether		1700	ug/kg	U	7/10/97
SJS02-SS05-000P	SVTCL	Bis(2-Ethylhexyl)Phthalate		1700	ug/kg	U	7/10/97
SJS02-SS05-000P	SVTCL	Butylbenzylphthalate		1700	ug/kg	U	7/10/97
SJS02-SS05-000P	SVTCL	Carbazole		1700	ug/kg	U	7/10/97
SJS02-SS05-000P	SVTCL	Chrysene	210	1700	ug/kg	J	7/10/97
SJS02-SS05-000P	SVTCL	Di-n-Butylphthalate		1700	ug/kg	U	7/10/97
SJS02-SS05-000P	SVTCL	Di-n-Octyl Phthalate		1700	ug/kg	U	7/10/97
SJS02-SS05-000P	SVTCL	Dibenz(a,h)Anthracene		1700	ug/kg	U	7/10/97
SJS02-SS05-000P	SVTCL	Dibenzofuran		1700	ug/kg	U	7/10/97
SJS02-SS05-000P	SVTCL	Diethylphthalate		1700	ug/kg	U	7/10/97
SJS02-SS05-000P	SVTCL	Dimethyl Phthalate		1700	ug/kg	U	7/1
SJS02-SS05-000P	SVTCL	Fluoranthene	340	1700	ug/kg	J	7/
SJS02-SS05-000P	SVTCL	Fluorene		1700	ug/kg	U	7/10/97
SJS02-SS05-000P	SVTCL	Hexachlorobenzene		1700	ug/kg	U	7/10/97
SJS02-SS05-000P	SVTCL	Hexachlorobutadiene		1700	ug/kg	U	7/10/97
SJS02-SS05-000P	SVTCL	Hexachlorocyclopentadien		1700	ug/kg	U	7/10/97
SJS02-SS05-000P	SVTCL	Hexachloroethane		1700	ug/kg	U	7/10/97
SJS02-SS05-000P	SVTCL	Indeno(1,2,3-cd)Pyrene		1700	ug/kg	U	7/10/97
SJS02-SS05-000P	SVTCL	Isophorone		1700	ug/kg	U	7/10/97
SJS02-SS05-000P	SVTCL	N-Nitroso-Di-n-Propylamine		1700	ug/kg	U	7/10/97
SJS02-SS05-000P	SVTCL	N-Nitrosodiphenylamine		1700	ug/kg	U	7/10/97
SJS02-SS05-000P	SVTCL	Naphthalene		1700	ug/kg	U	7/10/97
SJS02-SS05-000P	SVTCL	Nitrobenzene		1700	ug/kg	U	7/10/97
SJS02-SS05-000P	SVTCL	Pentachlorophenol		4400	ug/kg	U	7/10/97
SJS02-SS05-000P	SVTCL	Phenanthrene		1700	ug/kg	U	7/10/97
SJS02-SS05-000P	SVTCL	Phenol		1700	ug/kg	U	7/10/97
SJS02-SS05-000P	SVTCL	Pyrene	320	1700	ug/kg	J	7/10/97
SJS02-SS05-000P	VCTCL	1,1,1-Trichloroethane		11	ug/kg	UJ	7/7/97
SJS02-SS05-000P	VCTCL	1,1,2,2-Tetrachloroethane		11	ug/kg	UJ	7/7/97
SJS02-SS05-000P	VCTCL	1,1,2-Trichloroethane		11	ug/kg	UJ	7/7/97
SJS02-SS05-000P	VCTCL	1,1-Dichloroethane		11	ug/kg	UJ	7/7/97
SJS02-SS05-000P	VCTCL	1,1-Dichloroethene		11	ug/kg	UJ	7/7/97
SJS02-SS05-000P	VCTCL	1,2-Dichloroethane		11	ug/kg	UJ	7/7/97
SJS02-SS05-000P	VCTCL	1,2-Dichloroethene (total)		11	ug/kg	UJ	7/7/97
SJS02-SS05-000P	VCTCL	1,2-Dichloropropane		11	ug/kg	UJ	7/7/97
SJS02-SS05-000P	VCTCL	2-Butanone		11	ug/kg	UJ	7/7/97
SJS02-SS05-000P	VCTCL	2-Hexanone		11	ug/kg	UJ	7/7/97
SJS02-SS05-000P	VCTCL	4-Methyl-2-Pentanone		11	ug/kg	UJ	7/7/97
SJS02-SS05-000P	VCTCL	Acetone	9	11	ug/kg	B	7/7/97
SJS02-SS05-000P	VCTCL	Benzene		11	ug/kg	UJ	7
SJS02-SS05-000P	VCTCL	Bromodichloromethane		11	ug/kg	UJ	7/

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS02-SS05-000P	VCTCL	Bromoform		11	ug/kg	UJ	7/7/97
SJS02-SS05-000P	VCTCL	Bromomethane		11	ug/kg	UJ	7/7/97
SJS02-SS05-000P	VCTCL	Carbon Disulfide		11	ug/kg	UJ	7/7/97
SJS02-SS05-000P	VCTCL	Carbon Tetrachloride		11	ug/kg	UJ	7/7/97
SJS02-SS05-000P	VCTCL	Chlorobenzene		11	ug/kg	UJ	7/7/97
SJS02-SS05-000P	VCTCL	Chloroethane		11	ug/kg	UJ	7/7/97
SJS02-SS05-000P	VCTCL	Chloroform		11	ug/kg	UJ	7/7/97
SJS02-SS05-000P	VCTCL	Chloromethane		11	ug/kg	UJ	7/7/97
SJS02-SS05-000P	VCTCL	cis-1,3-Dichloropropene		11	ug/kg	UJ	7/7/97
SJS02-SS05-000P	VCTCL	Dibromochloromethane		11	ug/kg	UJ	7/7/97
SJS02-SS05-000P	VCTCL	Ethylbenzene		11	ug/kg	UJ	7/7/97
SJS02-SS05-000P	VCTCL	Methylene Chloride	5	11	ug/kg	B	7/7/97
SJS02-SS05-000P	VCTCL	Styrene		11	ug/kg	UJ	7/7/97
SJS02-SS05-000P	VCTCL	Tetrachloroethene		11	ug/kg	UJ	7/7/97
SJS02-SS05-000P	VCTCL	Toluene		11	ug/kg	UJ	7/7/97
SJS02-SS05-000P	VCTCL	Total Xylenes		11	ug/kg	UJ	7/7/97
SJS02-SS05-000P	VCTCL	Trans-1,3-Dichloropropene		11	ug/kg	UJ	7/7/97
SJS02-SS05-000P	VCTCL	Trichloroethene		11	ug/kg	UJ	7/7/97
SJS02-SS05-000P	VCTCL	Vinyl Chloride		11	ug/kg	UJ	7/7/97
SJS02-SS06-000	CTOTP	Total Phosphorous (as P)	153	63	mg/kg		7/16/97
SJS02-SS06-000	MCYAN	Aluminum	18600	7.66	mg/kg		7/8/97
SJS02-SS06-000	MCYAN	Antimony	4.1	0.35	mg/kg	B	7/9/97
SJS02-SS06-000	MCYAN	Arsenic		0.52	mg/kg	U	7/9/97
SJS02-SS06-000	MCYAN	Barium	245	0.35	mg/kg		7/8/97
SJS02-SS06-000	MCYAN	Beryllium	13.4	0.17	mg/kg		7/8/97
SJS02-SS06-000	MCYAN	Cadmium	0.65	0.09	mg/kg	J	7/9/97
SJS02-SS06-000	MCYAN	Calcium	8980	15.15	mg/kg		7/8/97
SJS02-SS06-000	MCYAN	Chromium	246	1.22	mg/kg		7/8/97
SJS02-SS06-000	MCYAN	Cobalt	62.6	1.39	mg/kg		7/8/97
SJS02-SS06-000	MCYAN	Copper	4260	1.04	mg/kg		7/8/97
SJS02-SS06-000	MCYAN	Cyanide		0.5	mg/kg	U	7/3/97
SJS02-SS06-000	MCYAN	Iron	106000	2.96	mg/kg		7/8/97
SJS02-SS06-000	MCYAN	Lead	2370	0.17	mg/kg		7/9/97
SJS02-SS06-000	MCYAN	Magnesium	2570	31.51	mg/kg		7/8/97
SJS02-SS06-000	MCYAN	Manganese	470	0.35	mg/kg		7/8/97
SJS02-SS06-000	MCYAN	Mercury	0.11	0.05	mg/kg		7/10/97
SJS02-SS06-000	MCYAN	Nickel	246	1.22	mg/kg		7/8/97
SJS02-SS06-000	MCYAN	Potassium	1900	38.65	mg/kg		7/8/97
SJS02-SS06-000	MCYAN	Selenium		0.52	mg/kg	U	7/9/97
SJS02-SS06-000	MCYAN	Silver	2.9	0.17	mg/kg	B	7/9/97
SJS02-SS06-000	MCYAN	Sodium	533	10.1	mg/kg	J	7/8/97
SJS02-SS06-000	MCYAN	Thallium	5.5	0.35	mg/kg		7/9/97
SJS02-SS06-000	MCYAN	Vanadium	40.2	1.57	mg/kg		7/8/97
SJS02-SS06-000	MCYAN	Zinc	7560	0.87	mg/kg		7/8/97
SJS02-SS06-000	PSPCB	4,4'-DDD	8.9	3.3	ug/kg	J	7/22/97
SJS02-SS06-000	PSPCB	4,4'-DDE		3.3	ug/kg	U	7/22/97
SJS02-SS06-000	PSPCB	4,4'-DDT	12	3.3	ug/kg	J	7/22/97
SJS02-SS06-000	PSPCB	Aldrin		1.7	ug/kg	U	7/22/97
SJS02-SS06-000	PSPCB	alpha-BHC		1.7	ug/kg	U	7/22/97
SJS02-SS06-000	PSPCB	alpha-Chlordane		1.7	ug/kg	U	7/22/97
SJS02-SS06-000	PSPCB	Aroclor-1016		33	ug/kg	U	7/22/97
SJS02-SS06-000	PSPCB	Aroclor-1221		66	ug/kg	U	7/22/97
SJS02-SS06-000	PSPCB	Aroclor-1232		33	ug/kg	U	7/22/97
SJS02-SS06-000	PSPCB	Aroclor-1242		33	ug/kg	U	7/22/97
SJS02-SS06-000	PSPCB	Aroclor-1248		33	ug/kg	U	7/22/97
SJS02-SS06-000	PSPCB	Aroclor-1254		33	ug/kg	U	7/22/97
SJS02-SS06-000	PSPCB	Aroclor-1260	54	33	ug/kg	J	7/22/97
SJS02-SS06-000	PSPCB	beta-BHC		1.7	ug/kg	U	7/22/97
SJS02-SS06-000	PSPCB	delta-BHC		1.7	ug/kg	U	7/22/97
SJS02-SS06-000	PSPCB	Dieldrin		3.3	ug/kg	U	7/22/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS02-SS06-000	PSPCB	Endosulfan I		1.7	ug/kg	U	7/
SJS02-SS06-000	PSPCB	Endosulfan II		3.3	ug/kg	U	7/
SJS02-SS06-000	PSPCB	Endosulfan Sulfate		3.3	ug/kg	U	7/22/97
SJS02-SS06-000	PSPCB	Endrin		3.3	ug/kg	U	7/22/97
SJS02-SS06-000	PSPCB	Endrin Aldehyde		3.3	ug/kg	U	7/22/97
SJS02-SS06-000	PSPCB	Endrin Ketone		3.3	ug/kg	U	7/22/97
SJS02-SS06-000	PSPCB	gamma-BHC		1.7	ug/kg	U	7/22/97
SJS02-SS06-000	PSPCB	gamma-Chlordane		1.7	ug/kg	U	7/22/97
SJS02-SS06-000	PSPCB	Heptachlor		1.7	ug/kg	U	7/22/97
SJS02-SS06-000	PSPCB	Heptachlor Epoxide		1.7	ug/kg	U	7/22/97
SJS02-SS06-000	PSPCB	Methoxychlor		17	ug/kg	U	7/22/97
SJS02-SS06-000	PSPCB	Toxaphene		170	ug/kg	U	7/22/97
SJS02-SS06-000	SVTCL	1,2,4-Trichlorobenzene		1600	ug/kg	U	7/10/97
SJS02-SS06-000	SVTCL	1,2-Dichlorobenzene		1600	ug/kg	U	7/10/97
SJS02-SS06-000	SVTCL	1,3-Dichlorobenzene		1600	ug/kg	U	7/10/97
SJS02-SS06-000	SVTCL	1,4-Dichlorobenzene		1600	ug/kg	U	7/10/97
SJS02-SS06-000	SVTCL	2,2'-oxybis(1-Chloropropane		1600	ug/kg	U	7/10/97
SJS02-SS06-000	SVTCL	2,4,5-Trichlorophenol		4100	ug/kg	U	7/10/97
SJS02-SS06-000	SVTCL	2,4,6-Trichlorophenol		1600	ug/kg	U	7/10/97
SJS02-SS06-000	SVTCL	2,4-Dichlorophenol		1600	ug/kg	U	7/10/97
SJS02-SS06-000	SVTCL	2,4-Dimethylphenol		1600	ug/kg	U	7/10/97
SJS02-SS06-000	SVTCL	2,4-Dinitrophenol		4100	ug/kg	U	7/10/97
SJS02-SS06-000	SVTCL	2,4-Dinitrotoluene		1600	ug/kg	U	7/10/97
SJS02-SS06-000	SVTCL	2,6-Dinitrotoluene		1600	ug/kg	U	7/10/97
SJS02-SS06-000	SVTCL	2-Chloronaphthalene		1600	ug/kg	U	7/10/97
SJS02-SS06-000	SVTCL	2-Chlorophenol		1600	ug/kg	U	7/10/97
SJS02-SS06-000	SVTCL	2-Methylnaphthalene		1600	ug/kg	U	7/10/97
SJS02-SS06-000	SVTCL	2-Methylphenol		1600	ug/kg	U	7/10/97
SJS02-SS06-000	SVTCL	2-Nitroaniline		4100	ug/kg	U	7/10/97
SJS02-SS06-000	SVTCL	2-Nitrophenol		1600	ug/kg	U	7/1
SJS02-SS06-000	SVTCL	3,3'-Dichlorobenzidine		1600	ug/kg	U	7/1
SJS02-SS06-000	SVTCL	3-Nitroaniline		4100	ug/kg	U	7/10/97
SJS02-SS06-000	SVTCL	4,6-Dinitro-2-Methylphenol		4100	ug/kg	U	7/10/97
SJS02-SS06-000	SVTCL	4-Bromophenyl phenylether		1600	ug/kg	U	7/10/97
SJS02-SS06-000	SVTCL	4-Chloro-3-Methylphenol		1600	ug/kg	U	7/10/97
SJS02-SS06-000	SVTCL	4-Chloroaniline		1600	ug/kg	U	7/10/97
SJS02-SS06-000	SVTCL	4-Chlorophenyl-phenylether		1600	ug/kg	U	7/10/97
SJS02-SS06-000	SVTCL	4-Methylphenol		1600	ug/kg	U	7/10/97
SJS02-SS06-000	SVTCL	4-Nitroaniline		4100	ug/kg	U	7/10/97
SJS02-SS06-000	SVTCL	4-Nitrophenol		4100	ug/kg	U	7/10/97
SJS02-SS06-000	SVTCL	Acenaphthene		1600	ug/kg	U	7/10/97
SJS02-SS06-000	SVTCL	Acenaphthylene		1600	ug/kg	U	7/10/97
SJS02-SS06-000	SVTCL	Anthracene		1600	ug/kg	U	7/10/97
SJS02-SS06-000	SVTCL	Benzo(a)Anthracene		1600	ug/kg	U	7/10/97
SJS02-SS06-000	SVTCL	Benzo(a)Pyrene		1600	ug/kg	U	7/10/97
SJS02-SS06-000	SVTCL	Benzo(b)Fluoranthene		1600	ug/kg	U	7/10/97
SJS02-SS06-000	SVTCL	Benzo(g,h,i)Perylene		1600	ug/kg	U	7/10/97
SJS02-SS06-000	SVTCL	Benzo(k)Fluoranthene		1600	ug/kg	U	7/10/97
SJS02-SS06-000	SVTCL	Bis(2-chloroethoxy)Methane		1600	ug/kg	U	7/10/97
SJS02-SS06-000	SVTCL	Bis(2-chloroethyl)Ether		1600	ug/kg	U	7/10/97
SJS02-SS06-000	SVTCL	Bis(2-Ethylhexyl)Phthalate	570	1600	ug/kg	B	7/10/97
SJS02-SS06-000	SVTCL	Butylbenzylphthalate	280	1600	ug/kg	J	7/10/97
SJS02-SS06-000	SVTCL	Carbazole		1600	ug/kg	U	7/10/97
SJS02-SS06-000	SVTCL	Chrysene		1600	ug/kg	U	7/10/97
SJS02-SS06-000	SVTCL	Di-n-Butylphthalate		1600	ug/kg	U	7/10/97
SJS02-SS06-000	SVTCL	Di-n-Octyl Phthalate		1600	ug/kg	U	7/10/97
SJS02-SS06-000	SVTCL	Dibenz(a,h)Anthracene		1600	ug/kg	U	7/10/97
SJS02-SS06-000	SVTCL	Dibenzofuran		1600	ug/kg	U	7/10/97
SJS02-SS06-000	SVTCL	Diethylphthalate		1600	ug/kg	U	7/1
SJS02-SS06-000	SVTCL	Dimethyl Phthalate		1600	ug/kg	U	7/10/

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS02-SS06-000	SVTCL	Fluoranthene		1600	ug/kg	U	7/10/97
SJS02-SS06-000	SVTCL	Fluorene		1600	ug/kg	U	7/10/97
SJS02-SS06-000	SVTCL	Hexachlorobenzene		1600	ug/kg	U	7/10/97
SJS02-SS06-000	SVTCL	Hexachlorobutadiene		1600	ug/kg	U	7/10/97
SJS02-SS06-000	SVTCL	Hexachlorocyclopentadien		1600	ug/kg	U	7/10/97
SJS02-SS06-000	SVTCL	Hexachloroethane		1600	ug/kg	U	7/10/97
SJS02-SS06-000	SVTCL	Indeno(1,2,3-cd)Pyrene		1600	ug/kg	U	7/10/97
SJS02-SS06-000	SVTCL	Isophorone		1600	ug/kg	U	7/10/97
SJS02-SS06-000	SVTCL	N-Nitroso-Di-n-Propylamine		1600	ug/kg	U	7/10/97
SJS02-SS06-000	SVTCL	N-Nitrosodiphenylamine		1600	ug/kg	U	7/10/97
SJS02-SS06-000	SVTCL	Naphthalene		1600	ug/kg	U	7/10/97
SJS02-SS06-000	SVTCL	Nitrobenzene		1600	ug/kg	U	7/10/97
SJS02-SS06-000	SVTCL	Pentachlorophenol		4100	ug/kg	U	7/10/97
SJS02-SS06-000	SVTCL	Phenanthrene		1600	ug/kg	U	7/10/97
SJS02-SS06-000	SVTCL	Phenol		1600	ug/kg	U	7/10/97
SJS02-SS06-000	SVTCL	Pyrene		1600	ug/kg	U	7/10/97
SJS02-SS06-000	VCTCL	1,1,1-Trichloroethane		10	ug/kg	U	7/7/97
SJS02-SS06-000	VCTCL	1,1,2,2-Tetrachloroethane		10	ug/kg	U	7/7/97
SJS02-SS06-000	VCTCL	1,1,2-Trichloroethane		10	ug/kg	U	7/7/97
SJS02-SS06-000	VCTCL	1,1-Dichloroethane		10	ug/kg	U	7/7/97
SJS02-SS06-000	VCTCL	1,1-Dichloroethene		10	ug/kg	U	7/7/97
SJS02-SS06-000	VCTCL	1,2-Dichloroethane		10	ug/kg	U	7/7/97
SJS02-SS06-000	VCTCL	1,2-Dichloroethene (total)		10	ug/kg	U	7/7/97
SJS02-SS06-000	VCTCL	1,2-Dichloropropane		10	ug/kg	U	7/7/97
SJS02-SS06-000	VCTCL	2-Butanone		10	ug/kg	U	7/7/97
SJS02-SS06-000	VCTCL	2-Hexanone		10	ug/kg	U	7/7/97
SJS02-SS06-000	VCTCL	4-Methyl-2-Pentanone		10	ug/kg	U	7/7/97
SJS02-SS06-000	VCTCL	Acetone	12	10	ug/kg	B	7/7/97
SJS02-SS06-000	VCTCL	Benzene		10	ug/kg	U	7/7/97
SJS02-SS06-000	VCTCL	Bromodichloromethane		10	ug/kg	U	7/7/97
SJS02-SS06-000	VCTCL	Bromoform		10	ug/kg	U	7/7/97
SJS02-SS06-000	VCTCL	Bromomethane		10	ug/kg	U	7/7/97
SJS02-SS06-000	VCTCL	Carbon Disulfide		10	ug/kg	U	7/7/97
SJS02-SS06-000	VCTCL	Carbon Tetrachloride		10	ug/kg	U	7/7/97
SJS02-SS06-000	VCTCL	Chlorobenzene		10	ug/kg	U	7/7/97
SJS02-SS06-000	VCTCL	Chloroethane		10	ug/kg	U	7/7/97
SJS02-SS06-000	VCTCL	Chloroform		10	ug/kg	U	7/7/97
SJS02-SS06-000	VCTCL	Chloromethane		10	ug/kg	U	7/7/97
SJS02-SS06-000	VCTCL	cis-1,3-Dichloropropene		10	ug/kg	U	7/7/97
SJS02-SS06-000	VCTCL	Dibromochloromethane		10	ug/kg	U	7/7/97
SJS02-SS06-000	VCTCL	Ethylbenzene		10	ug/kg	U	7/7/97
SJS02-SS06-000	VCTCL	Methylene Chloride	23	10	ug/kg	B	7/7/97
SJS02-SS06-000	VCTCL	Styrene		10	ug/kg	U	7/7/97
SJS02-SS06-000	VCTCL	Tetrachloroethene		10	ug/kg	U	7/7/97
SJS02-SS06-000	VCTCL	Toluene	1	10	ug/kg	J	7/7/97
SJS02-SS06-000	VCTCL	Total Xylenes		10	ug/kg	U	7/7/97
SJS02-SS06-000	VCTCL	Trans-1,3-Dichloropropene		10	ug/kg	U	7/7/97
SJS02-SS06-000	VCTCL	Trichloroethene		10	ug/kg	U	7/7/97
SJS02-SS06-000	VCTCL	Vinyl Chloride		10	ug/kg	U	7/7/97
SJS02-SS07-000	CTOTP	Total Phosphorous (as P)	7	1.3	mg/kg		7/16/97
SJS02-SS07-000	MCYAN	Aluminum	4350	8.36	mg/kg		7/8/97
SJS02-SS07-000	MCYAN	Antimony	0.9	0.38	mg/kg	B	7/9/97
SJS02-SS07-000	MCYAN	Arsenic	3.6	0.57	mg/kg		7/9/97
SJS02-SS07-000	MCYAN	Barium	47.3	0.38	mg/kg		7/8/97
SJS02-SS07-000	MCYAN	Beryllium		0.19	mg/kg	U	7/8/97
SJS02-SS07-000	MCYAN	Cadmium	0.29	0.09	mg/kg	J	7/9/97
SJS02-SS07-000	MCYAN	Calcium	4730	16.53	mg/kg		7/8/97
SJS02-SS07-000	MCYAN	Chromium	10.8	1.33	mg/kg		7/8/97
SJS02-SS07-000	MCYAN	Cobalt		1.52	mg/kg	U	7/8/97
SJS02-SS07-000	MCYAN	Copper	46.9	1.14	mg/kg		7/8/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Ana
SJS02-SS07-000	MCYAN	Cyanide		0.51	mg/kg	U	7
SJS02-SS07-000	MCYAN	Iron	6170	3.23	mg/kg		7
SJS02-SS07-000	MCYAN	Lead	97.8	0.19	mg/kg		7/9/9
SJS02-SS07-000	MCYAN	Magnesium	719	34.38	mg/kg	J	7/8/97
SJS02-SS07-000	MCYAN	Manganese	50.3	0.38	mg/kg		7/8/97
SJS02-SS07-000	MCYAN	Mercury	0.56	0.05	mg/kg		7/10/97
SJS02-SS07-000	MCYAN	Nickel	4.5	1.33	mg/kg	J	7/8/97
SJS02-SS07-000	MCYAN	Potassium	417	42.17	mg/kg	J	7/8/97
SJS02-SS07-000	MCYAN	Selenium		0.57	mg/kg	U	7/9/97
SJS02-SS07-000	MCYAN	Silver	0.98	0.19	mg/kg	B	7/9/97
SJS02-SS07-000	MCYAN	Sodium	82.2	11.02	mg/kg	B	7/8/97
SJS02-SS07-000	MCYAN	Thallium		0.38	mg/kg	U	7/9/97
SJS02-SS07-000	MCYAN	Vanadium	12.9	1.71	mg/kg		7/8/97
SJS02-SS07-000	MCYAN	Zinc	185	0.95	mg/kg		7/8/97
SJS02-SS07-000	PSPCB	4,4'-DDD	24	16	ug/kg		7/22/97
SJS02-SS07-000	PSPCB	4,4'-DDE	120	16	ug/kg		7/22/97
SJS02-SS07-000	PSPCB	4,4'-DDT	23	16	ug/kg		7/22/97
SJS02-SS07-000	PSPCB	Aldrin		8.4	ug/kg	U	7/22/97
SJS02-SS07-000	PSPCB	alpha-BHC		8.4	ug/kg	U	7/22/97
SJS02-SS07-000	PSPCB	alpha-Chlordane		8.4	ug/kg	U	7/22/97
SJS02-SS07-000	PSPCB	Aroclor-1016		160	ug/kg	U	7/22/97
SJS02-SS07-000	PSPCB	Aroclor-1221		330	ug/kg	U	7/22/97
SJS02-SS07-000	PSPCB	Aroclor-1232		160	ug/kg	U	7/22/97
SJS02-SS07-000	PSPCB	Aroclor-1242		160	ug/kg	U	7/22/97
SJS02-SS07-000	PSPCB	Aroclor-1248		160	ug/kg	U	7/22/97
SJS02-SS07-000	PSPCB	Aroclor-1254		160	ug/kg	U	7/22/97
SJS02-SS07-000	PSPCB	Aroclor-1260		160	ug/kg	U	7/22/97
SJS02-SS07-000	PSPCB	beta-BHC		8.4	ug/kg	U	7/22/97
SJS02-SS07-000	PSPCB	delta-BHC		8.4	ug/kg	U	7/22/97
SJS02-SS07-000	PSPCB	Dieldrin		16	ug/kg	U	7/
SJS02-SS07-000	PSPCB	Endosulfan I		8.4	ug/kg	U	7/2
SJS02-SS07-000	PSPCB	Endosulfan II		16	ug/kg	U	7/22/97
SJS02-SS07-000	PSPCB	Endosulfan Sulfate		16	ug/kg	U	7/22/97
SJS02-SS07-000	PSPCB	Endrin		16	ug/kg	U	7/22/97
SJS02-SS07-000	PSPCB	Endrin Aldehyde		16	ug/kg	U	7/22/97
SJS02-SS07-000	PSPCB	Endrin Ketone		16	ug/kg	U	7/22/97
SJS02-SS07-000	PSPCB	gamma-BHC		8.4	ug/kg	U	7/22/97
SJS02-SS07-000	PSPCB	gamma-Chlordane		8.4	ug/kg	U	7/22/97
SJS02-SS07-000	PSPCB	Heptachlor		8.4	ug/kg	U	7/22/97
SJS02-SS07-000	PSPCB	Heptachlor Epoxide		8.4	ug/kg	U	7/22/97
SJS02-SS07-000	PSPCB	Methoxychlor		84	ug/kg	U	7/22/97
SJS02-SS07-000	PSPCB	Toxaphene		840	ug/kg	U	7/22/97
SJS02-SS07-000	SVTCL	1,2,4-Trichlorobenzene		1600	ug/kg	U	7/11/97
SJS02-SS07-000	SVTCL	1,2-Dichlorobenzene		1600	ug/kg	U	7/11/97
SJS02-SS07-000	SVTCL	1,3-Dichlorobenzene		1600	ug/kg	U	7/11/97
SJS02-SS07-000	SVTCL	1,4-Dichlorobenzene		1600	ug/kg	U	7/11/97
SJS02-SS07-000	SVTCL	2,2'-oxybis(1-Chloropropane		1600	ug/kg	U	7/11/97
SJS02-SS07-000	SVTCL	2,4,5-Trichlorophenol		4200	ug/kg	U	7/11/97
SJS02-SS07-000	SVTCL	2,4,6-Trichlorophenol		1600	ug/kg	U	7/11/97
SJS02-SS07-000	SVTCL	2,4-Dichlorophenol		1600	ug/kg	U	7/11/97
SJS02-SS07-000	SVTCL	2,4-Dimethylphenol		1600	ug/kg	U	7/11/97
SJS02-SS07-000	SVTCL	2,4-Dinitrophenol		4200	ug/kg	U	7/11/97
SJS02-SS07-000	SVTCL	2,4-Dinitrotoluene		1600	ug/kg	U	7/11/97
SJS02-SS07-000	SVTCL	2,6-Dinitrotoluene		1600	ug/kg	U	7/11/97
SJS02-SS07-000	SVTCL	2-Chloronaphthalene		1600	ug/kg	U	7/11/97
SJS02-SS07-000	SVTCL	2-Chlorophenol		1600	ug/kg	U	7/11/97
SJS02-SS07-000	SVTCL	2-Methylnaphthalene		1600	ug/kg	U	7/11/97
SJS02-SS07-000	SVTCL	2-Methylphenol		1600	ug/kg	U	7/11/97
SJS02-SS07-000	SVTCL	2-Nitroaniline		4200	ug/kg	U	7/
SJS02-SS07-000	SVTCL	2-Nitrophenol		1600	ug/kg	U	7/11

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS02-SS07-000	SVTCL	3,3'-Dichlorobenzidine		1600	ug/kg	U	7/11/97
SJS02-SS07-000	SVTCL	3-Nitroaniline		4200	ug/kg	U	7/11/97
SJS02-SS07-000	SVTCL	4,6-Dinitro-2-Methylphenol		4200	ug/kg	U	7/11/97
SJS02-SS07-000	SVTCL	4-Bromophenyl phenylether		1600	ug/kg	U	7/11/97
SJS02-SS07-000	SVTCL	4-Chloro-3-Methylphenol		1600	ug/kg	U	7/11/97
SJS02-SS07-000	SVTCL	4-Chloroaniline		1600	ug/kg	U	7/11/97
SJS02-SS07-000	SVTCL	4-Chlorophenyl-phenylether		1600	ug/kg	U	7/11/97
SJS02-SS07-000	SVTCL	4-Methylphenol		1600	ug/kg	U	7/11/97
SJS02-SS07-000	SVTCL	4-Nitroaniline		4200	ug/kg	U	7/11/97
SJS02-SS07-000	SVTCL	4-Nitrophenol		4200	ug/kg	U	7/11/97
SJS02-SS07-000	SVTCL	Acenaphthene		1600	ug/kg	U	7/11/97
SJS02-SS07-000	SVTCL	Acenaphthylene		1600	ug/kg	U	7/11/97
SJS02-SS07-000	SVTCL	Anthracene		1600	ug/kg	U	7/11/97
SJS02-SS07-000	SVTCL	Benzo(a)Anthracene	390	1600	ug/kg	J	7/11/97
SJS02-SS07-000	SVTCL	Benzo(a)Pyrene	340	1600	ug/kg	J	7/11/97
SJS02-SS07-000	SVTCL	Benzo(b)Fluoranthene	440	1600	ug/kg	J	7/11/97
SJS02-SS07-000	SVTCL	Benzo(g,h,i)Perylene		1600	ug/kg	U	7/11/97
SJS02-SS07-000	SVTCL	Benzo(k)Fluoranthene	270	1600	ug/kg	J	7/11/97
SJS02-SS07-000	SVTCL	Bis(2-chloroethoxy)Methane		1600	ug/kg	U	7/11/97
SJS02-SS07-000	SVTCL	Bis(2-chloroethyl)Ether		1600	ug/kg	U	7/11/97
SJS02-SS07-000	SVTCL	Bis(2-Ethylhexyl)Phthalate		1600	ug/kg	U	7/11/97
SJS02-SS07-000	SVTCL	Butylbenzylphthalate		1600	ug/kg	U	7/11/97
SJS02-SS07-000	SVTCL	Carbazole		1600	ug/kg	U	7/11/97
SJS02-SS07-000	SVTCL	Chrysene	370	1600	ug/kg	J	7/11/97
SJS02-SS07-000	SVTCL	Di-n-Butylphthalate		1600	ug/kg	U	7/11/97
SJS02-SS07-000	SVTCL	Di-n-Octyl Phthalate		1600	ug/kg	U	7/11/97
SJS02-SS07-000	SVTCL	Dibenz(a,h)Anthracene		1600	ug/kg	U	7/11/97
SJS02-SS07-000	SVTCL	Dibenzofuran		1600	ug/kg	U	7/11/97
SJS02-SS07-000	SVTCL	Diethylphthalate		1600	ug/kg	U	7/11/97
SJS02-SS07-000	SVTCL	Dimethyl Phthalate		1600	ug/kg	U	7/11/97
SJS02-SS07-000	SVTCL	Fluoranthene	650	1600	ug/kg	J	7/11/97
SJS02-SS07-000	SVTCL	Fluorene		1600	ug/kg	U	7/11/97
SJS02-SS07-000	SVTCL	Hexachlorobenzene		1600	ug/kg	U	7/11/97
SJS02-SS07-000	SVTCL	Hexachlorobutadiene		1600	ug/kg	U	7/11/97
SJS02-SS07-000	SVTCL	Hexachlorocyclopentadien		1600	ug/kg	U	7/11/97
SJS02-SS07-000	SVTCL	Hexachloroethane		1600	ug/kg	U	7/11/97
SJS02-SS07-000	SVTCL	Indeno(1,2,3-cd)Pyrene	210	1600	ug/kg	J	7/11/97
SJS02-SS07-000	SVTCL	Isophorone		1600	ug/kg	U	7/11/97
SJS02-SS07-000	SVTCL	N-Nitroso-Di-n-Propylamine		1600	ug/kg	U	7/11/97
SJS02-SS07-000	SVTCL	N-Nitrosodiphenylamine		1600	ug/kg	U	7/11/97
SJS02-SS07-000	SVTCL	Naphthalene		1600	ug/kg	U	7/11/97
SJS02-SS07-000	SVTCL	Nitrobenzene		1600	ug/kg	U	7/11/97
SJS02-SS07-000	SVTCL	Pentachlorophenol		4200	ug/kg	U	7/11/97
SJS02-SS07-000	SVTCL	Phenanthrene	310	1600	ug/kg	J	7/11/97
SJS02-SS07-000	SVTCL	Phenol		1600	ug/kg	U	7/11/97
SJS02-SS07-000	SVTCL	Pyrene	590	1600	ug/kg	J	7/11/97
SJS02-SS07-000	VCTCL	1,1,1-Trichloroethane		10	ug/kg	U	7/8/97
SJS02-SS07-000	VCTCL	1,1,2,2-Tetrachloroethane		10	ug/kg	U	7/8/97
SJS02-SS07-000	VCTCL	1,1,2-Trichloroethane		10	ug/kg	U	7/8/97
SJS02-SS07-000	VCTCL	1,1-Dichloroethane		10	ug/kg	U	7/8/97
SJS02-SS07-000	VCTCL	1,1-Dichloroethene		10	ug/kg	U	7/8/97
SJS02-SS07-000	VCTCL	1,2-Dichloroethane		10	ug/kg	U	7/8/97
SJS02-SS07-000	VCTCL	1,2-Dichloroethene (total)		10	ug/kg	U	7/8/97
SJS02-SS07-000	VCTCL	1,2-Dichloropropane		10	ug/kg	U	7/8/97
SJS02-SS07-000	VCTCL	2-Butanone		10	ug/kg	U	7/8/97
SJS02-SS07-000	VCTCL	2-Hexanone		10	ug/kg	U	7/8/97
SJS02-SS07-000	VCTCL	4-Methyl-2-Pentanone		10	ug/kg	U	7/8/97
SJS02-SS07-000	VCTCL	Acetone		10	ug/kg	U	7/8/97
SJS02-SS07-000	VCTCL	Benzene		10	ug/kg	U	7/8/97
SJS02-SS07-000	VCTCL	Bromodichloromethane		10	ug/kg	U	7/8/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS02-SS07-000	VCTCL	Bromoform		10	ug/kg	U	7
SJS02-SS07-000	VCTCL	Bromomethane		10	ug/kg	U	7
SJS02-SS07-000	VCTCL	Carbon Disulfide		10	ug/kg	U	7/8/97
SJS02-SS07-000	VCTCL	Carbon Tetrachloride		10	ug/kg	U	7/8/97
SJS02-SS07-000	VCTCL	Chlorobenzene		10	ug/kg	U	7/8/97
SJS02-SS07-000	VCTCL	Chloroethane		10	ug/kg	U	7/8/97
SJS02-SS07-000	VCTCL	Chloroform		10	ug/kg	U	7/8/97
SJS02-SS07-000	VCTCL	Chloromethane		10	ug/kg	U	7/8/97
SJS02-SS07-000	VCTCL	cis-1,3-Dichloropropene		10	ug/kg	U	7/8/97
SJS02-SS07-000	VCTCL	Dibromochloromethane		10	ug/kg	U	7/8/97
SJS02-SS07-000	VCTCL	Ethylbenzene		10	ug/kg	U	7/8/97
SJS02-SS07-000	VCTCL	Methylene Chloride	39	10	ug/kg	B	7/8/97
SJS02-SS07-000	VCTCL	Styrene		10	ug/kg	U	7/8/97
SJS02-SS07-000	VCTCL	Tetrachloroethene		10	ug/kg	U	7/8/97
SJS02-SS07-000	VCTCL	Toluene		10	ug/kg	U	7/8/97
SJS02-SS07-000	VCTCL	Total Xylenes		10	ug/kg	U	7/8/97
SJS02-SS07-000	VCTCL	Trans-1,3-Dichloropropene		10	ug/kg	U	7/8/97
SJS02-SS07-000	VCTCL	Trichloroethene		10	ug/kg	U	7/8/97
SJS02-SS07-000	VCTCL	Vinyl Chloride		10	ug/kg	U	7/8/97
SJS02-SS08-000	CTOTP	Total Phosphorous (as P)	3.1	1.3	mg/kg		7/16/97
SJS02-SS08-000	MCYAN	Aluminum	4920	8.79	mg/kg		7/8/97
SJS02-SS08-000	MCYAN	Antimony		0.4	mg/kg	U	7/9/97
SJS02-SS08-000	MCYAN	Arsenic	5.1	0.6	mg/kg		7/9/97
SJS02-SS08-000	MCYAN	Barium	40.8	0.4	mg/kg		7/8/97
SJS02-SS08-000	MCYAN	Beryllium		0.2	mg/kg	U	7/8/97
SJS02-SS08-000	MCYAN	Cadmium	0.33	0.1	mg/kg	J	7/9/97
SJS02-SS08-000	MCYAN	Calcium	3670	17.37	mg/kg		7/8/97
SJS02-SS08-000	MCYAN	Chromium	12.8	1.4	mg/kg		7/8/97
SJS02-SS08-000	MCYAN	Cobalt	2.3	1.6	mg/kg	J	7/8/97
SJS02-SS08-000	MCYAN	Copper	64.9	1.2	mg/kg		7/
SJS02-SS08-000	MCYAN	Cyanide		0.52	mg/kg	U	7/
SJS02-SS08-000	MCYAN	Iron	7630	3.39	mg/kg		7/8/97
SJS02-SS08-000	MCYAN	Lead	87.1	0.2	mg/kg		7/9/97
SJS02-SS08-000	MCYAN	Magnesium	841	36.14	mg/kg	J	7/8/97
SJS02-SS08-000	MCYAN	Manganese	77.9	0.4	mg/kg		7/8/97
SJS02-SS08-000	MCYAN	Mercury	0.4	0.05	mg/kg		7/10/97
SJS02-SS08-000	MCYAN	Nickel	9	1.4	mg/kg		7/8/97
SJS02-SS08-000	MCYAN	Potassium	539	44.32	mg/kg	J	7/8/97
SJS02-SS08-000	MCYAN	Selenium		0.6	mg/kg	U	7/9/97
SJS02-SS08-000	MCYAN	Silver	1.5	0.2	mg/kg	B	7/9/97
SJS02-SS08-000	MCYAN	Sodium	54.6	11.58	mg/kg	B	7/8/97
SJS02-SS08-000	MCYAN	Thallium		0.4	mg/kg	U	7/9/97
SJS02-SS08-000	MCYAN	Vanadium	23.9	1.8	mg/kg		7/8/97
SJS02-SS08-000	MCYAN	Zinc	147	1	mg/kg		7/8/97
SJS02-SS08-000	PSPCB	4,4'-DDD	5.7	3.5	ug/kg	J	7/22/97
SJS02-SS08-000	PSPCB	4,4'-DDE	25	3.5	ug/kg		7/22/97
SJS02-SS08-000	PSPCB	4,4'-DDT	13	3.5	ug/kg	J	7/22/97
SJS02-SS08-000	PSPCB	Aldrin		1.8	ug/kg	U	7/22/97
SJS02-SS08-000	PSPCB	alpha-BHC		1.8	ug/kg	U	7/22/97
SJS02-SS08-000	PSPCB	alpha-Chlordane		1.8	ug/kg	U	7/22/97
SJS02-SS08-000	PSPCB	Aroclor-1016		35	ug/kg	U	7/22/97
SJS02-SS08-000	PSPCB	Aroclor-1221		71	ug/kg	U	7/22/97
SJS02-SS08-000	PSPCB	Aroclor-1232		35	ug/kg	U	7/22/97
SJS02-SS08-000	PSPCB	Aroclor-1242		35	ug/kg	U	7/22/97
SJS02-SS08-000	PSPCB	Aroclor-1248		35	ug/kg	U	7/22/97
SJS02-SS08-000	PSPCB	Aroclor-1254		35	ug/kg	U	7/22/97
SJS02-SS08-000	PSPCB	Aroclor-1260	17	35	ug/kg	J	7/22/97
SJS02-SS08-000	PSPCB	beta-BHC		1.8	ug/kg	U	7/22/97
SJS02-SS08-000	PSPCB	delta-BHC		1.8	ug/kg	U	7/
SJS02-SS08-000	PSPCB	Dieldrin		3.5	ug/kg	U	7/

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS02-SS08-000	PSPCB	Endosulfan I		1.8	ug/kg	U	7/22/97
SJS02-SS08-000	PSPCB	Endosulfan II		3.5	ug/kg	U	7/22/97
SJS02-SS08-000	PSPCB	Endosulfan Sulfate		3.5	ug/kg	U	7/22/97
SJS02-SS08-000	PSPCB	Endrin		3.5	ug/kg	U	7/22/97
SJS02-SS08-000	PSPCB	Endrin Aldehyde		3.5	ug/kg	U	7/22/97
SJS02-SS08-000	PSPCB	Endrin Ketone		3.5	ug/kg	U	7/22/97
SJS02-SS08-000	PSPCB	gamma-BHC		1.8	ug/kg	U	7/22/97
SJS02-SS08-000	PSPCB	gamma-Chlordane		1.8	ug/kg	U	7/22/97
SJS02-SS08-000	PSPCB	Heptachlor		1.8	ug/kg	U	7/22/97
SJS02-SS08-000	PSPCB	Heptachlor Epoxide		1.8	ug/kg	U	7/22/97
SJS02-SS08-000	PSPCB	Methoxychlor		18	ug/kg	U	7/22/97
SJS02-SS08-000	PSPCB	Toxaphene		180	ug/kg	U	7/22/97
SJS02-SS08-000	SVTCL	1,2,4-Trichlorobenzene		1700	ug/kg	U	7/14/97
SJS02-SS08-000	SVTCL	1,2-Dichlorobenzene		1700	ug/kg	U	7/14/97
SJS02-SS08-000	SVTCL	1,3-Dichlorobenzene		1700	ug/kg	U	7/14/97
SJS02-SS08-000	SVTCL	1,4-Dichlorobenzene		1700	ug/kg	U	7/14/97
SJS02-SS08-000	SVTCL	2,2'-oxybis(1-Chloropropane		1700	ug/kg	U	7/14/97
SJS02-SS08-000	SVTCL	2,4,5-Trichlorophenol		4300	ug/kg	U	7/14/97
SJS02-SS08-000	SVTCL	2,4,6-Trichlorophenol		1700	ug/kg	U	7/14/97
SJS02-SS08-000	SVTCL	2,4-Dichlorophenol		1700	ug/kg	U	7/14/97
SJS02-SS08-000	SVTCL	2,4-Dimethylphenol		1700	ug/kg	U	7/14/97
SJS02-SS08-000	SVTCL	2,4-Dinitrophenol		4300	ug/kg	U	7/14/97
SJS02-SS08-000	SVTCL	2,4-Dinitrotoluene		1700	ug/kg	U	7/14/97
SJS02-SS08-000	SVTCL	2,6-Dinitrotoluene		1700	ug/kg	U	7/14/97
SJS02-SS08-000	SVTCL	2-Chloronaphthalene		1700	ug/kg	U	7/14/97
SJS02-SS08-000	SVTCL	2-Chlorophenol		1700	ug/kg	U	7/14/97
SJS02-SS08-000	SVTCL	2-Methylnaphthalene		1700	ug/kg	U	7/14/97
SJS02-SS08-000	SVTCL	2-Methylphenol		1700	ug/kg	U	7/14/97
SJS02-SS08-000	SVTCL	2-Nitroaniline		4300	ug/kg	U	7/14/97
SJS02-SS08-000	SVTCL	2-Nitrophenol		1700	ug/kg	U	7/14/97
SJS02-SS08-000	SVTCL	3,3'-Dichlorobenzidine		1700	ug/kg	U	7/14/97
SJS02-SS08-000	SVTCL	3-Nitroaniline		4300	ug/kg	U	7/14/97
SJS02-SS08-000	SVTCL	4,6-Dinitro-2-Methylphenol		4300	ug/kg	U	7/14/97
SJS02-SS08-000	SVTCL	4-Bromophenyl phenylether		1700	ug/kg	U	7/14/97
SJS02-SS08-000	SVTCL	4-Chloro-3-Methylphenol		1700	ug/kg	U	7/14/97
SJS02-SS08-000	SVTCL	4-Chloroaniline		1700	ug/kg	U	7/14/97
SJS02-SS08-000	SVTCL	4-Chlorophenyl-phenylether		1700	ug/kg	U	7/14/97
SJS02-SS08-000	SVTCL	4-Methylphenol		1700	ug/kg	U	7/14/97
SJS02-SS08-000	SVTCL	4-Nitroaniline		4300	ug/kg	U	7/14/97
SJS02-SS08-000	SVTCL	4-Nitrophenol		4300	ug/kg	U	7/14/97
SJS02-SS08-000	SVTCL	Acenaphthene		1700	ug/kg	U	7/14/97
SJS02-SS08-000	SVTCL	Acenaphthylene		1700	ug/kg	U	7/14/97
SJS02-SS08-000	SVTCL	Anthracene		1700	ug/kg	U	7/14/97
SJS02-SS08-000	SVTCL	Benzo(a)Anthracene		1700	ug/kg	U	7/14/97
SJS02-SS08-000	SVTCL	Benzo(a)Pyrene		1700	ug/kg	U	7/14/97
SJS02-SS08-000	SVTCL	Benzo(b)Fluoranthene		1700	ug/kg	U	7/14/97
SJS02-SS08-000	SVTCL	Benzo(g,h,i)Perylene		1700	ug/kg	U	7/14/97
SJS02-SS08-000	SVTCL	Benzo(k)Fluoranthene		1700	ug/kg	U	7/14/97
SJS02-SS08-000	SVTCL	Bis(2-chloroethoxy)Methane		1700	ug/kg	U	7/14/97
SJS02-SS08-000	SVTCL	Bis(2-chloroethyl)Ether		1700	ug/kg	U	7/14/97
SJS02-SS08-000	SVTCL	Bis(2-Ethylhexyl)Phthalate		1700	ug/kg	U	7/14/97
SJS02-SS08-000	SVTCL	Butylbenzylphthalate		1700	ug/kg	U	7/14/97
SJS02-SS08-000	SVTCL	Carbazole		1700	ug/kg	U	7/14/97
SJS02-SS08-000	SVTCL	Chrysene		1700	ug/kg	U	7/14/97
SJS02-SS08-000	SVTCL	Di-n-Butylphthalate		1700	ug/kg	U	7/14/97
SJS02-SS08-000	SVTCL	Di-n-Octyl Phthalate		1700	ug/kg	U	7/14/97
SJS02-SS08-000	SVTCL	Dibenz(a,h)Anthracene		1700	ug/kg	U	7/14/97
SJS02-SS08-000	SVTCL	Dibenzofuran		1700	ug/kg	U	7/14/97
SJS02-SS08-000	SVTCL	Diethylphthalate		1700	ug/kg	U	7/14/97
SJS02-SS08-000	SVTCL	Dimethyl Phthalate		1700	ug/kg	U	7/14/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS02-SS09-000	SVTCL	3-Nitroaniline		900	ug/kg	U	7/2
SJS02-SS09-000	SVTCL	4,6-Dinitro-2-Methylphenol		900	ug/kg	U	7/
SJS02-SS09-000	SVTCL	4-Bromophenyl phenylether		360	ug/kg	U	7/20/97
SJS02-SS09-000	SVTCL	4-Chloro-3-Methylphenol		360	ug/kg	U	7/20/97
SJS02-SS09-000	SVTCL	4-Chloroaniline		360	ug/kg	U	7/20/97
SJS02-SS09-000	SVTCL	4-Chlorophenyl-phenylether		360	ug/kg	U	7/20/97
SJS02-SS09-000	SVTCL	4-Methylphenol		360	ug/kg	U	7/20/97
SJS02-SS09-000	SVTCL	4-Nitroaniline		900	ug/kg	U	7/20/97
SJS02-SS09-000	SVTCL	4-Nitrophenol		900	ug/kg	U	7/20/97
SJS02-SS09-000	SVTCL	Acenaphthene		360	ug/kg	U	7/20/97
SJS02-SS09-000	SVTCL	Acenaphthylene	37	360	ug/kg	J	7/20/97
SJS02-SS09-000	SVTCL	Anthracene		360	ug/kg	U	7/20/97
SJS02-SS09-000	SVTCL	Benzo(a)Anthracene	140	360	ug/kg	J	7/20/97
SJS02-SS09-000	SVTCL	Benzo(a)Pyrene	130	360	ug/kg	J	7/20/97
SJS02-SS09-000	SVTCL	Benzo(b)Fluoranthene	280	360	ug/kg	J	7/20/97
SJS02-SS09-000	SVTCL	Benzo(g,h,i)Perylene	76	360	ug/kg	J	7/20/97
SJS02-SS09-000	SVTCL	Benzo(k)Fluoranthene	87	360	ug/kg	J	7/20/97
SJS02-SS09-000	SVTCL	Bis(2-chloroethoxy)Methane		360	ug/kg	U	7/20/97
SJS02-SS09-000	SVTCL	Bis(2-chloroethyl)Ether		360	ug/kg	U	7/20/97
SJS02-SS09-000	SVTCL	Bis(2-Ethylhexyl)Phthalate	54	360	ug/kg	J	7/20/97
SJS02-SS09-000	SVTCL	Butylbenzylphthalate		360	ug/kg	U	7/20/97
SJS02-SS09-000	SVTCL	Carbazole		360	ug/kg	U	7/20/97
SJS02-SS09-000	SVTCL	Chrysene	150	360	ug/kg	J	7/20/97
SJS02-SS09-000	SVTCL	Di-n-Butylphthalate		360	ug/kg	U	7/20/97
SJS02-SS09-000	SVTCL	Di-n-Octyl Phthalate		360	ug/kg	U	7/20/97
SJS02-SS09-000	SVTCL	Dibenz(a,h)Anthracene		360	ug/kg	U	7/20/97
SJS02-SS09-000	SVTCL	Dibenzofuran		360	ug/kg	U	7/20/97
SJS02-SS09-000	SVTCL	Diethylphthalate		360	ug/kg	U	7/20/97
SJS02-SS09-000	SVTCL	Dimethyl Phthalate		360	ug/kg	U	7/20/97
SJS02-SS09-000	SVTCL	Fluoranthene	200	360	ug/kg	J	7/2
SJS02-SS09-000	SVTCL	Fluorene		360	ug/kg	U	7/2
SJS02-SS09-000	SVTCL	Hexachlorobenzene		360	ug/kg	U	7/20/97
SJS02-SS09-000	SVTCL	Hexachlorobutadiene		360	ug/kg	U	7/20/97
SJS02-SS09-000	SVTCL	Hexachlorocyclopentadien		360	ug/kg	U	7/20/97
SJS02-SS09-000	SVTCL	Hexachloroethane		360	ug/kg	U	7/20/97
SJS02-SS09-000	SVTCL	Indeno(1,2,3-cd)Pyrene	88	360	ug/kg	J	7/20/97
SJS02-SS09-000	SVTCL	Isophorone		360	ug/kg	U	7/20/97
SJS02-SS09-000	SVTCL	N-Nitroso-Di-n-Propylamine		360	ug/kg	U	7/20/97
SJS02-SS09-000	SVTCL	N-Nitrosodiphenylamine		360	ug/kg	U	7/20/97
SJS02-SS09-000	SVTCL	Naphthalene		360	ug/kg	U	7/20/97
SJS02-SS09-000	SVTCL	Nitrobenzene		360	ug/kg	U	7/20/97
SJS02-SS09-000	SVTCL	Pentachlorophenol		900	ug/kg	U	7/20/97
SJS02-SS09-000	SVTCL	Phenanthrene	53	360	ug/kg	J	7/20/97
SJS02-SS09-000	SVTCL	Phenol		360	ug/kg	U	7/20/97
SJS02-SS09-000	SVTCL	Pyrene	240	360	ug/kg	J	7/20/97
SJS02-SS09-000	VCTCL	1,1,1-Trichloroethane		11	ug/kg	U	7/9/97
SJS02-SS09-000	VCTCL	1,1,2,2-Tetrachloroethane		11	ug/kg	U	7/9/97
SJS02-SS09-000	VCTCL	1,1,2-Trichloroethane		11	ug/kg	U	7/9/97
SJS02-SS09-000	VCTCL	1,1-Dichloroethane		11	ug/kg	U	7/9/97
SJS02-SS09-000	VCTCL	1,1-Dichloroethene		11	ug/kg	U	7/9/97
SJS02-SS09-000	VCTCL	1,2-Dichloroethane		11	ug/kg	U	7/9/97
SJS02-SS09-000	VCTCL	1,2-Dichloroethene (total)		11	ug/kg	U	7/9/97
SJS02-SS09-000	VCTCL	1,2-Dichloropropane		11	ug/kg	U	7/9/97
SJS02-SS09-000	VCTCL	2-Butanone		11	ug/kg	U	7/9/97
SJS02-SS09-000	VCTCL	2-Hexanone		11	ug/kg	U	7/9/97
SJS02-SS09-000	VCTCL	4-Methyl-2-Pentanone		11	ug/kg	U	7/9/97
SJS02-SS09-000	VCTCL	Acetone	7	11	ug/kg	J	7/9/97
SJS02-SS09-000	VCTCL	Benzene		11	ug/kg	U	7/9/97
SJS02-SS09-000	VCTCL	Bromodichloromethane		11	ug/kg	U	7/
SJS02-SS09-000	VCTCL	Bromoform		11	ug/kg	U	7/

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS02-SS09-000	VCTCL	Bromomethane		11	ug/kg	U	7/9/97
SJS02-SS09-000	VCTCL	Carbon Disulfide		11	ug/kg	U	7/9/97
SJS02-SS09-000	VCTCL	Carbon Tetrachloride		11	ug/kg	U	7/9/97
SJS02-SS09-000	VCTCL	Chlorobenzene		11	ug/kg	U	7/9/97
SJS02-SS09-000	VCTCL	Chloroethane		11	ug/kg	U	7/9/97
SJS02-SS09-000	VCTCL	Chloroform		11	ug/kg	U	7/9/97
SJS02-SS09-000	VCTCL	Chloromethane		11	ug/kg	U	7/9/97
SJS02-SS09-000	VCTCL	cis-1,3-Dichloropropene		11	ug/kg	U	7/9/97
SJS02-SS09-000	VCTCL	Dibromochloromethane		11	ug/kg	U	7/9/97
SJS02-SS09-000	VCTCL	Ethylbenzene		11	ug/kg	U	7/9/97
SJS02-SS09-000	VCTCL	Methylene Chloride	33	11	ug/kg	B	7/9/97
SJS02-SS09-000	VCTCL	Styrene		11	ug/kg	U	7/9/97
SJS02-SS09-000	VCTCL	Tetrachloroethene		11	ug/kg	U	7/9/97
SJS02-SS09-000	VCTCL	Toluene		11	ug/kg	U	7/9/97
SJS02-SS09-000	VCTCL	Total Xylenes		11	ug/kg	U	7/9/97
SJS02-SS09-000	VCTCL	Trans-1,3-Dichloropropene		11	ug/kg	U	7/9/97
SJS02-SS09-000	VCTCL	Trichloroethene		11	ug/kg	U	7/9/97
SJS02-SS09-000	VCTCL	Vinyl Chloride		11	ug/kg	U	7/9/97
SJS02-SS10-000	CTOTP	Total Phosphorous (as P)	18.6	6.3	mg/kg		7/17/97
SJS02-SS10-000	EXPLO	1,3,5-Trinitrobenzene		500	ug/kg	U	7/9/97
SJS02-SS10-000	EXPLO	1,3-Dinitrobenzene		500	ug/kg	U	7/9/97
SJS02-SS10-000	EXPLO	2,4,6-Trinitrotoluene		500	ug/kg	U	7/9/97
SJS02-SS10-000	EXPLO	2,4-Dinitrotoluene		500	ug/kg	U	7/9/97
SJS02-SS10-000	EXPLO	2,6-Dinitrotoluene		500	ug/kg	U	7/9/97
SJS02-SS10-000	EXPLO	2-am-4,6-Dinitrotoluene		500	ug/kg	U	7/9/97
SJS02-SS10-000	EXPLO	2-Nitrotoluene		500	ug/kg	U	7/9/97
SJS02-SS10-000	EXPLO	3-Nitrotoluene		500	ug/kg	U	7/9/97
SJS02-SS10-000	EXPLO	4-am-2,6-Dinitrotoluene		500	ug/kg	U	7/9/97
SJS02-SS10-000	EXPLO	4-Nitrotoluene		500	ug/kg	U	7/9/97
SJS02-SS10-000	EXPLO	HMX		500	ug/kg	U	7/9/97
SJS02-SS10-000	EXPLO	Nitrobenzene		500	ug/kg	U	7/9/97
SJS02-SS10-000	EXPLO	RDX		500	ug/kg	U	7/9/97
SJS02-SS10-000	EXPLO	TETRYL		500	ug/kg	U	7/9/97
SJS02-SS10-000	MCYAN	Aluminum	2680	8.06	mg/kg		7/8/97
SJS02-SS10-000	MCYAN	Arsenic	2.5	0.55	mg/kg	K	7/8/97
SJS02-SS10-000	MCYAN	Barium	22.5	0.37	mg/kg	J	7/8/97
SJS02-SS10-000	MCYAN	Beryllium	0.34	0.18	mg/kg	J	7/8/97
SJS02-SS10-000	MCYAN	Cadmium	0.15	0.09	mg/kg	B	7/8/97
SJS02-SS10-000	MCYAN	Calcium	702	15.95	mg/kg	J	7/8/97
SJS02-SS10-000	MCYAN	Chromium	9.1	1.28	mg/kg		7/8/97
SJS02-SS10-000	MCYAN	Cobalt	2.3	1.47	mg/kg	J	7/8/97
SJS02-SS10-000	MCYAN	Copper	54.6	1.1	mg/kg		7/8/97
SJS02-SS10-000	MCYAN	Cyanide		0.5	mg/kg	U	7/3/97
SJS02-SS10-000	MCYAN	Iron	6060	3.12	mg/kg		7/8/97
SJS02-SS10-000	MCYAN	Lead	84.6	0.18	mg/kg		7/8/97
SJS02-SS10-000	MCYAN	Magnesium	470	33.17	mg/kg	J	7/8/97
SJS02-SS10-000	MCYAN	Manganese	42.6	0.37	mg/kg	K	7/8/97
SJS02-SS10-000	MCYAN	Mercury	0.36	0.04	mg/kg	L	7/10/97
SJS02-SS10-000	MCYAN	Nickel	5	1.28	mg/kg	J	7/8/97
SJS02-SS10-000	MCYAN	Potassium	391	40.69	mg/kg	J	7/8/97
SJS02-SS10-000	MCYAN	Selenium		0.55	mg/kg	U	7/8/97
SJS02-SS10-000	MCYAN	Silver	0.64	0.18	mg/kg	B	7/8/97
SJS02-SS10-000	MCYAN	Sodium	59.8	10.63	mg/kg	B	7/8/97
SJS02-SS10-000	MCYAN	Thallium	0.94	0.37	mg/kg	J	7/8/97
SJS02-SS10-000	MCYAN	Vanadium	19.9	1.65	mg/kg		7/8/97
SJS02-SS10-000	MCYAN	Zinc	164	0.92	mg/kg		7/8/97
SJS02-SS10-000	PSPCB	4,4'-DDD	7	3.3	ug/kg	J	7/23/97
SJS02-SS10-000	PSPCB	4,4'-DDE	37	3.3	ug/kg		7/23/97
SJS02-SS10-000	PSPCB	4,4'-DDT	79	33	ug/kg		7/23/97
SJS02-SS10-000	PSPCB	Aldrin		1.7	ug/kg	U	7/23/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS02-SS10-000	PSPCB	alpha-BHC		1.7	ug/kg	U	7/
SJS02-SS10-000	PSPCB	alpha-Chlordane		1.7	ug/kg	U	7/
SJS02-SS10-000	PSPCB	Aroclor-1016		33	ug/kg	U	7/23/97
SJS02-SS10-000	PSPCB	Aroclor-1221		67	ug/kg	U	7/23/97
SJS02-SS10-000	PSPCB	Aroclor-1232		33	ug/kg	U	7/23/97
SJS02-SS10-000	PSPCB	Aroclor-1242		33	ug/kg	U	7/23/97
SJS02-SS10-000	PSPCB	Aroclor-1248		33	ug/kg	U	7/23/97
SJS02-SS10-000	PSPCB	Aroclor-1254		33	ug/kg	U	7/23/97
SJS02-SS10-000	PSPCB	Aroclor-1260		33	ug/kg	U	7/23/97
SJS02-SS10-000	PSPCB	beta-BHC		1.7	ug/kg	U	7/23/97
SJS02-SS10-000	PSPCB	delta-BHC		1.7	ug/kg	U	7/23/97
SJS02-SS10-000	PSPCB	Dieldrin		3.3	ug/kg	U	7/23/97
SJS02-SS10-000	PSPCB	Endosulfan I		1.7	ug/kg	U	7/23/97
SJS02-SS10-000	PSPCB	Endosulfan II		3.3	ug/kg	U	7/23/97
SJS02-SS10-000	PSPCB	Endosulfan Sulfate		3.3	ug/kg	U	7/23/97
SJS02-SS10-000	PSPCB	Endrin		3.3	ug/kg	U	7/23/97
SJS02-SS10-000	PSPCB	Endrin Aldehyde		3.3	ug/kg	U	7/23/97
SJS02-SS10-000	PSPCB	Endrin Ketone		3.3	ug/kg	U	7/23/97
SJS02-SS10-000	PSPCB	gamma-BHC		1.7	ug/kg	U	7/23/97
SJS02-SS10-000	PSPCB	gamma-Chlordane		1.7	ug/kg	U	7/23/97
SJS02-SS10-000	PSPCB	Heptachlor		1.7	ug/kg	U	7/23/97
SJS02-SS10-000	PSPCB	Heptachlor Epoxide		1.7	ug/kg	U	7/23/97
SJS02-SS10-000	PSPCB	Methoxychlor		17	ug/kg	U	7/23/97
SJS02-SS10-000	PSPCB	Toxaphene		170	ug/kg	U	7/23/97
SJS02-SS10-000	SVTCL	1,2,4-Trichlorobenzene		330	ug/kg	U	7/23/97
SJS02-SS10-000	SVTCL	1,2-Dichlorobenzene		330	ug/kg	U	7/23/97
SJS02-SS10-000	SVTCL	1,3-Dichlorobenzene		330	ug/kg	U	7/23/97
SJS02-SS10-000	SVTCL	1,4-Dichlorobenzene		330	ug/kg	U	7/23/97
SJS02-SS10-000	SVTCL	2,2'-oxybis(1-Chloropropane		330	ug/kg	U	7/23/97
SJS02-SS10-000	SVTCL	2,4,5-Trichlorophenol		830	ug/kg	U	7/2
SJS02-SS10-000	SVTCL	2,4,6-Trichlorophenol		330	ug/kg	U	7/
SJS02-SS10-000	SVTCL	2,4-Dichlorophenol		330	ug/kg	U	7/23/97
SJS02-SS10-000	SVTCL	2,4-Dimethylphenol		330	ug/kg	U	7/23/97
SJS02-SS10-000	SVTCL	2,4-Dinitrophenol		830	ug/kg	U	7/23/97
SJS02-SS10-000	SVTCL	2,4-Dinitrotoluene		330	ug/kg	U	7/23/97
SJS02-SS10-000	SVTCL	2,6-Dinitrotoluene		330	ug/kg	U	7/23/97
SJS02-SS10-000	SVTCL	2-Chloronaphthalene		330	ug/kg	U	7/23/97
SJS02-SS10-000	SVTCL	2-Chlorophenol		330	ug/kg	U	7/23/97
SJS02-SS10-000	SVTCL	2-Methylnaphthalene		330	ug/kg	U	7/23/97
SJS02-SS10-000	SVTCL	2-Methylphenol		330	ug/kg	U	7/23/97
SJS02-SS10-000	SVTCL	2-Nitroaniline		830	ug/kg	U	7/23/97
SJS02-SS10-000	SVTCL	2-Nitrophenol		330	ug/kg	U	7/23/97
SJS02-SS10-000	SVTCL	3,3'-Dichlorobenzidine		330	ug/kg	U	7/23/97
SJS02-SS10-000	SVTCL	3-Nitroaniline		830	ug/kg	U	7/23/97
SJS02-SS10-000	SVTCL	4,6-Dinitro-2-Methylphenol		830	ug/kg	U	7/23/97
SJS02-SS10-000	SVTCL	4-Bromophenyl phenylether		330	ug/kg	U	7/23/97
SJS02-SS10-000	SVTCL	4-Chloro-3-Methylphenol		330	ug/kg	U	7/23/97
SJS02-SS10-000	SVTCL	4-Chloroaniline		330	ug/kg	U	7/23/97
SJS02-SS10-000	SVTCL	4-Chlorophenyl-phenylether		330	ug/kg	U	7/23/97
SJS02-SS10-000	SVTCL	4-Methylphenol		330	ug/kg	U	7/23/97
SJS02-SS10-000	SVTCL	4-Nitroaniline		830	ug/kg	U	7/23/97
SJS02-SS10-000	SVTCL	4-Nitrophenol		830	ug/kg	U	7/23/97
SJS02-SS10-000	SVTCL	Acenaphthene		330	ug/kg	U	7/23/97
SJS02-SS10-000	SVTCL	Acenaphthylene	89	330	ug/kg	J	7/23/97
SJS02-SS10-000	SVTCL	Anthracene		330	ug/kg	U	7/23/97
SJS02-SS10-000	SVTCL	Benzo(a)Anthracene	120	330	ug/kg	J	7/23/97
SJS02-SS10-000	SVTCL	Benzo(a)Pyrene	130	330	ug/kg	J	7/23/97
SJS02-SS10-000	SVTCL	Benzo(b)Fluoranthene	240	330	ug/kg	J	7/23/97
SJS02-SS10-000	SVTCL	Benzo(g,h,i)Perylene	160	330	ug/kg	J	7/2
SJS02-SS10-000	SVTCL	Benzo(k)Fluoranthene	120	330	ug/kg	J	7/

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS02-SS10-000	SVTCL	Bis(2-chloroethoxy)Methane		330	ug/kg	U	7/23/97
SJS02-SS10-000	SVTCL	Bis(2-chloroethyl)Ether		330	ug/kg	U	7/23/97
SJS02-SS10-000	SVTCL	Bis(2-Ethylhexyl)Phthalate	35	330	ug/kg		7/23/97
SJS02-SS10-000	SVTCL	Butylbenzylphthalate		330	ug/kg	U	7/23/97
SJS02-SS10-000	SVTCL	Carbazole		330	ug/kg	U	7/23/97
SJS02-SS10-000	SVTCL	Chrysene	150	330	ug/kg	J	7/23/97
SJS02-SS10-000	SVTCL	Di-n-Butylphthalate		330	ug/kg	U	7/23/97
SJS02-SS10-000	SVTCL	Di-n-Octyl Phthalate		330	ug/kg	UJ	7/23/97
SJS02-SS10-000	SVTCL	Dibenz(a,h)Anthracene		330	ug/kg	UJ	7/23/97
SJS02-SS10-000	SVTCL	Dibenzofuran		330	ug/kg	U	7/23/97
SJS02-SS10-000	SVTCL	Diethylphthalate		330	ug/kg	U	7/23/97
SJS02-SS10-000	SVTCL	Dimethyl Phthalate		330	ug/kg	U	7/23/97
SJS02-SS10-000	SVTCL	Fluoranthene	140	330	ug/kg	J	7/23/97
SJS02-SS10-000	SVTCL	Fluorene		330	ug/kg	U	7/23/97
SJS02-SS10-000	SVTCL	Hexachlorobenzene		330	ug/kg	U	7/23/97
SJS02-SS10-000	SVTCL	Hexachlorobutadiene		330	ug/kg	U	7/23/97
SJS02-SS10-000	SVTCL	Hexachlorocyclopentadien		330	ug/kg	U	7/23/97
SJS02-SS10-000	SVTCL	Hexachloroethane		330	ug/kg	U	7/23/97
SJS02-SS10-000	SVTCL	Indeno(1,2,3-cd)Pyrene	110	330	ug/kg	J	7/23/97
SJS02-SS10-000	SVTCL	Isophorone		330	ug/kg	U	7/23/97
SJS02-SS10-000	SVTCL	N-Nitroso-Di-n-Propylamine		330	ug/kg	U	7/23/97
SJS02-SS10-000	SVTCL	N-Nitrosodiphenylamine		330	ug/kg	U	7/23/97
SJS02-SS10-000	SVTCL	Naphthalene		330	ug/kg	U	7/23/97
SJS02-SS10-000	SVTCL	Nitrobenzene		330	ug/kg	U	7/23/97
SJS02-SS10-000	SVTCL	Pentachlorophenol		830	ug/kg	U	7/23/97
SJS02-SS10-000	SVTCL	Phenanthrene	41	330	ug/kg	J	7/23/97
SJS02-SS10-000	SVTCL	Phenol		330	ug/kg	U	7/23/97
SJS02-SS10-000	SVTCL	Pyrene	230	330	ug/kg	J	7/23/97
SJS02-SS10-000	VCTCL	1,1,1-Trichloroethane		10	ug/kg	U	7/8/97
SJS02-SS10-000	VCTCL	1,1,2,2-Tetrachloroethane		10	ug/kg	U	7/8/97
SJS02-SS10-000	VCTCL	1,1,2-Trichloroethane		10	ug/kg	U	7/8/97
SJS02-SS10-000	VCTCL	1,1-Dichloroethane		10	ug/kg	U	7/8/97
SJS02-SS10-000	VCTCL	1,1-Dichloroethene		10	ug/kg	U	7/8/97
SJS02-SS10-000	VCTCL	1,2-Dichloroethane		10	ug/kg	U	7/8/97
SJS02-SS10-000	VCTCL	1,2-Dichloroethene (total)		10	ug/kg	U	7/8/97
SJS02-SS10-000	VCTCL	1,2-Dichloropropane		10	ug/kg	U	7/8/97
SJS02-SS10-000	VCTCL	2-Butanone		10	ug/kg	U	7/8/97
SJS02-SS10-000	VCTCL	2-Hexanone		10	ug/kg	U	7/8/97
SJS02-SS10-000	VCTCL	4-Methyl-2-Pentanone		10	ug/kg	U	7/8/97
SJS02-SS10-000	VCTCL	Acetone	35	10	ug/kg		7/8/97
SJS02-SS10-000	VCTCL	Benzene		10	ug/kg	U	7/8/97
SJS02-SS10-000	VCTCL	Bromodichloromethane		10	ug/kg	U	7/8/97
SJS02-SS10-000	VCTCL	Bromoform		10	ug/kg	U	7/8/97
SJS02-SS10-000	VCTCL	Bromomethane		10	ug/kg	U	7/8/97
SJS02-SS10-000	VCTCL	Carbon Disulfide		10	ug/kg	U	7/8/97
SJS02-SS10-000	VCTCL	Carbon Tetrachloride		10	ug/kg	U	7/8/97
SJS02-SS10-000	VCTCL	Chlorobenzene		10	ug/kg	U	7/8/97
SJS02-SS10-000	VCTCL	Chloroethane		10	ug/kg	U	7/8/97
SJS02-SS10-000	VCTCL	Chloroform		10	ug/kg	U	7/8/97
SJS02-SS10-000	VCTCL	Chloromethane		10	ug/kg	U	7/8/97
SJS02-SS10-000	VCTCL	cis-1,3-Dichloropropene		10	ug/kg	U	7/8/97
SJS02-SS10-000	VCTCL	Dibromochloromethane		10	ug/kg	U	7/8/97
SJS02-SS10-000	VCTCL	Ethylbenzene		10	ug/kg	U	7/8/97
SJS02-SS10-000	VCTCL	Methylene Chloride	20	10	ug/kg	B	7/8/97
SJS02-SS10-000	VCTCL	Styrene		10	ug/kg	U	7/8/97
SJS02-SS10-000	VCTCL	Tetrachloroethene		10	ug/kg	U	7/8/97
SJS02-SS10-000	VCTCL	Toluene		10	ug/kg	U	7/8/97
SJS02-SS10-000	VCTCL	Total Xylenes		10	ug/kg	U	7/8/97
SJS02-SS10-000	VCTCL	Trans-1,3-Dichloropropene		10	ug/kg	U	7/8/97
SJS02-SS10-000	VCTCL	Trichloroethene		10	ug/kg	U	7/8/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS02-SS10-000	VCTCL	Vinyl Chloride		10	ug/kg	U	7
SJS02-SW02-000	CALKY	Alkalinity	107	2	mg/L		7/
SJS02-SW02-000	CHBOD	Biological Oxygen Demand		5	mg/L	U	7/21/97
SJS02-SW02-000	CHCOD	Chemical Oxygen Demand	154	5	mg/L		7/24/97
SJS02-SW02-000	CTDSS	Total Dissolved Solids	19100	10	mg/L		7/22/97
SJS02-SW02-000	CTOTC	Total Organic Carbon	16.4	1	mg/L		7/23/97
SJS02-SW02-000	CTOTP	Total Phosphorous (as P)	0.202	0.05	mg/L		7/30/97
SJS02-SW02-000	CTSSS	Total Suspended Solids	124	5	mg/L		7/22/97
SJS02-SW02-000	EXPLO	1,3,5-Trinitrobenzene		25	ug/L	U	8/7/97
SJS02-SW02-000	EXPLO	1,3-Dinitrobenzene		25	ug/L	U	8/7/97
SJS02-SW02-000	EXPLO	2,4,6-Trinitrotoluene		25	ug/L	U	8/7/97
SJS02-SW02-000	EXPLO	2,4-Dinitrotoluene		25	ug/L	U	8/7/97
SJS02-SW02-000	EXPLO	2,6-Dinitrotoluene		25	ug/L	U	8/7/97
SJS02-SW02-000	EXPLO	2-am-4,6-Dinitrotoluene		25	ug/L	U	8/7/97
SJS02-SW02-000	EXPLO	2-Nitrotoluene		25	ug/L	U	8/7/97
SJS02-SW02-000	EXPLO	3-Nitrotoluene		25	ug/L	U	8/7/97
SJS02-SW02-000	EXPLO	4-am-2,6-Dinitrotoluene		25	ug/L	U	8/7/97
SJS02-SW02-000	EXPLO	4-Nitrotoluene		25	ug/L	U	8/7/97
SJS02-SW02-000	EXPLO	HMX		25	ug/L	U	8/7/97
SJS02-SW02-000	EXPLO	Nitrobenzene		25	ug/L	U	8/7/97
SJS02-SW02-000	EXPLO	RDX		25	ug/L	U	8/7/97
SJS02-SW02-000	EXPLO	TETRYL		25	ug/L	U	8/7/97
SJS02-SW02-000	MCYAN	Aluminum	4210	29	ug/L		7/22/97
SJS02-SW02-000	MCYAN	Antimony	2	1	ug/L	J	7/21/97
SJS02-SW02-000	MCYAN	Arsenic		3	ug/L	U	7/25/97
SJS02-SW02-000	MCYAN	Barium	58	1	ug/L	J	7/22/97
SJS02-SW02-000	MCYAN	Beryllium		1	ug/L	U	7/22/97
SJS02-SW02-000	MCYAN	Cadmium	1.2	0.3	ug/L	L	7/21/97
SJS02-SW02-000	MCYAN	Calcium	197000	46	ug/L		7/22/97
SJS02-SW02-000	MCYAN	Chromium	104	4	ug/L		7/2
SJS02-SW02-000	MCYAN	Cobalt		8	ug/L	U	7/
SJS02-SW02-000	MCYAN	Copper	132	2	ug/L		7/22/97
SJS02-SW02-000	MCYAN	Cyanide		5	ug/L	U	7/22/97
SJS02-SW02-000	MCYAN	Iron	6470	5	ug/L		7/22/97
SJS02-SW02-000	MCYAN	Lead	47.8	1	ug/L	L	7/21/97
SJS02-SW02-000	MCYAN	Magnesium	606000	45	ug/L		7/22/97
SJS02-SW02-000	MCYAN	Manganese	85.8	1	ug/L		7/22/97
SJS02-SW02-000	MCYAN	Mercury	0.23	0.1	ug/L	B	7/29/97
SJS02-SW02-000	MCYAN	Nickel		7	ug/L	U	7/22/97
SJS02-SW02-000	MCYAN	Potassium	214000	97	ug/L	J	7/22/97
SJS02-SW02-000	MCYAN	Selenium		3	ug/L	U	7/21/97
SJS02-SW02-000	MCYAN	Silver		1	ug/L	U	7/21/97
SJS02-SW02-000	MCYAN	Sodium	5240000	28	ug/L		7/23/97
SJS02-SW02-000	MCYAN	Thallium		2	ug/L	U	7/21/97
SJS02-SW02-000	MCYAN	Vanadium	27.8	4	ug/L	J	7/22/97
SJS02-SW02-000	MCYAN	Zinc	175	3	ug/L		7/22/97
SJS02-SW02-000	PSPCB	4,4'-DDD		0.1	ug/L	U	8/6/97
SJS02-SW02-000	PSPCB	4,4'-DDE		0.1	ug/L	U	8/6/97
SJS02-SW02-000	PSPCB	4,4'-DDT		0.1	ug/L	U	8/6/97
SJS02-SW02-000	PSPCB	Aldrin		0.05	ug/L	U	8/6/97
SJS02-SW02-000	PSPCB	alpha-BHC		0.05	ug/L	U	8/6/97
SJS02-SW02-000	PSPCB	alpha-Chlordane		0.05	ug/L	U	8/6/97
SJS02-SW02-000	PSPCB	Aroclor-1016		1	ug/L	U	8/6/97
SJS02-SW02-000	PSPCB	Aroclor-1221		2	ug/L	U	8/6/97
SJS02-SW02-000	PSPCB	Aroclor-1232		1	ug/L	U	8/6/97
SJS02-SW02-000	PSPCB	Aroclor-1242		1	ug/L	U	8/6/97
SJS02-SW02-000	PSPCB	Aroclor-1248		1	ug/L	U	8/6/97
SJS02-SW02-000	PSPCB	Aroclor-1254		1	ug/L	U	8/6/97
SJS02-SW02-000	PSPCB	Aroclor-1260		1	ug/L	U	8
SJS02-SW02-000	PSPCB	beta-BHC		0.05	ug/L	U	8/

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS02-SW02-000	PSPCB	delta-BHC		0.05	ug/L	U	8/6/97
SJS02-SW02-000	PSPCB	Dieldrin		0.1	ug/L	U	8/6/97
SJS02-SW02-000	PSPCB	Endosulfan I		0.05	ug/L	U	8/6/97
SJS02-SW02-000	PSPCB	Endosulfan II		0.1	ug/L	U	8/6/97
SJS02-SW02-000	PSPCB	Endosulfan Sulfate		0.1	ug/L	U	8/6/97
SJS02-SW02-000	PSPCB	Endrin		0.1	ug/L	U	8/6/97
SJS02-SW02-000	PSPCB	Endrin Aldehyde		0.1	ug/L	U	8/6/97
SJS02-SW02-000	PSPCB	Endrin Ketone		0.1	ug/L	U	8/6/97
SJS02-SW02-000	PSPCB	gamma-BHC		0.05	ug/L	U	8/6/97
SJS02-SW02-000	PSPCB	gamma-Chlordane		0.05	ug/L	U	8/6/97
SJS02-SW02-000	PSPCB	Heptachlor		0.05	ug/L	U	8/6/97
SJS02-SW02-000	PSPCB	Heptachlor Epoxide		0.05	ug/L	U	8/6/97
SJS02-SW02-000	PSPCB	Methoxychlor		0.5	ug/L	U	8/6/97
SJS02-SW02-000	PSPCB	Toxaphene		5	ug/L	U	8/6/97
SJS02-SW02-000	SVTCL	1,2,4-Trichlorobenzene		10	ug/L	U	7/23/97
SJS02-SW02-000	SVTCL	1,2-Dichlorobenzene		10	ug/L	U	7/23/97
SJS02-SW02-000	SVTCL	1,3-Dichlorobenzene		10	ug/L	U	7/23/97
SJS02-SW02-000	SVTCL	1,4-Dichlorobenzene		10	ug/L	U	7/23/97
SJS02-SW02-000	SVTCL	2,2'-oxybis(1-Chloropropane		10	ug/L	U	7/23/97
SJS02-SW02-000	SVTCL	2,4,5-Trichlorophenol		25	ug/L	U	7/23/97
SJS02-SW02-000	SVTCL	2,4,6-Trichlorophenol		10	ug/L	U	7/23/97
SJS02-SW02-000	SVTCL	2,4-Dichlorophenol		10	ug/L	U	7/23/97
SJS02-SW02-000	SVTCL	2,4-Dimethylphenol		10	ug/L	U	7/23/97
SJS02-SW02-000	SVTCL	2,4-Dinitrotoluene		10	ug/L	U	7/23/97
SJS02-SW02-000	SVTCL	2,6-Dinitrotoluene		10	ug/L	U	7/23/97
SJS02-SW02-000	SVTCL	2-Chloronaphthalene		10	ug/L	U	7/23/97
SJS02-SW02-000	SVTCL	2-Chlorophenol		10	ug/L	U	7/23/97
SJS02-SW02-000	SVTCL	2-Methylnaphthalene		10	ug/L	U	7/23/97
SJS02-SW02-000	SVTCL	2-Methylphenol		10	ug/L	U	7/23/97
SJS02-SW02-000	SVTCL	2-Nitroaniline		25	ug/L	U	7/23/97
SJS02-SW02-000	SVTCL	2-Nitrophenol		10	ug/L	U	7/23/97
SJS02-SW02-000	SVTCL	3,3'-Dichlorobenzidine		10	ug/L	U	7/23/97
SJS02-SW02-000	SVTCL	3-Nitroaniline		25	ug/L	U	7/23/97
SJS02-SW02-000	SVTCL	4,6-Dinitro-2-Methylphenol		25	ug/L	U	7/23/97
SJS02-SW02-000	SVTCL	4-Bromophenyl phenylether		10	ug/L	U	7/23/97
SJS02-SW02-000	SVTCL	4-Chloro-3-Methylphenol		10	ug/L	U	7/23/97
SJS02-SW02-000	SVTCL	4-Chloroaniline		10	ug/L	U	7/23/97
SJS02-SW02-000	SVTCL	4-Chlorophenyl-phenylether		10	ug/L	U	7/23/97
SJS02-SW02-000	SVTCL	4-Methylphenol		10	ug/L	U	7/23/97
SJS02-SW02-000	SVTCL	4-Nitroaniline		25	ug/L	U	7/23/97
SJS02-SW02-000	SVTCL	4-Nitrophenol		25	ug/L	U	7/23/97
SJS02-SW02-000	SVTCL	Acenaphthene		10	ug/L	U	7/23/97
SJS02-SW02-000	SVTCL	Acenaphthylene		10	ug/L	U	7/23/97
SJS02-SW02-000	SVTCL	Anthracene		10	ug/L	U	7/23/97
SJS02-SW02-000	SVTCL	Benzo(a)Anthracene		10	ug/L	U	7/23/97
SJS02-SW02-000	SVTCL	Benzo(a)Pyrene		10	ug/L	U	7/23/97
SJS02-SW02-000	SVTCL	Benzo(b)Fluoranthene		10	ug/L	U	7/23/97
SJS02-SW02-000	SVTCL	Benzo(g,h,i)Perylene		10	ug/L	U	7/23/97
SJS02-SW02-000	SVTCL	Benzo(k)fluoranthene		10	ug/L	U	7/23/97
SJS02-SW02-000	SVTCL	Bis(2-chloroethoxy)Methane		10	ug/L	U	7/23/97
SJS02-SW02-000	SVTCL	Bis(2-chloroethyl)Ether		10	ug/L	U	7/23/97
SJS02-SW02-000	SVTCL	Bis(2-Ethylhexyl)Phthalate	3	10	ug/L	J	7/23/97
SJS02-SW02-000	SVTCL	Butylbenzylphthalate		10	ug/L	U	7/23/97
SJS02-SW02-000	SVTCL	Carbazole		10	ug/L	U	7/23/97
SJS02-SW02-000	SVTCL	Chrysene		10	ug/L	U	7/23/97
SJS02-SW02-000	SVTCL	Di-n-Butylphthalate		10	ug/L	U	7/23/97
SJS02-SW02-000	SVTCL	Di-n-Octyl Phthalate		10	ug/L	U	7/23/97
SJS02-SW02-000	SVTCL	Dibenz(a,h)Anthracene		10	ug/L	U	7/23/97
SJS02-SW02-000	SVTCL	Dibenzofuran		10	ug/L	U	7/23/97
SJS02-SW02-000	SVTCL	Diethylphthalate		10	ug/L	U	7/23/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS02-SW02-000	SVTCL	Dimethyl Phthalate		10	ug/L	U	7/
SJS02-SW02-000	SVTCL	Fluoranthene		10	ug/L	U	7/
SJS02-SW02-000	SVTCL	Fluorene		10	ug/L	U	7/23/97
SJS02-SW02-000	SVTCL	Hexachlorobenzene		10	ug/L	U	7/23/97
SJS02-SW02-000	SVTCL	Hexachlorobutadiene		10	ug/L	U	7/23/97
SJS02-SW02-000	SVTCL	Hexachlorocyclopentadien		10	ug/L	U	7/23/97
SJS02-SW02-000	SVTCL	Hexachloroethane		10	ug/L	U	7/23/97
SJS02-SW02-000	SVTCL	Indeno(1,2,3-cd)Pyrene		10	ug/L	U	7/23/97
SJS02-SW02-000	SVTCL	Isophorone		10	ug/L	U	7/23/97
SJS02-SW02-000	SVTCL	N-Nitroso-Di-n-Propylamine		10	ug/L	U	7/23/97
SJS02-SW02-000	SVTCL	N-Nitrosodiphenylamine		10	ug/L	U	7/23/97
SJS02-SW02-000	SVTCL	Naphthalene		10	ug/L	U	7/23/97
SJS02-SW02-000	SVTCL	Nitrobenzene		10	ug/L	U	7/23/97
SJS02-SW02-000	SVTCL	Pentachlorophenol		25	ug/L	U	7/23/97
SJS02-SW02-000	SVTCL	Phenanthrene		10	ug/L	U	7/23/97
SJS02-SW02-000	SVTCL	Phenol		10	ug/L	U	7/23/97
SJS02-SW02-000	SVTCL	Pyrene		10	ug/L	U	7/23/97
SJS02-SW02-000	VCTCL	1,1,1-Trichloroethane		10	ug/L	U	7/17/97
SJS02-SW02-000	VCTCL	1,1,2,2-Tetrachloroethane		10	ug/L	U	7/17/97
SJS02-SW02-000	VCTCL	1,1,2-Trichloroethane		10	ug/L	U	7/17/97
SJS02-SW02-000	VCTCL	1,1-Dichloroethane		10	ug/L	U	7/17/97
SJS02-SW02-000	VCTCL	1,1-Dichloroethene		10	ug/L	U	7/17/97
SJS02-SW02-000	VCTCL	1,2-Dichloroethane		10	ug/L	U	7/17/97
SJS02-SW02-000	VCTCL	1,2-Dichloroethene (total)		10	ug/L	U	7/17/97
SJS02-SW02-000	VCTCL	1,2-Dichloropropane		10	ug/L	U	7/17/97
SJS02-SW02-000	VCTCL	2-Butanone		10	ug/L	U	7/17/97
SJS02-SW02-000	VCTCL	2-Hexanone		10	ug/L	U	7/17/97
SJS02-SW02-000	VCTCL	4-Methyl-2-Pentanone		10	ug/L	U	7/17/97
SJS02-SW02-000	VCTCL	Acetone		10	ug/L	U	7/17/97
SJS02-SW02-000	VCTCL	Benzene		10	ug/L	U	7/1
SJS02-SW02-000	VCTCL	Bromodichloromethane		10	ug/L	U	7/1
SJS02-SW02-000	VCTCL	Bromoform		10	ug/L	U	7/17/97
SJS02-SW02-000	VCTCL	Bromomethane		10	ug/L	U	7/17/97
SJS02-SW02-000	VCTCL	Carbon Disulfide		10	ug/L	U	7/17/97
SJS02-SW02-000	VCTCL	Carbon Tetrachloride		10	ug/L	U	7/17/97
SJS02-SW02-000	VCTCL	Chlorobenzene		10	ug/L	U	7/17/97
SJS02-SW02-000	VCTCL	Chloroethane		10	ug/L	U	7/17/97
SJS02-SW02-000	VCTCL	Chloroform		10	ug/L	U	7/17/97
SJS02-SW02-000	VCTCL	Chloromethane		10	ug/L	U	7/17/97
SJS02-SW02-000	VCTCL	cis-1,3-Dichloropropene		10	ug/L	U	7/17/97
SJS02-SW02-000	VCTCL	Dibromochloromethane		10	ug/L	U	7/17/97
SJS02-SW02-000	VCTCL	Ethylbenzene		10	ug/L	U	7/17/97
SJS02-SW02-000	VCTCL	Methylene Chloride	8	10	ug/L	B	7/17/97
SJS02-SW02-000	VCTCL	Styrene		10	ug/L	U	7/17/97
SJS02-SW02-000	VCTCL	Tetrachloroethene		10	ug/L	U	7/17/97
SJS02-SW02-000	VCTCL	Toluene		10	ug/L	U	7/17/97
SJS02-SW02-000	VCTCL	Total Xylenes		10	ug/L	U	7/17/97
SJS02-SW02-000	VCTCL	Trans-1,3-Dichloropropene		10	ug/L	U	7/17/97
SJS02-SW02-000	VCTCL	Trichloroethene		10	ug/L	U	7/17/97
SJS02-SW02-000	VCTCL	Vinyl Chloride		10	ug/L	U	7/17/97
SJS02-SW02-000P	CALKY	Alkalinity	105	2	mg/L		7/21/97
SJS02-SW02-000P	CHBOD	Biological Oxygen Demand		5	mg/L	U	7/21/97
SJS02-SW02-000P	CHCOD	Chemical Oxygen Demand	154	5	mg/L		7/24/97
SJS02-SW02-000P	CTDSS	Total Dissolved Solids	26800	10	mg/L		7/22/97
SJS02-SW02-000P	CTOTC	Total Organic Carbon	24.4	1	mg/L		7/23/97
SJS02-SW02-000P	CTOTP	Total Phosphorous (as P)	0.153	0.05	mg/L		7/30/97
SJS02-SW02-000P	CTSSS	Total Suspended Solids	98	5	mg/L		7/22/97
SJS02-SW02-000P	EXPLO	1,3,5-Trinitrobenzene		25	ug/L	U	8/7/97
SJS02-SW02-000P	EXPLO	1,3-Dinitrobenzene		25	ug/L	U	8/
SJS02-SW02-000P	EXPLO	2,4,6-Trinitrotoluene		25	ug/L	U	8/

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS02-SW02-000P	EXPLO	2,4-Dinitrotoluene		25	ug/L	U	8/7/97
SJS02-SW02-000P	EXPLO	2,6-Dinitrotoluene		25	ug/L	U	8/7/97
SJS02-SW02-000P	EXPLO	2-am-4,6-Dinitrotoluene		25	ug/L	U	8/7/97
SJS02-SW02-000P	EXPLO	2-Nitrotoluene		25	ug/L	U	8/7/97
SJS02-SW02-000P	EXPLO	3-Nitrotoluene		25	ug/L	U	8/7/97
SJS02-SW02-000P	EXPLO	4-am-2,6-Dinitrotoluene		25	ug/L	U	8/7/97
SJS02-SW02-000P	EXPLO	4-Nitrotoluene		25	ug/L	U	8/7/97
SJS02-SW02-000P	EXPLO	HMX		25	ug/L	U	8/7/97
SJS02-SW02-000P	EXPLO	Nitrobenzene		25	ug/L	U	8/7/97
SJS02-SW02-000P	EXPLO	RDX		25	ug/L	U	8/7/97
SJS02-SW02-000P	EXPLO	TETRYL		25	ug/L	U	8/7/97
SJS02-SW02-000P	MCYAN	Aluminum	7870	29	ug/L		7/22/97
SJS02-SW02-000P	MCYAN	Antimony		2	ug/L	U	7/21/97
SJS02-SW02-000P	MCYAN	Arsenic	3.1	3	ug/L	J	7/25/97
SJS02-SW02-000P	MCYAN	Barium	70.7	1	ug/L	J	7/22/97
SJS02-SW02-000P	MCYAN	Beryllium		1	ug/L	U	7/22/97
SJS02-SW02-000P	MCYAN	Cadmium	1.9	0.3	ug/L	L	7/21/97
SJS02-SW02-000P	MCYAN	Calcium	214000	46	ug/L		7/22/97
SJS02-SW02-000P	MCYAN	Chromium	166	4	ug/L		7/22/97
SJS02-SW02-000P	MCYAN	Cobalt		8	ug/L	U	7/22/97
SJS02-SW02-000P	MCYAN	Copper	203	2	ug/L		7/22/97
SJS02-SW02-000P	MCYAN	Cyanide		5	ug/L	U	7/22/97
SJS02-SW02-000P	MCYAN	Iron	10700	5	ug/L		7/22/97
SJS02-SW02-000P	MCYAN	Lead	77.9	1	ug/L	L	7/21/97
SJS02-SW02-000P	MCYAN	Magnesium	665000	45	ug/L		7/22/97
SJS02-SW02-000P	MCYAN	Manganese	120	1	ug/L		7/22/97
SJS02-SW02-000P	MCYAN	Mercury	0.33	0.1	ug/L	B	7/29/97
SJS02-SW02-000P	MCYAN	Nickel		7	ug/L	U	7/22/97
SJS02-SW02-000P	MCYAN	Potassium	237000	97	ug/L	J	7/22/97
SJS02-SW02-000P	MCYAN	Selenium		3	ug/L	U	7/21/97
SJS02-SW02-000P	MCYAN	Silver	2	3	ug/L	B	7/21/97
SJS02-SW02-000P	MCYAN	Sodium	5640000	28	ug/L		7/23/97
SJS02-SW02-000P	MCYAN	Thallium		2	ug/L	U	7/21/97
SJS02-SW02-000P	MCYAN	Vanadium	32.8	4	ug/L	J	7/22/97
SJS02-SW02-000P	MCYAN	Zinc	268	3	ug/L		7/22/97
SJS02-SW02-000P	PSPCB	4,4'-DDD		0.1	ug/L	U	8/6/97
SJS02-SW02-000P	PSPCB	4,4'-DDE		0.1	ug/L	U	8/6/97
SJS02-SW02-000P	PSPCB	4,4'-DDT		0.1	ug/L	U	8/6/97
SJS02-SW02-000P	PSPCB	Aldrin		0.05	ug/L	U	8/6/97
SJS02-SW02-000P	PSPCB	alpha-BHC		0.05	ug/L	U	8/6/97
SJS02-SW02-000P	PSPCB	alpha-Chlordane		0.05	ug/L	U	8/6/97
SJS02-SW02-000P	PSPCB	Aroclor-1016		1	ug/L	U	8/6/97
SJS02-SW02-000P	PSPCB	Aroclor-1221		2	ug/L	U	8/6/97
SJS02-SW02-000P	PSPCB	Aroclor-1232		1	ug/L	U	8/6/97
SJS02-SW02-000P	PSPCB	Aroclor-1242		1	ug/L	U	8/6/97
SJS02-SW02-000P	PSPCB	Aroclor-1248		1	ug/L	U	8/6/97
SJS02-SW02-000P	PSPCB	Aroclor-1254		1	ug/L	U	8/6/97
SJS02-SW02-000P	PSPCB	Aroclor-1260		1	ug/L	U	8/6/97
SJS02-SW02-000P	PSPCB	beta-BHC		0.05	ug/L	U	8/6/97
SJS02-SW02-000P	PSPCB	delta-BHC		0.05	ug/L	U	8/6/97
SJS02-SW02-000P	PSPCB	Dieldrin		0.1	ug/L	U	8/6/97
SJS02-SW02-000P	PSPCB	Endosulfan I		0.05	ug/L	U	8/6/97
SJS02-SW02-000P	PSPCB	Endosulfan II		0.1	ug/L	U	8/6/97
SJS02-SW02-000P	PSPCB	Endosulfan Sulfate		0.1	ug/L	U	8/6/97
SJS02-SW02-000P	PSPCB	Endrin		0.1	ug/L	U	8/6/97
SJS02-SW02-000P	PSPCB	Endrin Aldehyde		0.1	ug/L	U	8/6/97
SJS02-SW02-000P	PSPCB	Endrin Ketone		0.1	ug/L	U	8/6/97
SJS02-SW02-000P	PSPCB	gamma-BHC		0.05	ug/L	U	8/6/97
SJS02-SW02-000P	PSPCB	gamma-Chlordane		0.05	ug/L	U	8/6/97
SJS02-SW02-000P	PSPCB	Heptachlor		0.05	ug/L	U	8/6/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS02-SW02-000P	PSPCB	Heptachlor Epoxide		0.05	ug/L	U	8/
SJS02-SW02-000P	PSPCB	Methoxychlor		0.5	ug/L	U	8
SJS02-SW02-000P	PSPCB	Toxaphene		5	ug/L	U	8/6/97
SJS02-SW02-000P	SVTCL	1,2,4-Trichlorobenzene		10	ug/L	U	7/24/97
SJS02-SW02-000P	SVTCL	1,2-Dichlorobenzene		10	ug/L	U	7/24/97
SJS02-SW02-000P	SVTCL	1,3-Dichlorobenzene		10	ug/L	U	7/24/97
SJS02-SW02-000P	SVTCL	1,4-Dichlorobenzene		10	ug/L	U	7/24/97
SJS02-SW02-000P	SVTCL	2,2'-oxybis(1-Chloropropane)		10	ug/L	U	7/24/97
SJS02-SW02-000P	SVTCL	2,4,5-Trichlorophenol		25	ug/L	U	7/24/97
SJS02-SW02-000P	SVTCL	2,4,6-Trichlorophenol		10	ug/L	U	7/24/97
SJS02-SW02-000P	SVTCL	2,4-Dichlorophenol		10	ug/L	U	7/24/97
SJS02-SW02-000P	SVTCL	2,4-Dimethylphenol		10	ug/L	U	7/24/97
SJS02-SW02-000P	SVTCL	2,4-Dinitrophenol		25	ug/L	U	7/24/97
SJS02-SW02-000P	SVTCL	2,4-Dinitrotoluene		10	ug/L	U	7/24/97
SJS02-SW02-000P	SVTCL	2,6-Dinitrotoluene		10	ug/L	U	7/24/97
SJS02-SW02-000P	SVTCL	2-Chloronaphthalene		10	ug/L	U	7/24/97
SJS02-SW02-000P	SVTCL	2-Chlorophenol		10	ug/L	U	7/24/97
SJS02-SW02-000P	SVTCL	2-Methylnaphthalene		10	ug/L	U	7/24/97
SJS02-SW02-000P	SVTCL	2-Methylphenol		10	ug/L	U	7/24/97
SJS02-SW02-000P	SVTCL	2-Nitroaniline		25	ug/L	U	7/24/97
SJS02-SW02-000P	SVTCL	2-Nitrophenol		10	ug/L	U	7/24/97
SJS02-SW02-000P	SVTCL	3,3'-Dichlorobenzidine		10	ug/L	U	7/24/97
SJS02-SW02-000P	SVTCL	3-Nitroaniline		25	ug/L	U	7/24/97
SJS02-SW02-000P	SVTCL	4,6-Dinitro-2-Methylphenol		25	ug/L	U	7/24/97
SJS02-SW02-000P	SVTCL	4-Bromophenyl phenylether		10	ug/L	U	7/24/97
SJS02-SW02-000P	SVTCL	4-Chloro-3-Methylphenol		10	ug/L	U	7/24/97
SJS02-SW02-000P	SVTCL	4-Chloroaniline		10	ug/L	U	7/24/97
SJS02-SW02-000P	SVTCL	4-Chlorophenyl-phenylether		10	ug/L	U	7/24/97
SJS02-SW02-000P	SVTCL	4-Methylphenol		10	ug/L	U	7/24/97
SJS02-SW02-000P	SVTCL	4-Nitroaniline		25	ug/L	U	7/2
SJS02-SW02-000P	SVTCL	4-Nitrophenol		25	ug/L	U	7/2
SJS02-SW02-000P	SVTCL	Acenaphthene		10	ug/L	U	7/24/97
SJS02-SW02-000P	SVTCL	Acenaphthylene		10	ug/L	U	7/24/97
SJS02-SW02-000P	SVTCL	Anthracene		10	ug/L	U	7/24/97
SJS02-SW02-000P	SVTCL	Benzo(a)Anthracene		10	ug/L	U	7/24/97
SJS02-SW02-000P	SVTCL	Benzo(a)Pyrene		10	ug/L	U	7/24/97
SJS02-SW02-000P	SVTCL	Benzo(b)Fluoranthene		10	ug/L	U	7/24/97
SJS02-SW02-000P	SVTCL	Benzo(g,h,i)Perylene		10	ug/L	U	7/24/97
SJS02-SW02-000P	SVTCL	Benzo(k)fluoranthene		10	ug/L	U	7/24/97
SJS02-SW02-000P	SVTCL	Bis(2-chloroethoxy)Methane		10	ug/L	U	7/24/97
SJS02-SW02-000P	SVTCL	Bis(2-chloroethyl)Ether		10	ug/L	U	7/24/97
SJS02-SW02-000P	SVTCL	Bis(2-Ethylhexyl)Phthalate	1	10	ug/L	J	7/24/97
SJS02-SW02-000P	SVTCL	Butylbenzylphthalate		10	ug/L	U	7/24/97
SJS02-SW02-000P	SVTCL	Carbazole		10	ug/L	U	7/24/97
SJS02-SW02-000P	SVTCL	Chrysene		10	ug/L	U	7/24/97
SJS02-SW02-000P	SVTCL	Di-n-Butylphthalate		10	ug/L	U	7/24/97
SJS02-SW02-000P	SVTCL	Di-n-Octyl Phthalate		10	ug/L	U	7/24/97
SJS02-SW02-000P	SVTCL	Dibenz(a,h)Anthracene		10	ug/L	U	7/24/97
SJS02-SW02-000P	SVTCL	Dibenzofuran		10	ug/L	U	7/24/97
SJS02-SW02-000P	SVTCL	Diethylphthalate		10	ug/L	U	7/24/97
SJS02-SW02-000P	SVTCL	Dimethyl Phthalate		10	ug/L	U	7/24/97
SJS02-SW02-000P	SVTCL	Fluoranthene		10	ug/L	U	7/24/97
SJS02-SW02-000P	SVTCL	Fluorene		10	ug/L	U	7/24/97
SJS02-SW02-000P	SVTCL	Hexachlorobenzene		10	ug/L	U	7/24/97
SJS02-SW02-000P	SVTCL	Hexachlorobutadiene		10	ug/L	U	7/24/97
SJS02-SW02-000P	SVTCL	Hexachlorocyclopentadien		10	ug/L	U	7/24/97
SJS02-SW02-000P	SVTCL	Hexachloroethane		10	ug/L	U	7/24/97
SJS02-SW02-000P	SVTCL	Indeno(1,2,3-cd)Pyrene		10	ug/L	U	7/24/97
SJS02-SW02-000P	SVTCL	Isophorone		10	ug/L	U	7/2
SJS02-SW02-000P	SVTCL	N-Nitroso-Di-n-Propylamine		10	ug/L	U	7/2

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS02-SW02-000P	SVTCL	N-Nitrosodiphenylamine		10	ug/L	U	7/24/97
SJS02-SW02-000P	SVTCL	Naphthalene		10	ug/L	U	7/24/97
SJS02-SW02-000P	SVTCL	Nitrobenzene		10	ug/L	U	7/24/97
SJS02-SW02-000P	SVTCL	Pentachlorophenol		25	ug/L	U	7/24/97
SJS02-SW02-000P	SVTCL	Phenanthrene		10	ug/L	U	7/24/97
SJS02-SW02-000P	SVTCL	Phenol		10	ug/L	U	7/24/97
SJS02-SW02-000P	SVTCL	Pyrene		10	ug/L	U	7/24/97
SJS02-SW02-000P	VCTCL	1,1,1-Trichloroethane		10	ug/L	U	7/17/97
SJS02-SW02-000P	VCTCL	1,1,2,2-Tetrachloroethane		10	ug/L	U	7/17/97
SJS02-SW02-000P	VCTCL	1,1,2-Trichloroethane		10	ug/L	U	7/17/97
SJS02-SW02-000P	VCTCL	1,1-Dichloroethane		10	ug/L	U	7/17/97
SJS02-SW02-000P	VCTCL	1,1-Dichloroethene		10	ug/L	U	7/17/97
SJS02-SW02-000P	VCTCL	1,2-Dichloroethane		10	ug/L	U	7/17/97
SJS02-SW02-000P	VCTCL	1,2-Dichloroethene (total)		10	ug/L	U	7/17/97
SJS02-SW02-000P	VCTCL	1,2-Dichloropropane		10	ug/L	U	7/17/97
SJS02-SW02-000P	VCTCL	2-Butanone		10	ug/L	U	7/17/97
SJS02-SW02-000P	VCTCL	2-Hexanone		10	ug/L	U	7/17/97
SJS02-SW02-000P	VCTCL	4-Methyl-2-Pentanone		10	ug/L	U	7/17/97
SJS02-SW02-000P	VCTCL	Acetone		10	ug/L	U	7/17/97
SJS02-SW02-000P	VCTCL	Benzene		10	ug/L	U	7/17/97
SJS02-SW02-000P	VCTCL	Bromodichloromethane		10	ug/L	U	7/17/97
SJS02-SW02-000P	VCTCL	Bromoform		10	ug/L	U	7/17/97
SJS02-SW02-000P	VCTCL	Bromomethane		10	ug/L	U	7/17/97
SJS02-SW02-000P	VCTCL	Carbon Disulfide		10	ug/L	U	7/17/97
SJS02-SW02-000P	VCTCL	Carbon Tetrachloride		10	ug/L	U	7/17/97
SJS02-SW02-000P	VCTCL	Chlorobenzene		10	ug/L	U	7/17/97
SJS02-SW02-000P	VCTCL	Chloroethane		10	ug/L	U	7/17/97
SJS02-SW02-000P	VCTCL	Chloroform		10	ug/L	U	7/17/97
SJS02-SW02-000P	VCTCL	Chloromethane		10	ug/L	U	7/17/97
SJS02-SW02-000P	VCTCL	cis-1,3-Dichloropropene		10	ug/L	U	7/17/97
SJS02-SW02-000P	VCTCL	Dibromochloromethane		10	ug/L	U	7/17/97
SJS02-SW02-000P	VCTCL	Ethylbenzene		10	ug/L	U	7/17/97
SJS02-SW02-000P	VCTCL	Methylene Chloride	9	10	ug/L	B	7/17/97
SJS02-SW02-000P	VCTCL	Styrene		10	ug/L	U	7/17/97
SJS02-SW02-000P	VCTCL	Tetrachloroethene		10	ug/L	U	7/17/97
SJS02-SW02-000P	VCTCL	Toluene		10	ug/L	U	7/17/97
SJS02-SW02-000P	VCTCL	Total Xylenes		10	ug/L	U	7/17/97
SJS02-SW02-000P	VCTCL	Trans-1,3-Dichloropropene		10	ug/L	U	7/17/97
SJS02-SW02-000P	VCTCL	Trichloroethene		10	ug/L	U	7/17/97
SJS02-SW02-000P	VCTCL	Vinyl Chloride		10	ug/L	U	7/17/97
SJS05-GW1D-001	CTOTP	Total Phosphorous (as P)	0.376	0.05	mg/L		7/31/97
SJS05-GW1D-001	MCYAN	Aluminum	1070	29	ug/L	J	8/11/97
SJS05-GW1D-001	MCYAN	Arsenic		3	ug/L	U	8/8/97
SJS05-GW1D-001	MCYAN	Barium	15	1	ug/L	B	8/11/97
SJS05-GW1D-001	MCYAN	Beryllium	1.4	1	ug/L	B	8/11/97
SJS05-GW1D-001	MCYAN	Cadmium		0.5	ug/L	UL	8/8/97
SJS05-GW1D-001	MCYAN	Calcium	58700	46	ug/L	J	8/11/97
SJS05-GW1D-001	MCYAN	Chromium	10.1	4	ug/L	J	8/11/97
SJS05-GW1D-001	MCYAN	Cobalt		8	ug/L	U	8/11/97
SJS05-GW1D-001	MCYAN	Copper		6	ug/L	U	8/11/97
SJS05-GW1D-001	MCYAN	Cyanide		5	ug/L	U	8/1/97
SJS05-GW1D-001	MCYAN	Iron	1460	5	ug/L	J	8/11/97
SJS05-GW1D-001	MCYAN	Lead	2.7	1	ug/L	B	8/8/97
SJS05-GW1D-001	MCYAN	Magnesium	4770	45	ug/L	J	8/11/97
SJS05-GW1D-001	MCYAN	Manganese	30.7	1	ug/L	B	8/11/97
SJS05-GW1D-001	MCYAN	Mercury	0.16	0.1	ug/L	B	8/7/97
SJS05-GW1D-001	MCYAN	Nickel		7	ug/L	U	8/11/97
SJS05-GW1D-001	MCYAN	Potassium	8030	97	ug/L		8/11/97
SJS05-GW1D-001	MCYAN	Silver		1	ug/L	U	8/8/97
SJS05-GW1D-001	MCYAN	Sodium	39000	28	ug/L	J	8/11/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anc
SJS05-GW1D-001	MCYAN	Thallium		2	ug/L	U	8
SJS05-GW1D-001	MCYAN	Vanadium		9	ug/L	U	8,
SJS05-GW1D-001	MCYAN	Zinc	11.4	3	ug/L	B	8/11/97
SJS05-GW1D-001	PSPCB	4,4'-DDD		0.1	ug/L	U	8/9/97
SJS05-GW1D-001	PSPCB	4,4'-DDE		0.1	ug/L	U	8/9/97
SJS05-GW1D-001	PSPCB	4,4'-DDT		0.1	ug/L	U	8/9/97
SJS05-GW1D-001	PSPCB	Aldrin		0.05	ug/L	U	8/9/97
SJS05-GW1D-001	PSPCB	alpha-BHC		0.05	ug/L	U	8/9/97
SJS05-GW1D-001	PSPCB	alpha-Chlordane		0.05	ug/L	U	8/9/97
SJS05-GW1D-001	PSPCB	Aroclor-1016		1	ug/L	U	8/9/97
SJS05-GW1D-001	PSPCB	Aroclor-1221		2	ug/L	U	8/9/97
SJS05-GW1D-001	PSPCB	Aroclor-1232		1	ug/L	U	8/9/97
SJS05-GW1D-001	PSPCB	Aroclor-1242		1	ug/L	U	8/9/97
SJS05-GW1D-001	PSPCB	Aroclor-1248		1	ug/L	U	8/9/97
SJS05-GW1D-001	PSPCB	Aroclor-1254		1	ug/L	U	8/9/97
SJS05-GW1D-001	PSPCB	Aroclor-1260		1	ug/L	U	8/9/97
SJS05-GW1D-001	PSPCB	beta-BHC		0.05	ug/L	U	8/9/97
SJS05-GW1D-001	PSPCB	delta-BHC		0.05	ug/L	U	8/9/97
SJS05-GW1D-001	PSPCB	Dieldrin		0.1	ug/L	U	8/9/97
SJS05-GW1D-001	PSPCB	Endosulfan I		0.05	ug/L	U	8/9/97
SJS05-GW1D-001	PSPCB	Endosulfan II		0.1	ug/L	U	8/9/97
SJS05-GW1D-001	PSPCB	Endosulfan Sulfate		0.1	ug/L	U	8/9/97
SJS05-GW1D-001	PSPCB	Endrin		0.1	ug/L	U	8/9/97
SJS05-GW1D-001	PSPCB	Endrin Aldehyde		0.1	ug/L	U	8/9/97
SJS05-GW1D-001	PSPCB	Endrin Ketone		0.1	ug/L	U	8/9/97
SJS05-GW1D-001	PSPCB	gamma-BHC		0.05	ug/L	U	8/9/97
SJS05-GW1D-001	PSPCB	gamma-Chlordane		0.05	ug/L	U	8/9/97
SJS05-GW1D-001	PSPCB	Heptachlor		0.05	ug/L	U	8/9/97
SJS05-GW1D-001	PSPCB	Heptachlor Epoxide		0.05	ug/L	U	8/9/97
SJS05-GW1D-001	PSPCB	Methoxychlor		0.5	ug/L	U	8
SJS05-GW1D-001	PSPCB	Toxaphene		5	ug/L	U	8,
SJS05-GW1D-001	SVTCL	1,2,4-Trichlorobenzene		10	ug/L	U	8/8/97
SJS05-GW1D-001	SVTCL	1,2-Dichlorobenzene		10	ug/L	U	8/8/97
SJS05-GW1D-001	SVTCL	1,3-Dichlorobenzene		10	ug/L	U	8/8/97
SJS05-GW1D-001	SVTCL	1,4-Dichlorobenzene		10	ug/L	U	8/8/97
SJS05-GW1D-001	SVTCL	2,2'-oxybis(1-Chloropropane		10	ug/L	U	8/8/97
SJS05-GW1D-001	SVTCL	2,4,5-Trichlorophenol		25	ug/L	U	8/8/97
SJS05-GW1D-001	SVTCL	2,4,6-Trichlorophenol		10	ug/L	U	8/8/97
SJS05-GW1D-001	SVTCL	2,4-Dichlorophenol		10	ug/L	U	8/8/97
SJS05-GW1D-001	SVTCL	2,4-Dimethylphenol		10	ug/L	U	8/8/97
SJS05-GW1D-001	SVTCL	2,4-Dinitrophenol		25	ug/L	U	8/8/97
SJS05-GW1D-001	SVTCL	2,4-Dinitrotoluene		10	ug/L	U	8/8/97
SJS05-GW1D-001	SVTCL	2,6-Dinitrotoluene		10	ug/L	U	8/8/97
SJS05-GW1D-001	SVTCL	2-Chloronaphthalene		10	ug/L	U	8/8/97
SJS05-GW1D-001	SVTCL	2-Chlorophenol		10	ug/L	U	8/8/97
SJS05-GW1D-001	SVTCL	2-Methylnaphthalene		10	ug/L	U	8/8/97
SJS05-GW1D-001	SVTCL	2-Methylphenol		10	ug/L	U	8/8/97
SJS05-GW1D-001	SVTCL	2-Nitroaniline		25	ug/L	U	8/8/97
SJS05-GW1D-001	SVTCL	2-Nitrophenol		10	ug/L	U	8/8/97
SJS05-GW1D-001	SVTCL	3,3'-Dichlorobenzidine		10	ug/L	U	8/8/97
SJS05-GW1D-001	SVTCL	3-Nitroaniline		25	ug/L	U	8/8/97
SJS05-GW1D-001	SVTCL	4,6-Dinitro-2-Methylphenol		25	ug/L	U	8/8/97
SJS05-GW1D-001	SVTCL	4-Bromophenol-phenylether		10	ug/L	U	8/8/97
SJS05-GW1D-001	SVTCL	4-Chloro-3-Methylphenol		10	ug/L	U	8/8/97
SJS05-GW1D-001	SVTCL	4-Chloroaniline		10	ug/L	U	8/8/97
SJS05-GW1D-001	SVTCL	4-Chlorophenyl-phenylether		10	ug/L	U	8/8/97
SJS05-GW1D-001	SVTCL	4-Methylphenol		10	ug/L	U	8/8/97
SJS05-GW1D-001	SVTCL	4-Nitroaniline		25	ug/L	U	8/8/97
SJS05-GW1D-001	SVTCL	4-Nitrophenol		25	ug/L	U	8
SJS05-GW1D-001	SVTCL	Acenaphthene		10	ug/L	U	8/

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS05-GW1D-001	SVTCL	Acenaphthylene		10	ug/L	U	8/8/97
SJS05-GW1D-001	SVTCL	Anthracene		10	ug/L	U	8/8/97
SJS05-GW1D-001	SVTCL	Benzo(a)anthracene		10	ug/L	U	8/8/97
SJS05-GW1D-001	SVTCL	Benzo(a)pyrene		10	ug/L	U	8/8/97
SJS05-GW1D-001	SVTCL	Benzo(b)fluoranthene		10	ug/L	U	8/8/97
SJS05-GW1D-001	SVTCL	Benzo(g,h,i)perylene		10	ug/L	U	8/8/97
SJS05-GW1D-001	SVTCL	Benzo(k)fluoranthene		10	ug/L	U	8/8/97
SJS05-GW1D-001	SVTCL	bis(2-Chloroethoxy)methan,		10	ug/L	U	8/8/97
SJS05-GW1D-001	SVTCL	bis(2-chloroethyl)ether		10	ug/L	U	8/8/97
SJS05-GW1D-001	SVTCL	bis(2-Ethylhexyl)phthalate		10	ug/L	U	8/8/97
SJS05-GW1D-001	SVTCL	Butylbenzylphthalate		10	ug/L	U	8/8/97
SJS05-GW1D-001	SVTCL	Carbazole		10	ug/L	U	8/8/97
SJS05-GW1D-001	SVTCL	Chrysene		10	ug/L	U	8/8/97
SJS05-GW1D-001	SVTCL	Di-n-butylphthalate		10	ug/L	U	8/8/97
SJS05-GW1D-001	SVTCL	Di-n-Octyl Phthalate		10	ug/L	U	8/8/97
SJS05-GW1D-001	SVTCL	Dibenzo(a,h)anthracene		10	ug/L	U	8/8/97
SJS05-GW1D-001	SVTCL	Dibenzofuran		10	ug/L	U	8/8/97
SJS05-GW1D-001	SVTCL	Diethylphthalate		10	ug/L	U	8/8/97
SJS05-GW1D-001	SVTCL	Dimethyl Phthalate		10	ug/L	U	8/8/97
SJS05-GW1D-001	SVTCL	Fluoranthene		10	ug/L	U	8/8/97
SJS05-GW1D-001	SVTCL	Fluorene		10	ug/L	U	8/8/97
SJS05-GW1D-001	SVTCL	Hexachlorobenzene		10	ug/L	U	8/8/97
SJS05-GW1D-001	SVTCL	Hexachlorobutadiene		10	ug/L	U	8/8/97
SJS05-GW1D-001	SVTCL	Hexachlorocyclopentadien		10	ug/L	U	8/8/97
SJS05-GW1D-001	SVTCL	Hexachloroethane		10	ug/L	U	8/8/97
SJS05-GW1D-001	SVTCL	Indeno(1,2,3-cd)pyrene		10	ug/L	U	8/8/97
SJS05-GW1D-001	SVTCL	Isophorone		10	ug/L	U	8/8/97
SJS05-GW1D-001	SVTCL	N-Nitroso-Di-n-Propylamine		10	ug/L	U	8/8/97
SJS05-GW1D-001	SVTCL	N-Nitrosodiphenylamine		10	ug/L	U	8/8/97
SJS05-GW1D-001	SVTCL	Naphthalene		10	ug/L	U	8/8/97
SJS05-GW1D-001	SVTCL	Nitrobenzene		10	ug/L	U	8/8/97
SJS05-GW1D-001	SVTCL	Pentachlorophenol		25	ug/L	U	8/8/97
SJS05-GW1D-001	SVTCL	Phenanthrene		10	ug/L	U	8/8/97
SJS05-GW1D-001	SVTCL	Phenol		10	ug/L	U	8/8/97
SJS05-GW1D-001	SVTCL	Pyrene		10	ug/L	U	8/8/97
SJS05-GW1D-001	VCLOW	1,1,1-Trichloroethane		1	ug/L	U	8/1/97
SJS05-GW1D-001	VCLOW	1,1,2,2-Tetrachloroethane		1	ug/L	U	8/1/97
SJS05-GW1D-001	VCLOW	1,1,2-Trichloroethane		1	ug/L	U	8/1/97
SJS05-GW1D-001	VCLOW	1,1-Dichloroethane		1	ug/L	U	8/1/97
SJS05-GW1D-001	VCLOW	1,1-Dichloroethene		1	ug/L	U	8/1/97
SJS05-GW1D-001	VCLOW	1,2,4-Trichlorobenzene		1	ug/L	U	8/1/97
SJS05-GW1D-001	VCLOW	1,2-Dibromo-3-chloropropa		1	ug/L	U	8/1/97
SJS05-GW1D-001	VCLOW	1,2-Dibromoethane		1	ug/L	U	8/1/97
SJS05-GW1D-001	VCLOW	1,2-Dichlorobenzene		1	ug/L	U	8/1/97
SJS05-GW1D-001	VCLOW	1,2-Dichloroethane		1	ug/L	U	8/1/97
SJS05-GW1D-001	VCLOW	1,2-Dichloropropane		1	ug/L	U	8/1/97
SJS05-GW1D-001	VCLOW	1,3-Dichlorobenzene		1	ug/L	U	8/1/97
SJS05-GW1D-001	VCLOW	1,4-Dichlorobenzene		1	ug/L	U	8/1/97
SJS05-GW1D-001	VCLOW	2-Hexanone		5	ug/L	U	8/1/97
SJS05-GW1D-001	VCLOW	4-Methyl-2-Pentanone		5	ug/L	U	8/1/97
SJS05-GW1D-001	VCLOW	Acetone		5	ug/L	U	8/1/97
SJS05-GW1D-001	VCLOW	Benzene		1	ug/L	U	8/1/97
SJS05-GW1D-001	VCLOW	Bromochloromethane		1	ug/L	U	8/1/97
SJS05-GW1D-001	VCLOW	Bromodichloromethane		1	ug/L	U	8/1/97
SJS05-GW1D-001	VCLOW	Bromoform		1	ug/L	U	8/1/97
SJS05-GW1D-001	VCLOW	Bromomethane		1	ug/L	U	8/1/97
SJS05-GW1D-001	VCLOW	Carbon Disulfide		1	ug/L	U	8/1/97
SJS05-GW1D-001	VCLOW	Carbon Tetrachloride		1	ug/L	U	8/1/97
SJS05-GW1D-001	VCLOW	Chlorobenzene		1	ug/L	U	8/1/97
SJS05-GW1D-001	VCLOW	Chloroethane		1	ug/L	U	8/1/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Ana
SJS05-GW1D-001	VCLOW	Chloroform	2	1	ug/L		8/
SJS05-GW1D-001	VCLOW	Chloromethane		1	ug/L	U	8,
SJS05-GW1D-001	VCLOW	cis-1,2-Dichloroethene		1	ug/L	U	8/1/97
SJS05-GW1D-001	VCLOW	cis-1,3-Dichloropropene		1	ug/L	U	8/1/97
SJS05-GW1D-001	VCLOW	Dibromochloromethane		1	ug/L	U	8/1/97
SJS05-GW1D-001	VCLOW	Ethylbenzene		1	ug/L	U	8/1/97
SJS05-GW1D-001	VCLOW	Methylene Chloride	2	1	ug/L	B	8/1/97
SJS05-GW1D-001	VCLOW	Styrene		1	ug/L	U	8/1/97
SJS05-GW1D-001	VCLOW	Tetrachloroethene		1	ug/L	U	8/1/97
SJS05-GW1D-001	VCLOW	Toluene		1	ug/L	U	8/1/97
SJS05-GW1D-001	VCLOW	Total Xylenes		1	ug/L	U	8/1/97
SJS05-GW1D-001	VCLOW	Trans-1,2-Dichloroethene		1	ug/L	U	8/1/97
SJS05-GW1D-001	VCLOW	trans-1,3-Dichloropropene		1	ug/L	U	8/1/97
SJS05-GW1D-001	VCLOW	Trichloroethene		1	ug/L	U	8/1/97
SJS05-GW1D-001	VCLOW	Vinyl Chloride		1	ug/L	U	8/1/97
SJS05-GW1D-001F	METAL	Aluminum	108	29	ug/L	B	8/11/97
SJS05-GW1D-001F	METAL	Antimony		2	ug/L	UL	8/13/97
SJS05-GW1D-001F	METAL	Arsenic		3	ug/L	UL	8/8/97
SJS05-GW1D-001F	METAL	Barium	11.6	1	ug/L	B	8/11/97
SJS05-GW1D-001F	METAL	Beryllium	1.1	1	ug/L	B	8/11/97
SJS05-GW1D-001F	METAL	Cadmium		0.5	ug/L	UL	8/8/97
SJS05-GW1D-001F	METAL	Calcium	65800	46	ug/L	J	8/11/97
SJS05-GW1D-001F	METAL	Chromium		7	ug/L	U	8/11/97
SJS05-GW1D-001F	METAL	Cobalt		8	ug/L	U	8/11/97
SJS05-GW1D-001F	METAL	Copper		6	ug/L	U	8/11/97
SJS05-GW1D-001F	METAL	Iron	40.7	5	ug/L	B	8/11/97
SJS05-GW1D-001F	METAL	Lead	1.4	1	ug/L	B	8/8/97
SJS05-GW1D-001F	METAL	Magnesium	5240	45	ug/L	J	8/11/97
SJS05-GW1D-001F	METAL	Manganese	10.1	1	ug/L	B	8/11
SJS05-GW1D-001F	METAL	Mercury	0.19	0.1	ug/L	B	8/
SJS05-GW1D-001F	METAL	Nickel		7	ug/L	U	8/1
SJS05-GW1D-001F	METAL	Potassium	8860	97	ug/L		8/11/97
SJS05-GW1D-001F	METAL	Silver		1	ug/L	U	8/8/97
SJS05-GW1D-001F	METAL	Sodium	44100	28	ug/L	J	8/11/97
SJS05-GW1D-001F	METAL	Thallium		2	ug/L	U	8/8/97
SJS05-GW1D-001F	METAL	Vanadium		9	ug/L	U	8/11/97
SJS05-GW1D-001F	METAL	Zinc	55.1	3	ug/L	B	8/11/97
SJS05-GW1S-001	CTOTP	Total Phosphorous (as P)	0.104	0.05	mg/L		7/29/97
SJS05-GW1S-001	MCYAN	Aluminum	1630	29	ug/L		7/22/97
SJS05-GW1S-001	MCYAN	Antimony		2	ug/L	U	7/21/97
SJS05-GW1S-001	MCYAN	Arsenic	4.8	3	ug/L	J	7/25/97
SJS05-GW1S-001	MCYAN	Barium	359	1	ug/L		7/22/97
SJS05-GW1S-001	MCYAN	Beryllium		1	ug/L	U	7/22/97
SJS05-GW1S-001	MCYAN	Cadmium		0.5	ug/L	U	7/21/97
SJS05-GW1S-001	MCYAN	Calcium	117000	46	ug/L		7/22/97
SJS05-GW1S-001	MCYAN	Chromium	8.5	4	ug/L	J	7/22/97
SJS05-GW1S-001	MCYAN	Cobalt		8	ug/L	U	7/22/97
SJS05-GW1S-001	MCYAN	Copper		6	ug/L	U	7/22/97
SJS05-GW1S-001	MCYAN	Cyanide		5	ug/L	U	7/22/97
SJS05-GW1S-001	MCYAN	Iron	58700	5	ug/L		7/22/97
SJS05-GW1S-001	MCYAN	Lead		1	ug/L	U	7/21/97
SJS05-GW1S-001	MCYAN	Magnesium	190000	45	ug/L		7/22/97
SJS05-GW1S-001	MCYAN	Manganese	1300	1	ug/L		7/22/97
SJS05-GW1S-001	MCYAN	Mercury	0.13	0.1	ug/L	B	7/29/97
SJS05-GW1S-001	MCYAN	Nickel		7	ug/L	U	7/22/97
SJS05-GW1S-001	MCYAN	Potassium	39500	97	ug/L		7/22/97
SJS05-GW1S-001	MCYAN	Selenium		3	ug/L	U	7/21/97
SJS05-GW1S-001	MCYAN	Silver	2.4	3	ug/L	B	7/21
SJS05-GW1S-001	MCYAN	Sodium	1200000	28	ug/L	B	7/2
SJS05-GW1S-001	MCYAN	Thallium	2.7	2	ug/L	B	7/21,

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS05-GW1S-001	VCLOW	Chloromethane		1	ug/L	U	7/21/97
SJS05-GW1S-001	VCLOW	cis-1,2-Dichloroethene		1	ug/L	U	7/21/97
SJS05-GW1S-001	VCLOW	cis-1,3-Dichloropropene		1	ug/L	U	7/21/97
SJS05-GW1S-001	VCLOW	Dibromochloromethane		1	ug/L	U	7/21/97
SJS05-GW1S-001	VCLOW	Ethylbenzene		1	ug/L	U	7/21/97
SJS05-GW1S-001	VCLOW	Methylene Chloride	3	1	ug/L	B	7/21/97
SJS05-GW1S-001	VCLOW	Styrene		1	ug/L	U	7/21/97
SJS05-GW1S-001	VCLOW	Tetrachloroethene		1	ug/L	U	7/21/97
SJS05-GW1S-001	VCLOW	Toluene	0.2	1	ug/L	J	7/21/97
SJS05-GW1S-001	VCLOW	Total Xylenes		1	ug/L	U	7/21/97
SJS05-GW1S-001	VCLOW	Trans-1,2-Dichloroethene		1	ug/L	U	7/21/97
SJS05-GW1S-001	VCLOW	Trans-1,3-Dichloropropene		1	ug/L	U	7/21/97
SJS05-GW1S-001	VCLOW	Trichloroethene		1	ug/L	U	7/21/97
SJS05-GW1S-001	VCLOW	Vinyl Chloride		1	ug/L	U	7/21/97
SJS05-GW1S-001F	METAL	Aluminum		44	ug/L	U	7/22/97
SJS05-GW1S-001F	METAL	Antimony		2	ug/L	U	7/21/97
SJS05-GW1S-001F	METAL	Arsenic	3.1	3	ug/L	J	7/25/97
SJS05-GW1S-001F	METAL	Barium	371	1	ug/L		7/22/97
SJS05-GW1S-001F	METAL	Beryllium		1	ug/L	U	7/22/97
SJS05-GW1S-001F	METAL	Cadmium		0.5	ug/L	U	7/21/97
SJS05-GW1S-001F	METAL	Calcium	118000	46	ug/L		7/22/97
SJS05-GW1S-001F	METAL	Chromium		7	ug/L	U	7/22/97
SJS05-GW1S-001F	METAL	Cobalt		8	ug/L	U	7/22/97
SJS05-GW1S-001F	METAL	Copper		6	ug/L	U	7/22/97
SJS05-GW1S-001F	METAL	Iron	65100	5	ug/L		7/22/97
SJS05-GW1S-001F	METAL	Lead		1	ug/L	U	7/21/97
SJS05-GW1S-001F	METAL	Magnesium	186000	45	ug/L		7/22/97
SJS05-GW1S-001F	METAL	Manganese	1290	1	ug/L		7/22/97
SJS05-GW1S-001F	METAL	Mercury	0.13	0.1	ug/L	B	7/29/97
SJS05-GW1S-001F	METAL	Nickel		7	ug/L	U	7/22/97
SJS05-GW1S-001F	METAL	Potassium	37100	97	ug/L		7/22/97
SJS05-GW1S-001F	METAL	Selenium		3	ug/L	U	7/21/97
SJS05-GW1S-001F	METAL	Silver	2.1	3	ug/L	B	7/21/97
SJS05-GW1S-001F	METAL	Sodium	1170000	28	ug/L		7/23/97
SJS05-GW1S-001F	METAL	Thallium	3.8	2	ug/L	B	7/21/97
SJS05-GW1S-001F	METAL	Vanadium		9	ug/L	U	7/22/97
SJS05-GW1S-001F	METAL	Zinc	36.6	3	ug/L	B	7/22/97
SJS05-GW2D-001	CTOTP	Total Phosphorous (as P)		1.3	mg/L	U	8/8/97
SJS05-GW2D-001	MCYAN	Aluminum	2250	29	ug/L		8/7/97
SJS05-GW2D-001	MCYAN	Antimony	3.1	1	ug/L	J	8/6/97
SJS05-GW2D-001	MCYAN	Arsenic	4.9	3	ug/L	J	8/6/97
SJS05-GW2D-001	MCYAN	Barium	26.5	1	ug/L	J	8/7/97
SJS05-GW2D-001	MCYAN	Beryllium	1.5	1	ug/L	K	8/7/97
SJS05-GW2D-001	MCYAN	Cadmium		0.5	ug/L	U	8/6/97
SJS05-GW2D-001	MCYAN	Calcium	68700	46	ug/L		8/7/97
SJS05-GW2D-001	MCYAN	Chromium	13	4	ug/L	B	8/7/97
SJS05-GW2D-001	MCYAN	Cobalt		8	ug/L	U	8/7/97
SJS05-GW2D-001	MCYAN	Copper		6	ug/L	U	8/7/97
SJS05-GW2D-001	MCYAN	Cyanide		5	ug/L	U	8/5/97
SJS05-GW2D-001	MCYAN	Iron	4420	5	ug/L	K	8/7/97
SJS05-GW2D-001	MCYAN	Lead	4.3	1	ug/L	B	8/6/97
SJS05-GW2D-001	MCYAN	Magnesium	10000	45	ug/L		8/7/97
SJS05-GW2D-001	MCYAN	Manganese	142	1	ug/L		8/7/97
SJS05-GW2D-001	MCYAN	Mercury		0.12	ug/L	U	8/6/97
SJS05-GW2D-001	MCYAN	Nickel		7	ug/L	U	8/7/97
SJS05-GW2D-001	MCYAN	Potassium	7740	97	ug/L		8/7/97
SJS05-GW2D-001	MCYAN	Selenium		3	ug/L	U	8/6/97
SJS05-GW2D-001	MCYAN	Silver	6.3	3	ug/L	B	8/6/97
SJS05-GW2D-001	MCYAN	Sodium	43000	28	ug/L		8/7/97
JS05-GW2D-001	MCYAN	Thallium		2	ug/L	U	8/7/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS05-GW2D-001	MCYAN	Vanadium	15.6	4	ug/L	K	8/
SJS05-GW2D-001	MCYAN	Zinc	14.4	3	ug/L	B	8/
SJS05-GW2D-001	PSPCB	4,4'-DDD		0.1	ug/L	U	8/21/97
SJS05-GW2D-001	PSPCB	4,4'-DDE		0.1	ug/L	U	8/21/97
SJS05-GW2D-001	PSPCB	4,4'-DDT		0.1	ug/L	U	8/21/97
SJS05-GW2D-001	PSPCB	Aldrin		0.05	ug/L	U	8/21/97
SJS05-GW2D-001	PSPCB	alpha-BHC		0.05	ug/L	U	8/21/97
SJS05-GW2D-001	PSPCB	alpha-Chlordane		0.05	ug/L	U	8/21/97
SJS05-GW2D-001	PSPCB	Aroclor-1016		1	ug/L	U	8/21/97
SJS05-GW2D-001	PSPCB	Aroclor-1221		2	ug/L	U	8/21/97
SJS05-GW2D-001	PSPCB	Aroclor-1232		1	ug/L	U	8/21/97
SJS05-GW2D-001	PSPCB	Aroclor-1242		1	ug/L	U	8/21/97
SJS05-GW2D-001	PSPCB	Aroclor-1248		1	ug/L	U	8/21/97
SJS05-GW2D-001	PSPCB	Aroclor-1254		1	ug/L	U	8/21/97
SJS05-GW2D-001	PSPCB	Aroclor-1260		1	ug/L	U	8/21/97
SJS05-GW2D-001	PSPCB	beta-BHC		0.05	ug/L	U	8/21/97
SJS05-GW2D-001	PSPCB	delta-BHC		0.05	ug/L	U	8/21/97
SJS05-GW2D-001	PSPCB	Dieldrin		0.1	ug/L	U	8/21/97
SJS05-GW2D-001	PSPCB	Endosulfan I		0.05	ug/L	U	8/21/97
SJS05-GW2D-001	PSPCB	Endosulfan II		0.1	ug/L	U	8/21/97
SJS05-GW2D-001	PSPCB	Endosulfan Sulfate		0.1	ug/L	U	8/21/97
SJS05-GW2D-001	PSPCB	Endrin		0.1	ug/L	U	8/21/97
SJS05-GW2D-001	PSPCB	Endrin Aldehyde		0.1	ug/L	U	8/21/97
SJS05-GW2D-001	PSPCB	Endrin Ketone		0.1	ug/L	U	8/21/97
SJS05-GW2D-001	PSPCB	gamma-BHC		0.05	ug/L	U	8/21/97
SJS05-GW2D-001	PSPCB	gamma-Chlordane		0.05	ug/L	U	8/21/97
SJS05-GW2D-001	PSPCB	Heptachlor		0.05	ug/L	U	8/21/97
SJS05-GW2D-001	PSPCB	Heptachlor Epoxide		0.05	ug/L	U	8/21/97
SJS05-GW2D-001	PSPCB	Methoxychlor		0.5	ug/L	U	8/21/97
SJS05-GW2D-001	PSPCB	Toxaphene		5	ug/L	U	8/2
SJS05-GW2D-001	SVTCL	1,2,4-Trichlorobenzene		10	ug/L	U	8/1
SJS05-GW2D-001	SVTCL	1,2-Dichlorobenzene		10	ug/L	U	8/15/97
SJS05-GW2D-001	SVTCL	1,3-Dichlorobenzene		10	ug/L	U	8/15/97
SJS05-GW2D-001	SVTCL	1,4-Dichlorobenzene		10	ug/L	U	8/15/97
SJS05-GW2D-001	SVTCL	2,2'-oxybis(1-Chloropropane		10	ug/L	U	8/15/97
SJS05-GW2D-001	SVTCL	2,4,5-Trichlorophenol		25	ug/L	U	8/15/97
SJS05-GW2D-001	SVTCL	2,4,6-Trichlorophenol		10	ug/L	U	8/15/97
SJS05-GW2D-001	SVTCL	2,4-Dichlorophenol		10	ug/L	U	8/15/97
SJS05-GW2D-001	SVTCL	2,4-Dimethylphenol		10	ug/L	U	8/15/97
SJS05-GW2D-001	SVTCL	2,4-Dinitrophenol		25	ug/L	UJ	8/15/97
SJS05-GW2D-001	SVTCL	2,4-Dinitrotoluene		10	ug/L	U	8/15/97
SJS05-GW2D-001	SVTCL	2,6-Dinitrotoluene		10	ug/L	U	8/15/97
SJS05-GW2D-001	SVTCL	2-Chloronaphthalene		10	ug/L	U	8/15/97
SJS05-GW2D-001	SVTCL	2-Chlorophenol		10	ug/L	U	8/15/97
SJS05-GW2D-001	SVTCL	2-Methylnaphthalene		10	ug/L	U	8/15/97
SJS05-GW2D-001	SVTCL	2-Methylphenol		10	ug/L	U	8/15/97
SJS05-GW2D-001	SVTCL	2-Nitroaniline		25	ug/L	U	8/15/97
SJS05-GW2D-001	SVTCL	2-Nitrophenol		10	ug/L	U	8/15/97
SJS05-GW2D-001	SVTCL	3,3'-Dichlorobenzidine		10	ug/L	U	8/15/97
SJS05-GW2D-001	SVTCL	3-Nitroaniline		25	ug/L	U	8/15/97
SJS05-GW2D-001	SVTCL	4,6-Dinitro-2-Methylphenol		25	ug/L	U	8/15/97
SJS05-GW2D-001	SVTCL	4-Bromophenol-phenylether		10	ug/L	U	8/15/97
SJS05-GW2D-001	SVTCL	4-Chloro-3-Methylphenol		10	ug/L	U	8/15/97
SJS05-GW2D-001	SVTCL	4-Chloroaniline		10	ug/L	U	8/15/97
SJS05-GW2D-001	SVTCL	4-Chlorophenyl-phenylether		10	ug/L	U	8/15/97
SJS05-GW2D-001	SVTCL	4-Methylphenol		10	ug/L	U	8/15/97
SJS05-GW2D-001	SVTCL	4-Nitroaniline		25	ug/L	U	8/15/97
SJS05-GW2D-001	SVTCL	4-Nitrophenol		25	ug/L	U	8/15/97
SJS05-GW2D-001	SVTCL	Acenaphthene		10	ug/L	U	8/1
SJS05-GW2D-001	SVTCL	Acenaphthylene		10	ug/L	U	8/1

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS05-GW2D-001	SVTCL	Anthracene		10	ug/L	U	8/15/97
SJS05-GW2D-001	SVTCL	Benzo(a)anthracene		10	ug/L	U	8/15/97
SJS05-GW2D-001	SVTCL	Benzo(a)pyrene		10	ug/L	U	8/15/97
SJS05-GW2D-001	SVTCL	Benzo(b)fluoranthene		10	ug/L	U	8/15/97
SJS05-GW2D-001	SVTCL	Benzo(g,h,i)perylene		10	ug/L	U	8/15/97
SJS05-GW2D-001	SVTCL	Benzo(k)fluoranthene		10	ug/L	U	8/15/97
SJS05-GW2D-001	SVTCL	bis(2-Chloroethoxy)methan		10	ug/L	U	8/15/97
SJS05-GW2D-001	SVTCL	bis(2-chloroethyl)ether		10	ug/L	U	8/15/97
SJS05-GW2D-001	SVTCL	bis(2-Ethylhexyl)phthalate		10	ug/L	U	8/15/97
SJS05-GW2D-001	SVTCL	Butylbenzylphthalate		10	ug/L	U	8/15/97
SJS05-GW2D-001	SVTCL	Carbazole		10	ug/L	U	8/15/97
SJS05-GW2D-001	SVTCL	Chrysene		10	ug/L	U	8/15/97
SJS05-GW2D-001	SVTCL	Di-n-butylphthalate		10	ug/L	U	8/15/97
SJS05-GW2D-001	SVTCL	Di-n-Octyl Phthalate		10	ug/L	U	8/15/97
SJS05-GW2D-001	SVTCL	Dibenzo(a,h)anthracene		10	ug/L	U	8/15/97
SJS05-GW2D-001	SVTCL	Dibenzofuran		10	ug/L	U	8/15/97
SJS05-GW2D-001	SVTCL	Diethylphthalate		10	ug/L	U	8/15/97
SJS05-GW2D-001	SVTCL	Dimethyl Phthalate		10	ug/L	U	8/15/97
SJS05-GW2D-001	SVTCL	Fluoranthene		10	ug/L	U	8/15/97
SJS05-GW2D-001	SVTCL	Fluorene		10	ug/L	U	8/15/97
SJS05-GW2D-001	SVTCL	Hexachlorobenzene		10	ug/L	U	8/15/97
SJS05-GW2D-001	SVTCL	Hexachlorobutadiene		10	ug/L	U	8/15/97
SJS05-GW2D-001	SVTCL	Hexachlorocyclopentadien		10	ug/L	U	8/15/97
SJS05-GW2D-001	SVTCL	Hexachloroethane		10	ug/L	U	8/15/97
SJS05-GW2D-001	SVTCL	Indeno(1,2,3-cd)pyrene		10	ug/L	U	8/15/97
SJS05-GW2D-001	SVTCL	Isophorone		10	ug/L	U	8/15/97
SJS05-GW2D-001	SVTCL	N-Nitroso-Di-n-Propylamine		10	ug/L	U	8/15/97
SJS05-GW2D-001	SVTCL	N-Nitrosodiphenylamine		10	ug/L	U	8/15/97
SJS05-GW2D-001	SVTCL	Naphthalene		10	ug/L	U	8/15/97
SJS05-GW2D-001	SVTCL	Nitrobenzene		10	ug/L	U	8/15/97
SJS05-GW2D-001	SVTCL	Pentachlorophenol		25	ug/L	U	8/15/97
SJS05-GW2D-001	SVTCL	Phenanthrene		10	ug/L	U	8/15/97
SJS05-GW2D-001	SVTCL	Phenol		10	ug/L	U	8/15/97
SJS05-GW2D-001	SVTCL	Pyrene		10	ug/L	U	8/15/97
SJS05-GW2D-001	VCLOW	1,1,1-Trichloroethane		1	ug/L	U	8/5/97
SJS05-GW2D-001	VCLOW	1,1,2,2-Tetrachloroethane		1	ug/L	U	8/5/97
SJS05-GW2D-001	VCLOW	1,1,2-Trichloroethane		1	ug/L	U	8/5/97
SJS05-GW2D-001	VCLOW	1,1-Dichloroethane		1	ug/L	U	8/5/97
SJS05-GW2D-001	VCLOW	1,1-Dichloroethene		1	ug/L	U	8/5/97
SJS05-GW2D-001	VCLOW	1,2,4-Trichlorobenzene		1	ug/L	U	8/5/97
SJS05-GW2D-001	VCLOW	1,2-Dibromo-3-chloropropa		1	ug/L	U	8/5/97
SJS05-GW2D-001	VCLOW	1,2-Dibromoethane		1	ug/L	U	8/5/97
SJS05-GW2D-001	VCLOW	1,2-Dichlorobenzene		1	ug/L	U	8/5/97
SJS05-GW2D-001	VCLOW	1,2-Dichloroethane		1	ug/L	U	8/5/97
SJS05-GW2D-001	VCLOW	1,2-Dichloropropane		1	ug/L	U	8/5/97
SJS05-GW2D-001	VCLOW	1,3-Dichlorobenzene		1	ug/L	U	8/5/97
SJS05-GW2D-001	VCLOW	1,4-Dichlorobenzene		1	ug/L	U	8/5/97
SJS05-GW2D-001	VCLOW	2-Hexanone		5	ug/L	U	8/5/97
SJS05-GW2D-001	VCLOW	4-Methyl-2-Pentanone		5	ug/L	U	8/5/97
SJS05-GW2D-001	VCLOW	Acetone	14	5	ug/L	B	8/5/97
SJS05-GW2D-001	VCLOW	Benzene		1	ug/L	U	8/5/97
SJS05-GW2D-001	VCLOW	Bromochloromethane		1	ug/L	U	8/5/97
SJS05-GW2D-001	VCLOW	Bromodichloromethane		1	ug/L	U	8/5/97
SJS05-GW2D-001	VCLOW	Bromoform		1	ug/L	U	8/5/97
SJS05-GW2D-001	VCLOW	Bromomethane		1	ug/L	U	8/5/97
SJS05-GW2D-001	VCLOW	Carbon Disulfide		1	ug/L	U	8/5/97
SJS05-GW2D-001	VCLOW	Carbon Tetrachloride		1	ug/L	U	8/5/97
SJS05-GW2D-001	VCLOW	Chlorobenzene		1	ug/L	U	8/5/97
SJS05-GW2D-001	VCLOW	Chloroethane		1	ug/L	U	8/5/97
SJS05-GW2D-001	VCLOW	Chloroform	5	1	ug/L		8/5/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS05-GW2D-001	VCLOW	Chloromethane		1	ug/L	U	8/
SJS05-GW2D-001	VCLOW	cis-1,2-Dichloroethene		1	ug/L	U	8
SJS05-GW2D-001	VCLOW	cis-1,3-Dichloropropene		1	ug/L	U	8/5/97
SJS05-GW2D-001	VCLOW	Dibromochloromethane		1	ug/L	U	8/5/97
SJS05-GW2D-001	VCLOW	Ethylbenzene		1	ug/L	U	8/5/97
SJS05-GW2D-001	VCLOW	Methylene Chloride	3	1	ug/L	B	8/5/97
SJS05-GW2D-001	VCLOW	Styrene		1	ug/L	U	8/5/97
SJS05-GW2D-001	VCLOW	Tetrachloroethene		1	ug/L	U	8/5/97
SJS05-GW2D-001	VCLOW	Toluene		1	ug/L	U	8/5/97
SJS05-GW2D-001	VCLOW	Total Xylenes		1	ug/L	U	8/5/97
SJS05-GW2D-001	VCLOW	Trans-1,2-Dichloroethene		1	ug/L	U	8/5/97
SJS05-GW2D-001	VCLOW	trans-1,3-Dichloropropene		1	ug/L	U	8/5/97
SJS05-GW2D-001	VCLOW	Trichloroethene		1	ug/L	U	8/5/97
SJS05-GW2D-001	VCLOW	Vinyl Chloride		1	ug/L	U	8/5/97
SJS05-GW2D-001F	METAL	Aluminum	56	29	ug/L	B	8/7/97
SJS05-GW2D-001F	METAL	Antimony	2	1	ug/L	J	8/6/97
SJS05-GW2D-001F	METAL	Arsenic		3	ug/L	U	8/6/97
SJS05-GW2D-001F	METAL	Barium	20.4	1	ug/L	B	8/7/97
SJS05-GW2D-001F	METAL	Beryllium		1	ug/L	U	8/7/97
SJS05-GW2D-001F	METAL	Cadmium		0.5	ug/L	U	8/6/97
SJS05-GW2D-001F	METAL	Calcium	58900	46	ug/L		8/7/97
SJS05-GW2D-001F	METAL	Chromium		7	ug/L	U	8/7/97
SJS05-GW2D-001F	METAL	Cobalt		8	ug/L	U	8/7/97
SJS05-GW2D-001F	METAL	Copper		6	ug/L	U	8/7/97
SJS05-GW2D-001F	METAL	Iron	454	5	ug/L		8/7/97
SJS05-GW2D-001F	METAL	Lead	1.7	1	ug/L	J	8/6/97
SJS05-GW2D-001F	METAL	Magnesium	9360	45	ug/L		8/7/97
SJS05-GW2D-001F	METAL	Manganese	100	1	ug/L		8/7/97
SJS05-GW2D-001F	METAL	Mercury		0.13	ug/L	U	8/6/97
SJS05-GW2D-001F	METAL	Nickel		7	ug/L	U	8/
SJS05-GW2D-001F	METAL	Potassium	7590	97	ug/L		8/
SJS05-GW2D-001F	METAL	Selenium		3	ug/L	U	8/6/97
SJS05-GW2D-001F	METAL	Silver	4.5	3	ug/L	B	8/6/97
SJS05-GW2D-001F	METAL	Sodium	44900	28	ug/L		8/7/97
SJS05-GW2D-001F	METAL	Thallium		2	ug/L	U	8/7/97
SJS05-GW2D-001F	METAL	Vanadium		9	ug/L	U	8/7/97
SJS05-GW2D-001F	METAL	Zinc	13.4	3	ug/L	B	8/7/97
SJS05-GW2S-001	CTOTP	Total Phosphorous (as P)	0.309	0.05	mg/L		7/30/97
SJS05-GW2S-001	MCYAN	Aluminum	1110	29	ug/L		7/28/97
SJS05-GW2S-001	MCYAN	Antimony		2	ug/L	U	7/29/97
SJS05-GW2S-001	MCYAN	Arsenic		3	ug/L	U	7/29/97
SJS05-GW2S-001	MCYAN	Barium	126	1	ug/L	J	7/28/97
SJS05-GW2S-001	MCYAN	Beryllium		1	ug/L	U	7/28/97
SJS05-GW2S-001	MCYAN	Cadmium		0.5	ug/L	U	7/29/97
SJS05-GW2S-001	MCYAN	Calcium	97800	46	ug/L		7/28/97
SJS05-GW2S-001	MCYAN	Chromium		7	ug/L	U	7/28/97
SJS05-GW2S-001	MCYAN	Cobalt		8	ug/L	U	7/28/97
SJS05-GW2S-001	MCYAN	Copper		6	ug/L	U	7/28/97
SJS05-GW2S-001	MCYAN	Cyanide		5	ug/L	U	7/22/97
SJS05-GW2S-001	MCYAN	Iron	13500	5	ug/L		7/28/97
SJS05-GW2S-001	MCYAN	Lead	1.1	1	ug/L	J	7/29/97
SJS05-GW2S-001	MCYAN	Magnesium	156000	45	ug/L		7/28/97
SJS05-GW2S-001	MCYAN	Manganese	992	1	ug/L		7/28/97
SJS05-GW2S-001	MCYAN	Mercury		0.12	ug/L	U	7/29/97
SJS05-GW2S-001	MCYAN	Nickel	14.1	4	ug/L	J	7/28/97
SJS05-GW2S-001	MCYAN	Potassium	49100	97	ug/L		7/28/97
SJS05-GW2S-001	MCYAN	Selenium		3	ug/L	UL	7/29/97
SJS05-GW2S-001	MCYAN	Silver	3.8	3	ug/L	B	7/29/97
SJS05-GW2S-001	MCYAN	Sodium	1340000	28	ug/L		7/2
SJS05-GW2S-001	MCYAN	Thallium		2	ug/L	U	7/2

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS05-GW2S-001	IMCYAN	Vanadium		9	ug/L	U	7/28/97
SJS05-GW2S-001	IMCYAN	Zinc	23.5	3	ug/L	B	7/28/97
SJS05-GW2S-001	PSPCB	4,4'-DDD		0.1	ug/L	U	7/31/97
SJS05-GW2S-001	PSPCB	4,4'-DDE		0.1	ug/L	U	7/31/97
SJS05-GW2S-001	PSPCB	4,4'-DDT		0.1	ug/L	U	7/31/97
SJS05-GW2S-001	PSPCB	Aldrin		0.05	ug/L	U	7/31/97
SJS05-GW2S-001	PSPCB	alpha-BHC		0.05	ug/L	U	7/31/97
SJS05-GW2S-001	PSPCB	alpha-Chlordane		0.05	ug/L	U	7/31/97
SJS05-GW2S-001	PSPCB	Aroclor-1016		1	ug/L	U	7/31/97
SJS05-GW2S-001	PSPCB	Aroclor-1221		2	ug/L	U	7/31/97
SJS05-GW2S-001	PSPCB	Aroclor-1232		1	ug/L	U	7/31/97
SJS05-GW2S-001	PSPCB	Aroclor-1242		1	ug/L	U	7/31/97
SJS05-GW2S-001	PSPCB	Aroclor-1248		1	ug/L	U	7/31/97
SJS05-GW2S-001	PSPCB	Aroclor-1254		1	ug/L	U	7/31/97
SJS05-GW2S-001	PSPCB	Aroclor-1260		1	ug/L	U	7/31/97
SJS05-GW2S-001	PSPCB	beta-BHC		0.05	ug/L	U	7/31/97
SJS05-GW2S-001	PSPCB	delta-BHC		0.05	ug/L	U	7/31/97
SJS05-GW2S-001	PSPCB	Dieldrin		0.1	ug/L	U	7/31/97
SJS05-GW2S-001	PSPCB	Endosulfan I		0.05	ug/L	U	7/31/97
SJS05-GW2S-001	PSPCB	Endosulfan II		0.1	ug/L	U	7/31/97
SJS05-GW2S-001	PSPCB	Endosulfan Sulfate		0.1	ug/L	U	7/31/97
SJS05-GW2S-001	PSPCB	Endrin		0.1	ug/L	U	7/31/97
SJS05-GW2S-001	PSPCB	Endrin Aldehyde		0.1	ug/L	U	7/31/97
SJS05-GW2S-001	PSPCB	Endrin Ketone		0.1	ug/L	U	7/31/97
SJS05-GW2S-001	PSPCB	gamma-BHC		0.05	ug/L	U	7/31/97
SJS05-GW2S-001	PSPCB	gamma-Chlordane		0.05	ug/L	U	7/31/97
SJS05-GW2S-001	PSPCB	Heptachlor		0.05	ug/L	U	7/31/97
SJS05-GW2S-001	PSPCB	Heptachlor Epoxide		0.05	ug/L	U	7/31/97
SJS05-GW2S-001	PSPCB	Methoxychlor		0.5	ug/L	U	7/31/97
SJS05-GW2S-001	PSPCB	Toxaphene		5	ug/L	U	7/31/97
SJS05-GW2S-001	SVTCL	1,2,4-Trichlorobenzene		10	ug/L	U	8/2/97
SJS05-GW2S-001	SVTCL	1,2-Dichlorobenzene		10	ug/L	U	8/2/97
SJS05-GW2S-001	SVTCL	1,3-Dichlorobenzene		10	ug/L	U	8/2/97
SJS05-GW2S-001	SVTCL	1,4-Dichlorobenzene		10	ug/L	U	8/2/97
SJS05-GW2S-001	SVTCL	2,2'-oxybis(1-Chloropropane		10	ug/L	U	8/2/97
SJS05-GW2S-001	SVTCL	2,4,5-Trichlorophenol		25	ug/L	U	8/2/97
SJS05-GW2S-001	SVTCL	2,4,6-Trichlorophenol		10	ug/L	U	8/2/97
SJS05-GW2S-001	SVTCL	2,4-Dichlorophenol		10	ug/L	U	8/2/97
SJS05-GW2S-001	SVTCL	2,4-Dimethylphenol		10	ug/L	U	8/2/97
SJS05-GW2S-001	SVTCL	2,4-Dinitrophenol		25	ug/L	U	8/2/97
SJS05-GW2S-001	SVTCL	2,4-Dinitrotoluene		10	ug/L	U	8/2/97
SJS05-GW2S-001	SVTCL	2,6-Dinitrotoluene		10	ug/L	U	8/2/97
SJS05-GW2S-001	SVTCL	2-Chloronaphthalene		10	ug/L	U	8/2/97
SJS05-GW2S-001	SVTCL	2-Chlorophenol		10	ug/L	U	8/2/97
SJS05-GW2S-001	SVTCL	2-Methylnaphthalene		10	ug/L	U	8/2/97
SJS05-GW2S-001	SVTCL	2-Methylphenol		10	ug/L	U	8/2/97
SJS05-GW2S-001	SVTCL	2-Nitroaniline		25	ug/L	U	8/2/97
SJS05-GW2S-001	SVTCL	2-Nitrophenol		10	ug/L	U	8/2/97
SJS05-GW2S-001	SVTCL	3,3'-Dichlorobenzidine		10	ug/L	U	8/2/97
SJS05-GW2S-001	SVTCL	3-Nitroaniline		25	ug/L	U	8/2/97
SJS05-GW2S-001	SVTCL	4,6-Dinitro-2-Methylphenol		25	ug/L	U	8/2/97
SJS05-GW2S-001	SVTCL	4-Bromophenyl phenylether		10	ug/L	U	8/2/97
SJS05-GW2S-001	SVTCL	4-Chloro-3-Methylphenol		10	ug/L	U	8/2/97
SJS05-GW2S-001	SVTCL	4-Chloroaniline		10	ug/L	U	8/2/97
SJS05-GW2S-001	SVTCL	4-Chlorophenyl-phenylether		10	ug/L	U	8/2/97
SJS05-GW2S-001	SVTCL	4-Methylphenol		10	ug/L	U	8/2/97
SJS05-GW2S-001	SVTCL	4-Nitroaniline		25	ug/L	U	8/2/97
SJS05-GW2S-001	SVTCL	4-Nitrophenol		25	ug/L	U	8/2/97
SJS05-GW2S-001	SVTCL	Acenaphthene		10	ug/L	U	8/2/97
SJS05-GW2S-001	SVTCL	Acenaphthylene		10	ug/L	U	8/2/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS05-GW2S-001	SVTCL	Anthracene		10	ug/L	U	8/2
SJS05-GW2S-001	SVTCL	Benzo(a)Anthracene		10	ug/L	U	8/
SJS05-GW2S-001	SVTCL	Benzo(a)Pyrene		10	ug/L	U	8/2
SJS05-GW2S-001	SVTCL	Benzo(b)Fluoranthene		10	ug/L	U	8/2/97
SJS05-GW2S-001	SVTCL	Benzo(g,h,i)Perylene		10	ug/L	U	8/2/97
SJS05-GW2S-001	SVTCL	Benzo(k)fluoranthene		10	ug/L	U	8/2/97
SJS05-GW2S-001	SVTCL	Bis(2-chloroethoxy)Methane		10	ug/L	U	8/2/97
SJS05-GW2S-001	SVTCL	Bis(2-chloroethyl)Ether		10	ug/L	U	8/2/97
SJS05-GW2S-001	SVTCL	Bis(2-Ethylhexyl)Phthalate		10	ug/L	U	8/2/97
SJS05-GW2S-001	SVTCL	Butylbenzylphthalate		10	ug/L	U	8/2/97
SJS05-GW2S-001	SVTCL	Carbazole		10	ug/L	U	8/2/97
SJS05-GW2S-001	SVTCL	Chrysene		10	ug/L	U	8/2/97
SJS05-GW2S-001	SVTCL	Di-n-Butylphthalate		10	ug/L	U	8/2/97
SJS05-GW2S-001	SVTCL	Di-n-Octyl Phthalate		10	ug/L	U	8/2/97
SJS05-GW2S-001	SVTCL	Dibenz(a,h)Anthracene		10	ug/L	U	8/2/97
SJS05-GW2S-001	SVTCL	Dibenzofuran		10	ug/L	U	8/2/97
SJS05-GW2S-001	SVTCL	Diethylphthalate		10	ug/L	U	8/2/97
SJS05-GW2S-001	SVTCL	Dimethyl Phthalate		10	ug/L	U	8/2/97
SJS05-GW2S-001	SVTCL	Fluoranthene		10	ug/L	U	8/2/97
SJS05-GW2S-001	SVTCL	Fluorene		10	ug/L	U	8/2/97
SJS05-GW2S-001	SVTCL	Hexachlorobenzene		10	ug/L	U	8/2/97
SJS05-GW2S-001	SVTCL	Hexachlorobutadiene		10	ug/L	U	8/2/97
SJS05-GW2S-001	SVTCL	Hexachlorocyclopentadien		10	ug/L	U	8/2/97
SJS05-GW2S-001	SVTCL	Hexachloroethane		10	ug/L	U	8/2/97
SJS05-GW2S-001	SVTCL	Indeno(1,2,3-cd)Pyrene		10	ug/L	U	8/2/97
SJS05-GW2S-001	SVTCL	Isophorone		10	ug/L	U	8/2/97
SJS05-GW2S-001	SVTCL	N-Nitroso-Di-n-Propylamine		10	ug/L	U	8/2/97
SJS05-GW2S-001	SVTCL	N-Nitrosodiphenylamine		10	ug/L	U	8/2/97
SJS05-GW2S-001	SVTCL	Naphthalene		10	ug/L	U	8/2/97
SJS05-GW2S-001	SVTCL	Nitrobenzene		10	ug/L	U	8/2
SJS05-GW2S-001	SVTCL	Pentachlorophenol		25	ug/L	U	8/
SJS05-GW2S-001	SVTCL	Phenanthrene		10	ug/L	U	8/2
SJS05-GW2S-001	SVTCL	Phenol		10	ug/L	U	8/2/97
SJS05-GW2S-001	SVTCL	Pyrene		10	ug/L	U	8/2/97
SJS05-GW2S-001	VCLOW	1,1,1-Trichloroethane		1	ug/L	U	7/25/97
SJS05-GW2S-001	VCLOW	1,1,2,2-Tetrachloroethane		1	ug/L	U	7/25/97
SJS05-GW2S-001	VCLOW	1,1,2-Trichloroethane		1	ug/L	U	7/25/97
SJS05-GW2S-001	VCLOW	1,1-Dichloroethane		1	ug/L	U	7/25/97
SJS05-GW2S-001	VCLOW	1,1-Dichloroethene		1	ug/L	U	7/25/97
SJS05-GW2S-001	VCLOW	1,2,4-Trichlorobenzene		1	ug/L	U	7/25/97
SJS05-GW2S-001	VCLOW	1,2-Dibromo-3-chloropropa		1	ug/L	U	7/25/97
SJS05-GW2S-001	VCLOW	1,2-Dibromoethane		1	ug/L	U	7/25/97
SJS05-GW2S-001	VCLOW	1,2-Dichlorobenzene		1	ug/L	U	7/25/97
SJS05-GW2S-001	VCLOW	1,2-Dichloroethane		1	ug/L	U	7/25/97
SJS05-GW2S-001	VCLOW	1,2-Dichloropropane		1	ug/L	U	7/25/97
SJS05-GW2S-001	VCLOW	1,3-Dichlorobenzene		1	ug/L	U	7/25/97
SJS05-GW2S-001	VCLOW	1,4-Dichlorobenzene		1	ug/L	U	7/25/97
SJS05-GW2S-001	VCLOW	2-Hexanone		5	ug/L	U	7/25/97
SJS05-GW2S-001	VCLOW	4-Methyl-2-Pentanone		5	ug/L	U	7/25/97
SJS05-GW2S-001	VCLOW	Acetone	8	5	ug/L	B	7/25/97
SJS05-GW2S-001	VCLOW	Benzene		1	ug/L	U	7/25/97
SJS05-GW2S-001	VCLOW	Bromochloromethane		1	ug/L	U	7/25/97
SJS05-GW2S-001	VCLOW	Bromodichloromethane		1	ug/L	U	7/25/97
SJS05-GW2S-001	VCLOW	Bromoform		1	ug/L	U	7/25/97
SJS05-GW2S-001	VCLOW	Bromomethane		1	ug/L	U	7/25/97
SJS05-GW2S-001	VCLOW	Carbon Disulfide		1	ug/L	U	7/25/97
SJS05-GW2S-001	VCLOW	Carbon Tetrachloride		1	ug/L	U	7/25/97
SJS05-GW2S-001	VCLOW	Chlorobenzene		1	ug/L	U	7/25/97
SJS05-GW2S-001	VCLOW	Chloroethane		1	ug/L	U	7/25
SJS05-GW2S-001	VCLOW	Chloroform		1	ug/L	U	7/2

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS05-GW2S-001	VCLOW	Chloromethane		1	ug/L	U	7/25/97
SJS05-GW2S-001	VCLOW	cis-1,2-Dichloroethene		1	ug/L	U	7/25/97
SJS05-GW2S-001	VCLOW	cis-1,3-Dichloropropene		1	ug/L	U	7/25/97
SJS05-GW2S-001	VCLOW	Dibromochloromethane		1	ug/L	U	7/25/97
SJS05-GW2S-001	VCLOW	Ethylbenzene		1	ug/L	U	7/25/97
SJS05-GW2S-001	VCLOW	Methylene Chloride	2	1	ug/L	B	7/25/97
SJS05-GW2S-001	VCLOW	Styrene		1	ug/L	U	7/25/97
SJS05-GW2S-001	VCLOW	Tetrachloroethene		1	ug/L	U	7/25/97
SJS05-GW2S-001	VCLOW	Toluene		1	ug/L	U	7/25/97
SJS05-GW2S-001	VCLOW	Total Xylenes		1	ug/L	U	7/25/97
SJS05-GW2S-001	VCLOW	Trans-1,2-Dichloroethene		1	ug/L	U	7/25/97
SJS05-GW2S-001	VCLOW	Trans-1,3-Dichloropropene		1	ug/L	U	7/25/97
SJS05-GW2S-001	VCLOW	Trichloroethene		1	ug/L	U	7/25/97
SJS05-GW2S-001	VCLOW	Vinyl Chloride		1	ug/L	U	7/25/97
SJS05-GW2S-001F	METAL	Aluminum		44	ug/L	U	7/28/97
SJS05-GW2S-001F	METAL	Antimony		2	ug/L	U	7/29/97
SJS05-GW2S-001F	METAL	Arsenic		3	ug/L	U	7/29/97
SJS05-GW2S-001F	METAL	Barium	120	1	ug/L	J	7/28/97
SJS05-GW2S-001F	METAL	Beryllium		1	ug/L	U	7/28/97
SJS05-GW2S-001F	METAL	Cadmium		0.5	ug/L	U	7/29/97
SJS05-GW2S-001F	METAL	Calcium	94800	46	ug/L		7/28/97
SJS05-GW2S-001F	METAL	Chromium		7	ug/L	U	7/28/97
SJS05-GW2S-001F	METAL	Cobalt		8	ug/L	U	7/28/97
SJS05-GW2S-001F	METAL	Copper		6	ug/L	U	7/28/97
SJS05-GW2S-001F	METAL	Iron	12300	5	ug/L		7/28/97
SJS05-GW2S-001F	METAL	Lead		1	ug/L	U	7/29/97
SJS05-GW2S-001F	METAL	Magnesium	153000	45	ug/L		7/28/97
SJS05-GW2S-001F	METAL	Manganese	950	1	ug/L		7/28/97
SJS05-GW2S-001F	METAL	Mercury		0.13	ug/L	U	7/29/97
SJS05-GW2S-001F	METAL	Nickel	7.4	4	ug/L	K	7/28/97
SJS05-GW2S-001F	METAL	Potassium	47800	97	ug/L		7/28/97
SJS05-GW2S-001F	METAL	Selenium		3	ug/L	U	7/29/97
SJS05-GW2S-001F	METAL	Silver	4.5	3	ug/L	B	7/29/97
SJS05-GW2S-001F	METAL	Sodium	1290000	28	ug/L		7/28/97
SJS05-GW2S-001F	METAL	Thallium		2	ug/L	U	7/29/97
SJS05-GW2S-001F	METAL	Vanadium		9	ug/L	U	7/28/97
SJS05-GW2S-001F	METAL	Zinc	28.5	3	ug/L	B	7/28/97
SJS05-GW3S-001	CTOTP	Total Phosphorous (as P)	0.128	0.05	mg/L		7/30/97
SJS05-GW3S-001	MCYAN	Aluminum	27100	29	ug/L		7/28/97
SJS05-GW3S-001	MCYAN	Antimony	3.7	1	ug/L	J	7/29/97
SJS05-GW3S-001	MCYAN	Arsenic	27.3	3	ug/L		7/29/97
SJS05-GW3S-001	MCYAN	Barium	77.8	1	ug/L	J	7/28/97
SJS05-GW3S-001	MCYAN	Beryllium	1.2	1	ug/L	J	7/28/97
SJS05-GW3S-001	MCYAN	Cadmium		0.5	ug/L	U	7/29/97
SJS05-GW3S-001	MCYAN	Calcium	53200	46	ug/L		7/28/97
SJS05-GW3S-001	MCYAN	Chromium	58.7	4	ug/L		7/28/97
SJS05-GW3S-001	MCYAN	Cobalt	41.5	3	ug/L	J	7/28/97
SJS05-GW3S-001	MCYAN	Copper	12.8	2	ug/L	J	7/28/97
SJS05-GW3S-001	MCYAN	Cyanide		5	ug/L	U	7/22/97
SJS05-GW3S-001	MCYAN	Iron	83700	5	ug/L		7/28/97
SJS05-GW3S-001	MCYAN	Lead	19.2	1	ug/L		7/29/97
SJS05-GW3S-001	MCYAN	Magnesium	49600	45	ug/L		7/28/97
SJS05-GW3S-001	MCYAN	Manganese	2980	1	ug/L		7/28/97
SJS05-GW3S-001	MCYAN	Mercury	0.18	0.1	ug/L	B	7/29/97
SJS05-GW3S-001	MCYAN	Nickel	46.5	4	ug/L	K	7/28/97
SJS05-GW3S-001	MCYAN	Potassium	13200	97	ug/L		7/28/97
SJS05-GW3S-001	MCYAN	Selenium		3	ug/L	UL	7/29/97
SJS05-GW3S-001	MCYAN	Silver	4.1	3	ug/L	B	7/29/97
SJS05-GW3S-001	MCYAN	Sodium	198000	28	ug/L		7/28/97
SJS05-GW3S-001	MCYAN	Thallium		2	ug/L	U	7/29/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS05-GW3S-001	MCYAN	Vanadium	82.8	4	ug/L		7/
SJS05-GW3S-001	MCYAN	Zinc	153	3	ug/L		7/
SJS05-GW3S-001	PSPCB	4,4'-DDD		0.1	ug/L	U	7/31/97
SJS05-GW3S-001	PSPCB	4,4'-DDE		0.1	ug/L	U	7/31/97
SJS05-GW3S-001	PSPCB	4,4'-DDT		0.1	ug/L	U	7/31/97
SJS05-GW3S-001	PSPCB	Aldrin		0.05	ug/L	U	7/31/97
SJS05-GW3S-001	PSPCB	alpha-BHC		0.05	ug/L	U	7/31/97
SJS05-GW3S-001	PSPCB	alpha-Chlordane		0.05	ug/L	U	7/31/97
SJS05-GW3S-001	PSPCB	Aroclor-1016		1	ug/L	U	7/31/97
SJS05-GW3S-001	PSPCB	Aroclor-1221		2	ug/L	U	7/31/97
SJS05-GW3S-001	PSPCB	Aroclor-1232		1	ug/L	U	7/31/97
SJS05-GW3S-001	PSPCB	Aroclor-1242		1	ug/L	U	7/31/97
SJS05-GW3S-001	PSPCB	Aroclor-1248		1	ug/L	U	7/31/97
SJS05-GW3S-001	PSPCB	Aroclor-1254		1	ug/L	U	7/31/97
SJS05-GW3S-001	PSPCB	Aroclor-1260		1	ug/L	U	7/31/97
SJS05-GW3S-001	PSPCB	beta-BHC		0.05	ug/L	U	7/31/97
SJS05-GW3S-001	PSPCB	delta-BHC		0.05	ug/L	U	7/31/97
SJS05-GW3S-001	PSPCB	Dieldrin		0.1	ug/L	U	7/31/97
SJS05-GW3S-001	PSPCB	Endosulfan I		0.05	ug/L	U	7/31/97
SJS05-GW3S-001	PSPCB	Endosulfan II		0.1	ug/L	U	7/31/97
SJS05-GW3S-001	PSPCB	Endosulfan Sulfate		0.1	ug/L	U	7/31/97
SJS05-GW3S-001	PSPCB	Endrin		0.1	ug/L	U	7/31/97
SJS05-GW3S-001	PSPCB	Endrin Aldehyde		0.1	ug/L	U	7/31/97
SJS05-GW3S-001	PSPCB	Endrin Ketone		0.1	ug/L	U	7/31/97
SJS05-GW3S-001	PSPCB	gamma-BHC		0.05	ug/L	U	7/31/97
SJS05-GW3S-001	PSPCB	gamma-Chlordane		0.05	ug/L	U	7/31/97
SJS05-GW3S-001	PSPCB	Heptachlor		0.05	ug/L	U	7/31/97
SJS05-GW3S-001	PSPCB	Heptachlor Epoxide		0.05	ug/L	U	7/31/97
SJS05-GW3S-001	PSPCB	Methoxychlor		0.5	ug/L	U	7/31/97
SJS05-GW3S-001	PSPCB	Toxaphene		5	ug/L	U	7/
SJS05-GW3S-001	SVTCL	1,2,4-Trichlorobenzene		10	ug/L	U	7/
SJS05-GW3S-001	SVTCL	1,2-Dichlorobenzene		10	ug/L	U	7/29/97
SJS05-GW3S-001	SVTCL	1,3-Dichlorobenzene		10	ug/L	U	7/29/97
SJS05-GW3S-001	SVTCL	1,4-Dichlorobenzene		10	ug/L	U	7/29/97
SJS05-GW3S-001	SVTCL	2,2'-oxybis(1-Chloropropane		10	ug/L	U	7/29/97
SJS05-GW3S-001	SVTCL	2,4,5-Trichlorophenol		25	ug/L	U	7/29/97
SJS05-GW3S-001	SVTCL	2,4,6-Trichlorophenol		10	ug/L	U	7/29/97
SJS05-GW3S-001	SVTCL	2,4-Dichlorophenol		10	ug/L	U	7/29/97
SJS05-GW3S-001	SVTCL	2,4-Dimethylphenol		10	ug/L	U	7/29/97
SJS05-GW3S-001	SVTCL	2,4-Dinitrophenol		25	ug/L	U	7/29/97
SJS05-GW3S-001	SVTCL	2,4-Dinitrotoluene		10	ug/L	U	7/29/97
SJS05-GW3S-001	SVTCL	2,6-Dinitrotoluene		10	ug/L	U	7/29/97
SJS05-GW3S-001	SVTCL	2-Chloronaphthalene		10	ug/L	U	7/29/97
SJS05-GW3S-001	SVTCL	2-Chlorophenol		10	ug/L	U	7/29/97
SJS05-GW3S-001	SVTCL	2-Methylnaphthalene		10	ug/L	U	7/29/97
SJS05-GW3S-001	SVTCL	2-Methylphenol		10	ug/L	U	7/29/97
SJS05-GW3S-001	SVTCL	2-Nitroaniline		25	ug/L	U	7/29/97
SJS05-GW3S-001	SVTCL	2-Nitrophenol		10	ug/L	U	7/29/97
SJS05-GW3S-001	SVTCL	3,3'-Dichlorobenzidine		10	ug/L	U	7/29/97
SJS05-GW3S-001	SVTCL	3-Nitroaniline		25	ug/L	U	7/29/97
SJS05-GW3S-001	SVTCL	4,6-Dinitro-2-Methylphenol		25	ug/L	U	7/29/97
SJS05-GW3S-001	SVTCL	4-Bromophenyl phenylether		10	ug/L	U	7/29/97
SJS05-GW3S-001	SVTCL	4-Chloro-3-Methylphenol		10	ug/L	U	7/29/97
SJS05-GW3S-001	SVTCL	4-Chloroaniline		10	ug/L	U	7/29/97
SJS05-GW3S-001	SVTCL	4-Chlorophenyl-phenylether		10	ug/L	U	7/29/97
SJS05-GW3S-001	SVTCL	4-Methylphenol		10	ug/L	U	7/29/97
SJS05-GW3S-001	SVTCL	4-Nitroaniline		25	ug/L	U	7/29/97
SJS05-GW3S-001	SVTCL	4-Nitrophenol		25	ug/L	U	7/29/97
SJS05-GW3S-001	SVTCL	Acenaphthene		10	ug/L	U	7/
SJS05-GW3S-001	SVTCL	Acenaphthylene		10	ug/L	U	7/

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS05-GW3S-001	SVTCL	Anthracene		10	ug/L	U	7/29/97
SJS05-GW3S-001	SVTCL	Benzo(a)Anthracene		10	ug/L	U	7/29/97
SJS05-GW3S-001	SVTCL	Benzo(a)Pyrene		10	ug/L	U	7/29/97
SJS05-GW3S-001	SVTCL	Benzo(b)Fluoranthene		10	ug/L	U	7/29/97
SJS05-GW3S-001	SVTCL	Benzo(g,h,i)Perylene		10	ug/L	U	7/29/97
SJS05-GW3S-001	SVTCL	Benzo(k)fluoranthene		10	ug/L	U	7/29/97
SJS05-GW3S-001	SVTCL	Bis(2-chloroethoxy)Methane		10	ug/L	U	7/29/97
SJS05-GW3S-001	SVTCL	Bis(2-chloroethyl)Ether		10	ug/L	U	7/29/97
SJS05-GW3S-001	SVTCL	Bis(2-Ethylhexyl)Phthalate	2	10	ug/L	J	7/29/97
SJS05-GW3S-001	SVTCL	Butylbenzylphthalate		10	ug/L	U	7/29/97
SJS05-GW3S-001	SVTCL	Carbazole		10	ug/L	U	7/29/97
SJS05-GW3S-001	SVTCL	Chrysene		10	ug/L	U	7/29/97
SJS05-GW3S-001	SVTCL	Di-n-Butylphthalate		10	ug/L	U	7/29/97
SJS05-GW3S-001	SVTCL	Di-n-Octyl Phthalate		10	ug/L	U	7/29/97
SJS05-GW3S-001	SVTCL	Dibenz(a,h)Anthracene		10	ug/L	U	7/29/97
SJS05-GW3S-001	SVTCL	Dibenzofuran		10	ug/L	U	7/29/97
SJS05-GW3S-001	SVTCL	Diethylphthalate		10	ug/L	U	7/29/97
SJS05-GW3S-001	SVTCL	Dimethyl Phthalate		10	ug/L	U	7/29/97
SJS05-GW3S-001	SVTCL	Fluoranthene		10	ug/L	U	7/29/97
SJS05-GW3S-001	SVTCL	Fluorene		10	ug/L	U	7/29/97
SJS05-GW3S-001	SVTCL	Hexachlorobenzene		10	ug/L	U	7/29/97
SJS05-GW3S-001	SVTCL	Hexachlorobutadiene		10	ug/L	U	7/29/97
SJS05-GW3S-001	SVTCL	Hexachlorocyclopentadien		10	ug/L	U	7/29/97
SJS05-GW3S-001	SVTCL	Hexachloroethane		10	ug/L	U	7/29/97
SJS05-GW3S-001	SVTCL	Indeno(1,2,3-cd)Pyrene		10	ug/L	U	7/29/97
SJS05-GW3S-001	SVTCL	Isophorone		10	ug/L	U	7/29/97
SJS05-GW3S-001	SVTCL	N-Nitroso-Di-n-Propylamine		10	ug/L	U	7/29/97
SJS05-GW3S-001	SVTCL	N-Nitrosodiphenylamine		10	ug/L	U	7/29/97
SJS05-GW3S-001	SVTCL	Naphthalene		10	ug/L	U	7/29/97
SJS05-GW3S-001	SVTCL	Nitrobenzene		10	ug/L	U	7/29/97
SJS05-GW3S-001	SVTCL	Pentachlorophenol		25	ug/L	U	7/29/97
SJS05-GW3S-001	SVTCL	Phenanthrene		10	ug/L	U	7/29/97
SJS05-GW3S-001	SVTCL	Phenol		10	ug/L	U	7/29/97
SJS05-GW3S-001	SVTCL	Pyrene		10	ug/L	U	7/29/97
SJS05-GW3S-001	VCLOW	1,1,1-Trichloroethane		1	ug/L	U	7/21/97
SJS05-GW3S-001	VCLOW	1,1,2,2-Tetrachloroethane		1	ug/L	U	7/21/97
SJS05-GW3S-001	VCLOW	1,1,2-Trichloroethane		1	ug/L	U	7/21/97
SJS05-GW3S-001	VCLOW	1,1-Dichloroethane		1	ug/L	U	7/21/97
SJS05-GW3S-001	VCLOW	1,1-Dichloroethene		1	ug/L	U	7/21/97
SJS05-GW3S-001	VCLOW	1,2,4-Trichlorobenzene		1	ug/L	U	7/21/97
SJS05-GW3S-001	VCLOW	1,2-Dibromo-3-chloropropa		1	ug/L	U	7/21/97
SJS05-GW3S-001	VCLOW	1,2-Dibromoethane		1	ug/L	U	7/21/97
SJS05-GW3S-001	VCLOW	1,2-Dichlorobenzene		1	ug/L	U	7/21/97
SJS05-GW3S-001	VCLOW	1,2-Dichloroethane		1	ug/L	U	7/21/97
SJS05-GW3S-001	VCLOW	1,2-Dichloropropane		1	ug/L	U	7/21/97
SJS05-GW3S-001	VCLOW	1,3-Dichlorobenzene		1	ug/L	U	7/21/97
SJS05-GW3S-001	VCLOW	1,4-Dichlorobenzene		1	ug/L	U	7/21/97
SJS05-GW3S-001	VCLOW	2-Hexanone		5	ug/L	U	7/21/97
SJS05-GW3S-001	VCLOW	4-Methyl-2-Pentanone		5	ug/L	U	7/21/97
SJS05-GW3S-001	VCLOW	Benzene		1	ug/L	U	7/21/97
SJS05-GW3S-001	VCLOW	Bromochloromethane		1	ug/L	U	7/21/97
SJS05-GW3S-001	VCLOW	Bromodichloromethane		1	ug/L	U	7/21/97
SJS05-GW3S-001	VCLOW	Bromoform		1	ug/L	U	7/21/97
SJS05-GW3S-001	VCLOW	Bromomethane		1	ug/L	U	7/21/97
SJS05-GW3S-001	VCLOW	Carbon Disulfide		1	ug/L	U	7/21/97
SJS05-GW3S-001	VCLOW	Carbon Tetrachloride		1	ug/L	U	7/21/97
SJS05-GW3S-001	VCLOW	Chlorobenzene		1	ug/L	U	7/21/97
SJS05-GW3S-001	VCLOW	Chloroethane		1	ug/L	U	7/21/97
SJS05-GW3S-001	VCLOW	Chloroform		1	ug/L	U	7/21/97
SJS05-GW3S-001	VCLOW	Chloromethane		1	ug/L	U	7/21/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS05-GW3S-001	VCLOW	cis-1,2-Dichloroethene		1	ug/L	U	7/2
SJS05-GW3S-001	VCLOW	cis-1,3-Dichloropropene		1	ug/L	U	7/2
SJS05-GW3S-001	VCLOW	Dibromochloromethane		1	ug/L	U	7/21/97
SJS05-GW3S-001	VCLOW	Ethylbenzene		1	ug/L	U	7/21/97
SJS05-GW3S-001	VCLOW	Methylene Chloride	3	1	ug/L	B	7/21/97
SJS05-GW3S-001	VCLOW	Styrene		1	ug/L	U	7/21/97
SJS05-GW3S-001	VCLOW	Tetrachloroethene		1	ug/L	U	7/21/97
SJS05-GW3S-001	VCLOW	Toluene		1	ug/L	U	7/21/97
SJS05-GW3S-001	VCLOW	Total Xylenes		1	ug/L	U	7/21/97
SJS05-GW3S-001	VCLOW	Trans-1,2-Dichloroethene		1	ug/L	U	7/21/97
SJS05-GW3S-001	VCLOW	Trans-1,3-Dichloropropene		1	ug/L	U	7/21/97
SJS05-GW3S-001	VCLOW	Trichloroethene		1	ug/L	U	7/21/97
SJS05-GW3S-001	VCLOW	Vinyl Chloride		1	ug/L	U	7/21/97
SJS05-GW3S-001F	METAL	Aluminum		44	ug/L	U	7/28/97
SJS05-GW3S-001F	METAL	Antimony		2	ug/L	U	7/29/97
SJS05-GW3S-001F	METAL	Arsenic		3	ug/L	U	7/29/97
SJS05-GW3S-001F	METAL	Barium	21.5	1	ug/L	B	7/28/97
SJS05-GW3S-001F	METAL	Beryllium		1	ug/L	U	7/28/97
SJS05-GW3S-001F	METAL	Cadmium		0.5	ug/L	U	7/29/97
SJS05-GW3S-001F	METAL	Calcium	68400	46	ug/L		7/28/97
SJS05-GW3S-001F	METAL	Chromium		7	ug/L	U	7/28/97
SJS05-GW3S-001F	METAL	Cobalt	22.3	3	ug/L	J	7/28/97
SJS05-GW3S-001F	METAL	Copper		6	ug/L	U	7/28/97
SJS05-GW3S-001F	METAL	Iron	40700	5	ug/L		7/28/97
SJS05-GW3S-001F	METAL	Lead		1	ug/L	U	7/29/97
SJS05-GW3S-001F	METAL	Magnesium	56900	45	ug/L		7/28/97
SJS05-GW3S-001F	METAL	Manganese	3140	1	ug/L		7/28/97
SJS05-GW3S-001F	METAL	Mercury		0.12	ug/L	U	7/29/97
SJS05-GW3S-001F	METAL	Nickel	13.5	4	ug/L	K	7/28/97
SJS05-GW3S-001F	METAL	Potassium	9250	97	ug/L		7/2
SJS05-GW3S-001F	METAL	Selenium		3	ug/L	U	7/2
SJS05-GW3S-001F	METAL	Silver	3.7	3	ug/L	B	7/29/97
SJS05-GW3S-001F	METAL	Sodium	249000	28	ug/L		7/28/97
SJS05-GW3S-001F	METAL	Thallium		2	ug/L	U	7/29/97
SJS05-GW3S-001F	METAL	Vanadium		9	ug/L	U	7/28/97
SJS05-GW3S-001F	METAL	Zinc	39.9	3	ug/L	B	7/28/97
SJS05-GW3S-001FP	METAL	Aluminum	72.3	29	ug/L	B	7/28/97
SJS05-GW3S-001FP	METAL	Antimony	3.1	1	ug/L	B	7/29/97
SJS05-GW3S-001FP	METAL	Arsenic		3	ug/L	U	7/29/97
SJS05-GW3S-001FP	METAL	Barium	22.9	1	ug/L	B	7/28/97
SJS05-GW3S-001FP	METAL	Beryllium		1	ug/L	U	7/28/97
SJS05-GW3S-001FP	METAL	Cadmium		0.5	ug/L	U	7/29/97
SJS05-GW3S-001FP	METAL	Calcium	68500	46	ug/L		7/28/97
SJS05-GW3S-001FP	METAL	Chromium		7	ug/L	U	7/28/97
SJS05-GW3S-001FP	METAL	Cobalt	19.2	3	ug/L	J	7/28/97
SJS05-GW3S-001FP	METAL	Copper		6	ug/L	U	7/28/97
SJS05-GW3S-001FP	METAL	Iron	40600	5	ug/L		7/28/97
SJS05-GW3S-001FP	METAL	Lead	1.3	1	ug/L	B	7/29/97
SJS05-GW3S-001FP	METAL	Magnesium	57100	45	ug/L		7/28/97
SJS05-GW3S-001FP	METAL	Manganese	3150	1	ug/L		7/28/97
SJS05-GW3S-001FP	METAL	Mercury		0.12	ug/L	U	7/29/97
SJS05-GW3S-001FP	METAL	Nickel	14.1	4	ug/L	K	7/28/97
SJS05-GW3S-001FP	METAL	Potassium	9570	97	ug/L		7/28/97
SJS05-GW3S-001FP	METAL	Selenium		3	ug/L	U	7/29/97
SJS05-GW3S-001FP	METAL	Silver	6	3	ug/L	B	7/29/97
SJS05-GW3S-001FP	METAL	Sodium	250000	28	ug/L		7/28/97
SJS05-GW3S-001FP	METAL	Thallium		2	ug/L	U	7/29/97
SJS05-GW3S-001FP	METAL	Vanadium		9	ug/L	U	7/28/97
SJS05-GW3S-001FP	METAL	Zinc	41.5	3	ug/L	B	7/2
SJS05-GW3S-001P	CTOTP	Total Phosphorous (as P)	0.251	0.05	mg/L		7/3

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS05-GW3S-001P	MCYAN	Aluminum	17100	29	ug/L		7/28/97
SJS05-GW3S-001P	MCYAN	Antimony	6	1	ug/L	J	7/29/97
SJS05-GW3S-001P	MCYAN	Arsenic	18.4	3	ug/L		7/29/97
SJS05-GW3S-001P	MCYAN	Barium	64.1	1	ug/L	J	7/28/97
SJS05-GW3S-001P	MCYAN	Beryllium		1	ug/L	U	7/28/97
SJS05-GW3S-001P	MCYAN	Cadmium		0.5	ug/L	U	7/29/97
SJS05-GW3S-001P	MCYAN	Calcium	49700	46	ug/L		7/28/97
SJS05-GW3S-001P	MCYAN	Chromium	36.1	4	ug/L		7/28/97
SJS05-GW3S-001P	MCYAN	Cobalt	33.4	3	ug/L	J	7/28/97
SJS05-GW3S-001P	MCYAN	Copper	11.2	2	ug/L	J	7/28/97
SJS05-GW3S-001P	MCYAN	Cyanide		5	ug/L	U	7/22/97
SJS05-GW3S-001P	MCYAN	Iron	65200	5	ug/L		7/28/97
SJS05-GW3S-001P	MCYAN	Lead	13.5	1	ug/L		7/29/97
SJS05-GW3S-001P	MCYAN	Magnesium	45000	45	ug/L		7/28/97
SJS05-GW3S-001P	MCYAN	Manganese	2670	1	ug/L		7/28/97
SJS05-GW3S-001P	MCYAN	Mercury	0.29	0.1	ug/L	B	7/29/97
SJS05-GW3S-001P	MCYAN	Nickel	41.1	4	ug/L	K	7/28/97
SJS05-GW3S-001P	MCYAN	Potassium	11100	97	ug/L		7/28/97
SJS05-GW3S-001P	MCYAN	Selenium		3	ug/L	UL	7/29/97
SJS05-GW3S-001P	MCYAN	Silver	6.9	3	ug/L	B	7/29/97
SJS05-GW3S-001P	MCYAN	Sodium	186000	28	ug/L		7/28/97
SJS05-GW3S-001P	MCYAN	Thallium	2.1	2	ug/L	J	7/29/97
SJS05-GW3S-001P	MCYAN	Vanadium	60.2	4	ug/L		7/28/97
SJS05-GW3S-001P	MCYAN	Zinc	109	3	ug/L		7/28/97
SJS05-GW3S-001P	PSPCB	4,4'-DDD		0.1	ug/L	U	7/31/97
SJS05-GW3S-001P	PSPCB	4,4'-DDE		0.1	ug/L	U	7/31/97
SJS05-GW3S-001P	PSPCB	4,4'-DDT		0.1	ug/L	U	7/31/97
SJS05-GW3S-001P	PSPCB	Aldrin		0.05	ug/L	U	7/31/97
SJS05-GW3S-001P	PSPCB	alpha-BHC		0.05	ug/L	U	7/31/97
SJS05-GW3S-001P	PSPCB	alpha-Chlordane		0.05	ug/L	U	7/31/97
SJS05-GW3S-001P	PSPCB	Aroclor-1016		1	ug/L	U	7/31/97
SJS05-GW3S-001P	PSPCB	Aroclor-1221		2	ug/L	U	7/31/97
SJS05-GW3S-001P	PSPCB	Aroclor-1232		1	ug/L	U	7/31/97
SJS05-GW3S-001P	PSPCB	Aroclor-1242		1	ug/L	U	7/31/97
SJS05-GW3S-001P	PSPCB	Aroclor-1248		1	ug/L	U	7/31/97
SJS05-GW3S-001P	PSPCB	Aroclor-1254		1	ug/L	U	7/31/97
SJS05-GW3S-001P	PSPCB	Aroclor-1260		1	ug/L	U	7/31/97
SJS05-GW3S-001P	PSPCB	beta-BHC		0.05	ug/L	U	7/31/97
SJS05-GW3S-001P	PSPCB	delta-BHC		0.05	ug/L	U	7/31/97
SJS05-GW3S-001P	PSPCB	Dieldrin		0.1	ug/L	U	7/31/97
SJS05-GW3S-001P	PSPCB	Endosulfan I		0.05	ug/L	U	7/31/97
SJS05-GW3S-001P	PSPCB	Endosulfan II		0.1	ug/L	U	7/31/97
SJS05-GW3S-001P	PSPCB	Endosulfan Sulfate		0.1	ug/L	U	7/31/97
SJS05-GW3S-001P	PSPCB	Endrin		0.1	ug/L	U	7/31/97
SJS05-GW3S-001P	PSPCB	Endrin Aldehyde		0.1	ug/L	U	7/31/97
SJS05-GW3S-001P	PSPCB	Endrin Ketone		0.1	ug/L	U	7/31/97
SJS05-GW3S-001P	PSPCB	gamma-BHC		0.05	ug/L	U	7/31/97
SJS05-GW3S-001P	PSPCB	gamma-Chlordane		0.05	ug/L	U	7/31/97
SJS05-GW3S-001P	PSPCB	Heptachlor		0.05	ug/L	U	7/31/97
SJS05-GW3S-001P	PSPCB	Heptachlor Epoxide		0.05	ug/L	U	7/31/97
SJS05-GW3S-001P	PSPCB	Methoxychlor		0.5	ug/L	U	7/31/97
SJS05-GW3S-001P	PSPCB	Toxaphene		5	ug/L	U	7/31/97
SJS05-GW3S-001P	SVTCL	1,2,4-Trichlorobenzene		10	ug/L	U	7/29/97
SJS05-GW3S-001P	SVTCL	1,2-Dichlorobenzene		10	ug/L	U	7/29/97
SJS05-GW3S-001P	SVTCL	1,3-Dichlorobenzene		10	ug/L	U	7/29/97
SJS05-GW3S-001P	SVTCL	1,4-Dichlorobenzene		10	ug/L	U	7/29/97
SJS05-GW3S-001P	SVTCL	2,2'-oxybis(1-Chloropropane		10	ug/L	U	7/29/97
SJS05-GW3S-001P	SVTCL	2,4,5-Trichlorophenol		25	ug/L	U	7/29/97
SJS05-GW3S-001P	SVTCL	2,4,6-Trichlorophenol		10	ug/L	U	7/29/97
SJS05-GW3S-001P	SVTCL	2,4-Dichlorophenol		10	ug/L	U	7/29/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS05-GW3S-001P	SVTCL	2,4-Dimethylphenol		10	ug/L	U	7/2
SJS05-GW3S-001P	SVTCL	2,4-Dinitrophenol		25	ug/L	U	7/
SJS05-GW3S-001P	SVTCL	2,4-Dinitrotoluene		10	ug/L	U	7/29/97
SJS05-GW3S-001P	SVTCL	2,6-Dinitrotoluene		10	ug/L	U	7/29/97
SJS05-GW3S-001P	SVTCL	2-Chloronaphthalene		10	ug/L	U	7/29/97
SJS05-GW3S-001P	SVTCL	2-Chlorophenol		10	ug/L	U	7/29/97
SJS05-GW3S-001P	SVTCL	2-Methylnaphthalene		10	ug/L	U	7/29/97
SJS05-GW3S-001P	SVTCL	2-Methylphenol		10	ug/L	U	7/29/97
SJS05-GW3S-001P	SVTCL	2-Nitroaniline		25	ug/L	U	7/29/97
SJS05-GW3S-001P	SVTCL	2-Nitrophenol		10	ug/L	U	7/29/97
SJS05-GW3S-001P	SVTCL	3,3'-Dichlorobenzidine		10	ug/L	U	7/29/97
SJS05-GW3S-001P	SVTCL	3-Nitroaniline		25	ug/L	U	7/29/97
SJS05-GW3S-001P	SVTCL	4,6-Dinitro-2-Methylphenol		25	ug/L	U	7/29/97
SJS05-GW3S-001P	SVTCL	4-Bromophenyl phenylether		10	ug/L	U	7/29/97
SJS05-GW3S-001P	SVTCL	4-Chloro-3-Methylphenol		10	ug/L	U	7/29/97
SJS05-GW3S-001P	SVTCL	4-Chloroaniline		10	ug/L	U	7/29/97
SJS05-GW3S-001P	SVTCL	4-Chlorophenyl-phenylether		10	ug/L	U	7/29/97
SJS05-GW3S-001P	SVTCL	4-Methylphenol		10	ug/L	U	7/29/97
SJS05-GW3S-001P	SVTCL	4-Nitroaniline		25	ug/L	U	7/29/97
SJS05-GW3S-001P	SVTCL	4-Nitrophenol		25	ug/L	U	7/29/97
SJS05-GW3S-001P	SVTCL	Acenaphthene		10	ug/L	U	7/29/97
SJS05-GW3S-001P	SVTCL	Acenaphthylene		10	ug/L	U	7/29/97
SJS05-GW3S-001P	SVTCL	Anthracene		10	ug/L	U	7/29/97
SJS05-GW3S-001P	SVTCL	Benzo(a)Anthracene		10	ug/L	U	7/29/97
SJS05-GW3S-001P	SVTCL	Benzo(a)Pyrene		10	ug/L	U	7/29/97
SJS05-GW3S-001P	SVTCL	Benzo(b)Fluoranthene		10	ug/L	U	7/29/97
SJS05-GW3S-001P	SVTCL	Benzo(g,h,i)Perylene		10	ug/L	U	7/29/97
SJS05-GW3S-001P	SVTCL	Benzo(k)fluoranthene		10	ug/L	U	7/29/97
SJS05-GW3S-001P	SVTCL	Bis(2-chloroethoxy)Methane		10	ug/L	U	7/29/97
SJS05-GW3S-001P	SVTCL	Bis(2-chloroethyl)Ether		10	ug/L	U	7/2
SJS05-GW3S-001P	SVTCL	Bis(2-Ethylhexyl)Phthalate	1	10	ug/L	J	7/2
SJS05-GW3S-001P	SVTCL	Butylbenzylphthalate		10	ug/L	U	7/29/97
SJS05-GW3S-001P	SVTCL	Carbazole		10	ug/L	U	7/29/97
SJS05-GW3S-001P	SVTCL	Chrysene		10	ug/L	U	7/29/97
SJS05-GW3S-001P	SVTCL	Di-n-Butylphthalate		10	ug/L	U	7/29/97
SJS05-GW3S-001P	SVTCL	Di-n-Octyl Phthalate		10	ug/L	U	7/29/97
SJS05-GW3S-001P	SVTCL	Dibenz(a,h)Anthracene		10	ug/L	U	7/29/97
SJS05-GW3S-001P	SVTCL	Dibenzofuran		10	ug/L	U	7/29/97
SJS05-GW3S-001P	SVTCL	Diethylphthalate		10	ug/L	U	7/29/97
SJS05-GW3S-001P	SVTCL	Dimethyl Phthalate		10	ug/L	U	7/29/97
SJS05-GW3S-001P	SVTCL	Fluoranthene		10	ug/L	U	7/29/97
SJS05-GW3S-001P	SVTCL	Fluorene		10	ug/L	U	7/29/97
SJS05-GW3S-001P	SVTCL	Hexachlorobenzene		10	ug/L	U	7/29/97
SJS05-GW3S-001P	SVTCL	Hexachlorobutadiene		10	ug/L	U	7/29/97
SJS05-GW3S-001P	SVTCL	Hexachlorocyclopentadien		10	ug/L	U	7/29/97
SJS05-GW3S-001P	SVTCL	Hexachloroethane		10	ug/L	U	7/29/97
SJS05-GW3S-001P	SVTCL	Indeno(1,2,3-cd)Pyrene		10	ug/L	U	7/29/97
SJS05-GW3S-001P	SVTCL	Isophorone		10	ug/L	U	7/29/97
SJS05-GW3S-001P	SVTCL	N-Nitroso-Di-n-Propylamine		10	ug/L	U	7/29/97
SJS05-GW3S-001P	SVTCL	N-Nitrosodiphenylamine		10	ug/L	U	7/29/97
SJS05-GW3S-001P	SVTCL	Naphthalene		10	ug/L	U	7/29/97
SJS05-GW3S-001P	SVTCL	Nitrobenzene		10	ug/L	U	7/29/97
SJS05-GW3S-001P	SVTCL	Pentachlorophenol		25	ug/L	U	7/29/97
SJS05-GW3S-001P	SVTCL	Phenanthrene		10	ug/L	U	7/29/97
SJS05-GW3S-001P	SVTCL	Phenol		10	ug/L	U	7/29/97
SJS05-GW3S-001P	SVTCL	Pyrene		10	ug/L	U	7/29/97
SJS05-GW3S-001P	VCLOW	1,1,1-Trichloroethane		1	ug/L	U	7/21/97
SJS05-GW3S-001P	VCLOW	1,1,2,2-Tetrachloroethane		1	ug/L	U	7/21/97
SJS05-GW3S-001P	VCLOW	1,1,2-Trichloroethane		1	ug/L	U	7/21
SJS05-GW3S-001P	VCLOW	1,1-Dichloroethane		1	ug/L	U	7/21

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS05-GW3S-001P	VCLOW	1,1-Dichloroethene		1	ug/L	U	7/21/97
SJS05-GW3S-001P	VCLOW	1,2,4-Trichlorobenzene		1	ug/L	U	7/21/97
SJS05-GW3S-001P	VCLOW	1,2-Dibromo-3-chloropropa		1	ug/L	U	7/21/97
SJS05-GW3S-001P	VCLOW	1,2-Dibromoethane		1	ug/L	U	7/21/97
SJS05-GW3S-001P	VCLOW	1,2-Dichlorobenzene		1	ug/L	U	7/21/97
SJS05-GW3S-001P	VCLOW	1,2-Dichloroethane		1	ug/L	U	7/21/97
SJS05-GW3S-001P	VCLOW	1,2-Dichloropropane		1	ug/L	U	7/21/97
SJS05-GW3S-001P	VCLOW	1,3-Dichlorobenzene		1	ug/L	U	7/21/97
SJS05-GW3S-001P	VCLOW	1,4-Dichlorobenzene		1	ug/L	U	7/21/97
SJS05-GW3S-001P	VCLOW	2-Hexanone		5	ug/L	U	7/21/97
SJS05-GW3S-001P	VCLOW	4-Methyl-2-Pentanone		5	ug/L	U	7/21/97
SJS05-GW3S-001P	VCLOW	Benzene		1	ug/L	U	7/21/97
SJS05-GW3S-001P	VCLOW	Bromochloromethane		1	ug/L	U	7/21/97
SJS05-GW3S-001P	VCLOW	Bromodichloromethane		1	ug/L	U	7/21/97
SJS05-GW3S-001P	VCLOW	Bromoform		1	ug/L	U	7/21/97
SJS05-GW3S-001P	VCLOW	Bromomethane		1	ug/L	U	7/21/97
SJS05-GW3S-001P	VCLOW	Carbon Disulfide	0.3	1	ug/L	J	7/21/97
SJS05-GW3S-001P	VCLOW	Carbon Tetrachloride		1	ug/L	U	7/21/97
SJS05-GW3S-001P	VCLOW	Chlorobenzene		1	ug/L	U	7/21/97
SJS05-GW3S-001P	VCLOW	Chloroethane		1	ug/L	U	7/21/97
SJS05-GW3S-001P	VCLOW	Chloroform		1	ug/L	U	7/21/97
SJS05-GW3S-001P	VCLOW	Chloromethane		1	ug/L	U	7/21/97
SJS05-GW3S-001P	VCLOW	cis-1,2-Dichloroethene		1	ug/L	U	7/21/97
SJS05-GW3S-001P	VCLOW	cis-1,3-Dichloropropene		1	ug/L	U	7/21/97
SJS05-GW3S-001P	VCLOW	Dibromochloromethane		1	ug/L	U	7/21/97
SJS05-GW3S-001P	VCLOW	Ethylbenzene		1	ug/L	U	7/21/97
SJS05-GW3S-001P	VCLOW	Methylene Chloride	4	1	ug/L	B	7/21/97
SJS05-GW3S-001P	VCLOW	Styrene		1	ug/L	U	7/21/97
SJS05-GW3S-001P	VCLOW	Tetrachloroethene		1	ug/L	U	7/21/97
SJS05-GW3S-001P	VCLOW	Toluene		1	ug/L	U	7/21/97
SJS05-GW3S-001P	VCLOW	Total Xylenes		1	ug/L	U	7/21/97
SJS05-GW3S-001P	VCLOW	Trans-1,2-Dichloroethene		1	ug/L	U	7/21/97
SJS05-GW3S-001P	VCLOW	Trans-1,3-Dichloropropene		1	ug/L	U	7/21/97
SJS05-GW3S-001P	VCLOW	Trichloroethene		1	ug/L	U	7/21/97
SJS05-GW3S-001P	VCLOW	Vinyl Chloride		1	ug/L	U	7/21/97
SJS05-SB01-003	CTOTP	Total Phosphorous (as P)	76.3	9.8	mg/kg		7/15/97
SJS05-SB01-003	EXPLO	1,3,5-Trinitrobenzene		580	ug/kg	U	7/9/97
SJS05-SB01-003	EXPLO	1,3-Dinitrobenzene		580	ug/kg	U	7/9/97
SJS05-SB01-003	EXPLO	2,4,6-Trinitrotoluene		580	ug/kg	U	7/9/97
SJS05-SB01-003	EXPLO	2,4-Dinitrotoluene		580	ug/kg	U	7/9/97
SJS05-SB01-003	EXPLO	2,6-Dinitrotoluene		580	ug/kg	U	7/9/97
SJS05-SB01-003	EXPLO	2-am-4,6-Dinitrotoluene		580	ug/kg	U	7/9/97
SJS05-SB01-003	EXPLO	2-Nitrotoluene		580	ug/kg	U	7/9/97
SJS05-SB01-003	EXPLO	3-Nitrotoluene		580	ug/kg	U	7/9/97
SJS05-SB01-003	EXPLO	4-am-2,6-Dinitrotoluene		580	ug/kg	U	7/9/97
SJS05-SB01-003	EXPLO	4-Nitrotoluene		580	ug/kg	U	7/9/97
SJS05-SB01-003	EXPLO	HMX		580	ug/kg	U	7/9/97
SJS05-SB01-003	EXPLO	Nitrobenzene		580	ug/kg	U	7/9/97
SJS05-SB01-003	EXPLO	RDX		580	ug/kg	U	7/9/97
SJS05-SB01-003	EXPLO	TETRYL		580	ug/kg	U	7/9/97
SJS05-SB01-003	MCYAN	Aluminum	12300	12.76	mg/kg		7/2/97
SJS05-SB01-003	MCYAN	Antimony	0.86	0.58	mg/kg	L	7/2/97
SJS05-SB01-003	MCYAN	Arsenic	4.9	0.87	mg/kg	L	7/2/97
SJS05-SB01-003	MCYAN	Barium	44.7	0.58	mg/kg	J	7/2/97
SJS05-SB01-003	MCYAN	Beryllium	0.36	0.29	mg/kg	J	7/2/97
SJS05-SB01-003	MCYAN	Cadmium		0.14	mg/kg	U	7/7/97
SJS05-SB01-003	MCYAN	Calcium	1120	25.22	mg/kg	J	7/2/97
SJS05-SB01-003	MCYAN	Chromium	24.9	2.03	mg/kg		7/2/97
SJS05-SB01-003	MCYAN	Cobalt	5.9	2.32	mg/kg	J	7/2/97
SJS05-SB01-003	MCYAN	Copper	25.1	1.74	mg/kg		7/2/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS05-SB01-003	MCYAN	Cyanide		0.81	mg/kg	U	7
SJS05-SB01-003	MCYAN	Iron	19100	4.93	mg/kg		7
SJS05-SB01-003	MCYAN	Lead	88.2	0.29	mg/kg	J	7/2/97
SJS05-SB01-003	MCYAN	Magnesium	3010	52.47	mg/kg		7/2/97
SJS05-SB01-003	MCYAN	Manganese	118	0.58	mg/kg		7/2/97
SJS05-SB01-003	MCYAN	Mercury	0.23	0.08	mg/kg		6/30/97
SJS05-SB01-003	MCYAN	Nickel	8.3	2.03	mg/kg	B	7/2/97
SJS05-SB01-003	MCYAN	Potassium	2300	64.36	mg/kg		7/2/97
SJS05-SB01-003	MCYAN	Selenium		0.87	mg/kg	UL	7/2/97
SJS05-SB01-003	MCYAN	Silver	0.86	0.29	mg/kg	B	7/2/97
SJS05-SB01-003	MCYAN	Sodium	2610	16.81	mg/kg		7/2/97
SJS05-SB01-003	MCYAN	Thallium	1.6	0.58	mg/kg	B	7/2/97
SJS05-SB01-003	MCYAN	Vanadium	26.7	2.61	mg/kg		7/2/97
SJS05-SB01-003	MCYAN	Zinc	64.4	1.45	mg/kg	L	7/2/97
SJS05-SB01-003	PSPCB	4,4'-DDD		4.2	ug/kg	U	7/16/97
SJS05-SB01-003	PSPCB	4,4'-DDE		4.2	ug/kg	U	7/16/97
SJS05-SB01-003	PSPCB	4,4'-DDT		4.2	ug/kg	U	7/16/97
SJS05-SB01-003	PSPCB	Aldrin		2.2	ug/kg	U	7/16/97
SJS05-SB01-003	PSPCB	alpha-BHC		2.2	ug/kg	U	7/16/97
SJS05-SB01-003	PSPCB	alpha-Chlordane		2.2	ug/kg	U	7/16/97
SJS05-SB01-003	PSPCB	Aroclor-1016		42	ug/kg	U	7/16/97
SJS05-SB01-003	PSPCB	Aroclor-1221		85	ug/kg	U	7/16/97
SJS05-SB01-003	PSPCB	Aroclor-1232		42	ug/kg	U	7/16/97
SJS05-SB01-003	PSPCB	Aroclor-1242		42	ug/kg	U	7/16/97
SJS05-SB01-003	PSPCB	Aroclor-1248		42	ug/kg	U	7/16/97
SJS05-SB01-003	PSPCB	Aroclor-1254		42	ug/kg	U	7/16/97
SJS05-SB01-003	PSPCB	Aroclor-1260		42	ug/kg	U	7/16/97
SJS05-SB01-003	PSPCB	beta-BHC		2.2	ug/kg	U	7/16/97
SJS05-SB01-003	PSPCB	delta-BHC		2.2	ug/kg	U	7/16/97
SJS05-SB01-003	PSPCB	Dieldrin		4.2	ug/kg	U	7/
SJS05-SB01-003	PSPCB	Endosulfan I		2.2	ug/kg	U	7/
SJS05-SB01-003	PSPCB	Endosulfan II		4.2	ug/kg	U	7/16/97
SJS05-SB01-003	PSPCB	Endosulfan Sulfate		4.2	ug/kg	U	7/16/97
SJS05-SB01-003	PSPCB	Endrin		4.2	ug/kg	U	7/16/97
SJS05-SB01-003	PSPCB	Endrin Aldehyde		4.2	ug/kg	U	7/16/97
SJS05-SB01-003	PSPCB	Endrin Ketone		4.2	ug/kg	U	7/16/97
SJS05-SB01-003	PSPCB	gamma-BHC		2.2	ug/kg	U	7/16/97
SJS05-SB01-003	PSPCB	gamma-Chlordane		2.2	ug/kg	U	7/16/97
SJS05-SB01-003	PSPCB	Heptachlor		2.2	ug/kg	U	7/16/97
SJS05-SB01-003	PSPCB	Heptachlor Epoxide		2.2	ug/kg	U	7/16/97
SJS05-SB01-003	PSPCB	Methoxychlor		22	ug/kg	U	7/16/97
SJS05-SB01-003	PSPCB	Toxaphene		220	ug/kg	U	7/16/97
SJS05-SB01-003	SVTCL	1,2,4-Trichlorobenzene		420	ug/kg	U	7/9/97
SJS05-SB01-003	SVTCL	1,2-Dichlorobenzene		420	ug/kg	U	7/9/97
SJS05-SB01-003	SVTCL	1,3-Dichlorobenzene		420	ug/kg	U	7/9/97
SJS05-SB01-003	SVTCL	1,4-Dichlorobenzene		420	ug/kg	U	7/9/97
SJS05-SB01-003	SVTCL	2,2'-oxybis(1-Chloropropane		420	ug/kg	U	7/9/97
SJS05-SB01-003	SVTCL	2,4,5-Trichlorophenol		1100	ug/kg	U	7/9/97
SJS05-SB01-003	SVTCL	2,4,6-Trichlorophenol		420	ug/kg	U	7/9/97
SJS05-SB01-003	SVTCL	2,4-Dichlorophenol		420	ug/kg	U	7/9/97
SJS05-SB01-003	SVTCL	2,4-Dimethylphenol		420	ug/kg	U	7/9/97
SJS05-SB01-003	SVTCL	2,4-Dinitrophenol		1100	ug/kg	U	7/9/97
SJS05-SB01-003	SVTCL	2,4-Dinitrotoluene		420	ug/kg	U	7/9/97
SJS05-SB01-003	SVTCL	2,6-Dinitrotoluene		420	ug/kg	U	7/9/97
SJS05-SB01-003	SVTCL	2-Chloronaphthalene		420	ug/kg	U	7/9/97
SJS05-SB01-003	SVTCL	2-Chlorophenol		420	ug/kg	U	7/9/97
SJS05-SB01-003	SVTCL	2-Methylnaphthalene		420	ug/kg	U	7/9/97
SJS05-SB01-003	SVTCL	2-Methylphenol		420	ug/kg	U	7/9/97
SJS05-SB01-003	SVTCL	2-Nitroaniline		1100	ug/kg	U	7
SJS05-SB01-003	SVTCL	2-Nitrophenol		420	ug/kg	U	7/

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS05-SB01-003	SVTCL	3,3'-Dichlorobenzidine		420	ug/kg	U	7/9/97
SJS05-SB01-003	SVTCL	3-Nitroaniline		1100	ug/kg	U	7/9/97
SJS05-SB01-003	SVTCL	4,6-Dinitro-2-Methylphenol		1100	ug/kg	U	7/9/97
SJS05-SB01-003	SVTCL	4-Bromophenyl phenylether		420	ug/kg	U	7/9/97
SJS05-SB01-003	SVTCL	4-Chloro-3-Methylphenol		420	ug/kg	U	7/9/97
SJS05-SB01-003	SVTCL	4-Chloroaniline		420	ug/kg	U	7/9/97
SJS05-SB01-003	SVTCL	4-Chlorophenyl-phenylether		420	ug/kg	U	7/9/97
SJS05-SB01-003	SVTCL	4-Methylphenol		420	ug/kg	U	7/9/97
SJS05-SB01-003	SVTCL	4-Nitroaniline		1100	ug/kg	U	7/9/97
SJS05-SB01-003	SVTCL	4-Nitrophenol		1100	ug/kg	U	7/9/97
SJS05-SB01-003	SVTCL	Acenaphthene		420	ug/kg	U	7/9/97
SJS05-SB01-003	SVTCL	Acenaphthylene		420	ug/kg	U	7/9/97
SJS05-SB01-003	SVTCL	Anthracene		420	ug/kg	U	7/9/97
SJS05-SB01-003	SVTCL	Benzo(a)Anthracene	65	460	ug/kg	J	7/9/97
SJS05-SB01-003	SVTCL	Benzo(a)Pyrene	60	460	ug/kg	J	7/9/97
SJS05-SB01-003	SVTCL	Benzo(b)Fluoranthene	100	460	ug/kg	J	7/9/97
SJS05-SB01-003	SVTCL	Benzo(g,h,i)Perylene		420	ug/kg	U	7/9/97
SJS05-SB01-003	SVTCL	Benzo(k)Fluoranthene		420	ug/kg	U	7/9/97
SJS05-SB01-003	SVTCL	Bis(2-chloroethoxy)Methane		420	ug/kg	U	7/9/97
SJS05-SB01-003	SVTCL	Bis(2-chloroethyl)Ether		420	ug/kg	U	7/9/97
SJS05-SB01-003	SVTCL	Bis(2-Ethylhexyl)Phthalate	51	320	ug/kg	B	7/9/97
SJS05-SB01-003	SVTCL	Butylbenzylphthalate		420	ug/kg	U	7/9/97
SJS05-SB01-003	SVTCL	Carbazole		420	ug/kg	U	7/9/97
SJS05-SB01-003	SVTCL	Chrysene	76	460	ug/kg	J	7/9/97
SJS05-SB01-003	SVTCL	Di-n-Butylphthalate		420	ug/kg	U	7/9/97
SJS05-SB01-003	SVTCL	Di-n-Octyl Phthalate		420	ug/kg	U	7/9/97
SJS05-SB01-003	SVTCL	Dibenz(a,h)Anthracene		420	ug/kg	U	7/9/97
SJS05-SB01-003	SVTCL	Dibenzofuran		420	ug/kg	U	7/9/97
SJS05-SB01-003	SVTCL	Diethylphthalate		420	ug/kg	U	7/9/97
SJS05-SB01-003	SVTCL	Dimethyl Phthalate		420	ug/kg	U	7/9/97
SJS05-SB01-003	SVTCL	Fluoranthene	350	460	ug/kg	J	7/9/97
SJS05-SB01-003	SVTCL	Fluorene		420	ug/kg	U	7/9/97
SJS05-SB01-003	SVTCL	Hexachlorobenzene		420	ug/kg	U	7/9/97
SJS05-SB01-003	SVTCL	Hexachlorobutadiene		420	ug/kg	U	7/9/97
SJS05-SB01-003	SVTCL	Hexachlorocyclopentadien		420	ug/kg	U	7/9/97
SJS05-SB01-003	SVTCL	Hexachloroethane		420	ug/kg	U	7/9/97
SJS05-SB01-003	SVTCL	Indeno(1,2,3-cd)Pyrene		420	ug/kg	U	7/9/97
SJS05-SB01-003	SVTCL	Isophorone		420	ug/kg	U	7/9/97
SJS05-SB01-003	SVTCL	N-Nitroso-Di-n-Propylamine		420	ug/kg	U	7/9/97
SJS05-SB01-003	SVTCL	N-Nitrosodiphenylamine		420	ug/kg	U	7/9/97
SJS05-SB01-003	SVTCL	Naphthalene		420	ug/kg	U	7/9/97
SJS05-SB01-003	SVTCL	Nitrobenzene		420	ug/kg	U	7/9/97
SJS05-SB01-003	SVTCL	Pentachlorophenol		1100	ug/kg	U	7/9/97
SJS05-SB01-003	SVTCL	Phenanthrene		420	ug/kg	U	7/9/97
SJS05-SB01-003	SVTCL	Phenol		420	ug/kg	U	7/9/97
SJS05-SB01-003	SVTCL	Pyrene	330	460	ug/kg	J	7/9/97
SJS05-SB01-003	VCTCL	1,1,1-Trichloroethane		18	ug/kg	U	7/1/97
SJS05-SB01-003	VCTCL	1,1,2,2-Tetrachloroethane		18	ug/kg	U	7/1/97
SJS05-SB01-003	VCTCL	1,1,2-Trichloroethane		18	ug/kg	U	7/1/97
SJS05-SB01-003	VCTCL	1,1-Dichloroethane		18	ug/kg	U	7/1/97
SJS05-SB01-003	VCTCL	1,1-Dichloroethene		18	ug/kg	U	7/1/97
SJS05-SB01-003	VCTCL	1,2-Dichloroethane		18	ug/kg	U	7/1/97
SJS05-SB01-003	VCTCL	1,2-Dichloroethene (total)		18	ug/kg	U	7/1/97
SJS05-SB01-003	VCTCL	1,2-Dichloropropane		18	ug/kg	U	7/1/97
SJS05-SB01-003	VCTCL	2-Butanone	21	18	ug/kg		7/1/97
SJS05-SB01-003	VCTCL	2-Hexanone		18	ug/kg	U	7/1/97
SJS05-SB01-003	VCTCL	4-Methyl-2-Pentanone		18	ug/kg	U	7/1/97
SJS05-SB01-003	VCTCL	Acetone	170	18	ug/kg		7/1/97
SJS05-SB01-003	VCTCL	Benzene		18	ug/kg	U	7/1/97
JS05-SB01-003	VCTCL	Bromodichloromethane		18	ug/kg	U	7/1/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS05-SB01-003	VCTCL	Bromoform		18	ug/kg	U	7/
SJS05-SB01-003	VCTCL	Bromomethane		18	ug/kg	U	7
SJS05-SB01-003	VCTCL	Carbon Disulfide		18	ug/kg	U	7/1/97
SJS05-SB01-003	VCTCL	Carbon Tetrachloride		18	ug/kg	U	7/1/97
SJS05-SB01-003	VCTCL	Chlorobenzene		18	ug/kg	U	7/1/97
SJS05-SB01-003	VCTCL	Chloroethane		18	ug/kg	U	7/1/97
SJS05-SB01-003	VCTCL	Chloroform		18	ug/kg	U	7/1/97
SJS05-SB01-003	VCTCL	Chloromethane		18	ug/kg	U	7/1/97
SJS05-SB01-003	VCTCL	cis-1,3-Dichloropropene		18	ug/kg	U	7/1/97
SJS05-SB01-003	VCTCL	Dibromochloromethane		18	ug/kg	U	7/1/97
SJS05-SB01-003	VCTCL	Ethylbenzene		18	ug/kg	U	7/1/97
SJS05-SB01-003	VCTCL	Methylene Chloride	100	18	ug/kg	B	7/1/97
SJS05-SB01-003	VCTCL	Styrene		18	ug/kg	U	7/1/97
SJS05-SB01-003	VCTCL	Tetrachloroethene		18	ug/kg	U	7/1/97
SJS05-SB01-003	VCTCL	Toluene		18	ug/kg	U	7/1/97
SJS05-SB01-003	VCTCL	Total Xylenes		18	ug/kg	U	7/1/97
SJS05-SB01-003	VCTCL	Trans-1,3-Dichloropropene		18	ug/kg	U	7/1/97
SJS05-SB01-003	VCTCL	Trichloroethene		18	ug/kg	U	7/1/97
SJS05-SB01-003	VCTCL	Vinyl Chloride		18	ug/kg	U	7/1/97
SJS05-SB02-002	CTOTP	Total Phosphorous (as P)	366	110	mg/kg		7/14/97
SJS05-SB02-002	MCYAN	Aluminum	27900	15.74	mg/kg	J	7/2/97
SJS05-SB02-002	MCYAN	Antimony		0.72	mg/kg	UL	7/2/97
SJS05-SB02-002	MCYAN	Arsenic	18.6	1.07	mg/kg		7/2/97
SJS05-SB02-002	MCYAN	Barium	52.7	0.72	mg/kg	J	7/2/97
SJS05-SB02-002	MCYAN	Beryllium	1	0.36	mg/kg	J	7/2/97
SJS05-SB02-002	MCYAN	Cadmium		0.18	mg/kg	U	7/2/97
SJS05-SB02-002	MCYAN	Calcium	1620	31.13	mg/kg	J	7/2/97
SJS05-SB02-002	MCYAN	Chromium	49.9	2.5	mg/kg		7/2/97
SJS05-SB02-002	MCYAN	Cobalt	36	2.86	mg/kg		7/2/97
SJS05-SB02-002	MCYAN	Copper	58.3	2.15	mg/kg		7/
SJS05-SB02-002	MCYAN	Cyanide		0.9	mg/kg	U	7/
SJS05-SB02-002	MCYAN	Iron	41600	6.08	mg/kg	J	7/2/97
SJS05-SB02-002	MCYAN	Lead	61.5	0.36	mg/kg	K	7/2/97
SJS05-SB02-002	MCYAN	Magnesium	5910	64.76	mg/kg		7/2/97
SJS05-SB02-002	MCYAN	Manganese	210	0.72	mg/kg	J	7/2/97
SJS05-SB02-002	MCYAN	Mercury		0.09	mg/kg	U	6/30/97
SJS05-SB02-002	MCYAN	Nickel	65.6	2.5	mg/kg		7/2/97
SJS05-SB02-002	MCYAN	Potassium	4360	79.43	mg/kg		7/2/97
SJS05-SB02-002	MCYAN	Selenium		1.07	mg/kg	U	7/3/97
SJS05-SB02-002	MCYAN	Silver	0.96	0.36	mg/kg	L	7/2/97
SJS05-SB02-002	MCYAN	Sodium	1350	20.75	mg/kg	J	7/2/97
SJS05-SB02-002	MCYAN	Thallium	2.4	0.72	mg/kg	K	7/2/97
SJS05-SB02-002	MCYAN	Vanadium	47	3.22	mg/kg		7/2/97
SJS05-SB02-002	MCYAN	Zinc	119	1.79	mg/kg		7/2/97
SJS05-SB02-002	PCDD_S	1,2,3,4,6,7,8-HpCDD	118	2.5	pg/g		7/18/97
SJS05-SB02-002	PCDD_S	1,2,3,4,6,7,8-HpCDF		2.5	pg/g	U	7/18/97
SJS05-SB02-002	PCDD_S	1,2,3,4,7,8,9-HpCDF		2.5	pg/g	U	7/18/97
SJS05-SB02-002	PCDD_S	1,2,3,4,7,8-HxCDD		2.5	pg/g	U	7/18/97
SJS05-SB02-002	PCDD_S	1,2,3,4,7,8-HxCDF		2.5	pg/g	U	7/18/97
SJS05-SB02-002	PCDD_S	1,2,3,6,7,8-HxCDD	3.02	2.5	pg/g		7/18/97
SJS05-SB02-002	PCDD_S	1,2,3,6,7,8-HxCDF		2.5	pg/g	U	7/18/97
SJS05-SB02-002	PCDD_S	1,2,3,7,8,9-HxCDD	8.44	2.5	pg/g		7/18/97
SJS05-SB02-002	PCDD_S	1,2,3,7,8,9-HxCDF		2.5	pg/g	U	7/18/97
SJS05-SB02-002	PCDD_S	1,2,3,7,8-PeCDD		1	pg/g	U	7/18/97
SJS05-SB02-002	PCDD_S	1,2,3,7,8-PeCDF		1	pg/g	U	7/18/97
SJS05-SB02-002	PCDD_S	2,3,4,6,7,8-HxCDF		2.5	pg/g	U	7/18/97
SJS05-SB02-002	PCDD_S	2,3,4,7,8-PeCDF		1	pg/g	U	7/18/97
SJS05-SB02-002	PCDD_S	2,3,7,8-TCDD		1	pg/g	U	7/18/97
SJS05-SB02-002	PCDD_S	2,3,7,8-TCDF		1	pg/g	U	7/
SJS05-SB02-002	PCDD_S	OCDD	4744	5	pg/g		7/

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS05-SB02-002	PCDD_S	OCDF	6.13	5	pg/g		7/18/97
SJS05-SB02-002	PCDD_S	TOTAL HpCDD	670	2.5	pg/g		7/18/97
SJS05-SB02-002	PCDD_S	TOTAL HpCDF		2.5	pg/g	U	7/18/97
SJS05-SB02-002	PCDD_S	TOTAL HxCDD	231	2.5	pg/g		7/18/97
SJS05-SB02-002	PCDD_S	TOTAL HxCDF		2.5	pg/g	U	7/18/97
SJS05-SB02-002	PCDD_S	TOTAL PeCDD		1	pg/g	U	7/18/97
SJS05-SB02-002	PCDD_S	TOTAL PeCDF		1	pg/g	U	7/18/97
SJS05-SB02-002	PCDD_S	TOTAL TCDD	10.7	1	pg/g		7/18/97
SJS05-SB02-002	PCDD_S	TOTAL TCDF		1	pg/g	U	7/18/97
SJS05-SB02-002	PCDD_S	TOTAL TEQ	5.93	1	pg/g		7/18/97
SJS05-SB02-002	PSPCB	4,4'-DDD		5.6	ug/kg	U	7/14/97
SJS05-SB02-002	PSPCB	4,4'-DDE		5.6	ug/kg	U	7/14/97
SJS05-SB02-002	PSPCB	4,4'-DDT		5.6	ug/kg	U	7/14/97
SJS05-SB02-002	PSPCB	Aldrin		2.9	ug/kg	U	7/14/97
SJS05-SB02-002	PSPCB	alpha-BHC		2.9	ug/kg	U	7/14/97
SJS05-SB02-002	PSPCB	alpha-Chlordane		2.9	ug/kg	U	7/14/97
SJS05-SB02-002	PSPCB	Aroclor-1016		56	ug/kg	U	7/14/97
SJS05-SB02-002	PSPCB	Aroclor-1221		110	ug/kg	U	7/14/97
SJS05-SB02-002	PSPCB	Aroclor-1232		56	ug/kg	U	7/14/97
SJS05-SB02-002	PSPCB	Aroclor-1242		56	ug/kg	U	7/14/97
SJS05-SB02-002	PSPCB	Aroclor-1248		56	ug/kg	U	7/14/97
SJS05-SB02-002	PSPCB	Aroclor-1254		56	ug/kg	U	7/14/97
SJS05-SB02-002	PSPCB	Aroclor-1260		56	ug/kg	U	7/14/97
SJS05-SB02-002	PSPCB	beta-BHC		2.9	ug/kg	U	7/14/97
SJS05-SB02-002	PSPCB	delta-BHC		2.9	ug/kg	U	7/14/97
SJS05-SB02-002	PSPCB	Dieldrin		5.6	ug/kg	U	7/14/97
SJS05-SB02-002	PSPCB	Endosulfan I		2.9	ug/kg	U	7/14/97
SJS05-SB02-002	PSPCB	Endosulfan II		5.6	ug/kg	U	7/14/97
SJS05-SB02-002	PSPCB	Endosulfan Sulfate		5.6	ug/kg	U	7/14/97
SJS05-SB02-002	PSPCB	Endrin		5.6	ug/kg	U	7/14/97
SJS05-SB02-002	PSPCB	Endrin Aldehyde		5.6	ug/kg	U	7/14/97
SJS05-SB02-002	PSPCB	Endrin Ketone		5.6	ug/kg	U	7/14/97
SJS05-SB02-002	PSPCB	gamma-BHC		2.9	ug/kg	U	7/14/97
SJS05-SB02-002	PSPCB	gamma-Chlordane		2.9	ug/kg	U	7/14/97
SJS05-SB02-002	PSPCB	Heptachlor		2.9	ug/kg	U	7/14/97
SJS05-SB02-002	PSPCB	Heptachlor Epoxide		2.9	ug/kg	U	7/14/97
SJS05-SB02-002	PSPCB	Methoxychlor		29	ug/kg	U	7/14/97
SJS05-SB02-002	PSPCB	Toxaphene		290	ug/kg	U	7/14/97
SJS05-SB02-002	SVTCL	1,2,4-Trichlorobenzene		570	ug/kg	U	7/7/97
SJS05-SB02-002	SVTCL	1,2-Dichlorobenzene		570	ug/kg	U	7/7/97
SJS05-SB02-002	SVTCL	1,3-Dichlorobenzene		570	ug/kg	U	7/7/97
SJS05-SB02-002	SVTCL	1,4-Dichlorobenzene		570	ug/kg	U	7/7/97
SJS05-SB02-002	SVTCL	2,2'-oxybis(1-Chloropropane		570	ug/kg	U	7/7/97
SJS05-SB02-002	SVTCL	2,4,5-Trichlorophenol		1400	ug/kg	U	7/7/97
SJS05-SB02-002	SVTCL	2,4,6-Trichlorophenol		570	ug/kg	U	7/7/97
SJS05-SB02-002	SVTCL	2,4-Dichlorophenol		570	ug/kg	U	7/7/97
SJS05-SB02-002	SVTCL	2,4-Dimethylphenol		570	ug/kg	U	7/7/97
SJS05-SB02-002	SVTCL	2,4-Dinitrophenol		1400	ug/kg	U	7/7/97
SJS05-SB02-002	SVTCL	2,4-Dinitrotoluene		570	ug/kg	U	7/7/97
SJS05-SB02-002	SVTCL	2,6-Dinitrotoluene		570	ug/kg	U	7/7/97
SJS05-SB02-002	SVTCL	2-Chloronaphthalene		570	ug/kg	U	7/7/97
SJS05-SB02-002	SVTCL	2-Chlorophenol		570	ug/kg	U	7/7/97
SJS05-SB02-002	SVTCL	2-Methylnaphthalene		570	ug/kg	U	7/7/97
SJS05-SB02-002	SVTCL	2-Methylphenol		570	ug/kg	U	7/7/97
SJS05-SB02-002	SVTCL	2-Nitroaniline		1400	ug/kg	U	7/7/97
SJS05-SB02-002	SVTCL	2-Nitrophenol		570	ug/kg	U	7/7/97
SJS05-SB02-002	SVTCL	3,3'-Dichlorobenzidine		570	ug/kg	U	7/7/97
SJS05-SB02-002	SVTCL	3-Nitroaniline		1400	ug/kg	U	7/7/97
SJS05-SB02-002	SVTCL	4,6-Dinitro-2-Methylphenol		1400	ug/kg	U	7/7/97
SJS05-SB02-002	SVTCL	4-Bromophenyl phenylether		570	ug/kg	U	7/7/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS05-SB02-002	SVTCL	4-Chloro-3-Methylphenol		570	ug/kg	U	7/7
SJS05-SB02-002	SVTCL	4-Chloroaniline		570	ug/kg	U	7
SJS05-SB02-002	SVTCL	4-Chlorophenyl-phenylether		570	ug/kg	U	7/
SJS05-SB02-002	SVTCL	4-Methylphenol		570	ug/kg	U	7/7/97
SJS05-SB02-002	SVTCL	4-Nitroaniline		1400	ug/kg	U	7/7/97
SJS05-SB02-002	SVTCL	4-Nitrophenol		1400	ug/kg	U	7/7/97
SJS05-SB02-002	SVTCL	Acenaphthene		570	ug/kg	U	7/7/97
SJS05-SB02-002	SVTCL	Acenaphthylene		570	ug/kg	U	7/7/97
SJS05-SB02-002	SVTCL	Anthracene		570	ug/kg	U	7/7/97
SJS05-SB02-002	SVTCL	Benzo(a)Anthracene		570	ug/kg	U	7/7/97
SJS05-SB02-002	SVTCL	Benzo(a)Pyrene		570	ug/kg	U	7/7/97
SJS05-SB02-002	SVTCL	Benzo(b)Fluoranthene	150	570	ug/kg	J	7/7/97
SJS05-SB02-002	SVTCL	Benzo(g,h,i)Perylene		570	ug/kg	U	7/7/97
SJS05-SB02-002	SVTCL	Benzo(k)Fluoranthene		570	ug/kg	U	7/7/97
SJS05-SB02-002	SVTCL	Bis(2-chloroethoxy)Methane		570	ug/kg	U	7/7/97
SJS05-SB02-002	SVTCL	Bis(2-chloroethyl)Ether		570	ug/kg	U	7/7/97
SJS05-SB02-002	SVTCL	Bis(2-Ethylhexyl)Phthalate		570	ug/kg	U	7/7/97
SJS05-SB02-002	SVTCL	Butylbenzylphthalate		570	ug/kg	U	7/7/97
SJS05-SB02-002	SVTCL	Carbazole		570	ug/kg	U	7/7/97
SJS05-SB02-002	SVTCL	Chrysene	110	570	ug/kg	J	7/7/97
SJS05-SB02-002	SVTCL	Di-n-Butylphthalate		570	ug/kg	U	7/7/97
SJS05-SB02-002	SVTCL	Di-n-Octyl Phthalate		570	ug/kg	U	7/7/97
SJS05-SB02-002	SVTCL	Dibenz(a,h)Anthracene		570	ug/kg	U	7/7/97
SJS05-SB02-002	SVTCL	Dibenzofuran		570	ug/kg	U	7/7/97
SJS05-SB02-002	SVTCL	Diethylphthalate		570	ug/kg	U	7/7/97
SJS05-SB02-002	SVTCL	Dimethyl Phthalate		570	ug/kg	U	7/7/97
SJS05-SB02-002	SVTCL	Fluoranthene	130	610	ug/kg	J	7/7/97
SJS05-SB02-002	SVTCL	Fluorene		570	ug/kg	U	7/7/97
SJS05-SB02-002	SVTCL	Hexachlorobenzene		570	ug/kg	U	7/7/97
SJS05-SB02-002	SVTCL	Hexachlorobutadiene		570	ug/kg	U	7/
SJS05-SB02-002	SVTCL	Hexachlorocyclopentadien		570	ug/kg	U	7/
SJS05-SB02-002	SVTCL	Hexachloroethane		570	ug/kg	U	7/7/97
SJS05-SB02-002	SVTCL	Indeno(1,2,3-cd)Pyrene		570	ug/kg	U	7/7/97
SJS05-SB02-002	SVTCL	Isophorone		570	ug/kg	U	7/7/97
SJS05-SB02-002	SVTCL	N-Nitroso-Di-n-Propylamine		570	ug/kg	U	7/7/97
SJS05-SB02-002	SVTCL	N-Nitrosodiphenylamine		570	ug/kg	U	7/7/97
SJS05-SB02-002	SVTCL	Naphthalene		570	ug/kg	U	7/7/97
SJS05-SB02-002	SVTCL	Nitrobenzene		570	ug/kg	U	7/7/97
SJS05-SB02-002	SVTCL	Pentachlorophenol		1400	ug/kg	U	7/7/97
SJS05-SB02-002	SVTCL	Phenanthrene		570	ug/kg	U	7/7/97
SJS05-SB02-002	SVTCL	Phenol		570	ug/kg	U	7/7/97
SJS05-SB02-002	SVTCL	Pyrene		570	ug/kg	U	7/7/97
SJS05-SB02-002	VCTCL	1,1,1-Trichloroethane		19	ug/kg	U	7/2/97
SJS05-SB02-002	VCTCL	1,1,2,2-Tetrachloroethane		19	ug/kg	U	7/2/97
SJS05-SB02-002	VCTCL	1,1,2-Trichloroethane		19	ug/kg	U	7/2/97
SJS05-SB02-002	VCTCL	1,1-Dichloroethane		19	ug/kg	U	7/2/97
SJS05-SB02-002	VCTCL	1,1-Dichloroethene		19	ug/kg	U	7/2/97
SJS05-SB02-002	VCTCL	1,2-Dichloroethane		19	ug/kg	U	7/2/97
SJS05-SB02-002	VCTCL	1,2-Dichloroethene (total)		19	ug/kg	U	7/2/97
SJS05-SB02-002	VCTCL	1,2-Dichloropropane		19	ug/kg	U	7/2/97
SJS05-SB02-002	VCTCL	2-Butanone		19	ug/kg	U	7/2/97
SJS05-SB02-002	VCTCL	2-Hexanone		19	ug/kg	U	7/2/97
SJS05-SB02-002	VCTCL	4-Methyl-2-Pentanone		19	ug/kg	U	7/2/97
SJS05-SB02-002	VCTCL	Acetone	84	19	ug/kg	B	7/2/97
SJS05-SB02-002	VCTCL	Benzene		19	ug/kg	U	7/2/97
SJS05-SB02-002	VCTCL	Bromodichloromethane		19	ug/kg	U	7/2/97
SJS05-SB02-002	VCTCL	Bromoform		19	ug/kg	U	7/2/97
SJS05-SB02-002	VCTCL	Bromomethane		19	ug/kg	U	7/2/97
SJS05-SB02-002	VCTCL	Carbon Disulfide		19	ug/kg	U	7/
SJS05-SB02-002	VCTCL	Carbon Tetrachloride		19	ug/kg	U	7/

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS05-SB02-002	VCTCL	Chlorobenzene		19	ug/kg	U	7/2/97
SJS05-SB02-002	VCTCL	Chloroethane		19	ug/kg	U	7/2/97
SJS05-SB02-002	VCTCL	Chloroform		19	ug/kg	U	7/2/97
SJS05-SB02-002	VCTCL	Chloromethane		19	ug/kg	U	7/2/97
SJS05-SB02-002	VCTCL	cis-1,3-Dichloropropene		19	ug/kg	U	7/2/97
SJS05-SB02-002	VCTCL	Dibromochloromethane		19	ug/kg	U	7/2/97
SJS05-SB02-002	VCTCL	Ethylbenzene		19	ug/kg	U	7/2/97
SJS05-SB02-002	VCTCL	Methylene Chloride	48	19	ug/kg	B	7/2/97
SJS05-SB02-002	VCTCL	Styrene		19	ug/kg	U	7/2/97
SJS05-SB02-002	VCTCL	Tetrachloroethene		19	ug/kg	U	7/2/97
SJS05-SB02-002	VCTCL	Toluene		19	ug/kg	U	7/2/97
SJS05-SB02-002	VCTCL	Total Xylenes		19	ug/kg	U	7/2/97
SJS05-SB02-002	VCTCL	Trans-1,3-Dichloropropene		19	ug/kg	U	7/2/97
SJS05-SB02-002	VCTCL	Trichloroethene		19	ug/kg	U	7/2/97
SJS05-SB02-002	VCTCL	Vinyl Chloride		19	ug/kg	U	7/2/97
SJS05-SB03-002	CTOTP	Total Phosphorous (as P)	5.5	2	mg/kg		7/14/97
SJS05-SB03-002	MCYAN	Aluminum	15100	13.81	mg/kg	J	7/2/97
SJS05-SB03-002	MCYAN	Antimony		0.63	mg/kg	UL	7/2/97
SJS05-SB03-002	MCYAN	Arsenic	6.9	0.94	mg/kg		7/2/97
SJS05-SB03-002	MCYAN	Barium	28.6	0.63	mg/kg	J	7/2/97
SJS05-SB03-002	MCYAN	Beryllium	0.91	0.31	mg/kg	J	7/2/97
SJS05-SB03-002	MCYAN	Cadmium		0.16	mg/kg	U	7/2/97
SJS05-SB03-002	MCYAN	Calcium	1290	27.3	mg/kg	J	7/2/97
SJS05-SB03-002	MCYAN	Chromium	26.3	2.2	mg/kg		7/2/97
SJS05-SB03-002	MCYAN	Cobalt	12.2	2.51	mg/kg	J	7/2/97
SJS05-SB03-002	MCYAN	Copper	13.6	1.88	mg/kg		7/2/97
SJS05-SB03-002	MCYAN	Cyanide		0.82	mg/kg	U	7/3/97
SJS05-SB03-002	MCYAN	Iron	25000	5.33	mg/kg	J	7/2/97
SJS05-SB03-002	MCYAN	Lead	30.6	0.31	mg/kg	K	7/2/97
SJS05-SB03-002	MCYAN	Magnesium	3840	56.8	mg/kg		7/2/97
SJS05-SB03-002	MCYAN	Manganese	212	0.63	mg/kg	J	7/2/97
SJS05-SB03-002	MCYAN	Mercury	0.18	0.08	mg/kg		6/30/97
SJS05-SB03-002	MCYAN	Nickel	15.6	2.2	mg/kg	B	7/2/97
SJS05-SB03-002	MCYAN	Potassium	2280	69.66	mg/kg		7/2/97
SJS05-SB03-002	MCYAN	Selenium		0.94	mg/kg	U	7/3/97
SJS05-SB03-002	MCYAN	Silver	0.89	0.31	mg/kg	L	7/2/97
SJS05-SB03-002	MCYAN	Sodium	2050	18.2	mg/kg		7/2/97
SJS05-SB03-002	MCYAN	Thallium		0.63	mg/kg	U	7/2/97
SJS05-SB03-002	MCYAN	Vanadium	30.7	2.82	mg/kg		7/2/97
SJS05-SB03-002	MCYAN	Zinc	110	1.57	mg/kg		7/2/97
SJS05-SB03-002	PCDD_S	1,2,3,4,6,7,8-HpCDD	143	2.5	pg/g		7/18/97
SJS05-SB03-002	PCDD_S	1,2,3,4,6,7,8-HpCDF		2.5	pg/g	U	7/18/97
SJS05-SB03-002	PCDD_S	1,2,3,4,7,8,9-HpCDF		2.5	pg/g	U	7/18/97
SJS05-SB03-002	PCDD_S	1,2,3,4,7,8-HxCDD		2.5	pg/g	U	7/18/97
SJS05-SB03-002	PCDD_S	1,2,3,4,7,8-HxCDF		2.5	pg/g	U	7/18/97
SJS05-SB03-002	PCDD_S	1,2,3,6,7,8-HxCDD		2.5	pg/g	U	7/18/97
SJS05-SB03-002	PCDD_S	1,2,3,6,7,8-HxCDF		2.5	pg/g	U	7/18/97
SJS05-SB03-002	PCDD_S	1,2,3,7,8,9-HxCDD	6.85	2.5	pg/g		7/18/97
SJS05-SB03-002	PCDD_S	1,2,3,7,8,9-HxCDF		2.5	pg/g	U	7/18/97
SJS05-SB03-002	PCDD_S	1,2,3,7,8-PeCDD		1	pg/g	U	7/18/97
SJS05-SB03-002	PCDD_S	1,2,3,7,8-PeCDF		1	pg/g	U	7/18/97
SJS05-SB03-002	PCDD_S	2,3,4,6,7,8-HxCDF		2.5	pg/g	U	7/18/97
SJS05-SB03-002	PCDD_S	2,3,4,7,8-PeCDF		1	pg/g	U	7/18/97
SJS05-SB03-002	PCDD_S	2,3,7,8-TCDD		1	pg/g	U	7/18/97
SJS05-SB03-002	PCDD_S	2,3,7,8-TCDF		1	pg/g	U	7/18/97
SJS05-SB03-002	PCDD_S	OCDD	4468	5	pg/g		7/18/97
SJS05-SB03-002	PCDD_S	OCDF		5	pg/g	U	7/18/97
SJS05-SB03-002	PCDD_S	TOTAL HpCDD	764	2.5	pg/g		7/18/97
SJS05-SB03-002	PCDD_S	TOTAL HpCDF		2.5	pg/g	U	7/18/97
SJS05-SB03-002	PCDD_S	TOTAL HxCDD	251	2.5	pg/g		7/18/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS05-SB03-002	PCDD_S	TOTAL HxCDF		2.5	pg/g	U	7/18
SJS05-SB03-002	PCDD_S	TOTAL PeCDD	5.6	1	pg/g		7/
SJS05-SB03-002	PCDD_S	TOTAL PeCDF		1	pg/g	U	7/18/97
SJS05-SB03-002	PCDD_S	TOTAL TCDD	33.3	1	pg/g		7/18/97
SJS05-SB03-002	PCDD_S	TOTAL TCDF		1	pg/g	U	7/18/97
SJS05-SB03-002	PCDD_S	TOTAL TEQ	6.59	1	pg/g		7/18/97
SJS05-SB03-002	PSPCB	4,4'-DDD		4.9	ug/kg	UJ	7/14/97
SJS05-SB03-002	PSPCB	4,4'-DDE		4.9	ug/kg	UJ	7/14/97
SJS05-SB03-002	PSPCB	4,4'-DDT		4.9	ug/kg	UJ	7/14/97
SJS05-SB03-002	PSPCB	Aldrin		2.5	ug/kg	UJ	7/14/97
SJS05-SB03-002	PSPCB	alpha-BHC		2.5	ug/kg	UJ	7/14/97
SJS05-SB03-002	PSPCB	alpha-Chlordane		2.5	ug/kg	UJ	7/14/97
SJS05-SB03-002	PSPCB	Aroclor-1016		49	ug/kg	UJ	7/14/97
SJS05-SB03-002	PSPCB	Aroclor-1221		100	ug/kg	UJ	7/14/97
SJS05-SB03-002	PSPCB	Aroclor-1232		49	ug/kg	UJ	7/14/97
SJS05-SB03-002	PSPCB	Aroclor-1242		49	ug/kg	UJ	7/14/97
SJS05-SB03-002	PSPCB	Aroclor-1248		49	ug/kg	UJ	7/14/97
SJS05-SB03-002	PSPCB	Aroclor-1254		49	ug/kg	UJ	7/14/97
SJS05-SB03-002	PSPCB	Aroclor-1260		49	ug/kg	UJ	7/14/97
SJS05-SB03-002	PSPCB	beta-BHC		2.5	ug/kg	UJ	7/14/97
SJS05-SB03-002	PSPCB	delta-BHC		2.5	ug/kg	UJ	7/14/97
SJS05-SB03-002	PSPCB	Dieldrin		4.9	ug/kg	UJ	7/14/97
SJS05-SB03-002	PSPCB	Endosulfan I		2.5	ug/kg	UJ	7/14/97
SJS05-SB03-002	PSPCB	Endosulfan II		4.9	ug/kg	UJ	7/14/97
SJS05-SB03-002	PSPCB	Endosulfan Sulfate		4.9	ug/kg	UJ	7/14/97
SJS05-SB03-002	PSPCB	Endrin		4.9	ug/kg	UJ	7/14/97
SJS05-SB03-002	PSPCB	Endrin Aldehyde		4.9	ug/kg	UJ	7/14/97
SJS05-SB03-002	PSPCB	Endrin Ketone		4.9	ug/kg	UJ	7/14/97
SJS05-SB03-002	PSPCB	gamma-BHC		2.5	ug/kg	UJ	7/14/97
SJS05-SB03-002	PSPCB	gamma-Chlordane		2.5	ug/kg	UJ	7/1
SJS05-SB03-002	PSPCB	Heptachlor		2.5	ug/kg	UJ	7/1
SJS05-SB03-002	PSPCB	Heptachlor Epoxide		2.5	ug/kg	UJ	7/14/97
SJS05-SB03-002	PSPCB	Methoxychlor		25	ug/kg	UJ	7/14/97
SJS05-SB03-002	PSPCB	Toxaphene		250	ug/kg	UJ	7/14/97
SJS05-SB03-002	SVTCL	1,2,4-Trichlorobenzene		490	ug/kg	U	7/3/97
SJS05-SB03-002	SVTCL	1,2-Dichlorobenzene		490	ug/kg	U	7/3/97
SJS05-SB03-002	SVTCL	1,3-Dichlorobenzene		490	ug/kg	U	7/3/97
SJS05-SB03-002	SVTCL	1,4-Dichlorobenzene		490	ug/kg	U	7/3/97
SJS05-SB03-002	SVTCL	2,2'-oxybis(1-Chloropropane		490	ug/kg	U	7/3/97
SJS05-SB03-002	SVTCL	2,4,5-Trichlorophenol		1200	ug/kg	U	7/3/97
SJS05-SB03-002	SVTCL	2,4,6-Trichlorophenol		490	ug/kg	U	7/3/97
SJS05-SB03-002	SVTCL	2,4-Dichlorophenol		490	ug/kg	U	7/3/97
SJS05-SB03-002	SVTCL	2,4-Dimethylphenol		490	ug/kg	U	7/3/97
SJS05-SB03-002	SVTCL	2,4-Dinitrophenol		1200	ug/kg	U	7/3/97
SJS05-SB03-002	SVTCL	2,4-Dinitrotoluene		490	ug/kg	U	7/3/97
SJS05-SB03-002	SVTCL	2,6-Dinitrotoluene		490	ug/kg	U	7/3/97
SJS05-SB03-002	SVTCL	2-Chloronaphthalene		490	ug/kg	U	7/3/97
SJS05-SB03-002	SVTCL	2-Chlorophenol		490	ug/kg	U	7/3/97
SJS05-SB03-002	SVTCL	2-Methylnaphthalene		490	ug/kg	U	7/3/97
SJS05-SB03-002	SVTCL	2-Methylphenol		490	ug/kg	U	7/3/97
SJS05-SB03-002	SVTCL	2-Nitroaniline		1200	ug/kg	U	7/3/97
SJS05-SB03-002	SVTCL	2-Nitrophenol		490	ug/kg	U	7/3/97
SJS05-SB03-002	SVTCL	3,3'-Dichlorobenzidine		490	ug/kg	U	7/3/97
SJS05-SB03-002	SVTCL	3-Nitroaniline		1200	ug/kg	U	7/3/97
SJS05-SB03-002	SVTCL	4,6-Dinitro-2-Methylphenol		1200	ug/kg	U	7/3/97
SJS05-SB03-002	SVTCL	4-Bromophenyl phenylether		490	ug/kg	U	7/3/97
SJS05-SB03-002	SVTCL	4-Chloro-3-Methylphenol		490	ug/kg	U	7/3/97
SJS05-SB03-002	SVTCL	4-Chloroaniline		490	ug/kg	U	7/3/97
SJS05-SB03-002	SVTCL	4-Chlorophenyl-phenylether		490	ug/kg	U	7/
SJS05-SB03-002	SVTCL	4-Methylphenol		490	ug/kg	U	7/

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS05-SB03-002	SVTCL	4-Nitroaniline		1200	ug/kg	U	7/3/97
SJS05-SB03-002	SVTCL	4-Nitrophenol		1200	ug/kg	U	7/3/97
SJS05-SB03-002	SVTCL	Acenaphthene		490	ug/kg	U	7/3/97
SJS05-SB03-002	SVTCL	Acenaphthylene		490	ug/kg	U	7/3/97
SJS05-SB03-002	SVTCL	Anthracene	170	490	ug/kg	J	7/3/97
SJS05-SB03-002	SVTCL	Benzo(a)Anthracene	490	490	ug/kg		7/3/97
SJS05-SB03-002	SVTCL	Benzo(a)Pyrene	270	490	ug/kg	J	7/3/97
SJS05-SB03-002	SVTCL	Benzo(b)Fluoranthene	510	490	ug/kg		7/3/97
SJS05-SB03-002	SVTCL	Benzo(g,h,i)Perylene	110	490	ug/kg	J	7/3/97
SJS05-SB03-002	SVTCL	Benzo(k)Fluoranthene	160	490	ug/kg	J	7/3/97
SJS05-SB03-002	SVTCL	Bis(2-chloroethoxy)Methane		490	ug/kg	U	7/3/97
SJS05-SB03-002	SVTCL	Bis(2-chloroethyl)Ether		490	ug/kg	U	7/3/97
SJS05-SB03-002	SVTCL	Bis(2-Ethylhexyl)Phthalate		490	ug/kg	U	7/3/97
SJS05-SB03-002	SVTCL	Butylbenzylphthalate		490	ug/kg	U	7/3/97
SJS05-SB03-002	SVTCL	Carbazole		490	ug/kg	U	7/3/97
SJS05-SB03-002	SVTCL	Chrysene	450	490	ug/kg	J	7/3/97
SJS05-SB03-002	SVTCL	Di-n-Butylphthalate		490	ug/kg	U	7/3/97
SJS05-SB03-002	SVTCL	Di-n-Octyl Phthalate		490	ug/kg	U	7/3/97
SJS05-SB03-002	SVTCL	Dibenz(a,h)Anthracene		490	ug/kg	U	7/3/97
SJS05-SB03-002	SVTCL	Dibenzofuran		490	ug/kg	U	7/3/97
SJS05-SB03-002	SVTCL	Diethylphthalate		490	ug/kg	U	7/3/97
SJS05-SB03-002	SVTCL	Dimethyl Phthalate		490	ug/kg	U	7/3/97
SJS05-SB03-002	SVTCL	Fluoranthene	1500	490	ug/kg		7/3/97
SJS05-SB03-002	SVTCL	Fluorene		490	ug/kg	U	7/3/97
SJS05-SB03-002	SVTCL	Hexachlorobenzene		490	ug/kg	U	7/3/97
SJS05-SB03-002	SVTCL	Hexachlorobutadiene		490	ug/kg	U	7/3/97
SJS05-SB03-002	SVTCL	Hexachlorocyclopentadien		490	ug/kg	U	7/3/97
SJS05-SB03-002	SVTCL	Hexachloroethane		490	ug/kg	U	7/3/97
SJS05-SB03-002	SVTCL	Indeno(1,2,3-cd)Pyrene	120	490	ug/kg	J	7/3/97
SJS05-SB03-002	SVTCL	Isophorone		490	ug/kg	U	7/3/97
SJS05-SB03-002	SVTCL	N-Nitroso-Di-n-Propylamine		490	ug/kg	U	7/3/97
SJS05-SB03-002	SVTCL	N-Nitrosodiphenylamine		490	ug/kg	U	7/3/97
SJS05-SB03-002	SVTCL	Naphthalene	63	490	ug/kg	J	7/3/97
SJS05-SB03-002	SVTCL	Nitrobenzene		490	ug/kg	U	7/3/97
SJS05-SB03-002	SVTCL	Pentachlorophenol		1200	ug/kg	U	7/3/97
SJS05-SB03-002	SVTCL	Phenanthrene	79	490	ug/kg	J	7/3/97
SJS05-SB03-002	SVTCL	Phenol		490	ug/kg	U	7/3/97
SJS05-SB03-002	SVTCL	Pyrene	980	490	ug/kg		7/3/97
SJS05-SB03-002	VCTCL	1,1,1-Trichloroethane		16	ug/kg	U	7/2/97
SJS05-SB03-002	VCTCL	1,1,2,2-Tetrachloroethane		16	ug/kg	U	7/2/97
SJS05-SB03-002	VCTCL	1,1,2-Trichloroethane		16	ug/kg	U	7/2/97
SJS05-SB03-002	VCTCL	1,1-Dichloroethane		16	ug/kg	U	7/2/97
SJS05-SB03-002	VCTCL	1,1-Dichloroethene		16	ug/kg	U	7/2/97
SJS05-SB03-002	VCTCL	1,2-Dichloroethane		16	ug/kg	U	7/2/97
SJS05-SB03-002	VCTCL	1,2-Dichloroethene (total)		16	ug/kg	U	7/2/97
SJS05-SB03-002	VCTCL	1,2-Dichloropropane		16	ug/kg	U	7/2/97
SJS05-SB03-002	VCTCL	2-Butanone		16	ug/kg	U	7/2/97
SJS05-SB03-002	VCTCL	2-Hexanone		16	ug/kg	U	7/2/97
SJS05-SB03-002	VCTCL	4-Methyl-2-Pentanone		16	ug/kg	U	7/2/97
SJS05-SB03-002	VCTCL	Acetone	110	16	ug/kg	B	7/2/97
SJS05-SB03-002	VCTCL	Benzene		16	ug/kg	U	7/2/97
SJS05-SB03-002	VCTCL	Bromodichloromethane		16	ug/kg	U	7/2/97
SJS05-SB03-002	VCTCL	Bromoform		16	ug/kg	U	7/2/97
SJS05-SB03-002	VCTCL	Bromomethane		16	ug/kg	U	7/2/97
SJS05-SB03-002	VCTCL	Carbon Disulfide		16	ug/kg	U	7/2/97
SJS05-SB03-002	VCTCL	Carbon Tetrachloride		16	ug/kg	U	7/2/97
SJS05-SB03-002	VCTCL	Chlorobenzene		16	ug/kg	U	7/2/97
SJS05-SB03-002	VCTCL	Chloroethane		16	ug/kg	U	7/2/97
SJS05-SB03-002	VCTCL	Chloroform		16	ug/kg	U	7/2/97
SJS05-SB03-002	VCTCL	Chloromethane		16	ug/kg	U	7/2/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS05-SB03-002	VCTCL	cis-1,3-Dichloropropene		16	ug/kg	U	7/2/97
SJS05-SB03-002	VCTCL	Dibromochloromethane		16	ug/kg	U	7/2/97
SJS05-SB03-002	VCTCL	Ethylbenzene		16	ug/kg	U	7/2/97
SJS05-SB03-002	VCTCL	Methylene Chloride	72	16	ug/kg	B	7/2/97
SJS05-SB03-002	VCTCL	Styrene		16	ug/kg	U	7/2/97
SJS05-SB03-002	VCTCL	Tetrachloroethene		16	ug/kg	U	7/2/97
SJS05-SB03-002	VCTCL	Toluene		16	ug/kg	U	7/2/97
SJS05-SB03-002	VCTCL	Total Xylenes		16	ug/kg	U	7/2/97
SJS05-SB03-002	VCTCL	Trans-1,3-Dichloropropene		16	ug/kg	U	7/2/97
SJS05-SB03-002	VCTCL	Trichloroethene		16	ug/kg	U	7/2/97
SJS05-SB03-002	VCTCL	Vinyl Chloride		16	ug/kg	U	7/2/97
SJS05-SB04-002	PCDD_S	1,2,3,4,6,7,8-HpCDD	34.6	2.5	pg/g		7/18/97
SJS05-SB04-002	PCDD_S	1,2,3,4,6,7,8-HpCDF		2.5	pg/g	U	7/18/97
SJS05-SB04-002	PCDD_S	1,2,3,4,7,8,9-HpCDF		2.5	pg/g	U	7/18/97
SJS05-SB04-002	PCDD_S	1,2,3,4,7,8-HxCDD		2.5	pg/g	U	7/18/97
SJS05-SB04-002	PCDD_S	1,2,3,4,7,8-HxCDF		2.5	pg/g	U	7/18/97
SJS05-SB04-002	PCDD_S	1,2,3,6,7,8-HxCDD		2.5	pg/g	U	7/18/97
SJS05-SB04-002	PCDD_S	1,2,3,6,7,8-HxCDF		2.5	pg/g	U	7/18/97
SJS05-SB04-002	PCDD_S	1,2,3,7,8,9-HxCDD		2.5	pg/g	U	7/18/97
SJS05-SB04-002	PCDD_S	1,2,3,7,8,9-HxCDF		2.5	pg/g	U	7/18/97
SJS05-SB04-002	PCDD_S	1,2,3,7,8-PeCDD		1	pg/g	U	7/18/97
SJS05-SB04-002	PCDD_S	1,2,3,7,8-PeCDF		1	pg/g	U	7/18/97
SJS05-SB04-002	PCDD_S	2,3,4,6,7,8-HxCDF		2.5	pg/g	U	7/18/97
SJS05-SB04-002	PCDD_S	2,3,4,7,8-PeCDF		1	pg/g	U	7/18/97
SJS05-SB04-002	PCDD_S	2,3,7,8-TCDD		1	pg/g	U	7/18/97
SJS05-SB04-002	PCDD_S	2,3,7,8-TCDF		1	pg/g	U	7/18/97
SJS05-SB04-002	PCDD_S	OCDD	1259	5	pg/g		7/18/97
SJS05-SB04-002	PCDD_S	OCDF		5	pg/g	U	7/18/97
SJS05-SB04-002	PCDD_S	TOTAL HpCDD	219	2.5	pg/g		7/18/97
SJS05-SB04-002	PCDD_S	TOTAL HpCDF		2.5	pg/g	U	7/18/97
SJS05-SB04-002	PCDD_S	TOTAL HxCDD	55.7	2.5	pg/g		7/18/97
SJS05-SB04-002	PCDD_S	TOTAL HxCDF		2.5	pg/g	U	7/18/97
SJS05-SB04-002	PCDD_S	TOTAL PeCDD		1	pg/g	U	7/18/97
SJS05-SB04-002	PCDD_S	TOTAL PeCDF		1	pg/g	U	7/18/97
SJS05-SB04-002	PCDD_S	TOTAL TCDD		1	pg/g	U	7/18/97
SJS05-SB04-002	PCDD_S	TOTAL TCDF		1	pg/g	U	7/18/97
SJS05-SB04-002	PCDD_S	TOTAL TEQ	1.61	1	pg/g		7/18/97
SJS05-SB04-003	CTOTP	Total Phosphorous (as P)	18.3	5.3	mg/kg		7/14/97
SJS05-SB04-003	MCYAN	Aluminum	3970	14.44	mg/kg	J	7/2/97
SJS05-SB04-003	MCYAN	Antimony		0.66	mg/kg	UL	7/2/97
SJS05-SB04-003	MCYAN	Arsenic	2.5	0.98	mg/kg	J	7/2/97
SJS05-SB04-003	MCYAN	Barium	14.5	0.66	mg/kg	J	7/2/97
SJS05-SB04-003	MCYAN	Beryllium		0.33	mg/kg	U	7/2/97
SJS05-SB04-003	MCYAN	Cadmium		0.16	mg/kg	U	7/2/97
SJS05-SB04-003	MCYAN	Calcium	1390	28.55	mg/kg	J	7/2/97
SJS05-SB04-003	MCYAN	Chromium	8.7	2.3	mg/kg		7/2/97
SJS05-SB04-003	MCYAN	Cobalt		2.63	mg/kg	U	7/2/97
SJS05-SB04-003	MCYAN	Copper	5	1.97	mg/kg	B	7/2/97
SJS05-SB04-003	MCYAN	Cyanide		0.85	mg/kg	U	7/3/97
SJS05-SB04-003	MCYAN	Iron	6130	5.58	mg/kg	J	7/2/97
SJS05-SB04-003	MCYAN	Lead	9.5	0.33	mg/kg	K	7/2/97
SJS05-SB04-003	MCYAN	Magnesium	1210	59.4	mg/kg	J	7/2/97
SJS05-SB04-003	MCYAN	Manganese	76.1	0.66	mg/kg	J	7/2/97
SJS05-SB04-003	MCYAN	Mercury		0.08	mg/kg	U	6/30/97
SJS05-SB04-003	MCYAN	Nickel		2.3	mg/kg	U	7/2/97
SJS05-SB04-003	MCYAN	Potassium	584	72.85	mg/kg	J	7/2/97
SJS05-SB04-003	MCYAN	Selenium		0.98	mg/kg	U	7/3/97
SJS05-SB04-003	MCYAN	Silver	0.4	0.33	mg/kg	L	7/2/97
SJS05-SB04-003	MCYAN	Sodium	975	19.03	mg/kg	J	7/2/97
SJS05-SB04-003	MCYAN	Thallium		0.66	mg/kg	U	7/2/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS05-SB04-003	IMCYAN	Vanadium	11.1	2.95	mg/kg	J	7/
SJS05-SB04-003	IMCYAN	Zinc	12.2	1.64	mg/kg	B	7
SJS05-SB04-003	PSPCB	4,4'-DDD		4.6	ug/kg	U	7/14/97
SJS05-SB04-003	PSPCB	4,4'-DDE		4.6	ug/kg	U	7/14/97
SJS05-SB04-003	PSPCB	4,4'-DDT		4.6	ug/kg	U	7/14/97
SJS05-SB04-003	PSPCB	Aldrin		2.4	ug/kg	U	7/14/97
SJS05-SB04-003	PSPCB	alpha-BHC		2.4	ug/kg	U	7/14/97
SJS05-SB04-003	PSPCB	alpha-Chlordane		2.4	ug/kg	U	7/14/97
SJS05-SB04-003	PSPCB	Aroclor-1016		46	ug/kg	U	7/14/97
SJS05-SB04-003	PSPCB	Aroclor-1221		93	ug/kg	U	7/14/97
SJS05-SB04-003	PSPCB	Aroclor-1232		46	ug/kg	U	7/14/97
SJS05-SB04-003	PSPCB	Aroclor-1242		46	ug/kg	U	7/14/97
SJS05-SB04-003	PSPCB	Aroclor-1248		46	ug/kg	U	7/14/97
SJS05-SB04-003	PSPCB	Aroclor-1254		46	ug/kg	U	7/14/97
SJS05-SB04-003	PSPCB	Aroclor-1260		46	ug/kg	U	7/14/97
SJS05-SB04-003	PSPCB	beta-BHC		2.4	ug/kg	U	7/14/97
SJS05-SB04-003	PSPCB	delta-BHC		2.4	ug/kg	U	7/14/97
SJS05-SB04-003	PSPCB	Dieldrin		4.6	ug/kg	U	7/14/97
SJS05-SB04-003	PSPCB	Endosulfan I		2.4	ug/kg	U	7/14/97
SJS05-SB04-003	PSPCB	Endosulfan II		4.6	ug/kg	U	7/14/97
SJS05-SB04-003	PSPCB	Endosulfan Sulfate		4.6	ug/kg	U	7/14/97
SJS05-SB04-003	PSPCB	Endrin		4.6	ug/kg	U	7/14/97
SJS05-SB04-003	PSPCB	Endrin Aldehyde		4.6	ug/kg	U	7/14/97
SJS05-SB04-003	PSPCB	Endrin Ketone		4.6	ug/kg	U	7/14/97
SJS05-SB04-003	PSPCB	gamma-BHC		2.4	ug/kg	U	7/14/97
SJS05-SB04-003	PSPCB	gamma-Chlordane		2.4	ug/kg	U	7/14/97
SJS05-SB04-003	PSPCB	Heptachlor		2.4	ug/kg	U	7/14/97
SJS05-SB04-003	PSPCB	Heptachlor Epoxide		2.4	ug/kg	U	7/14/97
SJS05-SB04-003	PSPCB	Methoxychlor		24	ug/kg	U	7/14/97
SJS05-SB04-003	PSPCB	Toxaphene		240	ug/kg	U	7/1
SJS05-SB04-003	SVTCL	1,2,4-Trichlorobenzene		460	ug/kg	UJ	7/1
SJS05-SB04-003	SVTCL	1,2-Dichlorobenzene		460	ug/kg	UJ	7/17/97
SJS05-SB04-003	SVTCL	1,3-Dichlorobenzene		460	ug/kg	UJ	7/17/97
SJS05-SB04-003	SVTCL	1,4-Dichlorobenzene		460	ug/kg	UJ	7/17/97
SJS05-SB04-003	SVTCL	2,2'-oxybis(1-Chloropropane		460	ug/kg	UJ	7/17/97
SJS05-SB04-003	SVTCL	2,4,5-Trichlorophenol		1200	ug/kg	UJ	7/17/97
SJS05-SB04-003	SVTCL	2,4,6-Trichlorophenol		460	ug/kg	UJ	7/17/97
SJS05-SB04-003	SVTCL	2,4-Dichlorophenol		460	ug/kg	UJ	7/17/97
SJS05-SB04-003	SVTCL	2,4-Dimethylphenol		460	ug/kg	UJ	7/17/97
SJS05-SB04-003	SVTCL	2,4-Dinitrophenol		1200	ug/kg	UJ	7/17/97
SJS05-SB04-003	SVTCL	2,4-Dinitrotoluene		460	ug/kg	UJ	7/17/97
SJS05-SB04-003	SVTCL	2,6-Dinitrotoluene		460	ug/kg	UJ	7/17/97
SJS05-SB04-003	SVTCL	2-Chloronaphthalene		460	ug/kg	UJ	7/17/97
SJS05-SB04-003	SVTCL	2-Chlorophenol		460	ug/kg	UJ	7/17/97
SJS05-SB04-003	SVTCL	2-Methylnaphthalene		460	ug/kg	UJ	7/17/97
SJS05-SB04-003	SVTCL	2-Methylphenol		460	ug/kg	UJ	7/17/97
SJS05-SB04-003	SVTCL	2-Nitroaniline		1200	ug/kg	UJ	7/17/97
SJS05-SB04-003	SVTCL	2-Nitrophenol		460	ug/kg	UJ	7/17/97
SJS05-SB04-003	SVTCL	3,3'-Dichlorobenzidine		460	ug/kg	UJ	7/17/97
SJS05-SB04-003	SVTCL	3-Nitroaniline		1200	ug/kg	UJ	7/17/97
SJS05-SB04-003	SVTCL	4,6-Dinitro-2-Methylphenol		1200	ug/kg	UJ	7/17/97
SJS05-SB04-003	SVTCL	4-Bromophenyl phenylether		460	ug/kg	UJ	7/17/97
SJS05-SB04-003	SVTCL	4-Chloro-3-Methylphenol		460	ug/kg	UJ	7/17/97
SJS05-SB04-003	SVTCL	4-Chloroaniline		460	ug/kg	UJ	7/17/97
SJS05-SB04-003	SVTCL	4-Chlorophenyl-phenylether		460	ug/kg	UJ	7/17/97
SJS05-SB04-003	SVTCL	4-Methylphenol		460	ug/kg	UJ	7/17/97
SJS05-SB04-003	SVTCL	4-Nitroaniline		1200	ug/kg	UJ	7/17/97
SJS05-SB04-003	SVTCL	4-Nitrophenol		1200	ug/kg	UJ	7/17/97
SJS05-SB04-003	SVTCL	Acenaphthene		460	ug/kg	UJ	7/1
SJS05-SB04-003	SVTCL	Acenaphthylene		460	ug/kg	UJ	7/1

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS05-SB04-003	SVTCL	Anthracene		460	ug/kg	UJ	7/17/97
SJS05-SB04-003	SVTCL	Benzo(a)Anthracene		460	ug/kg	UJ	7/17/97
SJS05-SB04-003	SVTCL	Benzo(a)Pyrene		460	ug/kg	UJ	7/17/97
SJS05-SB04-003	SVTCL	Benzo(b)Fluoranthene		460	ug/kg	UJ	7/17/97
SJS05-SB04-003	SVTCL	Benzo(g,h,i)Perylene		460	ug/kg	UJ	7/17/97
SJS05-SB04-003	SVTCL	Benzo(k)Fluoranthene		460	ug/kg	UJ	7/17/97
SJS05-SB04-003	SVTCL	Bis(2-chloroethoxy)Methane		460	ug/kg	UJ	7/17/97
SJS05-SB04-003	SVTCL	Bis(2-chloroethyl)Ether		460	ug/kg	UJ	7/17/97
SJS05-SB04-003	SVTCL	Bis(2-Ethylhexyl)Phthalate	79	460	ug/kg	B	7/17/97
SJS05-SB04-003	SVTCL	Butylbenzylphthalate		460	ug/kg	UJ	7/17/97
SJS05-SB04-003	SVTCL	Carbazole		460	ug/kg	UJ	7/17/97
SJS05-SB04-003	SVTCL	Chrysene		460	ug/kg	UJ	7/17/97
SJS05-SB04-003	SVTCL	Di-n-Butylphthalate		460	ug/kg	UJ	7/17/97
SJS05-SB04-003	SVTCL	Di-n-Octyl Phthalate		460	ug/kg	UJ	7/17/97
SJS05-SB04-003	SVTCL	Dibenz(a,h)Anthracene		460	ug/kg	UJ	7/17/97
SJS05-SB04-003	SVTCL	Dibenzofuran		460	ug/kg	UJ	7/17/97
SJS05-SB04-003	SVTCL	Diethylphthalate		460	ug/kg	UJ	7/17/97
SJS05-SB04-003	SVTCL	Dimethyl Phthalate		460	ug/kg	UJ	7/17/97
SJS05-SB04-003	SVTCL	Fluoranthene	59	460	ug/kg	J	7/17/97
SJS05-SB04-003	SVTCL	Fluorene		460	ug/kg	UJ	7/17/97
SJS05-SB04-003	SVTCL	Hexachlorobenzene		460	ug/kg	UJ	7/17/97
SJS05-SB04-003	SVTCL	Hexachlorobutadiene		460	ug/kg	UJ	7/17/97
SJS05-SB04-003	SVTCL	Hexachlorocyclopentadien		460	ug/kg	UJ	7/17/97
SJS05-SB04-003	SVTCL	Hexachloroethane		460	ug/kg	UJ	7/17/97
SJS05-SB04-003	SVTCL	Indeno(1,2,3-cd)Pyrene		460	ug/kg	UJ	7/17/97
SJS05-SB04-003	SVTCL	Isophorone		460	ug/kg	UJ	7/17/97
SJS05-SB04-003	SVTCL	N-Nitroso-Di-n-Propylamine		460	ug/kg	UJ	7/17/97
SJS05-SB04-003	SVTCL	N-Nitrosodiphenylamine		460	ug/kg	UJ	7/17/97
SJS05-SB04-003	SVTCL	Naphthalene		460	ug/kg	UJ	7/17/97
SJS05-SB04-003	SVTCL	Nitrobenzene		460	ug/kg	UJ	7/17/97
SJS05-SB04-003	SVTCL	Pentachlorophenol		1200	ug/kg	UJ	7/17/97
SJS05-SB04-003	SVTCL	Phenanthrene		460	ug/kg	UJ	7/17/97
SJS05-SB04-003	SVTCL	Phenol		460	ug/kg	UJ	7/17/97
SJS05-SB04-003	SVTCL	Pyrene		460	ug/kg	UJ	7/17/97
SJS05-SB04-003	VCTCL	1,1,1-Trichloroethane		12	ug/kg	U	7/1/97
SJS05-SB04-003	VCTCL	1,1,2,2-Tetrachloroethane		12	ug/kg	U	7/1/97
SJS05-SB04-003	VCTCL	1,1,2-Trichloroethane		12	ug/kg	U	7/1/97
SJS05-SB04-003	VCTCL	1,1-Dichloroethane		12	ug/kg	U	7/1/97
SJS05-SB04-003	VCTCL	1,1-Dichloroethene		12	ug/kg	U	7/1/97
SJS05-SB04-003	VCTCL	1,2-Dichloroethane		12	ug/kg	U	7/1/97
SJS05-SB04-003	VCTCL	1,2-Dichloroethene (total)		12	ug/kg	U	7/1/97
SJS05-SB04-003	VCTCL	1,2-Dichloropropane		12	ug/kg	U	7/1/97
SJS05-SB04-003	VCTCL	2-Butanone		12	ug/kg	U	7/1/97
SJS05-SB04-003	VCTCL	2-Hexanone		12	ug/kg	U	7/1/97
SJS05-SB04-003	VCTCL	4-Methyl-2-Pentanone		12	ug/kg	U	7/1/97
SJS05-SB04-003	VCTCL	Acetone	120	12	ug/kg	B	7/1/97
SJS05-SB04-003	VCTCL	Benzene		12	ug/kg	U	7/1/97
SJS05-SB04-003	VCTCL	Bromodichloromethane		12	ug/kg	U	7/1/97
SJS05-SB04-003	VCTCL	Bromoform		12	ug/kg	U	7/1/97
SJS05-SB04-003	VCTCL	Bromomethane		12	ug/kg	U	7/1/97
SJS05-SB04-003	VCTCL	Carbon Disulfide	2	12	ug/kg	J	7/1/97
SJS05-SB04-003	VCTCL	Carbon Tetrachloride		12	ug/kg	U	7/1/97
SJS05-SB04-003	VCTCL	Chlorobenzene		12	ug/kg	U	7/1/97
SJS05-SB04-003	VCTCL	Chloroethane		12	ug/kg	U	7/1/97
SJS05-SB04-003	VCTCL	Chloroform		12	ug/kg	U	7/1/97
SJS05-SB04-003	VCTCL	Chloromethane		12	ug/kg	U	7/1/97
SJS05-SB04-003	VCTCL	cis-1,3-Dichloropropene		12	ug/kg	U	7/1/97
SJS05-SB04-003	VCTCL	Dibromochloromethane		12	ug/kg	U	7/1/97
SJS05-SB04-003	VCTCL	Ethylbenzene		12	ug/kg	U	7/1/97
SJS05-SB04-003	VCTCL	Methylene Chloride	78	12	ug/kg	B	7/1/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS05-SB04-003	VCTCL	Styrene		12	ug/kg	U	7/1
SJS05-SB04-003	VCTCL	Tetrachloroethene		12	ug/kg	U	7
SJS05-SB04-003	VCTCL	Toluene		12	ug/kg	U	7/1/97
SJS05-SB04-003	VCTCL	Total Xylenes		12	ug/kg	U	7/1/97
SJS05-SB04-003	VCTCL	Trans-1,3-Dichloropropene		12	ug/kg	U	7/1/97
SJS05-SB04-003	VCTCL	Trichloroethene		12	ug/kg	U	7/1/97
SJS05-SB04-003	VCTCL	Vinyl Chloride		12	ug/kg	U	7/1/97
SJS05-SB05-000	CTOTP	Total Phosphorous (as P)		1.6	mg/kg	U	7/16/97
SJS05-SB05-000	MCYAN	Aluminum	11300	10.76	mg/kg		7/8/97
SJS05-SB05-000	MCYAN	Antimony	0.79	0.49	mg/kg	J	7/9/97
SJS05-SB05-000	MCYAN	Arsenic	9	0.73	mg/kg		7/9/97
SJS05-SB05-000	MCYAN	Barium	85.2	0.49	mg/kg		7/8/97
SJS05-SB05-000	MCYAN	Beryllium	0.39	0.24	mg/kg	J	7/8/97
SJS05-SB05-000	MCYAN	Cadmium		0.12	mg/kg	U	7/9/97
SJS05-SB05-000	MCYAN	Calcium	364	21.27	mg/kg	B	7/8/97
SJS05-SB05-000	MCYAN	Chromium	24.3	1.71	mg/kg		7/8/97
SJS05-SB05-000	MCYAN	Cobalt	3.9	1.96	mg/kg	J	7/8/97
SJS05-SB05-000	MCYAN	Copper	25	1.47	mg/kg		7/8/97
SJS05-SB05-000	MCYAN	Cyanide		0.67	mg/kg	U	7/3/97
SJS05-SB05-000	MCYAN	Iron	23700	4.16	mg/kg		7/8/97
SJS05-SB05-000	MCYAN	Lead	89.2	0.24	mg/kg		7/9/97
SJS05-SB05-000	MCYAN	Magnesium	1820	44.25	mg/kg		7/8/97
SJS05-SB05-000	MCYAN	Manganese	68.5	0.49	mg/kg		7/8/97
SJS05-SB05-000	MCYAN	Mercury	0.22	0.07	mg/kg		7/10/97
SJS05-SB05-000	MCYAN	Nickel	7.5	1.71	mg/kg	J	7/8/97
SJS05-SB05-000	MCYAN	Potassium	1870	54.27	mg/kg		7/8/97
SJS05-SB05-000	MCYAN	Selenium		0.73	mg/kg	U	7/9/97
SJS05-SB05-000	MCYAN	Silver	1	0.24	mg/kg	B	7/9/97
SJS05-SB05-000	MCYAN	Sodium	197	14.18	mg/kg	B	7/8/97
SJS05-SB05-000	MCYAN	Thallium	1.5	0.49	mg/kg	J	7/
SJS05-SB05-000	MCYAN	Vanadium	31.7	2.2	mg/kg		7/
SJS05-SB05-000	MCYAN	Zinc	63.3	1.22	mg/kg		7/8/97
SJS05-SB05-000	PSPCB	4,4'-DDD	33	5.3	ug/kg	J	7/21/97
SJS05-SB05-000	PSPCB	4,4'-DDE	310	53	ug/kg		7/21/97
SJS05-SB05-000	PSPCB	4,4'-DDT	620	53	ug/kg		7/21/97
SJS05-SB05-000	PSPCB	Aldrin		2.7	ug/kg	U	7/21/97
SJS05-SB05-000	PSPCB	alpha-BHC		2.7	ug/kg	U	7/21/97
SJS05-SB05-000	PSPCB	alpha-Chlordane		2.7	ug/kg	U	7/21/97
SJS05-SB05-000	PSPCB	Aroclor-1016		53	ug/kg	U	7/21/97
SJS05-SB05-000	PSPCB	Aroclor-1221		110	ug/kg	U	7/21/97
SJS05-SB05-000	PSPCB	Aroclor-1232		53	ug/kg	U	7/21/97
SJS05-SB05-000	PSPCB	Aroclor-1242		53	ug/kg	U	7/21/97
SJS05-SB05-000	PSPCB	Aroclor-1248		53	ug/kg	U	7/21/97
SJS05-SB05-000	PSPCB	Aroclor-1254		53	ug/kg	U	7/21/97
SJS05-SB05-000	PSPCB	Aroclor-1260		53	ug/kg	U	7/21/97
SJS05-SB05-000	PSPCB	beta-BHC		2.7	ug/kg	U	7/21/97
SJS05-SB05-000	PSPCB	delta-BHC		2.7	ug/kg	U	7/21/97
SJS05-SB05-000	PSPCB	Dieldrin		5.3	ug/kg	U	7/21/97
SJS05-SB05-000	PSPCB	Endosulfan I		2.7	ug/kg	U	7/21/97
SJS05-SB05-000	PSPCB	Endosulfan II		5.3	ug/kg	U	7/21/97
SJS05-SB05-000	PSPCB	Endosulfan Sulfate		5.3	ug/kg	U	7/21/97
SJS05-SB05-000	PSPCB	Endrin		5.3	ug/kg	U	7/21/97
SJS05-SB05-000	PSPCB	Endrin Aldehyde		5.3	ug/kg	U	7/21/97
SJS05-SB05-000	PSPCB	Endrin Ketone		5.3	ug/kg	U	7/21/97
SJS05-SB05-000	PSPCB	gamma-BHC		2.7	ug/kg	U	7/21/97
SJS05-SB05-000	PSPCB	gamma-Chlordane		2.7	ug/kg	U	7/21/97
SJS05-SB05-000	PSPCB	Heptachlor		2.7	ug/kg	U	7/21/97
SJS05-SB05-000	PSPCB	Heptachlor Epoxide		2.7	ug/kg	U	7/21/97
SJS05-SB05-000	PSPCB	Methoxychlor		27	ug/kg	U	7/2
SJS05-SB05-000	PSPCB	Toxaphene		270	ug/kg	U	7/2.

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS05-SB05-000	SVTCL	1,2,4-Trichlorobenzene		530	ug/kg	U	7/10/97
SJS05-SB05-000	SVTCL	1,2-Dichlorobenzene		530	ug/kg	U	7/10/97
SJS05-SB05-000	SVTCL	1,3-Dichlorobenzene		530	ug/kg	U	7/10/97
SJS05-SB05-000	SVTCL	1,4-Dichlorobenzene		530	ug/kg	U	7/10/97
SJS05-SB05-000	SVTCL	2,2'-oxybis(1-Chloropropane		530	ug/kg	U	7/10/97
SJS05-SB05-000	SVTCL	2,4,5-Trichlorophenol		1300	ug/kg	U	7/10/97
SJS05-SB05-000	SVTCL	2,4,6-Trichlorophenol		530	ug/kg	U	7/10/97
SJS05-SB05-000	SVTCL	2,4-Dichlorophenol		530	ug/kg	U	7/10/97
SJS05-SB05-000	SVTCL	2,4-Dimethylphenol		530	ug/kg	U	7/10/97
SJS05-SB05-000	SVTCL	2,4-Dinitrophenol		1300	ug/kg	U	7/10/97
SJS05-SB05-000	SVTCL	2,4-Dinitrotoluene		530	ug/kg	U	7/10/97
SJS05-SB05-000	SVTCL	2,6-Dinitrotoluene		530	ug/kg	U	7/10/97
SJS05-SB05-000	SVTCL	2-Chloronaphthalene		530	ug/kg	U	7/10/97
SJS05-SB05-000	SVTCL	2-Chlorophenol		530	ug/kg	U	7/10/97
SJS05-SB05-000	SVTCL	2-Methylnaphthalene		530	ug/kg	U	7/10/97
SJS05-SB05-000	SVTCL	2-Methylphenol		530	ug/kg	U	7/10/97
SJS05-SB05-000	SVTCL	2-Nitroaniline		1300	ug/kg	U	7/10/97
SJS05-SB05-000	SVTCL	2-Nitrophenol		530	ug/kg	U	7/10/97
SJS05-SB05-000	SVTCL	3,3'-Dichlorobenzidine		530	ug/kg	U	7/10/97
SJS05-SB05-000	SVTCL	3-Nitroaniline		1300	ug/kg	U	7/10/97
SJS05-SB05-000	SVTCL	4,6-Dinitro-2-Methylphenol		1300	ug/kg	U	7/10/97
SJS05-SB05-000	SVTCL	4-Bromophenyl phenylether		530	ug/kg	U	7/10/97
SJS05-SB05-000	SVTCL	4-Chloro-3-Methylphenol		530	ug/kg	U	7/10/97
SJS05-SB05-000	SVTCL	4-Chloroaniline		530	ug/kg	U	7/10/97
SJS05-SB05-000	SVTCL	4-Chlorophenyl-phenylether		530	ug/kg	U	7/10/97
SJS05-SB05-000	SVTCL	4-Methylphenol		530	ug/kg	U	7/10/97
SJS05-SB05-000	SVTCL	4-Nitroaniline		1300	ug/kg	U	7/10/97
SJS05-SB05-000	SVTCL	4-Nitrophenol		1300	ug/kg	U	7/10/97
SJS05-SB05-000	SVTCL	Acenaphthene		530	ug/kg	U	7/10/97
SJS05-SB05-000	SVTCL	Acenaphthylene		530	ug/kg	U	7/10/97
SJS05-SB05-000	SVTCL	Anthracene		530	ug/kg	U	7/10/97
SJS05-SB05-000	SVTCL	Benzo(a)Anthracene	130	530	ug/kg	J	7/10/97
SJS05-SB05-000	SVTCL	Benzo(a)Pyrene	82	530	ug/kg	J	7/10/97
SJS05-SB05-000	SVTCL	Benzo(b)Fluoranthene	300	530	ug/kg	J	7/10/97
SJS05-SB05-000	SVTCL	Benzo(g,h,i)Perylene	85	530	ug/kg	J	7/10/97
SJS05-SB05-000	SVTCL	Benzo(k)Fluoranthene	120	530	ug/kg	J	7/10/97
SJS05-SB05-000	SVTCL	Bis(2-chloroethoxy)Methane		530	ug/kg	U	7/10/97
SJS05-SB05-000	SVTCL	Bis(2-chloroethyl)Ether		530	ug/kg	U	7/10/97
SJS05-SB05-000	SVTCL	Bis(2-Ethylhexyl)Phthalate		530	ug/kg	U	7/10/97
SJS05-SB05-000	SVTCL	Butylbenzylphthalate		530	ug/kg	U	7/10/97
SJS05-SB05-000	SVTCL	Carbazole		530	ug/kg	U	7/10/97
SJS05-SB05-000	SVTCL	Chrysene	230	530	ug/kg	J	7/10/97
SJS05-SB05-000	SVTCL	Di-n-Butylphthalate		530	ug/kg	U	7/10/97
SJS05-SB05-000	SVTCL	Di-n-Octyl Phthalate		530	ug/kg	U	7/10/97
SJS05-SB05-000	SVTCL	Dibenz(a,h)Anthracene		530	ug/kg	U	7/10/97
SJS05-SB05-000	SVTCL	Dibenzofuran		530	ug/kg	U	7/10/97
SJS05-SB05-000	SVTCL	Diethylphthalate		530	ug/kg	U	7/10/97
SJS05-SB05-000	SVTCL	Dimethyl Phthalate		530	ug/kg	U	7/10/97
SJS05-SB05-000	SVTCL	Fluoranthene	170	530	ug/kg	J	7/10/97
SJS05-SB05-000	SVTCL	Fluorene		530	ug/kg	U	7/10/97
SJS05-SB05-000	SVTCL	Hexachlorobenzene		530	ug/kg	U	7/10/97
SJS05-SB05-000	SVTCL	Hexachlorobutadiene		530	ug/kg	U	7/10/97
SJS05-SB05-000	SVTCL	Hexachlorocyclopentadien		530	ug/kg	U	7/10/97
SJS05-SB05-000	SVTCL	Hexachloroethane		530	ug/kg	U	7/10/97
SJS05-SB05-000	SVTCL	Indeno(1,2,3-cd)Pyrene	120	530	ug/kg	J	7/10/97
SJS05-SB05-000	SVTCL	Isophorone		530	ug/kg	U	7/10/97
SJS05-SB05-000	SVTCL	N-Nitroso-Di-n-Propylamine		530	ug/kg	U	7/10/97
SJS05-SB05-000	SVTCL	N-Nitrosodiphenylamine		530	ug/kg	U	7/10/97
SJS05-SB05-000	SVTCL	Naphthalene		530	ug/kg	U	7/10/97
SJS05-SB05-000	SVTCL	Nitrobenzene		530	ug/kg	U	7/10/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS05-SB05-000	SVTCL	Pentachlorophenol		1300	ug/kg	U	7/[illegible]
SJS05-SB05-000	SVTCL	Phenanthrene		530	ug/kg	U	7[illegible]
SJS05-SB05-000	SVTCL	Phenol		530	ug/kg	U	7/[illegible]
SJS05-SB05-000	SVTCL	Pyrene	120	530	ug/kg	J	7/10/97
SJS05-SB05-000	VCTCL	1,1,1-Trichloroethane		16	ug/kg	U	7/6/97
SJS05-SB05-000	VCTCL	1,1,2,2-Tetrachloroethane		16	ug/kg	U	7/6/97
SJS05-SB05-000	VCTCL	1,1,2-Trichloroethane		16	ug/kg	U	7/6/97
SJS05-SB05-000	VCTCL	1,1-Dichloroethane		16	ug/kg	U	7/6/97
SJS05-SB05-000	VCTCL	1,1-Dichloroethene		16	ug/kg	U	7/6/97
SJS05-SB05-000	VCTCL	1,2-Dichloroethane		16	ug/kg	U	7/6/97
SJS05-SB05-000	VCTCL	1,2-Dichloroethene (total)		16	ug/kg	U	7/6/97
SJS05-SB05-000	VCTCL	1,2-Dichloropropane		16	ug/kg	U	7/6/97
SJS05-SB05-000	VCTCL	2-Butanone		16	ug/kg	U	7/6/97
SJS05-SB05-000	VCTCL	2-Hexanone		16	ug/kg	U	7/6/97
SJS05-SB05-000	VCTCL	4-Methyl-2-Pentanone		16	ug/kg	U	7/6/97
SJS05-SB05-000	VCTCL	Acetone	62	16	ug/kg	B	7/6/97
SJS05-SB05-000	VCTCL	Benzene		16	ug/kg	U	7/6/97
SJS05-SB05-000	VCTCL	Bromodichloromethane		16	ug/kg	U	7/6/97
SJS05-SB05-000	VCTCL	Bromoform		16	ug/kg	U	7/6/97
SJS05-SB05-000	VCTCL	Bromomethane		16	ug/kg	U	7/6/97
SJS05-SB05-000	VCTCL	Carbon Disulfide	9	16	ug/kg	B	7/6/97
SJS05-SB05-000	VCTCL	Carbon Tetrachloride		16	ug/kg	U	7/6/97
SJS05-SB05-000	VCTCL	Chlorobenzene		16	ug/kg	U	7/6/97
SJS05-SB05-000	VCTCL	Chloroethane		16	ug/kg	U	7/6/97
SJS05-SB05-000	VCTCL	Chloroform		16	ug/kg	U	7/6/97
SJS05-SB05-000	VCTCL	Chloromethane		16	ug/kg	U	7/6/97
SJS05-SB05-000	VCTCL	cis-1,3-Dichloropropene		16	ug/kg	U	7/6/97
SJS05-SB05-000	VCTCL	Dibromochloromethane		16	ug/kg	U	7/6/97
SJS05-SB05-000	VCTCL	Ethylbenzene		16	ug/kg	U	7/6/97
SJS05-SB05-000	VCTCL	Methylene Chloride	14	16	ug/kg	J	7[illegible]
SJS05-SB05-000	VCTCL	Styrene		16	ug/kg	U	[illegible]
SJS05-SB05-000	VCTCL	Tetrachloroethene	2	16	ug/kg	J	7/6/97
SJS05-SB05-000	VCTCL	Toluene		16	ug/kg	U	7/6/97
SJS05-SB05-000	VCTCL	Total Xylenes		16	ug/kg	U	7/6/97
SJS05-SB05-000	VCTCL	Trans-1,3-Dichloropropene		16	ug/kg	U	7/6/97
SJS05-SB05-000	VCTCL	Trichloroethene		16	ug/kg	U	7/6/97
SJS05-SB05-000	VCTCL	Vinyl Chloride		16	ug/kg	U	7/6/97
SJS05-SB06-002	CTOTP	Total Phosphorous (as P)	5.2	1.5	mg/kg		7/14/97
SJS05-SB06-002	MCYAN	Aluminum	4660	10.62	mg/kg	J	7/2/97
SJS05-SB06-002	MCYAN	Antimony		0.48	mg/kg	UL	7/2/97
SJS05-SB06-002	MCYAN	Arsenic	2.2	0.72	mg/kg	J	7/2/97
SJS05-SB06-002	MCYAN	Barium	28.2	0.48	mg/kg	J	7/2/97
SJS05-SB06-002	MCYAN	Beryllium		0.24	mg/kg	U	7/2/97
SJS05-SB06-002	MCYAN	Cadmium		0.12	mg/kg	U	7/2/97
SJS05-SB06-002	MCYAN	Calcium	158	21	mg/kg	B	7/2/97
SJS05-SB06-002	MCYAN	Chromium	9	1.69	mg/kg		7/2/97
SJS05-SB06-002	MCYAN	Cobalt	3.1	1.93	mg/kg	J	7/2/97
SJS05-SB06-002	MCYAN	Copper	2	1.45	mg/kg	B	7/2/97
SJS05-SB06-002	MCYAN	Cyanide		0.63	mg/kg	U	7/3/97
SJS05-SB06-002	MCYAN	Iron	5010	4.1	mg/kg	J	7/2/97
SJS05-SB06-002	MCYAN	Lead	3.7	0.24	mg/kg	K	7/2/97
SJS05-SB06-002	MCYAN	Magnesium	478	43.7	mg/kg	J	7/2/97
SJS05-SB06-002	MCYAN	Manganese	17.6	0.48	mg/kg	J	7/2/97
SJS05-SB06-002	MCYAN	Mercury		0.06	mg/kg	U	6/30/97
SJS05-SB06-002	MCYAN	Nickel	4.9	1.69	mg/kg	B	7/2/97
SJS05-SB06-002	MCYAN	Potassium	287	53.59	mg/kg	J	7/2/97
SJS05-SB06-002	MCYAN	Selenium		0.72	mg/kg	U	7/3/97
SJS05-SB06-002	MCYAN	Silver	0.35	0.24	mg/kg	L	7/2/97
SJS05-SB06-002	MCYAN	Sodium	94.2	14	mg/kg	B	7[illegible]
SJS05-SB06-002	MCYAN	Thallium		0.48	mg/kg	U	[illegible]

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS05-SB06-002	IMCYAN	Vanadium	10.5	2.17	mg/kg	J	7/2/97
SJS05-SB06-002	IMCYAN	Zinc	12.2	1.21	mg/kg	B	7/2/97
SJS05-SB06-002	PCDD_S	1,2,3,4,6,7,8-HpCDD	16.2	2.5	pg/g		7/18/97
SJS05-SB06-002	PCDD_S	1,2,3,4,6,7,8-HpCDF		2.5	pg/g	U	7/18/97
SJS05-SB06-002	PCDD_S	1,2,3,4,7,8,9-HpCDF		2.5	pg/g	U	7/18/97
SJS05-SB06-002	PCDD_S	1,2,3,4,7,8-HxCDD		2.5	pg/g	U	7/18/97
SJS05-SB06-002	PCDD_S	1,2,3,4,7,8-HxCDF		2.5	pg/g	U	7/18/97
SJS05-SB06-002	PCDD_S	1,2,3,6,7,8-HxCDD		2.5	pg/g	U	7/18/97
SJS05-SB06-002	PCDD_S	1,2,3,6,7,8-HxCDF		2.5	pg/g	U	7/18/97
SJS05-SB06-002	PCDD_S	1,2,3,7,8,9-HxCDD		2.5	pg/g	U	7/18/97
SJS05-SB06-002	PCDD_S	1,2,3,7,8,9-HxCDF		2.5	pg/g	U	7/18/97
SJS05-SB06-002	PCDD_S	1,2,3,7,8-PeCDD		1	pg/g	U	7/18/97
SJS05-SB06-002	PCDD_S	1,2,3,7,8-PeCDF		1	pg/g	U	7/18/97
SJS05-SB06-002	PCDD_S	2,3,4,6,7,8-HxCDF		2.5	pg/g	U	7/18/97
SJS05-SB06-002	PCDD_S	2,3,4,7,8-PeCDF		1	pg/g	U	7/18/97
SJS05-SB06-002	PCDD_S	2,3,7,8-TCDD		1	pg/g	U	7/18/97
SJS05-SB06-002	PCDD_S	2,3,7,8-TCDF		1	pg/g	U	7/18/97
SJS05-SB06-002	PCDD_S	OCDD	995	5	pg/g		7/18/97
SJS05-SB06-002	PCDD_S	OCDF		5	pg/g	U	7/18/97
SJS05-SB06-002	PCDD_S	TOTAL HpCDD	99.4	2.5	pg/g		7/18/97
SJS05-SB06-002	PCDD_S	TOTAL HpCDF		2.5	pg/g	U	7/18/97
SJS05-SB06-002	PCDD_S	TOTAL HxCDD	20.4	2.5	pg/g		7/18/97
SJS05-SB06-002	PCDD_S	TOTAL HxCDF		2.5	pg/g	U	7/18/97
SJS05-SB06-002	PCDD_S	TOTAL PeCDD		1	pg/g	U	7/18/97
SJS05-SB06-002	PCDD_S	TOTAL PeCDF		1	pg/g	U	7/18/97
SJS05-SB06-002	PCDD_S	TOTAL TCDD		1	pg/g	U	7/18/97
SJS05-SB06-002	PCDD_S	TOTAL TCDF		1	pg/g	U	7/18/97
SJS05-SB06-002	PCDD_S	TOTAL TEQ	1.16	1	pg/g		7/18/97
SJS05-SB06-002	PSPCB	4,4'-DDD		4.4	ug/kg	U	7/14/97
SJS05-SB06-002	PSPCB	4,4'-DDE		4.4	ug/kg	U	7/14/97
SJS05-SB06-002	PSPCB	4,4'-DDT		4.4	ug/kg	U	7/14/97
SJS05-SB06-002	PSPCB	Aldrin		2.3	ug/kg	U	7/14/97
SJS05-SB06-002	PSPCB	alpha-BHC		2.3	ug/kg	U	7/14/97
SJS05-SB06-002	PSPCB	alpha-Chlordane		2.3	ug/kg	U	7/14/97
SJS05-SB06-002	PSPCB	Aroclor-1016		44	ug/kg	U	7/14/97
SJS05-SB06-002	PSPCB	Aroclor-1221		89	ug/kg	U	7/14/97
SJS05-SB06-002	PSPCB	Aroclor-1232		44	ug/kg	U	7/14/97
SJS05-SB06-002	PSPCB	Aroclor-1242		44	ug/kg	U	7/14/97
SJS05-SB06-002	PSPCB	Aroclor-1248		44	ug/kg	U	7/14/97
SJS05-SB06-002	PSPCB	Aroclor-1254		44	ug/kg	U	7/14/97
SJS05-SB06-002	PSPCB	Aroclor-1260		44	ug/kg	U	7/14/97
SJS05-SB06-002	PSPCB	beta-BHC		2.3	ug/kg	U	7/14/97
SJS05-SB06-002	PSPCB	delta-BHC		2.3	ug/kg	U	7/14/97
SJS05-SB06-002	PSPCB	Dieldrin		4.4	ug/kg	U	7/14/97
SJS05-SB06-002	PSPCB	Endosulfan I		2.3	ug/kg	U	7/14/97
SJS05-SB06-002	PSPCB	Endosulfan II		4.4	ug/kg	U	7/14/97
SJS05-SB06-002	PSPCB	Endosulfan Sulfate		4.4	ug/kg	U	7/14/97
SJS05-SB06-002	PSPCB	Endrin		4.4	ug/kg	U	7/14/97
SJS05-SB06-002	PSPCB	Endrin Aldehyde		4.4	ug/kg	U	7/14/97
SJS05-SB06-002	PSPCB	Endrin Ketone		4.4	ug/kg	U	7/14/97
SJS05-SB06-002	PSPCB	gamma-BHC		2.3	ug/kg	U	7/14/97
SJS05-SB06-002	PSPCB	gamma-Chlordane		2.3	ug/kg	U	7/14/97
SJS05-SB06-002	PSPCB	Heptachlor		2.3	ug/kg	U	7/14/97
SJS05-SB06-002	PSPCB	Heptachlor Epoxide		2.3	ug/kg	U	7/14/97
SJS05-SB06-002	PSPCB	Methoxychlor		23	ug/kg	U	7/14/97
SJS05-SB06-002	PSPCB	Toxaphene		230	ug/kg	U	7/14/97
SJS05-SB06-002	SVTCL	1,2,4-Trichlorobenzene		440	ug/kg	UJ	7/18/97
SJS05-SB06-002	SVTCL	1,2-Dichlorobenzene		440	ug/kg	UJ	7/18/97
SJS05-SB06-002	SVTCL	1,3-Dichlorobenzene		440	ug/kg	UJ	7/18/97
SJS05-SB06-002	SVTCL	1,4-Dichlorobenzene		440	ug/kg	UJ	7/18/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS05-SB06-002	SVTCL	2,2'-oxybis(1-Chloropropane		440	ug/kg	UJ	7/
SJS05-SB06-002	SVTCL	2,4,5-Trichlorophenol		1100	ug/kg	UJ	7/
SJS05-SB06-002	SVTCL	2,4,6-Trichlorophenol		440	ug/kg	UJ	7/18/97
SJS05-SB06-002	SVTCL	2,4-Dichlorophenol		440	ug/kg	UJ	7/18/97
SJS05-SB06-002	SVTCL	2,4-Dimethylphenol		440	ug/kg	UJ	7/18/97
SJS05-SB06-002	SVTCL	2,4-Dinitrophenol		1100	ug/kg	UJ	7/18/97
SJS05-SB06-002	SVTCL	2,4-Dinitrotoluene		440	ug/kg	UJ	7/18/97
SJS05-SB06-002	SVTCL	2,6-Dinitrotoluene		440	ug/kg	UJ	7/18/97
SJS05-SB06-002	SVTCL	2-Chloronaphthalene		440	ug/kg	UJ	7/18/97
SJS05-SB06-002	SVTCL	2-Chlorophenol		440	ug/kg	UJ	7/18/97
SJS05-SB06-002	SVTCL	2-Methylnaphthalene		440	ug/kg	UJ	7/18/97
SJS05-SB06-002	SVTCL	2-Methylphenol		440	ug/kg	UJ	7/18/97
SJS05-SB06-002	SVTCL	2-Nitroaniline		1100	ug/kg	UJ	7/18/97
SJS05-SB06-002	SVTCL	2-Nitrophenol		440	ug/kg	UJ	7/18/97
SJS05-SB06-002	SVTCL	3,3'-Dichlorobenzidine		440	ug/kg	UJ	7/18/97
SJS05-SB06-002	SVTCL	3-Nitroaniline		1100	ug/kg	UJ	7/18/97
SJS05-SB06-002	SVTCL	4,6-Dinitro-2-Methylphenol		1100	ug/kg	UJ	7/18/97
SJS05-SB06-002	SVTCL	4-Bromophenyl phenylether		440	ug/kg	UJ	7/18/97
SJS05-SB06-002	SVTCL	4-Chloro-3-Methylphenol		440	ug/kg	UJ	7/18/97
SJS05-SB06-002	SVTCL	4-Chloroaniline		440	ug/kg	UJ	7/18/97
SJS05-SB06-002	SVTCL	4-Chlorophenyl-phenylether		440	ug/kg	UJ	7/18/97
SJS05-SB06-002	SVTCL	4-Methylphenol		440	ug/kg	UJ	7/18/97
SJS05-SB06-002	SVTCL	4-Nitroaniline		1100	ug/kg	UJ	7/18/97
SJS05-SB06-002	SVTCL	4-Nitrophenol		1100	ug/kg	UJ	7/18/97
SJS05-SB06-002	SVTCL	Acenaphthene		440	ug/kg	UJ	7/18/97
SJS05-SB06-002	SVTCL	Acenaphthylene		440	ug/kg	UJ	7/18/97
SJS05-SB06-002	SVTCL	Anthracene		440	ug/kg	UJ	7/18/97
SJS05-SB06-002	SVTCL	Benzo(a)Anthracene	80	440	ug/kg	J	7/18/97
SJS05-SB06-002	SVTCL	Benzo(a)Pyrene		440	ug/kg	UJ	7/18/97
SJS05-SB06-002	SVTCL	Benzo(b)Fluoranthene		440	ug/kg	UJ	7/1
SJS05-SB06-002	SVTCL	Benzo(g,h,i)Perylene		440	ug/kg	UJ	7/1
SJS05-SB06-002	SVTCL	Benzo(k)Fluoranthene		440	ug/kg	UJ	7/18/97
SJS05-SB06-002	SVTCL	Bis(2-chloroethoxy)Methane		440	ug/kg	UJ	7/18/97
SJS05-SB06-002	SVTCL	Bis(2-chloroethyl)Ether		440	ug/kg	UJ	7/18/97
SJS05-SB06-002	SVTCL	Bis(2-Ethylhexyl)Phthalate	130	440	ug/kg	B	7/18/97
SJS05-SB06-002	SVTCL	Butylbenzylphthalate		440	ug/kg	UJ	7/18/97
SJS05-SB06-002	SVTCL	Carbazole		440	ug/kg	UJ	7/18/97
SJS05-SB06-002	SVTCL	Chrysene	190	440	ug/kg	J	7/18/97
SJS05-SB06-002	SVTCL	Di-n-Butylphthalate		440	ug/kg	UJ	7/18/97
SJS05-SB06-002	SVTCL	Di-n-Octyl Phthalate		440	ug/kg	UJ	7/18/97
SJS05-SB06-002	SVTCL	Dibenz(a,h)Anthracene		440	ug/kg	UJ	7/18/97
SJS05-SB06-002	SVTCL	Dibenzofuran		440	ug/kg	UJ	7/18/97
SJS05-SB06-002	SVTCL	Diethylphthalate		440	ug/kg	UJ	7/18/97
SJS05-SB06-002	SVTCL	Dimethyl Phthalate		440	ug/kg	UJ	7/18/97
SJS05-SB06-002	SVTCL	Fluoranthene	49	440	ug/kg	J	7/18/97
SJS05-SB06-002	SVTCL	Fluorene		440	ug/kg	UJ	7/18/97
SJS05-SB06-002	SVTCL	Hexachlorobenzene		440	ug/kg	UJ	7/18/97
SJS05-SB06-002	SVTCL	Hexachlorobutadiene		440	ug/kg	UJ	7/18/97
SJS05-SB06-002	SVTCL	Hexachlorocyclopentadien		440	ug/kg	UJ	7/18/97
SJS05-SB06-002	SVTCL	Hexachloroethane		440	ug/kg	UJ	7/18/97
SJS05-SB06-002	SVTCL	Indeno(1,2,3-cd)Pyrene		440	ug/kg	UJ	7/18/97
SJS05-SB06-002	SVTCL	Isophorone		440	ug/kg	UJ	7/18/97
SJS05-SB06-002	SVTCL	N-Nitroso-Di-n-Propylamine		440	ug/kg	UJ	7/18/97
SJS05-SB06-002	SVTCL	N-Nitrosodiphenylamine		440	ug/kg	UJ	7/18/97
SJS05-SB06-002	SVTCL	Naphthalene		440	ug/kg	UJ	7/18/97
SJS05-SB06-002	SVTCL	Nitrobenzene		440	ug/kg	UJ	7/18/97
SJS05-SB06-002	SVTCL	Pentachlorophenol		1100	ug/kg	UJ	7/18/97
SJS05-SB06-002	SVTCL	Phenanthrene	71	440	ug/kg	J	7/18/97
SJS05-SB06-002	SVTCL	Phenol		440	ug/kg	UJ	7/
SJS05-SB06-002	SVTCL	Pyrene	330	440	ug/kg	J	7/1

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS05-SB06-002	VCTCL	1,1,1-Trichloroethane		12	ug/kg	U	7/1/97
SJS05-SB06-002	VCTCL	1,1,2,2-Tetrachloroethane		12	ug/kg	U	7/1/97
SJS05-SB06-002	VCTCL	1,1,2-Trichloroethane		12	ug/kg	U	7/1/97
SJS05-SB06-002	VCTCL	1,1-Dichloroethane		12	ug/kg	U	7/1/97
SJS05-SB06-002	VCTCL	1,1-Dichloroethene		12	ug/kg	U	7/1/97
SJS05-SB06-002	VCTCL	1,2-Dichloroethane		12	ug/kg	U	7/1/97
SJS05-SB06-002	VCTCL	1,2-Dichloroethene (total)		12	ug/kg	U	7/1/97
SJS05-SB06-002	VCTCL	1,2-Dichloropropane		12	ug/kg	U	7/1/97
SJS05-SB06-002	VCTCL	2-Butanone		12	ug/kg	U	7/1/97
SJS05-SB06-002	VCTCL	2-Hexanone		12	ug/kg	U	7/1/97
SJS05-SB06-002	VCTCL	4-Methyl-2-Pentanone		12	ug/kg	U	7/1/97
SJS05-SB06-002	VCTCL	Acetone	24	12	ug/kg	B	7/1/97
SJS05-SB06-002	VCTCL	Benzene		12	ug/kg	U	7/1/97
SJS05-SB06-002	VCTCL	Bromodichloromethane		12	ug/kg	U	7/1/97
SJS05-SB06-002	VCTCL	Bromoform		12	ug/kg	U	7/1/97
SJS05-SB06-002	VCTCL	Bromomethane		12	ug/kg	U	7/1/97
SJS05-SB06-002	VCTCL	Carbon Disulfide		12	ug/kg	U	7/1/97
SJS05-SB06-002	VCTCL	Carbon Tetrachloride		12	ug/kg	U	7/1/97
SJS05-SB06-002	VCTCL	Chlorobenzene		12	ug/kg	U	7/1/97
SJS05-SB06-002	VCTCL	Chloroethane		12	ug/kg	U	7/1/97
SJS05-SB06-002	VCTCL	Chloroform		12	ug/kg	U	7/1/97
SJS05-SB06-002	VCTCL	Chloromethane		12	ug/kg	U	7/1/97
SJS05-SB06-002	VCTCL	cis-1,3-Dichloropropene		12	ug/kg	U	7/1/97
SJS05-SB06-002	VCTCL	Dibromochloromethane		12	ug/kg	U	7/1/97
SJS05-SB06-002	VCTCL	Ethylbenzene		12	ug/kg	U	7/1/97
SJS05-SB06-002	VCTCL	Methylene Chloride	57	12	ug/kg	B	7/1/97
SJS05-SB06-002	VCTCL	Styrene		12	ug/kg	U	7/1/97
SJS05-SB06-002	VCTCL	Tetrachloroethene		12	ug/kg	U	7/1/97
SJS05-SB06-002	VCTCL	Toluene		12	ug/kg	U	7/1/97
SJS05-SB06-002	VCTCL	Total Xylenes		12	ug/kg	U	7/1/97
SJS05-SB06-002	VCTCL	Trans-1,3-Dichloropropene		12	ug/kg	U	7/1/97
SJS05-SB06-002	VCTCL	Trichloroethene		12	ug/kg	U	7/1/97
SJS05-SB06-002	VCTCL	Vinyl Chloride		12	ug/kg	U	7/1/97
SJS05-SB07-002	CTOTP	Total Phosphorous (as P)	6.8	2.2	mg/kg		7/14/97
SJS05-SB07-002	MCYAN	Aluminum	21400	15.52	mg/kg	J	7/2/97
SJS05-SB07-002	MCYAN	Antimony		0.71	mg/kg	UL	7/2/97
SJS05-SB07-002	MCYAN	Arsenic	10	1.06	mg/kg		7/2/97
SJS05-SB07-002	MCYAN	Barium	103	0.71	mg/kg		7/2/97
SJS05-SB07-002	MCYAN	Beryllium	1.5	0.35	mg/kg	J	7/2/97
SJS05-SB07-002	MCYAN	Cadmium		0.18	mg/kg	U	7/2/97
SJS05-SB07-002	MCYAN	Calcium	1110	30.69	mg/kg	J	7/2/97
SJS05-SB07-002	MCYAN	Chromium	36.5	2.47	mg/kg		7/2/97
SJS05-SB07-002	MCYAN	Cobalt	8.1	2.82	mg/kg	J	7/2/97
SJS05-SB07-002	MCYAN	Copper	44.8	2.12	mg/kg		7/2/97
SJS05-SB07-002	MCYAN	Cyanide		0.91	mg/kg	U	7/3/97
SJS05-SB07-002	MCYAN	Iron	36000	6	mg/kg	J	7/2/97
SJS05-SB07-002	MCYAN	Lead	269	0.35	mg/kg	K	7/2/97
SJS05-SB07-002	MCYAN	Magnesium	4560	63.84	mg/kg		7/2/97
SJS05-SB07-002	MCYAN	Manganese	234	0.71	mg/kg	J	7/2/97
SJS05-SB07-002	MCYAN	Mercury	0.69	0.08	mg/kg		6/30/97
SJS05-SB07-002	MCYAN	Nickel	14.5	2.47	mg/kg	B	7/2/97
SJS05-SB07-002	MCYAN	Potassium	2960	78.31	mg/kg		7/2/97
SJS05-SB07-002	MCYAN	Selenium		1.06	mg/kg	U	7/3/97
SJS05-SB07-002	MCYAN	Silver	0.65	0.35	mg/kg	L	7/2/97
SJS05-SB07-002	MCYAN	Sodium	1600	20.46	mg/kg	J	7/2/97
SJS05-SB07-002	MCYAN	Thallium		0.71	mg/kg	U	7/2/97
SJS05-SB07-002	MCYAN	Vanadium	41.9	3.17	mg/kg		7/2/97
SJS05-SB07-002	MCYAN	Zinc	63.7	1.76	mg/kg		7/2/97
SJS05-SB07-002	PCDD_S	1,2,3,4,6,7,8-HpCDD	127	2.5	pg/g		7/18/97
SJS05-SB07-002	PCDD_S	1,2,3,4,6,7,8-HpCDF	2.6	2.5	pg/g		7/18/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS05-SB07-002	PCDD_S	1,2,3,4,7,8,9-HpCDF		2.5	pg/g	U	7/18
SJS05-SB07-002	PCDD_S	1,2,3,4,7,8-HxCDD		2.5	pg/g	U	7/
SJS05-SB07-002	PCDD_S	1,2,3,4,7,8-HxCDF		2.5	pg/g	U	7/18/97
SJS05-SB07-002	PCDD_S	1,2,3,6,7,8-HxCDD		2.5	pg/g	U	7/18/97
SJS05-SB07-002	PCDD_S	1,2,3,6,7,8-HxCDF		2.5	pg/g	U	7/18/97
SJS05-SB07-002	PCDD_S	1,2,3,7,8,9-HxCDD	5.32	2.5	pg/g		7/18/97
SJS05-SB07-002	PCDD_S	1,2,3,7,8,9-HxCDF		2.5	pg/g	U	7/18/97
SJS05-SB07-002	PCDD_S	1,2,3,7,8-PeCDD		1	pg/g	U	7/18/97
SJS05-SB07-002	PCDD_S	1,2,3,7,8-PeCDF		1	pg/g	U	7/18/97
SJS05-SB07-002	PCDD_S	2,3,4,6,7,8-HxCDF		2.5	pg/g	U	7/18/97
SJS05-SB07-002	PCDD_S	2,3,4,7,8-PeCDF		1	pg/g	U	7/18/97
SJS05-SB07-002	PCDD_S	2,3,7,8-TCDD		1	pg/g	U	7/18/97
SJS05-SB07-002	PCDD_S	2,3,7,8-TCDF		1	pg/g	U	7/18/97
SJS05-SB07-002	PCDD_S	OCDD	2998	5	pg/g		7/18/97
SJS05-SB07-002	PCDD_S	OCDF	7.14	5	pg/g		7/18/97
SJS05-SB07-002	PCDD_S	TOTAL HpCDD	661	2.5	pg/g		7/18/97
SJS05-SB07-002	PCDD_S	TOTAL HpCDF	2.6	2.5	pg/g		7/18/97
SJS05-SB07-002	PCDD_S	TOTAL HxCDD	168	2.5	pg/g		7/18/97
SJS05-SB07-002	PCDD_S	TOTAL HxCDF		2.5	pg/g	U	7/18/97
SJS05-SB07-002	PCDD_S	TOTAL PeCDD	9.65	1	pg/g		7/18/97
SJS05-SB07-002	PCDD_S	TOTAL PeCDF		1	pg/g	U	7/18/97
SJS05-SB07-002	PCDD_S	TOTAL TCDD	6.83	1	pg/g		7/18/97
SJS05-SB07-002	PCDD_S	TOTAL TCDF		1	pg/g	U	7/18/97
SJS05-SB07-002	PCDD_S	TOTAL TEQ	4.83	1	pg/g		7/18/97
SJS05-SB07-002	PSPCB	4,4'-DDD		4.9	ug/kg	UL	7/14/97
SJS05-SB07-002	PSPCB	4,4'-DDE		4.9	ug/kg	UL	7/14/97
SJS05-SB07-002	PSPCB	4,4'-DDT		4.9	ug/kg	UL	7/14/97
SJS05-SB07-002	PSPCB	Aldrin		2.5	ug/kg	UL	7/14/97
SJS05-SB07-002	PSPCB	alpha-BHC		2.5	ug/kg	UL	7/14/97
SJS05-SB07-002	PSPCB	alpha-Chlordane		2.5	ug/kg	UL	7/1
SJS05-SB07-002	PSPCB	Aroclor-1016		49	ug/kg	UL	7/1
SJS05-SB07-002	PSPCB	Aroclor-1221		100	ug/kg	UL	7/14/97
SJS05-SB07-002	PSPCB	Aroclor-1232		49	ug/kg	UL	7/14/97
SJS05-SB07-002	PSPCB	Aroclor-1242		49	ug/kg	UL	7/14/97
SJS05-SB07-002	PSPCB	Aroclor-1248		49	ug/kg	UL	7/14/97
SJS05-SB07-002	PSPCB	Aroclor-1254		49	ug/kg	UL	7/14/97
SJS05-SB07-002	PSPCB	Aroclor-1260		49	ug/kg	UL	7/14/97
SJS05-SB07-002	PSPCB	beta-BHC		2.5	ug/kg	UL	7/14/97
SJS05-SB07-002	PSPCB	delta-BHC		2.5	ug/kg	UL	7/14/97
SJS05-SB07-002	PSPCB	Dieldrin		4.9	ug/kg	UL	7/14/97
SJS05-SB07-002	PSPCB	Endosulfan I		2.5	ug/kg	UL	7/14/97
SJS05-SB07-002	PSPCB	Endosulfan II		4.9	ug/kg	UL	7/14/97
SJS05-SB07-002	PSPCB	Endosulfan Sulfate		4.9	ug/kg	UL	7/14/97
SJS05-SB07-002	PSPCB	Endrin		4.9	ug/kg	UL	7/14/97
SJS05-SB07-002	PSPCB	Endrin Aldehyde		4.9	ug/kg	UL	7/14/97
SJS05-SB07-002	PSPCB	Endrin Ketone		4.9	ug/kg	UL	7/14/97
SJS05-SB07-002	PSPCB	gamma-BHC		2.5	ug/kg	UL	7/14/97
SJS05-SB07-002	PSPCB	gamma-Chlordane		2.5	ug/kg	UL	7/14/97
SJS05-SB07-002	PSPCB	Heptachlor		2.5	ug/kg	UL	7/14/97
SJS05-SB07-002	PSPCB	Heptachlor Epoxide		2.5	ug/kg	UL	7/14/97
SJS05-SB07-002	PSPCB	Methoxychlor		25	ug/kg	UL	7/14/97
SJS05-SB07-002	PSPCB	Toxaphene		250	ug/kg	UL	7/14/97
SJS05-SB07-002	SVTCL	1,2,4-Trichlorobenzene		490	ug/kg	U	7/3/97
SJS05-SB07-002	SVTCL	1,2-Dichlorobenzene		490	ug/kg	U	7/3/97
SJS05-SB07-002	SVTCL	1,3-Dichlorobenzene		490	ug/kg	U	7/3/97
SJS05-SB07-002	SVTCL	1,4-Dichlorobenzene		490	ug/kg	U	7/3/97
SJS05-SB07-002	SVTCL	2,2'-oxybis(1-Chloropropane		490	ug/kg	U	7/3/97
SJS05-SB07-002	SVTCL	2,4,5-Trichlorophenol		1200	ug/kg	U	7/3/97
SJS05-SB07-002	SVTCL	2,4,6-Trichlorophenol		490	ug/kg	U	7/
SJS05-SB07-002	SVTCL	2,4-Dichlorophenol		490	ug/kg	U	7/

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS05-SB07-002	SVTCL	2,4-Dimethylphenol		490	ug/kg	U	7/3/97
SJS05-SB07-002	SVTCL	2,4-Dinitrophenol		1200	ug/kg	U	7/3/97
SJS05-SB07-002	SVTCL	2,4-Dinitrotoluene		490	ug/kg	U	7/3/97
SJS05-SB07-002	SVTCL	2,6-Dinitrotoluene		490	ug/kg	U	7/3/97
SJS05-SB07-002	SVTCL	2-Chloronaphthalene		490	ug/kg	U	7/3/97
SJS05-SB07-002	SVTCL	2-Chlorophenol		490	ug/kg	U	7/3/97
SJS05-SB07-002	SVTCL	2-Methylnaphthalene		490	ug/kg	U	7/3/97
SJS05-SB07-002	SVTCL	2-Methylphenol		490	ug/kg	U	7/3/97
SJS05-SB07-002	SVTCL	2-Nitroaniline		1200	ug/kg	U	7/3/97
SJS05-SB07-002	SVTCL	2-Nitrophenol		490	ug/kg	U	7/3/97
SJS05-SB07-002	SVTCL	3,3'-Dichlorobenzidine		490	ug/kg	U	7/3/97
SJS05-SB07-002	SVTCL	3-Nitroaniline		1200	ug/kg	U	7/3/97
SJS05-SB07-002	SVTCL	4,6-Dinitro-2-Methylphenol		1200	ug/kg	U	7/3/97
SJS05-SB07-002	SVTCL	4-Bromophenyl phenylether		490	ug/kg	U	7/3/97
SJS05-SB07-002	SVTCL	4-Chloro-3-Methylphenol		490	ug/kg	U	7/3/97
SJS05-SB07-002	SVTCL	4-Chloroaniline		490	ug/kg	U	7/3/97
SJS05-SB07-002	SVTCL	4-Chlorophenyl-phenylether		490	ug/kg	U	7/3/97
SJS05-SB07-002	SVTCL	4-Methylphenol		490	ug/kg	U	7/3/97
SJS05-SB07-002	SVTCL	4-Nitroaniline		1200	ug/kg	U	7/3/97
SJS05-SB07-002	SVTCL	4-Nitrophenol		1200	ug/kg	U	7/3/97
SJS05-SB07-002	SVTCL	Acenaphthene		490	ug/kg	U	7/3/97
SJS05-SB07-002	SVTCL	Acenaphthylene		490	ug/kg	U	7/3/97
SJS05-SB07-002	SVTCL	Anthracene		490	ug/kg	U	7/3/97
SJS05-SB07-002	SVTCL	Benzo(a)Anthracene	68	490	ug/kg	J	7/3/97
SJS05-SB07-002	SVTCL	Benzo(a)Pyrene	120	490	ug/kg	J	7/3/97
SJS05-SB07-002	SVTCL	Benzo(b)Fluoranthene	230	490	ug/kg	J	7/3/97
SJS05-SB07-002	SVTCL	Benzo(g,h,i)Perylene	59	490	ug/kg	J	7/3/97
SJS05-SB07-002	SVTCL	Benzo(k)Fluoranthene	71	490	ug/kg	J	7/3/97
SJS05-SB07-002	SVTCL	Bis(2-chloroethoxy)Methane		490	ug/kg	U	7/3/97
SJS05-SB07-002	SVTCL	Bis(2-chloroethyl)Ether		490	ug/kg	U	7/3/97
SJS05-SB07-002	SVTCL	Bis(2-Ethylhexyl)Phthalate		490	ug/kg	U	7/3/97
SJS05-SB07-002	SVTCL	Butylbenzylphthalate		490	ug/kg	U	7/3/97
SJS05-SB07-002	SVTCL	Carbazole		490	ug/kg	U	7/3/97
SJS05-SB07-002	SVTCL	Chrysene	100	490	ug/kg	J	7/3/97
SJS05-SB07-002	SVTCL	Di-n-Butylphthalate		490	ug/kg	U	7/3/97
SJS05-SB07-002	SVTCL	Di-n-Octyl Phthalate		490	ug/kg	U	7/3/97
SJS05-SB07-002	SVTCL	Dibenz(a,h)Anthracene		490	ug/kg	U	7/3/97
SJS05-SB07-002	SVTCL	Dibenzofuran		490	ug/kg	U	7/3/97
SJS05-SB07-002	SVTCL	Diethylphthalate		490	ug/kg	U	7/3/97
SJS05-SB07-002	SVTCL	Dimethyl Phthalate		490	ug/kg	U	7/3/97
SJS05-SB07-002	SVTCL	Fluoranthene	540	490	ug/kg	J	7/3/97
SJS05-SB07-002	SVTCL	Fluorene		490	ug/kg	U	7/3/97
SJS05-SB07-002	SVTCL	Hexachlorobenzene		490	ug/kg	U	7/3/97
SJS05-SB07-002	SVTCL	Hexachlorobutadiene		490	ug/kg	U	7/3/97
SJS05-SB07-002	SVTCL	Hexachlorocyclopentadien		490	ug/kg	U	7/3/97
SJS05-SB07-002	SVTCL	Hexachloroethane		490	ug/kg	U	7/3/97
SJS05-SB07-002	SVTCL	Indeno(1,2,3-cd)Pyrene	63	490	ug/kg	J	7/3/97
SJS05-SB07-002	SVTCL	Isophorone		490	ug/kg	U	7/3/97
SJS05-SB07-002	SVTCL	N-Nitroso-Di-n-Propylamine		490	ug/kg	U	7/3/97
SJS05-SB07-002	SVTCL	N-Nitrosodiphenylamine		490	ug/kg	U	7/3/97
SJS05-SB07-002	SVTCL	Naphthalene		490	ug/kg	U	7/3/97
SJS05-SB07-002	SVTCL	Nitrobenzene		490	ug/kg	U	7/3/97
SJS05-SB07-002	SVTCL	Pentachlorophenol		1200	ug/kg	U	7/3/97
SJS05-SB07-002	SVTCL	Phenanthrene		490	ug/kg	U	7/3/97
SJS05-SB07-002	SVTCL	Phenol		490	ug/kg	U	7/3/97
SJS05-SB07-002	SVTCL	Pyrene	400	490	ug/kg	J	7/3/97
SJS05-SB07-002	VCTCL	1,1,1-Trichloroethane		20	ug/kg	U	7/5/97
SJS05-SB07-002	VCTCL	1,1,2,2-Tetrachloroethane		20	ug/kg	UJ	7/5/97
SJS05-SB07-002	VCTCL	1,1,2-Trichloroethane		20	ug/kg	U	7/5/97
SJS05-SB07-002	VCTCL	1,1-Dichloroethane		20	ug/kg	U	7/5/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS05-SB07-002	VCTCL	1,1-Dichloroethene		20	ug/kg	U	7
SJS05-SB07-002	VCTCL	1,2-Dichloroethane		20	ug/kg	U	7
SJS05-SB07-002	VCTCL	1,2-Dichloroethene (total)		20	ug/kg	U	7/5/97
SJS05-SB07-002	VCTCL	1,2-Dichloropropane		20	ug/kg	U	7/5/97
SJS05-SB07-002	VCTCL	2-Butanone	83	20	ug/kg		7/5/97
SJS05-SB07-002	VCTCL	2-Hexanone		20	ug/kg	UJ	7/5/97
SJS05-SB07-002	VCTCL	4-Methyl-2-Pentanone		20	ug/kg	UJ	7/5/97
SJS05-SB07-002	VCTCL	Acetone	350	20	ug/kg	B	7/5/97
SJS05-SB07-002	VCTCL	Benzene		20	ug/kg	U	7/5/97
SJS05-SB07-002	VCTCL	Bromodichloromethane		20	ug/kg	U	7/5/97
SJS05-SB07-002	VCTCL	Bromoform		20	ug/kg	U	7/5/97
SJS05-SB07-002	VCTCL	Bromomethane		20	ug/kg	U	7/5/97
SJS05-SB07-002	VCTCL	Carbon Disulfide	17	20	ug/kg	J	7/5/97
SJS05-SB07-002	VCTCL	Carbon Tetrachloride		20	ug/kg	U	7/5/97
SJS05-SB07-002	VCTCL	Chlorobenzene		20	ug/kg	UJ	7/5/97
SJS05-SB07-002	VCTCL	Chloroethane		20	ug/kg	U	7/5/97
SJS05-SB07-002	VCTCL	Chloroform		20	ug/kg	U	7/5/97
SJS05-SB07-002	VCTCL	Chloromethane		20	ug/kg	U	7/5/97
SJS05-SB07-002	VCTCL	cis-1,3-Dichloropropene		20	ug/kg	U	7/5/97
SJS05-SB07-002	VCTCL	Dibromochloromethane		20	ug/kg	U	7/5/97
SJS05-SB07-002	VCTCL	Ethylbenzene		20	ug/kg	UJ	7/5/97
SJS05-SB07-002	VCTCL	Methylene Chloride	23	20	ug/kg	B	7/5/97
SJS05-SB07-002	VCTCL	Styrene		20	ug/kg	UJ	7/5/97
SJS05-SB07-002	VCTCL	Tetrachloroethene		20	ug/kg	UJ	7/5/97
SJS05-SB07-002	VCTCL	Toluene		20	ug/kg	UJ	7/5/97
SJS05-SB07-002	VCTCL	Total Xylenes		20	ug/kg	UJ	7/5/97
SJS05-SB07-002	VCTCL	Trans-1,3-Dichloropropene		20	ug/kg	U	7/5/97
SJS05-SB07-002	VCTCL	Trichloroethene		20	ug/kg	U	7/5/97
SJS05-SB07-002	VCTCL	Vinyl Chloride		20	ug/kg	U	7/5/97
SJS05-SB07-002P	CTOTP	Total Phosphorous (as P)	5.9	2.3	mg/kg		7/
SJS05-SB07-002P	MCYAN	Aluminum	18800	12.14	mg/kg	J	7/
SJS05-SB07-002P	MCYAN	Antimony	0.64	0.55	mg/kg	L	7/2/97
SJS05-SB07-002P	MCYAN	Arsenic	10.9	0.83	mg/kg		7/2/97
SJS05-SB07-002P	MCYAN	Barium	39.8	0.55	mg/kg	J	7/2/97
SJS05-SB07-002P	MCYAN	Beryllium	0.8	0.28	mg/kg	J	7/2/97
SJS05-SB07-002P	MCYAN	Cadmium		0.14	mg/kg	U	7/2/97
SJS05-SB07-002P	MCYAN	Calcium	804	24.01	mg/kg	J	7/2/97
SJS05-SB07-002P	MCYAN	Chromium	35.5	1.93	mg/kg		7/2/97
SJS05-SB07-002P	MCYAN	Cobalt	21.7	2.21	mg/kg		7/2/97
SJS05-SB07-002P	MCYAN	Copper	20.7	1.66	mg/kg		7/2/97
SJS05-SB07-002P	MCYAN	Cyanide		0.91	mg/kg	U	7/3/97
SJS05-SB07-002P	MCYAN	Iron	34900	4.69	mg/kg	J	7/2/97
SJS05-SB07-002P	MCYAN	Lead	48.4	0.28	mg/kg	K	7/2/97
SJS05-SB07-002P	MCYAN	Magnesium	4520	49.95	mg/kg		7/2/97
SJS05-SB07-002P	MCYAN	Manganese	269	0.55	mg/kg	J	7/2/97
SJS05-SB07-002P	MCYAN	Mercury	0.28	0.09	mg/kg		6/30/97
SJS05-SB07-002P	MCYAN	Nickel	30.3	1.93	mg/kg		7/2/97
SJS05-SB07-002P	MCYAN	Potassium	2870	61.27	mg/kg		7/2/97
SJS05-SB07-002P	MCYAN	Selenium		0.83	mg/kg	U	7/3/97
SJS05-SB07-002P	MCYAN	Silver	0.67	0.28	mg/kg	L	7/2/97
SJS05-SB07-002P	MCYAN	Sodium	1350	16.01	mg/kg	J	7/2/97
SJS05-SB07-002P	MCYAN	Thallium	1.3	0.55	mg/kg	K	7/2/97
SJS05-SB07-002P	MCYAN	Vanadium	41.9	2.48	mg/kg		7/2/97
SJS05-SB07-002P	MCYAN	Zinc	310	1.38	mg/kg		7/2/97
SJS05-SB07-002P	PCDD_S	1,2,3,4,6,7,8-HpCDD	76.6	2.5	pg/g		7/18/97
SJS05-SB07-002P	PCDD_S	1,2,3,4,6,7,8-HpCDF		2.5	pg/g	U	7/18/97
SJS05-SB07-002P	PCDD_S	1,2,3,4,7,8,9-HpCDF		2.5	pg/g	U	7/18/97
SJS05-SB07-002P	PCDD_S	1,2,3,4,7,8-HxCDD		2.5	pg/g	U	7/18/97
SJS05-SB07-002P	PCDD_S	1,2,3,4,7,8-HxCDF		2.5	pg/g	U	7/1
SJS05-SB07-002P	PCDD_S	1,2,3,6,7,8-HxCDD		2.5	pg/g	U	7/1

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS05-SB07-002P	PCDD_S	1,2,3,6,7,8-HxCDF		2.5	pg/g	U	7/18/97
SJS05-SB07-002P	PCDD_S	1,2,3,7,8,9-HxCDD	5.96	2.5	pg/g		7/18/97
SJS05-SB07-002P	PCDD_S	1,2,3,7,8,9-HxCDF		2.5	pg/g	U	7/18/97
SJS05-SB07-002P	PCDD_S	1,2,3,7,8-PeCDD		1	pg/g	U	7/18/97
SJS05-SB07-002P	PCDD_S	1,2,3,7,8-PeCDF		1	pg/g	U	7/18/97
SJS05-SB07-002P	PCDD_S	2,3,4,6,7,8-HxCDF		2.5	pg/g	U	7/18/97
SJS05-SB07-002P	PCDD_S	2,3,4,7,8-PeCDF		1	pg/g	U	7/18/97
SJS05-SB07-002P	PCDD_S	2,3,7,8-TCDD		1	pg/g	U	7/18/97
SJS05-SB07-002P	PCDD_S	2,3,7,8-TCDF		1	pg/g	U	7/18/97
SJS05-SB07-002P	PCDD_S	OCDD	3290	5	pg/g		7/18/97
SJS05-SB07-002P	PCDD_S	OCDF		5	pg/g	U	7/18/97
SJS05-SB07-002P	PCDD_S	TOTAL HpCDD	592	2.5	pg/g		7/18/97
SJS05-SB07-002P	PCDD_S	TOTAL HpCDF		2.5	pg/g	U	7/18/97
SJS05-SB07-002P	PCDD_S	TOTAL HxCDD	194	2.5	pg/g		7/18/97
SJS05-SB07-002P	PCDD_S	TOTAL HxCDF		2.5	pg/g	U	7/18/97
SJS05-SB07-002P	PCDD_S	TOTAL PeCDD	6.96	1	pg/g		7/18/97
SJS05-SB07-002P	PCDD_S	TOTAL PeCDF		1	pg/g	U	7/18/97
SJS05-SB07-002P	PCDD_S	TOTAL TCDD	12.6	1	pg/g		7/18/97
SJS05-SB07-002P	PCDD_S	TOTAL TCDF		1	pg/g	U	7/18/97
SJS05-SB07-002P	PCDD_S	TOTAL TEQ	4.65	1	pg/g		7/18/97
SJS05-SB07-002P	PSPCB	4,4'-DDD		5	ug/kg	U	7/14/97
SJS05-SB07-002P	PSPCB	4,4'-DDE		5	ug/kg	U	7/14/97
SJS05-SB07-002P	PSPCB	4,4'-DDT		5	ug/kg	U	7/14/97
SJS05-SB07-002P	PSPCB	Aldrin		2.6	ug/kg	U	7/14/97
SJS05-SB07-002P	PSPCB	alpha-BHC		2.6	ug/kg	U	7/14/97
SJS05-SB07-002P	PSPCB	alpha-Chlordane		2.6	ug/kg	U	7/14/97
SJS05-SB07-002P	PSPCB	Aroclor-1016		50	ug/kg	U	7/14/97
SJS05-SB07-002P	PSPCB	Aroclor-1221		100	ug/kg	U	7/14/97
SJS05-SB07-002P	PSPCB	Aroclor-1232		50	ug/kg	U	7/14/97
SJS05-SB07-002P	PSPCB	Aroclor-1242		50	ug/kg	U	7/14/97
SJS05-SB07-002P	PSPCB	Aroclor-1248		50	ug/kg	U	7/14/97
SJS05-SB07-002P	PSPCB	Aroclor-1254		50	ug/kg	U	7/14/97
SJS05-SB07-002P	PSPCB	Aroclor-1260		50	ug/kg	U	7/14/97
SJS05-SB07-002P	PSPCB	beta-BHC		2.6	ug/kg	U	7/14/97
SJS05-SB07-002P	PSPCB	delta-BHC		2.6	ug/kg	U	7/14/97
SJS05-SB07-002P	PSPCB	Dieldrin		5	ug/kg	U	7/14/97
SJS05-SB07-002P	PSPCB	Endosulfan I		2.6	ug/kg	U	7/14/97
SJS05-SB07-002P	PSPCB	Endosulfan II		5	ug/kg	U	7/14/97
SJS05-SB07-002P	PSPCB	Endosulfan Sulfate		5	ug/kg	U	7/14/97
SJS05-SB07-002P	PSPCB	Endrin		5	ug/kg	U	7/14/97
SJS05-SB07-002P	PSPCB	Endrin Aldehyde		5	ug/kg	U	7/14/97
SJS05-SB07-002P	PSPCB	Endrin Ketone		5	ug/kg	U	7/14/97
SJS05-SB07-002P	PSPCB	gamma-BHC		2.6	ug/kg	U	7/14/97
SJS05-SB07-002P	PSPCB	gamma-Chlordane		2.6	ug/kg	U	7/14/97
SJS05-SB07-002P	PSPCB	Heptachlor		2.6	ug/kg	U	7/14/97
SJS05-SB07-002P	PSPCB	Heptachlor Epoxide		2.6	ug/kg	U	7/14/97
SJS05-SB07-002P	PSPCB	Methoxychlor		26	ug/kg	U	7/14/97
SJS05-SB07-002P	PSPCB	Toxaphene		260	ug/kg	U	7/14/97
SJS05-SB07-002P	SVTCL	1,2,4-Trichlorobenzene		500	ug/kg	U	7/3/97
SJS05-SB07-002P	SVTCL	1,2-Dichlorobenzene		500	ug/kg	U	7/3/97
SJS05-SB07-002P	SVTCL	1,3-Dichlorobenzene		500	ug/kg	U	7/3/97
SJS05-SB07-002P	SVTCL	1,4-Dichlorobenzene		500	ug/kg	U	7/3/97
SJS05-SB07-002P	SVTCL	2,2'-oxybis(1-Chloropropane		500	ug/kg	U	7/3/97
SJS05-SB07-002P	SVTCL	2,4,5-Trichlorophenol		1300	ug/kg	U	7/3/97
SJS05-SB07-002P	SVTCL	2,4,6-Trichlorophenol		500	ug/kg	U	7/3/97
SJS05-SB07-002P	SVTCL	2,4-Dichlorophenol		500	ug/kg	U	7/3/97
SJS05-SB07-002P	SVTCL	2,4-Dimethylphenol		500	ug/kg	U	7/3/97
SJS05-SB07-002P	SVTCL	2,4-Dinitrophenol		1300	ug/kg	U	7/3/97
SJS05-SB07-002P	SVTCL	2,4-Dinitrotoluene		500	ug/kg	U	7/3/97
SJS05-SB07-002P	SVTCL	2,6-Dinitrotoluene		500	ug/kg	U	7/3/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS05-SB07-002P	SVTCL	2-Chloronaphthalene		500	ug/kg	U	7/
SJS05-SB07-002P	SVTCL	2-Chlorophenol		500	ug/kg	U	7
SJS05-SB07-002P	SVTCL	2-Methylnaphthalene		500	ug/kg	U	7/3/97
SJS05-SB07-002P	SVTCL	2-Methylphenol		500	ug/kg	U	7/3/97
SJS05-SB07-002P	SVTCL	2-Nitroaniline		1300	ug/kg	U	7/3/97
SJS05-SB07-002P	SVTCL	2-Nitrophenol		500	ug/kg	U	7/3/97
SJS05-SB07-002P	SVTCL	3,3'-Dichlorobenzidine		500	ug/kg	U	7/3/97
SJS05-SB07-002P	SVTCL	3-Nitroaniline		1300	ug/kg	U	7/3/97
SJS05-SB07-002P	SVTCL	4,6-Dinitro-2-Methylphenol		1300	ug/kg	U	7/3/97
SJS05-SB07-002P	SVTCL	4-Bromophenyl phenylether		500	ug/kg	U	7/3/97
SJS05-SB07-002P	SVTCL	4-Chloro-3-Methylphenol		500	ug/kg	U	7/3/97
SJS05-SB07-002P	SVTCL	4-Chloroaniline		500	ug/kg	U	7/3/97
SJS05-SB07-002P	SVTCL	4-Chlorophenyl-phenylether		500	ug/kg	U	7/3/97
SJS05-SB07-002P	SVTCL	4-Methylphenol		500	ug/kg	U	7/3/97
SJS05-SB07-002P	SVTCL	4-Nitroaniline		1300	ug/kg	U	7/3/97
SJS05-SB07-002P	SVTCL	4-Nitrophenol		1300	ug/kg	U	7/3/97
SJS05-SB07-002P	SVTCL	Acenaphthene		500	ug/kg	U	7/3/97
SJS05-SB07-002P	SVTCL	Acenaphthylene		500	ug/kg	U	7/3/97
SJS05-SB07-002P	SVTCL	Anthracene		500	ug/kg	U	7/3/97
SJS05-SB07-002P	SVTCL	Benzo(a)Anthracene	220	500	ug/kg	J	7/3/97
SJS05-SB07-002P	SVTCL	Benzo(a)Pyrene	250	500	ug/kg	J	7/3/97
SJS05-SB07-002P	SVTCL	Benzo(b)Fluoranthene	630	500	ug/kg	J	7/3/97
SJS05-SB07-002P	SVTCL	Benzo(g,h,i)Perylene	160	500	ug/kg	J	7/3/97
SJS05-SB07-002P	SVTCL	Benzo(k)Fluoranthene	180	500	ug/kg	J	7/3/97
SJS05-SB07-002P	SVTCL	Bis(2-chloroethoxy)Methane		500	ug/kg	U	7/3/97
SJS05-SB07-002P	SVTCL	Bis(2-chloroethyl)Ether		500	ug/kg	U	7/3/97
SJS05-SB07-002P	SVTCL	Bis(2-Ethylhexyl)Phthalate		500	ug/kg	U	7/3/97
SJS05-SB07-002P	SVTCL	Butylbenzylphthalate		500	ug/kg	U	7/3/97
SJS05-SB07-002P	SVTCL	Carbazole		500	ug/kg	U	7/3/97
SJS05-SB07-002P	SVTCL	Chrysene	330	500	ug/kg	J	7/
SJS05-SB07-002P	SVTCL	Di-n-Butylphthalate		500	ug/kg	U	7/
SJS05-SB07-002P	SVTCL	Di-n-Octyl Phthalate		500	ug/kg	U	7/3/97
SJS05-SB07-002P	SVTCL	Dibenz(a,h)Anthracene		500	ug/kg	U	7/3/97
SJS05-SB07-002P	SVTCL	Dibenzofuran		500	ug/kg	U	7/3/97
SJS05-SB07-002P	SVTCL	Diethylphthalate		500	ug/kg	U	7/3/97
SJS05-SB07-002P	SVTCL	Dimethyl Phthalate		500	ug/kg	U	7/3/97
SJS05-SB07-002P	SVTCL	Fluoranthene	940	500	ug/kg	J	7/3/97
SJS05-SB07-002P	SVTCL	Fluorene		500	ug/kg	U	7/3/97
SJS05-SB07-002P	SVTCL	Hexachlorobenzene		500	ug/kg	U	7/3/97
SJS05-SB07-002P	SVTCL	Hexachlorobutadiene		500	ug/kg	U	7/3/97
SJS05-SB07-002P	SVTCL	Hexachlorocyclopentadien		500	ug/kg	U	7/3/97
SJS05-SB07-002P	SVTCL	Hexachloroethane		500	ug/kg	U	7/3/97
SJS05-SB07-002P	SVTCL	Indeno(1,2,3-cd)Pyrene	170	500	ug/kg	J	7/3/97
SJS05-SB07-002P	SVTCL	Isophorone		500	ug/kg	U	7/3/97
SJS05-SB07-002P	SVTCL	N-Nitroso-Di-n-Propylamine		500	ug/kg	U	7/3/97
SJS05-SB07-002P	SVTCL	N-Nitrosodiphenylamine		500	ug/kg	U	7/3/97
SJS05-SB07-002P	SVTCL	Naphthalene		500	ug/kg	U	7/3/97
SJS05-SB07-002P	SVTCL	Nitrobenzene		500	ug/kg	U	7/3/97
SJS05-SB07-002P	SVTCL	Pentachlorophenol		1300	ug/kg	U	7/3/97
SJS05-SB07-002P	SVTCL	Phenanthrene		500	ug/kg	U	7/3/97
SJS05-SB07-002P	SVTCL	Phenol		500	ug/kg	U	7/3/97
SJS05-SB07-002P	SVTCL	Pyrene	720	500	ug/kg	J	7/3/97
SJS05-SB07-002P	VCTCL	1,1,1-Trichloroethane		18	ug/kg	U	7/5/97
SJS05-SB07-002P	VCTCL	1,1,2,2-Tetrachloroethane		18	ug/kg	U	7/5/97
SJS05-SB07-002P	VCTCL	1,1,2-Trichloroethane		18	ug/kg	U	7/5/97
SJS05-SB07-002P	VCTCL	1,1-Dichloroethane		18	ug/kg	U	7/5/97
SJS05-SB07-002P	VCTCL	1,1-Dichloroethene		18	ug/kg	U	7/5/97
SJS05-SB07-002P	VCTCL	1,2-Dichloroethane		18	ug/kg	U	7/5/97
SJS05-SB07-002P	VCTCL	1,2-Dichloroethene (total)		18	ug/kg	U	7/
SJS05-SB07-002P	VCTCL	1,2-Dichloropropane		18	ug/kg	U	7/

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS05-SB07-002P	VCTCL	2-Butanone	89	18	ug/kg		7/5/97
SJS05-SB07-002P	VCTCL	2-Hexanone		18	ug/kg	U	7/5/97
SJS05-SB07-002P	VCTCL	4-Methyl-2-Pentanone		18	ug/kg	U	7/5/97
SJS05-SB07-002P	VCTCL	Acetone	240	36	ug/kg	B	7/7/97
SJS05-SB07-002P	VCTCL	Benzene		18	ug/kg	U	7/5/97
SJS05-SB07-002P	VCTCL	Bromodichloromethane		18	ug/kg	U	7/5/97
SJS05-SB07-002P	VCTCL	Bromoform		18	ug/kg	U	7/5/97
SJS05-SB07-002P	VCTCL	Bromomethane		18	ug/kg	U	7/5/97
SJS05-SB07-002P	VCTCL	Carbon Disulfide	17	18	ug/kg	J	7/5/97
SJS05-SB07-002P	VCTCL	Carbon Tetrachloride		18	ug/kg	U	7/5/97
SJS05-SB07-002P	VCTCL	Chlorobenzene		18	ug/kg	U	7/5/97
SJS05-SB07-002P	VCTCL	Chloroethane		18	ug/kg	U	7/5/97
SJS05-SB07-002P	VCTCL	Chloroform		18	ug/kg	U	7/5/97
SJS05-SB07-002P	VCTCL	Chloromethane		18	ug/kg	U	7/5/97
SJS05-SB07-002P	VCTCL	cis-1,3-Dichloropropene		18	ug/kg	U	7/5/97
SJS05-SB07-002P	VCTCL	Dibromochloromethane		18	ug/kg	U	7/5/97
SJS05-SB07-002P	VCTCL	Ethylbenzene		18	ug/kg	U	7/5/97
SJS05-SB07-002P	VCTCL	Methylene Chloride	25	18	ug/kg	B	7/5/97
SJS05-SB07-002P	VCTCL	Styrene		18	ug/kg	U	7/5/97
SJS05-SB07-002P	VCTCL	Tetrachloroethene		18	ug/kg	U	7/5/97
SJS05-SB07-002P	VCTCL	Toluene		18	ug/kg	U	7/5/97
SJS05-SB07-002P	VCTCL	Total Xylenes		18	ug/kg	U	7/5/97
SJS05-SB07-002P	VCTCL	Trans-1,3-Dichloropropene		18	ug/kg	U	7/5/97
SJS05-SB07-002P	VCTCL	Trichloroethene		18	ug/kg	U	7/5/97
SJS05-SB07-002P	VCTCL	Vinyl Chloride		18	ug/kg	U	7/5/97
SJS05-SB08-002	CTOTP	Total Phosphorous (as P)	15.6	2.2	mg/kg		7/16/97
SJS05-SB08-002	MCYAN	Aluminum	22000	14.11	mg/kg		7/8/97
SJS05-SB08-002	MCYAN	Antimony	0.68	0.64	mg/kg	J	7/9/97
SJS05-SB08-002	MCYAN	Arsenic	16.2	0.96	mg/kg		7/9/97
SJS05-SB08-002	MCYAN	Barium	52.3	0.64	mg/kg	J	7/8/97
SJS05-SB08-002	MCYAN	Beryllium	1	0.32	mg/kg	J	7/8/97
SJS05-SB08-002	MCYAN	Cadmium		0.16	mg/kg	U	7/9/97
SJS05-SB08-002	MCYAN	Calcium	542	27.9	mg/kg	B	7/8/97
SJS05-SB08-002	MCYAN	Chromium	45.1	2.24	mg/kg		7/8/97
SJS05-SB08-002	MCYAN	Cobalt	11.9	2.57	mg/kg	J	7/8/97
SJS05-SB08-002	MCYAN	Copper	31.2	1.92	mg/kg		7/8/97
SJS05-SB08-002	MCYAN	Cyanide		0.88	mg/kg	U	7/3/97
SJS05-SB08-002	MCYAN	Iron	58000	5.45	mg/kg		7/8/97
SJS05-SB08-002	MCYAN	Lead	70.5	0.32	mg/kg		7/9/97
SJS05-SB08-002	MCYAN	Magnesium	3850	58.04	mg/kg		7/8/97
SJS05-SB08-002	MCYAN	Manganese	189	0.64	mg/kg		7/8/97
SJS05-SB08-002	MCYAN	Mercury	0.43	0.09	mg/kg		7/10/97
SJS05-SB08-002	MCYAN	Nickel	19.4	2.24	mg/kg		7/8/97
SJS05-SB08-002	MCYAN	Potassium	3090	71.19	mg/kg		7/8/97
SJS05-SB08-002	MCYAN	Selenium		0.96	mg/kg	U	7/9/97
SJS05-SB08-002	MCYAN	Silver	1.8	0.32	mg/kg	B	7/9/97
SJS05-SB08-002	MCYAN	Sodium	296	18.6	mg/kg	B	7/8/97
SJS05-SB08-002	MCYAN	Thallium	4	0.64	mg/kg		7/9/97
SJS05-SB08-002	MCYAN	Vanadium	75.2	2.89	mg/kg		7/8/97
SJS05-SB08-002	MCYAN	Zinc	78.1	1.6	mg/kg		7/8/97
SJS05-SB08-002	PSPCB	4,4'-DDD		5.7	ug/kg	U	7/18/97
SJS05-SB08-002	PSPCB	4,4'-DDE		5.7	ug/kg	U	7/18/97
SJS05-SB08-002	PSPCB	4,4'-DDT		5.7	ug/kg	U	7/18/97
SJS05-SB08-002	PSPCB	Aldrin		2.9	ug/kg	U	7/18/97
SJS05-SB08-002	PSPCB	alpha-BHC		2.9	ug/kg	U	7/18/97
SJS05-SB08-002	PSPCB	alpha-Chlordane		2.9	ug/kg	U	7/18/97
SJS05-SB08-002	PSPCB	Aroclor-1016		57	ug/kg	U	7/18/97
SJS05-SB08-002	PSPCB	Aroclor-1221		120	ug/kg	U	7/18/97
SJS05-SB08-002	PSPCB	Aroclor-1232		57	ug/kg	U	7/18/97
SJS05-SB08-002	PSPCB	Aroclor-1242		57	ug/kg	U	7/18/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS05-SB08-002	PSPCB	Aroclor-1248		57	ug/kg	U	7/1
SJS05-SB08-002	PSPCB	Aroclor-1254		57	ug/kg	U	7/
SJS05-SB08-002	PSPCB	Aroclor-1260		57	ug/kg	U	7/18/97
SJS05-SB08-002	PSPCB	beta-BHC		2.9	ug/kg	U	7/18/97
SJS05-SB08-002	PSPCB	delta-BHC		2.9	ug/kg	U	7/18/97
SJS05-SB08-002	PSPCB	Dieldrin		5.7	ug/kg	U	7/18/97
SJS05-SB08-002	PSPCB	Endosulfan I		2.9	ug/kg	U	7/18/97
SJS05-SB08-002	PSPCB	Endosulfan II		5.7	ug/kg	U	7/18/97
SJS05-SB08-002	PSPCB	Endosulfan Sulfate		5.7	ug/kg	U	7/18/97
SJS05-SB08-002	PSPCB	Endrin		5.7	ug/kg	U	7/18/97
SJS05-SB08-002	PSPCB	Endrin Aldehyde		5.7	ug/kg	U	7/18/97
SJS05-SB08-002	PSPCB	Endrin Ketone		5.7	ug/kg	U	7/18/97
SJS05-SB08-002	PSPCB	gamma-BHC		2.9	ug/kg	U	7/18/97
SJS05-SB08-002	PSPCB	gamma-Chlordane		2.9	ug/kg	U	7/18/97
SJS05-SB08-002	PSPCB	Heptachlor		2.9	ug/kg	U	7/18/97
SJS05-SB08-002	PSPCB	Heptachlor Epoxide		2.9	ug/kg	U	7/18/97
SJS05-SB08-002	PSPCB	Methoxychlor		29	ug/kg	U	7/18/97
SJS05-SB08-002	PSPCB	Toxaphene		290	ug/kg	U	7/18/97
SJS05-SB08-002	SVTCL	1,2,4-Trichlorobenzene		570	ug/kg	U	7/14/97
SJS05-SB08-002	SVTCL	1,2-Dichlorobenzene		570	ug/kg	U	7/14/97
SJS05-SB08-002	SVTCL	1,3-Dichlorobenzene		570	ug/kg	U	7/14/97
SJS05-SB08-002	SVTCL	1,4-Dichlorobenzene		570	ug/kg	U	7/14/97
SJS05-SB08-002	SVTCL	2,2'-oxybis(1-Chloropropane		570	ug/kg	U	7/14/97
SJS05-SB08-002	SVTCL	2,4,5-Trichlorophenol		1400	ug/kg	U	7/14/97
SJS05-SB08-002	SVTCL	2,4,6-Trichlorophenol		570	ug/kg	U	7/14/97
SJS05-SB08-002	SVTCL	2,4-Dichlorophenol		570	ug/kg	U	7/14/97
SJS05-SB08-002	SVTCL	2,4-Dimethylphenol		570	ug/kg	U	7/14/97
SJS05-SB08-002	SVTCL	2,4-Dinitrophenol		1400	ug/kg	U	7/14/97
SJS05-SB08-002	SVTCL	2,4-Dinitrotoluene		570	ug/kg	U	7/14/97
SJS05-SB08-002	SVTCL	2,6-Dinitrotoluene		570	ug/kg	U	7/1
SJS05-SB08-002	SVTCL	2-Chloronaphthalene		570	ug/kg	U	7/14
SJS05-SB08-002	SVTCL	2-Chlorophenol		570	ug/kg	U	7/14/97
SJS05-SB08-002	SVTCL	2-Methylnaphthalene		570	ug/kg	U	7/14/97
SJS05-SB08-002	SVTCL	2-Methylphenol		570	ug/kg	U	7/14/97
SJS05-SB08-002	SVTCL	2-Nitroaniline		1400	ug/kg	U	7/14/97
SJS05-SB08-002	SVTCL	2-Nitrophenol		570	ug/kg	U	7/14/97
SJS05-SB08-002	SVTCL	3,3'-Dichlorobenzidine		570	ug/kg	U	7/14/97
SJS05-SB08-002	SVTCL	3-Nitroaniline		1400	ug/kg	U	7/14/97
SJS05-SB08-002	SVTCL	4,6-Dinitro-2-Methylphenol		1400	ug/kg	UJ	7/14/97
SJS05-SB08-002	SVTCL	4-Bromophenyl phenylether		570	ug/kg	UJ	7/14/97
SJS05-SB08-002	SVTCL	4-Chloro-3-Methylphenol		570	ug/kg	U	7/14/97
SJS05-SB08-002	SVTCL	4-Chloroaniline		570	ug/kg	U	7/14/97
SJS05-SB08-002	SVTCL	4-Chlorophenyl-phenylether		570	ug/kg	U	7/14/97
SJS05-SB08-002	SVTCL	4-Methylphenol		570	ug/kg	U	7/14/97
SJS05-SB08-002	SVTCL	4-Nitroaniline		1400	ug/kg	U	7/14/97
SJS05-SB08-002	SVTCL	4-Nitrophenol		1400	ug/kg	U	7/14/97
SJS05-SB08-002	SVTCL	Acenaphthene		570	ug/kg	U	7/14/97
SJS05-SB08-002	SVTCL	Acenaphthylene		570	ug/kg	U	7/14/97
SJS05-SB08-002	SVTCL	Anthracene		570	ug/kg	UJ	7/14/97
SJS05-SB08-002	SVTCL	Benzo(a)Anthracene		570	ug/kg	U	7/14/97
SJS05-SB08-002	SVTCL	Benzo(a)Pyrene	67	570	ug/kg	J	7/14/97
SJS05-SB08-002	SVTCL	Benzo(b)Fluoranthene	160	570	ug/kg	J	7/14/97
SJS05-SB08-002	SVTCL	Benzo(g,h,i)Perylene		570	ug/kg	U	7/14/97
SJS05-SB08-002	SVTCL	Benzo(k)Fluoranthene		570	ug/kg	U	7/14/97
SJS05-SB08-002	SVTCL	Bis(2-chloroethoxy)Methane		570	ug/kg	U	7/14/97
SJS05-SB08-002	SVTCL	Bis(2-chloroethyl)Ether		570	ug/kg	U	7/14/97
SJS05-SB08-002	SVTCL	Bis(2-Ethylhexyl)Phthalate	150	570	ug/kg	B	7/14/97
SJS05-SB08-002	SVTCL	Butylbenzylphthalate		570	ug/kg	U	7/14/97
SJS05-SB08-002	SVTCL	Carbazole		570	ug/kg	UJ	7/1
SJS05-SB08-002	SVTCL	Chrysene	110	570	ug/kg	J	7/14

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS05-SB08-002	SVTCL	Di-n-Butylphthalate		570	ug/kg	UJ	7/14/97
SJS05-SB08-002	SVTCL	Di-n-Octyl Phthalate		570	ug/kg	U	7/14/97
SJS05-SB08-002	SVTCL	Dibenz(a,h)Anthracene		570	ug/kg	U	7/14/97
SJS05-SB08-002	SVTCL	Dibenzofuran		570	ug/kg	U	7/14/97
SJS05-SB08-002	SVTCL	Diethylphthalate		570	ug/kg	U	7/14/97
SJS05-SB08-002	SVTCL	Dimethyl Phthalate		570	ug/kg	U	7/14/97
SJS05-SB08-002	SVTCL	Fluoranthene	280	570	ug/kg	J	7/14/97
SJS05-SB08-002	SVTCL	Fluorene		570	ug/kg	U	7/14/97
SJS05-SB08-002	SVTCL	Hexachlorobenzene		570	ug/kg	UJ	7/14/97
SJS05-SB08-002	SVTCL	Hexachlorobutadiene		570	ug/kg	U	7/14/97
SJS05-SB08-002	SVTCL	Hexachlorocyclopentadien		570	ug/kg	U	7/14/97
SJS05-SB08-002	SVTCL	Hexachloroethane		570	ug/kg	U	7/14/97
SJS05-SB08-002	SVTCL	Indeno(1,2,3-cd)Pyrene		570	ug/kg	U	7/14/97
SJS05-SB08-002	SVTCL	Isophorone		570	ug/kg	U	7/14/97
SJS05-SB08-002	SVTCL	N-Nitroso-Di-n-Propylamine		570	ug/kg	U	7/14/97
SJS05-SB08-002	SVTCL	N-Nitrosodiphenylamine		570	ug/kg	UJ	7/14/97
SJS05-SB08-002	SVTCL	Naphthalene		570	ug/kg	U	7/14/97
SJS05-SB08-002	SVTCL	Nitrobenzene		570	ug/kg	U	7/14/97
SJS05-SB08-002	SVTCL	Pentachlorophenol		1400	ug/kg	UJ	7/14/97
SJS05-SB08-002	SVTCL	Phenanthrene		570	ug/kg	UJ	7/14/97
SJS05-SB08-002	SVTCL	Phenol		570	ug/kg	U	7/14/97
SJS05-SB08-002	SVTCL	Pyrene	340	570	ug/kg	J	7/14/97
SJS05-SB08-002	VCTCL	1,1,1-Trichloroethane		21	ug/kg	U	7/2/97
SJS05-SB08-002	VCTCL	1,1,2,2-Tetrachloroethane		21	ug/kg	U	7/2/97
SJS05-SB08-002	VCTCL	1,1,2-Trichloroethane		21	ug/kg	U	7/2/97
SJS05-SB08-002	VCTCL	1,1-Dichloroethane		21	ug/kg	U	7/2/97
SJS05-SB08-002	VCTCL	1,1-Dichloroethene		21	ug/kg	U	7/2/97
SJS05-SB08-002	VCTCL	1,2-Dichloroethane		21	ug/kg	U	7/2/97
SJS05-SB08-002	VCTCL	1,2-Dichloroethene (total)		21	ug/kg	U	7/2/97
SJS05-SB08-002	VCTCL	1,2-Dichloropropane		21	ug/kg	U	7/2/97
SJS05-SB08-002	VCTCL	2-Butanone	32	21	ug/kg		7/2/97
SJS05-SB08-002	VCTCL	2-Hexanone		21	ug/kg	U	7/2/97
SJS05-SB08-002	VCTCL	4-Methyl-2-Pentanone		21	ug/kg	U	7/2/97
SJS05-SB08-002	VCTCL	Acetone	180	21	ug/kg	B	7/2/97
SJS05-SB08-002	VCTCL	Benzene		21	ug/kg	U	7/2/97
SJS05-SB08-002	VCTCL	Bromodichloromethane		21	ug/kg	U	7/2/97
SJS05-SB08-002	VCTCL	Bromoform		21	ug/kg	U	7/2/97
SJS05-SB08-002	VCTCL	Bromomethane		21	ug/kg	U	7/2/97
SJS05-SB08-002	VCTCL	Carbon Disulfide		21	ug/kg	U	7/2/97
SJS05-SB08-002	VCTCL	Carbon Tetrachloride		21	ug/kg	U	7/2/97
SJS05-SB08-002	VCTCL	Chlorobenzene		21	ug/kg	U	7/2/97
SJS05-SB08-002	VCTCL	Chloroethane		21	ug/kg	U	7/2/97
SJS05-SB08-002	VCTCL	Chloroform		21	ug/kg	U	7/2/97
SJS05-SB08-002	VCTCL	Chloromethane		21	ug/kg	U	7/2/97
SJS05-SB08-002	VCTCL	cis-1,3-Dichloropropene		21	ug/kg	U	7/2/97
SJS05-SB08-002	VCTCL	Dibromochloromethane		21	ug/kg	U	7/2/97
SJS05-SB08-002	VCTCL	Ethylbenzene		21	ug/kg	U	7/2/97
SJS05-SB08-002	VCTCL	Methylene Chloride	57	21	ug/kg	B	7/2/97
SJS05-SB08-002	VCTCL	Styrene		21	ug/kg	U	7/2/97
SJS05-SB08-002	VCTCL	Tetrachloroethene	3	21	ug/kg	J	7/2/97
SJS05-SB08-002	VCTCL	Toluene		21	ug/kg	U	7/2/97
SJS05-SB08-002	VCTCL	Total Xylenes		21	ug/kg	U	7/2/97
SJS05-SB08-002	VCTCL	Trans-1,3-Dichloropropene		21	ug/kg	U	7/2/97
SJS05-SB08-002	VCTCL	Trichloroethene		21	ug/kg	U	7/2/97
SJS05-SB08-002	VCTCL	Vinyl Chloride		21	ug/kg	U	7/2/97
SJS05-SB09-002	CTOTP	Total Phosphorous (as P)	4.6	1.5	mg/kg		7/15/97
SJS05-SB09-002	MCYAN	Aluminum	761	10.33	mg/kg		7/2/97
SJS05-SB09-002	MCYAN	Antimony	2.3	0.47	mg/kg	L	7/2/97
SJS05-SB09-002	MCYAN	Arsenic		0.7	mg/kg	UL	7/2/97
SJS05-SB09-002	MCYAN	Barium	2.6	0.47	mg/kg	B	7/2/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS05-SB09-002	MCYAN	Beryllium		0.23	mg/kg	U	7
SJS05-SB09-002	MCYAN	Cadmium		0.12	mg/kg	U	7
SJS05-SB09-002	MCYAN	Calcium	263	20.43	mg/kg	J	7/2/97
SJS05-SB09-002	MCYAN	Chromium	1.9	1.64	mg/kg	K	7/2/97
SJS05-SB09-002	MCYAN	Cobalt		1.88	mg/kg	U	7/2/97
SJS05-SB09-002	MCYAN	Copper		1.41	mg/kg	U	7/2/97
SJS05-SB09-002	MCYAN	Cyanide		0.6	mg/kg	U	7/2/97
SJS05-SB09-002	MCYAN	Iron	767	3.99	mg/kg		7/2/97
SJS05-SB09-002	MCYAN	Lead	3.9	0.23	mg/kg	J	7/2/97
SJS05-SB09-002	MCYAN	Magnesium	148	42.5	mg/kg	J	7/2/97
SJS05-SB09-002	MCYAN	Manganese	7	0.47	mg/kg		7/2/97
SJS05-SB09-002	MCYAN	Mercury		0.05	mg/kg	U	6/30/97
SJS05-SB09-002	MCYAN	Nickel		1.64	mg/kg	U	7/2/97
SJS05-SB09-002	MCYAN	Potassium	151	52.12	mg/kg	J	7/2/97
SJS05-SB09-002	MCYAN	Selenium		0.7	mg/kg	UL	7/2/97
SJS05-SB09-002	MCYAN	Silver		0.23	mg/kg	U	7/2/97
SJS05-SB09-002	MCYAN	Sodium	35.5	13.62	mg/kg	B	7/2/97
SJS05-SB09-002	MCYAN	Thallium		0.47	mg/kg	U	7/2/97
SJS05-SB09-002	MCYAN	Vanadium		2.11	mg/kg	U	7/2/97
SJS05-SB09-002	MCYAN	Zinc	4	1.17	mg/kg	B	7/2/97
SJS05-SB09-002	PSPCB	4,4'-DDD		4.1	ug/kg	U	7/16/97
SJS05-SB09-002	PSPCB	4,4'-DDE		4.1	ug/kg	U	7/16/97
SJS05-SB09-002	PSPCB	4,4'-DDT		4.1	ug/kg	U	7/16/97
SJS05-SB09-002	PSPCB	Aldrin		2.1	ug/kg	U	7/16/97
SJS05-SB09-002	PSPCB	alpha-BHC		2.1	ug/kg	U	7/16/97
SJS05-SB09-002	PSPCB	alpha-Chlordane		2.1	ug/kg	U	7/16/97
SJS05-SB09-002	PSPCB	Aroclor-1016		41	ug/kg	U	7/16/97
SJS05-SB09-002	PSPCB	Aroclor-1221		84	ug/kg	U	7/16/97
SJS05-SB09-002	PSPCB	Aroclor-1232		41	ug/kg	U	7/16/97
SJS05-SB09-002	PSPCB	Aroclor-1242		41	ug/kg	U	7/
SJS05-SB09-002	PSPCB	Aroclor-1248		41	ug/kg	U	7/
SJS05-SB09-002	PSPCB	Aroclor-1254		41	ug/kg	U	7/16/97
SJS05-SB09-002	PSPCB	Aroclor-1260		41	ug/kg	U	7/16/97
SJS05-SB09-002	PSPCB	beta-BHC		2.1	ug/kg	U	7/16/97
SJS05-SB09-002	PSPCB	delta-BHC		2.1	ug/kg	U	7/16/97
SJS05-SB09-002	PSPCB	Dieldrin		4.1	ug/kg	U	7/16/97
SJS05-SB09-002	PSPCB	Endosulfan I		2.1	ug/kg	U	7/16/97
SJS05-SB09-002	PSPCB	Endosulfan II		4.1	ug/kg	U	7/16/97
SJS05-SB09-002	PSPCB	Endosulfan Sulfate		4.1	ug/kg	U	7/16/97
SJS05-SB09-002	PSPCB	Endrin		4.1	ug/kg	U	7/16/97
SJS05-SB09-002	PSPCB	Endrin Aldehyde		4.1	ug/kg	U	7/16/97
SJS05-SB09-002	PSPCB	Endrin Ketone		4.1	ug/kg	U	7/16/97
SJS05-SB09-002	PSPCB	gamma-BHC		2.1	ug/kg	U	7/16/97
SJS05-SB09-002	PSPCB	gamma-Chlordane		2.1	ug/kg	U	7/16/97
SJS05-SB09-002	PSPCB	Heptachlor		2.1	ug/kg	U	7/16/97
SJS05-SB09-002	PSPCB	Heptachlor Epoxide		2.1	ug/kg	U	7/16/97
SJS05-SB09-002	PSPCB	Methoxychlor		21	ug/kg	U	7/16/97
SJS05-SB09-002	PSPCB	Toxaphene		210	ug/kg	U	7/16/97
SJS05-SB09-002	SVTCL	1,2,4-Trichlorobenzene		410	ug/kg	U	7/9/97
SJS05-SB09-002	SVTCL	1,2-Dichlorobenzene		410	ug/kg	U	7/9/97
SJS05-SB09-002	SVTCL	1,3-Dichlorobenzene		410	ug/kg	U	7/9/97
SJS05-SB09-002	SVTCL	1,4-Dichlorobenzene		410	ug/kg	U	7/9/97
SJS05-SB09-002	SVTCL	2,2'-oxybis(1-Chloropropane		410	ug/kg	U	7/9/97
SJS05-SB09-002	SVTCL	2,4,5-Trichlorophenol		1000	ug/kg	U	7/9/97
SJS05-SB09-002	SVTCL	2,4,6-Trichlorophenol		410	ug/kg	U	7/9/97
SJS05-SB09-002	SVTCL	2,4-Dichlorophenol		410	ug/kg	U	7/9/97
SJS05-SB09-002	SVTCL	2,4-Dimethylphenol		410	ug/kg	U	7/9/97
SJS05-SB09-002	SVTCL	2,4-Dinitrophenol		1000	ug/kg	U	7/9/97
SJS05-SB09-002	SVTCL	2,4-Dinitrotoluene		410	ug/kg	U	7
SJS05-SB09-002	SVTCL	2,6-Dinitrotoluene		410	ug/kg	U	7/

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS05-SB09-002	SVTCL	2-Chloronaphthalene		410	ug/kg	U	7/9/97
SJS05-SB09-002	SVTCL	2-Chlorophenol		410	ug/kg	U	7/9/97
SJS05-SB09-002	SVTCL	2-Methylnaphthalene		410	ug/kg	U	7/9/97
SJS05-SB09-002	SVTCL	2-Methylphenol		410	ug/kg	U	7/9/97
SJS05-SB09-002	SVTCL	2-Nitroaniline		1000	ug/kg	U	7/9/97
SJS05-SB09-002	SVTCL	2-Nitrophenol		410	ug/kg	U	7/9/97
SJS05-SB09-002	SVTCL	3,3'-Dichlorobenzidine		410	ug/kg	U	7/9/97
SJS05-SB09-002	SVTCL	3-Nitroaniline		1000	ug/kg	U	7/9/97
SJS05-SB09-002	SVTCL	4,6-Dinitro-2-Methylphenol		1000	ug/kg	U	7/9/97
SJS05-SB09-002	SVTCL	4-Bromophenyl phenylether		410	ug/kg	U	7/9/97
SJS05-SB09-002	SVTCL	4-Chloro-3-Methylphenol		410	ug/kg	U	7/9/97
SJS05-SB09-002	SVTCL	4-Chloroaniline		410	ug/kg	U	7/9/97
SJS05-SB09-002	SVTCL	4-Chlorophenyl-phenylether		410	ug/kg	U	7/9/97
SJS05-SB09-002	SVTCL	4-Methylphenol		410	ug/kg	U	7/9/97
SJS05-SB09-002	SVTCL	4-Nitroaniline		1000	ug/kg	U	7/9/97
SJS05-SB09-002	SVTCL	4-Nitrophenol		1000	ug/kg	U	7/9/97
SJS05-SB09-002	SVTCL	Acenaphthene		410	ug/kg	U	7/9/97
SJS05-SB09-002	SVTCL	Acenaphthylene		410	ug/kg	U	7/9/97
SJS05-SB09-002	SVTCL	Anthracene		410	ug/kg	U	7/9/97
SJS05-SB09-002	SVTCL	Benzo(a)Anthracene		410	ug/kg	U	7/9/97
SJS05-SB09-002	SVTCL	Benzo(a)Pyrene		410	ug/kg	U	7/9/97
SJS05-SB09-002	SVTCL	Benzo(b)Fluoranthene		410	ug/kg	U	7/9/97
SJS05-SB09-002	SVTCL	Benzo(g,h,i)Perylene		410	ug/kg	U	7/9/97
SJS05-SB09-002	SVTCL	Benzo(k)Fluoranthene		410	ug/kg	U	7/9/97
SJS05-SB09-002	SVTCL	Bis(2-chloroethoxy)Methane		410	ug/kg	U	7/9/97
SJS05-SB09-002	SVTCL	Bis(2-chloroethyl)Ether		410	ug/kg	U	7/9/97
SJS05-SB09-002	SVTCL	Bis(2-Ethylhexyl)Phthalate	58	320	ug/kg	B	7/9/97
SJS05-SB09-002	SVTCL	Butylbenzylphthalate		410	ug/kg	U	7/9/97
SJS05-SB09-002	SVTCL	Carbazole		410	ug/kg	U	7/9/97
SJS05-SB09-002	SVTCL	Chrysene		410	ug/kg	U	7/9/97
SJS05-SB09-002	SVTCL	Di-n-Butylphthalate		410	ug/kg	U	7/9/97
SJS05-SB09-002	SVTCL	Di-n-Octyl Phthalate		410	ug/kg	U	7/9/97
SJS05-SB09-002	SVTCL	Dibenz(a,h)Anthracene		410	ug/kg	U	7/9/97
SJS05-SB09-002	SVTCL	Dibenzofuran		410	ug/kg	U	7/9/97
SJS05-SB09-002	SVTCL	Diethylphthalate		410	ug/kg	U	7/9/97
SJS05-SB09-002	SVTCL	Dimethyl Phthalate		410	ug/kg	U	7/9/97
SJS05-SB09-002	SVTCL	Fluoranthene		410	ug/kg	U	7/9/97
SJS05-SB09-002	SVTCL	Fluorene		410	ug/kg	U	7/9/97
SJS05-SB09-002	SVTCL	Hexachlorobenzene		410	ug/kg	U	7/9/97
SJS05-SB09-002	SVTCL	Hexachlorobutadiene		410	ug/kg	U	7/9/97
SJS05-SB09-002	SVTCL	Hexachlorocyclopentadien		410	ug/kg	U	7/9/97
SJS05-SB09-002	SVTCL	Hexachloroethane		410	ug/kg	U	7/9/97
SJS05-SB09-002	SVTCL	Indeno(1,2,3-cd)Pyrene		410	ug/kg	U	7/9/97
SJS05-SB09-002	SVTCL	Isophorone		410	ug/kg	U	7/9/97
SJS05-SB09-002	SVTCL	N-Nitroso-Di-n-Propylamine		410	ug/kg	U	7/9/97
SJS05-SB09-002	SVTCL	N-Nitrosodiphenylamine		410	ug/kg	U	7/9/97
SJS05-SB09-002	SVTCL	Naphthalene		410	ug/kg	U	7/9/97
SJS05-SB09-002	SVTCL	Nitrobenzene		410	ug/kg	U	7/9/97
SJS05-SB09-002	SVTCL	Pentachlorophenol		1000	ug/kg	U	7/9/97
SJS05-SB09-002	SVTCL	Phenanthrene		410	ug/kg	U	7/9/97
SJS05-SB09-002	SVTCL	Phenol		410	ug/kg	U	7/9/97
SJS05-SB09-002	SVTCL	Pyrene		410	ug/kg	U	7/9/97
SJS05-SB09-002	VCTCL	1,1,1-Trichloroethane		12	ug/kg	U	7/2/97
SJS05-SB09-002	VCTCL	1,1,2,2-Tetrachloroethane		12	ug/kg	U	7/2/97
SJS05-SB09-002	VCTCL	1,1,2-Trichloroethane		12	ug/kg	U	7/2/97
SJS05-SB09-002	VCTCL	1,1-Dichloroethane		12	ug/kg	U	7/2/97
SJS05-SB09-002	VCTCL	1,1-Dichloroethene		12	ug/kg	U	7/2/97
SJS05-SB09-002	VCTCL	1,2-Dichloroethane		12	ug/kg	U	7/2/97
SJS05-SB09-002	VCTCL	1,2-Dichloroethene (total)		12	ug/kg	U	7/2/97
JS05-SB09-002	VCTCL	1,2-Dichloropropane		12	ug/kg	U	7/2/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS05-SB09-002	VCTCL	2-Butanone		12	ug/kg	U	7
SJS05-SB09-002	VCTCL	2-Hexanone		12	ug/kg	U	7
SJS05-SB09-002	VCTCL	4-Methyl-2-Pentanone		12	ug/kg	U	7/2/97
SJS05-SB09-002	VCTCL	Acetone	18	12	ug/kg		7/2/97
SJS05-SB09-002	VCTCL	Benzene		12	ug/kg	U	7/2/97
SJS05-SB09-002	VCTCL	Bromodichloromethane		12	ug/kg	U	7/2/97
SJS05-SB09-002	VCTCL	Bromoform		12	ug/kg	U	7/2/97
SJS05-SB09-002	VCTCL	Bromomethane		12	ug/kg	U	7/2/97
SJS05-SB09-002	VCTCL	Carbon Disulfide		12	ug/kg	U	7/2/97
SJS05-SB09-002	VCTCL	Carbon Tetrachloride		12	ug/kg	U	7/2/97
SJS05-SB09-002	VCTCL	Chlorobenzene		12	ug/kg	U	7/2/97
SJS05-SB09-002	VCTCL	Chloroethane		12	ug/kg	U	7/2/97
SJS05-SB09-002	VCTCL	Chloroform		12	ug/kg	U	7/2/97
SJS05-SB09-002	VCTCL	Chloromethane		12	ug/kg	U	7/2/97
SJS05-SB09-002	VCTCL	cis-1,3-Dichloropropene		12	ug/kg	U	7/2/97
SJS05-SB09-002	VCTCL	Dibromochloromethane		12	ug/kg	U	7/2/97
SJS05-SB09-002	VCTCL	Ethylbenzene		12	ug/kg	U	7/2/97
SJS05-SB09-002	VCTCL	Methylene Chloride	33	12	ug/kg	B	7/2/97
SJS05-SB09-002	VCTCL	Styrene		12	ug/kg	U	7/2/97
SJS05-SB09-002	VCTCL	Tetrachloroethene		12	ug/kg	U	7/2/97
SJS05-SB09-002	VCTCL	Toluene		12	ug/kg	U	7/2/97
SJS05-SB09-002	VCTCL	Total Xylenes		12	ug/kg	U	7/2/97
SJS05-SB09-002	VCTCL	Trans-1,3-Dichloropropene		12	ug/kg	U	7/2/97
SJS05-SB09-002	VCTCL	Trichloroethene		12	ug/kg	U	7/2/97
SJS05-SB09-002	VCTCL	Vinyl Chloride		12	ug/kg	U	7/2/97
SJS05-SB10-002	CTOTP	Total Phosphorous (as P)	71	37	mg/kg		7/15/97
SJS05-SB10-002	MCYAN	Aluminum	547	9.54	mg/kg		7/2/97
SJS05-SB10-002	MCYAN	Arsenic		0.65	mg/kg	UL	7/2/97
SJS05-SB10-002	MCYAN	Barium	2.4	0.43	mg/kg	B	7/2/97
SJS05-SB10-002	MCYAN	Beryllium		0.22	mg/kg	U	7
SJS05-SB10-002	MCYAN	Cadmium		0.11	mg/kg	U	7
SJS05-SB10-002	MCYAN	Calcium	266	18.87	mg/kg	J	7/2/97
SJS05-SB10-002	MCYAN	Chromium	2.5	1.52	mg/kg	K	7/2/97
SJS05-SB10-002	MCYAN	Cobalt		1.74	mg/kg	U	7/2/97
SJS05-SB10-002	MCYAN	Copper	2	1.3	mg/kg	B	7/2/97
SJS05-SB10-002	MCYAN	Cyanide		0.58	mg/kg	U	7/2/97
SJS05-SB10-002	MCYAN	Iron	813	3.69	mg/kg		7/2/97
SJS05-SB10-002	MCYAN	Lead	1.1	0.22	mg/kg	K	7/2/97
SJS05-SB10-002	MCYAN	Magnesium	177	39.26	mg/kg	J	7/2/97
SJS05-SB10-002	MCYAN	Manganese	6.6	0.43	mg/kg		7/2/97
SJS05-SB10-002	MCYAN	Mercury		0.05	mg/kg	U	6/30/97
SJS05-SB10-002	MCYAN	Nickel		1.52	mg/kg	U	7/2/97
SJS05-SB10-002	MCYAN	Potassium	123	48.15	mg/kg	J	7/2/97
SJS05-SB10-002	MCYAN	Selenium		0.65	mg/kg	UL	7/2/97
SJS05-SB10-002	MCYAN	Silver	0.23	0.22	mg/kg	J	7/2/97
SJS05-SB10-002	MCYAN	Sodium	38.9	12.58	mg/kg	B	7/2/97
SJS05-SB10-002	MCYAN	Thallium		0.43	mg/kg	U	7/2/97
SJS05-SB10-002	MCYAN	Vanadium		1.95	mg/kg	U	7/2/97
SJS05-SB10-002	MCYAN	Zinc	3.8	1.08	mg/kg	B	7/2/97
SJS05-SB10-002	PSPCB	4,4'-DDD		3.4	ug/kg	U	7/16/97
SJS05-SB10-002	PSPCB	4,4'-DDE		3.4	ug/kg	U	7/16/97
SJS05-SB10-002	PSPCB	4,4'-DDT		3.4	ug/kg	U	7/16/97
SJS05-SB10-002	PSPCB	Aldrin		1.8	ug/kg	U	7/16/97
SJS05-SB10-002	PSPCB	alpha-BHC		1.8	ug/kg	U	7/16/97
SJS05-SB10-002	PSPCB	alpha-Chlordane		1.8	ug/kg	U	7/16/97
SJS05-SB10-002	PSPCB	Aroclor-1016		34	ug/kg	U	7/16/97
SJS05-SB10-002	PSPCB	Aroclor-1221		70	ug/kg	U	7/16/97
SJS05-SB10-002	PSPCB	Aroclor-1232		34	ug/kg	U	7/16/97
SJS05-SB10-002	PSPCB	Aroclor-1242		34	ug/kg	U	7/1
SJS05-SB10-002	PSPCB	Aroclor-1248		34	ug/kg	U	7/1

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS05-SB10-002	PSPCB	Aroclor-1254		34	ug/kg	U	7/16/97
SJS05-SB10-002	PSPCB	Aroclor-1260		34	ug/kg	U	7/16/97
SJS05-SB10-002	PSPCB	beta-BHC		1.8	ug/kg	U	7/16/97
SJS05-SB10-002	PSPCB	delta-BHC		1.8	ug/kg	U	7/16/97
SJS05-SB10-002	PSPCB	Dieldrin		3.4	ug/kg	U	7/16/97
SJS05-SB10-002	PSPCB	Endosulfan I		1.8	ug/kg	U	7/16/97
SJS05-SB10-002	PSPCB	Endosulfan II		3.4	ug/kg	U	7/16/97
SJS05-SB10-002	PSPCB	Endosulfan Sulfate		3.4	ug/kg	U	7/16/97
SJS05-SB10-002	PSPCB	Endrin		3.4	ug/kg	U	7/16/97
SJS05-SB10-002	PSPCB	Endrin Aldehyde		3.4	ug/kg	U	7/16/97
SJS05-SB10-002	PSPCB	Endrin Ketone		3.4	ug/kg	U	7/16/97
SJS05-SB10-002	PSPCB	gamma-BHC		1.8	ug/kg	U	7/16/97
SJS05-SB10-002	PSPCB	gamma-Chlordane		1.8	ug/kg	U	7/16/97
SJS05-SB10-002	PSPCB	Heptachlor		1.8	ug/kg	U	7/16/97
SJS05-SB10-002	PSPCB	Heptachlor Epoxide		1.8	ug/kg	U	7/16/97
SJS05-SB10-002	PSPCB	Methoxychlor		18	ug/kg	U	7/16/97
SJS05-SB10-002	PSPCB	Toxaphene		180	ug/kg	U	7/16/97
SJS05-SB10-002	SVTCL	1,2,4-Trichlorobenzene		340	ug/kg	U	7/9/97
SJS05-SB10-002	SVTCL	1,2-Dichlorobenzene		340	ug/kg	U	7/9/97
SJS05-SB10-002	SVTCL	1,3-Dichlorobenzene		340	ug/kg	U	7/9/97
SJS05-SB10-002	SVTCL	1,4-Dichlorobenzene		340	ug/kg	U	7/9/97
SJS05-SB10-002	SVTCL	2,2'-oxybis(1-Chloropropane		340	ug/kg	U	7/9/97
SJS05-SB10-002	SVTCL	2,4,5-Trichlorophenol		860	ug/kg	U	7/9/97
SJS05-SB10-002	SVTCL	2,4,6-Trichlorophenol		340	ug/kg	U	7/9/97
SJS05-SB10-002	SVTCL	2,4-Dichlorophenol		340	ug/kg	U	7/9/97
SJS05-SB10-002	SVTCL	2,4-Dimethylphenol		340	ug/kg	U	7/9/97
SJS05-SB10-002	SVTCL	2,4-Dinitrophenol		860	ug/kg	U	7/9/97
SJS05-SB10-002	SVTCL	2,4-Dinitrotoluene		340	ug/kg	U	7/9/97
SJS05-SB10-002	SVTCL	2,6-Dinitrotoluene		340	ug/kg	U	7/9/97
SJS05-SB10-002	SVTCL	2-Chloronaphthalene		340	ug/kg	U	7/9/97
SJS05-SB10-002	SVTCL	2-Chlorophenol		340	ug/kg	U	7/9/97
SJS05-SB10-002	SVTCL	2-Methylnaphthalene		340	ug/kg	U	7/9/97
SJS05-SB10-002	SVTCL	2-Methylphenol		340	ug/kg	U	7/9/97
SJS05-SB10-002	SVTCL	2-Nitroaniline		860	ug/kg	U	7/9/97
SJS05-SB10-002	SVTCL	2-Nitrophenol		340	ug/kg	U	7/9/97
SJS05-SB10-002	SVTCL	3,3'-Dichlorobenzidine		340	ug/kg	U	7/9/97
SJS05-SB10-002	SVTCL	3-Nitroaniline		860	ug/kg	U	7/9/97
SJS05-SB10-002	SVTCL	4,6-Dinitro-2-Methylphenol		860	ug/kg	U	7/9/97
SJS05-SB10-002	SVTCL	4-Bromophenyl phenylether		340	ug/kg	U	7/9/97
SJS05-SB10-002	SVTCL	4-Chloro-3-Methylphenol		340	ug/kg	U	7/9/97
SJS05-SB10-002	SVTCL	4-Chloroaniline		340	ug/kg	U	7/9/97
SJS05-SB10-002	SVTCL	4-Chlorophenyl-phenylether		340	ug/kg	U	7/9/97
SJS05-SB10-002	SVTCL	4-Methylphenol		340	ug/kg	U	7/9/97
SJS05-SB10-002	SVTCL	4-Nitroaniline		860	ug/kg	U	7/9/97
SJS05-SB10-002	SVTCL	4-Nitrophenol		860	ug/kg	U	7/9/97
SJS05-SB10-002	SVTCL	Acenaphthene		340	ug/kg	U	7/9/97
SJS05-SB10-002	SVTCL	Acenaphthylene		340	ug/kg	U	7/9/97
SJS05-SB10-002	SVTCL	Anthracene		340	ug/kg	U	7/9/97
SJS05-SB10-002	SVTCL	Benzo(a)Anthracene		340	ug/kg	U	7/9/97
SJS05-SB10-002	SVTCL	Benzo(a)Pyrene		340	ug/kg	U	7/9/97
SJS05-SB10-002	SVTCL	Benzo(b)Fluoranthene	42	360	ug/kg	J	7/9/97
SJS05-SB10-002	SVTCL	Benzo(g,h,i)Perylene		340	ug/kg	U	7/9/97
SJS05-SB10-002	SVTCL	Benzo(k)Fluoranthene		340	ug/kg	U	7/9/97
SJS05-SB10-002	SVTCL	Bis(2-chloroethoxy)Methane		340	ug/kg	U	7/9/97
SJS05-SB10-002	SVTCL	Bis(2-chloroethyl)Ether		340	ug/kg	U	7/9/97
SJS05-SB10-002	SVTCL	Bis(2-Ethylhexyl)Phthalate	51	250	ug/kg	B	7/9/97
SJS05-SB10-002	SVTCL	Butylbenzylphthalate		340	ug/kg	U	7/9/97
SJS05-SB10-002	SVTCL	Carbazole		340	ug/kg	U	7/9/97
SJS05-SB10-002	SVTCL	Chrysene		340	ug/kg	U	7/9/97
JS05-SB10-002	SVTCL	Di-n-Butylphthalate		340	ug/kg	U	7/9/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS05-SB10-002	SVTCL	Di-n-Octyl Phthalate		340	ug/kg	U	7
SJS05-SB10-002	SVTCL	Dibenz(a,h)Anthracene		340	ug/kg	U	7
SJS05-SB10-002	SVTCL	Dibenzofuran		340	ug/kg	U	7/9/97
SJS05-SB10-002	SVTCL	Diethylphthalate		340	ug/kg	U	7/9/97
SJS05-SB10-002	SVTCL	Dimethyl Phthalate		340	ug/kg	U	7/9/97
SJS05-SB10-002	SVTCL	Fluoranthene		340	ug/kg	U	7/9/97
SJS05-SB10-002	SVTCL	Fluorene		340	ug/kg	U	7/9/97
SJS05-SB10-002	SVTCL	Hexachlorobenzene		340	ug/kg	U	7/9/97
SJS05-SB10-002	SVTCL	Hexachlorobutadiene		340	ug/kg	U	7/9/97
SJS05-SB10-002	SVTCL	Hexachlorocyclopentadien		340	ug/kg	U	7/9/97
SJS05-SB10-002	SVTCL	Hexachloroethane		340	ug/kg	U	7/9/97
SJS05-SB10-002	SVTCL	Indeno(1,2,3-cd)Pyrene		340	ug/kg	U	7/9/97
SJS05-SB10-002	SVTCL	Isophorone		340	ug/kg	U	7/9/97
SJS05-SB10-002	SVTCL	N-Nitroso-Di-n-Propylamine		340	ug/kg	U	7/9/97
SJS05-SB10-002	SVTCL	N-Nitrosodiphenylamine		340	ug/kg	U	7/9/97
SJS05-SB10-002	SVTCL	Naphthalene		340	ug/kg	U	7/9/97
SJS05-SB10-002	SVTCL	Nitrobenzene		340	ug/kg	U	7/9/97
SJS05-SB10-002	SVTCL	Pentachlorophenol		860	ug/kg	U	7/9/97
SJS05-SB10-002	SVTCL	Phenanthrene		340	ug/kg	U	7/9/97
SJS05-SB10-002	SVTCL	Phenol		340	ug/kg	U	7/9/97
SJS05-SB10-002	SVTCL	Pyrene		340	ug/kg	U	7/9/97
SJS05-SB10-002	VCTCL	1,1,1-Trichloroethane		12	ug/kg	U	7/1/97
SJS05-SB10-002	VCTCL	1,1,2,2-Tetrachloroethane		12	ug/kg	U	7/1/97
SJS05-SB10-002	VCTCL	1,1,2-Trichloroethane		12	ug/kg	U	7/1/97
SJS05-SB10-002	VCTCL	1,1-Dichloroethane		12	ug/kg	U	7/1/97
SJS05-SB10-002	VCTCL	1,1-Dichloroethene		12	ug/kg	U	7/1/97
SJS05-SB10-002	VCTCL	1,2-Dichloroethane		12	ug/kg	U	7/1/97
SJS05-SB10-002	VCTCL	1,2-Dichloroethene (total)		12	ug/kg	U	7/1/97
SJS05-SB10-002	VCTCL	1,2-Dichloropropane		12	ug/kg	U	7/1/97
SJS05-SB10-002	VCTCL	2-Butanone		12	ug/kg	U	7
SJS05-SB10-002	VCTCL	2-Hexanone		12	ug/kg	U	7/
SJS05-SB10-002	VCTCL	4-Methyl-2-Pentanone		12	ug/kg	U	7/1/97
SJS05-SB10-002	VCTCL	Acetone	11	12	ug/kg	J	7/1/97
SJS05-SB10-002	VCTCL	Benzene		12	ug/kg	U	7/1/97
SJS05-SB10-002	VCTCL	Bromodichloromethane		12	ug/kg	U	7/1/97
SJS05-SB10-002	VCTCL	Bromoform		12	ug/kg	U	7/1/97
SJS05-SB10-002	VCTCL	Bromomethane		12	ug/kg	U	7/1/97
SJS05-SB10-002	VCTCL	Carbon Disulfide		12	ug/kg	U	7/1/97
SJS05-SB10-002	VCTCL	Carbon Tetrachloride		12	ug/kg	U	7/1/97
SJS05-SB10-002	VCTCL	Chlorobenzene		12	ug/kg	U	7/1/97
SJS05-SB10-002	VCTCL	Chloroethane		12	ug/kg	U	7/1/97
SJS05-SB10-002	VCTCL	Chloroform		12	ug/kg	U	7/1/97
SJS05-SB10-002	VCTCL	Chloromethane		12	ug/kg	U	7/1/97
SJS05-SB10-002	VCTCL	cis-1,3-Dichloropropene		12	ug/kg	U	7/1/97
SJS05-SB10-002	VCTCL	Dibromochloromethane		12	ug/kg	U	7/1/97
SJS05-SB10-002	VCTCL	Ethylbenzene		12	ug/kg	U	7/1/97
SJS05-SB10-002	VCTCL	Methylene Chloride	39	12	ug/kg	B	7/1/97
SJS05-SB10-002	VCTCL	Styrene		12	ug/kg	U	7/1/97
SJS05-SB10-002	VCTCL	Tetrachloroethene		12	ug/kg	U	7/1/97
SJS05-SB10-002	VCTCL	Toluene		12	ug/kg	U	7/1/97
SJS05-SB10-002	VCTCL	Total Xylenes		12	ug/kg	U	7/1/97
SJS05-SB10-002	VCTCL	Trans-1,3-Dichloropropene		12	ug/kg	U	7/1/97
SJS05-SB10-002	VCTCL	Trichloroethene		12	ug/kg	U	7/1/97
SJS05-SB10-002	VCTCL	Vinyl Chloride		12	ug/kg	U	7/1/97
SJS05-SB11-002	CTOTP	Total Phosphorous (as P)	49.3	7.4	mg/kg		7/15/97
SJS05-SB11-002	MCYAN	Aluminum	2760	7.28	mg/kg		7/2/97
SJS05-SB11-002	MCYAN	Arsenic	1.3	0.5	mg/kg	L	7/2/97
SJS05-SB11-002	MCYAN	Barium	7	0.33	mg/kg	B	7/2/97
SJS05-SB11-002	MCYAN	Beryllium		0.17	mg/kg	U	7
SJS05-SB11-002	MCYAN	Cadmium		0.08	mg/kg	U	7/.

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS05-SB11-002	MCYAN	Calcium	22300	14.4	mg/kg		7/2/97
SJS05-SB11-002	MCYAN	Chromium	5.7	1.16	mg/kg		7/2/97
SJS05-SB11-002	MCYAN	Cobalt	2.5	1.32	mg/kg	J	7/2/97
SJS05-SB11-002	MCYAN	Copper	9.1	0.99	mg/kg		7/2/97
SJS05-SB11-002	MCYAN	Cyanide		0.59	mg/kg	U	7/2/97
SJS05-SB11-002	MCYAN	Iron	4780	2.81	mg/kg		7/2/97
SJS05-SB11-002	MCYAN	Lead	12.2	0.17	mg/kg	J	7/2/97
SJS05-SB11-002	MCYAN	Magnesium	818	29.96	mg/kg	J	7/2/97
SJS05-SB11-002	MCYAN	Manganese	60.4	0.33	mg/kg		7/2/97
SJS05-SB11-002	MCYAN	Mercury		0.05	mg/kg	U	6/30/97
SJS05-SB11-002	MCYAN	Nickel	3	1.16	mg/kg	B	7/2/97
SJS05-SB11-002	MCYAN	Potassium	414	36.75	mg/kg	J	7/2/97
SJS05-SB11-002	MCYAN	Selenium		0.5	mg/kg	UL	7/2/97
SJS05-SB11-002	MCYAN	Silver	0.52	0.17	mg/kg	J	7/2/97
SJS05-SB11-002	MCYAN	Sodium	143	9.6	mg/kg	B	7/2/97
SJS05-SB11-002	MCYAN	Thallium		0.33	mg/kg	U	7/2/97
SJS05-SB11-002	MCYAN	Vanadium	5.9	1.49	mg/kg	J	7/2/97
SJS05-SB11-002	MCYAN	Zinc	20.2	0.83	mg/kg	B	7/2/97
SJS05-SB11-002	PSPCB	4,4'-DDD		3.8	ug/kg	U	7/15/97
SJS05-SB11-002	PSPCB	4,4'-DDE		3.8	ug/kg	U	7/15/97
SJS05-SB11-002	PSPCB	4,4'-DDT		3.8	ug/kg	U	7/15/97
SJS05-SB11-002	PSPCB	Aldrin		1.9	ug/kg	U	7/15/97
SJS05-SB11-002	PSPCB	alpha-BHC		1.9	ug/kg	U	7/15/97
SJS05-SB11-002	PSPCB	alpha-Chlordane		1.9	ug/kg	U	7/15/97
SJS05-SB11-002	PSPCB	Aroclor-1016		38	ug/kg	U	7/15/97
SJS05-SB11-002	PSPCB	Aroclor-1221		76	ug/kg	U	7/15/97
SJS05-SB11-002	PSPCB	Aroclor-1232		38	ug/kg	U	7/15/97
SJS05-SB11-002	PSPCB	Aroclor-1242		38	ug/kg	U	7/15/97
SJS05-SB11-002	PSPCB	Aroclor-1248		38	ug/kg	U	7/15/97
SJS05-SB11-002	PSPCB	Aroclor-1254		38	ug/kg	U	7/15/97
SJS05-SB11-002	PSPCB	Aroclor-1260		38	ug/kg	U	7/15/97
SJS05-SB11-002	PSPCB	beta-BHC		1.9	ug/kg	U	7/15/97
SJS05-SB11-002	PSPCB	delta-BHC		1.9	ug/kg	U	7/15/97
SJS05-SB11-002	PSPCB	Dieldrin		3.8	ug/kg	U	7/15/97
SJS05-SB11-002	PSPCB	Endosulfan I		1.9	ug/kg	U	7/15/97
SJS05-SB11-002	PSPCB	Endosulfan II		3.8	ug/kg	U	7/15/97
SJS05-SB11-002	PSPCB	Endosulfan Sulfate		3.8	ug/kg	U	7/15/97
SJS05-SB11-002	PSPCB	Endrin		3.8	ug/kg	U	7/15/97
SJS05-SB11-002	PSPCB	Endrin Aldehyde		3.8	ug/kg	U	7/15/97
SJS05-SB11-002	PSPCB	Endrin Ketone		3.8	ug/kg	U	7/15/97
SJS05-SB11-002	PSPCB	gamma-BHC		1.9	ug/kg	U	7/15/97
SJS05-SB11-002	PSPCB	gamma-Chlordane		1.9	ug/kg	U	7/15/97
SJS05-SB11-002	PSPCB	Heptachlor		1.9	ug/kg	U	7/15/97
SJS05-SB11-002	PSPCB	Heptachlor Epoxide		1.9	ug/kg	U	7/15/97
SJS05-SB11-002	PSPCB	Methoxychlor		19	ug/kg	U	7/15/97
SJS05-SB11-002	PSPCB	Toxaphene		190	ug/kg	U	7/15/97
SJS05-SB11-002	SVTCL	1,2,4-Trichlorobenzene		380	ug/kg	U	7/9/97
SJS05-SB11-002	SVTCL	1,2-Dichlorobenzene		380	ug/kg	U	7/9/97
SJS05-SB11-002	SVTCL	1,3-Dichlorobenzene		380	ug/kg	U	7/9/97
SJS05-SB11-002	SVTCL	1,4-Dichlorobenzene		380	ug/kg	U	7/9/97
SJS05-SB11-002	SVTCL	2,2'-oxybis(1-Chloropropane		380	ug/kg	U	7/9/97
SJS05-SB11-002	SVTCL	2,4,5-Trichlorophenol		950	ug/kg	U	7/9/97
SJS05-SB11-002	SVTCL	2,4,6-Trichlorophenol		380	ug/kg	U	7/9/97
SJS05-SB11-002	SVTCL	2,4-Dichlorophenol		380	ug/kg	U	7/9/97
SJS05-SB11-002	SVTCL	2,4-Dimethylphenol		380	ug/kg	U	7/9/97
SJS05-SB11-002	SVTCL	2,4-Dinitrophenol		950	ug/kg	U	7/9/97
SJS05-SB11-002	SVTCL	2,4-Dinitrotoluene		380	ug/kg	U	7/9/97
SJS05-SB11-002	SVTCL	2,6-Dinitrotoluene		380	ug/kg	U	7/9/97
SJS05-SB11-002	SVTCL	2-Chloronaphthalene		380	ug/kg	U	7/9/97
SJS05-SB11-002	SVTCL	2-Chlorophenol		380	ug/kg	U	7/9/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS05-SB11-002	SVTCL	2-Methylnaphthalene		380	ug/kg	U	7/
SJS05-SB11-002	SVTCL	2-Methylphenol		380	ug/kg	U	7
SJS05-SB11-002	SVTCL	2-Nitroaniline		950	ug/kg	U	7/9/97
SJS05-SB11-002	SVTCL	2-Nitrophenol		380	ug/kg	U	7/9/97
SJS05-SB11-002	SVTCL	3,3'-Dichlorobenzidine		380	ug/kg	U	7/9/97
SJS05-SB11-002	SVTCL	3-Nitroaniline		950	ug/kg	U	7/9/97
SJS05-SB11-002	SVTCL	4,6-Dinitro-2-Methylphenol		950	ug/kg	U	7/9/97
SJS05-SB11-002	SVTCL	4-Bromophenyl phenylether		380	ug/kg	U	7/9/97
SJS05-SB11-002	SVTCL	4-Chloro-3-Methylphenol		380	ug/kg	U	7/9/97
SJS05-SB11-002	SVTCL	4-Chloroaniline		380	ug/kg	U	7/9/97
SJS05-SB11-002	SVTCL	4-Chlorophenyl-phenylether		380	ug/kg	U	7/9/97
SJS05-SB11-002	SVTCL	4-Methylphenol		380	ug/kg	U	7/9/97
SJS05-SB11-002	SVTCL	4-Nitroaniline		950	ug/kg	U	7/9/97
SJS05-SB11-002	SVTCL	4-Nitrophenol		950	ug/kg	U	7/9/97
SJS05-SB11-002	SVTCL	Acenaphthene		380	ug/kg	U	7/9/97
SJS05-SB11-002	SVTCL	Acenaphthylene		380	ug/kg	U	7/9/97
SJS05-SB11-002	SVTCL	Anthracene		380	ug/kg	U	7/9/97
SJS05-SB11-002	SVTCL	Benzo(a)Anthracene		380	ug/kg	U	7/9/97
SJS05-SB11-002	SVTCL	Benzo(a)Pyrene		380	ug/kg	U	7/9/97
SJS05-SB11-002	SVTCL	Benzo(b)Fluoranthene		380	ug/kg	U	7/9/97
SJS05-SB11-002	SVTCL	Benzo(g,h,i)Perylene		380	ug/kg	U	7/9/97
SJS05-SB11-002	SVTCL	Benzo(k)Fluoranthene		380	ug/kg	U	7/9/97
SJS05-SB11-002	SVTCL	Bis(2-chloroethoxy)Methane		380	ug/kg	U	7/9/97
SJS05-SB11-002	SVTCL	Bis(2-chloroethyl)Ether		380	ug/kg	U	7/9/97
SJS05-SB11-002	SVTCL	Bis(2-Ethylhexyl)Phthalate	150	280	ug/kg	B	7/9/97
SJS05-SB11-002	SVTCL	Butylbenzylphthalate		380	ug/kg	U	7/9/97
SJS05-SB11-002	SVTCL	Carbazole		380	ug/kg	U	7/9/97
SJS05-SB11-002	SVTCL	Chrysene		380	ug/kg	U	7/9/97
SJS05-SB11-002	SVTCL	Di-n-Butylphthalate		380	ug/kg	U	7/9/97
SJS05-SB11-002	SVTCL	Di-n-Octyl Phthalate		380	ug/kg	U	7/
SJS05-SB11-002	SVTCL	Dibenz(a,h)Anthracene		380	ug/kg	U	7/
SJS05-SB11-002	SVTCL	Dibenzofuran		380	ug/kg	U	7/9/97
SJS05-SB11-002	SVTCL	Diethylphthalate		380	ug/kg	U	7/9/97
SJS05-SB11-002	SVTCL	Dimethyl Phthalate		380	ug/kg	U	7/9/97
SJS05-SB11-002	SVTCL	Fluoranthene	42	410	ug/kg	J	7/9/97
SJS05-SB11-002	SVTCL	Fluorene		380	ug/kg	U	7/9/97
SJS05-SB11-002	SVTCL	Hexachlorobenzene		380	ug/kg	U	7/9/97
SJS05-SB11-002	SVTCL	Hexachlorobutadiene		380	ug/kg	U	7/9/97
SJS05-SB11-002	SVTCL	Hexachlorocyclopentadien		380	ug/kg	U	7/9/97
SJS05-SB11-002	SVTCL	Hexachloroethane		380	ug/kg	U	7/9/97
SJS05-SB11-002	SVTCL	Indeno(1,2,3-cd)Pyrene		380	ug/kg	U	7/9/97
SJS05-SB11-002	SVTCL	Isophorone		380	ug/kg	U	7/9/97
SJS05-SB11-002	SVTCL	N-Nitroso-Di-n-Propylamine		380	ug/kg	U	7/9/97
SJS05-SB11-002	SVTCL	N-Nitrosodiphenylamine		380	ug/kg	U	7/9/97
SJS05-SB11-002	SVTCL	Naphthalene		380	ug/kg	U	7/9/97
SJS05-SB11-002	SVTCL	Nitrobenzene		380	ug/kg	U	7/9/97
SJS05-SB11-002	SVTCL	Pentachlorophenol		950	ug/kg	U	7/9/97
SJS05-SB11-002	SVTCL	Phenanthrene		380	ug/kg	U	7/9/97
SJS05-SB11-002	SVTCL	Phenol		380	ug/kg	U	7/9/97
SJS05-SB11-002	SVTCL	Pyrene	42	410	ug/kg	J	7/9/97
SJS05-SB11-002	VCTCL	1,1,1-Trichloroethane		12	ug/kg	U	7/1/97
SJS05-SB11-002	VCTCL	1,1,2,2-Tetrachloroethane		12	ug/kg	U	7/1/97
SJS05-SB11-002	VCTCL	1,1,2-Trichloroethane		12	ug/kg	U	7/1/97
SJS05-SB11-002	VCTCL	1,1-Dichloroethane		12	ug/kg	U	7/1/97
SJS05-SB11-002	VCTCL	1,1-Dichloroethene		12	ug/kg	U	7/1/97
SJS05-SB11-002	VCTCL	1,2-Dichloroethane		12	ug/kg	U	7/1/97
SJS05-SB11-002	VCTCL	1,2-Dichloroethene (total)		12	ug/kg	U	7/1/97
SJS05-SB11-002	VCTCL	1,2-Dichloropropane		12	ug/kg	U	7/1/97
SJS05-SB11-002	VCTCL	2-Butanone		12	ug/kg	U	7/
SJS05-SB11-002	VCTCL	2-Hexanone		12	ug/kg	U	7/

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS05-SB11-002	VCTCL	4-Methyl-2-Pentanone		12	ug/kg	U	7/1/97
SJS05-SB11-002	VCTCL	Acetone	23	12	ug/kg		7/1/97
SJS05-SB11-002	VCTCL	Benzene		12	ug/kg	U	7/1/97
SJS05-SB11-002	VCTCL	Bromodichloromethane		12	ug/kg	U	7/1/97
SJS05-SB11-002	VCTCL	Bromoform		12	ug/kg	U	7/1/97
SJS05-SB11-002	VCTCL	Bromomethane		12	ug/kg	U	7/1/97
SJS05-SB11-002	VCTCL	Carbon Disulfide		12	ug/kg	U	7/1/97
SJS05-SB11-002	VCTCL	Carbon Tetrachloride		12	ug/kg	U	7/1/97
SJS05-SB11-002	VCTCL	Chlorobenzene		12	ug/kg	U	7/1/97
SJS05-SB11-002	VCTCL	Chloroethane		12	ug/kg	U	7/1/97
SJS05-SB11-002	VCTCL	Chloroform		12	ug/kg	U	7/1/97
SJS05-SB11-002	VCTCL	Chloromethane		12	ug/kg	U	7/1/97
SJS05-SB11-002	VCTCL	cis-1,3-Dichloropropene		12	ug/kg	U	7/1/97
SJS05-SB11-002	VCTCL	Dibromochloromethane		12	ug/kg	U	7/1/97
SJS05-SB11-002	VCTCL	Ethylbenzene		12	ug/kg	U	7/1/97
SJS05-SB11-002	VCTCL	Methylene Chloride	61	12	ug/kg	B	7/1/97
SJS05-SB11-002	VCTCL	Styrene		12	ug/kg	U	7/1/97
SJS05-SB11-002	VCTCL	Tetrachloroethene		12	ug/kg	U	7/1/97
SJS05-SB11-002	VCTCL	Toluene		12	ug/kg	U	7/1/97
SJS05-SB11-002	VCTCL	Total Xylenes		12	ug/kg	U	7/1/97
SJS05-SB11-002	VCTCL	Trans-1,3-Dichloropropene		12	ug/kg	U	7/1/97
SJS05-SB11-002	VCTCL	Trichloroethene		12	ug/kg	U	7/1/97
SJS05-SB11-002	VCTCL	Vinyl Chloride		12	ug/kg	U	7/1/97
SJS05-SB11-002P	CTOTP	Total Phosphorous (as P)	10.8	1.5	mg/kg		7/15/97
SJS05-SB11-002P	MCYAN	Aluminum	1430	10.14	mg/kg		7/2/97
SJS05-SB11-002P	MCYAN	Arsenic		0.69	mg/kg	UL	7/2/97
SJS05-SB11-002P	MCYAN	Barium	4.3	0.46	mg/kg	B	7/2/97
SJS05-SB11-002P	MCYAN	Beryllium		0.23	mg/kg	U	7/2/97
SJS05-SB11-002P	MCYAN	Cadmium		0.12	mg/kg	U	7/7/97
SJS05-SB11-002P	MCYAN	Calcium	50500	20.04	mg/kg		7/2/97
SJS05-SB11-002P	MCYAN	Chromium	2.6	1.61	mg/kg	K	7/2/97
SJS05-SB11-002P	MCYAN	Cobalt		1.84	mg/kg	U	7/2/97
SJS05-SB11-002P	MCYAN	Copper	2.3	1.38	mg/kg	B	7/2/97
SJS05-SB11-002P	MCYAN	Cyanide		0.61	mg/kg	U	7/2/97
SJS05-SB11-002P	MCYAN	Iron	3000	3.92	mg/kg		7/2/97
SJS05-SB11-002P	MCYAN	Lead	1.6	0.23	mg/kg	J	7/2/97
SJS05-SB11-002P	MCYAN	Magnesium	716	41.7	mg/kg	J	7/2/97
SJS05-SB11-002P	MCYAN	Manganese	86.4	0.46	mg/kg		7/2/97
SJS05-SB11-002P	MCYAN	Mercury		0.05	mg/kg	U	6/30/97
SJS05-SB11-002P	MCYAN	Nickel		1.61	mg/kg	U	7/2/97
SJS05-SB11-002P	MCYAN	Potassium	276	51.14	mg/kg	J	7/2/97
SJS05-SB11-002P	MCYAN	Selenium		0.69	mg/kg	UL	7/2/97
SJS05-SB11-002P	MCYAN	Silver	0.67	0.23	mg/kg	J	7/2/97
SJS05-SB11-002P	MCYAN	Sodium	318	13.36	mg/kg	B	7/2/97
SJS05-SB11-002P	MCYAN	Thallium		0.46	mg/kg	U	7/2/97
SJS05-SB11-002P	MCYAN	Vanadium	2.9	2.07	mg/kg	B	7/2/97
SJS05-SB11-002P	MCYAN	Zinc	9.5	1.15	mg/kg	B	7/2/97
SJS05-SB11-002P	PSPCB	4,4'-DDD		3.5	ug/kg	UJ	7/16/97
SJS05-SB11-002P	PSPCB	4,4'-DDE		3.5	ug/kg	UJ	7/16/97
SJS05-SB11-002P	PSPCB	4,4'-DDT		3.5	ug/kg	UJ	7/16/97
SJS05-SB11-002P	PSPCB	Aldrin		1.8	ug/kg	UJ	7/16/97
SJS05-SB11-002P	PSPCB	alpha-BHC		1.8	ug/kg	UJ	7/16/97
SJS05-SB11-002P	PSPCB	alpha-Chlordane		1.8	ug/kg	UJ	7/16/97
SJS05-SB11-002P	PSPCB	Aroclor-1016		35	ug/kg	UJ	7/16/97
SJS05-SB11-002P	PSPCB	Aroclor-1221		71	ug/kg	UJ	7/16/97
SJS05-SB11-002P	PSPCB	Aroclor-1232		35	ug/kg	UJ	7/16/97
SJS05-SB11-002P	PSPCB	Aroclor-1242		35	ug/kg	UJ	7/16/97
SJS05-SB11-002P	PSPCB	Aroclor-1248		35	ug/kg	UJ	7/16/97
SJS05-SB11-002P	PSPCB	Aroclor-1254		35	ug/kg	UJ	7/16/97
SJS05-SB11-002P	PSPCB	Aroclor-1260		35	ug/kg	UJ	7/16/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS05-SB11-002P	PSPCB	beta-BHC		1.8	ug/kg	UJ	7/1
SJS05-SB11-002P	PSPCB	delta-BHC		1.8	ug/kg	UJ	7/1
SJS05-SB11-002P	PSPCB	Dieldrin		3.5	ug/kg	UJ	7/16/97
SJS05-SB11-002P	PSPCB	Endosulfan I		1.8	ug/kg	UJ	7/16/97
SJS05-SB11-002P	PSPCB	Endosulfan II		3.5	ug/kg	UJ	7/16/97
SJS05-SB11-002P	PSPCB	Endosulfan Sulfate		3.5	ug/kg	UJ	7/16/97
SJS05-SB11-002P	PSPCB	Endrin		3.5	ug/kg	UJ	7/16/97
SJS05-SB11-002P	PSPCB	Endrin Aldehyde		3.5	ug/kg	UJ	7/16/97
SJS05-SB11-002P	PSPCB	Endrin Ketone		3.5	ug/kg	UJ	7/16/97
SJS05-SB11-002P	PSPCB	gamma-BHC		1.8	ug/kg	UJ	7/16/97
SJS05-SB11-002P	PSPCB	gamma-Chlordane		1.8	ug/kg	UJ	7/16/97
SJS05-SB11-002P	PSPCB	Heptachlor		1.8	ug/kg	UJ	7/16/97
SJS05-SB11-002P	PSPCB	Heptachlor Epoxide		1.8	ug/kg	UJ	7/16/97
SJS05-SB11-002P	PSPCB	Methoxychlor		18	ug/kg	UJ	7/16/97
SJS05-SB11-002P	PSPCB	Toxaphene		180	ug/kg	UJ	7/16/97
SJS05-SB11-002P	SVTCL	1,2,4-Trichlorobenzene		690	ug/kg	U	7/9/97
SJS05-SB11-002P	SVTCL	1,2-Dichlorobenzene		690	ug/kg	U	7/9/97
SJS05-SB11-002P	SVTCL	1,3-Dichlorobenzene		690	ug/kg	U	7/9/97
SJS05-SB11-002P	SVTCL	1,4-Dichlorobenzene		690	ug/kg	U	7/9/97
SJS05-SB11-002P	SVTCL	2,2'-oxybis(1-Chloropropane		690	ug/kg	U	7/9/97
SJS05-SB11-002P	SVTCL	2,4,5-Trichlorophenol		1700	ug/kg	U	7/9/97
SJS05-SB11-002P	SVTCL	2,4,6-Trichlorophenol		690	ug/kg	U	7/9/97
SJS05-SB11-002P	SVTCL	2,4-Dichlorophenol		690	ug/kg	U	7/9/97
SJS05-SB11-002P	SVTCL	2,4-Dimethylphenol		690	ug/kg	U	7/9/97
SJS05-SB11-002P	SVTCL	2,4-Dinitrophenol		1700	ug/kg	U	7/9/97
SJS05-SB11-002P	SVTCL	2,4-Dinitrotoluene		690	ug/kg	U	7/9/97
SJS05-SB11-002P	SVTCL	2,6-Dinitrotoluene		690	ug/kg	U	7/9/97
SJS05-SB11-002P	SVTCL	2-Chloronaphthalene		690	ug/kg	U	7/9/97
SJS05-SB11-002P	SVTCL	2-Chlorophenol		690	ug/kg	U	7/9/97
SJS05-SB11-002P	SVTCL	2-Methylnaphthalene		690	ug/kg	U	7/
SJS05-SB11-002P	SVTCL	2-Methylphenol		690	ug/kg	U	7/
SJS05-SB11-002P	SVTCL	2-Nitroaniline		1700	ug/kg	U	7/9/97
SJS05-SB11-002P	SVTCL	2-Nitrophenol		690	ug/kg	U	7/9/97
SJS05-SB11-002P	SVTCL	3,3'-Dichlorobenzidine		690	ug/kg	U	7/9/97
SJS05-SB11-002P	SVTCL	3-Nitroaniline		1700	ug/kg	U	7/9/97
SJS05-SB11-002P	SVTCL	4,6-Dinitro-2-Methylphenol		1700	ug/kg	U	7/9/97
SJS05-SB11-002P	SVTCL	4-Bromophenyl phenylether		690	ug/kg	U	7/9/97
SJS05-SB11-002P	SVTCL	4-Chloro-3-Methylphenol		690	ug/kg	U	7/9/97
SJS05-SB11-002P	SVTCL	4-Chloroaniline		690	ug/kg	U	7/9/97
SJS05-SB11-002P	SVTCL	4-Chlorophenyl-phenylether		690	ug/kg	U	7/9/97
SJS05-SB11-002P	SVTCL	4-Methylphenol		690	ug/kg	U	7/9/97
SJS05-SB11-002P	SVTCL	4-Nitroaniline		1700	ug/kg	U	7/9/97
SJS05-SB11-002P	SVTCL	4-Nitrophenol		1700	ug/kg	U	7/9/97
SJS05-SB11-002P	SVTCL	Acenaphthene		690	ug/kg	U	7/9/97
SJS05-SB11-002P	SVTCL	Acenaphthylene		690	ug/kg	U	7/9/97
SJS05-SB11-002P	SVTCL	Anthracene		690	ug/kg	U	7/9/97
SJS05-SB11-002P	SVTCL	Benzo(a)Anthracene		690	ug/kg	U	7/9/97
SJS05-SB11-002P	SVTCL	Benzo(a)Pyrene		690	ug/kg	U	7/9/97
SJS05-SB11-002P	SVTCL	Benzo(b)Fluoranthene		690	ug/kg	U	7/9/97
SJS05-SB11-002P	SVTCL	Benzo(g,h,i)Perylene		690	ug/kg	U	7/9/97
SJS05-SB11-002P	SVTCL	Benzo(k)Fluoranthene		690	ug/kg	U	7/9/97
SJS05-SB11-002P	SVTCL	Bis(2-chloroethoxy)Methane		690	ug/kg	U	7/9/97
SJS05-SB11-002P	SVTCL	Bis(2-chloroethyl)Ether		690	ug/kg	U	7/9/97
SJS05-SB11-002P	SVTCL	Bis(2-Ethylhexyl)Phthalate	2900	560	ug/kg	B	7/9/97
SJS05-SB11-002P	SVTCL	Butylbenzylphthalate		690	ug/kg	U	7/9/97
SJS05-SB11-002P	SVTCL	Carbazole		690	ug/kg	U	7/9/97
SJS05-SB11-002P	SVTCL	Chrysene		690	ug/kg	U	7/9/97
SJS05-SB11-002P	SVTCL	Di-n-Butylphthalate		690	ug/kg	U	7/9/97
SJS05-SB11-002P	SVTCL	Di-n-Octyl Phthalate		690	ug/kg	U	7/
SJS05-SB11-002P	SVTCL	Dibenz(a,h)Anthracene		690	ug/kg	U	7/

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS05-SB11-002P	SVTCL	Dibenzofuran		690	ug/kg	U	7/9/97
SJS05-SB11-002P	SVTCL	Diethylphthalate		690	ug/kg	U	7/9/97
SJS05-SB11-002P	SVTCL	Dimethyl Phthalate		690	ug/kg	U	7/9/97
SJS05-SB11-002P	SVTCL	Fluoranthene		690	ug/kg	U	7/9/97
SJS05-SB11-002P	SVTCL	Fluorene		690	ug/kg	U	7/9/97
SJS05-SB11-002P	SVTCL	Hexachlorobenzene		690	ug/kg	U	7/9/97
SJS05-SB11-002P	SVTCL	Hexachlorobutadiene		690	ug/kg	U	7/9/97
SJS05-SB11-002P	SVTCL	Hexachlorocyclopentadien,		690	ug/kg	U	7/9/97
SJS05-SB11-002P	SVTCL	Hexachloroethane		690	ug/kg	U	7/9/97
SJS05-SB11-002P	SVTCL	Indeno(1,2,3-cd)Pyrene		690	ug/kg	U	7/9/97
SJS05-SB11-002P	SVTCL	Isophorone		690	ug/kg	U	7/9/97
SJS05-SB11-002P	SVTCL	N-Nitroso-Di-n-Propylamine		690	ug/kg	U	7/9/97
SJS05-SB11-002P	SVTCL	N-Nitrosodiphenylamine		690	ug/kg	U	7/9/97
SJS05-SB11-002P	SVTCL	Naphthalene		690	ug/kg	U	7/9/97
SJS05-SB11-002P	SVTCL	Nitrobenzene		690	ug/kg	U	7/9/97
SJS05-SB11-002P	SVTCL	Pentachlorophenol		1700	ug/kg	U	7/9/97
SJS05-SB11-002P	SVTCL	Phenanthrene		690	ug/kg	U	7/9/97
SJS05-SB11-002P	SVTCL	Phenol		690	ug/kg	U	7/9/97
SJS05-SB11-002P	SVTCL	Pyrene		690	ug/kg	U	7/9/97
SJS05-SB11-002P	VCTCL	1,1,1-Trichloroethane		12	ug/kg	U	7/1/97
SJS05-SB11-002P	VCTCL	1,1,2,2-Tetrachloroethane		12	ug/kg	U	7/1/97
SJS05-SB11-002P	VCTCL	1,1,2-Trichloroethane		12	ug/kg	U	7/1/97
SJS05-SB11-002P	VCTCL	1,1-Dichloroethane		12	ug/kg	U	7/1/97
SJS05-SB11-002P	VCTCL	1,1-Dichloroethene		12	ug/kg	U	7/1/97
SJS05-SB11-002P	VCTCL	1,2-Dichloroethane		12	ug/kg	U	7/1/97
SJS05-SB11-002P	VCTCL	1,2-Dichloroethene (total)		12	ug/kg	U	7/1/97
SJS05-SB11-002P	VCTCL	1,2-Dichloropropane		12	ug/kg	U	7/1/97
SJS05-SB11-002P	VCTCL	2-Butanone		12	ug/kg	U	7/1/97
SJS05-SB11-002P	VCTCL	2-Hexanone		12	ug/kg	U	7/1/97
SJS05-SB11-002P	VCTCL	4-Methyl-2-Pentanone		12	ug/kg	U	7/1/97
SJS05-SB11-002P	VCTCL	Acetone	21	12	ug/kg		7/1/97
SJS05-SB11-002P	VCTCL	Benzene		12	ug/kg	U	7/1/97
SJS05-SB11-002P	VCTCL	Bromodichloromethane		12	ug/kg	U	7/1/97
SJS05-SB11-002P	VCTCL	Bromoform		12	ug/kg	U	7/1/97
SJS05-SB11-002P	VCTCL	Bromomethane		12	ug/kg	U	7/1/97
SJS05-SB11-002P	VCTCL	Carbon Disulfide		12	ug/kg	U	7/1/97
SJS05-SB11-002P	VCTCL	Carbon Tetrachloride		12	ug/kg	U	7/1/97
SJS05-SB11-002P	VCTCL	Chlorobenzene		12	ug/kg	U	7/1/97
SJS05-SB11-002P	VCTCL	Chloroethane		12	ug/kg	U	7/1/97
SJS05-SB11-002P	VCTCL	Chloroform		12	ug/kg	U	7/1/97
SJS05-SB11-002P	VCTCL	Chloromethane		12	ug/kg	U	7/1/97
SJS05-SB11-002P	VCTCL	cis-1,3-Dichloropropene		12	ug/kg	U	7/1/97
SJS05-SB11-002P	VCTCL	Dibromochloromethane		12	ug/kg	U	7/1/97
SJS05-SB11-002P	VCTCL	Ethylbenzene		12	ug/kg	U	7/1/97
SJS05-SB11-002P	VCTCL	Methylene Chloride	54	12	ug/kg	B	7/1/97
SJS05-SB11-002P	VCTCL	Styrene		12	ug/kg	U	7/1/97
SJS05-SB11-002P	VCTCL	Tetrachloroethene		12	ug/kg	U	7/1/97
SJS05-SB11-002P	VCTCL	Toluene		12	ug/kg	U	7/1/97
SJS05-SB11-002P	VCTCL	Total Xylenes		12	ug/kg	U	7/1/97
SJS05-SB11-002P	VCTCL	Trans-1,3-Dichloropropene		12	ug/kg	U	7/1/97
SJS05-SB11-002P	VCTCL	Trichloroethene		12	ug/kg	U	7/1/97
SJS05-SB11-002P	VCTCL	Vinyl Chloride		12	ug/kg	U	7/1/97
SJS05-SB12-002	CTOTP	Total Phosphorous (as P)	4.8	1.5	mg/kg		7/14/97
SJS05-SB12-002	MCYAN	Aluminum	2860	10.2	mg/kg	J	7/2/97
SJS05-SB12-002	MCYAN	Antimony		0.46	mg/kg	UL	7/2/97
SJS05-SB12-002	MCYAN	Arsenic	0.93	0.7	mg/kg	J	7/2/97
SJS05-SB12-002	MCYAN	Barium	8	0.46	mg/kg	J	7/2/97
SJS05-SB12-002	MCYAN	Beryllium		0.23	mg/kg	U	7/2/97
SJS05-SB12-002	MCYAN	Cadmium		0.12	mg/kg	U	7/2/97
SJS05-SB12-002	MCYAN	Calcium	579	20.18	mg/kg	J	7/2/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS05-SB12-002	MCYAN	Chromium	6.6	1.62	mg/kg		7/
SJS05-SB12-002	MCYAN	Cobalt	2.8	1.86	mg/kg	J	7
SJS05-SB12-002	MCYAN	Copper		1.39	mg/kg	U	7/2/97
SJS05-SB12-002	MCYAN	Cyanide		0.61	mg/kg	U	7/3/97
SJS05-SB12-002	MCYAN	Iron	4770	3.94	mg/kg	J	7/2/97
SJS05-SB12-002	MCYAN	Lead	3.5	0.23	mg/kg	K	7/2/97
SJS05-SB12-002	MCYAN	Magnesium	639	41.97	mg/kg	J	7/2/97
SJS05-SB12-002	MCYAN	Manganese	52.4	0.46	mg/kg	J	7/2/97
SJS05-SB12-002	MCYAN	Mercury		0.05	mg/kg	U	6/30/97
SJS05-SB12-002	MCYAN	Nickel	2.7	1.62	mg/kg	B	7/2/97
SJS05-SB12-002	MCYAN	Potassium	490	51.48	mg/kg	J	7/2/97
SJS05-SB12-002	MCYAN	Selenium		0.7	mg/kg	U	7/3/97
SJS05-SB12-002	MCYAN	Silver	0.32	0.23	mg/kg	L	7/2/97
SJS05-SB12-002	MCYAN	Sodium	58	13.45	mg/kg	B	7/2/97
SJS05-SB12-002	MCYAN	Thallium		0.46	mg/kg	U	7/2/97
SJS05-SB12-002	MCYAN	Vanadium	7.1	2.09	mg/kg	J	7/2/97
SJS05-SB12-002	MCYAN	Zinc	12.8	1.16	mg/kg	B	7/2/97
SJS05-SB12-002	PSPCB	4,4'-DDD	2.6	3.8	ug/kg	J	7/14/97
SJS05-SB12-002	PSPCB	4,4'-DDE	5.9	3.8	ug/kg		7/14/97
SJS05-SB12-002	PSPCB	4,4'-DDT	3.7	3.8	ug/kg	J	7/14/97
SJS05-SB12-002	PSPCB	Aldrin		1.9	ug/kg	U	7/14/97
SJS05-SB12-002	PSPCB	alpha-BHC		1.9	ug/kg	U	7/14/97
SJS05-SB12-002	PSPCB	alpha-Chlordane		1.9	ug/kg	U	7/14/97
SJS05-SB12-002	PSPCB	Aroclor-1016		38	ug/kg	U	7/14/97
SJS05-SB12-002	PSPCB	Aroclor-1221		76	ug/kg	U	7/14/97
SJS05-SB12-002	PSPCB	Aroclor-1232		38	ug/kg	U	7/14/97
SJS05-SB12-002	PSPCB	Aroclor-1242		38	ug/kg	U	7/14/97
SJS05-SB12-002	PSPCB	Aroclor-1248		38	ug/kg	U	7/14/97
SJS05-SB12-002	PSPCB	Aroclor-1254		38	ug/kg	U	7/14/97
SJS05-SB12-002	PSPCB	Aroclor-1260		38	ug/kg	U	7/1
SJS05-SB12-002	PSPCB	beta-BHC		1.9	ug/kg	U	7/
SJS05-SB12-002	PSPCB	delta-BHC		1.9	ug/kg	U	7/14/97
SJS05-SB12-002	PSPCB	Dieldrin		3.8	ug/kg	U	7/14/97
SJS05-SB12-002	PSPCB	Endosulfan I		1.9	ug/kg	U	7/14/97
SJS05-SB12-002	PSPCB	Endosulfan II		3.8	ug/kg	U	7/14/97
SJS05-SB12-002	PSPCB	Endosulfan Sulfate		3.8	ug/kg	U	7/14/97
SJS05-SB12-002	PSPCB	Endrin		3.8	ug/kg	U	7/14/97
SJS05-SB12-002	PSPCB	Endrin Aldehyde		3.8	ug/kg	U	7/14/97
SJS05-SB12-002	PSPCB	Endrin Ketone		3.8	ug/kg	U	7/14/97
SJS05-SB12-002	PSPCB	gamma-BHC		1.9	ug/kg	U	7/14/97
SJS05-SB12-002	PSPCB	gamma-Chlordane		1.9	ug/kg	U	7/14/97
SJS05-SB12-002	PSPCB	Heptachlor		1.9	ug/kg	U	7/14/97
SJS05-SB12-002	PSPCB	Heptachlor Epoxide		1.9	ug/kg	U	7/14/97
SJS05-SB12-002	PSPCB	Methoxychlor		19	ug/kg	U	7/14/97
SJS05-SB12-002	PSPCB	Toxaphene		190	ug/kg	U	7/14/97
SJS05-SB12-002	SVTCL	1,2,4-Trichlorobenzene		380	ug/kg	U	7/3/97
SJS05-SB12-002	SVTCL	1,2-Dichlorobenzene		380	ug/kg	U	7/3/97
SJS05-SB12-002	SVTCL	1,3-Dichlorobenzene		380	ug/kg	U	7/3/97
SJS05-SB12-002	SVTCL	1,4-Dichlorobenzene		380	ug/kg	U	7/3/97
SJS05-SB12-002	SVTCL	2,2'-oxybis(1-Chloropropane		380	ug/kg	U	7/3/97
SJS05-SB12-002	SVTCL	2,4,5-Trichlorophenol		950	ug/kg	U	7/3/97
SJS05-SB12-002	SVTCL	2,4,6-Trichlorophenol		380	ug/kg	U	7/3/97
SJS05-SB12-002	SVTCL	2,4-Dichlorophenol		380	ug/kg	U	7/3/97
SJS05-SB12-002	SVTCL	2,4-Dimethylphenol		380	ug/kg	U	7/3/97
SJS05-SB12-002	SVTCL	2,4-Dinitrophenol		950	ug/kg	U	7/3/97
SJS05-SB12-002	SVTCL	2,4-Dinitrotoluene		380	ug/kg	U	7/3/97
SJS05-SB12-002	SVTCL	2,6-Dinitrotoluene		380	ug/kg	U	7/3/97
SJS05-SB12-002	SVTCL	2-Chloronaphthalene		380	ug/kg	U	7/3/97
SJS05-SB12-002	SVTCL	2-Chlorophenol		380	ug/kg	U	7
SJS05-SB12-002	SVTCL	2-Methylnaphthalene		380	ug/kg	U	7/

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS05-SB12-002	SVTCL	2-Methylphenol		380	ug/kg	U	7/3/97
SJS05-SB12-002	SVTCL	2-Nitroaniline		950	ug/kg	U	7/3/97
SJS05-SB12-002	SVTCL	2-Nitrophenol		380	ug/kg	U	7/3/97
SJS05-SB12-002	SVTCL	3,3'-Dichlorobenzidine		380	ug/kg	U	7/3/97
SJS05-SB12-002	SVTCL	3-Nitroaniline		950	ug/kg	U	7/3/97
SJS05-SB12-002	SVTCL	4,6-Dinitro-2-Methylphenol		950	ug/kg	U	7/3/97
SJS05-SB12-002	SVTCL	4-Bromophenyl phenylether		380	ug/kg	U	7/3/97
SJS05-SB12-002	SVTCL	4-Chloro-3-Methylphenol		380	ug/kg	U	7/3/97
SJS05-SB12-002	SVTCL	4-Chloroaniline		380	ug/kg	U	7/3/97
SJS05-SB12-002	SVTCL	4-Chlorophenyl-phenylether		380	ug/kg	U	7/3/97
SJS05-SB12-002	SVTCL	4-Methylphenol		380	ug/kg	U	7/3/97
SJS05-SB12-002	SVTCL	4-Nitroaniline		950	ug/kg	U	7/3/97
SJS05-SB12-002	SVTCL	4-Nitrophenol		950	ug/kg	U	7/3/97
SJS05-SB12-002	SVTCL	Acenaphthene		380	ug/kg	U	7/3/97
SJS05-SB12-002	SVTCL	Acenaphthylene		380	ug/kg	U	7/3/97
SJS05-SB12-002	SVTCL	Anthracene		380	ug/kg	U	7/3/97
SJS05-SB12-002	SVTCL	Benzo(a)Anthracene		380	ug/kg	U	7/3/97
SJS05-SB12-002	SVTCL	Benzo(a)Pyrene		380	ug/kg	U	7/3/97
SJS05-SB12-002	SVTCL	Benzo(b)Fluoranthene		380	ug/kg	U	7/3/97
SJS05-SB12-002	SVTCL	Benzo(g,h,i)Perylene		380	ug/kg	U	7/3/97
SJS05-SB12-002	SVTCL	Benzo(k)Fluoranthene		380	ug/kg	U	7/3/97
SJS05-SB12-002	SVTCL	Bis(2-chloroethoxy)Methane		380	ug/kg	U	7/3/97
SJS05-SB12-002	SVTCL	Bis(2-chloroethyl)Ether		380	ug/kg	U	7/3/97
SJS05-SB12-002	SVTCL	Bis(2-Ethylhexyl)Phthalate		380	ug/kg	U	7/3/97
SJS05-SB12-002	SVTCL	Butylbenzylphthalate		380	ug/kg	U	7/3/97
SJS05-SB12-002	SVTCL	Carbazole		380	ug/kg	U	7/3/97
SJS05-SB12-002	SVTCL	Chrysene		380	ug/kg	U	7/3/97
SJS05-SB12-002	SVTCL	Di-n-Butylphthalate		380	ug/kg	U	7/3/97
SJS05-SB12-002	SVTCL	Di-n-Octyl Phthalate		380	ug/kg	U	7/3/97
SJS05-SB12-002	SVTCL	Dibenz(a,h)Anthracene		380	ug/kg	U	7/3/97
SJS05-SB12-002	SVTCL	Dibenzofuran		380	ug/kg	U	7/3/97
SJS05-SB12-002	SVTCL	Diethylphthalate		380	ug/kg	U	7/3/97
SJS05-SB12-002	SVTCL	Dimethyl Phthalate		380	ug/kg	U	7/3/97
SJS05-SB12-002	SVTCL	Fluoranthene		380	ug/kg	U	7/3/97
SJS05-SB12-002	SVTCL	Fluorene		380	ug/kg	U	7/3/97
SJS05-SB12-002	SVTCL	Hexachlorobenzene		380	ug/kg	U	7/3/97
SJS05-SB12-002	SVTCL	Hexachlorobutadiene		380	ug/kg	U	7/3/97
SJS05-SB12-002	SVTCL	Hexachlorocyclopentadien		380	ug/kg	U	7/3/97
SJS05-SB12-002	SVTCL	Hexachloroethane		380	ug/kg	U	7/3/97
SJS05-SB12-002	SVTCL	Indeno(1,2,3-cd)Pyrene		380	ug/kg	U	7/3/97
SJS05-SB12-002	SVTCL	Isophorone		380	ug/kg	U	7/3/97
SJS05-SB12-002	SVTCL	N-Nitroso-Di-n-Propylamine		380	ug/kg	U	7/3/97
SJS05-SB12-002	SVTCL	N-Nitrosodiphenylamine		380	ug/kg	U	7/3/97
SJS05-SB12-002	SVTCL	Naphthalene		380	ug/kg	U	7/3/97
SJS05-SB12-002	SVTCL	Nitrobenzene		380	ug/kg	U	7/3/97
SJS05-SB12-002	SVTCL	Pentachlorophenol		950	ug/kg	U	7/3/97
SJS05-SB12-002	SVTCL	Phenanthrene		380	ug/kg	U	7/3/97
SJS05-SB12-002	SVTCL	Phenol		380	ug/kg	U	7/3/97
SJS05-SB12-002	SVTCL	Pyrene		380	ug/kg	U	7/3/97
SJS05-SB12-002	VCTCL	1,1,1-Trichloroethane		13	ug/kg	U	7/5/97
SJS05-SB12-002	VCTCL	1,1,2,2-Tetrachloroethane		13	ug/kg	U	7/5/97
SJS05-SB12-002	VCTCL	1,1,2-Trichloroethane		13	ug/kg	U	7/5/97
SJS05-SB12-002	VCTCL	1,1-Dichloroethane		13	ug/kg	U	7/5/97
SJS05-SB12-002	VCTCL	1,1-Dichloroethene		13	ug/kg	U	7/5/97
SJS05-SB12-002	VCTCL	1,2-Dichloroethane		13	ug/kg	U	7/5/97
SJS05-SB12-002	VCTCL	1,2-Dichloroethene (total)		13	ug/kg	U	7/5/97
SJS05-SB12-002	VCTCL	1,2-Dichloropropane		13	ug/kg	U	7/5/97
SJS05-SB12-002	VCTCL	2-Butanone		13	ug/kg	U	7/5/97
SJS05-SB12-002	VCTCL	2-Hexanone		13	ug/kg	U	7/5/97
SJS05-SB12-002	VCTCL	4-Methyl-2-Pentanone		13	ug/kg	U	7/5/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS05-SB12-002	VCTCL	Acetone	15	13	ug/kg	B	7/
SJS05-SB12-002	VCTCL	Benzene		13	ug/kg	U	7
SJS05-SB12-002	VCTCL	Bromodichloromethane		13	ug/kg	U	7/5/97
SJS05-SB12-002	VCTCL	Bromoform		13	ug/kg	U	7/5/97
SJS05-SB12-002	VCTCL	Bromomethane		13	ug/kg	U	7/5/97
SJS05-SB12-002	VCTCL	Carbon Disulfide		13	ug/kg	U	7/5/97
SJS05-SB12-002	VCTCL	Carbon Tetrachloride		13	ug/kg	U	7/5/97
SJS05-SB12-002	VCTCL	Chlorobenzene		13	ug/kg	U	7/5/97
SJS05-SB12-002	VCTCL	Chloroethane		13	ug/kg	U	7/5/97
SJS05-SB12-002	VCTCL	Chloroform		13	ug/kg	U	7/5/97
SJS05-SB12-002	VCTCL	Chloromethane		13	ug/kg	U	7/5/97
SJS05-SB12-002	VCTCL	cis-1,3-Dichloropropene		13	ug/kg	U	7/5/97
SJS05-SB12-002	VCTCL	Dibromochloromethane		13	ug/kg	U	7/5/97
SJS05-SB12-002	VCTCL	Ethylbenzene		13	ug/kg	U	7/5/97
SJS05-SB12-002	VCTCL	Methylene Chloride	7	13	ug/kg	B	7/5/97
SJS05-SB12-002	VCTCL	Styrene		13	ug/kg	U	7/5/97
SJS05-SB12-002	VCTCL	Tetrachloroethene		13	ug/kg	U	7/5/97
SJS05-SB12-002	VCTCL	Toluene		13	ug/kg	U	7/5/97
SJS05-SB12-002	VCTCL	Total Xylenes		13	ug/kg	U	7/5/97
SJS05-SB12-002	VCTCL	Trans-1,3-Dichloropropene		13	ug/kg	U	7/5/97
SJS05-SB12-002	VCTCL	Trichloroethene		13	ug/kg	U	7/5/97
SJS05-SB12-002	VCTCL	Vinyl Chloride		13	ug/kg	U	7/5/97
SJS05-SB13-002	CTOTP	Total Phosphorous (as P)	5.7	1.4	mg/kg		7/14/97
SJS05-SB13-002	MCYAN	Aluminum	919	7.99	mg/kg	J	7/2/97
SJS05-SB13-002	MCYAN	Antimony		0.36	mg/kg	UL	7/2/97
SJS05-SB13-002	MCYAN	Arsenic		0.54	mg/kg	U	7/2/97
SJS05-SB13-002	MCYAN	Barium	2.3	0.36	mg/kg	B	7/2/97
SJS05-SB13-002	MCYAN	Beryllium		0.18	mg/kg	U	7/2/97
SJS05-SB13-002	MCYAN	Cadmium		0.09	mg/kg	U	7/2/97
SJS05-SB13-002	MCYAN	Calcium	135	15.79	mg/kg	B	7/
SJS05-SB13-002	MCYAN	Chromium	2.3	1.27	mg/kg		7/
SJS05-SB13-002	MCYAN	Cobalt		1.45	mg/kg	U	7/2/97
SJS05-SB13-002	MCYAN	Copper		1.09	mg/kg	U	7/2/97
SJS05-SB13-002	MCYAN	Cyanide		0.59	mg/kg	U	7/3/97
SJS05-SB13-002	MCYAN	Iron	990	3.09	mg/kg	J	7/2/97
SJS05-SB13-002	MCYAN	Lead	1.8	0.18	mg/kg	B	7/2/97
SJS05-SB13-002	MCYAN	Magnesium	87.6	32.86	mg/kg	J	7/2/97
SJS05-SB13-002	MCYAN	Manganese	7	0.36	mg/kg	J	7/2/97
SJS05-SB13-002	MCYAN	Mercury		0.05	mg/kg	U	6/30/97
SJS05-SB13-002	MCYAN	Nickel		1.27	mg/kg	U	7/2/97
SJS05-SB13-002	MCYAN	Potassium	108	40.3	mg/kg	J	7/2/97
SJS05-SB13-002	MCYAN	Selenium		0.54	mg/kg	U	7/3/97
SJS05-SB13-002	MCYAN	Silver		0.18	mg/kg	UL	7/2/97
SJS05-SB13-002	MCYAN	Sodium	23.3	10.53	mg/kg	B	7/2/97
SJS05-SB13-002	MCYAN	Thallium		0.36	mg/kg	U	7/2/97
SJS05-SB13-002	MCYAN	Vanadium	1.6	1.63	mg/kg	J	7/2/97
SJS05-SB13-002	MCYAN	Zinc	5	0.91	mg/kg	B	7/2/97
SJS05-SB13-002	PSPCB	4,4'-DDD		3.7	ug/kg	U	7/14/97
SJS05-SB13-002	PSPCB	4,4'-DDE		3.7	ug/kg	U	7/14/97
SJS05-SB13-002	PSPCB	4,4'-DDT		3.7	ug/kg	U	7/14/97
SJS05-SB13-002	PSPCB	Aldrin		1.9	ug/kg	U	7/14/97
SJS05-SB13-002	PSPCB	alpha-BHC		1.9	ug/kg	U	7/14/97
SJS05-SB13-002	PSPCB	alpha-Chlordane		1.9	ug/kg	U	7/14/97
SJS05-SB13-002	PSPCB	Aroclor-1016		37	ug/kg	U	7/14/97
SJS05-SB13-002	PSPCB	Aroclor-1221		75	ug/kg	U	7/14/97
SJS05-SB13-002	PSPCB	Aroclor-1232		37	ug/kg	U	7/14/97
SJS05-SB13-002	PSPCB	Aroclor-1242		37	ug/kg	U	7/14/97
SJS05-SB13-002	PSPCB	Aroclor-1248		37	ug/kg	U	7/14/97
SJS05-SB13-002	PSPCB	Aroclor-1254		37	ug/kg	U	7/1
SJS05-SB13-002	PSPCB	Aroclor-1260		37	ug/kg	U	7/1

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS05-SB13-002	PSPCB	beta-BHC		1.9	ug/kg	U	7/14/97
SJS05-SB13-002	PSPCB	delta-BHC		1.9	ug/kg	U	7/14/97
SJS05-SB13-002	PSPCB	Dieldrin		3.7	ug/kg	U	7/14/97
SJS05-SB13-002	PSPCB	Endosulfan I		1.9	ug/kg	U	7/14/97
SJS05-SB13-002	PSPCB	Endosulfan II		3.7	ug/kg	U	7/14/97
SJS05-SB13-002	PSPCB	Endosulfan Sulfate		3.7	ug/kg	U	7/14/97
SJS05-SB13-002	PSPCB	Endrin		3.7	ug/kg	U	7/14/97
SJS05-SB13-002	PSPCB	Endrin Aldehyde		3.7	ug/kg	U	7/14/97
SJS05-SB13-002	PSPCB	Endrin Ketone		3.7	ug/kg	U	7/14/97
SJS05-SB13-002	PSPCB	gamma-BHC		1.9	ug/kg	U	7/14/97
SJS05-SB13-002	PSPCB	gamma-Chlordane		1.9	ug/kg	U	7/14/97
SJS05-SB13-002	PSPCB	Heptachlor		1.9	ug/kg	U	7/14/97
SJS05-SB13-002	PSPCB	Heptachlor Epoxide		1.9	ug/kg	U	7/14/97
SJS05-SB13-002	PSPCB	Methoxychlor		19	ug/kg	U	7/14/97
SJS05-SB13-002	PSPCB	Toxaphene		190	ug/kg	U	7/14/97
SJS05-SB13-002	SVTCL	1,2,4-Trichlorobenzene		370	ug/kg	U	7/3/97
SJS05-SB13-002	SVTCL	1,2-Dichlorobenzene		370	ug/kg	U	7/3/97
SJS05-SB13-002	SVTCL	1,3-Dichlorobenzene		370	ug/kg	U	7/3/97
SJS05-SB13-002	SVTCL	1,4-Dichlorobenzene		370	ug/kg	U	7/3/97
SJS05-SB13-002	SVTCL	2,2'-oxybis(1-Chloropropane		370	ug/kg	U	7/3/97
SJS05-SB13-002	SVTCL	2,4,5-Trichlorophenol		930	ug/kg	U	7/3/97
SJS05-SB13-002	SVTCL	2,4,6-Trichlorophenol		370	ug/kg	U	7/3/97
SJS05-SB13-002	SVTCL	2,4-Dichlorophenol		370	ug/kg	U	7/3/97
SJS05-SB13-002	SVTCL	2,4-Dimethylphenol		370	ug/kg	U	7/3/97
SJS05-SB13-002	SVTCL	2,4-Dinitrophenol		930	ug/kg	U	7/3/97
SJS05-SB13-002	SVTCL	2,4-Dinitrotoluene		370	ug/kg	U	7/3/97
SJS05-SB13-002	SVTCL	2,6-Dinitrotoluene		370	ug/kg	U	7/3/97
SJS05-SB13-002	SVTCL	2-Chloronaphthalene		370	ug/kg	U	7/3/97
SJS05-SB13-002	SVTCL	2-Chlorophenol		370	ug/kg	U	7/3/97
SJS05-SB13-002	SVTCL	2-Methylnaphthalene		370	ug/kg	U	7/3/97
SJS05-SB13-002	SVTCL	2-Methylphenol		370	ug/kg	U	7/3/97
SJS05-SB13-002	SVTCL	2-Nitroaniline		930	ug/kg	U	7/3/97
SJS05-SB13-002	SVTCL	2-Nitrophenol		370	ug/kg	U	7/3/97
SJS05-SB13-002	SVTCL	3,3'-Dichlorobenzidine		370	ug/kg	U	7/3/97
SJS05-SB13-002	SVTCL	3-Nitroaniline		930	ug/kg	U	7/3/97
SJS05-SB13-002	SVTCL	4,6-Dinitro-2-Methylphenol		930	ug/kg	U	7/3/97
SJS05-SB13-002	SVTCL	4-Bromophenyl phenylether		370	ug/kg	U	7/3/97
SJS05-SB13-002	SVTCL	4-Chloro-3-Methylphenol		370	ug/kg	U	7/3/97
SJS05-SB13-002	SVTCL	4-Chloroaniline		370	ug/kg	U	7/3/97
SJS05-SB13-002	SVTCL	4-Chlorophenyl-phenylether		370	ug/kg	U	7/3/97
SJS05-SB13-002	SVTCL	4-Methylphenol		370	ug/kg	U	7/3/97
SJS05-SB13-002	SVTCL	4-Nitroaniline		930	ug/kg	U	7/3/97
SJS05-SB13-002	SVTCL	4-Nitrophenol		930	ug/kg	U	7/3/97
SJS05-SB13-002	SVTCL	Acenaphthene		370	ug/kg	U	7/3/97
SJS05-SB13-002	SVTCL	Acenaphthylene		370	ug/kg	U	7/3/97
SJS05-SB13-002	SVTCL	Anthracene		370	ug/kg	U	7/3/97
SJS05-SB13-002	SVTCL	Benzo(a)Anthracene		370	ug/kg	U	7/3/97
SJS05-SB13-002	SVTCL	Benzo(a)Pyrene		370	ug/kg	U	7/3/97
SJS05-SB13-002	SVTCL	Benzo(b)Fluoranthene		370	ug/kg	U	7/3/97
SJS05-SB13-002	SVTCL	Benzo(g,h,i)Perylene		370	ug/kg	U	7/3/97
SJS05-SB13-002	SVTCL	Benzo(k)Fluoranthene		370	ug/kg	U	7/3/97
SJS05-SB13-002	SVTCL	Bis(2-chloroethoxy)Methane		370	ug/kg	U	7/3/97
SJS05-SB13-002	SVTCL	Bis(2-chloroethyl)Ether		370	ug/kg	U	7/3/97
SJS05-SB13-002	SVTCL	Bis(2-Ethylhexyl)Phthalate		370	ug/kg	U	7/3/97
SJS05-SB13-002	SVTCL	Butylbenzylphthalate		370	ug/kg	U	7/3/97
SJS05-SB13-002	SVTCL	Carbazole		370	ug/kg	U	7/3/97
SJS05-SB13-002	SVTCL	Chrysene		370	ug/kg	U	7/3/97
SJS05-SB13-002	SVTCL	Di-n-Butylphthalate		370	ug/kg	U	7/3/97
SJS05-SB13-002	SVTCL	Di-n-Octyl Phthalate		370	ug/kg	U	7/3/97
SJS05-SB13-002	SVTCL	Dibenz(a,h)Anthracene		370	ug/kg	U	7/3/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS05-SB13-002	SVTCL	Dibenzofuran		370	ug/kg	U	7/
SJS05-SB13-002	SVTCL	Diethylphthalate		370	ug/kg	U	7/
SJS05-SB13-002	SVTCL	Dimethyl Phthalate		370	ug/kg	U	7/3/97
SJS05-SB13-002	SVTCL	Fluoranthene		370	ug/kg	U	7/3/97
SJS05-SB13-002	SVTCL	Fluorene		370	ug/kg	U	7/3/97
SJS05-SB13-002	SVTCL	Hexachlorobenzene		370	ug/kg	U	7/3/97
SJS05-SB13-002	SVTCL	Hexachlorobutadiene		370	ug/kg	U	7/3/97
SJS05-SB13-002	SVTCL	Hexachlorocyclopentadien		370	ug/kg	U	7/3/97
SJS05-SB13-002	SVTCL	Hexachloroethane		370	ug/kg	U	7/3/97
SJS05-SB13-002	SVTCL	Indeno(1,2,3-cd)Pyrene		370	ug/kg	U	7/3/97
SJS05-SB13-002	SVTCL	Isophorone		370	ug/kg	U	7/3/97
SJS05-SB13-002	SVTCL	N-Nitroso-Di-n-Propylamine		370	ug/kg	U	7/3/97
SJS05-SB13-002	SVTCL	N-Nitrosodiphenylamine		370	ug/kg	U	7/3/97
SJS05-SB13-002	SVTCL	Naphthalene		370	ug/kg	U	7/3/97
SJS05-SB13-002	SVTCL	Nitrobenzene		370	ug/kg	U	7/3/97
SJS05-SB13-002	SVTCL	Pentachlorophenol		930	ug/kg	U	7/3/97
SJS05-SB13-002	SVTCL	Phenanthrene		370	ug/kg	U	7/3/97
SJS05-SB13-002	SVTCL	Phenol		370	ug/kg	U	7/3/97
SJS05-SB13-002	SVTCL	Pyrene		370	ug/kg	U	7/3/97
SJS05-SB13-002	VCTCL	1,1,1-Trichloroethane		12	ug/kg	U	7/1/97
SJS05-SB13-002	VCTCL	1,1,2,2-Tetrachloroethane		12	ug/kg	U	7/1/97
SJS05-SB13-002	VCTCL	1,1,2-Trichloroethane		12	ug/kg	U	7/1/97
SJS05-SB13-002	VCTCL	1,1-Dichloroethane		12	ug/kg	U	7/1/97
SJS05-SB13-002	VCTCL	1,1-Dichloroethene		12	ug/kg	U	7/1/97
SJS05-SB13-002	VCTCL	1,2-Dichloroethane		12	ug/kg	U	7/1/97
SJS05-SB13-002	VCTCL	1,2-Dichloroethene (total)		12	ug/kg	U	7/1/97
SJS05-SB13-002	VCTCL	1,2-Dichloropropane		12	ug/kg	U	7/1/97
SJS05-SB13-002	VCTCL	2-Butanone		12	ug/kg	U	7/1/97
SJS05-SB13-002	VCTCL	2-Hexanone		12	ug/kg	U	7/1/97
SJS05-SB13-002	VCTCL	4-Methyl-2-Pentanone		12	ug/kg	U	7/
SJS05-SB13-002	VCTCL	Acetone	45	12	ug/kg	B	7/
SJS05-SB13-002	VCTCL	Benzene		12	ug/kg	U	7/1/97
SJS05-SB13-002	VCTCL	Bromodichloromethane		12	ug/kg	U	7/1/97
SJS05-SB13-002	VCTCL	Bromoform		12	ug/kg	U	7/1/97
SJS05-SB13-002	VCTCL	Bromomethane		12	ug/kg	U	7/1/97
SJS05-SB13-002	VCTCL	Carbon Disulfide		12	ug/kg	U	7/1/97
SJS05-SB13-002	VCTCL	Carbon Tetrachloride		12	ug/kg	U	7/1/97
SJS05-SB13-002	VCTCL	Chlorobenzene		12	ug/kg	U	7/1/97
SJS05-SB13-002	VCTCL	Chloroethane		12	ug/kg	U	7/1/97
SJS05-SB13-002	VCTCL	Chloroform		12	ug/kg	U	7/1/97
SJS05-SB13-002	VCTCL	Chloromethane		12	ug/kg	U	7/1/97
SJS05-SB13-002	VCTCL	cis-1,3-Dichloropropene		12	ug/kg	U	7/1/97
SJS05-SB13-002	VCTCL	Dibromochloromethane		12	ug/kg	U	7/1/97
SJS05-SB13-002	VCTCL	Ethylbenzene		12	ug/kg	U	7/1/97
SJS05-SB13-002	VCTCL	Methylene Chloride	73	12	ug/kg	B	7/1/97
SJS05-SB13-002	VCTCL	Styrene		12	ug/kg	U	7/1/97
SJS05-SB13-002	VCTCL	Tetrachloroethene		12	ug/kg	U	7/1/97
SJS05-SB13-002	VCTCL	Toluene		12	ug/kg	U	7/1/97
SJS05-SB13-002	VCTCL	Total Xylenes		12	ug/kg	U	7/1/97
SJS05-SB13-002	VCTCL	Trans-1,3-Dichloropropene		12	ug/kg	U	7/1/97
SJS05-SB13-002	VCTCL	Trichloroethene		12	ug/kg	U	7/1/97
SJS05-SB13-002	VCTCL	Vinyl Chloride		12	ug/kg	U	7/1/97
SJS05-SB14-002	ICTOTP	Total Phosphorous (as P)	8.9	1.5	mg/kg		7/14/97
SJS05-SB14-002	EXPLO	1,3,5-Trinitrobenzene		640	ug/kg	U	7/9/97
SJS05-SB14-002	EXPLO	1,3-Dinitrobenzene		640	ug/kg	U	7/9/97
SJS05-SB14-002	EXPLO	2,4,6-Trinitrotoluene		640	ug/kg	U	7/9/97
SJS05-SB14-002	EXPLO	2,4-Dinitrotoluene		640	ug/kg	U	7/9/97
SJS05-SB14-002	EXPLO	2,6-Dinitrotoluene		640	ug/kg	U	7/9/97
SJS05-SB14-002	EXPLO	2-am-4,6-Dinitrotoluene		640	ug/kg	U	7/
SJS05-SB14-002	EXPLO	2-Nitrotoluene		640	ug/kg	U	7/9/

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS05-SB14-002	EXPLO	3-Nitrotoluene		640	ug/kg	U	7/9/97
SJS05-SB14-002	EXPLO	4-am-2,6-Dinitrotoluene		640	ug/kg	U	7/9/97
SJS05-SB14-002	EXPLO	4-Nitrotoluene		640	ug/kg	U	7/9/97
SJS05-SB14-002	EXPLO	HMX		640	ug/kg	U	7/9/97
SJS05-SB14-002	EXPLO	Nitrobenzene		640	ug/kg	U	7/9/97
SJS05-SB14-002	EXPLO	RDX		640	ug/kg	U	7/9/97
SJS05-SB14-002	EXPLO	TETRYL		640	ug/kg	U	7/9/97
SJS05-SB14-002	MCYAN	Aluminum	2070	8.73	mg/kg	J	7/2/97
SJS05-SB14-002	MCYAN	Antimony		0.4	mg/kg	UL	7/2/97
SJS05-SB14-002	MCYAN	Arsenic		0.6	mg/kg	U	7/2/97
SJS05-SB14-002	MCYAN	Barium	6.9	0.4	mg/kg	J	7/2/97
SJS05-SB14-002	MCYAN	Beryllium		0.2	mg/kg	U	7/2/97
SJS05-SB14-002	MCYAN	Cadmium		0.1	mg/kg	U	7/2/97
SJS05-SB14-002	MCYAN	Calcium	451	17.26	mg/kg	J	7/2/97
SJS05-SB14-002	MCYAN	Chromium	4.6	1.39	mg/kg		7/2/97
SJS05-SB14-002	MCYAN	Cobalt		1.59	mg/kg	U	7/2/97
SJS05-SB14-002	MCYAN	Copper	1.6	1.19	mg/kg	B	7/2/97
SJS05-SB14-002	MCYAN	Cyanide		0.62	mg/kg	U	7/3/97
SJS05-SB14-002	MCYAN	Iron	3520	3.37	mg/kg	J	7/2/97
SJS05-SB14-002	MCYAN	Lead	2.8	0.2	mg/kg	K	7/2/97
SJS05-SB14-002	MCYAN	Magnesium	412	35.91	mg/kg	J	7/2/97
SJS05-SB14-002	MCYAN	Manganese	41.3	0.4	mg/kg	J	7/2/97
SJS05-SB14-002	MCYAN	Mercury		0.06	mg/kg	U	6/30/97
SJS05-SB14-002	MCYAN	Nickel		1.39	mg/kg	U	7/2/97
SJS05-SB14-002	MCYAN	Potassium	365	44.05	mg/kg	J	7/2/97
SJS05-SB14-002	MCYAN	Selenium		0.6	mg/kg	U	7/3/97
SJS05-SB14-002	MCYAN	Silver		0.2	mg/kg	UL	7/2/97
SJS05-SB14-002	MCYAN	Sodium	46.8	11.51	mg/kg	B	7/2/97
SJS05-SB14-002	MCYAN	Thallium		0.4	mg/kg	U	7/2/97
SJS05-SB14-002	MCYAN	Vanadium	4.9	1.79	mg/kg	J	7/2/97
SJS05-SB14-002	MCYAN	Zinc	8.3	0.99	mg/kg	B	7/2/97
SJS05-SB14-002	PSPCB	4,4'-DDD		3.9	ug/kg	U	7/14/97
SJS05-SB14-002	PSPCB	4,4'-DDE		3.9	ug/kg	U	7/14/97
SJS05-SB14-002	PSPCB	4,4'-DDT		3.9	ug/kg	U	7/14/97
SJS05-SB14-002	PSPCB	Aldrin		2	ug/kg	U	7/14/97
SJS05-SB14-002	PSPCB	alpha-BHC		2	ug/kg	U	7/14/97
SJS05-SB14-002	PSPCB	alpha-Chlordane		2	ug/kg	U	7/14/97
SJS05-SB14-002	PSPCB	Aroclor-1016		39	ug/kg	U	7/14/97
SJS05-SB14-002	PSPCB	Aroclor-1221		80	ug/kg	U	7/14/97
SJS05-SB14-002	PSPCB	Aroclor-1232		39	ug/kg	U	7/14/97
SJS05-SB14-002	PSPCB	Aroclor-1242		39	ug/kg	U	7/14/97
SJS05-SB14-002	PSPCB	Aroclor-1248		39	ug/kg	U	7/14/97
SJS05-SB14-002	PSPCB	Aroclor-1254		39	ug/kg	U	7/14/97
SJS05-SB14-002	PSPCB	Aroclor-1260		39	ug/kg	U	7/14/97
SJS05-SB14-002	PSPCB	beta-BHC		2	ug/kg	U	7/14/97
SJS05-SB14-002	PSPCB	delta-BHC		2	ug/kg	U	7/14/97
SJS05-SB14-002	PSPCB	Dieldrin		3.9	ug/kg	U	7/14/97
SJS05-SB14-002	PSPCB	Endosulfan I		2	ug/kg	U	7/14/97
SJS05-SB14-002	PSPCB	Endosulfan II		3.9	ug/kg	U	7/14/97
SJS05-SB14-002	PSPCB	Endosulfan Sulfate		3.9	ug/kg	U	7/14/97
SJS05-SB14-002	PSPCB	Endrin		3.9	ug/kg	U	7/14/97
SJS05-SB14-002	PSPCB	Endrin Aldehyde		3.9	ug/kg	U	7/14/97
SJS05-SB14-002	PSPCB	Endrin Ketone		3.9	ug/kg	U	7/14/97
SJS05-SB14-002	PSPCB	gamma-BHC		2	ug/kg	U	7/14/97
SJS05-SB14-002	PSPCB	gamma-Chlordane		2	ug/kg	U	7/14/97
SJS05-SB14-002	PSPCB	Heptachlor		2	ug/kg	U	7/14/97
SJS05-SB14-002	PSPCB	Heptachlor Epoxide		2	ug/kg	U	7/14/97
SJS05-SB14-002	PSPCB	Methoxychlor		20	ug/kg	U	7/14/97
SJS05-SB14-002	PSPCB	Toxaphene		200	ug/kg	U	7/14/97
SJS05-SB14-002	SVTCL	1,2,4-Trichlorobenzene		390	ug/kg	U	7/3/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS05-SB14-002	SVTCL	1,2-Dichlorobenzene		390	ug/kg	U	7
SJS05-SB14-002	SVTCL	1,3-Dichlorobenzene		390	ug/kg	U	7
SJS05-SB14-002	SVTCL	1,4-Dichlorobenzene		390	ug/kg	U	7/3/97
SJS05-SB14-002	SVTCL	2,2'-oxybis(1-Chloropropane		390	ug/kg	U	7/3/97
SJS05-SB14-002	SVTCL	2,4,5-Trichlorophenol		990	ug/kg	U	7/3/97
SJS05-SB14-002	SVTCL	2,4,6-Trichlorophenol		390	ug/kg	U	7/3/97
SJS05-SB14-002	SVTCL	2,4-Dichlorophenol		390	ug/kg	U	7/3/97
SJS05-SB14-002	SVTCL	2,4-Dimethylphenol		390	ug/kg	U	7/3/97
SJS05-SB14-002	SVTCL	2,4-Dinitrophenol		990	ug/kg	U	7/3/97
SJS05-SB14-002	SVTCL	2,4-Dinitrotoluene		390	ug/kg	U	7/3/97
SJS05-SB14-002	SVTCL	2,6-Dinitrotoluene		390	ug/kg	U	7/3/97
SJS05-SB14-002	SVTCL	2-Chloronaphthalene		390	ug/kg	U	7/3/97
SJS05-SB14-002	SVTCL	2-Chlorophenol		390	ug/kg	U	7/3/97
SJS05-SB14-002	SVTCL	2-Methylnaphthalene		390	ug/kg	U	7/3/97
SJS05-SB14-002	SVTCL	2-Methylphenol		390	ug/kg	U	7/3/97
SJS05-SB14-002	SVTCL	2-Nitroaniline		990	ug/kg	U	7/3/97
SJS05-SB14-002	SVTCL	2-Nitrophenol		390	ug/kg	U	7/3/97
SJS05-SB14-002	SVTCL	3,3'-Dichlorobenzidine		390	ug/kg	U	7/3/97
SJS05-SB14-002	SVTCL	3-Nitroaniline		990	ug/kg	U	7/3/97
SJS05-SB14-002	SVTCL	4,6-Dinitro-2-Methylphenol		990	ug/kg	U	7/3/97
SJS05-SB14-002	SVTCL	4-Bromophenyl phenylether		390	ug/kg	U	7/3/97
SJS05-SB14-002	SVTCL	4-Chloro-3-Methylphenol		390	ug/kg	U	7/3/97
SJS05-SB14-002	SVTCL	4-Chloroaniline		390	ug/kg	U	7/3/97
SJS05-SB14-002	SVTCL	4-Chlorophenyl-phenylether		390	ug/kg	U	7/3/97
SJS05-SB14-002	SVTCL	4-Methylphenol		390	ug/kg	U	7/3/97
SJS05-SB14-002	SVTCL	4-Nitroaniline		990	ug/kg	U	7/3/97
SJS05-SB14-002	SVTCL	4-Nitrophenol		990	ug/kg	U	7/3/97
SJS05-SB14-002	SVTCL	Acenaphthene		390	ug/kg	U	7/3/97
SJS05-SB14-002	SVTCL	Acenaphthylene		390	ug/kg	U	7/3/97
SJS05-SB14-002	SVTCL	Anthracene		390	ug/kg	U	7/
SJS05-SB14-002	SVTCL	Benzo(a)Anthracene		390	ug/kg	U	7
SJS05-SB14-002	SVTCL	Benzo(a)Pyrene		390	ug/kg	U	7/3/97
SJS05-SB14-002	SVTCL	Benzo(b)Fluoranthene		390	ug/kg	U	7/3/97
SJS05-SB14-002	SVTCL	Benzo(g,h,i)Perylene		390	ug/kg	U	7/3/97
SJS05-SB14-002	SVTCL	Benzo(k)Fluoranthene		390	ug/kg	U	7/3/97
SJS05-SB14-002	SVTCL	Bis(2-chloroethoxy)Methane		390	ug/kg	U	7/3/97
SJS05-SB14-002	SVTCL	Bis(2-chloroethyl)Ether		390	ug/kg	U	7/3/97
SJS05-SB14-002	SVTCL	Bis(2-Ethylhexyl)Phthalate		390	ug/kg	U	7/3/97
SJS05-SB14-002	SVTCL	Butylbenzylphthalate		390	ug/kg	U	7/3/97
SJS05-SB14-002	SVTCL	Carbazole		390	ug/kg	U	7/3/97
SJS05-SB14-002	SVTCL	Chrysene		390	ug/kg	U	7/3/97
SJS05-SB14-002	SVTCL	Di-n-Butylphthalate		390	ug/kg	U	7/3/97
SJS05-SB14-002	SVTCL	Di-n-Octyl Phthalate		390	ug/kg	U	7/3/97
SJS05-SB14-002	SVTCL	Dibenz(a,h)Anthracene		390	ug/kg	U	7/3/97
SJS05-SB14-002	SVTCL	Dibenzofuran		390	ug/kg	U	7/3/97
SJS05-SB14-002	SVTCL	Diethylphthalate		390	ug/kg	U	7/3/97
SJS05-SB14-002	SVTCL	Dimethyl Phthalate		390	ug/kg	U	7/3/97
SJS05-SB14-002	SVTCL	Fluoranthene		390	ug/kg	U	7/3/97
SJS05-SB14-002	SVTCL	Fluorene		390	ug/kg	U	7/3/97
SJS05-SB14-002	SVTCL	Hexachlorobenzene		390	ug/kg	U	7/3/97
SJS05-SB14-002	SVTCL	Hexachlorobutadiene		390	ug/kg	U	7/3/97
SJS05-SB14-002	SVTCL	Hexachlorocyclopentadien		390	ug/kg	U	7/3/97
SJS05-SB14-002	SVTCL	Hexachloroethane		390	ug/kg	U	7/3/97
SJS05-SB14-002	SVTCL	Indeno(1,2,3-cd)Pyrene		390	ug/kg	U	7/3/97
SJS05-SB14-002	SVTCL	Isophorone		390	ug/kg	U	7/3/97
SJS05-SB14-002	SVTCL	N-Nitroso-Di-n-Propylamine		390	ug/kg	U	7/3/97
SJS05-SB14-002	SVTCL	N-Nitrosodiphenylamine		390	ug/kg	U	7/3/97
SJS05-SB14-002	SVTCL	Naphthalene		390	ug/kg	U	7/3/97
SJS05-SB14-002	SVTCL	Nitrobenzene		390	ug/kg	U	7
SJS05-SB14-002	SVTCL	Pentachlorophenol		990	ug/kg	U	7

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS05-SB14-002	SVTCL	Phenanthrene		390	ug/kg	U	7/3/97
SJS05-SB14-002	SVTCL	Phenol		390	ug/kg	U	7/3/97
SJS05-SB14-002	SVTCL	Pyrene		390	ug/kg	U	7/3/97
SJS05-SB14-002	VCTCL	1,1,1-Trichloroethane		12	ug/kg	U	7/7/97
SJS05-SB14-002	VCTCL	1,1,2,2-Tetrachloroethane		12	ug/kg	U	7/7/97
SJS05-SB14-002	VCTCL	1,1,2-Trichloroethane		12	ug/kg	U	7/7/97
SJS05-SB14-002	VCTCL	1,1-Dichloroethane		12	ug/kg	U	7/7/97
SJS05-SB14-002	VCTCL	1,1-Dichloroethene		12	ug/kg	U	7/7/97
SJS05-SB14-002	VCTCL	1,2-Dichloroethane		12	ug/kg	U	7/7/97
SJS05-SB14-002	VCTCL	1,2-Dichloroethene (total)		12	ug/kg	U	7/7/97
SJS05-SB14-002	VCTCL	1,2-Dichloropropane		12	ug/kg	U	7/7/97
SJS05-SB14-002	VCTCL	2-Butanone		12	ug/kg	U	7/7/97
SJS05-SB14-002	VCTCL	2-Hexanone		12	ug/kg	U	7/7/97
SJS05-SB14-002	VCTCL	4-Methyl-2-Pentanone		12	ug/kg	U	7/7/97
SJS05-SB14-002	VCTCL	Acetone	14	12	ug/kg	B	7/7/97
SJS05-SB14-002	VCTCL	Benzene		12	ug/kg	U	7/7/97
SJS05-SB14-002	VCTCL	Bromodichloromethane		12	ug/kg	U	7/7/97
SJS05-SB14-002	VCTCL	Bromoform		12	ug/kg	U	7/7/97
SJS05-SB14-002	VCTCL	Bromomethane		12	ug/kg	U	7/7/97
SJS05-SB14-002	VCTCL	Carbon Disulfide		12	ug/kg	U	7/7/97
SJS05-SB14-002	VCTCL	Carbon Tetrachloride		12	ug/kg	U	7/7/97
SJS05-SB14-002	VCTCL	Chlorobenzene		12	ug/kg	U	7/7/97
SJS05-SB14-002	VCTCL	Chloroethane		12	ug/kg	U	7/7/97
SJS05-SB14-002	VCTCL	Chloroform		12	ug/kg	U	7/7/97
SJS05-SB14-002	VCTCL	Chloromethane		12	ug/kg	U	7/7/97
SJS05-SB14-002	VCTCL	cis-1,3-Dichloropropene		12	ug/kg	U	7/7/97
SJS05-SB14-002	VCTCL	Dibromochloromethane		12	ug/kg	U	7/7/97
SJS05-SB14-002	VCTCL	Ethylbenzene		12	ug/kg	U	7/7/97
SJS05-SB14-002	VCTCL	Methylene Chloride	20	12	ug/kg	B	7/7/97
SJS05-SB14-002	VCTCL	Styrene		12	ug/kg	U	7/7/97
SJS05-SB14-002	VCTCL	Tetrachloroethene		12	ug/kg	U	7/7/97
SJS05-SB14-002	VCTCL	Toluene		12	ug/kg	U	7/7/97
SJS05-SB14-002	VCTCL	Total Xylenes		12	ug/kg	U	7/7/97
SJS05-SB14-002	VCTCL	Trans-1,3-Dichloropropene		12	ug/kg	U	7/7/97
SJS05-SB14-002	VCTCL	Trichloroethene		12	ug/kg	U	7/7/97
SJS05-SB14-002	VCTCL	Vinyl Chloride		12	ug/kg	U	7/7/97
SJS05-SB15-002	CTOTP	Total Phosphorous (as P)	6.2	1.5	mg/kg		7/14/97
SJS05-SB15-002	MCYAN	Aluminum	1800	10.63	mg/kg	J	7/2/97
SJS05-SB15-002	MCYAN	Antimony		0.48	mg/kg	UL	7/2/97
SJS05-SB15-002	MCYAN	Arsenic	1.1	0.72	mg/kg	J	7/2/97
SJS05-SB15-002	MCYAN	Barium	3.4	0.48	mg/kg	B	7/2/97
SJS05-SB15-002	MCYAN	Beryllium		0.24	mg/kg	U	7/2/97
SJS05-SB15-002	MCYAN	Cadmium		0.12	mg/kg	U	7/2/97
SJS05-SB15-002	MCYAN	Calcium	362	21.01	mg/kg	J	7/2/97
SJS05-SB15-002	MCYAN	Chromium	2.6	1.69	mg/kg		7/2/97
SJS05-SB15-002	MCYAN	Cobalt	2	1.93	mg/kg	J	7/2/97
SJS05-SB15-002	MCYAN	Copper		1.45	mg/kg	U	7/2/97
SJS05-SB15-002	MCYAN	Cyanide		0.6	mg/kg	U	7/3/97
SJS05-SB15-002	MCYAN	Iron	3400	4.11	mg/kg	J	7/2/97
SJS05-SB15-002	MCYAN	Lead	3.6	0.24	mg/kg	K	7/2/97
SJS05-SB15-002	MCYAN	Magnesium	271	43.71	mg/kg	J	7/2/97
SJS05-SB15-002	MCYAN	Manganese	30.2	0.48	mg/kg	J	7/2/97
SJS05-SB15-002	MCYAN	Mercury		0.05	mg/kg	U	6/30/97
SJS05-SB15-002	MCYAN	Nickel	1.8	1.69	mg/kg	B	7/2/97
SJS05-SB15-002	MCYAN	Potassium	242	53.61	mg/kg	J	7/2/97
SJS05-SB15-002	MCYAN	Selenium		0.72	mg/kg	U	7/3/97
SJS05-SB15-002	MCYAN	Silver		0.24	mg/kg	UL	7/2/97
SJS05-SB15-002	MCYAN	Sodium	36.9	14.01	mg/kg	B	7/2/97
SJS05-SB15-002	MCYAN	Thallium		0.48	mg/kg	U	7/2/97
SJS05-SB15-002	MCYAN	Vanadium	3.2	2.17	mg/kg	J	7/2/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS05-SB15-002	MCYAN	Zinc	6.7	1.21	mg/kg	B	7/
SJS05-SB15-002	PSPCB	4,4'-DDD	110	8.4	ug/kg		7/
SJS05-SB15-002	PSPCB	4,4'-DDE	66	4.2	ug/kg	J	7/1
SJS05-SB15-002	PSPCB	4,4'-DDT	11	4.2	ug/kg		7/14/97
SJS05-SB15-002	PSPCB	Aldrin		2.2	ug/kg	U	7/14/97
SJS05-SB15-002	PSPCB	alpha-BHC		2.2	ug/kg	U	7/14/97
SJS05-SB15-002	PSPCB	alpha-Chlordane		2.2	ug/kg	U	7/14/97
SJS05-SB15-002	PSPCB	Aroclor-1016		42	ug/kg	U	7/14/97
SJS05-SB15-002	PSPCB	Aroclor-1221		86	ug/kg	U	7/14/97
SJS05-SB15-002	PSPCB	Aroclor-1232		42	ug/kg	U	7/14/97
SJS05-SB15-002	PSPCB	Aroclor-1242		42	ug/kg	U	7/14/97
SJS05-SB15-002	PSPCB	Aroclor-1248		42	ug/kg	U	7/14/97
SJS05-SB15-002	PSPCB	Aroclor-1254		42	ug/kg	U	7/14/97
SJS05-SB15-002	PSPCB	Aroclor-1260		42	ug/kg	U	7/14/97
SJS05-SB15-002	PSPCB	beta-BHC		2.2	ug/kg	U	7/14/97
SJS05-SB15-002	PSPCB	delta-BHC		2.2	ug/kg	U	7/14/97
SJS05-SB15-002	PSPCB	Dieldrin		4.2	ug/kg	U	7/14/97
SJS05-SB15-002	PSPCB	Endosulfan I		2.2	ug/kg	U	7/14/97
SJS05-SB15-002	PSPCB	Endosulfan II		4.2	ug/kg	U	7/14/97
SJS05-SB15-002	PSPCB	Endosulfan Sulfate		4.2	ug/kg	U	7/14/97
SJS05-SB15-002	PSPCB	Endrin		4.2	ug/kg	U	7/14/97
SJS05-SB15-002	PSPCB	Endrin Aldehyde		4.2	ug/kg	U	7/14/97
SJS05-SB15-002	PSPCB	Endrin Ketone		4.2	ug/kg	U	7/14/97
SJS05-SB15-002	PSPCB	gamma-BHC		2.2	ug/kg	U	7/14/97
SJS05-SB15-002	PSPCB	gamma-Chlordane		2.2	ug/kg	U	7/14/97
SJS05-SB15-002	PSPCB	Heptachlor		2.2	ug/kg	U	7/14/97
SJS05-SB15-002	PSPCB	Heptachlor Epoxide		2.2	ug/kg	U	7/14/97
SJS05-SB15-002	PSPCB	Methoxychlor		22	ug/kg	U	7/14/97
SJS05-SB15-002	PSPCB	Toxaphene		220	ug/kg	U	7/14/97
SJS05-SB15-002	SVTCL	1,2,4-Trichlorobenzene		420	ug/kg	U	7/
SJS05-SB15-002	SVTCL	1,2-Dichlorobenzene		420	ug/kg	U	7
SJS05-SB15-002	SVTCL	1,3-Dichlorobenzene		420	ug/kg	U	7/
SJS05-SB15-002	SVTCL	1,4-Dichlorobenzene		420	ug/kg	U	7/3/97
SJS05-SB15-002	SVTCL	2,2'-oxybis(1-Chloropropane		420	ug/kg	U	7/3/97
SJS05-SB15-002	SVTCL	2,4,5-Trichlorophenol		1100	ug/kg	U	7/3/97
SJS05-SB15-002	SVTCL	2,4,6-Trichlorophenol		420	ug/kg	U	7/3/97
SJS05-SB15-002	SVTCL	2,4-Dichlorophenol		420	ug/kg	U	7/3/97
SJS05-SB15-002	SVTCL	2,4-Dimethylphenol		420	ug/kg	U	7/3/97
SJS05-SB15-002	SVTCL	2,4-Dinitrophenol		1100	ug/kg	U	7/3/97
SJS05-SB15-002	SVTCL	2,4-Dinitrotoluene		420	ug/kg	U	7/3/97
SJS05-SB15-002	SVTCL	2,6-Dinitrotoluene		420	ug/kg	U	7/3/97
SJS05-SB15-002	SVTCL	2-Chloronaphthalene		420	ug/kg	U	7/3/97
SJS05-SB15-002	SVTCL	2-Chlorophenol		420	ug/kg	U	7/3/97
SJS05-SB15-002	SVTCL	2-Methylnaphthalene		420	ug/kg	U	7/3/97
SJS05-SB15-002	SVTCL	2-Methylphenol		420	ug/kg	U	7/3/97
SJS05-SB15-002	SVTCL	2-Nitroaniline		1100	ug/kg	U	7/3/97
SJS05-SB15-002	SVTCL	2-Nitrophenol		420	ug/kg	U	7/3/97
SJS05-SB15-002	SVTCL	3,3'-Dichlorobenzidine		420	ug/kg	U	7/3/97
SJS05-SB15-002	SVTCL	3-Nitroaniline		1100	ug/kg	U	7/3/97
SJS05-SB15-002	SVTCL	4,6-Dinitro-2-Methylphenol		1100	ug/kg	U	7/3/97
SJS05-SB15-002	SVTCL	4-Bromophenyl phenylether		420	ug/kg	U	7/3/97
SJS05-SB15-002	SVTCL	4-Chloro-3-Methylphenol		420	ug/kg	U	7/3/97
SJS05-SB15-002	SVTCL	4-Chloroaniline		420	ug/kg	U	7/3/97
SJS05-SB15-002	SVTCL	4-Chlorophenyl-phenylether		420	ug/kg	U	7/3/97
SJS05-SB15-002	SVTCL	4-Methylphenol		420	ug/kg	U	7/3/97
SJS05-SB15-002	SVTCL	4-Nitroaniline		1100	ug/kg	U	7/3/97
SJS05-SB15-002	SVTCL	4-Nitrophenol		1100	ug/kg	U	7/3/97
SJS05-SB15-002	SVTCL	Acenaphthene		420	ug/kg	U	7/3/97
SJS05-SB15-002	SVTCL	Acenaphthylene		420	ug/kg	U	7/
SJS05-SB15-002	SVTCL	Anthracene	44	420	ug/kg	J	7

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS05-SB15-002	SVTCL	Benzo(a)Anthracene	120	420	ug/kg	J	7/3/97
SJS05-SB15-002	SVTCL	Benzo(a)Pyrene	70	420	ug/kg	J	7/3/97
SJS05-SB15-002	SVTCL	Benzo(b)Fluoranthene	440	420	ug/kg		7/3/97
SJS05-SB15-002	SVTCL	Benzo(g,h,i)Perylene	100	420	ug/kg	J	7/3/97
SJS05-SB15-002	SVTCL	Benzo(k)Fluoranthene	140	420	ug/kg	J	7/3/97
SJS05-SB15-002	SVTCL	Bis(2-chloroethoxy)Methane		420	ug/kg	U	7/3/97
SJS05-SB15-002	SVTCL	Bis(2-chloroethyl)Ether		420	ug/kg	U	7/3/97
SJS05-SB15-002	SVTCL	Bis(2-Ethylhexyl)Phthalate		420	ug/kg	U	7/3/97
SJS05-SB15-002	SVTCL	Butylbenzylphthalate		420	ug/kg	U	7/3/97
SJS05-SB15-002	SVTCL	Carbazole		420	ug/kg	U	7/3/97
SJS05-SB15-002	SVTCL	Chrysene	210	420	ug/kg	J	7/3/97
SJS05-SB15-002	SVTCL	Di-n-Butylphthalate		420	ug/kg	U	7/3/97
SJS05-SB15-002	SVTCL	Di-n-Octyl Phthalate		420	ug/kg	U	7/3/97
SJS05-SB15-002	SVTCL	Dibenz(a,h)Anthracene		420	ug/kg	U	7/3/97
SJS05-SB15-002	SVTCL	Dibenzofuran		420	ug/kg	U	7/3/97
SJS05-SB15-002	SVTCL	Diethylphthalate		420	ug/kg	U	7/3/97
SJS05-SB15-002	SVTCL	Dimethyl Phthalate		420	ug/kg	U	7/3/97
SJS05-SB15-002	SVTCL	Fluoranthene	110	420	ug/kg	J	7/3/97
SJS05-SB15-002	SVTCL	Fluorene		420	ug/kg	U	7/3/97
SJS05-SB15-002	SVTCL	Hexachlorobenzene		420	ug/kg	U	7/3/97
SJS05-SB15-002	SVTCL	Hexachlorobutadiene		420	ug/kg	U	7/3/97
SJS05-SB15-002	SVTCL	Hexachlorocyclopentadien		420	ug/kg	U	7/3/97
SJS05-SB15-002	SVTCL	Hexachloroethane		420	ug/kg	U	7/3/97
SJS05-SB15-002	SVTCL	Indeno(1,2,3-cd)Pyrene	140	420	ug/kg	J	7/3/97
SJS05-SB15-002	SVTCL	Isophorone		420	ug/kg	U	7/3/97
SJS05-SB15-002	SVTCL	N-Nitroso-Di-n-Propylamine		420	ug/kg	U	7/3/97
SJS05-SB15-002	SVTCL	N-Nitrosodiphenylamine		420	ug/kg	U	7/3/97
SJS05-SB15-002	SVTCL	Naphthalene		420	ug/kg	U	7/3/97
SJS05-SB15-002	SVTCL	Nitrobenzene		420	ug/kg	U	7/3/97
SJS05-SB15-002	SVTCL	Pentachlorophenol		1100	ug/kg	U	7/3/97
SJS05-SB15-002	SVTCL	Phenanthrene		420	ug/kg	U	7/3/97
SJS05-SB15-002	SVTCL	Phenol		420	ug/kg	U	7/3/97
SJS05-SB15-002	SVTCL	Pyrene	81	420	ug/kg	J	7/3/97
SJS05-SB15-002	VCTCL	1,1,1-Trichloroethane		12	ug/kg	U	7/1/97
SJS05-SB15-002	VCTCL	1,1,2,2-Tetrachloroethane		12	ug/kg	U	7/1/97
SJS05-SB15-002	VCTCL	1,1,2-Trichloroethane		12	ug/kg	U	7/1/97
SJS05-SB15-002	VCTCL	1,1-Dichloroethane		12	ug/kg	U	7/1/97
SJS05-SB15-002	VCTCL	1,1-Dichloroethene		12	ug/kg	U	7/1/97
SJS05-SB15-002	VCTCL	1,2-Dichloroethane		12	ug/kg	U	7/1/97
SJS05-SB15-002	VCTCL	1,2-Dichloroethene (total)		12	ug/kg	U	7/1/97
SJS05-SB15-002	VCTCL	1,2-Dichloropropane		12	ug/kg	U	7/1/97
SJS05-SB15-002	VCTCL	2-Butanone		12	ug/kg	U	7/1/97
SJS05-SB15-002	VCTCL	2-Hexanone		12	ug/kg	U	7/1/97
SJS05-SB15-002	VCTCL	4-Methyl-2-Pentanone		12	ug/kg	U	7/1/97
SJS05-SB15-002	VCTCL	Acetone	21	12	ug/kg	B	7/1/97
SJS05-SB15-002	VCTCL	Benzene		12	ug/kg	U	7/1/97
SJS05-SB15-002	VCTCL	Bromodichloromethane		12	ug/kg	U	7/1/97
SJS05-SB15-002	VCTCL	Bromoform		12	ug/kg	U	7/1/97
SJS05-SB15-002	VCTCL	Bromomethane		12	ug/kg	U	7/1/97
SJS05-SB15-002	VCTCL	Carbon Disulfide		12	ug/kg	U	7/1/97
SJS05-SB15-002	VCTCL	Carbon Tetrachloride		12	ug/kg	U	7/1/97
SJS05-SB15-002	VCTCL	Chlorobenzene		12	ug/kg	U	7/1/97
SJS05-SB15-002	VCTCL	Chloroethane		12	ug/kg	U	7/1/97
SJS05-SB15-002	VCTCL	Chloroform		12	ug/kg	U	7/1/97
SJS05-SB15-002	VCTCL	Chloromethane		12	ug/kg	U	7/1/97
SJS05-SB15-002	VCTCL	cis-1,3-Dichloropropene		12	ug/kg	U	7/1/97
SJS05-SB15-002	VCTCL	Dibromochloromethane		12	ug/kg	U	7/1/97
SJS05-SB15-002	VCTCL	Ethylbenzene		12	ug/kg	U	7/1/97
SJS05-SB15-002	VCTCL	Methylene Chloride	75	12	ug/kg	B	7/1/97
SJS05-SB15-002	VCTCL	Styrene		12	ug/kg	U	7/1/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS05-SB15-002	VCTCL	Tetrachloroethene		12	ug/kg	U	7/
SJS05-SB15-002	VCTCL	Toluene		12	ug/kg	U	7
SJS05-SB15-002	VCTCL	Total Xylenes		12	ug/kg	U	7/1/97
SJS05-SB15-002	VCTCL	Trans-1,3-Dichloropropene		12	ug/kg	U	7/1/97
SJS05-SB15-002	VCTCL	Trichloroethene		12	ug/kg	U	7/1/97
SJS05-SB15-002	VCTCL	Vinyl Chloride		12	ug/kg	U	7/1/97
SJS05-SD01-000	CTOTC	Total Organic Carbon	77400	80.5	mg/kg		7/29/97
SJS05-SD01-000	CTOTP	Total Phosphorous (as P)	7.1	2	mg/kg		7/29/97
SJS05-SD01-000	EXPLO	1,3,5-Trinitrobenzene		810	ug/L	U	8/7/97
SJS05-SD01-000	EXPLO	1,3-Dinitrobenzene		810	ug/L	U	8/7/97
SJS05-SD01-000	EXPLO	2,4,6-Trinitrotoluene		810	ug/L	U	8/7/97
SJS05-SD01-000	EXPLO	2,4-Dinitrotoluene		810	ug/L	U	8/7/97
SJS05-SD01-000	EXPLO	2,6-Dinitrotoluene		810	ug/L	U	8/7/97
SJS05-SD01-000	EXPLO	2-am-4,6-Dinitrotoluene		810	ug/L	U	8/7/97
SJS05-SD01-000	EXPLO	2-Nitrotoluene		810	ug/L	U	8/7/97
SJS05-SD01-000	EXPLO	3-Nitrotoluene		810	ug/L	U	8/7/97
SJS05-SD01-000	EXPLO	4-am-2,6-Dinitrotoluene		810	ug/L	U	8/7/97
SJS05-SD01-000	EXPLO	4-Nitrotoluene		810	ug/L	U	8/7/97
SJS05-SD01-000	EXPLO	HMX		810	ug/L	U	8/7/97
SJS05-SD01-000	EXPLO	Nitrobenzene		810	ug/L	U	8/7/97
SJS05-SD01-000	EXPLO	RDX		810	ug/L	U	8/7/97
SJS05-SD01-000	EXPLO	TETRYL		810	ug/L	U	8/7/97
SJS05-SD01-000	MCYAN	Aluminum	18900	13.76	mg/kg		7/25/97
SJS05-SD01-000	MCYAN	Antimony	5.2	0.63	mg/kg	B	7/25/97
SJS05-SD01-000	MCYAN	Arsenic	23.2	0.94	mg/kg		7/25/97
SJS05-SD01-000	MCYAN	Barium	2460	0.63	mg/kg		7/25/97
SJS05-SD01-000	MCYAN	Beryllium	3.5	0.31	mg/kg		7/25/97
SJS05-SD01-000	MCYAN	Cadmium		0.16	mg/kg	U	7/25/97
SJS05-SD01-000	MCYAN	Calcium	3660	27.2	mg/kg		7/25/97
SJS05-SD01-000	MCYAN	Chromium	29.6	2.19	mg/kg		7/2
SJS05-SD01-000	MCYAN	Cobalt	46.8	2.5	mg/kg		7/2
SJS05-SD01-000	MCYAN	Copper	256	1.88	mg/kg		7/25/97
SJS05-SD01-000	MCYAN	Cyanide		0.8	mg/kg	U	7/22/97
SJS05-SD01-000	MCYAN	Iron	57600	5.32	mg/kg		7/25/97
SJS05-SD01-000	MCYAN	Lead	377	0.31	mg/kg		7/25/97
SJS05-SD01-000	MCYAN	Magnesium	2380	56.6	mg/kg		7/25/97
SJS05-SD01-000	MCYAN	Manganese	572	0.63	mg/kg	K	7/25/97
SJS05-SD01-000	MCYAN	Mercury	0.44	0.08	mg/kg		8/1/97
SJS05-SD01-000	MCYAN	Nickel	33.6	2.19	mg/kg		7/25/97
SJS05-SD01-000	MCYAN	Potassium	1470	69.42	mg/kg	J	7/25/97
SJS05-SD01-000	MCYAN	Selenium		0.94	mg/kg	UL	7/28/97
SJS05-SD01-000	MCYAN	Silver	1.2	0.31	mg/kg	J	7/25/97
SJS05-SD01-000	MCYAN	Sodium	571	18.14	mg/kg	J	7/25/97
SJS05-SD01-000	MCYAN	Thallium		0.63	mg/kg	U	7/25/97
SJS05-SD01-000	MCYAN	Vanadium	63.8	2.81	mg/kg		7/25/97
SJS05-SD01-000	MCYAN	Zinc	970	1.56	mg/kg		7/25/97
SJS05-SD01-000	PSPCB	4,4'-DDD	160	51	ug/kg		8/6/97
SJS05-SD01-000	PSPCB	4,4'-DDE	320	51	ug/kg		8/6/97
SJS05-SD01-000	PSPCB	4,4'-DDT	240	51	ug/kg		8/6/97
SJS05-SD01-000	PSPCB	Aldrin		2.6	ug/kg	U	8/5/97
SJS05-SD01-000	PSPCB	alpha-BHC		2.6	ug/kg	U	8/5/97
SJS05-SD01-000	PSPCB	alpha-Chlordane		2.6	ug/kg	U	8/5/97
SJS05-SD01-000	PSPCB	Aroclor-1016		51	ug/kg	U	8/5/97
SJS05-SD01-000	PSPCB	Aroclor-1221		100	ug/kg	U	8/5/97
SJS05-SD01-000	PSPCB	Aroclor-1232		51	ug/kg	U	8/5/97
SJS05-SD01-000	PSPCB	Aroclor-1242		51	ug/kg	U	8/5/97
SJS05-SD01-000	PSPCB	Aroclor-1248		51	ug/kg	U	8/5/97
SJS05-SD01-000	PSPCB	Aroclor-1254		51	ug/kg	U	8/5/97
SJS05-SD01-000	PSPCB	Aroclor-1260		51	ug/kg	U	8/
SJS05-SD01-000	PSPCB	beta-BHC		2.6	ug/kg	U	8/

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS05-SD01-000	PSPCB	delta-BHC		2.6	ug/kg	U	8/5/97
SJS05-SD01-000	PSPCB	Dieldrin		5.1	ug/kg	U	8/5/97
SJS05-SD01-000	PSPCB	Endosulfan I		2.6	ug/kg	U	8/5/97
SJS05-SD01-000	PSPCB	Endosulfan II		5.1	ug/kg	U	8/5/97
SJS05-SD01-000	PSPCB	Endosulfan Sulfate		5.1	ug/kg	U	8/5/97
SJS05-SD01-000	PSPCB	Endrin		5.1	ug/kg	U	8/5/97
SJS05-SD01-000	PSPCB	Endrin Aldehyde		5.1	ug/kg	U	8/5/97
SJS05-SD01-000	PSPCB	Endrin Ketone		5.1	ug/kg	U	8/5/97
SJS05-SD01-000	PSPCB	gamma-BHC		2.6	ug/kg	U	8/5/97
SJS05-SD01-000	PSPCB	gamma-Chlordane		2.6	ug/kg	U	8/5/97
SJS05-SD01-000	PSPCB	Heptachlor		2.6	ug/kg	U	8/5/97
SJS05-SD01-000	PSPCB	Heptachlor Epoxide		2.6	ug/kg	U	8/5/97
SJS05-SD01-000	PSPCB	Methoxychlor		26	ug/kg	U	8/5/97
SJS05-SD01-000	PSPCB	Toxaphene		260	ug/kg	U	8/5/97
SJS05-SD01-000	SVTCL	1,2,4-Trichlorobenzene		510	ug/kg	U	8/9/97
SJS05-SD01-000	SVTCL	1,2-Dichlorobenzene		510	ug/kg	U	8/9/97
SJS05-SD01-000	SVTCL	1,3-Dichlorobenzene		510	ug/kg	U	8/9/97
SJS05-SD01-000	SVTCL	1,4-Dichlorobenzene		510	ug/kg	U	8/9/97
SJS05-SD01-000	SVTCL	2,2'-oxybis(1-Chloropropane		510	ug/kg	U	8/9/97
SJS05-SD01-000	SVTCL	2,4,5-Trichlorophenol		1300	ug/kg	U	8/9/97
SJS05-SD01-000	SVTCL	2,4,6-Trichlorophenol		510	ug/kg	U	8/9/97
SJS05-SD01-000	SVTCL	2,4-Dichlorophenol		510	ug/kg	U	8/9/97
SJS05-SD01-000	SVTCL	2,4-Dimethylphenol		510	ug/kg	U	8/9/97
SJS05-SD01-000	SVTCL	2,4-Dinitrophenol		1300	ug/kg	UJ	8/9/97
SJS05-SD01-000	SVTCL	2,4-Dinitrotoluene	470	510	ug/kg	J	8/9/97
SJS05-SD01-000	SVTCL	2,6-Dinitrotoluene		510	ug/kg	U	8/9/97
SJS05-SD01-000	SVTCL	2-Chloronaphthalene		510	ug/kg	U	8/9/97
SJS05-SD01-000	SVTCL	2-Chlorophenol		510	ug/kg	U	8/9/97
SJS05-SD01-000	SVTCL	2-Methylnaphthalene		510	ug/kg	U	8/9/97
SJS05-SD01-000	SVTCL	2-Methylphenol		510	ug/kg	U	8/9/97
SJS05-SD01-000	SVTCL	2-Nitroaniline		1300	ug/kg	U	8/9/97
SJS05-SD01-000	SVTCL	2-Nitrophenol		510	ug/kg	U	8/9/97
SJS05-SD01-000	SVTCL	3,3'-Dichlorobenzidine		510	ug/kg	U	8/9/97
SJS05-SD01-000	SVTCL	3-Nitroaniline		1300	ug/kg	U	8/9/97
SJS05-SD01-000	SVTCL	4,6-Dinitro-2-Methylphenol		1300	ug/kg	U	8/9/97
SJS05-SD01-000	SVTCL	4-Bromophenyl phenylether		510	ug/kg	U	8/9/97
SJS05-SD01-000	SVTCL	4-Chloro-3-Methylphenol		510	ug/kg	U	8/9/97
SJS05-SD01-000	SVTCL	4-Chloroaniline		510	ug/kg	U	8/9/97
SJS05-SD01-000	SVTCL	4-Chlorophenyl-phenylether		510	ug/kg	U	8/9/97
SJS05-SD01-000	SVTCL	4-Methylphenol		510	ug/kg	U	8/9/97
SJS05-SD01-000	SVTCL	4-Nitroaniline		1300	ug/kg	U	8/9/97
SJS05-SD01-000	SVTCL	4-Nitrophenol		1300	ug/kg	U	8/9/97
SJS05-SD01-000	SVTCL	Acenaphthene		510	ug/kg	U	8/9/97
SJS05-SD01-000	SVTCL	Acenaphthylene	140	510	ug/kg	J	8/9/97
SJS05-SD01-000	SVTCL	Anthracene	93	510	ug/kg	J	8/9/97
SJS05-SD01-000	SVTCL	Benzo(a)Anthracene	600	510	ug/kg		8/9/97
SJS05-SD01-000	SVTCL	Benzo(a)Pyrene	390	510	ug/kg	J	8/9/97
SJS05-SD01-000	SVTCL	Benzo(b)Fluoranthene	940	510	ug/kg		8/9/97
SJS05-SD01-000	SVTCL	Benzo(g,h,i)Perylene	390	510	ug/kg	J	8/9/97
SJS05-SD01-000	SVTCL	Benzo(k)fluoranthene	360	510	ug/kg	J	8/9/97
SJS05-SD01-000	SVTCL	Bis(2-chloroethoxy)Methane		510	ug/kg	U	8/9/97
SJS05-SD01-000	SVTCL	Bis(2-chloroethyl)Ether		510	ug/kg	U	8/9/97
SJS05-SD01-000	SVTCL	Bis(2-Ethylhexyl)Phthalate	91	220	ug/kg	B	8/9/97
SJS05-SD01-000	SVTCL	Butylbenzylphthalate		510	ug/kg	U	8/9/97
SJS05-SD01-000	SVTCL	Carbazole		510	ug/kg	U	8/9/97
SJS05-SD01-000	SVTCL	Chrysene	670	510	ug/kg		8/9/97
SJS05-SD01-000	SVTCL	Di-n-Butylphthalate	120	510	ug/kg	B	8/9/97
SJS05-SD01-000	SVTCL	Di-n-Octyl Phthalate		510	ug/kg	U	8/9/97
SJS05-SD01-000	SVTCL	Dibenz(a,h)Anthracene	160	510	ug/kg	J	8/9/97
SJS05-SD01-000	SVTCL	Dibenzofuran		510	ug/kg	U	8/9/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS05-SD01-000	SVTCL	Diethylphthalate		510	ug/kg	U	8/
SJS05-SD01-000	SVTCL	Dimethyl Phthalate		510	ug/kg	U	8
SJS05-SD01-000	SVTCL	Fluoranthene	600	510	ug/kg		8/9/9
SJS05-SD01-000	SVTCL	Fluorene		510	ug/kg	U	8/9/97
SJS05-SD01-000	SVTCL	Hexachlorobenzene		510	ug/kg	U	8/9/97
SJS05-SD01-000	SVTCL	Hexachlorobutadiene		510	ug/kg	U	8/9/97
SJS05-SD01-000	SVTCL	Hexachlorocyclopentadien		510	ug/kg	UJ	8/9/97
SJS05-SD01-000	SVTCL	Hexachloroethane		510	ug/kg	U	8/9/97
SJS05-SD01-000	SVTCL	Indeno(1,2,3-cd)Pyrene	440	510	ug/kg	J	8/9/97
SJS05-SD01-000	SVTCL	Isophorone		510	ug/kg	U	8/9/97
SJS05-SD01-000	SVTCL	N-Nitroso-Di-n-Propylamine		510	ug/kg	U	8/9/97
SJS05-SD01-000	SVTCL	N-Nitrosodiphenylamine	78	510	ug/kg	J	8/9/97
SJS05-SD01-000	SVTCL	Naphthalene	110	510	ug/kg	J	8/9/97
SJS05-SD01-000	SVTCL	Nitrobenzene		510	ug/kg	U	8/9/97
SJS05-SD01-000	SVTCL	Pentachlorophenol		1300	ug/kg	U	8/9/97
SJS05-SD01-000	SVTCL	Phenanthrene	180	510	ug/kg	J	8/9/97
SJS05-SD01-000	SVTCL	Phenol		510	ug/kg	U	8/9/97
SJS05-SD01-000	SVTCL	Pyrene	570	510	ug/kg		8/9/97
SJS05-SD01-000	VCTCL	1,1,1-Trichloroethane		15	ug/kg	UJ	7/18/97
SJS05-SD01-000	VCTCL	1,1,2,2-Tetrachloroethane		15	ug/kg	UJ	7/18/97
SJS05-SD01-000	VCTCL	1,1,2-Trichloroethane		15	ug/kg	UJ	7/18/97
SJS05-SD01-000	VCTCL	1,1-Dichloroethane		15	ug/kg	UJ	7/18/97
SJS05-SD01-000	VCTCL	1,1-Dichloroethene		15	ug/kg	UJ	7/18/97
SJS05-SD01-000	VCTCL	1,2-Dichloroethane		15	ug/kg	UJ	7/18/97
SJS05-SD01-000	VCTCL	1,2-Dichloroethene (total)		15	ug/kg	UJ	7/18/97
SJS05-SD01-000	VCTCL	1,2-Dichloropropane		15	ug/kg	UJ	7/18/97
SJS05-SD01-000	VCTCL	2-Butanone		15	ug/kg	UJ	7/18/97
SJS05-SD01-000	VCTCL	2-Hexanone		15	ug/kg	UJ	7/18/97
SJS05-SD01-000	VCTCL	4-Methyl-2-Pentanone		15	ug/kg	UJ	7/18/97
SJS05-SD01-000	VCTCL	Acetone		15	ug/kg	UJ	7/1
SJS05-SD01-000	VCTCL	Benzene		15	ug/kg	UJ	7/
SJS05-SD01-000	VCTCL	Bromodichloromethane		15	ug/kg	UJ	7/18/97
SJS05-SD01-000	VCTCL	Bromoform		15	ug/kg	UJ	7/18/97
SJS05-SD01-000	VCTCL	Bromomethane		15	ug/kg	UJ	7/18/97
SJS05-SD01-000	VCTCL	Carbon Disulfide		15	ug/kg	UJ	7/18/97
SJS05-SD01-000	VCTCL	Carbon Tetrachloride		15	ug/kg	UJ	7/18/97
SJS05-SD01-000	VCTCL	Chlorobenzene		15	ug/kg	UJ	7/18/97
SJS05-SD01-000	VCTCL	Chloroethane		15	ug/kg	UJ	7/18/97
SJS05-SD01-000	VCTCL	Chloroform		15	ug/kg	UJ	7/18/97
SJS05-SD01-000	VCTCL	Chloromethane		15	ug/kg	UJ	7/18/97
SJS05-SD01-000	VCTCL	cis-1,3-Dichloropropene		15	ug/kg	UJ	7/18/97
SJS05-SD01-000	VCTCL	Dibromochloromethane		15	ug/kg	UJ	7/18/97
SJS05-SD01-000	VCTCL	Ethylbenzene		15	ug/kg	UJ	7/18/97
SJS05-SD01-000	VCTCL	Methylene Chloride	37	15	ug/kg	B	7/18/97
SJS05-SD01-000	VCTCL	Styrene		15	ug/kg	UJ	7/18/97
SJS05-SD01-000	VCTCL	Tetrachloroethene		15	ug/kg	UJ	7/18/97
SJS05-SD01-000	VCTCL	Toluene		15	ug/kg	UJ	7/18/97
SJS05-SD01-000	VCTCL	Total Xylenes		15	ug/kg	UJ	7/18/97
SJS05-SD01-000	VCTCL	Trans-1,3-Dichloropropene		15	ug/kg	UJ	7/18/97
SJS05-SD01-000	VCTCL	Trichloroethene		15	ug/kg	UJ	7/18/97
SJS05-SD01-000	VCTCL	Vinyl Chloride		15	ug/kg	UJ	7/18/97
SJS05-SD02-000	CTOTC	Total Organic Carbon	43100	99.6	mg/kg		7/30/97
SJS05-SD02-000	CTOTP	Total Phosphorous (as P)	128	30.2	mg/kg		7/29/97
SJS05-SD02-000	EXPLO	1,3,5-Trinitrobenzene		1000	ug/L	U	8/7/97
SJS05-SD02-000	EXPLO	1,3-Dinitrobenzene		1000	ug/L	U	8/7/97
SJS05-SD02-000	EXPLO	2,4,6-Trinitrotoluene		1000	ug/L	U	8/7/97
SJS05-SD02-000	EXPLO	2,4-Dinitrotoluene		1000	ug/L	U	8/7/97
SJS05-SD02-000	EXPLO	2,6-Dinitrotoluene		1000	ug/L	U	8/7/97
SJS05-SD02-000	EXPLO	2-am-4,6-Dinitrotoluene		1000	ug/L	U	8/
SJS05-SD02-000	EXPLO	2-Nitrotoluene		1000	ug/L	U	8/

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS05-SD02-000	EXPLO	3-Nitrotoluene		1000	ug/L	U	8/7/97
SJS05-SD02-000	EXPLO	4-am-2,6-Dinitrotoluene		1000	ug/L	U	8/7/97
SJS05-SD02-000	EXPLO	4-Nitrotoluene		1000	ug/L	U	8/7/97
SJS05-SD02-000	EXPLO	HMX		1000	ug/L	U	8/7/97
SJS05-SD02-000	EXPLO	Nitrobenzene		1000	ug/L	U	8/7/97
SJS05-SD02-000	EXPLO	RDX		1000	ug/L	U	8/7/97
SJS05-SD02-000	EXPLO	TETRYL		1000	ug/L	U	8/7/97
SJS05-SD02-000	MCYAN	Aluminum	13800	12.61	mg/kg		7/25/97
SJS05-SD02-000	MCYAN	Antimony	1.9	0.57	mg/kg	B	7/25/97
SJS05-SD02-000	MCYAN	Arsenic		0.86	mg/kg	U	7/25/97
SJS05-SD02-000	MCYAN	Barium	133	0.57	mg/kg		7/25/97
SJS05-SD02-000	MCYAN	Beryllium	0.74	0.29	mg/kg	J	7/25/97
SJS05-SD02-000	MCYAN	Cadmium		0.14	mg/kg	U	7/28/97
SJS05-SD02-000	MCYAN	Calcium	1230	24.94	mg/kg	J	7/25/97
SJS05-SD02-000	MCYAN	Chromium	32.2	2.01	mg/kg		7/25/97
SJS05-SD02-000	MCYAN	Cobalt	4.3	2.29	mg/kg	J	7/25/97
SJS05-SD02-000	MCYAN	Copper	39.7	1.72	mg/kg		7/25/97
SJS05-SD02-000	MCYAN	Cyanide	1.1	0.5	mg/kg	J	7/22/97
SJS05-SD02-000	MCYAN	Iron	161000	4.87	mg/kg		7/25/97
SJS05-SD02-000	MCYAN	Lead	302	0.29	mg/kg		7/25/97
SJS05-SD02-000	MCYAN	Magnesium	2090	51.88	mg/kg		7/25/97
SJS05-SD02-000	MCYAN	Manganese	76	0.57	mg/kg	K	7/25/97
SJS05-SD02-000	MCYAN	Mercury	0.29	0.1	mg/kg		8/1/97
SJS05-SD02-000	MCYAN	Nickel	5.3	2.01	mg/kg	B	7/25/97
SJS05-SD02-000	MCYAN	Potassium	1900	63.63	mg/kg		7/25/97
SJS05-SD02-000	MCYAN	Selenium		0.86	mg/kg	UL	7/28/97
SJS05-SD02-000	MCYAN	Silver	1.6	0.29	mg/kg	J	7/25/97
SJS05-SD02-000	MCYAN	Sodium	1920	16.62	mg/kg		7/25/97
SJS05-SD02-000	MCYAN	Thallium	5.7	0.57	mg/kg		7/25/97
SJS05-SD02-000	MCYAN	Vanadium	42.2	2.58	mg/kg		7/25/97
SJS05-SD02-000	MCYAN	Zinc	124	1.43	mg/kg		7/25/97
SJS05-SD02-000	PSPCB	4,4'-DDD	19	6.2	ug/kg		8/5/97
SJS05-SD02-000	PSPCB	4,4'-DDE	12	6.2	ug/kg		8/5/97
SJS05-SD02-000	PSPCB	4,4'-DDT	26	6.2	ug/kg	J	8/5/97
SJS05-SD02-000	PSPCB	Aldrin		3.2	ug/kg	U	8/5/97
SJS05-SD02-000	PSPCB	alpha-BHC		3.2	ug/kg	U	8/5/97
SJS05-SD02-000	PSPCB	alpha-Chlordane		3.2	ug/kg	U	8/5/97
SJS05-SD02-000	PSPCB	Aroclor-1016		62	ug/kg	U	8/5/97
SJS05-SD02-000	PSPCB	Aroclor-1221		130	ug/kg	U	8/5/97
SJS05-SD02-000	PSPCB	Aroclor-1232		62	ug/kg	U	8/5/97
SJS05-SD02-000	PSPCB	Aroclor-1242		62	ug/kg	U	8/5/97
SJS05-SD02-000	PSPCB	Aroclor-1248		62	ug/kg	U	8/5/97
SJS05-SD02-000	PSPCB	Aroclor-1254		62	ug/kg	U	8/5/97
SJS05-SD02-000	PSPCB	Aroclor-1260		62	ug/kg	U	8/5/97
SJS05-SD02-000	PSPCB	beta-BHC		3.2	ug/kg	U	8/5/97
SJS05-SD02-000	PSPCB	delta-BHC		3.2	ug/kg	U	8/5/97
SJS05-SD02-000	PSPCB	Dieldrin		6.2	ug/kg	U	8/5/97
SJS05-SD02-000	PSPCB	Endosulfan I		3.2	ug/kg	U	8/5/97
SJS05-SD02-000	PSPCB	Endosulfan II		6.2	ug/kg	U	8/5/97
SJS05-SD02-000	PSPCB	Endosulfan Sulfate		6.2	ug/kg	U	8/5/97
SJS05-SD02-000	PSPCB	Endrin		6.2	ug/kg	U	8/5/97
SJS05-SD02-000	PSPCB	Endrin Aldehyde	8.9	6.2	ug/kg	J	8/5/97
SJS05-SD02-000	PSPCB	Endrin Ketone		6.2	ug/kg	U	8/5/97
SJS05-SD02-000	PSPCB	gamma-BHC		3.2	ug/kg	U	8/5/97
SJS05-SD02-000	PSPCB	gamma-Chlordane		3.2	ug/kg	U	8/5/97
SJS05-SD02-000	PSPCB	Heptachlor		3.2	ug/kg	U	8/5/97
SJS05-SD02-000	PSPCB	Heptachlor Epoxide		3.2	ug/kg	U	8/5/97
SJS05-SD02-000	PSPCB	Methoxychlor		32	ug/kg	U	8/5/97
SJS05-SD02-000	PSPCB	Toxaphene		320	ug/kg	U	8/5/97
SJS05-SD02-000	SVTCL	1,2,4-Trichlorobenzene		620	ug/kg	U	8/9/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS05-SD02-000	SVTCL	1,2-Dichlorobenzene		620	ug/kg	U	8/
SJS05-SD02-000	SVTCL	1,3-Dichlorobenzene		620	ug/kg	U	8
SJS05-SD02-000	SVTCL	1,4-Dichlorobenzene		620	ug/kg	U	8/9/97
SJS05-SD02-000	SVTCL	2,2'-oxybis(1-Chloropropane		620	ug/kg	U	8/9/97
SJS05-SD02-000	SVTCL	2,4,5-Trichlorophenol		1600	ug/kg	U	8/9/97
SJS05-SD02-000	SVTCL	2,4,6-Trichlorophenol		620	ug/kg	U	8/9/97
SJS05-SD02-000	SVTCL	2,4-Dichlorophenol		620	ug/kg	U	8/9/97
SJS05-SD02-000	SVTCL	2,4-Dimethylphenol		620	ug/kg	U	8/9/97
SJS05-SD02-000	SVTCL	2,4-Dinitrophenol		1600	ug/kg	UJ	8/9/97
SJS05-SD02-000	SVTCL	2,4-Dinitrotoluene	65	620	ug/kg	J	8/9/97
SJS05-SD02-000	SVTCL	2,6-Dinitrotoluene		620	ug/kg	U	8/9/97
SJS05-SD02-000	SVTCL	2-Chloronaphthalene		620	ug/kg	U	8/9/97
SJS05-SD02-000	SVTCL	2-Chlorophenol		620	ug/kg	U	8/9/97
SJS05-SD02-000	SVTCL	2-Methylnaphthalene		620	ug/kg	U	8/9/97
SJS05-SD02-000	SVTCL	2-Methylphenol		620	ug/kg	U	8/9/97
SJS05-SD02-000	SVTCL	2-Nitroaniline		1600	ug/kg	U	8/9/97
SJS05-SD02-000	SVTCL	2-Nitrophenol		620	ug/kg	U	8/9/97
SJS05-SD02-000	SVTCL	3,3'-Dichlorobenzidine		620	ug/kg	U	8/9/97
SJS05-SD02-000	SVTCL	3-Nitroaniline		1600	ug/kg	U	8/9/97
SJS05-SD02-000	SVTCL	4,6-Dinitro-2-Methylphenol		1600	ug/kg	U	8/9/97
SJS05-SD02-000	SVTCL	4-Bromophenyl phenylether		620	ug/kg	U	8/9/97
SJS05-SD02-000	SVTCL	4-Chloro-3-Methylphenol		620	ug/kg	U	8/9/97
SJS05-SD02-000	SVTCL	4-Chloroaniline		620	ug/kg	U	8/9/97
SJS05-SD02-000	SVTCL	4-Chlorophenyl-phenylether		620	ug/kg	U	8/9/97
SJS05-SD02-000	SVTCL	4-Methylphenol		620	ug/kg	U	8/9/97
SJS05-SD02-000	SVTCL	4-Nitroaniline		1600	ug/kg	U	8/9/97
SJS05-SD02-000	SVTCL	4-Nitrophenol		1600	ug/kg	U	8/9/97
SJS05-SD02-000	SVTCL	Acenaphthene	65	620	ug/kg	J	8/9/97
SJS05-SD02-000	SVTCL	Acenaphthylene		620	ug/kg	U	8/9/97
SJS05-SD02-000	SVTCL	Anthracene	99	620	ug/kg	J	8/
SJS05-SD02-000	SVTCL	Benzo(a)Anthracene	300	620	ug/kg	J	8
SJS05-SD02-000	SVTCL	Benzo(a)Pyrene	220	620	ug/kg	J	8/9/97
SJS05-SD02-000	SVTCL	Benzo(b)Fluoranthene	460	620	ug/kg	J	8/9/97
SJS05-SD02-000	SVTCL	Benzo(g,h,i)Perylene	170	620	ug/kg	J	8/9/97
SJS05-SD02-000	SVTCL	Benzo(k)fluoranthene	160	620	ug/kg	J	8/9/97
SJS05-SD02-000	SVTCL	Bis(2-chloroethoxy)Methane		620	ug/kg	U	8/9/97
SJS05-SD02-000	SVTCL	Bis(2-chloroethyl)Ether		620	ug/kg	U	8/9/97
SJS05-SD02-000	SVTCL	Bis(2-Ethylhexyl)Phthalate	140	260	ug/kg	B	8/9/97
SJS05-SD02-000	SVTCL	Butylbenzylphthalate		620	ug/kg	U	8/9/97
SJS05-SD02-000	SVTCL	Carbazole		620	ug/kg	U	8/9/97
SJS05-SD02-000	SVTCL	Chrysene	450	620	ug/kg	J	8/9/97
SJS05-SD02-000	SVTCL	Di-n-Butylphthalate	370	620	ug/kg	B	8/9/97
SJS05-SD02-000	SVTCL	Di-n-Octyl Phthalate		620	ug/kg	U	8/9/97
SJS05-SD02-000	SVTCL	Dibenz(a,h)Anthracene		620	ug/kg	U	8/9/97
SJS05-SD02-000	SVTCL	Dibenzofuran		620	ug/kg	U	8/9/97
SJS05-SD02-000	SVTCL	Diethylphthalate		620	ug/kg	U	8/9/97
SJS05-SD02-000	SVTCL	Dimethyl Phthalate		620	ug/kg	U	8/9/97
SJS05-SD02-000	SVTCL	Fluoranthene		620	ug/kg	U	8/9/97
SJS05-SD02-000	SVTCL	Fluorene	63	620	ug/kg	J	8/9/97
SJS05-SD02-000	SVTCL	Hexachlorobenzene		620	ug/kg	U	8/9/97
SJS05-SD02-000	SVTCL	Hexachlorobutadiene		620	ug/kg	U	8/9/97
SJS05-SD02-000	SVTCL	Hexachlorocyclopentadien		620	ug/kg	UJ	8/9/97
SJS05-SD02-000	SVTCL	Hexachloroethane		620	ug/kg	U	8/9/97
SJS05-SD02-000	SVTCL	Indeno(1,2,3-cd)Pyrene	170	620	ug/kg	J	8/9/97
SJS05-SD02-000	SVTCL	Isophorone		620	ug/kg	U	8/9/97
SJS05-SD02-000	SVTCL	N-Nitroso-Di-n-Propylamine		620	ug/kg	U	8/9/97
SJS05-SD02-000	SVTCL	N-Nitrosodiphenylamine	610	620	ug/kg	J	8/9/97
SJS05-SD02-000	SVTCL	Naphthalene	80	620	ug/kg	J	8/9/97
SJS05-SD02-000	SVTCL	Nitrobenzene		620	ug/kg	U	8/
SJS05-SD02-000	SVTCL	Pentachlorophenol		1600	ug/kg	U	8/

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS05-SD02-000	SVTCL	Phenanthrene	520	620	ug/kg	J	8/9/97
SJS05-SD02-000	SVTCL	Phenol		620	ug/kg	U	8/9/97
SJS05-SD02-000	SVTCL	Pyrene	680	620	ug/kg		8/9/97
SJS05-SD02-000	VCTCL	1,1,1-Trichloroethane		17	ug/kg	U	7/19/97
SJS05-SD02-000	VCTCL	1,1,2,2-Tetrachloroethane		17	ug/kg	U	7/19/97
SJS05-SD02-000	VCTCL	1,1,2-Trichloroethane		17	ug/kg	U	7/19/97
SJS05-SD02-000	VCTCL	1,1-Dichloroethane		17	ug/kg	U	7/19/97
SJS05-SD02-000	VCTCL	1,1-Dichloroethene		17	ug/kg	U	7/19/97
SJS05-SD02-000	VCTCL	1,2-Dichloroethane		17	ug/kg	U	7/19/97
SJS05-SD02-000	VCTCL	1,2-Dichloroethene (total)		17	ug/kg	U	7/19/97
SJS05-SD02-000	VCTCL	1,2-Dichloropropane		17	ug/kg	U	7/19/97
SJS05-SD02-000	VCTCL	2-Butanone		17	ug/kg	U	7/19/97
SJS05-SD02-000	VCTCL	2-Hexanone		17	ug/kg	U	7/19/97
SJS05-SD02-000	VCTCL	4-Methyl-2-Pentanone		17	ug/kg	U	7/19/97
SJS05-SD02-000	VCTCL	Acetone		17	ug/kg	U	7/19/97
SJS05-SD02-000	VCTCL	Benzene		17	ug/kg	U	7/19/97
SJS05-SD02-000	VCTCL	Bromodichloromethane		17	ug/kg	U	7/19/97
SJS05-SD02-000	VCTCL	Bromoform		17	ug/kg	U	7/19/97
SJS05-SD02-000	VCTCL	Bromomethane		17	ug/kg	U	7/19/97
SJS05-SD02-000	VCTCL	Carbon Disulfide		17	ug/kg	U	7/19/97
SJS05-SD02-000	VCTCL	Carbon Tetrachloride		17	ug/kg	U	7/19/97
SJS05-SD02-000	VCTCL	Chlorobenzene		17	ug/kg	U	7/19/97
SJS05-SD02-000	VCTCL	Chloroethane		17	ug/kg	U	7/19/97
SJS05-SD02-000	VCTCL	Chloroform	3	17	ug/kg	J	7/19/97
SJS05-SD02-000	VCTCL	Chloromethane		17	ug/kg	U	7/19/97
SJS05-SD02-000	VCTCL	cis-1,3-Dichloropropene		17	ug/kg	U	7/19/97
SJS05-SD02-000	VCTCL	Dibromochloromethane		17	ug/kg	U	7/19/97
SJS05-SD02-000	VCTCL	Ethylbenzene		17	ug/kg	U	7/19/97
SJS05-SD02-000	VCTCL	Methylene Chloride	100	17	ug/kg	B	7/19/97
SJS05-SD02-000	VCTCL	Styrene		17	ug/kg	U	7/19/97
SJS05-SD02-000	VCTCL	Tetrachloroethene		17	ug/kg	U	7/19/97
SJS05-SD02-000	VCTCL	Toluene		17	ug/kg	U	7/19/97
SJS05-SD02-000	VCTCL	Total Xylenes		17	ug/kg	U	7/19/97
SJS05-SD02-000	VCTCL	Trans-1,3-Dichloropropene		17	ug/kg	U	7/19/97
SJS05-SD02-000	VCTCL	Trichloroethene		17	ug/kg	U	7/19/97
SJS05-SD02-000	VCTCL	Vinyl Chloride		17	ug/kg	U	7/19/97
SJS05-SD03-000	CTOTC	Total Organic Carbon	24500	108	mg/kg	L	7/16/97
SJS05-SD03-000	CTOTP	Total Phosphorous (as P)	20.7	2.6	mg/kg		7/18/97
SJS05-SD03-000	MCYAN	Aluminum	17000	18.1	mg/kg		7/11/97
SJS05-SD03-000	MCYAN	Antimony	0.94	0.82	mg/kg	L	7/16/97
SJS05-SD03-000	MCYAN	Arsenic	12.5	1.23	mg/kg		7/16/97
SJS05-SD03-000	MCYAN	Barium	53.1	0.82	mg/kg	J	7/11/97
SJS05-SD03-000	MCYAN	Beryllium	2.4	0.41	mg/kg		7/11/97
SJS05-SD03-000	MCYAN	Cadmium		0.21	mg/kg	U	7/16/97
SJS05-SD03-000	MCYAN	Calcium	1370	35.79	mg/kg	J	7/11/97
SJS05-SD03-000	MCYAN	Chromium	17	2.88	mg/kg		7/11/97
SJS05-SD03-000	MCYAN	Cobalt		3.29	mg/kg	U	7/11/97
SJS05-SD03-000	MCYAN	Copper	39	2.47	mg/kg		7/11/97
SJS05-SD03-000	MCYAN	Cyanide		1.1	mg/kg	U	7/8/97
SJS05-SD03-000	MCYAN	Iron	29100	6.99	mg/kg		7/11/97
SJS05-SD03-000	MCYAN	Lead	115	0.41	mg/kg		7/16/97
SJS05-SD03-000	MCYAN	Magnesium	1970	74.46	mg/kg	J	7/11/97
SJS05-SD03-000	MCYAN	Manganese	48.1	0.82	mg/kg		7/11/97
SJS05-SD03-000	MCYAN	Mercury	0.17	0.09	mg/kg	J	7/15/97
SJS05-SD03-000	MCYAN	Nickel	7	2.88	mg/kg	J	7/11/97
SJS05-SD03-000	MCYAN	Potassium	1410	91.33	mg/kg	J	7/11/97
SJS05-SD03-000	MCYAN	Selenium		1.23	mg/kg	U	7/16/97
SJS05-SD03-000	MCYAN	Silver		0.41	mg/kg	U	7/16/97
SJS05-SD03-000	MCYAN	Sodium	4740	23.86	mg/kg		7/11/97
SJS05-SD03-000	MCYAN	Thallium		0.82	mg/kg	U	7/16/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS05-SD03-000	MCYAN	Vanadium	37.7	3.7	mg/kg		7/1
SJS05-SD03-000	MCYAN	Zinc	149	2.06	mg/kg	L	7/
SJS05-SD03-000	PSPCB	4,4'-DDD	110	71	ug/kg		7/2
SJS05-SD03-000	PSPCB	4,4'-DDE	54	7.1	ug/kg		7/27/97
SJS05-SD03-000	PSPCB	4,4'-DDT	38	7.1	ug/kg		7/27/97
SJS05-SD03-000	PSPCB	Aldrin		3.6	ug/kg	U	7/27/97
SJS05-SD03-000	PSPCB	alpha-BHC		3.6	ug/kg	U	7/27/97
SJS05-SD03-000	PSPCB	alpha-Chlordane		3.6	ug/kg	U	7/27/97
SJS05-SD03-000	PSPCB	Aroclor-1016		71	ug/kg	U	7/27/97
SJS05-SD03-000	PSPCB	Aroclor-1221		140	ug/kg	U	7/27/97
SJS05-SD03-000	PSPCB	Aroclor-1232		71	ug/kg	U	7/27/97
SJS05-SD03-000	PSPCB	Aroclor-1242		71	ug/kg	U	7/27/97
SJS05-SD03-000	PSPCB	Aroclor-1248		71	ug/kg	U	7/27/97
SJS05-SD03-000	PSPCB	Aroclor-1254		71	ug/kg	U	7/27/97
SJS05-SD03-000	PSPCB	Aroclor-1260		71	ug/kg	U	7/27/97
SJS05-SD03-000	PSPCB	beta-BHC		3.6	ug/kg	U	7/27/97
SJS05-SD03-000	PSPCB	delta-BHC		3.6	ug/kg	U	7/27/97
SJS05-SD03-000	PSPCB	Dieldrin	21	7.1	ug/kg		7/27/97
SJS05-SD03-000	PSPCB	Endosulfan I		3.6	ug/kg	U	7/27/97
SJS05-SD03-000	PSPCB	Endosulfan II		7.1	ug/kg	U	7/27/97
SJS05-SD03-000	PSPCB	Endosulfan Sulfate		7.1	ug/kg	U	7/27/97
SJS05-SD03-000	PSPCB	Endrin		7.1	ug/kg	U	7/27/97
SJS05-SD03-000	PSPCB	Endrin Aldehyde		7.1	ug/kg	U	7/27/97
SJS05-SD03-000	PSPCB	Endrin Ketone		7.1	ug/kg	U	7/27/97
SJS05-SD03-000	PSPCB	gamma-BHC		3.6	ug/kg	U	7/27/97
SJS05-SD03-000	PSPCB	gamma-Chlordane		3.6	ug/kg	U	7/27/97
SJS05-SD03-000	PSPCB	Heptachlor		3.6	ug/kg	U	7/27/97
SJS05-SD03-000	PSPCB	Heptachlor Epoxide		3.6	ug/kg	U	7/27/97
SJS05-SD03-000	PSPCB	Methoxychlor		36	ug/kg	U	7/27/97
SJS05-SD03-000	PSPCB	Toxaphene		360	ug/kg	U	7/2
SJS05-SD03-000	SVTCL	1,2,4-Trichlorobenzene		3600	ug/kg	U	7/
SJS05-SD03-000	SVTCL	1,2-Dichlorobenzene		3600	ug/kg	U	7/21
SJS05-SD03-000	SVTCL	1,3-Dichlorobenzene		3600	ug/kg	U	7/21/97
SJS05-SD03-000	SVTCL	1,4-Dichlorobenzene		3600	ug/kg	U	7/21/97
SJS05-SD03-000	SVTCL	2,2'-oxybis(1-Chloropropane		3600	ug/kg	U	7/21/97
SJS05-SD03-000	SVTCL	2,4,5-Trichlorophenol		9000	ug/kg	U	7/21/97
SJS05-SD03-000	SVTCL	2,4,6-Trichlorophenol		3600	ug/kg	U	7/21/97
SJS05-SD03-000	SVTCL	2,4-Dichlorophenol		3600	ug/kg	U	7/21/97
SJS05-SD03-000	SVTCL	2,4-Dimethylphenol		3600	ug/kg	U	7/21/97
SJS05-SD03-000	SVTCL	2,4-Dinitrotoluene		3600	ug/kg	U	7/21/97
SJS05-SD03-000	SVTCL	2,6-Dinitrotoluene		3600	ug/kg	U	7/21/97
SJS05-SD03-000	SVTCL	2-Chloronaphthalene		3600	ug/kg	U	7/21/97
SJS05-SD03-000	SVTCL	2-Chlorophenol		3600	ug/kg	U	7/21/97
SJS05-SD03-000	SVTCL	2-Methylnaphthalene		3600	ug/kg	U	7/21/97
SJS05-SD03-000	SVTCL	2-Methylphenol		3600	ug/kg	U	7/21/97
SJS05-SD03-000	SVTCL	2-Nitroaniline		9000	ug/kg	U	7/21/97
SJS05-SD03-000	SVTCL	2-Nitrophenol		3600	ug/kg	U	7/21/97
SJS05-SD03-000	SVTCL	3,3'-Dichlorobenzidine		3600	ug/kg	U	7/21/97
SJS05-SD03-000	SVTCL	3-Nitroaniline		9000	ug/kg	U	7/21/97
SJS05-SD03-000	SVTCL	4,6-Dinitro-2-Methylphenol		9000	ug/kg	U	7/21/97
SJS05-SD03-000	SVTCL	4-Bromophenyl phenylether		3600	ug/kg	U	7/21/97
SJS05-SD03-000	SVTCL	4-Chloro-3-Methylphenol		3600	ug/kg	U	7/21/97
SJS05-SD03-000	SVTCL	4-Chloroaniline		3600	ug/kg	U	7/21/97
SJS05-SD03-000	SVTCL	4-Chlorophenyl-phenylether		3600	ug/kg	U	7/21/97
SJS05-SD03-000	SVTCL	4-Methylphenol		3600	ug/kg	U	7/21/97
SJS05-SD03-000	SVTCL	4-Nitroaniline		9000	ug/kg	U	7/21/97
SJS05-SD03-000	SVTCL	4-Nitrophenol		9000	ug/kg	U	7/21/97
SJS05-SD03-000	SVTCL	Acenaphthene		3600	ug/kg	U	7/21/97
SJS05-SD03-000	SVTCL	Acenaphthylene		3600	ug/kg	U	7/2
SJS05-SD03-000	SVTCL	Anthracene		3600	ug/kg	U	7/

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS05-SD03-000	SVTCL	Benzo(a)Anthracene		3600	ug/kg	U	7/21/97
SJS05-SD03-000	SVTCL	Benzo(a)Pyrene		3600	ug/kg	U	7/21/97
SJS05-SD03-000	SVTCL	Benzo(b)Fluoranthene		3600	ug/kg	U	7/21/97
SJS05-SD03-000	SVTCL	Benzo(g,h,i)Perylene		3600	ug/kg	U	7/21/97
SJS05-SD03-000	SVTCL	Benzo(k)Fluoranthene		3600	ug/kg	U	7/21/97
SJS05-SD03-000	SVTCL	Bis(2-chloroethoxy)Methane		3600	ug/kg	U	7/21/97
SJS05-SD03-000	SVTCL	Bis(2-chloroethyl)Ether		3600	ug/kg	U	7/21/97
SJS05-SD03-000	SVTCL	Bis(2-Ethylhexyl)Phthalate		3600	ug/kg	U	7/21/97
SJS05-SD03-000	SVTCL	Butylbenzylphthalate		3600	ug/kg	U	7/21/97
SJS05-SD03-000	SVTCL	Carbazole		3600	ug/kg	U	7/21/97
SJS05-SD03-000	SVTCL	Chrysene	410	3600	ug/kg	J	7/21/97
SJS05-SD03-000	SVTCL	Di-n-Butylphthalate		3600	ug/kg	U	7/21/97
SJS05-SD03-000	SVTCL	Di-n-Octyl Phthalate		3600	ug/kg	U	7/21/97
SJS05-SD03-000	SVTCL	Dibenz(a,h)Anthracene		3600	ug/kg	U	7/21/97
SJS05-SD03-000	SVTCL	Dibenzofuran		3600	ug/kg	U	7/21/97
SJS05-SD03-000	SVTCL	Diethylphthalate	720	3600	ug/kg	J	7/21/97
SJS05-SD03-000	SVTCL	Dimethyl Phthalate		3600	ug/kg	U	7/21/97
SJS05-SD03-000	SVTCL	Fluoranthene		3600	ug/kg	U	7/21/97
SJS05-SD03-000	SVTCL	Fluorene		3600	ug/kg	U	7/21/97
SJS05-SD03-000	SVTCL	Hexachlorobenzene		3600	ug/kg	U	7/21/97
SJS05-SD03-000	SVTCL	Hexachlorobutadiene		3600	ug/kg	U	7/21/97
SJS05-SD03-000	SVTCL	Hexachlorocyclopentadien		3600	ug/kg	U	7/21/97
SJS05-SD03-000	SVTCL	Hexachloroethane		3600	ug/kg	U	7/21/97
SJS05-SD03-000	SVTCL	Indeno(1,2,3-cd)Pyrene		3600	ug/kg	U	7/21/97
SJS05-SD03-000	SVTCL	Isophorone		3600	ug/kg	U	7/21/97
SJS05-SD03-000	SVTCL	N-Nitroso-Di-n-Propylamine		3600	ug/kg	U	7/21/97
SJS05-SD03-000	SVTCL	N-Nitrosodiphenylamine		3600	ug/kg	U	7/21/97
SJS05-SD03-000	SVTCL	Naphthalene		3600	ug/kg	U	7/21/97
SJS05-SD03-000	SVTCL	Nitrobenzene		3600	ug/kg	U	7/21/97
SJS05-SD03-000	SVTCL	Pentachlorophenol		9000	ug/kg	U	7/21/97
SJS05-SD03-000	SVTCL	Phenanthrene		3600	ug/kg	U	7/21/97
SJS05-SD03-000	SVTCL	Phenol		3600	ug/kg	U	7/21/97
SJS05-SD03-000	SVTCL	Pyrene		3600	ug/kg	U	7/21/97
SJS05-SD03-000	VCTCL	1,1,1-Trichloroethane		21	ug/kg	U	7/8/97
SJS05-SD03-000	VCTCL	1,1,2,2-Tetrachloroethane		21	ug/kg	U	7/8/97
SJS05-SD03-000	VCTCL	1,1,2-Trichloroethane		21	ug/kg	U	7/8/97
SJS05-SD03-000	VCTCL	1,1-Dichloroethane		21	ug/kg	U	7/8/97
SJS05-SD03-000	VCTCL	1,1-Dichloroethene		21	ug/kg	U	7/8/97
SJS05-SD03-000	VCTCL	1,2-Dichloroethane		21	ug/kg	U	7/8/97
SJS05-SD03-000	VCTCL	1,2-Dichloroethene (total)		21	ug/kg	U	7/8/97
SJS05-SD03-000	VCTCL	1,2-Dichloropropane		21	ug/kg	U	7/8/97
SJS05-SD03-000	VCTCL	2-Butanone		21	ug/kg	U	7/8/97
SJS05-SD03-000	VCTCL	2-Hexanone		21	ug/kg	U	7/8/97
SJS05-SD03-000	VCTCL	4-Methyl-2-Pentanone		21	ug/kg	U	7/8/97
SJS05-SD03-000	VCTCL	Acetone	52	21	ug/kg		7/8/97
SJS05-SD03-000	VCTCL	Benzene		21	ug/kg	U	7/8/97
SJS05-SD03-000	VCTCL	Bromodichloromethane		21	ug/kg	U	7/8/97
SJS05-SD03-000	VCTCL	Bromoform		21	ug/kg	U	7/8/97
SJS05-SD03-000	VCTCL	Bromomethane		21	ug/kg	U	7/8/97
SJS05-SD03-000	VCTCL	Carbon Disulfide		21	ug/kg	U	7/8/97
SJS05-SD03-000	VCTCL	Carbon Tetrachloride		21	ug/kg	U	7/8/97
SJS05-SD03-000	VCTCL	Chlorobenzene		21	ug/kg	U	7/8/97
SJS05-SD03-000	VCTCL	Chloroethane		21	ug/kg	U	7/8/97
SJS05-SD03-000	VCTCL	Chloroform		21	ug/kg	U	7/8/97
SJS05-SD03-000	VCTCL	Chloromethane		21	ug/kg	U	7/8/97
SJS05-SD03-000	VCTCL	cis-1,3-Dichloropropene		21	ug/kg	U	7/8/97
SJS05-SD03-000	VCTCL	Dibromochloromethane		21	ug/kg	U	7/8/97
SJS05-SD03-000	VCTCL	Ethylbenzene		21	ug/kg	U	7/8/97
SJS05-SD03-000	VCTCL	Methylene Chloride	69	21	ug/kg	B	7/8/97
SJS05-SD03-000	VCTCL	Styrene		21	ug/kg	U	7/8/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS05-SD03-000	VCTCL	Tetrachloroethene		21	ug/kg	U	7
SJS05-SD03-000	VCTCL	Toluene		21	ug/kg	U	7
SJS05-SD03-000	VCTCL	Total Xylenes		21	ug/kg	U	7/8/97
SJS05-SD03-000	VCTCL	Trans-1,3-Dichloropropene		21	ug/kg	U	7/8/97
SJS05-SD03-000	VCTCL	Trichloroethene		21	ug/kg	U	7/8/97
SJS05-SD03-000	VCTCL	Vinyl Chloride		21	ug/kg	U	7/8/97
SJS05-SS01-000	CTOTP	Total Phosphorous (as P)	3.9	1.3	mg/kg		7/15/97
SJS05-SS01-000	MCYAN	Aluminum	5880	6.88	mg/kg		7/2/97
SJS05-SS01-000	MCYAN	Antimony	35.4	0.31	mg/kg	B	7/2/97
SJS05-SS01-000	MCYAN	Arsenic	14.6	0.47	mg/kg	L	7/2/97
SJS05-SS01-000	MCYAN	Barium	1040	0.31	mg/kg		7/2/97
SJS05-SS01-000	MCYAN	Beryllium	0.88	0.16	mg/kg		7/2/97
SJS05-SS01-000	MCYAN	Cadmium	6	0.08	mg/kg		7/7/97
SJS05-SS01-000	MCYAN	Calcium	8170	13.6	mg/kg		7/2/97
SJS05-SS01-000	MCYAN	Chromium	74.6	1.09	mg/kg		7/2/97
SJS05-SS01-000	MCYAN	Cobalt	17.7	1.25	mg/kg		7/2/97
SJS05-SS01-000	MCYAN	Copper	6470	0.94	mg/kg		7/2/97
SJS05-SS01-000	MCYAN	Cyanide		0.53	mg/kg	U	7/2/97
SJS05-SS01-000	MCYAN	Iron	120000	2.66	mg/kg		7/2/97
SJS05-SS01-000	MCYAN	Lead	7210	0.16	mg/kg	J	7/2/97
SJS05-SS01-000	MCYAN	Magnesium	3300	28.3	mg/kg		7/2/97
SJS05-SS01-000	MCYAN	Manganese	852	0.31	mg/kg		7/2/97
SJS05-SS01-000	MCYAN	Mercury	0.44	0.04	mg/kg		6/30/97
SJS05-SS01-000	MCYAN	Nickel	91.5	1.09	mg/kg		7/2/97
SJS05-SS01-000	MCYAN	Potassium	963	34.71	mg/kg		7/2/97
SJS05-SS01-000	MCYAN	Selenium		0.47	mg/kg	UL	7/2/97
SJS05-SS01-000	MCYAN	Silver	3.5	0.16	mg/kg		7/2/97
SJS05-SS01-000	MCYAN	Sodium	764	9.07	mg/kg	J	7/2/97
SJS05-SS01-000	MCYAN	Thallium	5.3	0.31	mg/kg		7/2/97
SJS05-SS01-000	MCYAN	Vanadium	23.6	1.41	mg/kg		7/
SJS05-SS01-000	MCYAN	Zinc	8490	0.78	mg/kg	L	7
SJS05-SS01-000	PSPCB	4,4'-DDD	38	3.5	ug/kg	J	7/16/97
SJS05-SS01-000	PSPCB	4,4'-DDE	400	3.5	ug/kg		7/17/97
SJS05-SS01-000	PSPCB	4,4'-DDT	110	3.5	ug/kg		7/17/97
SJS05-SS01-000	PSPCB	Aldrin		1.8	ug/kg	U	7/16/97
SJS05-SS01-000	PSPCB	alpha-BHC		1.8	ug/kg	U	7/16/97
SJS05-SS01-000	PSPCB	alpha-Chlordane		1.8	ug/kg	U	7/16/97
SJS05-SS01-000	PSPCB	Aroclor-1016		35	ug/kg	U	7/16/97
SJS05-SS01-000	PSPCB	Aroclor-1221		71	ug/kg	U	7/16/97
SJS05-SS01-000	PSPCB	Aroclor-1232		35	ug/kg	U	7/16/97
SJS05-SS01-000	PSPCB	Aroclor-1242		35	ug/kg	U	7/16/97
SJS05-SS01-000	PSPCB	Aroclor-1248		35	ug/kg	U	7/16/97
SJS05-SS01-000	PSPCB	Aroclor-1254		35	ug/kg	U	7/16/97
SJS05-SS01-000	PSPCB	Aroclor-1260		35	ug/kg	U	7/16/97
SJS05-SS01-000	PSPCB	beta-BHC		1.8	ug/kg	U	7/16/97
SJS05-SS01-000	PSPCB	delta-BHC		1.8	ug/kg	U	7/16/97
SJS05-SS01-000	PSPCB	Dieldrin		3.5	ug/kg	U	7/16/97
SJS05-SS01-000	PSPCB	Endosulfan I		1.8	ug/kg	U	7/16/97
SJS05-SS01-000	PSPCB	Endosulfan II		3.5	ug/kg	U	7/16/97
SJS05-SS01-000	PSPCB	Endosulfan Sulfate		3.5	ug/kg	U	7/16/97
SJS05-SS01-000	PSPCB	Endrin		3.5	ug/kg	U	7/16/97
SJS05-SS01-000	PSPCB	Endrin Aldehyde		3.5	ug/kg	U	7/16/97
SJS05-SS01-000	PSPCB	Endrin Ketone		3.5	ug/kg	U	7/16/97
SJS05-SS01-000	PSPCB	gamma-BHC		1.8	ug/kg	U	7/16/97
SJS05-SS01-000	PSPCB	gamma-Chlordane		1.8	ug/kg	U	7/16/97
SJS05-SS01-000	PSPCB	Heptachlor		1.8	ug/kg	U	7/16/97
SJS05-SS01-000	PSPCB	Heptachlor Epoxide		1.8	ug/kg	U	7/16/97
SJS05-SS01-000	PSPCB	Methoxychlor		18	ug/kg	U	7/16/97
SJS05-SS01-000	PSPCB	Toxaphene		180	ug/kg	U	7/1
SJS05-SS01-000	SVTCL	1,2,4-Trichlorobenzene		350	ug/kg	U	7,

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS05-SS01-000	SVTCL	1,2-Dichlorobenzene		350	ug/kg	U	7/9/97
SJS05-SS01-000	SVTCL	1,3-Dichlorobenzene		350	ug/kg	U	7/9/97
SJS05-SS01-000	SVTCL	1,4-Dichlorobenzene		350	ug/kg	U	7/9/97
SJS05-SS01-000	SVTCL	2,2'-oxybis(1-Chloropropane		350	ug/kg	U	7/9/97
SJS05-SS01-000	SVTCL	2,4,5-Trichlorophenol		880	ug/kg	U	7/9/97
SJS05-SS01-000	SVTCL	2,4,6-Trichlorophenol		350	ug/kg	U	7/9/97
SJS05-SS01-000	SVTCL	2,4-Dichlorophenol		350	ug/kg	U	7/9/97
SJS05-SS01-000	SVTCL	2,4-Dimethylphenol		350	ug/kg	U	7/9/97
SJS05-SS01-000	SVTCL	2,4-Dinitrophenol		880	ug/kg	U	7/9/97
SJS05-SS01-000	SVTCL	2,4-Dinitrotoluene	580	400	ug/kg		7/9/97
SJS05-SS01-000	SVTCL	2,6-Dinitrotoluene	39	400	ug/kg	J	7/9/97
SJS05-SS01-000	SVTCL	2-Chloronaphthalene		350	ug/kg	U	7/9/97
SJS05-SS01-000	SVTCL	2-Chlorophenol		350	ug/kg	U	7/9/97
SJS05-SS01-000	SVTCL	2-Methylnaphthalene	42	400	ug/kg	J	7/9/97
SJS05-SS01-000	SVTCL	2-Methylphenol		350	ug/kg	U	7/9/97
SJS05-SS01-000	SVTCL	2-Nitroaniline		880	ug/kg	U	7/9/97
SJS05-SS01-000	SVTCL	2-Nitrophenol		350	ug/kg	U	7/9/97
SJS05-SS01-000	SVTCL	3,3'-Dichlorobenzidine		350	ug/kg	U	7/9/97
SJS05-SS01-000	SVTCL	3-Nitroaniline		880	ug/kg	U	7/9/97
SJS05-SS01-000	SVTCL	4,6-Dinitro-2-Methylphenol		880	ug/kg	U	7/9/97
SJS05-SS01-000	SVTCL	4-Bromophenyl phenylether		350	ug/kg	U	7/9/97
SJS05-SS01-000	SVTCL	4-Chloro-3-Methylphenol		350	ug/kg	U	7/9/97
SJS05-SS01-000	SVTCL	4-Chloroaniline		350	ug/kg	U	7/9/97
SJS05-SS01-000	SVTCL	4-Chlorophenyl-phenylether		350	ug/kg	U	7/9/97
SJS05-SS01-000	SVTCL	4-Methylphenol		350	ug/kg	U	7/9/97
SJS05-SS01-000	SVTCL	4-Nitroaniline		880	ug/kg	U	7/9/97
SJS05-SS01-000	SVTCL	4-Nitrophenol		880	ug/kg	U	7/9/97
SJS05-SS01-000	SVTCL	Acenaphthene		350	ug/kg	U	7/9/97
SJS05-SS01-000	SVTCL	Acenaphthylene		350	ug/kg	U	7/9/97
SJS05-SS01-000	SVTCL	Anthracene	54	400	ug/kg	J	7/9/97
SJS05-SS01-000	SVTCL	Benzo(a)Anthracene	390	400	ug/kg		7/9/97
SJS05-SS01-000	SVTCL	Benzo(a)Pyrene	390	400	ug/kg		7/9/97
SJS05-SS01-000	SVTCL	Benzo(b)Fluoranthene	700	400	ug/kg		7/9/97
SJS05-SS01-000	SVTCL	Benzo(g,h,i)Perylene	270	400	ug/kg	J	7/9/97
SJS05-SS01-000	SVTCL	Benzo(k)Fluoranthene	140	400	ug/kg	J	7/9/97
SJS05-SS01-000	SVTCL	Bis(2-chloroethoxy)Methane		350	ug/kg	U	7/9/97
SJS05-SS01-000	SVTCL	Bis(2-chloroethyl)Ether		350	ug/kg	U	7/9/97
SJS05-SS01-000	SVTCL	Bis(2-Ethylhexyl)Phthalate	69	280	ug/kg	B	7/9/97
SJS05-SS01-000	SVTCL	Butylbenzylphthalate		350	ug/kg	U	7/9/97
SJS05-SS01-000	SVTCL	Carbazole	40	400	ug/kg	J	7/9/97
SJS05-SS01-000	SVTCL	Chrysene	390	400	ug/kg		7/9/97
SJS05-SS01-000	SVTCL	Di-n-Butylphthalate	180	400	ug/kg	J	7/9/97
SJS05-SS01-000	SVTCL	Di-n-Octyl Phthalate		350	ug/kg	U	7/9/97
SJS05-SS01-000	SVTCL	Dibenz(a,h)Anthracene		350	ug/kg	U	7/9/97
SJS05-SS01-000	SVTCL	Dibenzofuran		350	ug/kg	U	7/9/97
SJS05-SS01-000	SVTCL	Diethylphthalate		350	ug/kg	U	7/9/97
SJS05-SS01-000	SVTCL	Dimethyl Phthalate		350	ug/kg	U	7/9/97
SJS05-SS01-000	SVTCL	Fluoranthene	520	400	ug/kg		7/9/97
SJS05-SS01-000	SVTCL	Fluorene		350	ug/kg	U	7/9/97
SJS05-SS01-000	SVTCL	Hexachlorobenzene		350	ug/kg	U	7/9/97
SJS05-SS01-000	SVTCL	Hexachlorobutadiene		350	ug/kg	U	7/9/97
SJS05-SS01-000	SVTCL	Hexachlorocyclopentadien		350	ug/kg	U	7/9/97
SJS05-SS01-000	SVTCL	Hexachloroethane		350	ug/kg	U	7/9/97
SJS05-SS01-000	SVTCL	Indeno(1,2,3-cd)Pyrene	270	400	ug/kg	J	7/9/97
SJS05-SS01-000	SVTCL	Isophorone		350	ug/kg	U	7/9/97
SJS05-SS01-000	SVTCL	N-Nitroso-Di-n-Propylamine		350	ug/kg	U	7/9/97
SJS05-SS01-000	SVTCL	N-Nitrosodiphenylamine	120	400	ug/kg	J	7/9/97
SJS05-SS01-000	SVTCL	Naphthalene	50	400	ug/kg	J	7/9/97
SJS05-SS01-000	SVTCL	Nitrobenzene		350	ug/kg	U	7/9/97
SJS05-SS01-000	SVTCL	Pentachlorophenol		880	ug/kg	U	7/9/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS05-SS01-000	SVTCL	Phenanthrene	270	400	ug/kg	J	7
SJS05-SS01-000	SVTCL	Phenol		350	ug/kg	U	7
SJS05-SS01-000	SVTCL	Pyrene	510	400	ug/kg		7/
SJS05-SS01-000	VCTCL	1,1,1-Trichloroethane		11	ug/kg	UJ	7/2/97
SJS05-SS01-000	VCTCL	1,1,2,2-Tetrachloroethane		11	ug/kg	UJ	7/2/97
SJS05-SS01-000	VCTCL	1,1,2-Trichloroethane		11	ug/kg	UJ	7/2/97
SJS05-SS01-000	VCTCL	1,1-Dichloroethane		11	ug/kg	UJ	7/2/97
SJS05-SS01-000	VCTCL	1,1-Dichloroethene		11	ug/kg	UJ	7/2/97
SJS05-SS01-000	VCTCL	1,2-Dichloroethane		11	ug/kg	UJ	7/2/97
SJS05-SS01-000	VCTCL	1,2-Dichloroethene (total)		11	ug/kg	UJ	7/2/97
SJS05-SS01-000	VCTCL	1,2-Dichloropropane		11	ug/kg	UJ	7/2/97
SJS05-SS01-000	VCTCL	2-Butanone		11	ug/kg	UJ	7/2/97
SJS05-SS01-000	VCTCL	2-Hexanone		11	ug/kg	UJ	7/2/97
SJS05-SS01-000	VCTCL	4-Methyl-2-Pentanone		11	ug/kg	UJ	7/2/97
SJS05-SS01-000	VCTCL	Acetone		11	ug/kg	UJ	7/2/97
SJS05-SS01-000	VCTCL	Benzene		11	ug/kg	UJ	7/2/97
SJS05-SS01-000	VCTCL	Bromodichloromethane		11	ug/kg	UJ	7/2/97
SJS05-SS01-000	VCTCL	Bromoform		11	ug/kg	UJ	7/2/97
SJS05-SS01-000	VCTCL	Bromomethane		11	ug/kg	UJ	7/2/97
SJS05-SS01-000	VCTCL	Carbon Disulfide		11	ug/kg	UJ	7/2/97
SJS05-SS01-000	VCTCL	Carbon Tetrachloride		11	ug/kg	UJ	7/2/97
SJS05-SS01-000	VCTCL	Chlorobenzene		11	ug/kg	UJ	7/2/97
SJS05-SS01-000	VCTCL	Chloroethane		11	ug/kg	UJ	7/2/97
SJS05-SS01-000	VCTCL	Chloroform		11	ug/kg	UJ	7/2/97
SJS05-SS01-000	VCTCL	Chloromethane		11	ug/kg	UJ	7/2/97
SJS05-SS01-000	VCTCL	cis-1,3-Dichloropropene		11	ug/kg	UJ	7/2/97
SJS05-SS01-000	VCTCL	Dibromochloromethane		11	ug/kg	UJ	7/2/97
SJS05-SS01-000	VCTCL	Ethylbenzene		11	ug/kg	UJ	7/2/97
SJS05-SS01-000	VCTCL	Methylene Chloride	56	11	ug/kg	B	7/2/97
SJS05-SS01-000	VCTCL	Styrene		11	ug/kg	UJ	7/
SJS05-SS01-000	VCTCL	Tetrachloroethene		11	ug/kg	UJ	7/
SJS05-SS01-000	VCTCL	Toluene		11	ug/kg	UJ	7/2/97
SJS05-SS01-000	VCTCL	Total Xylenes		11	ug/kg	UJ	7/2/97
SJS05-SS01-000	VCTCL	Trans-1,3-Dichloropropene		11	ug/kg	UJ	7/2/97
SJS05-SS01-000	VCTCL	Trichloroethene		11	ug/kg	UJ	7/2/97
SJS05-SS01-000	VCTCL	Vinyl Chloride		11	ug/kg	UJ	7/2/97
SJS05-SS02-000	CTOTP	Total Phosphorous (as P)	8.4	1.4	mg/kg		7/17/97
SJS05-SS02-000	MCYAN	Aluminum	12300	9.26	mg/kg		7/8/97
SJS05-SS02-000	MCYAN	Arsenic	13.3	0.63	mg/kg	K	7/8/97
SJS05-SS02-000	MCYAN	Barium	64.7	0.42	mg/kg		7/8/97
SJS05-SS02-000	MCYAN	Beryllium	0.64	0.21	mg/kg	J	7/8/97
SJS05-SS02-000	MCYAN	Cadmium		0.11	mg/kg	U	7/8/97
SJS05-SS02-000	MCYAN	Calcium	570	18.31	mg/kg	J	7/8/97
SJS05-SS02-000	MCYAN	Chromium	34.8	1.47	mg/kg		7/8/97
SJS05-SS02-000	MCYAN	Cobalt	3.3	1.68	mg/kg	J	7/8/97
SJS05-SS02-000	MCYAN	Copper	43.6	1.26	mg/kg		7/8/97
SJS05-SS02-000	MCYAN	Cyanide		0.57	mg/kg	U	7/8/97
SJS05-SS02-000	MCYAN	Iron	32400	3.58	mg/kg		7/8/97
SJS05-SS02-000	MCYAN	Lead	85.6	0.21	mg/kg		7/8/97
SJS05-SS02-000	MCYAN	Magnesium	1880	38.09	mg/kg		7/8/97
SJS05-SS02-000	MCYAN	Manganese	63.4	0.42	mg/kg	K	7/8/97
SJS05-SS02-000	MCYAN	Mercury	0.25	0.06	mg/kg	L	7/10/97
SJS05-SS02-000	MCYAN	Nickel	7.9	1.47	mg/kg	J	7/8/97
SJS05-SS02-000	MCYAN	Potassium	1630	46.72	mg/kg		7/8/97
SJS05-SS02-000	MCYAN	Selenium		0.63	mg/kg	U	7/8/97
SJS05-SS02-000	MCYAN	Silver	0.26	0.21	mg/kg	B	7/8/97
SJS05-SS02-000	MCYAN	Sodium	150	12.21	mg/kg	B	7/8/97
SJS05-SS02-000	MCYAN	Thallium	2.1	0.42	mg/kg	J	7/8/97
SJS05-SS02-000	MCYAN	Vanadium	55.7	1.89	mg/kg		7/
SJS05-SS02-000	MCYAN	Zinc	77.8	1.05	mg/kg		7/

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS05-SS02-000	PSPCB	4,4'-DDD	66	37	ug/kg	J	7/23/97
SJS05-SS02-000	PSPCB	4,4'-DDE	180	37	ug/kg		7/23/97
SJS05-SS02-000	PSPCB	4,4'-DDT	600	37	ug/kg		7/23/97
SJS05-SS02-000	PSPCB	Aldrin		1.9	ug/kg	U	7/22/97
SJS05-SS02-000	PSPCB	alpha-BHC		1.9	ug/kg	U	7/22/97
SJS05-SS02-000	PSPCB	alpha-Chlordane		1.9	ug/kg	U	7/22/97
SJS05-SS02-000	PSPCB	Aroclor-1016		37	ug/kg	U	7/22/97
SJS05-SS02-000	PSPCB	Aroclor-1221		76	ug/kg	U	7/22/97
SJS05-SS02-000	PSPCB	Aroclor-1232		37	ug/kg	U	7/22/97
SJS05-SS02-000	PSPCB	Aroclor-1242		37	ug/kg	U	7/22/97
SJS05-SS02-000	PSPCB	Aroclor-1248		37	ug/kg	U	7/22/97
SJS05-SS02-000	PSPCB	Aroclor-1254		37	ug/kg	U	7/22/97
SJS05-SS02-000	PSPCB	Aroclor-1260	30	37	ug/kg	J	7/22/97
SJS05-SS02-000	PSPCB	beta-BHC		1.9	ug/kg	U	7/22/97
SJS05-SS02-000	PSPCB	delta-BHC		1.9	ug/kg	U	7/22/97
SJS05-SS02-000	PSPCB	Dieldrin	5	3.7	ug/kg	P	7/22/97
SJS05-SS02-000	PSPCB	Endosulfan I		1.9	ug/kg	U	7/22/97
SJS05-SS02-000	PSPCB	Endosulfan II		3.7	ug/kg	U	7/22/97
SJS05-SS02-000	PSPCB	Endosulfan Sulfate		3.7	ug/kg	U	7/22/97
SJS05-SS02-000	PSPCB	Endrin		3.7	ug/kg	U	7/22/97
SJS05-SS02-000	PSPCB	Endrin Aldehyde		3.7	ug/kg	U	7/22/97
SJS05-SS02-000	PSPCB	Endrin Ketone		3.7	ug/kg	U	7/22/97
SJS05-SS02-000	PSPCB	gamma-BHC		1.9	ug/kg	U	7/22/97
SJS05-SS02-000	PSPCB	gamma-Chlordane		1.9	ug/kg	U	7/22/97
SJS05-SS02-000	PSPCB	Heptachlor		1.9	ug/kg	U	7/22/97
SJS05-SS02-000	PSPCB	Heptachlor Epoxide		1.9	ug/kg	U	7/22/97
SJS05-SS02-000	PSPCB	Methoxychlor		19	ug/kg	U	7/22/97
SJS05-SS02-000	PSPCB	Toxaphene		190	ug/kg	U	7/22/97
SJS05-SS02-000	SVTCL	1,2,4-Trichlorobenzene		370	ug/kg	U	7/20/97
SJS05-SS02-000	SVTCL	1,2-Dichlorobenzene		370	ug/kg	U	7/20/97
SJS05-SS02-000	SVTCL	1,3-Dichlorobenzene		370	ug/kg	U	7/20/97
SJS05-SS02-000	SVTCL	1,4-Dichlorobenzene		370	ug/kg	U	7/20/97
SJS05-SS02-000	SVTCL	2,2'-oxybis(1-Chloropropane		370	ug/kg	U	7/20/97
SJS05-SS02-000	SVTCL	2,4,5-Trichlorophenol		930	ug/kg	U	7/20/97
SJS05-SS02-000	SVTCL	2,4,6-Trichlorophenol		370	ug/kg	U	7/20/97
SJS05-SS02-000	SVTCL	2,4-Dichlorophenol		370	ug/kg	U	7/20/97
SJS05-SS02-000	SVTCL	2,4-Dimethylphenol		370	ug/kg	U	7/20/97
SJS05-SS02-000	SVTCL	2,4-Dinitrophenol		930	ug/kg	U	7/20/97
SJS05-SS02-000	SVTCL	2,4-Dinitrotoluene		370	ug/kg	U	7/20/97
SJS05-SS02-000	SVTCL	2,6-Dinitrotoluene		370	ug/kg	U	7/20/97
SJS05-SS02-000	SVTCL	2-Chloronaphthalene		370	ug/kg	U	7/20/97
SJS05-SS02-000	SVTCL	2-Chlorophenol		370	ug/kg	U	7/20/97
SJS05-SS02-000	SVTCL	2-Methylnaphthalene		370	ug/kg	U	7/20/97
SJS05-SS02-000	SVTCL	2-Methylphenol		370	ug/kg	U	7/20/97
SJS05-SS02-000	SVTCL	2-Nitroaniline		930	ug/kg	U	7/20/97
SJS05-SS02-000	SVTCL	2-Nitrophenol		370	ug/kg	U	7/20/97
SJS05-SS02-000	SVTCL	3,3'-Dichlorobenzidine		370	ug/kg	U	7/20/97
SJS05-SS02-000	SVTCL	3-Nitroaniline		930	ug/kg	U	7/20/97
SJS05-SS02-000	SVTCL	4,6-Dinitro-2-Methylphenol		930	ug/kg	U	7/20/97
SJS05-SS02-000	SVTCL	4-Bromophenyl phenylether		370	ug/kg	U	7/20/97
SJS05-SS02-000	SVTCL	4-Chloro-3-Methylphenol		370	ug/kg	U	7/20/97
SJS05-SS02-000	SVTCL	4-Chloroaniline		370	ug/kg	U	7/20/97
SJS05-SS02-000	SVTCL	4-Chlorophenyl-phenylether		370	ug/kg	U	7/20/97
SJS05-SS02-000	SVTCL	4-Methylphenol		370	ug/kg	U	7/20/97
SJS05-SS02-000	SVTCL	4-Nitroaniline		930	ug/kg	U	7/20/97
SJS05-SS02-000	SVTCL	4-Nitrophenol		930	ug/kg	U	7/20/97
SJS05-SS02-000	SVTCL	Acenaphthene		370	ug/kg	U	7/20/97
SJS05-SS02-000	SVTCL	Acenaphthylene	47	370	ug/kg	J	7/20/97
SJS05-SS02-000	SVTCL	Anthracene		370	ug/kg	U	7/20/97
SJS05-SS02-000	SVTCL	Benzo(a)Anthracene	180	370	ug/kg	J	7/20/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS05-SS02-000	SVTCL	Benzo(a)Pyrene	140	370	ug/kg	J	7/2
SJS05-SS02-000	SVTCL	Benzo(b)Fluoranthene	570	370	ug/kg		7/2
SJS05-SS02-000	SVTCL	Benzo(g,h,i)Perylene	120	370	ug/kg	J	7/2
SJS05-SS02-000	SVTCL	Benzo(k)Fluoranthene	200	370	ug/kg	J	7/20/97
SJS05-SS02-000	SVTCL	Bis(2-chloroethoxy)Methane		370	ug/kg	U	7/20/97
SJS05-SS02-000	SVTCL	Bis(2-chloroethyl)Ether		370	ug/kg	U	7/20/97
SJS05-SS02-000	SVTCL	Bis(2-Ethylhexyl)Phthalate	56	370	ug/kg	B	7/20/97
SJS05-SS02-000	SVTCL	Butylbenzylphthalate		370	ug/kg	U	7/20/97
SJS05-SS02-000	SVTCL	Carbazole		370	ug/kg	U	7/20/97
SJS05-SS02-000	SVTCL	Chrysene	340	370	ug/kg	J	7/20/97
SJS05-SS02-000	SVTCL	Di-n-Butylphthalate		370	ug/kg	U	7/20/97
SJS05-SS02-000	SVTCL	Di-n-Octyl Phthalate		370	ug/kg	U	7/20/97
SJS05-SS02-000	SVTCL	Dibenz(a,h)Anthracene		370	ug/kg	U	7/20/97
SJS05-SS02-000	SVTCL	Dibenzofuran		370	ug/kg	U	7/20/97
SJS05-SS02-000	SVTCL	Diethylphthalate		370	ug/kg	U	7/20/97
SJS05-SS02-000	SVTCL	Dimethyl Phthalate		370	ug/kg	U	7/20/97
SJS05-SS02-000	SVTCL	Fluoranthene	260	370	ug/kg	J	7/20/97
SJS05-SS02-000	SVTCL	Fluorene		370	ug/kg	U	7/20/97
SJS05-SS02-000	SVTCL	Hexachlorobenzene		370	ug/kg	U	7/20/97
SJS05-SS02-000	SVTCL	Hexachlorobutadiene		370	ug/kg	U	7/20/97
SJS05-SS02-000	SVTCL	Hexachlorocyclopentadien		370	ug/kg	U	7/20/97
SJS05-SS02-000	SVTCL	Hexachloroethane		370	ug/kg	U	7/20/97
SJS05-SS02-000	SVTCL	Indeno(1,2,3-cd)Pyrene	160	370	ug/kg	J	7/20/97
SJS05-SS02-000	SVTCL	Isophorone		370	ug/kg	U	7/20/97
SJS05-SS02-000	SVTCL	N-Nitroso-Di-n-Propylamine		370	ug/kg	U	7/20/97
SJS05-SS02-000	SVTCL	N-Nitrosodiphenylamine		370	ug/kg	U	7/20/97
SJS05-SS02-000	SVTCL	Naphthalene		370	ug/kg	U	7/20/97
SJS05-SS02-000	SVTCL	Nitrobenzene		370	ug/kg	U	7/20/97
SJS05-SS02-000	SVTCL	Pentachlorophenol		930	ug/kg	U	7/20/97
SJS05-SS02-000	SVTCL	Phenanthrene	70	370	ug/kg	J	7/2
SJS05-SS02-000	SVTCL	Phenol		370	ug/kg	U	7/2
SJS05-SS02-000	SVTCL	Pyrene	220	370	ug/kg	J	7/20
SJS05-SS02-000	VCTCL	1,1,1-Trichloroethane		11	ug/kg	U	7/9/97
SJS05-SS02-000	VCTCL	1,1,2,2-Tetrachloroethane		11	ug/kg	U	7/9/97
SJS05-SS02-000	VCTCL	1,1,2-Trichloroethane		11	ug/kg	U	7/9/97
SJS05-SS02-000	VCTCL	1,1-Dichloroethane		11	ug/kg	U	7/9/97
SJS05-SS02-000	VCTCL	1,1-Dichloroethene		11	ug/kg	U	7/9/97
SJS05-SS02-000	VCTCL	1,2-Dichloroethane		11	ug/kg	U	7/9/97
SJS05-SS02-000	VCTCL	1,2-Dichloroethene (total)		11	ug/kg	U	7/9/97
SJS05-SS02-000	VCTCL	1,2-Dichloropropane		11	ug/kg	U	7/9/97
SJS05-SS02-000	VCTCL	2-Butanone		11	ug/kg	U	7/9/97
SJS05-SS02-000	VCTCL	2-Hexanone		11	ug/kg	U	7/9/97
SJS05-SS02-000	VCTCL	4-Methyl-2-Pentanone		11	ug/kg	U	7/9/97
SJS05-SS02-000	VCTCL	Acetone		11	ug/kg	U	7/9/97
SJS05-SS02-000	VCTCL	Benzene		11	ug/kg	U	7/9/97
SJS05-SS02-000	VCTCL	Bromodichloromethane		11	ug/kg	U	7/9/97
SJS05-SS02-000	VCTCL	Bromoform		11	ug/kg	U	7/9/97
SJS05-SS02-000	VCTCL	Bromomethane		11	ug/kg	U	7/9/97
SJS05-SS02-000	VCTCL	Carbon Disulfide		11	ug/kg	U	7/9/97
SJS05-SS02-000	VCTCL	Carbon Tetrachloride		11	ug/kg	U	7/9/97
SJS05-SS02-000	VCTCL	Chlorobenzene		11	ug/kg	U	7/9/97
SJS05-SS02-000	VCTCL	Chloroethane		11	ug/kg	U	7/9/97
SJS05-SS02-000	VCTCL	Chloroform		11	ug/kg	U	7/9/97
SJS05-SS02-000	VCTCL	Chloromethane		11	ug/kg	U	7/9/97
SJS05-SS02-000	VCTCL	cis-1,3-Dichloropropene		11	ug/kg	U	7/9/97
SJS05-SS02-000	VCTCL	Dibromochloromethane		11	ug/kg	U	7/9/97
SJS05-SS02-000	VCTCL	Ethylbenzene		11	ug/kg	U	7/9/97
SJS05-SS02-000	VCTCL	Methylene Chloride	13	11	ug/kg	B	7/9/97
SJS05-SS02-000	VCTCL	Styrene		11	ug/kg	U	7/
SJS05-SS02-000	VCTCL	Tetrachloroethene		11	ug/kg	U	7/

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS05-SS02-000	VCTCL	Toluene		11	ug/kg	U	7/9/97
SJS05-SS02-000	VCTCL	Total Xylenes		11	ug/kg	U	7/9/97
SJS05-SS02-000	VCTCL	Trans-1,3-Dichloropropene		11	ug/kg	U	7/9/97
SJS05-SS02-000	VCTCL	Trichloroethene		11	ug/kg	U	7/9/97
SJS05-SS02-000	VCTCL	Vinyl Chloride		11	ug/kg	U	7/9/97
SJS05-SS03-000	CTOTP	Total Phosphorous (as P)	5.6	1.5	mg/kg		7/17/97
SJS05-SS03-000	MCYAN	Aluminum	20200	9.92	mg/kg		7/8/97
SJS05-SS03-000	MCYAN	Arsenic	22.7	0.68	mg/kg	K	7/8/97
SJS05-SS03-000	MCYAN	Barium	268	0.45	mg/kg		7/8/97
SJS05-SS03-000	MCYAN	Beryllium	1.2	0.23	mg/kg		7/8/97
SJS05-SS03-000	MCYAN	Cadmium	0.82	0.11	mg/kg	B	7/8/97
SJS05-SS03-000	MCYAN	Calcium	671	19.61	mg/kg	J	7/8/97
SJS05-SS03-000	MCYAN	Chromium	37.1	1.58	mg/kg		7/8/97
SJS05-SS03-000	MCYAN	Cobalt	7.9	1.8	mg/kg	J	7/8/97
SJS05-SS03-000	MCYAN	Copper	89.2	1.35	mg/kg		7/8/97
SJS05-SS03-000	MCYAN	Cyanide	1.45	0.5	mg/kg	J	7/8/97
SJS05-SS03-000	MCYAN	Iron	31500	3.83	mg/kg		7/8/97
SJS05-SS03-000	MCYAN	Lead	822	0.23	mg/kg		7/8/97
SJS05-SS03-000	MCYAN	Magnesium	3160	40.8	mg/kg		7/8/97
SJS05-SS03-000	MCYAN	Manganese	122	0.45	mg/kg	K	7/8/97
SJS05-SS03-000	MCYAN	Mercury	0.42	0.06	mg/kg	L	7/10/97
SJS05-SS03-000	MCYAN	Nickel	19.2	1.58	mg/kg		7/8/97
SJS05-SS03-000	MCYAN	Potassium	3800	50.04	mg/kg		7/8/97
SJS05-SS03-000	MCYAN	Selenium		0.68	mg/kg	U	7/8/97
SJS05-SS03-000	MCYAN	Silver	0.4	0.23	mg/kg	B	7/8/97
SJS05-SS03-000	MCYAN	Sodium	575	13.07	mg/kg	J	7/8/97
SJS05-SS03-000	MCYAN	Thallium	2.9	0.45	mg/kg		7/8/97
SJS05-SS03-000	MCYAN	Vanadium	52.5	2.03	mg/kg		7/8/97
SJS05-SS03-000	MCYAN	Zinc	132	1.13	mg/kg		7/8/97
SJS05-SS03-000	PSPCB	4,4'-DDD		3.9	ug/kg	UJ	7/23/97
SJS05-SS03-000	PSPCB	4,4'-DDE	220	39	ug/kg		7/23/97
SJS05-SS03-000	PSPCB	4,4'-DDT	250	39	ug/kg		7/23/97
SJS05-SS03-000	PSPCB	Aldrin		2	ug/kg	UJ	7/23/97
SJS05-SS03-000	PSPCB	alpha-BHC		2	ug/kg	UJ	7/23/97
SJS05-SS03-000	PSPCB	alpha-Chlordane		2	ug/kg	UJ	7/23/97
SJS05-SS03-000	PSPCB	Aroclor-1016		39	ug/kg	UJ	7/23/97
SJS05-SS03-000	PSPCB	Aroclor-1221		79	ug/kg	UJ	7/23/97
SJS05-SS03-000	PSPCB	Aroclor-1232		39	ug/kg	UJ	7/23/97
SJS05-SS03-000	PSPCB	Aroclor-1242		39	ug/kg	UJ	7/23/97
SJS05-SS03-000	PSPCB	Aroclor-1248		39	ug/kg	UJ	7/23/97
SJS05-SS03-000	PSPCB	Aroclor-1254		39	ug/kg	UJ	7/23/97
SJS05-SS03-000	PSPCB	Aroclor-1260		39	ug/kg	UJ	7/23/97
SJS05-SS03-000	PSPCB	beta-BHC		2	ug/kg	UJ	7/23/97
SJS05-SS03-000	PSPCB	delta-BHC		2	ug/kg	UJ	7/23/97
SJS05-SS03-000	PSPCB	Dieldrin		3.9	ug/kg	UJ	7/23/97
SJS05-SS03-000	PSPCB	Endosulfan I		2	ug/kg	UJ	7/23/97
SJS05-SS03-000	PSPCB	Endosulfan II		3.9	ug/kg	UJ	7/23/97
SJS05-SS03-000	PSPCB	Endosulfan Sulfate		3.9	ug/kg	UJ	7/23/97
SJS05-SS03-000	PSPCB	Endrin		3.9	ug/kg	UJ	7/23/97
SJS05-SS03-000	PSPCB	Endrin Aldehyde		3.9	ug/kg	UJ	7/23/97
SJS05-SS03-000	PSPCB	Endrin Ketone		3.9	ug/kg	UJ	7/23/97
SJS05-SS03-000	PSPCB	gamma-BHC		2	ug/kg	UJ	7/23/97
SJS05-SS03-000	PSPCB	gamma-Chlordane		2	ug/kg	UJ	7/23/97
SJS05-SS03-000	PSPCB	Heptachlor		2	ug/kg	UJ	7/23/97
SJS05-SS03-000	PSPCB	Heptachlor Epoxide		2	ug/kg	UJ	7/23/97
SJS05-SS03-000	PSPCB	Methoxychlor		20	ug/kg	UJ	7/23/97
SJS05-SS03-000	PSPCB	Toxaphene		200	ug/kg	UJ	7/23/97
SJS05-SS03-000	SVTCL	1,2,4-Trichlorobenzene		2000	ug/kg	U	7/20/97
SJS05-SS03-000	SVTCL	1,2-Dichlorobenzene		2000	ug/kg	U	7/20/97
SJS05-SS03-000	SVTCL	1,3-Dichlorobenzene		2000	ug/kg	U	7/20/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS02-GW1D-001	CTOTP	Total Phosphorous (as P)	0.18	0.084	mg/L		8/22/97
SJS02-GW1D-001	EXPLO	1,3,5-Trinitrobenzene		25	ug/L	U	8/9/97
SJS02-GW1D-001	EXPLO	1,3-Dinitrobenzene		25	ug/L	U	8/9/97
SJS02-GW1D-001	EXPLO	2,4,6-Trinitrotoluene		25	ug/L	U	8/9/97
SJS02-GW1D-001	EXPLO	2,4-Dinitrotoluene		25	ug/L	U	8/9/97
SJS02-GW1D-001	EXPLO	2,6-Dinitrotoluene		25	ug/L	U	8/9/97
SJS02-GW1D-001	EXPLO	2-am-4,6-Dinitrotoluene		25	ug/L	U	8/9/97
SJS02-GW1D-001	EXPLO	2-Nitrotoluene		25	ug/L	U	8/9/97
SJS02-GW1D-001	EXPLO	3-Nitrotoluene		25	ug/L	U	8/9/97
SJS02-GW1D-001	EXPLO	4-am-2,6-Dinitrotoluene		25	ug/L	U	8/9/97
SJS02-GW1D-001	EXPLO	4-Nitrotoluene		25	ug/L	U	8/9/97
SJS02-GW1D-001	EXPLO	HMX		25	ug/L	U	8/9/97
SJS02-GW1D-001	EXPLO	Nitrobenzene		25	ug/L	U	8/9/97
SJS02-GW1D-001	EXPLO	RDX		25	ug/L	U	8/9/97
SJS02-GW1D-001	EXPLO	TETRYL		25	ug/L	U	8/9/97
SJS02-GW1D-001	MCYAN	Aluminum	2000	29	ug/L		8/7/97
SJS02-GW1D-001	MCYAN	Antimony		2	ug/L	U	8/6/97
SJS02-GW1D-001	MCYAN	Arsenic	3.7	3	ug/L	J	8/6/97
SJS02-GW1D-001	MCYAN	Barium	18.2	1	ug/L	B	8/7/97
SJS02-GW1D-001	MCYAN	Beryllium		1	ug/L	U	8/7/97
SJS02-GW1D-001	MCYAN	Cadmium		0.5	ug/L	U	8/6/97
SJS02-GW1D-001	MCYAN	Calcium	57900	46	ug/L		8/7/97
SJS02-GW1D-001	MCYAN	Chromium	11.8	4	ug/L	B	8/7/97
SJS02-GW1D-001	MCYAN	Cobalt		8	ug/L	U	8/7/97
SJS02-GW1D-001	MCYAN	Copper		6	ug/L	U	8/7/97
SJS02-GW1D-001	MCYAN	Cyanide		5	ug/L	U	8/5/97
SJS02-GW1D-001	MCYAN	Iron	3820	5	ug/L	K	8/7/97
SJS02-GW1D-001	MCYAN	Lead	2.7	1	ug/L	B	8/6/97
SJS02-GW1D-001	MCYAN	Magnesium	5200	45	ug/L		8/7/97
SJS02-GW1D-001	MCYAN	Manganese	45.5	1	ug/L		8/7/97
SJS02-GW1D-001	MCYAN	Mercury		0.13	ug/L	U	8/6/97
SJS02-GW1D-001	MCYAN	Nickel		7	ug/L	U	8/7/97
SJS02-GW1D-001	MCYAN	Potassium	5520	97	ug/L		8/7/97
SJS02-GW1D-001	MCYAN	Selenium		3	ug/L	U	8/6/97
SJS02-GW1D-001	MCYAN	Silver	3.6	3	ug/L	B	8/6/97
SJS02-GW1D-001	MCYAN	Sodium	11400	28	ug/L		8/7/97
SJS02-GW1D-001	MCYAN	Thallium		2	ug/L	U	8/7/97
SJS02-GW1D-001	MCYAN	Vanadium	9.6	4	ug/L	K	8/7/97
SJS02-GW1D-001	MCYAN	Zinc	18.9	3	ug/L	B	8/7/97
SJS02-GW1D-001	PSPCB	4,4'-DDD		0.1	ug/L	U	8/21/97
SJS02-GW1D-001	PSPCB	4,4'-DDE		0.1	ug/L	U	8/21/97
SJS02-GW1D-001	PSPCB	4,4'-DDT		0.1	ug/L	U	8/21/97
SJS02-GW1D-001	PSPCB	Aldrin		0.05	ug/L	U	8/21/97
SJS02-GW1D-001	PSPCB	alpha-BHC		0.05	ug/L	U	8/21/97
SJS02-GW1D-001	PSPCB	alpha-Chlordane		0.05	ug/L	U	8/21/97
SJS02-GW1D-001	PSPCB	Aroclor-1016		1	ug/L	U	8/21/97
SJS02-GW1D-001	PSPCB	Aroclor-1221		2	ug/L	U	8/21/97
SJS02-GW1D-001	PSPCB	Aroclor-1232		1	ug/L	U	8/21/97
SJS02-GW1D-001	PSPCB	Aroclor-1242		1	ug/L	U	8/21/97
SJS02-GW1D-001	PSPCB	Aroclor-1248		1	ug/L	U	8/21/97
SJS02-GW1D-001	PSPCB	Aroclor-1254		1	ug/L	U	8/21/97
SJS02-GW1D-001	PSPCB	Aroclor-1260		1	ug/L	U	8/21/97
SJS02-GW1D-001	PSPCB	beta-BHC		0.05	ug/L	U	8/21/97
SJS02-GW1D-001	PSPCB	delta-BHC		0.05	ug/L	U	8/21/97
SJS02-GW1D-001	PSPCB	Dieldrin		0.1	ug/L	U	8/21/97
SJS02-GW1D-001	PSPCB	Endosulfan I		0.05	ug/L	U	8/21/97
SJS02-GW1D-001	PSPCB	Endosulfan II		0.1	ug/L	U	8/21/97
SJS02-GW1D-001	PSPCB	Endosulfan Sulfate		0.1	ug/L	U	8/21/97
SJS02-GW1D-001	PSPCB	Endrin		0.1	ug/L	U	8/21/97
SJS02-GW1D-001	PSPCB	Endrin Aldehyde		0.1	ug/L	U	8/21/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS02-GW1D-001	PSPCB	Endrin Ketone		0.1	ug/L	U	8/21
SJS02-GW1D-001	PSPCB	gamma-BHC		0.05	ug/L	U	8/2
SJS02-GW1D-001	PSPCB	gamma-Chlordane		0.05	ug/L	U	8/21/97
SJS02-GW1D-001	PSPCB	Heptachlor		0.05	ug/L	U	8/21/97
SJS02-GW1D-001	PSPCB	Heptachlor Epoxide		0.05	ug/L	U	8/21/97
SJS02-GW1D-001	PSPCB	Methoxychlor		0.5	ug/L	U	8/21/97
SJS02-GW1D-001	PSPCB	Toxaphene		5	ug/L	U	8/21/97
SJS02-GW1D-001	SVTCL	1,2,4-Trichlorobenzene		10	ug/L	U	8/14/97
SJS02-GW1D-001	SVTCL	1,2-Dichlorobenzene		10	ug/L	U	8/14/97
SJS02-GW1D-001	SVTCL	1,3-Dichlorobenzene		10	ug/L	U	8/14/97
SJS02-GW1D-001	SVTCL	1,4-Dichlorobenzene		10	ug/L	U	8/14/97
SJS02-GW1D-001	SVTCL	2,2'-oxybis(1-Chloropropan		10	ug/L	U	8/14/97
SJS02-GW1D-001	SVTCL	2,4,5-Trichlorophenol		25	ug/L	U	8/14/97
SJS02-GW1D-001	SVTCL	2,4,6-Trichlorophenol		10	ug/L	U	8/14/97
SJS02-GW1D-001	SVTCL	2,4-Dichlorophenol		10	ug/L	U	8/14/97
SJS02-GW1D-001	SVTCL	2,4-Dimethylphenol		10	ug/L	U	8/14/97
SJS02-GW1D-001	SVTCL	2,4-Dinitrophenol		25	ug/L	UJ	8/14/97
SJS02-GW1D-001	SVTCL	2,4-Dinitrotoluene		10	ug/L	U	8/14/97
SJS02-GW1D-001	SVTCL	2,6-Dinitrotoluene		10	ug/L	U	8/14/97
SJS02-GW1D-001	SVTCL	2-Chloronaphthalene		10	ug/L	U	8/14/97
SJS02-GW1D-001	SVTCL	2-Chlorophenol		10	ug/L	U	8/14/97
SJS02-GW1D-001	SVTCL	2-Methylnaphthalene		10	ug/L	U	8/14/97
SJS02-GW1D-001	SVTCL	2-Methylphenol		10	ug/L	U	8/14/97
SJS02-GW1D-001	SVTCL	2-Nitroaniline		25	ug/L	U	8/14/97
SJS02-GW1D-001	SVTCL	2-Nitrophenol		10	ug/L	U	8/14/97
SJS02-GW1D-001	SVTCL	3,3'-Dichlorobenzidine		10	ug/L	U	8/14/97
SJS02-GW1D-001	SVTCL	3-Nitroaniline		25	ug/L	U	8/14/97
SJS02-GW1D-001	SVTCL	4,6-Dinitro-2-Methylphenol		25	ug/L	U	8/14/97
SJS02-GW1D-001	SVTCL	4-Bromophenol-phenylethe		10	ug/L	U	8/14/97
SJS02-GW1D-001	SVTCL	4-Chloro-3-Methylphenol		10	ug/L	U	8/14
SJS02-GW1D-001	SVTCL	4-Chloroaniline		10	ug/L	U	8/14
SJS02-GW1D-001	SVTCL	4-Chlorophenyl-phenylethe		10	ug/L	U	8/14/97
SJS02-GW1D-001	SVTCL	4-Methylphenol		10	ug/L	U	8/14/97
SJS02-GW1D-001	SVTCL	4-Nitroaniline		25	ug/L	U	8/14/97
SJS02-GW1D-001	SVTCL	4-Nitrophenol		25	ug/L	U	8/14/97
SJS02-GW1D-001	SVTCL	Acenaphthene		10	ug/L	U	8/14/97
SJS02-GW1D-001	SVTCL	Acenaphthylene		10	ug/L	U	8/14/97
SJS02-GW1D-001	SVTCL	Anthracene		10	ug/L	U	8/14/97
SJS02-GW1D-001	SVTCL	Benzo(a)anthracene		10	ug/L	U	8/14/97
SJS02-GW1D-001	SVTCL	Benzo(a)pyrene		10	ug/L	U	8/14/97
SJS02-GW1D-001	SVTCL	Benzo(b)fluoranthene		10	ug/L	U	8/14/97
SJS02-GW1D-001	SVTCL	Benzo(g,h,i)perylene		10	ug/L	U	8/14/97
SJS02-GW1D-001	SVTCL	Benzo(k)fluoranthene		10	ug/L	U	8/14/97
SJS02-GW1D-001	SVTCL	bis(2-Chloroethoxy)methan		10	ug/L	U	8/14/97
SJS02-GW1D-001	SVTCL	bis(2-chloroethyl)ether		10	ug/L	U	8/14/97
SJS02-GW1D-001	SVTCL	bis(2-Ethylhexyl)phthalate		10	ug/L	U	8/14/97
SJS02-GW1D-001	SVTCL	Butylbenzylphthalate		10	ug/L	U	8/14/97
SJS02-GW1D-001	SVTCL	Carbazole		10	ug/L	U	8/14/97
SJS02-GW1D-001	SVTCL	Chrysene		10	ug/L	U	8/14/97
SJS02-GW1D-001	SVTCL	Di-n-butylphthalate		10	ug/L	U	8/14/97
SJS02-GW1D-001	SVTCL	Di-n-Octyl Phthalate		10	ug/L	U	8/14/97
SJS02-GW1D-001	SVTCL	Dibenzo(a,h)anthracene		10	ug/L	U	8/14/97
SJS02-GW1D-001	SVTCL	Dibenzofuran		10	ug/L	U	8/14/97
SJS02-GW1D-001	SVTCL	Diethylphthalate		10	ug/L	U	8/14/97
SJS02-GW1D-001	SVTCL	Dimethyl Phthalate		10	ug/L	U	8/14/97
SJS02-GW1D-001	SVTCL	Fluoranthene		10	ug/L	U	8/14/97
SJS02-GW1D-001	SVTCL	Fluorene		10	ug/L	U	8/14/97
SJS02-GW1D-001	SVTCL	Hexachlorobenzene		10	ug/L	U	8/14/97
SJS02-GW1D-001	SVTCL	Hexachlorobutadiene		10	ug/L	U	8/14
SJS02-GW1D-001	SVTCL	Hexachlorocyclopentadien		10	ug/L	U	8/14

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS02-GW1D-001	SVTCL	Hexachloroethane		10	ug/L	U	8/14/97
SJS02-GW1D-001	SVTCL	Indeno(1,2,3-cd)pyrene		10	ug/L	U	8/14/97
SJS02-GW1D-001	SVTCL	Isophorone		10	ug/L	U	8/14/97
SJS02-GW1D-001	SVTCL	N-Nitroso-Di-n-Propylamine		10	ug/L	U	8/14/97
SJS02-GW1D-001	SVTCL	N-Nitrosodiphenylamine		10	ug/L	U	8/14/97
SJS02-GW1D-001	SVTCL	Naphthalene		10	ug/L	U	8/14/97
SJS02-GW1D-001	SVTCL	Nitrobenzene		10	ug/L	U	8/14/97
SJS02-GW1D-001	SVTCL	Pentachlorophenol		25	ug/L	U	8/14/97
SJS02-GW1D-001	SVTCL	Phenanthrene		10	ug/L	U	8/14/97
SJS02-GW1D-001	SVTCL	Phenol		10	ug/L	U	8/14/97
SJS02-GW1D-001	SVTCL	Pyrene		10	ug/L	U	8/14/97
SJS02-GW1D-001	VCLOW	1,1,1-Trichloroethane		1	ug/L	U	8/5/97
SJS02-GW1D-001	VCLOW	1,1,2,2-Tetrachloroethane		1	ug/L	U	8/5/97
SJS02-GW1D-001	VCLOW	1,1,2-Trichloroethane		1	ug/L	U	8/5/97
SJS02-GW1D-001	VCLOW	1,1-Dichloroethane		1	ug/L	U	8/5/97
SJS02-GW1D-001	VCLOW	1,1-Dichloroethene		1	ug/L	U	8/5/97
SJS02-GW1D-001	VCLOW	1,2,4-Trichlorobenzene		1	ug/L	U	8/5/97
SJS02-GW1D-001	VCLOW	1,2-Dibromo-3-chloropropa		1	ug/L	U	8/5/97
SJS02-GW1D-001	VCLOW	1,2-Dibromoethane		1	ug/L	U	8/5/97
SJS02-GW1D-001	VCLOW	1,2-Dichlorobenzene		1	ug/L	U	8/5/97
SJS02-GW1D-001	VCLOW	1,2-Dichloroethane		1	ug/L	U	8/5/97
SJS02-GW1D-001	VCLOW	1,2-Dichloropropane		1	ug/L	U	8/5/97
SJS02-GW1D-001	VCLOW	1,3-Dichlorobenzene		1	ug/L	U	8/5/97
SJS02-GW1D-001	VCLOW	1,4-Dichlorobenzene		1	ug/L	U	8/5/97
SJS02-GW1D-001	VCLOW	2-Hexanone		5	ug/L	U	8/5/97
SJS02-GW1D-001	VCLOW	4-Methyl-2-Pentanone		5	ug/L	U	8/5/97
SJS02-GW1D-001	VCLOW	Acetone		5	ug/L	U	8/5/97
SJS02-GW1D-001	VCLOW	Benzene		1	ug/L	U	8/5/97
SJS02-GW1D-001	VCLOW	Bromochloromethane		1	ug/L	U	8/5/97
SJS02-GW1D-001	VCLOW	Bromodichloromethane		1	ug/L	U	8/5/97
SJS02-GW1D-001	VCLOW	Bromoform		1	ug/L	U	8/5/97
SJS02-GW1D-001	VCLOW	Bromomethane		1	ug/L	U	8/5/97
SJS02-GW1D-001	VCLOW	Carbon Disulfide		1	ug/L	U	8/5/97
SJS02-GW1D-001	VCLOW	Carbon Tetrachloride		1	ug/L	U	8/5/97
SJS02-GW1D-001	VCLOW	Chlorobenzene		1	ug/L	U	8/5/97
SJS02-GW1D-001	VCLOW	Chloroethane		1	ug/L	U	8/5/97
SJS02-GW1D-001	VCLOW	Chloroform	0.6	1	ug/L	J	8/5/97
SJS02-GW1D-001	VCLOW	Chloromethane		1	ug/L	U	8/5/97
SJS02-GW1D-001	VCLOW	cis-1,2-Dichloroethene		1	ug/L	U	8/5/97
SJS02-GW1D-001	VCLOW	cis-1,3-Dichloropropene		1	ug/L	U	8/5/97
SJS02-GW1D-001	VCLOW	Dibromochloromethane		1	ug/L	U	8/5/97
SJS02-GW1D-001	VCLOW	Ethylbenzene		1	ug/L	U	8/5/97
SJS02-GW1D-001	VCLOW	Methylene Chloride	3	1	ug/L	B	8/5/97
SJS02-GW1D-001	VCLOW	Styrene		1	ug/L	U	8/5/97
SJS02-GW1D-001	VCLOW	Tetrachloroethene		1	ug/L	U	8/5/97
SJS02-GW1D-001	VCLOW	Toluene	0.3	1	ug/L	J	8/5/97
SJS02-GW1D-001	VCLOW	Total Xylenes		1	ug/L	U	8/5/97
SJS02-GW1D-001	VCLOW	Trans-1,2-Dichloroethene		1	ug/L	U	8/5/97
SJS02-GW1D-001	VCLOW	trans-1,3-Dichloropropene		1	ug/L	U	8/5/97
SJS02-GW1D-001	VCLOW	Trichloroethene		1	ug/L	U	8/5/97
SJS02-GW1D-001	VCLOW	Vinyl Chloride		1	ug/L	U	8/5/97
SJS02-GW1D-001F	METAL	Aluminum	79.2	29	ug/L	B	8/7/97
SJS02-GW1D-001F	METAL	Antimony	3.1	1	ug/L	J	8/6/97
SJS02-GW1D-001F	METAL	Arsenic		3	ug/L	U	8/6/97
SJS02-GW1D-001F	METAL	Barium	11.7	1	ug/L	B	8/7/97
SJS02-GW1D-001F	METAL	Beryllium		1	ug/L	U	8/7/97
SJS02-GW1D-001F	METAL	Cadmium		0.5	ug/L	U	8/6/97
SJS02-GW1D-001F	METAL	Calcium	55900	46	ug/L		8/7/97
SJS02-GW1D-001F	METAL	Chromium		7	ug/L	U	8/7/97
SJS02-GW1D-001F	METAL	Cobalt		8	ug/L	U	8/7/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS02-GW1D-001F	METAL	Copper		6	ug/L	U	8/7
SJS02-GW1D-001F	METAL	Iron	30.4	5	ug/L	B	8/7
SJS02-GW1D-001F	METAL	Lead		1	ug/L	U	8/6/97
SJS02-GW1D-001F	METAL	Magnesium	4790	45	ug/L	J	8/7/97
SJS02-GW1D-001F	METAL	Manganese	3.3	1	ug/L	B	8/7/97
SJS02-GW1D-001F	METAL	Mercury		0.12	ug/L	U	8/6/97
SJS02-GW1D-001F	METAL	Nickel		7	ug/L	U	8/7/97
SJS02-GW1D-001F	METAL	Potassium	5330	97	ug/L		8/7/97
SJS02-GW1D-001F	METAL	Selenium		3	ug/L	U	8/6/97
SJS02-GW1D-001F	METAL	Silver	3.4	3	ug/L	B	8/6/97
SJS02-GW1D-001F	METAL	Sodium	11800	28	ug/L		8/7/97
SJS02-GW1D-001F	METAL	Thallium		2	ug/L	U	8/7/97
SJS02-GW1D-001F	METAL	Vanadium		9	ug/L	U	8/7/97
SJS02-GW1D-001F	METAL	Zinc	9	3	ug/L	B	8/7/97
SJS02-GW1D-002	CTOTP	Total Phosphorous (as P)	0.87	0.25	mg/L		11/19/97
SJS02-GW1D-002	MCYAN	Aluminum	42.4	29	ug/L	J	11/27/97
SJS02-GW1D-002	MCYAN	Antimony		1.7	ug/L	U	11/21/97
SJS02-GW1D-002	MCYAN	Arsenic		3.2	ug/L	U	11/21/97
SJS02-GW1D-002	MCYAN	Barium	9.3	1	ug/L	B	11/27/97
SJS02-GW1D-002	MCYAN	Beryllium		0.58	ug/L	U	11/27/97
SJS02-GW1D-002	MCYAN	Cadmium		0.4	ug/L	U	11/21/97
SJS02-GW1D-002	MCYAN	Calcium	53600	46	ug/L		11/27/97
SJS02-GW1D-002	MCYAN	Chromium		4.6	ug/L	U	11/27/97
SJS02-GW1D-002	MCYAN	Cobalt		6	ug/L	U	11/27/97
SJS02-GW1D-002	MCYAN	Copper		5.8	ug/L	U	11/27/97
SJS02-GW1D-002	MCYAN	Cyanide		5	ug/L	U	11/12/97
SJS02-GW1D-002	MCYAN	Iron	59	5	ug/L	B	11/27/97
SJS02-GW1D-002	MCYAN	Lead		1.3	ug/L	U	11/21/97
SJS02-GW1D-002	MCYAN	Magnesium	3720	45	ug/L	J	11/27/97
SJS02-GW1D-002	MCYAN	Manganese	5.6	1	ug/L	B	11/27/
SJS02-GW1D-002	MCYAN	Mercury		0.12	ug/L	U	11/19/
SJS02-GW1D-002	MCYAN	Nickel		6.3	ug/L	U	11/27/97
SJS02-GW1D-002	MCYAN	Potassium	5300	97	ug/L		11/27/97
SJS02-GW1D-002	MCYAN	Selenium		3.3	ug/L	U	11/21/97
SJS02-GW1D-002	MCYAN	Silver	2	3	ug/L	B	11/21/97
SJS02-GW1D-002	MCYAN	Sodium	12600	28	ug/L		11/27/97
SJS02-GW1D-002	MCYAN	Thallium		1.5	ug/L	U	11/21/97
SJS02-GW1D-002	MCYAN	Vanadium		6.8	ug/L	U	11/27/97
SJS02-GW1D-002	MCYAN	Zinc	10.8	3	ug/L	B	11/27/97
SJS02-GW1D-002	PSPCB	4,4'-DDD		0.1	ug/L	U	11/21/97
SJS02-GW1D-002	PSPCB	4,4'-DDE		0.1	ug/L	U	11/21/97
SJS02-GW1D-002	PSPCB	4,4'-DDT		0.1	ug/L	U	11/21/97
SJS02-GW1D-002	PSPCB	Aldrin		0.05	ug/L	U	11/21/97
SJS02-GW1D-002	PSPCB	alpha-BHC		0.05	ug/L	U	11/21/97
SJS02-GW1D-002	PSPCB	alpha-Chlordane		0.05	ug/L	U	11/21/97
SJS02-GW1D-002	PSPCB	Aroclor-1016		1	ug/L	U	11/21/97
SJS02-GW1D-002	PSPCB	Aroclor-1221		2	ug/L	U	11/21/97
SJS02-GW1D-002	PSPCB	Aroclor-1232		1	ug/L	U	11/21/97
SJS02-GW1D-002	PSPCB	Aroclor-1242		1	ug/L	U	11/21/97
SJS02-GW1D-002	PSPCB	Aroclor-1248		1	ug/L	U	11/21/97
SJS02-GW1D-002	PSPCB	Aroclor-1254		1	ug/L	U	11/21/97
SJS02-GW1D-002	PSPCB	Aroclor-1260		1	ug/L	U	11/21/97
SJS02-GW1D-002	PSPCB	beta-BHC		0.05	ug/L	U	11/21/97
SJS02-GW1D-002	PSPCB	delta-BHC		0.05	ug/L	U	11/21/97
SJS02-GW1D-002	PSPCB	Dieldrin		0.1	ug/L	U	11/21/97
SJS02-GW1D-002	PSPCB	Endosulfan I		0.05	ug/L	U	11/21/97
SJS02-GW1D-002	PSPCB	Endosulfan II		0.1	ug/L	U	11/21/97
SJS02-GW1D-002	PSPCB	Endosulfan Sulfate		0.1	ug/L	U	11/21/97
SJS02-GW1D-002	PSPCB	Endrin		0.1	ug/L	U	11/21/
SJS02-GW1D-002	PSPCB	Endrin Aldehyde		0.1	ug/L	U	11/21/

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS02-GW1D-002	PSPCB	Endrin Ketone		0.1	ug/L	U	11/21/97
SJS02-GW1D-002	PSPCB	gamma-BHC		0.05	ug/L	U	11/21/97
SJS02-GW1D-002	PSPCB	gamma-Chlordane		0.05	ug/L	U	11/21/97
SJS02-GW1D-002	PSPCB	Heptachlor		0.05	ug/L	U	11/21/97
SJS02-GW1D-002	PSPCB	Heptachlor Epoxide		0.05	ug/L	U	11/21/97
SJS02-GW1D-002	PSPCB	Methoxychlor		0.5	ug/L	U	11/21/97
SJS02-GW1D-002	PSPCB	Toxaphene		5	ug/L	U	11/21/97
SJS02-GW1D-002	SVTCL	1,2,4-Trichlorobenzene		10	ug/L	U	11/16/97
SJS02-GW1D-002	SVTCL	1,2-Dichlorobenzene		10	ug/L	U	11/16/97
SJS02-GW1D-002	SVTCL	1,3-Dichlorobenzene		10	ug/L	U	11/16/97
SJS02-GW1D-002	SVTCL	1,4-Dichlorobenzene		10	ug/L	U	11/16/97
SJS02-GW1D-002	SVTCL	2,2'-oxybis(1-Chloropropan		10	ug/L	U	11/16/97
SJS02-GW1D-002	SVTCL	2,4,5-Trichlorophenol		25	ug/L	U	11/16/97
SJS02-GW1D-002	SVTCL	2,4,6-Trichlorophenol		10	ug/L	U	11/16/97
SJS02-GW1D-002	SVTCL	2,4-Dichlorophenol		10	ug/L	U	11/16/97
SJS02-GW1D-002	SVTCL	2,4-Dimethylphenol		10	ug/L	U	11/16/97
SJS02-GW1D-002	SVTCL	2,4-Dinitrophenol		25	ug/L	U	11/16/97
SJS02-GW1D-002	SVTCL	2,4-Dinitrotoluene		10	ug/L	U	11/16/97
SJS02-GW1D-002	SVTCL	2,6-Dinitrotoluene		10	ug/L	U	11/16/97
SJS02-GW1D-002	SVTCL	2-Chloronaphthalene		10	ug/L	U	11/16/97
SJS02-GW1D-002	SVTCL	2-Chlorophenol		10	ug/L	U	11/16/97
SJS02-GW1D-002	SVTCL	2-Methylnaphthalene		10	ug/L	U	11/16/97
SJS02-GW1D-002	SVTCL	2-Methylphenol		10	ug/L	U	11/16/97
SJS02-GW1D-002	SVTCL	2-Nitroaniline		25	ug/L	U	11/16/97
SJS02-GW1D-002	SVTCL	2-Nitrophenol		10	ug/L	U	11/16/97
SJS02-GW1D-002	SVTCL	3,3'-Dichlorobenzidine		10	ug/L	U	11/16/97
SJS02-GW1D-002	SVTCL	3-Nitroaniline		25	ug/L	U	11/16/97
SJS02-GW1D-002	SVTCL	4,6-Dinitro-2-Methylphenol		25	ug/L	U	11/16/97
SJS02-GW1D-002	SVTCL	4-Bromophenol-phenylethe		10	ug/L	U	11/16/97
SJS02-GW1D-002	SVTCL	4-Chloro-3-Methylphenol		10	ug/L	U	11/16/97
SJS02-GW1D-002	SVTCL	4-Chloroaniline		10	ug/L	U	11/16/97
SJS02-GW1D-002	SVTCL	4-Chlorophenyl-phenylethe		10	ug/L	U	11/16/97
SJS02-GW1D-002	SVTCL	4-Methylphenol		10	ug/L	U	11/16/97
SJS02-GW1D-002	SVTCL	4-Nitroaniline		25	ug/L	U	11/16/97
SJS02-GW1D-002	SVTCL	4-Nitrophenol		25	ug/L	U	11/16/97
SJS02-GW1D-002	SVTCL	Acenaphthene		10	ug/L	U	11/16/97
SJS02-GW1D-002	SVTCL	Acenaphthylene		10	ug/L	U	11/16/97
SJS02-GW1D-002	SVTCL	Anthracene		10	ug/L	U	11/16/97
SJS02-GW1D-002	SVTCL	Benzo(a)anthracene		10	ug/L	U	11/16/97
SJS02-GW1D-002	SVTCL	Benzo(a)pyrene		10	ug/L	U	11/16/97
SJS02-GW1D-002	SVTCL	Benzo(b)fluoranthene		10	ug/L	U	11/16/97
SJS02-GW1D-002	SVTCL	Benzo(g,h,i)perylene		10	ug/L	U	11/16/97
SJS02-GW1D-002	SVTCL	Benzo(k)fluoranthene		10	ug/L	U	11/16/97
SJS02-GW1D-002	SVTCL	bis(2-Chloroethoxy)methan		10	ug/L	U	11/16/97
SJS02-GW1D-002	SVTCL	bis(2-chloroethyl)ether		10	ug/L	U	11/16/97
SJS02-GW1D-002	SVTCL	bis(2-Ethylhexyl)phthalate		10	ug/L	U	11/16/97
SJS02-GW1D-002	SVTCL	Butylbenzylphthalate		10	ug/L	U	11/16/97
SJS02-GW1D-002	SVTCL	Carbazole		10	ug/L	U	11/16/97
SJS02-GW1D-002	SVTCL	Chrysene		10	ug/L	U	11/16/97
SJS02-GW1D-002	SVTCL	Di-n-butylphthalate		10	ug/L	U	11/16/97
SJS02-GW1D-002	SVTCL	Di-n-Octyl Phthalate		10	ug/L	U	11/16/97
SJS02-GW1D-002	SVTCL	Dibenzo(a,h)anthracene		10	ug/L	U	11/16/97
SJS02-GW1D-002	SVTCL	Dibenzofuran		10	ug/L	U	11/16/97
SJS02-GW1D-002	SVTCL	Diethylphthalate		10	ug/L	U	11/16/97
SJS02-GW1D-002	SVTCL	Dimethyl Phthalate		10	ug/L	U	11/16/97
SJS02-GW1D-002	SVTCL	Fluoranthene		10	ug/L	U	11/16/97
SJS02-GW1D-002	SVTCL	Fluorene		10	ug/L	U	11/16/97
SJS02-GW1D-002	SVTCL	Hexachlorobenzene		10	ug/L	U	11/16/97
SJS02-GW1D-002	SVTCL	Hexachlorobutadiene		10	ug/L	U	11/16/97
SJS02-GW1D-002	SVTCL	Hexachlorocyclopentadien		10	ug/L	U	11/16/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS02-GW1D-002	SVTCL	Hexachloroethane		10	ug/L	U	11/16/
SJS02-GW1D-002	SVTCL	Indeno(1,2,3-cd)pyrene		10	ug/L	U	11/16
SJS02-GW1D-002	SVTCL	Isophorone		10	ug/L	U	11/16/
SJS02-GW1D-002	SVTCL	N-Nitroso-Di-n-Propylamine		10	ug/L	U	11/16/97
SJS02-GW1D-002	SVTCL	N-Nitrosodiphenylamine		10	ug/L	U	11/16/97
SJS02-GW1D-002	SVTCL	Naphthalene		10	ug/L	U	11/16/97
SJS02-GW1D-002	SVTCL	Nitrobenzene		10	ug/L	U	11/16/97
SJS02-GW1D-002	SVTCL	Pentachlorophenol		25	ug/L	U	11/16/97
SJS02-GW1D-002	SVTCL	Phenanthrene		10	ug/L	U	11/16/97
SJS02-GW1D-002	SVTCL	Phenol	5	10	ug/L	J	11/16/97
SJS02-GW1D-002	SVTCL	Pyrene		10	ug/L	U	11/16/97
SJS02-GW1D-002	VCLOW	1,1,1-Trichloroethane		1	ug/L	U	11/12/97
SJS02-GW1D-002	VCLOW	1,1,2,2-Tetrachloroethane		1	ug/L	U	11/12/97
SJS02-GW1D-002	VCLOW	1,1,2-Trichloroethane		1	ug/L	U	11/12/97
SJS02-GW1D-002	VCLOW	1,1-Dichloroethane		1	ug/L	U	11/12/97
SJS02-GW1D-002	VCLOW	1,1-Dichloroethene		1	ug/L	U	11/12/97
SJS02-GW1D-002	VCLOW	1,2,4-Trichlorobenzene		1	ug/L	U	11/12/97
SJS02-GW1D-002	VCLOW	1,2-Dibromo-3-chloropropa		1	ug/L	U	11/12/97
SJS02-GW1D-002	VCLOW	1,2-Dibromoethane		1	ug/L	U	11/12/97
SJS02-GW1D-002	VCLOW	1,2-Dichlorobenzene		1	ug/L	U	11/12/97
SJS02-GW1D-002	VCLOW	1,2-Dichloroethane		1	ug/L	U	11/12/97
SJS02-GW1D-002	VCLOW	1,2-Dichloropropane		1	ug/L	U	11/12/97
SJS02-GW1D-002	VCLOW	1,3-Dichlorobenzene		1	ug/L	U	11/12/97
SJS02-GW1D-002	VCLOW	1,4-Dichlorobenzene		1	ug/L	U	11/12/97
SJS02-GW1D-002	VCLOW	2-Hexanone		5	ug/L	U	11/12/97
SJS02-GW1D-002	VCLOW	4-Methyl-2-Pentanone		5	ug/L	U	11/12/97
SJS02-GW1D-002	VCLOW	Acetone	7	5	ug/L	B	11/12/97
SJS02-GW1D-002	VCLOW	Benzene		1	ug/L	U	11/12/97
SJS02-GW1D-002	VCLOW	Bromochloromethane		1	ug/L	U	11/12/97
SJS02-GW1D-002	VCLOW	Bromodichloromethane		1	ug/L	U	11/12/
SJS02-GW1D-002	VCLOW	Bromoform		1	ug/L	U	11/12
SJS02-GW1D-002	VCLOW	Bromomethane		1	ug/L	U	11/12/
SJS02-GW1D-002	VCLOW	Carbon Disulfide	0.2	1	ug/L	J	11/12/97
SJS02-GW1D-002	VCLOW	Carbon Tetrachloride		1	ug/L	U	11/12/97
SJS02-GW1D-002	VCLOW	Chlorobenzene		1	ug/L	U	11/12/97
SJS02-GW1D-002	VCLOW	Chloroethane		1	ug/L	U	11/12/97
SJS02-GW1D-002	VCLOW	Chloroform		1	ug/L	U	11/12/97
SJS02-GW1D-002	VCLOW	Chloromethane		1	ug/L	U	11/12/97
SJS02-GW1D-002	VCLOW	cis-1,2-Dichloroethene		1	ug/L	U	11/12/97
SJS02-GW1D-002	VCLOW	cis-1,3-Dichloropropene		1	ug/L	U	11/12/97
SJS02-GW1D-002	VCLOW	Dibromochloromethane		1	ug/L	U	11/12/97
SJS02-GW1D-002	VCLOW	Ethylbenzene		1	ug/L	U	11/12/97
SJS02-GW1D-002	VCLOW	Methylene Chloride	2	2	ug/L	B	11/12/97
SJS02-GW1D-002	VCLOW	Styrene		1	ug/L	U	11/12/97
SJS02-GW1D-002	VCLOW	Tetrachloroethene		1	ug/L	U	11/12/97
SJS02-GW1D-002	VCLOW	Toluene	0.7	1	ug/L	B	11/12/97
SJS02-GW1D-002	VCLOW	Total Xylenes		1	ug/L	U	11/12/97
SJS02-GW1D-002	VCLOW	Trans-1,2-Dichloroethene		1	ug/L	U	11/12/97
SJS02-GW1D-002	VCLOW	trans-1,3-Dichloropropene		1	ug/L	U	11/12/97
SJS02-GW1D-002	VCLOW	Trichloroethene		1	ug/L	U	11/12/97
SJS02-GW1D-002	VCLOW	Vinyl Chloride		1	ug/L	U	11/12/97
SJS02-GW1D-002F	METAL	Aluminum		38.1	ug/L	U	11/27/97
SJS02-GW1D-002F	METAL	Antimony		1.7	ug/L	U	11/21/97
SJS02-GW1D-002F	METAL	Arsenic	3.4	3	ug/L	J	11/21/97
SJS02-GW1D-002F	METAL	Barium	6.7	1	ug/L	B	11/27/97
SJS02-GW1D-002F	METAL	Beryllium		0.58	ug/L	U	11/27/97
SJS02-GW1D-002F	METAL	Cadmium		0.4	ug/L	U	11/21/97
SJS02-GW1D-002F	METAL	Calcium	48700	46	ug/L		11/27/97
SJS02-GW1D-002F	METAL	Chromium		4.6	ug/L	U	11/27/
SJS02-GW1D-002F	METAL	Cobalt		6	ug/L	U	11/2

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS02-GW1D-002F	METAL	Copper		5.8	ug/L	U	11/27/97
SJS02-GW1D-002F	METAL	Iron	34.6	5	ug/L	B	11/27/97
SJS02-GW1D-002F	METAL	Lead		1.3	ug/L	U	11/21/97
SJS02-GW1D-002F	METAL	Magnesium	3420	45	ug/L	J	11/27/97
SJS02-GW1D-002F	METAL	Manganese	4.8	1	ug/L	B	11/27/97
SJS02-GW1D-002F	METAL	Mercury		0.12	ug/L	U	11/19/97
SJS02-GW1D-002F	METAL	Nickel		6.3	ug/L	U	11/27/97
SJS02-GW1D-002F	METAL	Potassium	4730	97	ug/L	J	11/27/97
SJS02-GW1D-002F	METAL	Selenium		3.3	ug/L	U	11/21/97
SJS02-GW1D-002F	METAL	Silver	1.4	3	ug/L	B	11/21/97
SJS02-GW1D-002F	METAL	Sodium	11400	28	ug/L		11/27/97
SJS02-GW1D-002F	METAL	Thallium	2.3	2	ug/L	B	11/21/97
SJS02-GW1D-002F	METAL	Vanadium		6.8	ug/L	U	11/27/97
SJS02-GW1D-002F	METAL	Zinc	7.5	3	ug/L	B	11/27/97
SJS02-GW1S-001	CTOTP	Total Phosphorous (as P)	0.146	0.05	mg/L		7/30/97
SJS02-GW1S-001	MCYAN	Aluminum	4400	29	ug/L		7/28/97
SJS02-GW1S-001	MCYAN	Antimony		2	ug/L	U	7/29/97
SJS02-GW1S-001	MCYAN	Arsenic	3.8	3	ug/L	J	7/29/97
SJS02-GW1S-001	MCYAN	Barium	54.5	1	ug/L	J	7/28/97
SJS02-GW1S-001	MCYAN	Beryllium		1	ug/L	U	7/28/97
SJS02-GW1S-001	MCYAN	Cadmium		0.5	ug/L	U	7/29/97
SJS02-GW1S-001	MCYAN	Calcium	75600	46	ug/L		7/28/97
SJS02-GW1S-001	MCYAN	Chromium	13.2	4	ug/L	K	7/28/97
SJS02-GW1S-001	MCYAN	Cobalt	13.2	3	ug/L	J	7/28/97
SJS02-GW1S-001	MCYAN	Copper		6	ug/L	U	7/28/97
SJS02-GW1S-001	MCYAN	Cyanide		5	ug/L	U	7/22/97
SJS02-GW1S-001	MCYAN	Iron	8870	5	ug/L		7/28/97
SJS02-GW1S-001	MCYAN	Lead	3.6	1	ug/L		7/29/97
SJS02-GW1S-001	MCYAN	Magnesium	21400	45	ug/L		7/28/97
SJS02-GW1S-001	MCYAN	Manganese	988	1	ug/L		7/28/97
SJS02-GW1S-001	MCYAN	Mercury		0.13	ug/L	U	7/29/97
SJS02-GW1S-001	MCYAN	Nickel	14.8	4	ug/L	K	7/28/97
SJS02-GW1S-001	MCYAN	Potassium	4720	97	ug/L	J	7/28/97
SJS02-GW1S-001	MCYAN	Selenium		3	ug/L	UL	7/29/97
SJS02-GW1S-001	MCYAN	Silver	4.7	3	ug/L	B	7/29/97
SJS02-GW1S-001	MCYAN	Sodium	44600	28	ug/L		7/28/97
SJS02-GW1S-001	MCYAN	Thallium		2	ug/L	U	7/29/97
SJS02-GW1S-001	MCYAN	Vanadium	14.1	4	ug/L	J	7/28/97
SJS02-GW1S-001	MCYAN	Zinc	28	3	ug/L	B	7/28/97
SJS02-GW1S-001	PSPCB	4,4'-DDD		0.1	ug/L	U	7/31/97
SJS02-GW1S-001	PSPCB	4,4'-DDE		0.1	ug/L	U	7/31/97
SJS02-GW1S-001	PSPCB	4,4'-DDT		0.1	ug/L	U	7/31/97
SJS02-GW1S-001	PSPCB	Aldrin		0.05	ug/L	U	7/31/97
SJS02-GW1S-001	PSPCB	alpha-BHC		0.05	ug/L	U	7/31/97
SJS02-GW1S-001	PSPCB	alpha-Chlordane		0.05	ug/L	U	7/31/97
SJS02-GW1S-001	PSPCB	Aroclor-1016		1	ug/L	U	7/31/97
SJS02-GW1S-001	PSPCB	Aroclor-1221		2	ug/L	U	7/31/97
SJS02-GW1S-001	PSPCB	Aroclor-1232		1	ug/L	U	7/31/97
SJS02-GW1S-001	PSPCB	Aroclor-1242		1	ug/L	U	7/31/97
SJS02-GW1S-001	PSPCB	Aroclor-1248		1	ug/L	U	7/31/97
SJS02-GW1S-001	PSPCB	Aroclor-1254		1	ug/L	U	7/31/97
SJS02-GW1S-001	PSPCB	Aroclor-1260		1	ug/L	U	7/31/97
SJS02-GW1S-001	PSPCB	beta-BHC		0.05	ug/L	U	7/31/97
SJS02-GW1S-001	PSPCB	delta-BHC		0.05	ug/L	U	7/31/97
SJS02-GW1S-001	PSPCB	Dieldrin		0.1	ug/L	U	7/31/97
SJS02-GW1S-001	PSPCB	Endosulfan I		0.05	ug/L	U	7/31/97
SJS02-GW1S-001	PSPCB	Endosulfan II		0.1	ug/L	U	7/31/97
SJS02-GW1S-001	PSPCB	Endosulfan Sulfate		0.1	ug/L	U	7/31/97
SJS02-GW1S-001	PSPCB	Endrin		0.1	ug/L	U	7/31/97
SJS02-GW1S-001	PSPCB	Endrin Aldehyde		0.1	ug/L	U	7/31/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS02-GW1S-001	PSPCB	Endrin Ketone		0.1	ug/L	U	7/31/
SJS02-GW1S-001	PSPCB	gamma-BHC		0.05	ug/L	U	7/31/
SJS02-GW1S-001	PSPCB	gamma-Chlordane		0.05	ug/L	U	7/31/
SJS02-GW1S-001	PSPCB	Heptachlor		0.05	ug/L	U	7/31/97
SJS02-GW1S-001	PSPCB	Heptachlor Epoxide		0.05	ug/L	U	7/31/97
SJS02-GW1S-001	PSPCB	Methoxychlor		0.5	ug/L	U	7/31/97
SJS02-GW1S-001	PSPCB	Toxaphene		5	ug/L	U	7/31/97
SJS02-GW1S-001	SVTCL	1,2,4-Trichlorobenzene		10	ug/L	U	7/30/97
SJS02-GW1S-001	SVTCL	1,2-Dichlorobenzene		10	ug/L	U	7/30/97
SJS02-GW1S-001	SVTCL	1,3-Dichlorobenzene		10	ug/L	U	7/30/97
SJS02-GW1S-001	SVTCL	1,4-Dichlorobenzene		10	ug/L	U	7/30/97
SJS02-GW1S-001	SVTCL	2,2'-oxybis(1-Chloropropan		10	ug/L	U	7/30/97
SJS02-GW1S-001	SVTCL	2,4,5-Trichlorophenol		25	ug/L	U	7/30/97
SJS02-GW1S-001	SVTCL	2,4,6-Trichlorophenol		10	ug/L	U	7/30/97
SJS02-GW1S-001	SVTCL	2,4-Dichlorophenol		10	ug/L	U	7/30/97
SJS02-GW1S-001	SVTCL	2,4-Dimethylphenol		10	ug/L	U	7/30/97
SJS02-GW1S-001	SVTCL	2,4-Dinitrophenol		25	ug/L	U	7/30/97
SJS02-GW1S-001	SVTCL	2,4-Dinitrotoluene		10	ug/L	U	7/30/97
SJS02-GW1S-001	SVTCL	2,6-Dinitrotoluene		10	ug/L	U	7/30/97
SJS02-GW1S-001	SVTCL	2-Chloronaphthalene		10	ug/L	U	7/30/97
SJS02-GW1S-001	SVTCL	2-Chlorophenol		10	ug/L	U	7/30/97
SJS02-GW1S-001	SVTCL	2-Methylnaphthalene		10	ug/L	U	7/30/97
SJS02-GW1S-001	SVTCL	2-Methylphenol		10	ug/L	U	7/30/97
SJS02-GW1S-001	SVTCL	2-Nitroaniline		25	ug/L	U	7/30/97
SJS02-GW1S-001	SVTCL	2-Nitrophenol		10	ug/L	U	7/30/97
SJS02-GW1S-001	SVTCL	3,3'-Dichlorobenzidine		10	ug/L	U	7/30/97
SJS02-GW1S-001	SVTCL	3-Nitroaniline		25	ug/L	U	7/30/97
SJS02-GW1S-001	SVTCL	4,6-Dinitro-2-Methylphenol		25	ug/L	U	7/30/97
SJS02-GW1S-001	SVTCL	4-Bromophenyl phenylether		10	ug/L	U	7/30/97
SJS02-GW1S-001	SVTCL	4-Chloro-3-Methylphenol		10	ug/L	U	7/30/
SJS02-GW1S-001	SVTCL	4-Chloroaniline		10	ug/L	U	7/30/
SJS02-GW1S-001	SVTCL	4-Chlorophenyl-phenylethe		10	ug/L	U	7/30/
SJS02-GW1S-001	SVTCL	4-Methylphenol		10	ug/L	U	7/30/97
SJS02-GW1S-001	SVTCL	4-Nitroaniline		25	ug/L	U	7/30/97
SJS02-GW1S-001	SVTCL	4-Nitrophenol		25	ug/L	U	7/30/97
SJS02-GW1S-001	SVTCL	Acenaphthene		10	ug/L	U	7/30/97
SJS02-GW1S-001	SVTCL	Acenaphthylene		10	ug/L	U	7/30/97
SJS02-GW1S-001	SVTCL	Anthracene		10	ug/L	U	7/30/97
SJS02-GW1S-001	SVTCL	Benzo(a)Anthracene		10	ug/L	U	7/30/97
SJS02-GW1S-001	SVTCL	Benzo(a)Pyrene		10	ug/L	U	7/30/97
SJS02-GW1S-001	SVTCL	Benzo(b)Fluoranthene		10	ug/L	U	7/30/97
SJS02-GW1S-001	SVTCL	Benzo(g,h,i)Perylene		10	ug/L	U	7/30/97
SJS02-GW1S-001	SVTCL	Benzo(k)fluoranthene		10	ug/L	U	7/30/97
SJS02-GW1S-001	SVTCL	Bis(2-chloroethoxy)Methan		10	ug/L	U	7/30/97
SJS02-GW1S-001	SVTCL	Bis(2-chloroethyl)Ether		10	ug/L	U	7/30/97
SJS02-GW1S-001	SVTCL	Bis(2-Ethylhexyl)Phthalate		10	ug/L	U	7/30/97
SJS02-GW1S-001	SVTCL	Butylbenzylphthalate		10	ug/L	U	7/30/97
SJS02-GW1S-001	SVTCL	Carbazole		10	ug/L	U	7/30/97
SJS02-GW1S-001	SVTCL	Chrysene		10	ug/L	U	7/30/97
SJS02-GW1S-001	SVTCL	Di-n-Butylphthalate		10	ug/L	U	7/30/97
SJS02-GW1S-001	SVTCL	Di-n-Octyl Phthalate		10	ug/L	U	7/30/97
SJS02-GW1S-001	SVTCL	Dibenz(a,h)Anthracene		10	ug/L	U	7/30/97
SJS02-GW1S-001	SVTCL	Dibenzofuran		10	ug/L	U	7/30/97
SJS02-GW1S-001	SVTCL	Diethylphthalate		10	ug/L	U	7/30/97
SJS02-GW1S-001	SVTCL	Dimethyl Phthalate		10	ug/L	U	7/30/97
SJS02-GW1S-001	SVTCL	Fluoranthene		10	ug/L	U	7/30/97
SJS02-GW1S-001	SVTCL	Fluorene		10	ug/L	U	7/30/97
SJS02-GW1S-001	SVTCL	Hexachlorobenzene		10	ug/L	U	7/30/97
SJS02-GW1S-001	SVTCL	Hexachlorobutadiene		10	ug/L	U	7/30/
SJS02-GW1S-001	SVTCL	Hexachlorocyclopentadien		10	ug/L	U	7/30/

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS02-GW1S-001	SVTCL	Hexachloroethane		10	ug/L	U	7/30/97
SJS02-GW1S-001	SVTCL	Indeno(1,2,3-cd)Pyrene		10	ug/L	U	7/30/97
SJS02-GW1S-001	SVTCL	Isophorone		10	ug/L	U	7/30/97
SJS02-GW1S-001	SVTCL	N-Nitroso-Di-n-Propylamine		10	ug/L	U	7/30/97
SJS02-GW1S-001	SVTCL	N-Nitrosodiphenylamine		10	ug/L	U	7/30/97
SJS02-GW1S-001	SVTCL	Naphthalene		10	ug/L	U	7/30/97
SJS02-GW1S-001	SVTCL	Nitrobenzene		10	ug/L	U	7/30/97
SJS02-GW1S-001	SVTCL	Pentachlorophenol		25	ug/L	U	7/30/97
SJS02-GW1S-001	SVTCL	Phenanthrene		10	ug/L	U	7/30/97
SJS02-GW1S-001	SVTCL	Phenol		10	ug/L	U	7/30/97
SJS02-GW1S-001	SVTCL	Pyrene		10	ug/L	U	7/30/97
SJS02-GW1S-001	VCLOW	1,1,1-Trichloroethane		1	ug/L	U	7/25/97
SJS02-GW1S-001	VCLOW	1,1,2,2-Tetrachloroethane		1	ug/L	U	7/25/97
SJS02-GW1S-001	VCLOW	1,1,2-Trichloroethane		1	ug/L	U	7/25/97
SJS02-GW1S-001	VCLOW	1,1-Dichloroethane		1	ug/L	U	7/25/97
SJS02-GW1S-001	VCLOW	1,1-Dichloroethene		1	ug/L	U	7/25/97
SJS02-GW1S-001	VCLOW	1,2,4-Trichlorobenzene		1	ug/L	U	7/25/97
SJS02-GW1S-001	VCLOW	1,2-Dibromo-3-chloropropa		1	ug/L	U	7/25/97
SJS02-GW1S-001	VCLOW	1,2-Dibromoethane		1	ug/L	U	7/25/97
SJS02-GW1S-001	VCLOW	1,2-Dichlorobenzene		1	ug/L	U	7/25/97
SJS02-GW1S-001	VCLOW	1,2-Dichloroethane		1	ug/L	U	7/25/97
SJS02-GW1S-001	VCLOW	1,2-Dichloropropane		1	ug/L	U	7/25/97
SJS02-GW1S-001	VCLOW	1,3-Dichlorobenzene		1	ug/L	U	7/25/97
SJS02-GW1S-001	VCLOW	1,4-Dichlorobenzene		1	ug/L	U	7/25/97
SJS02-GW1S-001	VCLOW	2-Hexanone		5	ug/L	U	7/25/97
SJS02-GW1S-001	VCLOW	4-Methyl-2-Pentanone		5	ug/L	U	7/25/97
SJS02-GW1S-001	VCLOW	Acetone	7	5	ug/L	B	7/25/97
SJS02-GW1S-001	VCLOW	Benzene		1	ug/L	U	7/25/97
SJS02-GW1S-001	VCLOW	Bromochloromethane		1	ug/L	U	7/25/97
SJS02-GW1S-001	VCLOW	Bromodichloromethane		1	ug/L	U	7/25/97
SJS02-GW1S-001	VCLOW	Bromoform		1	ug/L	U	7/25/97
SJS02-GW1S-001	VCLOW	Bromomethane		1	ug/L	U	7/25/97
SJS02-GW1S-001	VCLOW	Carbon Disulfide		1	ug/L	U	7/25/97
SJS02-GW1S-001	VCLOW	Carbon Tetrachloride		1	ug/L	U	7/25/97
SJS02-GW1S-001	VCLOW	Chlorobenzene		1	ug/L	U	7/25/97
SJS02-GW1S-001	VCLOW	Chloroethane		1	ug/L	U	7/25/97
SJS02-GW1S-001	VCLOW	Chloroform		1	ug/L	U	7/25/97
SJS02-GW1S-001	VCLOW	Chloromethane		1	ug/L	U	7/25/97
SJS02-GW1S-001	VCLOW	cis-1,2-Dichloroethene		1	ug/L	U	7/25/97
SJS02-GW1S-001	VCLOW	cis-1,3-Dichloropropene		1	ug/L	U	7/25/97
SJS02-GW1S-001	VCLOW	Dibromochloromethane		1	ug/L	U	7/25/97
SJS02-GW1S-001	VCLOW	Ethylbenzene		1	ug/L	U	7/25/97
SJS02-GW1S-001	VCLOW	Methylene Chloride	2	1	ug/L	B	7/25/97
SJS02-GW1S-001	VCLOW	Styrene		1	ug/L	U	7/25/97
SJS02-GW1S-001	VCLOW	Tetrachloroethene		1	ug/L	U	7/25/97
SJS02-GW1S-001	VCLOW	Toluene		1	ug/L	U	7/25/97
SJS02-GW1S-001	VCLOW	Total Xylenes		1	ug/L	U	7/25/97
SJS02-GW1S-001	VCLOW	Trans-1,2-Dichloroethene		1	ug/L	U	7/25/97
SJS02-GW1S-001	VCLOW	Trans-1,3-Dichloropropene		1	ug/L	U	7/25/97
SJS02-GW1S-001	VCLOW	Trichloroethene		1	ug/L	U	7/25/97
SJS02-GW1S-001	VCLOW	Vinyl Chloride		1	ug/L	U	7/25/97
SJS02-GW1S-001F	METAL	Aluminum		44	ug/L	U	7/28/97
SJS02-GW1S-001F	METAL	Antimony		2	ug/L	U	7/29/97
SJS02-GW1S-001F	METAL	Arsenic		3	ug/L	U	7/29/97
SJS02-GW1S-001F	METAL	Barium	42.1	1	ug/L	J	7/28/97
SJS02-GW1S-001F	METAL	Beryllium		1	ug/L	U	7/28/97
SJS02-GW1S-001F	METAL	Cadmium		0.5	ug/L	U	7/29/97
SJS02-GW1S-001F	METAL	Calcium	67700	46	ug/L		7/28/97
SJS02-GW1S-001F	METAL	Chromium		7	ug/L	U	7/28/97
SJS02-GW1S-001F	METAL	Cobalt	8.1	3	ug/L	J	7/28/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS02-GW1S-001F	METAL	Copper		6	ug/L	U	7/28/
SJS02-GW1S-001F	METAL	Iron	2530	5	ug/L		7/28
SJS02-GW1S-001F	METAL	Lead		1	ug/L	U	7/29/
SJS02-GW1S-001F	METAL	Magnesium	21000	45	ug/L		7/28/97
SJS02-GW1S-001F	METAL	Manganese	1020	1	ug/L		7/28/97
SJS02-GW1S-001F	METAL	Mercury		0.12	ug/L	U	7/29/97
SJS02-GW1S-001F	METAL	Nickel	16.8	4	ug/L	K	7/28/97
SJS02-GW1S-001F	METAL	Potassium	4170	97	ug/L	J	7/28/97
SJS02-GW1S-001F	METAL	Selenium		3	ug/L	U	7/29/97
SJS02-GW1S-001F	METAL	Silver	2.8	3	ug/L	J	7/29/97
SJS02-GW1S-001F	METAL	Sodium	43900	28	ug/L		7/28/97
SJS02-GW1S-001F	METAL	Thallium		2	ug/L	U	7/29/97
SJS02-GW1S-001F	METAL	Vanadium		9	ug/L	U	7/28/97
SJS02-GW1S-001F	METAL	Zinc	17.8	3	ug/L	B	7/28/97
SJS02-GW1S-002	CTOTP	Total Phosphorous (as P)	0.073	0.05	mg/L		11/19/97
SJS02-GW1S-002	MCYAN	Aluminum	365	29	ug/L		11/27/97
SJS02-GW1S-002	MCYAN	Antimony		1.7	ug/L	U	11/21/97
SJS02-GW1S-002	MCYAN	Arsenic	5.1	3	ug/L	B	11/21/97
SJS02-GW1S-002	MCYAN	Barium	39.6	1	ug/L	J	11/27/97
SJS02-GW1S-002	MCYAN	Beryllium	0.58	1	ug/L	J	11/27/97
SJS02-GW1S-002	MCYAN	Cadmium		0.4	ug/L	U	11/21/97
SJS02-GW1S-002	MCYAN	Calcium	149000	46	ug/L		11/27/97
SJS02-GW1S-002	MCYAN	Chromium	23	4	ug/L		11/27/97
SJS02-GW1S-002	MCYAN	Cobalt	12.4	3	ug/L	J	11/27/97
SJS02-GW1S-002	MCYAN	Copper		5.8	ug/L	U	11/27/97
SJS02-GW1S-002	MCYAN	Cyanide		5	ug/L	U	11/12/97
SJS02-GW1S-002	MCYAN	Iron	5990	5	ug/L		11/27/97
SJS02-GW1S-002	MCYAN	Lead	1.9	1	ug/L	J	11/21/97
SJS02-GW1S-002	MCYAN	Magnesium	16200	45	ug/L		11/27/97
SJS02-GW1S-002	MCYAN	Manganese	405	1	ug/L		11/27/
SJS02-GW1S-002	MCYAN	Mercury		0.13	ug/L	U	11/19
SJS02-GW1S-002	MCYAN	Nickel	16.5	4	ug/L	U	11/27/97
SJS02-GW1S-002	MCYAN	Potassium	3880	97	ug/L	J	11/27/97
SJS02-GW1S-002	MCYAN	Selenium		3.3	ug/L	U	11/21/97
SJS02-GW1S-002	MCYAN	Silver		1.1	ug/L	U	11/21/97
SJS02-GW1S-002	MCYAN	Sodium	20900	28	ug/L		11/27/97
SJS02-GW1S-002	MCYAN	Thallium	2.6	2	ug/L	B	11/21/97
SJS02-GW1S-002	MCYAN	Vanadium		6.8	ug/L	U	11/27/97
SJS02-GW1S-002	MCYAN	Zinc	18	3	ug/L	B	11/27/97
SJS02-GW1S-002	PSPCB	4,4'-DDD		0.1	ug/L	U	11/21/97
SJS02-GW1S-002	PSPCB	4,4'-DDE		0.1	ug/L	U	11/21/97
SJS02-GW1S-002	PSPCB	4,4'-DDT		0.1	ug/L	U	11/21/97
SJS02-GW1S-002	PSPCB	Aldrin		0.05	ug/L	U	11/21/97
SJS02-GW1S-002	PSPCB	alpha-BHC		0.05	ug/L	U	11/21/97
SJS02-GW1S-002	PSPCB	alpha-Chlordane		0.05	ug/L	U	11/21/97
SJS02-GW1S-002	PSPCB	Aroclor-1016		1	ug/L	U	11/21/97
SJS02-GW1S-002	PSPCB	Aroclor-1221		2	ug/L	U	11/21/97
SJS02-GW1S-002	PSPCB	Aroclor-1232		1	ug/L	U	11/21/97
SJS02-GW1S-002	PSPCB	Aroclor-1242		1	ug/L	U	11/21/97
SJS02-GW1S-002	PSPCB	Aroclor-1248		1	ug/L	U	11/21/97
SJS02-GW1S-002	PSPCB	Aroclor-1254		1	ug/L	U	11/21/97
SJS02-GW1S-002	PSPCB	Aroclor-1260		1	ug/L	U	11/21/97
SJS02-GW1S-002	PSPCB	beta-BHC		0.05	ug/L	U	11/21/97
SJS02-GW1S-002	PSPCB	delta-BHC		0.05	ug/L	U	11/21/97
SJS02-GW1S-002	PSPCB	Dieldrin		0.1	ug/L	U	11/21/97
SJS02-GW1S-002	PSPCB	Endosulfan I		0.05	ug/L	U	11/21/97
SJS02-GW1S-002	PSPCB	Endosulfan II		0.1	ug/L	U	11/21/97
SJS02-GW1S-002	PSPCB	Endosulfan Sulfate		0.1	ug/L	U	11/21/97
SJS02-GW1S-002	PSPCB	Endrin		0.1	ug/L	U	11/21/
SJS02-GW1S-002	PSPCB	Endrin Aldehyde		0.1	ug/L	U	11/21/

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS02-GW1S-002	PSPCB	Endrin Ketone		0.1	ug/L	U	11/21/97
SJS02-GW1S-002	PSPCB	gamma-BHC		0.05	ug/L	U	11/21/97
SJS02-GW1S-002	PSPCB	gamma-Chlordane		0.05	ug/L	U	11/21/97
SJS02-GW1S-002	PSPCB	Heptachlor		0.05	ug/L	U	11/21/97
SJS02-GW1S-002	PSPCB	Heptachlor Epoxide		0.05	ug/L	U	11/21/97
SJS02-GW1S-002	PSPCB	Methoxychlor		0.5	ug/L	U	11/21/97
SJS02-GW1S-002	PSPCB	Toxaphene		5	ug/L	U	11/21/97
SJS02-GW1S-002	SVTCL	1,2,4-Trichlorobenzene		10	ug/L	U	11/17/97
SJS02-GW1S-002	SVTCL	1,2-Dichlorobenzene		10	ug/L	U	11/17/97
SJS02-GW1S-002	SVTCL	1,3-Dichlorobenzene		10	ug/L	U	11/17/97
SJS02-GW1S-002	SVTCL	1,4-Dichlorobenzene		10	ug/L	U	11/17/97
SJS02-GW1S-002	SVTCL	2,2'-oxybis(1-Chloropropan		10	ug/L	U	11/17/97
SJS02-GW1S-002	SVTCL	2,4,5-Trichlorophenol		25	ug/L	U	11/17/97
SJS02-GW1S-002	SVTCL	2,4,6-Trichlorophenol		10	ug/L	U	11/17/97
SJS02-GW1S-002	SVTCL	2,4-Dichlorophenol		10	ug/L	U	11/17/97
SJS02-GW1S-002	SVTCL	2,4-Dimethylphenol		10	ug/L	U	11/17/97
SJS02-GW1S-002	SVTCL	2,4-Dinitrophenol		25	ug/L	U	11/17/97
SJS02-GW1S-002	SVTCL	2,4-Dinitrotoluene		10	ug/L	U	11/17/97
SJS02-GW1S-002	SVTCL	2,6-Dinitrotoluene		10	ug/L	U	11/17/97
SJS02-GW1S-002	SVTCL	2-Chloronaphthalene		10	ug/L	U	11/17/97
SJS02-GW1S-002	SVTCL	2-Chlorophenol		10	ug/L	U	11/17/97
SJS02-GW1S-002	SVTCL	2-Methylnaphthalene		10	ug/L	U	11/17/97
SJS02-GW1S-002	SVTCL	2-Methylphenol		10	ug/L	U	11/17/97
SJS02-GW1S-002	SVTCL	2-Nitroaniline		25	ug/L	U	11/17/97
SJS02-GW1S-002	SVTCL	2-Nitrophenol		10	ug/L	U	11/17/97
SJS02-GW1S-002	SVTCL	3,3'-Dichlorobenzidine		10	ug/L	U	11/17/97
SJS02-GW1S-002	SVTCL	3-Nitroaniline		25	ug/L	U	11/17/97
SJS02-GW1S-002	SVTCL	4,6-Dinitro-2-Methylphenol		25	ug/L	U	11/17/97
SJS02-GW1S-002	SVTCL	4-Bromophenol-phenylethe		10	ug/L	U	11/17/97
SJS02-GW1S-002	SVTCL	4-Chloro-3-Methylphenol		10	ug/L	U	11/17/97
SJS02-GW1S-002	SVTCL	4-Chloroaniline		10	ug/L	U	11/17/97
SJS02-GW1S-002	SVTCL	4-Chlorophenyl-phenylethe		10	ug/L	U	11/17/97
SJS02-GW1S-002	SVTCL	4-Methylphenol		10	ug/L	U	11/17/97
SJS02-GW1S-002	SVTCL	4-Nitroaniline		25	ug/L	U	11/17/97
SJS02-GW1S-002	SVTCL	4-Nitrophenol		25	ug/L	U	11/17/97
SJS02-GW1S-002	SVTCL	Acenaphthene		10	ug/L	U	11/17/97
SJS02-GW1S-002	SVTCL	Acenaphthylene		10	ug/L	U	11/17/97
SJS02-GW1S-002	SVTCL	Anthracene		10	ug/L	U	11/17/97
SJS02-GW1S-002	SVTCL	Benzo(a)anthracene		10	ug/L	U	11/17/97
SJS02-GW1S-002	SVTCL	Benzo(a)pyrene		10	ug/L	U	11/17/97
SJS02-GW1S-002	SVTCL	Benzo(b)fluoranthene		10	ug/L	U	11/17/97
SJS02-GW1S-002	SVTCL	Benzo(g,h,i)perylene		10	ug/L	U	11/17/97
SJS02-GW1S-002	SVTCL	Benzo(k)fluoranthene		10	ug/L	U	11/17/97
SJS02-GW1S-002	SVTCL	bis(2-Chloroethoxy)methan		10	ug/L	U	11/17/97
SJS02-GW1S-002	SVTCL	bis(2-chloroethyl)ether		10	ug/L	U	11/17/97
SJS02-GW1S-002	SVTCL	bis(2-Ethylhexyl)phthalate		10	ug/L	U	11/17/97
SJS02-GW1S-002	SVTCL	Butylbenzylphthalate		10	ug/L	U	11/17/97
SJS02-GW1S-002	SVTCL	Carbazole		10	ug/L	U	11/17/97
SJS02-GW1S-002	SVTCL	Chrysene		10	ug/L	U	11/17/97
SJS02-GW1S-002	SVTCL	Di-n-butylphthalate		10	ug/L	U	11/17/97
SJS02-GW1S-002	SVTCL	Di-n-Octyl Phthalate		10	ug/L	U	11/17/97
SJS02-GW1S-002	SVTCL	Dibenzo(a,h)anthracene		10	ug/L	U	11/17/97
SJS02-GW1S-002	SVTCL	Dibenzofuran		10	ug/L	U	11/17/97
SJS02-GW1S-002	SVTCL	Diethylphthalate		10	ug/L	U	11/17/97
SJS02-GW1S-002	SVTCL	Dimethyl Phthalate		10	ug/L	U	11/17/97
SJS02-GW1S-002	SVTCL	Fluoranthene		10	ug/L	U	11/17/97
SJS02-GW1S-002	SVTCL	Fluorene		10	ug/L	U	11/17/97
SJS02-GW1S-002	SVTCL	Hexachlorobenzene		10	ug/L	U	11/17/97
SJS02-GW1S-002	SVTCL	Hexachlorobutadiene		10	ug/L	U	11/17/97
SJS02-GW1S-002	SVTCL	Hexachlorocyclopentadien		10	ug/L	U	11/17/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS02-GW1S-002	SVTCL	Hexachloroethane		10	ug/L	U	11/17
SJS02-GW1S-002	SVTCL	Indeno(1,2,3-cd)pyrene		10	ug/L	U	11/17
SJS02-GW1S-002	SVTCL	Isophorone		10	ug/L	U	11/17
SJS02-GW1S-002	SVTCL	N-Nitroso-Di-n-Propylamine		10	ug/L	U	11/17/97
SJS02-GW1S-002	SVTCL	N-Nitrosodiphenylamine		10	ug/L	U	11/17/97
SJS02-GW1S-002	SVTCL	Naphthalene		10	ug/L	U	11/17/97
SJS02-GW1S-002	SVTCL	Nitrobenzene		10	ug/L	U	11/17/97
SJS02-GW1S-002	SVTCL	Pentachlorophenol		25	ug/L	U	11/17/97
SJS02-GW1S-002	SVTCL	Phenanthrene		10	ug/L	U	11/17/97
SJS02-GW1S-002	SVTCL	Phenol		10	ug/L	U	11/17/97
SJS02-GW1S-002	SVTCL	Pyrene		10	ug/L	U	11/17/97
SJS02-GW1S-002	VCLOW	1,1,1-Trichloroethane		1	ug/L	U	11/12/97
SJS02-GW1S-002	VCLOW	1,1,2,2-Tetrachloroethane		1	ug/L	U	11/12/97
SJS02-GW1S-002	VCLOW	1,1,2-Trichloroethane		1	ug/L	U	11/12/97
SJS02-GW1S-002	VCLOW	1,1-Dichloroethane		1	ug/L	U	11/12/97
SJS02-GW1S-002	VCLOW	1,1-Dichloroethene		1	ug/L	U	11/12/97
SJS02-GW1S-002	VCLOW	1,2,4-Trichlorobenzene		1	ug/L	U	11/12/97
SJS02-GW1S-002	VCLOW	1,2-Dibromo-3-chloropropa		1	ug/L	U	11/12/97
SJS02-GW1S-002	VCLOW	1,2-Dibromoethane		1	ug/L	U	11/12/97
SJS02-GW1S-002	VCLOW	1,2-Dichlorobenzene		1	ug/L	U	11/12/97
SJS02-GW1S-002	VCLOW	1,2-Dichloroethane		1	ug/L	U	11/12/97
SJS02-GW1S-002	VCLOW	1,2-Dichloropropane		1	ug/L	U	11/12/97
SJS02-GW1S-002	VCLOW	1,3-Dichlorobenzene		1	ug/L	U	11/12/97
SJS02-GW1S-002	VCLOW	1,4-Dichlorobenzene		1	ug/L	U	11/12/97
SJS02-GW1S-002	VCLOW	2-Hexanone		5	ug/L	U	11/12/97
SJS02-GW1S-002	VCLOW	4-Methyl-2-Pentanone		5	ug/L	U	11/12/97
SJS02-GW1S-002	VCLOW	Benzene		1	ug/L	U	11/12/97
SJS02-GW1S-002	VCLOW	Bromochloromethane		1	ug/L	U	11/12/97
SJS02-GW1S-002	VCLOW	Bromodichloromethane		1	ug/L	U	11/12/97
SJS02-GW1S-002	VCLOW	Bromoform		1	ug/L	U	11/12
SJS02-GW1S-002	VCLOW	Bromomethane		1	ug/L	U	11/12
SJS02-GW1S-002	VCLOW	Carbon Disulfide		1	ug/L	U	11/12
SJS02-GW1S-002	VCLOW	Carbon Tetrachloride		1	ug/L	U	11/12/97
SJS02-GW1S-002	VCLOW	Chlorobenzene		1	ug/L	U	11/12/97
SJS02-GW1S-002	VCLOW	Chloroethane		1	ug/L	U	11/12/97
SJS02-GW1S-002	VCLOW	Chloroform		1	ug/L	U	11/12/97
SJS02-GW1S-002	VCLOW	Chloromethane		1	ug/L	U	11/12/97
SJS02-GW1S-002	VCLOW	cis-1,2-Dichloroethene		1	ug/L	U	11/12/97
SJS02-GW1S-002	VCLOW	cis-1,3-Dichloropropene		1	ug/L	U	11/12/97
SJS02-GW1S-002	VCLOW	Dibromochloromethane		1	ug/L	U	11/12/97
SJS02-GW1S-002	VCLOW	Ethylbenzene		1	ug/L	U	11/12/97
SJS02-GW1S-002	VCLOW	Methylene Chloride	2	2	ug/L	B	11/12/97
SJS02-GW1S-002	VCLOW	Styrene		1	ug/L	U	11/12/97
SJS02-GW1S-002	VCLOW	Tetrachloroethene		1	ug/L	U	11/12/97
SJS02-GW1S-002	VCLOW	Toluene		1	ug/L	U	11/12/97
SJS02-GW1S-002	VCLOW	Total Xylenes		1	ug/L	U	11/12/97
SJS02-GW1S-002	VCLOW	Trans-1,2-Dichloroethene		1	ug/L	U	11/12/97
SJS02-GW1S-002	VCLOW	trans-1,3-Dichloropropene		1	ug/L	U	11/12/97
SJS02-GW1S-002	VCLOW	Trichloroethene		1	ug/L	U	11/12/97
SJS02-GW1S-002	VCLOW	Vinyl Chloride		1	ug/L	U	11/12/97
SJS02-GW1S-002F	METAL	Aluminum		38.1	ug/L	U	11/27/97
SJS02-GW1S-002F	METAL	Antimony		1.7	ug/L	U	11/21/97
SJS02-GW1S-002F	METAL	Arsenic	3.4	3	ug/L	B	11/21/97
SJS02-GW1S-002F	METAL	Barium	40.2	1	ug/L	J	11/27/97
SJS02-GW1S-002F	METAL	Beryllium	0.58	1	ug/L	J	11/27/97
SJS02-GW1S-002F	METAL	Cadmium		0.4	ug/L	U	11/21/97
SJS02-GW1S-002F	METAL	Calcium	152000	46	ug/L		11/27/97
SJS02-GW1S-002F	METAL	Chromium	4.8	4	ug/L	J	11/27/97
SJS02-GW1S-002F	METAL	Cobalt	48	3	ug/L	J	11/27
SJS02-GW1S-002F	METAL	Copper		5.8	ug/L	U	11/27

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS02-GW1S-002F	METAL	Iron	5460	5	ug/L		11/27/97
SJS02-GW1S-002F	METAL	Lead		1.3	ug/L	U	11/21/97
SJS02-GW1S-002F	METAL	Magnesium	16600	45	ug/L		11/27/97
SJS02-GW1S-002F	METAL	Manganese	416	1	ug/L		11/27/97
SJS02-GW1S-002F	METAL	Mercury		0.12	ug/L	U	11/19/97
SJS02-GW1S-002F	METAL	Nickel	11.2	4	ug/L	J	11/27/97
SJS02-GW1S-002F	METAL	Potassium	3980	97	ug/L	J	11/27/97
SJS02-GW1S-002F	METAL	Selenium		3.3	ug/L	U	11/21/97
SJS02-GW1S-002F	METAL	Silver	1.8	3	ug/L	B	11/21/97
SJS02-GW1S-002F	METAL	Sodium	21600	28	ug/L		11/27/97
SJS02-GW1S-002F	METAL	Thallium	2.5	2	ug/L	B	11/21/97
SJS02-GW1S-002F	METAL	Vanadium		6.8	ug/L	U	11/27/97
SJS02-GW1S-002F	METAL	Zinc	21.9	3	ug/L	B	11/27/97
SJS02-GW2D-001	CTOTP	Total Phosphorous (as P)	0.862	0.125	mg/L		7/30/97
SJS02-GW2D-001	MCYAN	Aluminum	45.8	29	ug/L	B	7/28/97
SJS02-GW2D-001	MCYAN	Antimony		2	ug/L	U	7/29/97
SJS02-GW2D-001	MCYAN	Arsenic	4.5	3	ug/L	B	7/29/97
SJS02-GW2D-001	MCYAN	Barium	18.3	1	ug/L	B	7/28/97
SJS02-GW2D-001	MCYAN	Beryllium		1	ug/L	U	7/28/97
SJS02-GW2D-001	MCYAN	Cadmium		0.5	ug/L	U	7/29/97
SJS02-GW2D-001	MCYAN	Calcium	49500	46	ug/L		7/28/97
SJS02-GW2D-001	MCYAN	Chromium		7	ug/L	U	7/28/97
SJS02-GW2D-001	MCYAN	Cobalt		8	ug/L	U	7/28/97
SJS02-GW2D-001	MCYAN	Copper		6	ug/L	U	7/28/97
SJS02-GW2D-001	MCYAN	Cyanide		5	ug/L	UL	8/5/97
SJS02-GW2D-001	MCYAN	Iron	87.4	5	ug/L	B	7/28/97
SJS02-GW2D-001	MCYAN	Lead		1	ug/L	U	7/29/97
SJS02-GW2D-001	MCYAN	Magnesium	13600	45	ug/L		7/28/97
SJS02-GW2D-001	MCYAN	Manganese	49.4	1	ug/L	B	7/28/97
SJS02-GW2D-001	MCYAN	Mercury		0.12	ug/L	U	7/29/97
SJS02-GW2D-001	MCYAN	Nickel		7	ug/L	U	7/28/97
SJS02-GW2D-001	MCYAN	Potassium	8800	97	ug/L	B	7/28/97
SJS02-GW2D-001	MCYAN	Selenium		3	ug/L	UL	7/29/97
SJS02-GW2D-001	MCYAN	Silver	2.9	3	ug/L	B	7/29/97
SJS02-GW2D-001	MCYAN	Sodium	19100	28	ug/L		7/28/97
SJS02-GW2D-001	MCYAN	Thallium		2	ug/L	U	7/29/97
SJS02-GW2D-001	MCYAN	Vanadium		9	ug/L	U	7/28/97
SJS02-GW2D-001	MCYAN	Zinc		5	ug/L	U	7/28/97
SJS02-GW2D-001	PSPCB	4,4'-DDD		0.1	ug/L	U	7/31/97
SJS02-GW2D-001	PSPCB	4,4'-DDE		0.1	ug/L	U	7/31/97
SJS02-GW2D-001	PSPCB	4,4'-DDT		0.1	ug/L	U	7/31/97
SJS02-GW2D-001	PSPCB	Aldrin		0.05	ug/L	U	7/31/97
SJS02-GW2D-001	PSPCB	alpha-BHC		0.05	ug/L	U	7/31/97
SJS02-GW2D-001	PSPCB	alpha-Chlordane		0.05	ug/L	U	7/31/97
SJS02-GW2D-001	PSPCB	Aroclor-1016		1	ug/L	U	7/31/97
SJS02-GW2D-001	PSPCB	Aroclor-1221		2	ug/L	U	7/31/97
SJS02-GW2D-001	PSPCB	Aroclor-1232		1	ug/L	U	7/31/97
SJS02-GW2D-001	PSPCB	Aroclor-1242		1	ug/L	U	7/31/97
SJS02-GW2D-001	PSPCB	Aroclor-1248		1	ug/L	U	7/31/97
SJS02-GW2D-001	PSPCB	Aroclor-1254		1	ug/L	U	7/31/97
SJS02-GW2D-001	PSPCB	Aroclor-1260		1	ug/L	U	7/31/97
SJS02-GW2D-001	PSPCB	beta-BHC		0.05	ug/L	U	7/31/97
SJS02-GW2D-001	PSPCB	delta-BHC		0.05	ug/L	U	7/31/97
SJS02-GW2D-001	PSPCB	Dieldrin		0.1	ug/L	U	7/31/97
SJS02-GW2D-001	PSPCB	Endosulfan I		0.05	ug/L	U	7/31/97
SJS02-GW2D-001	PSPCB	Endosulfan II		0.1	ug/L	U	7/31/97
SJS02-GW2D-001	PSPCB	Endosulfan Sulfate		0.1	ug/L	U	7/31/97
SJS02-GW2D-001	PSPCB	Endrin		0.1	ug/L	U	7/31/97
SJS02-GW2D-001	PSPCB	Endrin Aldehyde		0.1	ug/L	U	7/31/97
SJS02-GW2D-001	PSPCB	Endrin Ketone		0.1	ug/L	U	7/31/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS02-GW2D-001	PSPCB	gamma-BHC		0.05	ug/L	U	7/31
SJS02-GW2D-001	PSPCB	gamma-Chlordane		0.05	ug/L	U	7/31
SJS02-GW2D-001	PSPCB	Heptachlor		0.05	ug/L	U	7/31,
SJS02-GW2D-001	PSPCB	Heptachlor Epoxide		0.05	ug/L	U	7/31/97
SJS02-GW2D-001	PSPCB	Methoxychlor		0.5	ug/L	U	7/31/97
SJS02-GW2D-001	PSPCB	Toxaphene		5	ug/L	U	7/31/97
SJS02-GW2D-001	SVTCL	1,2,4-Trichlorobenzene		10	ug/L	U	7/31/97
SJS02-GW2D-001	SVTCL	1,2-Dichlorobenzene		10	ug/L	U	7/31/97
SJS02-GW2D-001	SVTCL	1,3-Dichlorobenzene		10	ug/L	U	7/31/97
SJS02-GW2D-001	SVTCL	1,4-Dichlorobenzene		10	ug/L	U	7/31/97
SJS02-GW2D-001	SVTCL	2,2'-oxybis(1-Chloropropan		10	ug/L	U	7/31/97
SJS02-GW2D-001	SVTCL	2,4,5-Trichlorophenol		25	ug/L	U	7/31/97
SJS02-GW2D-001	SVTCL	2,4,6-Trichlorophenol		10	ug/L	U	7/31/97
SJS02-GW2D-001	SVTCL	2,4-Dichlorophenol		10	ug/L	U	7/31/97
SJS02-GW2D-001	SVTCL	2,4-Dimethylphenol		10	ug/L	U	7/31/97
SJS02-GW2D-001	SVTCL	2,4-Dinitrophenol		25	ug/L	U	7/31/97
SJS02-GW2D-001	SVTCL	2,4-Dinitrotoluene		10	ug/L	U	7/31/97
SJS02-GW2D-001	SVTCL	2,6-Dinitrotoluene		10	ug/L	U	7/31/97
SJS02-GW2D-001	SVTCL	2-Chloronaphthalene		10	ug/L	U	7/31/97
SJS02-GW2D-001	SVTCL	2-Chlorophenol		10	ug/L	U	7/31/97
SJS02-GW2D-001	SVTCL	2-Methylnaphthalene		10	ug/L	U	7/31/97
SJS02-GW2D-001	SVTCL	2-Methylphenol		10	ug/L	U	7/31/97
SJS02-GW2D-001	SVTCL	2-Nitroaniline		25	ug/L	U	7/31/97
SJS02-GW2D-001	SVTCL	2-Nitrophenol		10	ug/L	U	7/31/97
SJS02-GW2D-001	SVTCL	3,3'-Dichlorobenzidine		10	ug/L	U	7/31/97
SJS02-GW2D-001	SVTCL	3-Nitroaniline		25	ug/L	U	7/31/97
SJS02-GW2D-001	SVTCL	4,6-Dinitro-2-Methylphenol		25	ug/L	U	7/31/97
SJS02-GW2D-001	SVTCL	4-Bromophenyl phenylether		10	ug/L	U	7/31/97
SJS02-GW2D-001	SVTCL	4-Chloro-3-Methylphenol		10	ug/L	U	7/31/97
SJS02-GW2D-001	SVTCL	4-Chloroaniline		10	ug/L	U	7/31/
SJS02-GW2D-001	SVTCL	4-Chlorophenyl-phenylethe		10	ug/L	U	7/31,
SJS02-GW2D-001	SVTCL	4-Methylphenol		10	ug/L	U	7/31/9
SJS02-GW2D-001	SVTCL	4-Nitroaniline		25	ug/L	U	7/31/97
SJS02-GW2D-001	SVTCL	4-Nitrophenol		25	ug/L	U	7/31/97
SJS02-GW2D-001	SVTCL	Acenaphthene		10	ug/L	U	7/31/97
SJS02-GW2D-001	SVTCL	Acenaphthylene		10	ug/L	U	7/31/97
SJS02-GW2D-001	SVTCL	Anthracene		10	ug/L	U	7/31/97
SJS02-GW2D-001	SVTCL	Benzo(a)Anthracene		10	ug/L	U	7/31/97
SJS02-GW2D-001	SVTCL	Benzo(a)Pyrene		10	ug/L	U	7/31/97
SJS02-GW2D-001	SVTCL	Benzo(b)Fluoranthene		10	ug/L	U	7/31/97
SJS02-GW2D-001	SVTCL	Benzo(g,h,i)Perylene		10	ug/L	U	7/31/97
SJS02-GW2D-001	SVTCL	Benzo(k)fluoranthene		10	ug/L	U	7/31/97
SJS02-GW2D-001	SVTCL	Bis(2-chloroethoxy)Methan		10	ug/L	U	7/31/97
SJS02-GW2D-001	SVTCL	Bis(2-chloroethyl)Ether		10	ug/L	U	7/31/97
SJS02-GW2D-001	SVTCL	Bis(2-Ethylhexyl)Phthalate		10	ug/L	U	7/31/97
SJS02-GW2D-001	SVTCL	Butylbenzylphthalate		10	ug/L	U	7/31/97
SJS02-GW2D-001	SVTCL	Carbazole		10	ug/L	U	7/31/97
SJS02-GW2D-001	SVTCL	Chrysene		10	ug/L	U	7/31/97
SJS02-GW2D-001	SVTCL	Di-n-Butylphthalate		10	ug/L	U	7/31/97
SJS02-GW2D-001	SVTCL	Di-n-Octyl Phthalate		10	ug/L	U	7/31/97
SJS02-GW2D-001	SVTCL	Dibenz(a,h)Anthracene		10	ug/L	U	7/31/97
SJS02-GW2D-001	SVTCL	Dibenzofuran		10	ug/L	U	7/31/97
SJS02-GW2D-001	SVTCL	Diethylphthalate		10	ug/L	U	7/31/97
SJS02-GW2D-001	SVTCL	Dimethyl Phthalate		10	ug/L	U	7/31/97
SJS02-GW2D-001	SVTCL	Fluoranthene		10	ug/L	U	7/31/97
SJS02-GW2D-001	SVTCL	Fluorene		10	ug/L	U	7/31/97
SJS02-GW2D-001	SVTCL	Hexachlorobenzene		10	ug/L	U	7/31/97
SJS02-GW2D-001	SVTCL	Hexachlorobutadiene		10	ug/L	U	7/31/97
SJS02-GW2D-001	SVTCL	Hexachlorocyclopentadien		10	ug/L	U	7/31/
SJS02-GW2D-001	SVTCL	Hexachloroethane		10	ug/L	U	7/31,

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS02-GW2D-001	SVTCL	Indeno(1,2,3-cd)Pyrene		10	ug/L	U	7/31/97
SJS02-GW2D-001	SVTCL	Isophorone		10	ug/L	U	7/31/97
SJS02-GW2D-001	SVTCL	N-Nitroso-Di-n-Propylamine		10	ug/L	U	7/31/97
SJS02-GW2D-001	SVTCL	N-Nitrosodiphenylamine		10	ug/L	U	7/31/97
SJS02-GW2D-001	SVTCL	Naphthalene		10	ug/L	U	7/31/97
SJS02-GW2D-001	SVTCL	Nitrobenzene		10	ug/L	U	7/31/97
SJS02-GW2D-001	SVTCL	Pentachlorophenol		25	ug/L	U	7/31/97
SJS02-GW2D-001	SVTCL	Phenanthrene		10	ug/L	U	7/31/97
SJS02-GW2D-001	SVTCL	Phenol		10	ug/L	U	7/31/97
SJS02-GW2D-001	SVTCL	Pyrene		10	ug/L	U	7/31/97
SJS02-GW2D-001	VCLOW	1,1,1-Trichloroethane		1	ug/L	U	7/25/97
SJS02-GW2D-001	VCLOW	1,1,2,2-Tetrachloroethane		1	ug/L	U	7/25/97
SJS02-GW2D-001	VCLOW	1,1,2-Trichloroethane		1	ug/L	U	7/25/97
SJS02-GW2D-001	VCLOW	1,1-Dichloroethane		1	ug/L	U	7/25/97
SJS02-GW2D-001	VCLOW	1,1-Dichloroethene		1	ug/L	U	7/25/97
SJS02-GW2D-001	VCLOW	1,2,4-Trichlorobenzene		1	ug/L	U	7/25/97
SJS02-GW2D-001	VCLOW	1,2-Dibromo-3-chloropropa		1	ug/L	U	7/25/97
SJS02-GW2D-001	VCLOW	1,2-Dibromoethane		1	ug/L	U	7/25/97
SJS02-GW2D-001	VCLOW	1,2-Dichlorobenzene		1	ug/L	U	7/25/97
SJS02-GW2D-001	VCLOW	1,2-Dichloroethane		1	ug/L	U	7/25/97
SJS02-GW2D-001	VCLOW	1,2-Dichloropropane		1	ug/L	U	7/25/97
SJS02-GW2D-001	VCLOW	1,3-Dichlorobenzene		1	ug/L	U	7/25/97
SJS02-GW2D-001	VCLOW	1,4-Dichlorobenzene		1	ug/L	U	7/25/97
SJS02-GW2D-001	VCLOW	2-Hexanone		5	ug/L	U	7/25/97
SJS02-GW2D-001	VCLOW	4-Methyl-2-Pentanone		5	ug/L	U	7/25/97
SJS02-GW2D-001	VCLOW	Benzene		1	ug/L	U	7/25/97
SJS02-GW2D-001	VCLOW	Bromochloromethane		1	ug/L	U	7/25/97
SJS02-GW2D-001	VCLOW	Bromodichloromethane		1	ug/L	U	7/25/97
SJS02-GW2D-001	VCLOW	Bromoform		1	ug/L	U	7/25/97
SJS02-GW2D-001	VCLOW	Bromomethane		1	ug/L	U	7/25/97
SJS02-GW2D-001	VCLOW	Carbon Disulfide		1	ug/L	U	7/25/97
SJS02-GW2D-001	VCLOW	Carbon Tetrachloride		1	ug/L	U	7/25/97
SJS02-GW2D-001	VCLOW	Chlorobenzene		1	ug/L	U	7/25/97
SJS02-GW2D-001	VCLOW	Chloroethane		1	ug/L	U	7/25/97
SJS02-GW2D-001	VCLOW	Chloroform	6	1	ug/L		7/25/97
SJS02-GW2D-001	VCLOW	Chloromethane		1	ug/L	U	7/25/97
SJS02-GW2D-001	VCLOW	cis-1,2-Dichloroethene		1	ug/L	U	7/25/97
SJS02-GW2D-001	VCLOW	cis-1,3-Dichloropropene		1	ug/L	U	7/25/97
SJS02-GW2D-001	VCLOW	Dibromochloromethane		1	ug/L	U	7/25/97
SJS02-GW2D-001	VCLOW	Ethylbenzene		1	ug/L	U	7/25/97
SJS02-GW2D-001	VCLOW	Methylene Chloride	3	1	ug/L	B	7/25/97
SJS02-GW2D-001	VCLOW	Styrene		1	ug/L	U	7/25/97
SJS02-GW2D-001	VCLOW	Tetrachloroethene		1	ug/L	U	7/25/97
SJS02-GW2D-001	VCLOW	Toluene		1	ug/L	U	7/25/97
SJS02-GW2D-001	VCLOW	Total Xylenes		1	ug/L	U	7/25/97
SJS02-GW2D-001	VCLOW	Trans-1,2-Dichloroethene		1	ug/L	U	7/25/97
SJS02-GW2D-001	VCLOW	Trans-1,3-Dichloropropene		1	ug/L	U	7/25/97
SJS02-GW2D-001	VCLOW	Trichloroethene		1	ug/L	U	7/25/97
SJS02-GW2D-001	VCLOW	Vinyl Chloride		1	ug/L	U	7/25/97
SJS02-GW2D-001F	METAL	Aluminum		44	ug/L	U	7/28/97
SJS02-GW2D-001F	METAL	Antimony	3	1	ug/L	J	7/29/97
SJS02-GW2D-001F	METAL	Arsenic	4.4	3	ug/L	J	7/29/97
SJS02-GW2D-001F	METAL	Barium	18.3	1	ug/L	B	7/28/97
SJS02-GW2D-001F	METAL	Beryllium		1	ug/L	U	7/28/97
SJS02-GW2D-001F	METAL	Cadmium		0.5	ug/L	U	7/29/97
SJS02-GW2D-001F	METAL	Calcium	49300	46	ug/L		7/28/97
SJS02-GW2D-001F	METAL	Chromium		7	ug/L	U	7/28/97
SJS02-GW2D-001F	METAL	Cobalt		8	ug/L	U	7/28/97
SJS02-GW2D-001F	METAL	Copper		6	ug/L	U	7/28/97
SJS02-GW2D-001F	METAL	Iron	45.3	5	ug/L	B	7/28/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS02-GW2D-001F	METAL	Lead	1.5	1	ug/L	B	7/29/
SJS02-GW2D-001F	METAL	Magnesium	13200	45	ug/L		7/28
SJS02-GW2D-001F	METAL	Manganese	43.9	1	ug/L	B	7/28
SJS02-GW2D-001F	METAL	Mercury		0.12	ug/L	U	7/29/97
SJS02-GW2D-001F	METAL	Nickel		7	ug/L	U	7/28/97
SJS02-GW2D-001F	METAL	Potassium	8800	97	ug/L	B	7/28/97
SJS02-GW2D-001F	METAL	Selenium		3	ug/L	U	7/29/97
SJS02-GW2D-001F	METAL	Silver	3.2	3	ug/L	B	7/29/97
SJS02-GW2D-001F	METAL	Sodium	19600	28	ug/L		7/28/97
SJS02-GW2D-001F	METAL	Thallium		2	ug/L	U	7/29/97
SJS02-GW2D-001F	METAL	Vanadium		9	ug/L	U	7/28/97
SJS02-GW2D-001F	METAL	Zinc	11.1	3	ug/L	B	7/28/97
SJS02-GW2D-002	CTOTP	Total Phosphorous (as P)	1.8	0.25	mg/L		11/19/97
SJS02-GW2D-002	MCYAN	Aluminum		38.1	ug/L	U	11/27/97
SJS02-GW2D-002	MCYAN	Antimony		1.7	ug/L	U	11/21/97
SJS02-GW2D-002	MCYAN	Arsenic		3.2	ug/L	U	11/21/97
SJS02-GW2D-002	MCYAN	Barium	22.7	1	ug/L	B	11/27/97
SJS02-GW2D-002	MCYAN	Beryllium		0.58	ug/L	U	11/27/97
SJS02-GW2D-002	MCYAN	Cadmium		0.4	ug/L	U	11/21/97
SJS02-GW2D-002	MCYAN	Calcium	49900	46	ug/L		11/27/97
SJS02-GW2D-002	MCYAN	Chromium		4.6	ug/L	U	11/27/97
SJS02-GW2D-002	MCYAN	Cobalt		6	ug/L	U	11/27/97
SJS02-GW2D-002	MCYAN	Copper		5.8	ug/L	U	11/27/97
SJS02-GW2D-002	MCYAN	Cyanide		5	ug/L	U	11/18/97
SJS02-GW2D-002	MCYAN	Iron	876	5	ug/L		11/27/97
SJS02-GW2D-002	MCYAN	Lead		1.3	ug/L	U	11/21/97
SJS02-GW2D-002	MCYAN	Magnesium	20200	45	ug/L		11/27/97
SJS02-GW2D-002	MCYAN	Manganese	228	1	ug/L		11/27/97
SJS02-GW2D-002	MCYAN	Mercury		0.13	ug/L	U	11/19/97
SJS02-GW2D-002	MCYAN	Nickel		6.3	ug/L	U	11/27/
SJS02-GW2D-002	MCYAN	Potassium	11600	97	ug/L		11/27/
SJS02-GW2D-002	MCYAN	Selenium		3.3	ug/L	U	11/21/
SJS02-GW2D-002	MCYAN	Silver	2	3	ug/L	B	11/21/97
SJS02-GW2D-002	MCYAN	Sodium	18300	28	ug/L		11/27/97
SJS02-GW2D-002	MCYAN	Thallium		1.5	ug/L	U	11/21/97
SJS02-GW2D-002	MCYAN	Vanadium		6.8	ug/L	U	11/27/97
SJS02-GW2D-002	MCYAN	Zinc	23.6	3	ug/L	B	11/27/97
SJS02-GW2D-002	PSPCB	4,4'-DDD		0.1	ug/L	U	11/21/97
SJS02-GW2D-002	PSPCB	4,4'-DDE		0.1	ug/L	U	11/21/97
SJS02-GW2D-002	PSPCB	4,4'-DDT		0.1	ug/L	U	11/21/97
SJS02-GW2D-002	PSPCB	Aldrin		0.05	ug/L	U	11/21/97
SJS02-GW2D-002	PSPCB	alpha-BHC		0.05	ug/L	U	11/21/97
SJS02-GW2D-002	PSPCB	alpha-Chlordane		0.05	ug/L	U	11/21/97
SJS02-GW2D-002	PSPCB	Aroclor-1016		1	ug/L	U	11/21/97
SJS02-GW2D-002	PSPCB	Aroclor-1221		2	ug/L	U	11/21/97
SJS02-GW2D-002	PSPCB	Aroclor-1232		1	ug/L	U	11/21/97
SJS02-GW2D-002	PSPCB	Aroclor-1242		1	ug/L	U	11/21/97
SJS02-GW2D-002	PSPCB	Aroclor-1248		1	ug/L	U	11/21/97
SJS02-GW2D-002	PSPCB	Aroclor-1254		1	ug/L	U	11/21/97
SJS02-GW2D-002	PSPCB	Aroclor-1260		1	ug/L	U	11/21/97
SJS02-GW2D-002	PSPCB	beta-BHC		0.05	ug/L	U	11/21/97
SJS02-GW2D-002	PSPCB	delta-BHC		0.05	ug/L	U	11/21/97
SJS02-GW2D-002	PSPCB	Dieldrin		0.1	ug/L	U	11/21/97
SJS02-GW2D-002	PSPCB	Endosulfan I		0.05	ug/L	U	11/21/97
SJS02-GW2D-002	PSPCB	Endosulfan II		0.1	ug/L	U	11/21/97
SJS02-GW2D-002	PSPCB	Endosulfan Sulfate		0.1	ug/L	U	11/21/97
SJS02-GW2D-002	PSPCB	Endrin		0.1	ug/L	U	11/21/97
SJS02-GW2D-002	PSPCB	Endrin Aldehyde		0.1	ug/L	U	11/21/97
SJS02-GW2D-002	PSPCB	Endrin Ketone		0.1	ug/L	U	11/21/
SJS02-GW2D-002	PSPCB	gamma-BHC		0.05	ug/L	U	11/21/

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS02-GW2D-002	PSPCB	gamma-Chlordane		0.05	ug/L	U	11/21/97
SJS02-GW2D-002	PSPCB	Heptachlor		0.05	ug/L	U	11/21/97
SJS02-GW2D-002	PSPCB	Heptachlor Epoxide		0.05	ug/L	U	11/21/97
SJS02-GW2D-002	PSPCB	Methoxychlor		0.5	ug/L	U	11/21/97
SJS02-GW2D-002	PSPCB	Toxaphene		5	ug/L	U	11/21/97
SJS02-GW2D-002	SVTCL	1,2,4-Trichlorobenzene		10	ug/L	U	11/19/97
SJS02-GW2D-002	SVTCL	1,2-Dichlorobenzene		10	ug/L	U	11/19/97
SJS02-GW2D-002	SVTCL	1,3-Dichlorobenzene		10	ug/L	U	11/19/97
SJS02-GW2D-002	SVTCL	1,4-Dichlorobenzene		10	ug/L	U	11/19/97
SJS02-GW2D-002	SVTCL	2,2'-oxybis(1-Chloropropan		10	ug/L	U	11/19/97
SJS02-GW2D-002	SVTCL	2,4,5-Trichlorophenol		25	ug/L	U	11/19/97
SJS02-GW2D-002	SVTCL	2,4,6-Trichlorophenol		10	ug/L	U	11/19/97
SJS02-GW2D-002	SVTCL	2,4-Dichlorophenol		10	ug/L	U	11/19/97
SJS02-GW2D-002	SVTCL	2,4-Dimethylphenol		10	ug/L	U	11/19/97
SJS02-GW2D-002	SVTCL	2,4-Dinitrophenol		25	ug/L	U	11/19/97
SJS02-GW2D-002	SVTCL	2,4-Dinitrotoluene		10	ug/L	U	11/19/97
SJS02-GW2D-002	SVTCL	2,6-Dinitrotoluene		10	ug/L	U	11/19/97
SJS02-GW2D-002	SVTCL	2-Chloronaphthalene		10	ug/L	U	11/19/97
SJS02-GW2D-002	SVTCL	2-Chlorophenol		10	ug/L	U	11/19/97
SJS02-GW2D-002	SVTCL	2-Methylnaphthalene		10	ug/L	U	11/19/97
SJS02-GW2D-002	SVTCL	2-Methylphenol		10	ug/L	U	11/19/97
SJS02-GW2D-002	SVTCL	2-Nitroaniline		25	ug/L	U	11/19/97
SJS02-GW2D-002	SVTCL	2-Nitrophenol		10	ug/L	U	11/19/97
SJS02-GW2D-002	SVTCL	3,3'-Dichlorobenzidine		10	ug/L	U	11/19/97
SJS02-GW2D-002	SVTCL	3-Nitroaniline		25	ug/L	U	11/19/97
SJS02-GW2D-002	SVTCL	4,6-Dinitro-2-Methylphenol		25	ug/L	U	11/19/97
SJS02-GW2D-002	SVTCL	4-Bromophenol-phenylethe		10	ug/L	U	11/19/97
SJS02-GW2D-002	SVTCL	4-Chloro-3-Methylphenol		10	ug/L	U	11/19/97
SJS02-GW2D-002	SVTCL	4-Chloroaniline		10	ug/L	U	11/19/97
SJS02-GW2D-002	SVTCL	4-Chlorophenyl-phenylethe		10	ug/L	U	11/19/97
SJS02-GW2D-002	SVTCL	4-Methylphenol		10	ug/L	U	11/19/97
SJS02-GW2D-002	SVTCL	4-Nitroaniline		25	ug/L	U	11/19/97
SJS02-GW2D-002	SVTCL	4-Nitrophenol		25	ug/L	U	11/19/97
SJS02-GW2D-002	SVTCL	Acenaphthene		10	ug/L	U	11/19/97
SJS02-GW2D-002	SVTCL	Acenaphthylene		10	ug/L	U	11/19/97
SJS02-GW2D-002	SVTCL	Anthracene		10	ug/L	U	11/19/97
SJS02-GW2D-002	SVTCL	Benzo(a)anthracene		10	ug/L	U	11/19/97
SJS02-GW2D-002	SVTCL	Benzo(a)pyrene		10	ug/L	U	11/19/97
SJS02-GW2D-002	SVTCL	Benzo(b)fluoranthene		10	ug/L	U	11/19/97
SJS02-GW2D-002	SVTCL	Benzo(g,h,i)perylene		10	ug/L	U	11/19/97
SJS02-GW2D-002	SVTCL	Benzo(k)fluoranthene		10	ug/L	U	11/19/97
SJS02-GW2D-002	SVTCL	bis(2-Chloroethoxy)methan		10	ug/L	U	11/19/97
SJS02-GW2D-002	SVTCL	bis(2-chloroethyl)ether		10	ug/L	U	11/19/97
SJS02-GW2D-002	SVTCL	bis(2-Ethylhexyl)phthalate	5	10	ug/L	B	11/19/97
SJS02-GW2D-002	SVTCL	Butylbenzylphthalate		10	ug/L	U	11/19/97
SJS02-GW2D-002	SVTCL	Carbazole		10	ug/L	U	11/19/97
SJS02-GW2D-002	SVTCL	Chrysene		10	ug/L	U	11/19/97
SJS02-GW2D-002	SVTCL	Di-n-butylphthalate		10	ug/L	U	11/19/97
SJS02-GW2D-002	SVTCL	Di-n-Octyl Phthalate		10	ug/L	U	11/19/97
SJS02-GW2D-002	SVTCL	Dibenzo(a,h)anthracene		10	ug/L	U	11/19/97
SJS02-GW2D-002	SVTCL	Dibenzofuran		10	ug/L	U	11/19/97
SJS02-GW2D-002	SVTCL	Diethylphthalate		10	ug/L	U	11/19/97
SJS02-GW2D-002	SVTCL	Dimethyl Phthalate		10	ug/L	U	11/19/97
SJS02-GW2D-002	SVTCL	Fluoranthene		10	ug/L	U	11/19/97
SJS02-GW2D-002	SVTCL	Fluorene		10	ug/L	U	11/19/97
SJS02-GW2D-002	SVTCL	Hexachlorobenzene		10	ug/L	U	11/19/97
SJS02-GW2D-002	SVTCL	Hexachlorobutadiene		10	ug/L	U	11/19/97
SJS02-GW2D-002	SVTCL	Hexachlorocyclopentadien		10	ug/L	U	11/19/97
SJS02-GW2D-002	SVTCL	Hexachloroethane		10	ug/L	U	11/19/97
SJS02-GW2D-002	SVTCL	Indeno(1,2,3-cd)pyrene		10	ug/L	U	11/19/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS02-GW2D-002	SVTCL	Isophorone		10	ug/L	U	11/19/97
SJS02-GW2D-002	SVTCL	N-Nitroso-Di-n-Propylamine		10	ug/L	U	11/19/
SJS02-GW2D-002	SVTCL	N-Nitrosodiphenylamine		10	ug/L	U	11/19/
SJS02-GW2D-002	SVTCL	Naphthalene		10	ug/L	U	11/19/97
SJS02-GW2D-002	SVTCL	Nitrobenzene		10	ug/L	U	11/19/97
SJS02-GW2D-002	SVTCL	Pentachlorophenol		25	ug/L	U	11/19/97
SJS02-GW2D-002	SVTCL	Phenanthrene		10	ug/L	U	11/19/97
SJS02-GW2D-002	SVTCL	Phenol		10	ug/L	U	11/19/97
SJS02-GW2D-002	SVTCL	Pyrene		10	ug/L	U	11/19/97
SJS02-GW2D-002	VCLOW	1,1,1-Trichloroethane		1	ug/L	U	11/12/97
SJS02-GW2D-002	VCLOW	1,1,2,2-Tetrachloroethane		1	ug/L	U	11/12/97
SJS02-GW2D-002	VCLOW	1,1,2-Trichloroethane		1	ug/L	U	11/12/97
SJS02-GW2D-002	VCLOW	1,1-Dichloroethane		1	ug/L	U	11/12/97
SJS02-GW2D-002	VCLOW	1,1-Dichloroethene		1	ug/L	U	11/12/97
SJS02-GW2D-002	VCLOW	1,2,4-Trichlorobenzene		1	ug/L	U	11/12/97
SJS02-GW2D-002	VCLOW	1,2-Dibromo-3-chloropropa		1	ug/L	U	11/12/97
SJS02-GW2D-002	VCLOW	1,2-Dibromoethane		1	ug/L	U	11/12/97
SJS02-GW2D-002	VCLOW	1,2-Dichlorobenzene		1	ug/L	U	11/12/97
SJS02-GW2D-002	VCLOW	1,2-Dichloroethane		1	ug/L	U	11/12/97
SJS02-GW2D-002	VCLOW	1,2-Dichloropropane		1	ug/L	U	11/12/97
SJS02-GW2D-002	VCLOW	1,3-Dichlorobenzene		1	ug/L	U	11/12/97
SJS02-GW2D-002	VCLOW	1,4-Dichlorobenzene		1	ug/L	U	11/12/97
SJS02-GW2D-002	VCLOW	2-Hexanone		5	ug/L	U	11/12/97
SJS02-GW2D-002	VCLOW	4-Methyl-2-Pentanone		5	ug/L	U	11/12/97
SJS02-GW2D-002	VCLOW	Benzene		1	ug/L	U	11/12/97
SJS02-GW2D-002	VCLOW	Bromochloromethane		1	ug/L	U	11/12/97
SJS02-GW2D-002	VCLOW	Bromodichloromethane		1	ug/L	U	11/12/97
SJS02-GW2D-002	VCLOW	Bromoform		1	ug/L	U	11/12/97
SJS02-GW2D-002	VCLOW	Bromomethane		1	ug/L	U	11/12/97
SJS02-GW2D-002	VCLOW	Carbon Disulfide		1	ug/L	U	11/12/97
SJS02-GW2D-002	VCLOW	Carbon Tetrachloride		1	ug/L	U	11/12/
SJS02-GW2D-002	VCLOW	Chlorobenzene		1	ug/L	U	11/12/
SJS02-GW2D-002	VCLOW	Chloroethane		1	ug/L	U	11/12/97
SJS02-GW2D-002	VCLOW	Chloroform		1	ug/L	U	11/12/97
SJS02-GW2D-002	VCLOW	Chloromethane		1	ug/L	U	11/12/97
SJS02-GW2D-002	VCLOW	cis-1,2-Dichloroethene		1	ug/L	U	11/12/97
SJS02-GW2D-002	VCLOW	cis-1,3-Dichloropropene		1	ug/L	U	11/12/97
SJS02-GW2D-002	VCLOW	Dibromochloromethane		1	ug/L	U	11/12/97
SJS02-GW2D-002	VCLOW	Ethylbenzene		1	ug/L	U	11/12/97
SJS02-GW2D-002	VCLOW	Methylene Chloride	2	2	ug/L	B	11/12/97
SJS02-GW2D-002	VCLOW	Styrene		1	ug/L	U	11/12/97
SJS02-GW2D-002	VCLOW	Tetrachloroethene		1	ug/L	U	11/12/97
SJS02-GW2D-002	VCLOW	Toluene		1	ug/L	U	11/12/97
SJS02-GW2D-002	VCLOW	Total Xylenes		1	ug/L	U	11/12/97
SJS02-GW2D-002	VCLOW	Trans-1,2-Dichloroethene		1	ug/L	U	11/12/97
SJS02-GW2D-002	VCLOW	trans-1,3-Dichloropropene		1	ug/L	U	11/12/97
SJS02-GW2D-002	VCLOW	Trichloroethene		1	ug/L	U	11/12/97
SJS02-GW2D-002	VCLOW	Vinyl Chloride		1	ug/L	U	11/12/97
SJS02-GW2D-002F	METAL	Aluminum		38.1	ug/L	U	11/27/97
SJS02-GW2D-002F	METAL	Antimony		1.7	ug/L	U	11/21/97
SJS02-GW2D-002F	METAL	Arsenic		3.2	ug/L	U	11/21/97
SJS02-GW2D-002F	METAL	Barium	19.2	1	ug/L	B	11/27/97
SJS02-GW2D-002F	METAL	Beryllium		0.58	ug/L	U	11/27/97
SJS02-GW2D-002F	METAL	Cadmium		0.4	ug/L	U	11/21/97
SJS02-GW2D-002F	METAL	Calcium	45600	46	ug/L		11/27/97
SJS02-GW2D-002F	METAL	Chromium		4.6	ug/L	U	11/27/97
SJS02-GW2D-002F	METAL	Cobalt		6	ug/L	U	11/27/97
SJS02-GW2D-002F	METAL	Copper		5.8	ug/L	U	11/27/97
SJS02-GW2D-002F	METAL	Iron	715	5	ug/L		11/27/97
SJS02-GW2D-002F	METAL	Lead		1.3	ug/L	U	11/21/

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS02-GW2D-002F	METAL	Magnesium	18100	45	ug/L		11/27/97
SJS02-GW2D-002F	METAL	Manganese	207	1	ug/L		11/27/97
SJS02-GW2D-002F	METAL	Mercury		0.13	ug/L	U	11/19/97
SJS02-GW2D-002F	METAL	Nickel		6.3	ug/L	U	11/27/97
SJS02-GW2D-002F	METAL	Potassium	10300	97	ug/L		11/27/97
SJS02-GW2D-002F	METAL	Selenium		3.3	ug/L	U	11/21/97
SJS02-GW2D-002F	METAL	Silver	2.6	3	ug/L	B	11/21/97
SJS02-GW2D-002F	METAL	Sodium	16600	28	ug/L		11/27/97
SJS02-GW2D-002F	METAL	Thallium		1.5	ug/L	U	11/21/97
SJS02-GW2D-002F	METAL	Vanadium		6.8	ug/L	U	11/27/97
SJS02-GW2D-002F	METAL	Zinc	10.7	3	ug/L	B	11/27/97
SJS02-GW2D-002FP	METAL	Aluminum		38.1	ug/L	U	11/27/97
SJS02-GW2D-002FP	METAL	Antimony		1.7	ug/L	U	11/21/97
SJS02-GW2D-002FP	METAL	Arsenic		3.2	ug/L	U	11/21/97
SJS02-GW2D-002FP	METAL	Barium	19.5	1	ug/L	B	11/27/97
SJS02-GW2D-002FP	METAL	Beryllium		0.58	ug/L	U	11/27/97
SJS02-GW2D-002FP	METAL	Cadmium		0.4	ug/L	U	11/21/97
SJS02-GW2D-002FP	METAL	Calcium	44100	46	ug/L		11/27/97
SJS02-GW2D-002FP	METAL	Chromium		4.6	ug/L	U	11/27/97
SJS02-GW2D-002FP	METAL	Cobalt		6	ug/L	U	11/27/97
SJS02-GW2D-002FP	METAL	Copper		5.8	ug/L	U	11/27/97
SJS02-GW2D-002FP	METAL	Iron	599	5	ug/L		11/27/97
SJS02-GW2D-002FP	METAL	Lead		1.3	ug/L	U	11/21/97
SJS02-GW2D-002FP	METAL	Magnesium	18500	45	ug/L		11/27/97
SJS02-GW2D-002FP	METAL	Manganese	200	1	ug/L		11/27/97
SJS02-GW2D-002FP	METAL	Mercury		0.13	ug/L	U	11/19/97
SJS02-GW2D-002FP	METAL	Nickel		6.3	ug/L	U	11/27/97
SJS02-GW2D-002FP	METAL	Potassium	10400	97	ug/L		11/27/97
SJS02-GW2D-002FP	METAL	Selenium		3.3	ug/L	U	11/21/97
SJS02-GW2D-002FP	METAL	Silver		1.1	ug/L	B	11/21/97
SJS02-GW2D-002FP	METAL	Sodium	16200	28	ug/L		11/27/97
SJS02-GW2D-002FP	METAL	Thallium	2.2	2	ug/L	B	11/21/97
SJS02-GW2D-002FP	METAL	Vanadium		6.8	ug/L	U	11/27/97
SJS02-GW2D-002FP	METAL	Zinc	20.4	3	ug/L	B	11/27/97
SJS02-GW2D-002P	CTOTP	Total Phosphorous (as P)	2.14	0.42	mg/L		11/19/97
SJS02-GW2D-002P	MCYAN	Aluminum		38.1	ug/L	U	11/27/97
SJS02-GW2D-002P	MCYAN	Antimony		1.7	ug/L	U	11/21/97
SJS02-GW2D-002P	MCYAN	Arsenic		3.2	ug/L	U	11/21/97
SJS02-GW2D-002P	MCYAN	Barium	23	1	ug/L	B	11/27/97
SJS02-GW2D-002P	MCYAN	Beryllium		0.58	ug/L	U	11/27/97
SJS02-GW2D-002P	MCYAN	Cadmium		0.4	ug/L	U	11/21/97
SJS02-GW2D-002P	MCYAN	Calcium	47900	46	ug/L		11/27/97
SJS02-GW2D-002P	MCYAN	Chromium		4.6	ug/L	U	11/27/97
SJS02-GW2D-002P	MCYAN	Cobalt		6	ug/L	U	11/27/97
SJS02-GW2D-002P	MCYAN	Copper		5.8	ug/L	U	11/27/97
SJS02-GW2D-002P	MCYAN	Cyanide		5	ug/L	U	11/18/97
SJS02-GW2D-002P	MCYAN	Iron	786	5	ug/L		11/27/97
SJS02-GW2D-002P	MCYAN	Lead		1.3	ug/L	U	11/21/97
SJS02-GW2D-002P	MCYAN	Magnesium	19900	45	ug/L		11/27/97
SJS02-GW2D-002P	MCYAN	Manganese	221	1	ug/L		11/27/97
SJS02-GW2D-002P	MCYAN	Mercury		0.13	ug/L	U	11/19/97
SJS02-GW2D-002P	MCYAN	Nickel		6.3	ug/L	U	11/27/97
SJS02-GW2D-002P	MCYAN	Potassium	11300	97	ug/L		11/27/97
SJS02-GW2D-002P	MCYAN	Selenium		3.3	ug/L	U	11/21/97
SJS02-GW2D-002P	MCYAN	Silver	3.1	3	ug/L	B	11/21/97
SJS02-GW2D-002P	MCYAN	Sodium	17800	28	ug/L		11/27/97
SJS02-GW2D-002P	MCYAN	Thallium	2.3	2	ug/L	B	11/21/97
SJS02-GW2D-002P	MCYAN	Vanadium		6.8	ug/L	U	11/27/97
SJS02-GW2D-002P	MCYAN	Zinc	18.8	3	ug/L	B	11/27/97
SJS02-GW2D-002P	PSPCB	4,4'-DDD		0.1	ug/L	U	11/21/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS02-GW2D-002P	PSPCB	4,4'-DDE		0.1	ug/L	U	11/21/
SJS02-GW2D-002P	PSPCB	4,4'-DDT		0.1	ug/L	U	11/21
SJS02-GW2D-002P	PSPCB	Aldrin		0.05	ug/L	U	11/21/
SJS02-GW2D-002P	PSPCB	alpha-BHC		0.05	ug/L	U	11/21/97
SJS02-GW2D-002P	PSPCB	alpha-Chlordane		0.05	ug/L	U	11/21/97
SJS02-GW2D-002P	PSPCB	Aroclor-1016		1	ug/L	U	11/21/97
SJS02-GW2D-002P	PSPCB	Aroclor-1221		2	ug/L	U	11/21/97
SJS02-GW2D-002P	PSPCB	Aroclor-1232		1	ug/L	U	11/21/97
SJS02-GW2D-002P	PSPCB	Aroclor-1242		1	ug/L	U	11/21/97
SJS02-GW2D-002P	PSPCB	Aroclor-1248		1	ug/L	U	11/21/97
SJS02-GW2D-002P	PSPCB	Aroclor-1254		1	ug/L	U	11/21/97
SJS02-GW2D-002P	PSPCB	Aroclor-1260		1	ug/L	U	11/21/97
SJS02-GW2D-002P	PSPCB	beta-BHC		0.05	ug/L	U	11/21/97
SJS02-GW2D-002P	PSPCB	delta-BHC		0.05	ug/L	U	11/21/97
SJS02-GW2D-002P	PSPCB	Dieldrin		0.1	ug/L	U	11/21/97
SJS02-GW2D-002P	PSPCB	Endosulfan I		0.05	ug/L	U	11/21/97
SJS02-GW2D-002P	PSPCB	Endosulfan II		0.1	ug/L	U	11/21/97
SJS02-GW2D-002P	PSPCB	Endosulfan Sulfate		0.1	ug/L	U	11/21/97
SJS02-GW2D-002P	PSPCB	Endrin		0.1	ug/L	U	11/21/97
SJS02-GW2D-002P	PSPCB	Endrin Aldehyde		0.1	ug/L	U	11/21/97
SJS02-GW2D-002P	PSPCB	Endrin Ketone		0.1	ug/L	U	11/21/97
SJS02-GW2D-002P	PSPCB	gamma-BHC		0.05	ug/L	U	11/21/97
SJS02-GW2D-002P	PSPCB	gamma-Chlordane		0.05	ug/L	U	11/21/97
SJS02-GW2D-002P	PSPCB	Heptachlor		0.05	ug/L	U	11/21/97
SJS02-GW2D-002P	PSPCB	Heptachlor Epoxide		0.05	ug/L	U	11/21/97
SJS02-GW2D-002P	PSPCB	Methoxychlor		0.5	ug/L	U	11/21/97
SJS02-GW2D-002P	PSPCB	Toxaphene		5	ug/L	U	11/21/97
SJS02-GW2D-002P	SVTCL	1,2,4-Trichlorobenzene		10	ug/L	U	11/19/97
SJS02-GW2D-002P	SVTCL	1,2-Dichlorobenzene		10	ug/L	U	11/19/97
SJS02-GW2D-002P	SVTCL	1,3-Dichlorobenzene		10	ug/L	U	11/19/
SJS02-GW2D-002P	SVTCL	1,4-Dichlorobenzene		10	ug/L	U	11/19/
SJS02-GW2D-002P	SVTCL	2,2'-oxybis(1-Chloropropan		10	ug/L	U	11/19/97
SJS02-GW2D-002P	SVTCL	2,4,5-Trichlorophenol		25	ug/L	U	11/19/97
SJS02-GW2D-002P	SVTCL	2,4,6-Trichlorophenol		10	ug/L	U	11/19/97
SJS02-GW2D-002P	SVTCL	2,4-Dichlorophenol		10	ug/L	U	11/19/97
SJS02-GW2D-002P	SVTCL	2,4-Dimethylphenol		10	ug/L	U	11/19/97
SJS02-GW2D-002P	SVTCL	2,4-Dinitrophenol		25	ug/L	U	11/19/97
SJS02-GW2D-002P	SVTCL	2,4-Dinitrotoluene		10	ug/L	U	11/19/97
SJS02-GW2D-002P	SVTCL	2,6-Dinitrotoluene		10	ug/L	U	11/19/97
SJS02-GW2D-002P	SVTCL	2-Chloronaphthalene		10	ug/L	U	11/19/97
SJS02-GW2D-002P	SVTCL	2-Chlorophenol		10	ug/L	U	11/19/97
SJS02-GW2D-002P	SVTCL	2-Methylnaphthalene		10	ug/L	U	11/19/97
SJS02-GW2D-002P	SVTCL	2-Methylphenol		10	ug/L	U	11/19/97
SJS02-GW2D-002P	SVTCL	2-Nitroaniline		25	ug/L	U	11/19/97
SJS02-GW2D-002P	SVTCL	2-Nitrophenol		10	ug/L	U	11/19/97
SJS02-GW2D-002P	SVTCL	3,3'-Dichlorobenzidine		10	ug/L	U	11/19/97
SJS02-GW2D-002P	SVTCL	3-Nitroaniline		25	ug/L	U	11/19/97
SJS02-GW2D-002P	SVTCL	4,6-Dinitro-2-Methylphenol		25	ug/L	U	11/19/97
SJS02-GW2D-002P	SVTCL	4-Bromophenol-phenylethe		10	ug/L	U	11/19/97
SJS02-GW2D-002P	SVTCL	4-Chloro-3-Methylphenol		10	ug/L	U	11/19/97
SJS02-GW2D-002P	SVTCL	4-Chloroaniline		10	ug/L	U	11/19/97
SJS02-GW2D-002P	SVTCL	4-Chlorophenyl-phenylethe		10	ug/L	U	11/19/97
SJS02-GW2D-002P	SVTCL	4-Methylphenol		10	ug/L	U	11/19/97
SJS02-GW2D-002P	SVTCL	4-Nitroaniline		25	ug/L	U	11/19/97
SJS02-GW2D-002P	SVTCL	4-Nitrophenol		25	ug/L	U	11/19/97
SJS02-GW2D-002P	SVTCL	Acenaphthene		10	ug/L	U	11/19/97
SJS02-GW2D-002P	SVTCL	Acenaphthylene		10	ug/L	U	11/19/97
SJS02-GW2D-002P	SVTCL	Anthracene		10	ug/L	U	11/19/97
SJS02-GW2D-002P	SVTCL	Benzo(a)anthracene		10	ug/L	U	11/19/
SJS02-GW2D-002P	SVTCL	Benzo(a)pyrene		10	ug/L	U	11/19/

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS02-GW2D-002P	SVTCL	Benzo(b)fluoranthene		10	ug/L	U	11/19/97
SJS02-GW2D-002P	SVTCL	Benzo(g,h,i)perylene		10	ug/L	U	11/19/97
SJS02-GW2D-002P	SVTCL	Benzo(k)fluoranthene		10	ug/L	U	11/19/97
SJS02-GW2D-002P	SVTCL	bis(2-Chloroethoxy)methan		10	ug/L	U	11/19/97
SJS02-GW2D-002P	SVTCL	bis(2-chloroethyl)ether		10	ug/L	U	11/19/97
SJS02-GW2D-002P	SVTCL	bis(2-Ethylhexyl)phthalate		10	ug/L	U	11/19/97
SJS02-GW2D-002P	SVTCL	Butylbenzylphthalate		10	ug/L	U	11/19/97
SJS02-GW2D-002P	SVTCL	Carbazole		10	ug/L	U	11/19/97
SJS02-GW2D-002P	SVTCL	Chrysene		10	ug/L	U	11/19/97
SJS02-GW2D-002P	SVTCL	Di-n-butylphthalate		10	ug/L	U	11/19/97
SJS02-GW2D-002P	SVTCL	Di-n-Octyl Phthalate		10	ug/L	U	11/19/97
SJS02-GW2D-002P	SVTCL	Dibenzo(a,h)anthracene		10	ug/L	U	11/19/97
SJS02-GW2D-002P	SVTCL	Dibenzofuran		10	ug/L	U	11/19/97
SJS02-GW2D-002P	SVTCL	Diethylphthalate		10	ug/L	U	11/19/97
SJS02-GW2D-002P	SVTCL	Dimethyl Phthalate		10	ug/L	U	11/19/97
SJS02-GW2D-002P	SVTCL	Fluoranthene		10	ug/L	U	11/19/97
SJS02-GW2D-002P	SVTCL	Fluorene		10	ug/L	U	11/19/97
SJS02-GW2D-002P	SVTCL	Hexachlorobenzene		10	ug/L	U	11/19/97
SJS02-GW2D-002P	SVTCL	Hexachlorobutadiene		10	ug/L	U	11/19/97
SJS02-GW2D-002P	SVTCL	Hexachlorocyclopentadien		10	ug/L	U	11/19/97
SJS02-GW2D-002P	SVTCL	Hexachloroethane		10	ug/L	U	11/19/97
SJS02-GW2D-002P	SVTCL	Indeno(1,2,3-cd)pyrene		10	ug/L	U	11/19/97
SJS02-GW2D-002P	SVTCL	Isophorone		10	ug/L	U	11/19/97
SJS02-GW2D-002P	SVTCL	N-Nitroso-Di-n-Propylamine		10	ug/L	U	11/19/97
SJS02-GW2D-002P	SVTCL	N-Nitrosodiphenylamine		10	ug/L	U	11/19/97
SJS02-GW2D-002P	SVTCL	Naphthalene		10	ug/L	U	11/19/97
SJS02-GW2D-002P	SVTCL	Nitrobenzene		10	ug/L	U	11/19/97
SJS02-GW2D-002P	SVTCL	Pentachlorophenol		25	ug/L	U	11/19/97
SJS02-GW2D-002P	SVTCL	Phenanthrene		10	ug/L	U	11/19/97
SJS02-GW2D-002P	SVTCL	Phenol		10	ug/L	U	11/19/97
SJS02-GW2D-002P	SVTCL	Pyrene		10	ug/L	U	11/19/97
SJS02-GW2D-002P	VCLOW	1,1,1-Trichloroethane		1	ug/L	U	11/12/97
SJS02-GW2D-002P	VCLOW	1,1,2,2-Tetrachloroethane		1	ug/L	U	11/12/97
SJS02-GW2D-002P	VCLOW	1,1,2-Trichloroethane		1	ug/L	U	11/12/97
SJS02-GW2D-002P	VCLOW	1,1-Dichloroethane		1	ug/L	U	11/12/97
SJS02-GW2D-002P	VCLOW	1,1-Dichloroethene		1	ug/L	U	11/12/97
SJS02-GW2D-002P	VCLOW	1,2,4-Trichlorobenzene		1	ug/L	U	11/12/97
SJS02-GW2D-002P	VCLOW	1,2-Dibromo-3-chloropropa		1	ug/L	U	11/12/97
SJS02-GW2D-002P	VCLOW	1,2-Dibromoethane		1	ug/L	U	11/12/97
SJS02-GW2D-002P	VCLOW	1,2-Dichlorobenzene		1	ug/L	U	11/12/97
SJS02-GW2D-002P	VCLOW	1,2-Dichloroethane		1	ug/L	U	11/12/97
SJS02-GW2D-002P	VCLOW	1,2-Dichloropropane		1	ug/L	U	11/12/97
SJS02-GW2D-002P	VCLOW	1,3-Dichlorobenzene		1	ug/L	U	11/12/97
SJS02-GW2D-002P	VCLOW	1,4-Dichlorobenzene		1	ug/L	U	11/12/97
SJS02-GW2D-002P	VCLOW	2-Hexanone		5	ug/L	U	11/12/97
SJS02-GW2D-002P	VCLOW	4-Methyl-2-Pentanone		5	ug/L	U	11/12/97
SJS02-GW2D-002P	VCLOW	Benzene		1	ug/L	U	11/12/97
SJS02-GW2D-002P	VCLOW	Bromochloromethane		1	ug/L	U	11/12/97
SJS02-GW2D-002P	VCLOW	Bromodichloromethane		1	ug/L	U	11/12/97
SJS02-GW2D-002P	VCLOW	Bromoform		1	ug/L	U	11/12/97
SJS02-GW2D-002P	VCLOW	Bromomethane		1	ug/L	U	11/12/97
SJS02-GW2D-002P	VCLOW	Carbon Disulfide		1	ug/L	U	11/12/97
SJS02-GW2D-002P	VCLOW	Carbon Tetrachloride		1	ug/L	U	11/12/97
SJS02-GW2D-002P	VCLOW	Chlorobenzene		1	ug/L	U	11/12/97
SJS02-GW2D-002P	VCLOW	Chloroethane		1	ug/L	U	11/12/97
SJS02-GW2D-002P	VCLOW	Chloroform		1	ug/L	U	11/12/97
SJS02-GW2D-002P	VCLOW	Chloromethane		1	ug/L	U	11/12/97
SJS02-GW2D-002P	VCLOW	cis-1,2-Dichloroethene		1	ug/L	U	11/12/97
SJS02-GW2D-002P	VCLOW	cis-1,3-Dichloropropene		1	ug/L	U	11/12/97
SJS02-GW2D-002P	VCLOW	Dibromochloromethane		1	ug/L	U	11/12/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS02-GW2D-002P	VCLOW	Ethylbenzene		1	ug/L	U	11/12/9
SJS02-GW2D-002P	VCLOW	Methylene Chloride	2	2	ug/L	B	11/12
SJS02-GW2D-002P	VCLOW	Styrene		1	ug/L	U	11/12/
SJS02-GW2D-002P	VCLOW	Tetrachloroethene		1	ug/L	U	11/12/97
SJS02-GW2D-002P	VCLOW	Toluene		1	ug/L	U	11/12/97
SJS02-GW2D-002P	VCLOW	Total Xylenes		1	ug/L	U	11/12/97
SJS02-GW2D-002P	VCLOW	Trans-1,2-Dichloroethene		1	ug/L	U	11/12/97
SJS02-GW2D-002P	VCLOW	trans-1,3-Dichloropropene		1	ug/L	U	11/12/97
SJS02-GW2D-002P	VCLOW	Trichloroethene		1	ug/L	U	11/12/97
SJS02-GW2D-002P	VCLOW	Vinyl Chloride		1	ug/L	U	11/12/97
SJS02-GW2S-001	CTOTP	Total Phosphorous (as P)	0.338	0.05	mg/L		7/31/97
SJS02-GW2S-001	MCYAN	Aluminum	35500	29	ug/L	J	8/11/97
SJS02-GW2S-001	MCYAN	Arsenic		3	ug/L	U	8/8/97
SJS02-GW2S-001	MCYAN	Barium	726	1	ug/L		8/11/97
SJS02-GW2S-001	MCYAN	Beryllium	1.4	1	ug/L	B	8/11/97
SJS02-GW2S-001	MCYAN	Cadmium		0.5	ug/L	UL	8/8/97
SJS02-GW2S-001	MCYAN	Calcium	110000	46	ug/L	J	8/11/97
SJS02-GW2S-001	MCYAN	Chromium	56.3	4	ug/L	J	8/11/97
SJS02-GW2S-001	MCYAN	Cobalt		8	ug/L	U	8/11/97
SJS02-GW2S-001	MCYAN	Copper	21.4	2	ug/L	B	8/11/97
SJS02-GW2S-001	MCYAN	Cyanide		5	ug/L	U	7/25/97
SJS02-GW2S-001	MCYAN	Iron	377000	5	ug/L	J	8/11/97
SJS02-GW2S-001	MCYAN	Lead	36.7	1	ug/L	L	8/8/97
SJS02-GW2S-001	MCYAN	Magnesium	123000	45	ug/L	J	8/11/97
SJS02-GW2S-001	MCYAN	Manganese	797	1	ug/L	L	8/11/97
SJS02-GW2S-001	MCYAN	Mercury	0.64	0.1	ug/L	B	8/7/97
SJS02-GW2S-001	MCYAN	Nickel	9.3	4	ug/L	J	8/11/97
SJS02-GW2S-001	MCYAN	Potassium	14100	97	ug/L		8/11/97
SJS02-GW2S-001	MCYAN	Silver	1.5	3	ug/L	J	8/8/97
SJS02-GW2S-001	MCYAN	Sodium	883000	28	ug/L	J	8/11/
SJS02-GW2S-001	MCYAN	Thallium	6.9	2	ug/L	J	8/8/
SJS02-GW2S-001	MCYAN	Vanadium	79.6	4	ug/L		8/11/
SJS02-GW2S-001	MCYAN	Zinc	74.9	3	ug/L	B	8/11/97
SJS02-GW2S-001	PSPCB	4,4'-DDD		0.1	ug/L	U	8/9/97
SJS02-GW2S-001	PSPCB	4,4'-DDE		0.1	ug/L	U	8/9/97
SJS02-GW2S-001	PSPCB	4,4'-DDT		0.1	ug/L	U	8/9/97
SJS02-GW2S-001	PSPCB	Aldrin		0.05	ug/L	U	8/9/97
SJS02-GW2S-001	PSPCB	alpha-BHC		0.05	ug/L	U	8/9/97
SJS02-GW2S-001	PSPCB	alpha-Chlordane		0.05	ug/L	U	8/9/97
SJS02-GW2S-001	PSPCB	Aroclor-1016		1	ug/L	U	8/9/97
SJS02-GW2S-001	PSPCB	Aroclor-1221		2	ug/L	U	8/9/97
SJS02-GW2S-001	PSPCB	Aroclor-1232		1	ug/L	U	8/9/97
SJS02-GW2S-001	PSPCB	Aroclor-1242		1	ug/L	U	8/9/97
SJS02-GW2S-001	PSPCB	Aroclor-1248		1	ug/L	U	8/9/97
SJS02-GW2S-001	PSPCB	Aroclor-1254		1	ug/L	U	8/9/97
SJS02-GW2S-001	PSPCB	Aroclor-1260		1	ug/L	U	8/9/97
SJS02-GW2S-001	PSPCB	beta-BHC		0.05	ug/L	U	8/9/97
SJS02-GW2S-001	PSPCB	delta-BHC		0.05	ug/L	U	8/9/97
SJS02-GW2S-001	PSPCB	Dieldrin		0.1	ug/L	U	8/9/97
SJS02-GW2S-001	PSPCB	Endosulfan I		0.05	ug/L	U	8/9/97
SJS02-GW2S-001	PSPCB	Endosulfan II		0.1	ug/L	U	8/9/97
SJS02-GW2S-001	PSPCB	Endosulfan Sulfate		0.1	ug/L	U	8/9/97
SJS02-GW2S-001	PSPCB	Endrin		0.1	ug/L	U	8/9/97
SJS02-GW2S-001	PSPCB	Endrin Aldehyde		0.1	ug/L	U	8/9/97
SJS02-GW2S-001	PSPCB	Endrin Ketone		0.1	ug/L	U	8/9/97
SJS02-GW2S-001	PSPCB	gamma-BHC		0.05	ug/L	U	8/9/97
SJS02-GW2S-001	PSPCB	gamma-Chlordane		0.05	ug/L	U	8/9/97
SJS02-GW2S-001	PSPCB	Heptachlor		0.05	ug/L	U	8/9/97
SJS02-GW2S-001	PSPCB	Heptachlor Epoxide		0.05	ug/L	U	8/9/
SJS02-GW2S-001	PSPCB	Methoxychlor		0.5	ug/L	U	8/9/

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS02-GW2S-001	PSPCB	Toxaphene		5	ug/L	U	8/9/97
SJS02-GW2S-001	SVTCL	1,2,4-Trichlorobenzene		10	ug/L	U	8/8/97
SJS02-GW2S-001	SVTCL	1,2-Dichlorobenzene		10	ug/L	U	8/8/97
SJS02-GW2S-001	SVTCL	1,3-Dichlorobenzene		10	ug/L	U	8/8/97
SJS02-GW2S-001	SVTCL	1,4-Dichlorobenzene		10	ug/L	U	8/8/97
SJS02-GW2S-001	SVTCL	2,2'-oxybis(1-Chloropropan		10	ug/L	U	8/8/97
SJS02-GW2S-001	SVTCL	2,4,5-Trichlorophenol		25	ug/L	U	8/8/97
SJS02-GW2S-001	SVTCL	2,4,6-Trichlorophenol		10	ug/L	U	8/8/97
SJS02-GW2S-001	SVTCL	2,4-Dichlorophenol		10	ug/L	U	8/8/97
SJS02-GW2S-001	SVTCL	2,4-Dimethylphenol		10	ug/L	U	8/8/97
SJS02-GW2S-001	SVTCL	2,4-Dinitrophenol		25	ug/L	U	8/8/97
SJS02-GW2S-001	SVTCL	2,4-Dinitrotoluene		10	ug/L	U	8/8/97
SJS02-GW2S-001	SVTCL	2,6-Dinitrotoluene		10	ug/L	U	8/8/97
SJS02-GW2S-001	SVTCL	2-Chloronaphthalene		10	ug/L	U	8/8/97
SJS02-GW2S-001	SVTCL	2-Chlorophenol		10	ug/L	U	8/8/97
SJS02-GW2S-001	SVTCL	2-Methylnaphthalene		10	ug/L	U	8/8/97
SJS02-GW2S-001	SVTCL	2-Methylphenol		10	ug/L	U	8/8/97
SJS02-GW2S-001	SVTCL	2-Nitroaniline		25	ug/L	U	8/8/97
SJS02-GW2S-001	SVTCL	2-Nitrophenol		10	ug/L	U	8/8/97
SJS02-GW2S-001	SVTCL	3,3'-Dichlorobenzidine		10	ug/L	U	8/8/97
SJS02-GW2S-001	SVTCL	3-Nitroaniline		25	ug/L	U	8/8/97
SJS02-GW2S-001	SVTCL	4,6-Dinitro-2-Methylphenol		25	ug/L	U	8/8/97
SJS02-GW2S-001	SVTCL	4-Bromophenol-phenylethe		10	ug/L	U	8/8/97
SJS02-GW2S-001	SVTCL	4-Chloro-3-Methylphenol		10	ug/L	U	8/8/97
SJS02-GW2S-001	SVTCL	4-Chloroaniline		10	ug/L	U	8/8/97
SJS02-GW2S-001	SVTCL	4-Chlorophenyl-phenylethe		10	ug/L	U	8/8/97
SJS02-GW2S-001	SVTCL	4-Methylphenol		10	ug/L	U	8/8/97
SJS02-GW2S-001	SVTCL	4-Nitroaniline		25	ug/L	U	8/8/97
SJS02-GW2S-001	SVTCL	4-Nitrophenol		25	ug/L	U	8/8/97
SJS02-GW2S-001	SVTCL	Acenaphthene		10	ug/L	U	8/8/97
SJS02-GW2S-001	SVTCL	Acenaphthylene		10	ug/L	U	8/8/97
SJS02-GW2S-001	SVTCL	Anthracene		10	ug/L	U	8/8/97
SJS02-GW2S-001	SVTCL	Benzo(a)anthracene		10	ug/L	U	8/8/97
SJS02-GW2S-001	SVTCL	Benzo(a)pyrene		10	ug/L	U	8/8/97
SJS02-GW2S-001	SVTCL	Benzo(b)fluoranthene		10	ug/L	U	8/8/97
SJS02-GW2S-001	SVTCL	Benzo(g,h,i)perylene		10	ug/L	U	8/8/97
SJS02-GW2S-001	SVTCL	Benzo(k)fluoranthene		10	ug/L	U	8/8/97
SJS02-GW2S-001	SVTCL	bis(2-Chloroethoxy)methan		10	ug/L	U	8/8/97
SJS02-GW2S-001	SVTCL	bis(2-chloroethyl)ether		10	ug/L	U	8/8/97
SJS02-GW2S-001	SVTCL	bis(2-Ethylhexyl)phthalate		10	ug/L	U	8/8/97
SJS02-GW2S-001	SVTCL	Butylbenzylphthalate		10	ug/L	U	8/8/97
SJS02-GW2S-001	SVTCL	Carbazole		10	ug/L	U	8/8/97
SJS02-GW2S-001	SVTCL	Chrysene		10	ug/L	U	8/8/97
SJS02-GW2S-001	SVTCL	Di-n-butylphthalate		10	ug/L	U	8/8/97
SJS02-GW2S-001	SVTCL	Di-n-Octyl Phthalate		10	ug/L	U	8/8/97
SJS02-GW2S-001	SVTCL	Dibenzo(a,h)anthracene		10	ug/L	U	8/8/97
SJS02-GW2S-001	SVTCL	Dibenzofuran		10	ug/L	U	8/8/97
SJS02-GW2S-001	SVTCL	Diethylphthalate		10	ug/L	U	8/8/97
SJS02-GW2S-001	SVTCL	Dimethyl Phthalate		10	ug/L	U	8/8/97
SJS02-GW2S-001	SVTCL	Fluoranthene		10	ug/L	U	8/8/97
SJS02-GW2S-001	SVTCL	Fluorene		10	ug/L	U	8/8/97
SJS02-GW2S-001	SVTCL	Hexachlorobenzene		10	ug/L	U	8/8/97
SJS02-GW2S-001	SVTCL	Hexachlorobutadiene		10	ug/L	U	8/8/97
SJS02-GW2S-001	SVTCL	Hexachlorocyclopentadien		10	ug/L	U	8/8/97
SJS02-GW2S-001	SVTCL	Hexachloroethane		10	ug/L	U	8/8/97
SJS02-GW2S-001	SVTCL	Indeno(1,2,3-cd)pyrene		10	ug/L	U	8/8/97
SJS02-GW2S-001	SVTCL	Isophorone		10	ug/L	U	8/8/97
SJS02-GW2S-001	SVTCL	N-Nitroso-Di-n-Propylamine		10	ug/L	U	8/8/97
SJS02-GW2S-001	SVTCL	N-Nitrosodiphenylamine		10	ug/L	U	8/8/97
SJS02-GW2S-001	SVTCL	Naphthalene		10	ug/L	U	8/8/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS02-GW2S-001	SVTCL	Nitrobenzene		10	ug/L	U	8/8/
SJS02-GW2S-001	SVTCL	Pentachlorophenol		25	ug/L	U	8/8/
SJS02-GW2S-001	SVTCL	Phenanthrene		10	ug/L	U	8/8/
SJS02-GW2S-001	SVTCL	Phenol		10	ug/L	U	8/8/97
SJS02-GW2S-001	SVTCL	Pyrene		10	ug/L	U	8/8/97
SJS02-GW2S-001	VCLOW	1,1,1-Trichloroethane		1	ug/L	U	7/27/97
SJS02-GW2S-001	VCLOW	1,1,2,2-Tetrachloroethane		1	ug/L	U	7/27/97
SJS02-GW2S-001	VCLOW	1,1,2-Trichloroethane		1	ug/L	U	7/27/97
SJS02-GW2S-001	VCLOW	1,1-Dichloroethane		1	ug/L	U	7/27/97
SJS02-GW2S-001	VCLOW	1,1-Dichloroethene		1	ug/L	U	7/27/97
SJS02-GW2S-001	VCLOW	1,2,4-Trichlorobenzene		1	ug/L	U	7/27/97
SJS02-GW2S-001	VCLOW	1,2-Dibromo-3-chloropropa		1	ug/L	U	7/27/97
SJS02-GW2S-001	VCLOW	1,2-Dibromoethane		1	ug/L	U	7/27/97
SJS02-GW2S-001	VCLOW	1,2-Dichlorobenzene		1	ug/L	U	7/27/97
SJS02-GW2S-001	VCLOW	1,2-Dichloroethane		1	ug/L	U	7/27/97
SJS02-GW2S-001	VCLOW	1,2-Dichloropropane		1	ug/L	U	7/27/97
SJS02-GW2S-001	VCLOW	1,3-Dichlorobenzene		1	ug/L	U	7/27/97
SJS02-GW2S-001	VCLOW	1,4-Dichlorobenzene		1	ug/L	U	7/27/97
SJS02-GW2S-001	VCLOW	2-Hexanone		5	ug/L	U	7/27/97
SJS02-GW2S-001	VCLOW	4-Methyl-2-Pentanone		5	ug/L	U	7/27/97
SJS02-GW2S-001	VCLOW	Acetone	10	5	ug/L	B	7/27/97
SJS02-GW2S-001	VCLOW	Benzene		1	ug/L	U	7/27/97
SJS02-GW2S-001	VCLOW	Bromochloromethane		1	ug/L	U	7/27/97
SJS02-GW2S-001	VCLOW	Bromodichloromethane		1	ug/L	U	7/27/97
SJS02-GW2S-001	VCLOW	Bromoform		1	ug/L	U	7/27/97
SJS02-GW2S-001	VCLOW	Bromomethane		1	ug/L	U	7/27/97
SJS02-GW2S-001	VCLOW	Carbon Disulfide		1	ug/L	U	7/27/97
SJS02-GW2S-001	VCLOW	Carbon Tetrachloride		1	ug/L	U	7/27/97
SJS02-GW2S-001	VCLOW	Chlorobenzene		1	ug/L	U	7/27/97
SJS02-GW2S-001	VCLOW	Chloroethane		1	ug/L	U	7/27/
SJS02-GW2S-001	VCLOW	Chloroform		1	ug/L	U	7/27/
SJS02-GW2S-001	VCLOW	Chloromethane		1	ug/L	U	7/27/
SJS02-GW2S-001	VCLOW	cis-1,2-Dichloroethene		1	ug/L	U	7/27/97
SJS02-GW2S-001	VCLOW	cis-1,3-Dichloropropene		1	ug/L	U	7/27/97
SJS02-GW2S-001	VCLOW	Dibromochloromethane		1	ug/L	U	7/27/97
SJS02-GW2S-001	VCLOW	Ethylbenzene		1	ug/L	U	7/27/97
SJS02-GW2S-001	VCLOW	Methylene Chloride	1	1	ug/L	B	7/27/97
SJS02-GW2S-001	VCLOW	Styrene		1	ug/L	U	7/27/97
SJS02-GW2S-001	VCLOW	Tetrachloroethene		1	ug/L	U	7/27/97
SJS02-GW2S-001	VCLOW	Toluene		1	ug/L	U	7/27/97
SJS02-GW2S-001	VCLOW	Total Xylenes		1	ug/L	U	7/27/97
SJS02-GW2S-001	VCLOW	Trans-1,2-Dichloroethene		1	ug/L	U	7/27/97
SJS02-GW2S-001	VCLOW	trans-1,3-Dichloropropene		1	ug/L	U	7/27/97
SJS02-GW2S-001	VCLOW	Trichloroethene		1	ug/L	U	7/27/97
SJS02-GW2S-001	VCLOW	Vinyl Chloride		1	ug/L	U	7/27/97
SJS02-GW2S-001F	METAL	Aluminum		44	ug/L	U	8/11/97
SJS02-GW2S-001F	METAL	Antimony		2	ug/L	UL	8/13/97
SJS02-GW2S-001F	METAL	Arsenic		3	ug/L	UL	8/8/97
SJS02-GW2S-001F	METAL	Barium	495	1	ug/L		8/11/97
SJS02-GW2S-001F	METAL	Beryllium		1	ug/L	U	8/11/97
SJS02-GW2S-001F	METAL	Cadmium		0.5	ug/L	UL	8/8/97
SJS02-GW2S-001F	METAL	Calcium	90200	46	ug/L	J	8/11/97
SJS02-GW2S-001F	METAL	Chromium		7	ug/L	U	8/11/97
SJS02-GW2S-001F	METAL	Cobalt		8	ug/L	U	8/11/97
SJS02-GW2S-001F	METAL	Copper		6	ug/L	U	8/11/97
SJS02-GW2S-001F	METAL	Iron	267000	5	ug/L	J	8/11/97
SJS02-GW2S-001F	METAL	Lead		1	ug/L	U	8/8/97
SJS02-GW2S-001F	METAL	Magnesium	99800	45	ug/L	J	8/11/97
SJS02-GW2S-001F	METAL	Manganese	612	1	ug/L	J	8/11/
SJS02-GW2S-001F	METAL	Mercury	0.38	0.1	ug/L	B	8/7/

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS02-GW2S-001F	METAL	Nickel		7	ug/L	U	8/11/97
SJS02-GW2S-001F	METAL	Potassium	9980	97	ug/L		8/11/97
SJS02-GW2S-001F	METAL	Silver	2	3	ug/L	J	8/8/97
SJS02-GW2S-001F	METAL	Sodium	720000	28	ug/L	J	8/11/97
SJS02-GW2S-001F	METAL	Thallium	9.6	2	ug/L	J	8/8/97
SJS02-GW2S-001F	METAL	Vanadium		9	ug/L	U	8/11/97
SJS02-GW2S-001F	METAL	Zinc	33.8	3	ug/L	B	8/11/97
SJS02-GW2S-002	CTOTP	Total Phosphorous (as P)	0.082	0.05	mg/L		11/19/97
SJS02-GW2S-002	MCYAN	Aluminum	1170	29	ug/L		11/27/97
SJS02-GW2S-002	MCYAN	Antimony		1.7	ug/L	U	11/21/97
SJS02-GW2S-002	MCYAN	Arsenic		3.2	ug/L	U	11/21/97
SJS02-GW2S-002	MCYAN	Barium	575	1	ug/L		11/27/97
SJS02-GW2S-002	MCYAN	Beryllium	0.77	1	ug/L	J	11/27/97
SJS02-GW2S-002	MCYAN	Cadmium		2	ug/L	U	11/24/97
SJS02-GW2S-002	MCYAN	Calcium	169000	46	ug/L		11/27/97
SJS02-GW2S-002	MCYAN	Chromium	14.3	4	ug/L		11/27/97
SJS02-GW2S-002	MCYAN	Cobalt	15.4	3	ug/L	J	11/27/97
SJS02-GW2S-002	MCYAN	Copper		5.8	ug/L	U	11/27/97
SJS02-GW2S-002	MCYAN	Cyanide		5	ug/L	U	11/12/97
SJS02-GW2S-002	MCYAN	Iron	203000	5	ug/L		11/27/97
SJS02-GW2S-002	MCYAN	Lead	8.2	1	ug/L		11/21/97
SJS02-GW2S-002	MCYAN	Magnesium	125000	45	ug/L		11/27/97
SJS02-GW2S-002	MCYAN	Manganese	843	1	ug/L		11/27/97
SJS02-GW2S-002	MCYAN	Mercury		0.12	ug/L	U	11/19/97
SJS02-GW2S-002	MCYAN	Nickel	8.2	4	ug/L	J	11/27/97
SJS02-GW2S-002	MCYAN	Potassium	18500	97	ug/L		11/27/97
SJS02-GW2S-002	MCYAN	Selenium		16.5	ug/L	U	11/24/97
SJS02-GW2S-002	MCYAN	Silver	2.5	3	ug/L	B	11/21/97
SJS02-GW2S-002	MCYAN	Sodium	691000	28	ug/L		11/27/97
SJS02-GW2S-002	MCYAN	Thallium	5.8	2	ug/L	B	11/21/97
SJS02-GW2S-002	MCYAN	Vanadium	12.3	4	ug/L	J	11/27/97
SJS02-GW2S-002	MCYAN	Zinc	15.3	3	ug/L	J	11/27/97
SJS02-GW2S-002	PSPCB	4,4'-DDD		0.1	ug/L	U	11/21/97
SJS02-GW2S-002	PSPCB	4,4'-DDE		0.1	ug/L	U	11/21/97
SJS02-GW2S-002	PSPCB	4,4'-DDT		0.1	ug/L	U	11/21/97
SJS02-GW2S-002	PSPCB	Aldrin		0.05	ug/L	U	11/21/97
SJS02-GW2S-002	PSPCB	alpha-BHC		0.05	ug/L	U	11/21/97
SJS02-GW2S-002	PSPCB	alpha-Chlordane		0.05	ug/L	U	11/21/97
SJS02-GW2S-002	PSPCB	Aroclor-1016		1	ug/L	U	11/21/97
SJS02-GW2S-002	PSPCB	Aroclor-1221		2	ug/L	U	11/21/97
SJS02-GW2S-002	PSPCB	Aroclor-1232		1	ug/L	U	11/21/97
SJS02-GW2S-002	PSPCB	Aroclor-1242		1	ug/L	U	11/21/97
SJS02-GW2S-002	PSPCB	Aroclor-1248		1	ug/L	U	11/21/97
SJS02-GW2S-002	PSPCB	Aroclor-1254		1	ug/L	U	11/21/97
SJS02-GW2S-002	PSPCB	Aroclor-1260		1	ug/L	U	11/21/97
SJS02-GW2S-002	PSPCB	beta-BHC		0.05	ug/L	U	11/21/97
SJS02-GW2S-002	PSPCB	delta-BHC		0.05	ug/L	U	11/21/97
SJS02-GW2S-002	PSPCB	Dieldrin		0.1	ug/L	U	11/21/97
SJS02-GW2S-002	PSPCB	Endosulfan I		0.05	ug/L	U	11/21/97
SJS02-GW2S-002	PSPCB	Endosulfan II		0.1	ug/L	U	11/21/97
SJS02-GW2S-002	PSPCB	Endosulfan Sulfate		0.1	ug/L	U	11/21/97
SJS02-GW2S-002	PSPCB	Endrin		0.1	ug/L	U	11/21/97
SJS02-GW2S-002	PSPCB	Endrin Aldehyde		0.1	ug/L	U	11/21/97
SJS02-GW2S-002	PSPCB	Endrin Ketone		0.1	ug/L	U	11/21/97
SJS02-GW2S-002	PSPCB	gamma-BHC		0.05	ug/L	U	11/21/97
SJS02-GW2S-002	PSPCB	gamma-Chlordane		0.05	ug/L	U	11/21/97
SJS02-GW2S-002	PSPCB	Heptachlor		0.05	ug/L	U	11/21/97
SJS02-GW2S-002	PSPCB	Heptachlor Epoxide		0.05	ug/L	U	11/21/97
SJS02-GW2S-002	PSPCB	Methoxychlor		0.5	ug/L	U	11/21/97
SJS02-GW2S-002	PSPCB	Toxaphene		5	ug/L	U	11/21/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS02-GW2S-002	SVTCL	1,2,4-Trichlorobenzene		10	ug/L	U	11/19
SJS02-GW2S-002	SVTCL	1,2-Dichlorobenzene		10	ug/L	U	11/19
SJS02-GW2S-002	SVTCL	1,3-Dichlorobenzene		10	ug/L	U	11/19/
SJS02-GW2S-002	SVTCL	1,4-Dichlorobenzene		10	ug/L	U	11/19/97
SJS02-GW2S-002	SVTCL	2,2'-oxybis(1-Chloropropan		10	ug/L	U	11/19/97
SJS02-GW2S-002	SVTCL	2,4,5-Trichlorophenol		25	ug/L	U	11/19/97
SJS02-GW2S-002	SVTCL	2,4,6-Trichlorophenol		10	ug/L	U	11/19/97
SJS02-GW2S-002	SVTCL	2,4-Dichlorophenol		10	ug/L	U	11/19/97
SJS02-GW2S-002	SVTCL	2,4-Dimethylphenol		10	ug/L	U	11/19/97
SJS02-GW2S-002	SVTCL	2,4-Dinitrophenol		25	ug/L	U	11/19/97
SJS02-GW2S-002	SVTCL	2,4-Dinitrotoluene		10	ug/L	U	11/19/97
SJS02-GW2S-002	SVTCL	2,6-Dinitrotoluene		10	ug/L	U	11/19/97
SJS02-GW2S-002	SVTCL	2-Chloronaphthalene		10	ug/L	U	11/19/97
SJS02-GW2S-002	SVTCL	2-Chlorophenol		10	ug/L	U	11/19/97
SJS02-GW2S-002	SVTCL	2-Methylnaphthalene		10	ug/L	U	11/19/97
SJS02-GW2S-002	SVTCL	2-Methylphenol		10	ug/L	U	11/19/97
SJS02-GW2S-002	SVTCL	2-Nitroaniline		25	ug/L	U	11/19/97
SJS02-GW2S-002	SVTCL	2-Nitrophenol		10	ug/L	U	11/19/97
SJS02-GW2S-002	SVTCL	3,3'-Dichlorobenzidine		10	ug/L	U	11/19/97
SJS02-GW2S-002	SVTCL	3-Nitroaniline		25	ug/L	U	11/19/97
SJS02-GW2S-002	SVTCL	4,6-Dinitro-2-Methylphenol		25	ug/L	U	11/19/97
SJS02-GW2S-002	SVTCL	4-Bromophenol-phenylethe		10	ug/L	U	11/19/97
SJS02-GW2S-002	SVTCL	4-Chloro-3-Methylphenol		10	ug/L	U	11/19/97
SJS02-GW2S-002	SVTCL	4-Chloroaniline		10	ug/L	U	11/19/97
SJS02-GW2S-002	SVTCL	4-Chlorophenyl-phenylethe		10	ug/L	U	11/19/97
SJS02-GW2S-002	SVTCL	4-Methylphenol		10	ug/L	U	11/19/97
SJS02-GW2S-002	SVTCL	4-Nitroaniline		25	ug/L	U	11/19/97
SJS02-GW2S-002	SVTCL	4-Nitrophenol		25	ug/L	U	11/19/97
SJS02-GW2S-002	SVTCL	Acenaphthene		10	ug/L	U	11/19/97
SJS02-GW2S-002	SVTCL	Acenaphthylene		10	ug/L	U	11/19
SJS02-GW2S-002	SVTCL	Anthracene		10	ug/L	U	11/19
SJS02-GW2S-002	SVTCL	Benzo(a)anthracene		10	ug/L	U	11/19/97
SJS02-GW2S-002	SVTCL	Benzo(a)pyrene		10	ug/L	U	11/19/97
SJS02-GW2S-002	SVTCL	Benzo(b)fluoranthene		10	ug/L	U	11/19/97
SJS02-GW2S-002	SVTCL	Benzo(g,h,i)perylene		10	ug/L	U	11/19/97
SJS02-GW2S-002	SVTCL	Benzo(k)fluoranthene		10	ug/L	U	11/19/97
SJS02-GW2S-002	SVTCL	bis(2-Chloroethoxy)methan		10	ug/L	U	11/19/97
SJS02-GW2S-002	SVTCL	bis(2-chloroethyl)ether		10	ug/L	U	11/19/97
SJS02-GW2S-002	SVTCL	bis(2-Ethylhexyl)phthalate		10	ug/L	U	11/19/97
SJS02-GW2S-002	SVTCL	Butylbenzylphthalate		10	ug/L	U	11/19/97
SJS02-GW2S-002	SVTCL	Carbazole		10	ug/L	U	11/19/97
SJS02-GW2S-002	SVTCL	Chrysene		10	ug/L	U	11/19/97
SJS02-GW2S-002	SVTCL	Di-n-butylphthalate		10	ug/L	U	11/19/97
SJS02-GW2S-002	SVTCL	Di-n-Octyl Phthalate		10	ug/L	U	11/19/97
SJS02-GW2S-002	SVTCL	Dibenzo(a,h)anthracene		10	ug/L	U	11/19/97
SJS02-GW2S-002	SVTCL	Dibenzofuran		10	ug/L	U	11/19/97
SJS02-GW2S-002	SVTCL	Diethylphthalate		10	ug/L	U	11/19/97
SJS02-GW2S-002	SVTCL	Dimethyl Phthalate		10	ug/L	U	11/19/97
SJS02-GW2S-002	SVTCL	Fluoranthene		10	ug/L	U	11/19/97
SJS02-GW2S-002	SVTCL	Fluorene		10	ug/L	U	11/19/97
SJS02-GW2S-002	SVTCL	Hexachlorobenzene		10	ug/L	U	11/19/97
SJS02-GW2S-002	SVTCL	Hexachlorobutadiene		10	ug/L	U	11/19/97
SJS02-GW2S-002	SVTCL	Hexachlorocyclopentadien		10	ug/L	U	11/19/97
SJS02-GW2S-002	SVTCL	Hexachloroethane		10	ug/L	U	11/19/97
SJS02-GW2S-002	SVTCL	Indeno(1,2,3-cd)pyrene		10	ug/L	U	11/19/97
SJS02-GW2S-002	SVTCL	Isophorone		10	ug/L	U	11/19/97
SJS02-GW2S-002	SVTCL	N-Nitroso-Di-n-Propylamine		10	ug/L	U	11/19/97
SJS02-GW2S-002	SVTCL	N-Nitrosodiphenylamine		10	ug/L	U	11/19/97
SJS02-GW2S-002	SVTCL	Naphthalene		10	ug/L	U	11/19/
SJS02-GW2S-002	SVTCL	Nitrobenzene		10	ug/L	U	11/19

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS02-GW2S-002	SVTCL	Pentachlorophenol		25	ug/L	U	11/19/97
SJS02-GW2S-002	SVTCL	Phenanthrene		10	ug/L	U	11/19/97
SJS02-GW2S-002	SVTCL	Phenol		10	ug/L	U	11/19/97
SJS02-GW2S-002	SVTCL	Pyrene		10	ug/L	U	11/19/97
SJS02-GW2S-002	VCLOW	1,1,1-Trichloroethane		1	ug/L	U	11/12/97
SJS02-GW2S-002	VCLOW	1,1,2,2-Tetrachloroethane		1	ug/L	U	11/12/97
SJS02-GW2S-002	VCLOW	1,1,2-Trichloroethane		1	ug/L	U	11/12/97
SJS02-GW2S-002	VCLOW	1,1-Dichloroethane		1	ug/L	U	11/12/97
SJS02-GW2S-002	VCLOW	1,1-Dichloroethene		1	ug/L	U	11/12/97
SJS02-GW2S-002	VCLOW	1,2,4-Trichlorobenzene		1	ug/L	U	11/12/97
SJS02-GW2S-002	VCLOW	1,2-Dibromo-3-chloropropa		1	ug/L	U	11/12/97
SJS02-GW2S-002	VCLOW	1,2-Dibromoethane		1	ug/L	U	11/12/97
SJS02-GW2S-002	VCLOW	1,2-Dichlorobenzene		1	ug/L	U	11/12/97
SJS02-GW2S-002	VCLOW	1,2-Dichloroethane		1	ug/L	U	11/12/97
SJS02-GW2S-002	VCLOW	1,2-Dichloropropane		1	ug/L	U	11/12/97
SJS02-GW2S-002	VCLOW	1,3-Dichlorobenzene		1	ug/L	U	11/12/97
SJS02-GW2S-002	VCLOW	1,4-Dichlorobenzene		1	ug/L	U	11/12/97
SJS02-GW2S-002	VCLOW	2-Hexanone		5	ug/L	U	11/12/97
SJS02-GW2S-002	VCLOW	4-Methyl-2-Pentanone		5	ug/L	U	11/12/97
SJS02-GW2S-002	VCLOW	Acetone	6	5	ug/L	B	11/12/97
SJS02-GW2S-002	VCLOW	Benzene		1	ug/L	U	11/12/97
SJS02-GW2S-002	VCLOW	Bromochloromethane		1	ug/L	U	11/12/97
SJS02-GW2S-002	VCLOW	Bromodichloromethane		1	ug/L	U	11/12/97
SJS02-GW2S-002	VCLOW	Bromoform		1	ug/L	U	11/12/97
SJS02-GW2S-002	VCLOW	Bromomethane		1	ug/L	U	11/12/97
SJS02-GW2S-002	VCLOW	Carbon Disulfide		1	ug/L	U	11/12/97
SJS02-GW2S-002	VCLOW	Carbon Tetrachloride		1	ug/L	U	11/12/97
SJS02-GW2S-002	VCLOW	Chlorobenzene		1	ug/L	U	11/12/97
SJS02-GW2S-002	VCLOW	Chloroethane		1	ug/L	U	11/12/97
SJS02-GW2S-002	VCLOW	Chloroform		1	ug/L	U	11/12/97
SJS02-GW2S-002	VCLOW	Chloromethane		1	ug/L	U	11/12/97
SJS02-GW2S-002	VCLOW	cis-1,2-Dichloroethene		1	ug/L	U	11/12/97
SJS02-GW2S-002	VCLOW	cis-1,3-Dichloropropene		1	ug/L	U	11/12/97
SJS02-GW2S-002	VCLOW	Dibromochloromethane		1	ug/L	U	11/12/97
SJS02-GW2S-002	VCLOW	Ethylbenzene		1	ug/L	U	11/12/97
SJS02-GW2S-002	VCLOW	Methylene Chloride	2	2	ug/L	B	11/12/97
SJS02-GW2S-002	VCLOW	Styrene		1	ug/L	U	11/12/97
SJS02-GW2S-002	VCLOW	Tetrachloroethene		1	ug/L	U	11/12/97
SJS02-GW2S-002	VCLOW	Toluene		1	ug/L	U	11/12/97
SJS02-GW2S-002	VCLOW	Total Xylenes		1	ug/L	U	11/12/97
SJS02-GW2S-002	VCLOW	Trans-1,2-Dichloroethene		1	ug/L	U	11/12/97
SJS02-GW2S-002	VCLOW	trans-1,3-Dichloropropene		1	ug/L	U	11/12/97
SJS02-GW2S-002	VCLOW	Trichloroethene		1	ug/L	U	11/12/97
SJS02-GW2S-002	VCLOW	Vinyl Chloride		1	ug/L	U	11/12/97
SJS02-GW2S-002F	METAL	Aluminum		38.1	ug/L	U	11/27/97
SJS02-GW2S-002F	METAL	Antimony		1.7	ug/L	U	11/21/97
SJS02-GW2S-002F	METAL	Arsenic		32	ug/L	U	11/24/97
SJS02-GW2S-002F	METAL	Barium	697	1	ug/L		11/27/97
SJS02-GW2S-002F	METAL	Beryllium	0.58	1	ug/L	J	11/27/97
SJS02-GW2S-002F	METAL	Cadmium		4	ug/L	U	11/24/97
SJS02-GW2S-002F	METAL	Calcium	135000	46	ug/L		11/27/97
SJS02-GW2S-002F	METAL	Chromium	9.9	4	ug/L	J	11/27/97
SJS02-GW2S-002F	METAL	Cobalt	67.9	3	ug/L		11/27/97
SJS02-GW2S-002F	METAL	Copper		5.8	ug/L	U	11/27/97
SJS02-GW2S-002F	METAL	Iron	367000	5	ug/L		11/27/97
SJS02-GW2S-002F	METAL	Lead	15.5	1	ug/L		11/21/97
SJS02-GW2S-002F	METAL	Magnesium	128000	45	ug/L		11/27/97
SJS02-GW2S-002F	METAL	Manganese	807	1	ug/L		11/27/97
SJS02-GW2S-002F	METAL	Mercury		0.13	ug/L	U	11/19/97
SJS02-GW2S-002F	METAL	Nickel	7.1	4	ug/L	J	11/27/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS02-GW2S-002F	METAL	Potassium	14500	97	ug/L		11/27
SJS02-GW2S-002F	METAL	Selenium		33	ug/L	U	11/24
SJS02-GW2S-002F	METAL	Silver	4.3	3	ug/L	B	11/21/
SJS02-GW2S-002F	METAL	Sodium	876000	28	ug/L		11/27/97
SJS02-GW2S-002F	METAL	Thallium		1.5	ug/L	U	11/21/97
SJS02-GW2S-002F	METAL	Vanadium	14.2	4	ug/L	J	11/27/97
SJS02-GW2S-002F	METAL	Zinc	33.5	3	ug/L	B	11/27/97
SJS02-GW3S-001	CTOTP	Total Phosphorous (as P)	0.105	0.05	mg/L		7/30/97
SJS02-GW3S-001	EXPLO	1,3,5-Trinitrobenzene		25	ug/L	U	8/9/97
SJS02-GW3S-001	EXPLO	1,3-Dinitrobenzene		25	ug/L	U	8/9/97
SJS02-GW3S-001	EXPLO	2,4,6-Trinitrotoluene		25	ug/L	U	8/9/97
SJS02-GW3S-001	EXPLO	2,4-Dinitrotoluene		25	ug/L	U	8/9/97
SJS02-GW3S-001	EXPLO	2,6-Dinitrotoluene		25	ug/L	U	8/9/97
SJS02-GW3S-001	EXPLO	2-am-4,6-Dinitrotoluene		25	ug/L	U	8/9/97
SJS02-GW3S-001	EXPLO	2-Nitrotoluene		25	ug/L	U	8/9/97
SJS02-GW3S-001	EXPLO	3-Nitrotoluene		25	ug/L	U	8/9/97
SJS02-GW3S-001	EXPLO	4-am-2,6-Dinitrotoluene		25	ug/L	U	8/9/97
SJS02-GW3S-001	EXPLO	4-Nitrotoluene		25	ug/L	U	8/9/97
SJS02-GW3S-001	EXPLO	HMX		25	ug/L	U	8/9/97
SJS02-GW3S-001	EXPLO	Nitrobenzene		25	ug/L	U	8/9/97
SJS02-GW3S-001	EXPLO	RDX		25	ug/L	U	8/9/97
SJS02-GW3S-001	EXPLO	TETRYL		25	ug/L	U	8/9/97
SJS02-GW3S-001	MCYAN	Aluminum	6890	29	ug/L		7/28/97
SJS02-GW3S-001	MCYAN	Antimony		2	ug/L	U	7/29/97
SJS02-GW3S-001	MCYAN	Arsenic	10.5	3	ug/L	B	7/29/97
SJS02-GW3S-001	MCYAN	Barium	127	1	ug/L	B	7/28/97
SJS02-GW3S-001	MCYAN	Beryllium		1	ug/L	U	7/28/97
SJS02-GW3S-001	MCYAN	Cadmium		0.5	ug/L	U	7/29/97
SJS02-GW3S-001	MCYAN	Calcium	86300	46	ug/L		7/28/97
SJS02-GW3S-001	MCYAN	Chromium	12	4	ug/L	K	7/28/
SJS02-GW3S-001	MCYAN	Cobalt		8	ug/L	U	7/28/
SJS02-GW3S-001	MCYAN	Copper		6	ug/L	U	7/28/97
SJS02-GW3S-001	MCYAN	Cyanide		5	ug/L	UL	8/5/97
SJS02-GW3S-001	MCYAN	Iron	26700	5	ug/L		7/28/97
SJS02-GW3S-001	MCYAN	Lead	4.8	1	ug/L	B	7/29/97
SJS02-GW3S-001	MCYAN	Magnesium	67600	45	ug/L		7/28/97
SJS02-GW3S-001	MCYAN	Manganese	1380	1	ug/L		7/28/97
SJS02-GW3S-001	MCYAN	Mercury	0.14	0.1	ug/L	B	7/29/97
SJS02-GW3S-001	MCYAN	Nickel		7	ug/L	U	7/28/97
SJS02-GW3S-001	MCYAN	Potassium	21900	97	ug/L		7/28/97
SJS02-GW3S-001	MCYAN	Selenium		3	ug/L	UL	7/29/97
SJS02-GW3S-001	MCYAN	Silver	4.6	3	ug/L	B	7/29/97
SJS02-GW3S-001	MCYAN	Sodium	295000	28	ug/L		7/28/97
SJS02-GW3S-001	MCYAN	Thallium		2	ug/L	U	7/29/97
SJS02-GW3S-001	MCYAN	Vanadium	19.4	4	ug/L	J	7/28/97
SJS02-GW3S-001	MCYAN	Zinc	23.4	3	ug/L	B	7/28/97
SJS02-GW3S-001	PSPCB	4,4'-DDD		0.1	ug/L	U	7/31/97
SJS02-GW3S-001	PSPCB	4,4'-DDE		0.1	ug/L	U	7/31/97
SJS02-GW3S-001	PSPCB	4,4'-DDT		0.1	ug/L	U	7/31/97
SJS02-GW3S-001	PSPCB	Aldrin		0.05	ug/L	U	7/31/97
SJS02-GW3S-001	PSPCB	alpha-BHC		0.05	ug/L	U	7/31/97
SJS02-GW3S-001	PSPCB	alpha-Chlordane		0.05	ug/L	U	7/31/97
SJS02-GW3S-001	PSPCB	Aroclor-1016		1	ug/L	U	7/31/97
SJS02-GW3S-001	PSPCB	Aroclor-1221		2	ug/L	U	7/31/97
SJS02-GW3S-001	PSPCB	Aroclor-1232		1	ug/L	U	7/31/97
SJS02-GW3S-001	PSPCB	Aroclor-1242		1	ug/L	U	7/31/97
SJS02-GW3S-001	PSPCB	Aroclor-1248		1	ug/L	U	7/31/97
SJS02-GW3S-001	PSPCB	Aroclor-1254		1	ug/L	U	7/31/97
SJS02-GW3S-001	PSPCB	Aroclor-1260		1	ug/L	U	7/31/
SJS02-GW3S-001	PSPCB	beta-BHC		0.05	ug/L	U	7/31/

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS02-GW3S-001	PSPCB	delta-BHC		0.05	ug/L	U	7/31/97
SJS02-GW3S-001	PSPCB	Dieldrin		0.1	ug/L	U	7/31/97
SJS02-GW3S-001	PSPCB	Endosulfan I		0.05	ug/L	U	7/31/97
SJS02-GW3S-001	PSPCB	Endosulfan II		0.1	ug/L	U	7/31/97
SJS02-GW3S-001	PSPCB	Endosulfan Sulfate		0.1	ug/L	U	7/31/97
SJS02-GW3S-001	PSPCB	Endrin		0.1	ug/L	U	7/31/97
SJS02-GW3S-001	PSPCB	Endrin Aldehyde		0.1	ug/L	U	7/31/97
SJS02-GW3S-001	PSPCB	Endrin Ketone		0.1	ug/L	U	7/31/97
SJS02-GW3S-001	PSPCB	gamma-BHC		0.05	ug/L	U	7/31/97
SJS02-GW3S-001	PSPCB	gamma-Chlordane		0.05	ug/L	U	7/31/97
SJS02-GW3S-001	PSPCB	Heptachlor		0.05	ug/L	U	7/31/97
SJS02-GW3S-001	PSPCB	Heptachlor Epoxide		0.05	ug/L	U	7/31/97
SJS02-GW3S-001	PSPCB	Methoxychlor		0.5	ug/L	U	7/31/97
SJS02-GW3S-001	PSPCB	Toxaphene		5	ug/L	U	7/31/97
SJS02-GW3S-001	SVTCL	1,2,4-Trichlorobenzene		10	ug/L	U	7/31/97
SJS02-GW3S-001	SVTCL	1,2-Dichlorobenzene		10	ug/L	U	7/31/97
SJS02-GW3S-001	SVTCL	1,3-Dichlorobenzene		10	ug/L	U	7/31/97
SJS02-GW3S-001	SVTCL	1,4-Dichlorobenzene		10	ug/L	U	7/31/97
SJS02-GW3S-001	SVTCL	2,2'-oxybis(1-Chloropropan		10	ug/L	U	7/31/97
SJS02-GW3S-001	SVTCL	2,4,5-Trichlorophenol		25	ug/L	U	7/31/97
SJS02-GW3S-001	SVTCL	2,4,6-Trichlorophenol		10	ug/L	U	7/31/97
SJS02-GW3S-001	SVTCL	2,4-Dichlorophenol		10	ug/L	U	7/31/97
SJS02-GW3S-001	SVTCL	2,4-Dimethylphenol		10	ug/L	U	7/31/97
SJS02-GW3S-001	SVTCL	2,4-Dinitrophenol		25	ug/L	U	7/31/97
SJS02-GW3S-001	SVTCL	2,4-Dinitrotoluene		10	ug/L	U	7/31/97
SJS02-GW3S-001	SVTCL	2,6-Dinitrotoluene		10	ug/L	U	7/31/97
SJS02-GW3S-001	SVTCL	2-Chloronaphthalene		10	ug/L	U	7/31/97
SJS02-GW3S-001	SVTCL	2-Chlorophenol		10	ug/L	U	7/31/97
SJS02-GW3S-001	SVTCL	2-Methylnaphthalene		10	ug/L	U	7/31/97
SJS02-GW3S-001	SVTCL	2-Methylphenol		10	ug/L	U	7/31/97
SJS02-GW3S-001	SVTCL	2-Nitroaniline		25	ug/L	U	7/31/97
SJS02-GW3S-001	SVTCL	2-Nitrophenol		10	ug/L	U	7/31/97
SJS02-GW3S-001	SVTCL	3,3'-Dichlorobenzidine		10	ug/L	U	7/31/97
SJS02-GW3S-001	SVTCL	3-Nitroaniline		25	ug/L	U	7/31/97
SJS02-GW3S-001	SVTCL	4,6-Dinitro-2-Methylphenol		25	ug/L	U	7/31/97
SJS02-GW3S-001	SVTCL	4-Bromophenyl phenylether		10	ug/L	U	7/31/97
SJS02-GW3S-001	SVTCL	4-Chloro-3-Methylphenol		10	ug/L	U	7/31/97
SJS02-GW3S-001	SVTCL	4-Chloroaniline		10	ug/L	U	7/31/97
SJS02-GW3S-001	SVTCL	4-Chlorophenyl-phenylethe		10	ug/L	U	7/31/97
SJS02-GW3S-001	SVTCL	4-Methylphenol		10	ug/L	U	7/31/97
SJS02-GW3S-001	SVTCL	4-Nitroaniline		25	ug/L	U	7/31/97
SJS02-GW3S-001	SVTCL	4-Nitrophenol		25	ug/L	U	7/31/97
SJS02-GW3S-001	SVTCL	Acenaphthene		10	ug/L	U	7/31/97
SJS02-GW3S-001	SVTCL	Acenaphthylene		10	ug/L	U	7/31/97
SJS02-GW3S-001	SVTCL	Anthracene		10	ug/L	U	7/31/97
SJS02-GW3S-001	SVTCL	Benzo(a)Anthracene		10	ug/L	U	7/31/97
SJS02-GW3S-001	SVTCL	Benzo(a)Pyrene		10	ug/L	U	7/31/97
SJS02-GW3S-001	SVTCL	Benzo(b)Fluoranthene		10	ug/L	U	7/31/97
SJS02-GW3S-001	SVTCL	Benzo(g,h,i)Perylene		10	ug/L	U	7/31/97
SJS02-GW3S-001	SVTCL	Benzo(k)fluoranthene		10	ug/L	U	7/31/97
SJS02-GW3S-001	SVTCL	Bis(2-chloroethoxy)Methan		10	ug/L	U	7/31/97
SJS02-GW3S-001	SVTCL	Bis(2-chloroethyl)Ether		10	ug/L	U	7/31/97
SJS02-GW3S-001	SVTCL	Bis(2-Ethylhexyl)Phthalate		10	ug/L	U	7/31/97
SJS02-GW3S-001	SVTCL	Butylbenzylphthalate		10	ug/L	U	7/31/97
SJS02-GW3S-001	SVTCL	Carbazole		10	ug/L	U	7/31/97
SJS02-GW3S-001	SVTCL	Chrysene		10	ug/L	U	7/31/97
SJS02-GW3S-001	SVTCL	Di-n-Butylphthalate		10	ug/L	U	7/31/97
SJS02-GW3S-001	SVTCL	Di-n-Octyl Phthalate		10	ug/L	U	7/31/97
SJS02-GW3S-001	SVTCL	Dibenz(a,h)Anthracene		10	ug/L	U	7/31/97
SJS02-GW3S-001	SVTCL	Dibenzofuran		10	ug/L	U	7/31/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS02-GW3S-001	SVTCL	Diethylphthalate		10	ug/L	U	7/31
SJS02-GW3S-001	SVTCL	Dimethyl Phthalate		10	ug/L	U	7/31
SJS02-GW3S-001	SVTCL	Fluoranthene		10	ug/L	U	7/31/
SJS02-GW3S-001	SVTCL	Fluorene		10	ug/L	U	7/31/97
SJS02-GW3S-001	SVTCL	Hexachlorobenzene		10	ug/L	U	7/31/97
SJS02-GW3S-001	SVTCL	Hexachlorobutadiene		10	ug/L	U	7/31/97
SJS02-GW3S-001	SVTCL	Hexachlorocyclopentadien		10	ug/L	U	7/31/97
SJS02-GW3S-001	SVTCL	Hexachloroethane		10	ug/L	U	7/31/97
SJS02-GW3S-001	SVTCL	Indeno(1,2,3-cd)Pyrene		10	ug/L	U	7/31/97
SJS02-GW3S-001	SVTCL	Isophorone		10	ug/L	U	7/31/97
SJS02-GW3S-001	SVTCL	N-Nitroso-Di-n-Propylamine		10	ug/L	U	7/31/97
SJS02-GW3S-001	SVTCL	N-Nitrosodiphenylamine		10	ug/L	U	7/31/97
SJS02-GW3S-001	SVTCL	Naphthalene		10	ug/L	U	7/31/97
SJS02-GW3S-001	SVTCL	Nitrobenzene		10	ug/L	U	7/31/97
SJS02-GW3S-001	SVTCL	Pentachlorophenol		25	ug/L	U	7/31/97
SJS02-GW3S-001	SVTCL	Phenanthrene		10	ug/L	U	7/31/97
SJS02-GW3S-001	SVTCL	Phenol		10	ug/L	U	7/31/97
SJS02-GW3S-001	SVTCL	Pyrene		10	ug/L	U	7/31/97
SJS02-GW3S-001	VCLOW	1,1,1-Trichloroethane		1	ug/L	U	7/25/97
SJS02-GW3S-001	VCLOW	1,1,2,2-Tetrachloroethane		1	ug/L	U	7/25/97
SJS02-GW3S-001	VCLOW	1,1,2-Trichloroethane		1	ug/L	U	7/25/97
SJS02-GW3S-001	VCLOW	1,1-Dichloroethane		1	ug/L	U	7/25/97
SJS02-GW3S-001	VCLOW	1,1-Dichloroethene		1	ug/L	U	7/25/97
SJS02-GW3S-001	VCLOW	1,2,4-Trichlorobenzene		1	ug/L	U	7/25/97
SJS02-GW3S-001	VCLOW	1,2-Dibromo-3-chloropropa		1	ug/L	U	7/25/97
SJS02-GW3S-001	VCLOW	1,2-Dibromoethane		1	ug/L	U	7/25/97
SJS02-GW3S-001	VCLOW	1,2-Dichlorobenzene		1	ug/L	U	7/25/97
SJS02-GW3S-001	VCLOW	1,2-Dichloroethane		1	ug/L	U	7/25/97
SJS02-GW3S-001	VCLOW	1,2-Dichloropropane		1	ug/L	U	7/25/97
SJS02-GW3S-001	VCLOW	1,3-Dichlorobenzene		1	ug/L	U	7/25/
SJS02-GW3S-001	VCLOW	1,4-Dichlorobenzene		1	ug/L	U	7/25/
SJS02-GW3S-001	VCLOW	2-Hexanone		5	ug/L	U	7/25/97
SJS02-GW3S-001	VCLOW	4-Methyl-2-Pentanone		5	ug/L	U	7/25/97
SJS02-GW3S-001	VCLOW	Acetone	5	5	ug/L	B	7/25/97
SJS02-GW3S-001	VCLOW	Benzene		1	ug/L	U	7/25/97
SJS02-GW3S-001	VCLOW	Bromochloromethane		1	ug/L	U	7/25/97
SJS02-GW3S-001	VCLOW	Bromodichloromethane		1	ug/L	U	7/25/97
SJS02-GW3S-001	VCLOW	Bromoform		1	ug/L	U	7/25/97
SJS02-GW3S-001	VCLOW	Bromomethane		1	ug/L	U	7/25/97
SJS02-GW3S-001	VCLOW	Carbon Disulfide		1	ug/L	U	7/25/97
SJS02-GW3S-001	VCLOW	Carbon Tetrachloride		1	ug/L	U	7/25/97
SJS02-GW3S-001	VCLOW	Chlorobenzene		1	ug/L	U	7/25/97
SJS02-GW3S-001	VCLOW	Chloroethane		1	ug/L	U	7/25/97
SJS02-GW3S-001	VCLOW	Chloroform		1	ug/L	U	7/25/97
SJS02-GW3S-001	VCLOW	Chloromethane		1	ug/L	U	7/25/97
SJS02-GW3S-001	VCLOW	cis-1,2-Dichloroethene		1	ug/L	U	7/25/97
SJS02-GW3S-001	VCLOW	cis-1,3-Dichloropropene		1	ug/L	U	7/25/97
SJS02-GW3S-001	VCLOW	Dibromochloromethane		1	ug/L	U	7/25/97
SJS02-GW3S-001	VCLOW	Ethylbenzene		1	ug/L	U	7/25/97
SJS02-GW3S-001	VCLOW	Methylene Chloride	2	1	ug/L	B	7/25/97
SJS02-GW3S-001	VCLOW	Styrene		1	ug/L	U	7/25/97
SJS02-GW3S-001	VCLOW	Tetrachloroethene		1	ug/L	U	7/25/97
SJS02-GW3S-001	VCLOW	Toluene		1	ug/L	U	7/25/97
SJS02-GW3S-001	VCLOW	Total Xylenes		1	ug/L	U	7/25/97
SJS02-GW3S-001	VCLOW	Trans-1,2-Dichloroethene		1	ug/L	U	7/25/97
SJS02-GW3S-001	VCLOW	Trans-1,3-Dichloropropene		1	ug/L	U	7/25/97
SJS02-GW3S-001	VCLOW	Trichloroethene		1	ug/L	U	7/25/97
SJS02-GW3S-001	VCLOW	Vinyl Chloride		1	ug/L	U	7/25/97
SJS02-GW3S-001F	METAL	Aluminum		44	ug/L	U	7/28/
SJS02-GW3S-001F	METAL	Antimony		2	ug/L	U	7/29/

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS02-GW3S-001F	IMETAL	Arsenic	5.6	3	ug/L	J	7/29/97
SJS02-GW3S-001F	IMETAL	Barium	110	1	ug/L	B	7/28/97
SJS02-GW3S-001F	IMETAL	Beryllium		1	ug/L	U	7/28/97
SJS02-GW3S-001F	IMETAL	Cadmium		0.5	ug/L	U	7/29/97
SJS02-GW3S-001F	IMETAL	Calcium	90800	46	ug/L		7/28/97
SJS02-GW3S-001F	IMETAL	Chromium		7	ug/L	U	7/28/97
SJS02-GW3S-001F	IMETAL	Cobalt	9.1	3	ug/L	J	7/28/97
SJS02-GW3S-001F	IMETAL	Copper		6	ug/L	U	7/28/97
SJS02-GW3S-001F	IMETAL	Iron	32000	5	ug/L		7/28/97
SJS02-GW3S-001F	IMETAL	Lead		1	ug/L	U	7/29/97
SJS02-GW3S-001F	IMETAL	Magnesium	83100	45	ug/L		7/28/97
SJS02-GW3S-001F	IMETAL	Manganese	1720	1	ug/L		7/28/97
SJS02-GW3S-001F	IMETAL	Mercury	0.13	0.1	ug/L	B	7/29/97
SJS02-GW3S-001F	IMETAL	Nickel		7	ug/L	U	7/28/97
SJS02-GW3S-001F	IMETAL	Potassium	25400	97	ug/L		7/28/97
SJS02-GW3S-001F	IMETAL	Selenium		3	ug/L	U	7/29/97
SJS02-GW3S-001F	IMETAL	Silver	3.1	3	ug/L	B	7/29/97
SJS02-GW3S-001F	IMETAL	Sodium	375000	28	ug/L		7/28/97
SJS02-GW3S-001F	IMETAL	Thallium		2	ug/L	U	7/29/97
SJS02-GW3S-001F	IMETAL	Vanadium		9	ug/L	U	7/28/97
SJS02-GW3S-001F	IMETAL	Zinc	8.7	3	ug/L	B	7/28/97
SJS02-GW3S-001P	IEXPLO	1,3,5-Trinitrobenzene		25	ug/L	U	8/9/97
SJS02-GW3S-001P	IEXPLO	1,3-Dinitrobenzene		25	ug/L	U	8/9/97
SJS02-GW3S-001P	IEXPLO	2,4,6-Trinitrotoluene		25	ug/L	U	8/9/97
SJS02-GW3S-001P	IEXPLO	2,4-Dinitrotoluene		25	ug/L	U	8/9/97
SJS02-GW3S-001P	IEXPLO	2,6-Dinitrotoluene		25	ug/L	U	8/9/97
SJS02-GW3S-001P	IEXPLO	2-am-4,6-Dinitrotoluene		25	ug/L	U	8/9/97
SJS02-GW3S-001P	IEXPLO	2-Nitrotoluene		25	ug/L	U	8/9/97
SJS02-GW3S-001P	IEXPLO	3-Nitrotoluene		25	ug/L	U	8/9/97
SJS02-GW3S-001P	IEXPLO	4-am-2,6-Dinitrotoluene		25	ug/L	U	8/9/97
SJS02-GW3S-001P	IEXPLO	4-Nitrotoluene		25	ug/L	U	8/9/97
SJS02-GW3S-001P	IEXPLO	HMX		25	ug/L	U	8/9/97
SJS02-GW3S-001P	IEXPLO	Nitrobenzene		25	ug/L	U	8/9/97
SJS02-GW3S-001P	IEXPLO	RDX		25	ug/L	U	8/9/97
SJS02-GW3S-001P	IEXPLO	TETRYL		25	ug/L	U	8/9/97
SJS02-GW3S-002	ICTOTP	Total Phosphorous (as P)		0.05	mg/L	U	11/19/97
SJS02-GW3S-002	IEXPLO	1,3,5-Trinitrobenzene		25	ug/L	U	11/25/97
SJS02-GW3S-002	IEXPLO	1,3-Dinitrobenzene		25	ug/L	U	11/25/97
SJS02-GW3S-002	IEXPLO	2,4,6-Trinitrotoluene		25	ug/L	U	11/25/97
SJS02-GW3S-002	IEXPLO	2,4-Dinitrotoluene		25	ug/L	U	11/25/97
SJS02-GW3S-002	IEXPLO	2,6-Dinitrotoluene		25	ug/L	U	11/25/97
SJS02-GW3S-002	IEXPLO	2-am-4,6-Dinitrotoluene		25	ug/L	U	11/25/97
SJS02-GW3S-002	IEXPLO	2-Nitrotoluene		25	ug/L	U	11/25/97
SJS02-GW3S-002	IEXPLO	3-Nitrotoluene		25	ug/L	U	11/25/97
SJS02-GW3S-002	IEXPLO	4-am-2,6-Dinitrotoluene		25	ug/L	U	11/25/97
SJS02-GW3S-002	IEXPLO	4-Nitrotoluene		25	ug/L	U	11/25/97
SJS02-GW3S-002	IEXPLO	HMX		25	ug/L	U	11/25/97
SJS02-GW3S-002	IEXPLO	Nitrobenzene		25	ug/L	U	11/25/97
SJS02-GW3S-002	IEXPLO	RDX		25	ug/L	U	11/25/97
SJS02-GW3S-002	IEXPLO	TETRYL		25	ug/L	U	11/25/97
SJS02-GW3S-002	IMCYAN	Aluminum	130	29	ug/L	J	11/27/97
SJS02-GW3S-002	IMCYAN	Antimony		1.7	ug/L	U	11/21/97
SJS02-GW3S-002	IMCYAN	Arsenic	6.2	3	ug/L	J	11/21/97
SJS02-GW3S-002	IMCYAN	Barium	55.1	1	ug/L	J	11/27/97
SJS02-GW3S-002	IMCYAN	Beryllium	0.58	1	ug/L	J	11/27/97
SJS02-GW3S-002	IMCYAN	Cadmium		0.4	ug/L	U	11/21/97
SJS02-GW3S-002	IMCYAN	Calcium	217000	46	ug/L		11/27/97
SJS02-GW3S-002	IMCYAN	Chromium		4.6	ug/L	U	11/27/97
SJS02-GW3S-002	IMCYAN	Cobalt		6	ug/L	U	11/27/97
SJS02-GW3S-002	IMCYAN	Copper	6.3	2	ug/L	J	11/27/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS02-GW3S-002	MCYAN	Cyanide		5	ug/L	U	11/12/
SJS02-GW3S-002	MCYAN	Iron	1240	5	ug/L		11/27
SJS02-GW3S-002	MCYAN	Lead		1.3	ug/L	U	11/21/
SJS02-GW3S-002	MCYAN	Magnesium	25300	45	ug/L		11/27/97
SJS02-GW3S-002	MCYAN	Manganese	197	1	ug/L		11/27/97
SJS02-GW3S-002	MCYAN	Mercury		0.13	ug/L	U	11/19/97
SJS02-GW3S-002	MCYAN	Nickel	11.2	4	ug/L	J	11/27/97
SJS02-GW3S-002	MCYAN	Potassium	6970	97	ug/L		11/27/97
SJS02-GW3S-002	MCYAN	Selenium		3.3	ug/L	U	11/21/97
SJS02-GW3S-002	MCYAN	Silver	1.2	3	ug/L	B	11/21/97
SJS02-GW3S-002	MCYAN	Sodium	23800	28	ug/L		11/27/97
SJS02-GW3S-002	MCYAN	Thallium	4.3	2	ug/L	B	11/21/97
SJS02-GW3S-002	MCYAN	Vanadium		6.8	ug/L	U	11/27/97
SJS02-GW3S-002	MCYAN	Zinc	319	3	ug/L		11/27/97
SJS02-GW3S-002	PSPCB	4,4'-DDD		0.1	ug/L	U	11/21/97
SJS02-GW3S-002	PSPCB	4,4'-DDE		0.1	ug/L	U	11/21/97
SJS02-GW3S-002	PSPCB	4,4'-DDT		0.1	ug/L	U	11/21/97
SJS02-GW3S-002	PSPCB	Aldrin		0.05	ug/L	U	11/21/97
SJS02-GW3S-002	PSPCB	alpha-BHC		0.05	ug/L	U	11/21/97
SJS02-GW3S-002	PSPCB	alpha-Chlordane		0.05	ug/L	U	11/21/97
SJS02-GW3S-002	PSPCB	Aroclor-1016		1	ug/L	U	11/21/97
SJS02-GW3S-002	PSPCB	Aroclor-1221		2	ug/L	U	11/21/97
SJS02-GW3S-002	PSPCB	Aroclor-1232		1	ug/L	U	11/21/97
SJS02-GW3S-002	PSPCB	Aroclor-1242		1	ug/L	U	11/21/97
SJS02-GW3S-002	PSPCB	Aroclor-1248		1	ug/L	U	11/21/97
SJS02-GW3S-002	PSPCB	Aroclor-1254		1	ug/L	U	11/21/97
SJS02-GW3S-002	PSPCB	Aroclor-1260		1	ug/L	U	11/21/97
SJS02-GW3S-002	PSPCB	beta-BHC		0.05	ug/L	U	11/21/97
SJS02-GW3S-002	PSPCB	delta-BHC		0.05	ug/L	U	11/21/97
SJS02-GW3S-002	PSPCB	Dieldrin		0.1	ug/L	U	11/21/
SJS02-GW3S-002	PSPCB	Endosulfan I		0.05	ug/L	U	11/21
SJS02-GW3S-002	PSPCB	Endosulfan II		0.1	ug/L	U	11/21/
SJS02-GW3S-002	PSPCB	Endosulfan Sulfate		0.1	ug/L	U	11/21/97
SJS02-GW3S-002	PSPCB	Endrin		0.1	ug/L	U	11/21/97
SJS02-GW3S-002	PSPCB	Endrin Aldehyde		0.1	ug/L	U	11/21/97
SJS02-GW3S-002	PSPCB	Endrin Ketone		0.1	ug/L	U	11/21/97
SJS02-GW3S-002	PSPCB	gamma-BHC		0.05	ug/L	U	11/21/97
SJS02-GW3S-002	PSPCB	gamma-Chlordane		0.05	ug/L	U	11/21/97
SJS02-GW3S-002	PSPCB	Heptachlor		0.05	ug/L	U	11/21/97
SJS02-GW3S-002	PSPCB	Heptachlor Epoxide		0.05	ug/L	U	11/21/97
SJS02-GW3S-002	PSPCB	Methoxychlor		0.5	ug/L	U	11/21/97
SJS02-GW3S-002	PSPCB	Toxaphene		5	ug/L	U	11/21/97
SJS02-GW3S-002	SVTCL	1,2,4-Trichlorobenzene		10	ug/L	U	11/19/97
SJS02-GW3S-002	SVTCL	1,2-Dichlorobenzene		10	ug/L	U	11/19/97
SJS02-GW3S-002	SVTCL	1,3-Dichlorobenzene		10	ug/L	U	11/19/97
SJS02-GW3S-002	SVTCL	1,4-Dichlorobenzene		10	ug/L	U	11/19/97
SJS02-GW3S-002	SVTCL	2,2'-oxybis(1-Chloropropan		10	ug/L	U	11/19/97
SJS02-GW3S-002	SVTCL	2,4,5-Trichlorophenol		25	ug/L	U	11/19/97
SJS02-GW3S-002	SVTCL	2,4,6-Trichlorophenol		10	ug/L	U	11/19/97
SJS02-GW3S-002	SVTCL	2,4-Dichlorophenol		10	ug/L	U	11/19/97
SJS02-GW3S-002	SVTCL	2,4-Dimethylphenol		10	ug/L	U	11/19/97
SJS02-GW3S-002	SVTCL	2,4-Dinitrophenol		25	ug/L	U	11/19/97
SJS02-GW3S-002	SVTCL	2,4-Dinitrotoluene		10	ug/L	U	11/19/97
SJS02-GW3S-002	SVTCL	2,6-Dinitrotoluene		10	ug/L	U	11/19/97
SJS02-GW3S-002	SVTCL	2-Chloronaphthalene		10	ug/L	U	11/19/97
SJS02-GW3S-002	SVTCL	2-Chlorophenol		10	ug/L	U	11/19/97
SJS02-GW3S-002	SVTCL	2-Methylnaphthalene		10	ug/L	U	11/19/97
SJS02-GW3S-002	SVTCL	2-Methylphenol		10	ug/L	U	11/19/97
SJS02-GW3S-002	SVTCL	2-Nitroaniline		25	ug/L	U	11/19/
SJS02-GW3S-002	SVTCL	2-Nitrophenol		10	ug/L	U	11/19

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS02-GW3S-002	SVTCL	3,3'-Dichlorobenzidine		10	ug/L	U	11/19/97
SJS02-GW3S-002	SVTCL	3-Nitroaniline		25	ug/L	U	11/19/97
SJS02-GW3S-002	SVTCL	4,6-Dinitro-2-Methylphenol		25	ug/L	U	11/19/97
SJS02-GW3S-002	SVTCL	4-Bromophenol-phenylethe		10	ug/L	U	11/19/97
SJS02-GW3S-002	SVTCL	4-Chloro-3-Methylphenol		10	ug/L	U	11/19/97
SJS02-GW3S-002	SVTCL	4-Chloroaniline		10	ug/L	U	11/19/97
SJS02-GW3S-002	SVTCL	4-Chlorophenyl-phenylethe		10	ug/L	U	11/19/97
SJS02-GW3S-002	SVTCL	4-Methylphenol		10	ug/L	U	11/19/97
SJS02-GW3S-002	SVTCL	4-Nitroaniline		25	ug/L	U	11/19/97
SJS02-GW3S-002	SVTCL	4-Nitrophenol		25	ug/L	U	11/19/97
SJS02-GW3S-002	SVTCL	Acenaphthene		10	ug/L	U	11/19/97
SJS02-GW3S-002	SVTCL	Acenaphthylene		10	ug/L	U	11/19/97
SJS02-GW3S-002	SVTCL	Anthracene		10	ug/L	U	11/19/97
SJS02-GW3S-002	SVTCL	Benzo(a)anthracene		10	ug/L	U	11/19/97
SJS02-GW3S-002	SVTCL	Benzo(a)pyrene		10	ug/L	U	11/19/97
SJS02-GW3S-002	SVTCL	Benzo(b)fluoranthene		10	ug/L	U	11/19/97
SJS02-GW3S-002	SVTCL	Benzo(g,h,i)perylene		10	ug/L	U	11/19/97
SJS02-GW3S-002	SVTCL	Benzo(k)fluoranthene		10	ug/L	U	11/19/97
SJS02-GW3S-002	SVTCL	bis(2-Chloroethoxy)methan		10	ug/L	U	11/19/97
SJS02-GW3S-002	SVTCL	bis(2-chloroethyl)ether		10	ug/L	U	11/19/97
SJS02-GW3S-002	SVTCL	bis(2-Ethylhexyl)phthalate		10	ug/L	U	11/19/97
SJS02-GW3S-002	SVTCL	Butylbenzylphthalate		10	ug/L	U	11/19/97
SJS02-GW3S-002	SVTCL	Carbazole		10	ug/L	U	11/19/97
SJS02-GW3S-002	SVTCL	Chrysene		10	ug/L	U	11/19/97
SJS02-GW3S-002	SVTCL	Di-n-butylphthalate		10	ug/L	U	11/19/97
SJS02-GW3S-002	SVTCL	Di-n-Octyl Phthalate		10	ug/L	U	11/19/97
SJS02-GW3S-002	SVTCL	Dibenzo(a,h)anthracene		10	ug/L	U	11/19/97
SJS02-GW3S-002	SVTCL	Dibenzofuran		10	ug/L	U	11/19/97
SJS02-GW3S-002	SVTCL	Diethylphthalate		10	ug/L	U	11/19/97
SJS02-GW3S-002	SVTCL	Dimethyl Phthalate		10	ug/L	U	11/19/97
SJS02-GW3S-002	SVTCL	Fluoranthene		10	ug/L	U	11/19/97
SJS02-GW3S-002	SVTCL	Fluorene		10	ug/L	U	11/19/97
SJS02-GW3S-002	SVTCL	Hexachlorobenzene		10	ug/L	U	11/19/97
SJS02-GW3S-002	SVTCL	Hexachlorobutadiene		10	ug/L	U	11/19/97
SJS02-GW3S-002	SVTCL	Hexachlorocyclopentadien		10	ug/L	U	11/19/97
SJS02-GW3S-002	SVTCL	Hexachloroethane		10	ug/L	U	11/19/97
SJS02-GW3S-002	SVTCL	Indeno(1,2,3-cd)pyrene		10	ug/L	U	11/19/97
SJS02-GW3S-002	SVTCL	Isophorone		10	ug/L	U	11/19/97
SJS02-GW3S-002	SVTCL	N-Nitroso-Di-n-Propylamine		10	ug/L	U	11/19/97
SJS02-GW3S-002	SVTCL	N-Nitrosodiphenylamine		10	ug/L	U	11/19/97
SJS02-GW3S-002	SVTCL	Naphthalene		10	ug/L	U	11/19/97
SJS02-GW3S-002	SVTCL	Nitrobenzene		10	ug/L	U	11/19/97
SJS02-GW3S-002	SVTCL	Pentachlorophenol		25	ug/L	U	11/19/97
SJS02-GW3S-002	SVTCL	Phenanthrene		10	ug/L	U	11/19/97
SJS02-GW3S-002	SVTCL	Phenol		10	ug/L	U	11/19/97
SJS02-GW3S-002	SVTCL	Pyrene		10	ug/L	U	11/19/97
SJS02-GW3S-002	VCLOW	1,1,1-Trichloroethane		1	ug/L	U	11/12/97
SJS02-GW3S-002	VCLOW	1,1,2,2-Tetrachloroethane		1	ug/L	U	11/12/97
SJS02-GW3S-002	VCLOW	1,1,2-Trichloroethane		1	ug/L	U	11/12/97
SJS02-GW3S-002	VCLOW	1,1-Dichloroethane		1	ug/L	U	11/12/97
SJS02-GW3S-002	VCLOW	1,1-Dichloroethene		1	ug/L	U	11/12/97
SJS02-GW3S-002	VCLOW	1,2,4-Trichlorobenzene		1	ug/L	U	11/12/97
SJS02-GW3S-002	VCLOW	1,2-Dibromo-3-chloropropa		1	ug/L	U	11/12/97
SJS02-GW3S-002	VCLOW	1,2-Dibromoethane		1	ug/L	U	11/12/97
SJS02-GW3S-002	VCLOW	1,2-Dichlorobenzene		1	ug/L	U	11/12/97
SJS02-GW3S-002	VCLOW	1,2-Dichloroethane		1	ug/L	U	11/12/97
SJS02-GW3S-002	VCLOW	1,2-Dichloropropane		1	ug/L	U	11/12/97
SJS02-GW3S-002	VCLOW	1,3-Dichlorobenzene		1	ug/L	U	11/12/97
SJS02-GW3S-002	VCLOW	1,4-Dichlorobenzene		1	ug/L	U	11/12/97
SJS02-GW3S-002	VCLOW	2-Hexanone		5	ug/L	U	11/12/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS02-GW3S-002	VCLOW	4-Methyl-2-Pentanone		5	ug/L	U	11/12/
SJS02-GW3S-002	VCLOW	Acetone	22	5	ug/L	B	11/12/
SJS02-GW3S-002	VCLOW	Benzene		1	ug/L	U	11/12/
SJS02-GW3S-002	VCLOW	Bromochloromethane		1	ug/L	U	11/12/97
SJS02-GW3S-002	VCLOW	Bromodichloromethane		1	ug/L	U	11/12/97
SJS02-GW3S-002	VCLOW	Bromoform		1	ug/L	U	11/12/97
SJS02-GW3S-002	VCLOW	Bromomethane		1	ug/L	U	11/12/97
SJS02-GW3S-002	VCLOW	Carbon Disulfide		1	ug/L	U	11/12/97
SJS02-GW3S-002	VCLOW	Carbon Tetrachloride		1	ug/L	U	11/12/97
SJS02-GW3S-002	VCLOW	Chlorobenzene		1	ug/L	U	11/12/97
SJS02-GW3S-002	VCLOW	Chloroethane		1	ug/L	U	11/12/97
SJS02-GW3S-002	VCLOW	Chloroform		1	ug/L	U	11/12/97
SJS02-GW3S-002	VCLOW	Chloromethane		1	ug/L	U	11/12/97
SJS02-GW3S-002	VCLOW	cis-1,2-Dichloroethene		1	ug/L	U	11/12/97
SJS02-GW3S-002	VCLOW	cis-1,3-Dichloropropene		1	ug/L	U	11/12/97
SJS02-GW3S-002	VCLOW	Dibromochloromethane		1	ug/L	U	11/12/97
SJS02-GW3S-002	VCLOW	Ethylbenzene		1	ug/L	U	11/12/97
SJS02-GW3S-002	VCLOW	Methylene Chloride	2	2	ug/L	B	11/12/97
SJS02-GW3S-002	VCLOW	Styrene		1	ug/L	U	11/12/97
SJS02-GW3S-002	VCLOW	Tetrachloroethene		1	ug/L	U	11/12/97
SJS02-GW3S-002	VCLOW	Toluene		1	ug/L	U	11/12/97
SJS02-GW3S-002	VCLOW	Total Xylenes		1	ug/L	U	11/12/97
SJS02-GW3S-002	VCLOW	Trans-1,2-Dichloroethene		1	ug/L	U	11/12/97
SJS02-GW3S-002	VCLOW	trans-1,3-Dichloropropene		1	ug/L	U	11/12/97
SJS02-GW3S-002	VCLOW	Trichloroethene		1	ug/L	U	11/12/97
SJS02-GW3S-002	VCLOW	Vinyl Chloride		1	ug/L	U	11/12/97
SJS02-GW3S-002F	METAL	Aluminum		38.1	ug/L	U	11/27/97
SJS02-GW3S-002F	METAL	Antimony		1.7	ug/L	U	11/21/97
SJS02-GW3S-002F	METAL	Arsenic	6	3	ug/L	J	11/21/97
SJS02-GW3S-002F	METAL	Barium	54.8	1	ug/L	J	11/27/
SJS02-GW3S-002F	METAL	Beryllium		0.58	ug/L	U	11/27/
SJS02-GW3S-002F	METAL	Cadmium		0.4	ug/L	U	11/21/
SJS02-GW3S-002F	METAL	Calcium	211000	46	ug/L		11/27/97
SJS02-GW3S-002F	METAL	Chromium		4.6	ug/L	U	11/27/97
SJS02-GW3S-002F	METAL	Cobalt	11.3	3	ug/L	J	11/27/97
SJS02-GW3S-002F	METAL	Copper		5.8	ug/L	U	11/27/97
SJS02-GW3S-002F	METAL	Iron	689	5	ug/L		11/27/97
SJS02-GW3S-002F	METAL	Lead		1.3	ug/L	U	11/21/97
SJS02-GW3S-002F	METAL	Magnesium	23700	45	ug/L		11/27/97
SJS02-GW3S-002F	METAL	Manganese	174	1	ug/L		11/27/97
SJS02-GW3S-002F	METAL	Mercury		0.13	ug/L	U	11/19/97
SJS02-GW3S-002F	METAL	Nickel	11.6	4	ug/L	J	11/27/97
SJS02-GW3S-002F	METAL	Potassium	6330	97	ug/L		11/27/97
SJS02-GW3S-002F	METAL	Selenium		3.3	ug/L	U	11/21/97
SJS02-GW3S-002F	METAL	Silver		1.1	ug/L	U	11/21/97
SJS02-GW3S-002F	METAL	Sodium	22200	28	ug/L		11/27/97
SJS02-GW3S-002F	METAL	Thallium	3.2	2	ug/L	B	11/21/97
SJS02-GW3S-002F	METAL	Vanadium		6.8	ug/L	U	11/27/97
SJS02-GW3S-002F	METAL	Zinc	330	3	ug/L		11/27/97
SJS05-GW1D-001	CTOTP	Total Phosphorous (as P)	0.376	0.05	mg/L		7/31/97
SJS05-GW1D-001	MCYAN	Aluminum	1070	29	ug/L	J	8/11/97
SJS05-GW1D-001	MCYAN	Arsenic		3	ug/L	U	8/8/97
SJS05-GW1D-001	MCYAN	Barium	15	1	ug/L	B	8/11/97
SJS05-GW1D-001	MCYAN	Beryllium	1.4	1	ug/L	B	8/11/97
SJS05-GW1D-001	MCYAN	Cadmium		0.5	ug/L	UL	8/8/97
SJS05-GW1D-001	MCYAN	Calcium	58700	46	ug/L	J	8/11/97
SJS05-GW1D-001	MCYAN	Chromium	10.1	4	ug/L	J	8/11/97
SJS05-GW1D-001	MCYAN	Cobalt		8	ug/L	U	8/11/97
SJS05-GW1D-001	MCYAN	Copper		6	ug/L	U	8/11/
SJS05-GW1D-001	MCYAN	Cyanide		5	ug/L	U	8/1

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS05-GW1D-001	MCYAN	Iron	1460	5	ug/L	J	8/11/97
SJS05-GW1D-001	MCYAN	Lead	2.7	1	ug/L	B	8/8/97
SJS05-GW1D-001	MCYAN	Magnesium	4770	45	ug/L	J	8/11/97
SJS05-GW1D-001	MCYAN	Manganese	30.7	1	ug/L	B	8/11/97
SJS05-GW1D-001	MCYAN	Mercury	0.16	0.1	ug/L	B	8/7/97
SJS05-GW1D-001	MCYAN	Nickel		7	ug/L	U	8/11/97
SJS05-GW1D-001	MCYAN	Potassium	8030	97	ug/L		8/11/97
SJS05-GW1D-001	MCYAN	Silver		1	ug/L	U	8/8/97
SJS05-GW1D-001	MCYAN	Sodium	39000	28	ug/L	J	8/11/97
SJS05-GW1D-001	MCYAN	Thallium		2	ug/L	U	8/8/97
SJS05-GW1D-001	MCYAN	Vanadium		9	ug/L	U	8/11/97
SJS05-GW1D-001	MCYAN	Zinc	11.4	3	ug/L	B	8/11/97
SJS05-GW1D-001	PSPCB	4,4'-DDD		0.1	ug/L	U	8/9/97
SJS05-GW1D-001	PSPCB	4,4'-DDE		0.1	ug/L	U	8/9/97
SJS05-GW1D-001	PSPCB	4,4'-DDT		0.1	ug/L	U	8/9/97
SJS05-GW1D-001	PSPCB	Aldrin		0.05	ug/L	U	8/9/97
SJS05-GW1D-001	PSPCB	alpha-BHC		0.05	ug/L	U	8/9/97
SJS05-GW1D-001	PSPCB	alpha-Chlordane		0.05	ug/L	U	8/9/97
SJS05-GW1D-001	PSPCB	Aroclor-1016		1	ug/L	U	8/9/97
SJS05-GW1D-001	PSPCB	Aroclor-1221		2	ug/L	U	8/9/97
SJS05-GW1D-001	PSPCB	Aroclor-1232		1	ug/L	U	8/9/97
SJS05-GW1D-001	PSPCB	Aroclor-1242		1	ug/L	U	8/9/97
SJS05-GW1D-001	PSPCB	Aroclor-1248		1	ug/L	U	8/9/97
SJS05-GW1D-001	PSPCB	Aroclor-1254		1	ug/L	U	8/9/97
SJS05-GW1D-001	PSPCB	Aroclor-1260		1	ug/L	U	8/9/97
SJS05-GW1D-001	PSPCB	beta-BHC		0.05	ug/L	U	8/9/97
SJS05-GW1D-001	PSPCB	delta-BHC		0.05	ug/L	U	8/9/97
SJS05-GW1D-001	PSPCB	Dieldrin		0.1	ug/L	U	8/9/97
SJS05-GW1D-001	PSPCB	Endosulfan I		0.05	ug/L	U	8/9/97
SJS05-GW1D-001	PSPCB	Endosulfan II		0.1	ug/L	U	8/9/97
SJS05-GW1D-001	PSPCB	Endosulfan Sulfate		0.1	ug/L	U	8/9/97
SJS05-GW1D-001	PSPCB	Endrin		0.1	ug/L	U	8/9/97
SJS05-GW1D-001	PSPCB	Endrin Aldehyde		0.1	ug/L	U	8/9/97
SJS05-GW1D-001	PSPCB	Endrin Ketone		0.1	ug/L	U	8/9/97
SJS05-GW1D-001	PSPCB	gamma-BHC		0.05	ug/L	U	8/9/97
SJS05-GW1D-001	PSPCB	gamma-Chlordane		0.05	ug/L	U	8/9/97
SJS05-GW1D-001	PSPCB	Heptachlor		0.05	ug/L	U	8/9/97
SJS05-GW1D-001	PSPCB	Heptachlor Epoxide		0.05	ug/L	U	8/9/97
SJS05-GW1D-001	PSPCB	Methoxychlor		0.5	ug/L	U	8/9/97
SJS05-GW1D-001	PSPCB	Toxaphene		5	ug/L	U	8/9/97
SJS05-GW1D-001	SVTCL	1,2,4-Trichlorobenzene		10	ug/L	U	8/8/97
SJS05-GW1D-001	SVTCL	1,2-Dichlorobenzene		10	ug/L	U	8/8/97
SJS05-GW1D-001	SVTCL	1,3-Dichlorobenzene		10	ug/L	U	8/8/97
SJS05-GW1D-001	SVTCL	1,4-Dichlorobenzene		10	ug/L	U	8/8/97
SJS05-GW1D-001	SVTCL	2,2'-oxybis(1-Chloropropan		10	ug/L	U	8/8/97
SJS05-GW1D-001	SVTCL	2,4,5-Trichlorophenol		25	ug/L	U	8/8/97
SJS05-GW1D-001	SVTCL	2,4,6-Trichlorophenol		10	ug/L	U	8/8/97
SJS05-GW1D-001	SVTCL	2,4-Dichlorophenol		10	ug/L	U	8/8/97
SJS05-GW1D-001	SVTCL	2,4-Dimethylphenol		10	ug/L	U	8/8/97
SJS05-GW1D-001	SVTCL	2,4-Dinitrophenol		25	ug/L	U	8/8/97
SJS05-GW1D-001	SVTCL	2,4-Dinitrotoluene		10	ug/L	U	8/8/97
SJS05-GW1D-001	SVTCL	2,6-Dinitrotoluene		10	ug/L	U	8/8/97
SJS05-GW1D-001	SVTCL	2-Chloronaphthalene		10	ug/L	U	8/8/97
SJS05-GW1D-001	SVTCL	2-Chlorophenol		10	ug/L	U	8/8/97
SJS05-GW1D-001	SVTCL	2-Methylnaphthalene		10	ug/L	U	8/8/97
SJS05-GW1D-001	SVTCL	2-Methylphenol		10	ug/L	U	8/8/97
SJS05-GW1D-001	SVTCL	2-Nitroaniline		25	ug/L	U	8/8/97
SJS05-GW1D-001	SVTCL	2-Nitrophenol		10	ug/L	U	8/8/97
SJS05-GW1D-001	SVTCL	3,3'-Dichlorobenzidine		10	ug/L	U	8/8/97
SJS05-GW1D-001	SVTCL	3-Nitroaniline		25	ug/L	U	8/8/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS05-GW1D-001	SVTCL	4,6-Dinitro-2-Methylphenol		25	ug/L	U	8/8
SJS05-GW1D-001	SVTCL	4-Bromophenol-phenylethe		10	ug/L	U	8/8
SJS05-GW1D-001	SVTCL	4-Chloro-3-Methylphenol		10	ug/L	U	8/8
SJS05-GW1D-001	SVTCL	4-Chloroaniline		10	ug/L	U	8/8/97
SJS05-GW1D-001	SVTCL	4-Chlorophenyl-phenylethe		10	ug/L	U	8/8/97
SJS05-GW1D-001	SVTCL	4-Methylphenol		10	ug/L	U	8/8/97
SJS05-GW1D-001	SVTCL	4-Nitroaniline		25	ug/L	U	8/8/97
SJS05-GW1D-001	SVTCL	4-Nitrophenol		25	ug/L	U	8/8/97
SJS05-GW1D-001	SVTCL	Acenaphthene		10	ug/L	U	8/8/97
SJS05-GW1D-001	SVTCL	Acenaphthylene		10	ug/L	U	8/8/97
SJS05-GW1D-001	SVTCL	Anthracene		10	ug/L	U	8/8/97
SJS05-GW1D-001	SVTCL	Benzo(a)anthracene		10	ug/L	U	8/8/97
SJS05-GW1D-001	SVTCL	Benzo(a)pyrene		10	ug/L	U	8/8/97
SJS05-GW1D-001	SVTCL	Benzo(b)fluoranthene		10	ug/L	U	8/8/97
SJS05-GW1D-001	SVTCL	Benzo(g,h,i)perylene		10	ug/L	U	8/8/97
SJS05-GW1D-001	SVTCL	Benzo(k)fluoranthene		10	ug/L	U	8/8/97
SJS05-GW1D-001	SVTCL	bis(2-Chloroethoxy)methan		10	ug/L	U	8/8/97
SJS05-GW1D-001	SVTCL	bis(2-chloroethyl)ether		10	ug/L	U	8/8/97
SJS05-GW1D-001	SVTCL	bis(2-Ethylhexyl)phthalate		10	ug/L	U	8/8/97
SJS05-GW1D-001	SVTCL	Butylbenzylphthalate		10	ug/L	U	8/8/97
SJS05-GW1D-001	SVTCL	Carbazole		10	ug/L	U	8/8/97
SJS05-GW1D-001	SVTCL	Chrysene		10	ug/L	U	8/8/97
SJS05-GW1D-001	SVTCL	Di-n-butylphthalate		10	ug/L	U	8/8/97
SJS05-GW1D-001	SVTCL	Di-n-Octyl Phthalate		10	ug/L	U	8/8/97
SJS05-GW1D-001	SVTCL	Dibenzo(a,h)anthracene		10	ug/L	U	8/8/97
SJS05-GW1D-001	SVTCL	Dibenzofuran		10	ug/L	U	8/8/97
SJS05-GW1D-001	SVTCL	Diethylphthalate		10	ug/L	U	8/8/97
SJS05-GW1D-001	SVTCL	Dimethyl Phthalate		10	ug/L	U	8/8/97
SJS05-GW1D-001	SVTCL	Fluoranthene		10	ug/L	U	8/8/97
SJS05-GW1D-001	SVTCL	Fluorene		10	ug/L	U	8/8
SJS05-GW1D-001	SVTCL	Hexachlorobenzene		10	ug/L	U	8/8
SJS05-GW1D-001	SVTCL	Hexachlorobutadiene		10	ug/L	U	8/8/97
SJS05-GW1D-001	SVTCL	Hexachlorocyclopentadien		10	ug/L	U	8/8/97
SJS05-GW1D-001	SVTCL	Hexachloroethane		10	ug/L	U	8/8/97
SJS05-GW1D-001	SVTCL	Indeno(1,2,3-cd)pyrene		10	ug/L	U	8/8/97
SJS05-GW1D-001	SVTCL	Isophorone		10	ug/L	U	8/8/97
SJS05-GW1D-001	SVTCL	N-Nitroso-Di-n-Propylamine		10	ug/L	U	8/8/97
SJS05-GW1D-001	SVTCL	N-Nitrosodiphenylamine		10	ug/L	U	8/8/97
SJS05-GW1D-001	SVTCL	Naphthalene		10	ug/L	U	8/8/97
SJS05-GW1D-001	SVTCL	Nitrobenzene		10	ug/L	U	8/8/97
SJS05-GW1D-001	SVTCL	Pentachlorophenol		25	ug/L	U	8/8/97
SJS05-GW1D-001	SVTCL	Phenanthrene		10	ug/L	U	8/8/97
SJS05-GW1D-001	SVTCL	Phenol		10	ug/L	U	8/8/97
SJS05-GW1D-001	SVTCL	Pyrene		10	ug/L	U	8/8/97
SJS05-GW1D-001	VCLOW	1,1,1-Trichloroethane		1	ug/L	U	8/1/97
SJS05-GW1D-001	VCLOW	1,1,2,2-Tetrachloroethane		1	ug/L	U	8/1/97
SJS05-GW1D-001	VCLOW	1,1,2-Trichloroethane		1	ug/L	U	8/1/97
SJS05-GW1D-001	VCLOW	1,1-Dichloroethane		1	ug/L	U	8/1/97
SJS05-GW1D-001	VCLOW	1,1-Dichloroethene		1	ug/L	U	8/1/97
SJS05-GW1D-001	VCLOW	1,2,4-Trichlorobenzene		1	ug/L	U	8/1/97
SJS05-GW1D-001	VCLOW	1,2-Dibromo-3-chloropropa		1	ug/L	U	8/1/97
SJS05-GW1D-001	VCLOW	1,2-Dibromoethane		1	ug/L	U	8/1/97
SJS05-GW1D-001	VCLOW	1,2-Dichlorobenzene		1	ug/L	U	8/1/97
SJS05-GW1D-001	VCLOW	1,2-Dichloroethane		1	ug/L	U	8/1/97
SJS05-GW1D-001	VCLOW	1,2-Dichloropropane		1	ug/L	U	8/1/97
SJS05-GW1D-001	VCLOW	1,3-Dichlorobenzene		1	ug/L	U	8/1/97
SJS05-GW1D-001	VCLOW	1,4-Dichlorobenzene		1	ug/L	U	8/1/97
SJS05-GW1D-001	VCLOW	2-Hexanone		5	ug/L	U	8/1/97
SJS05-GW1D-001	VCLOW	4-Methyl-2-Pentanone		5	ug/L	U	8/1
SJS05-GW1D-001	VCLOW	Acetone		5	ug/L	U	8/1

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS05-GW1D-001	VCLOW	Benzene		1	ug/L	U	8/1/97
SJS05-GW1D-001	VCLOW	Bromochloromethane		1	ug/L	U	8/1/97
SJS05-GW1D-001	VCLOW	Bromodichloromethane		1	ug/L	U	8/1/97
SJS05-GW1D-001	VCLOW	Bromoform		1	ug/L	U	8/1/97
SJS05-GW1D-001	VCLOW	Bromomethane		1	ug/L	U	8/1/97
SJS05-GW1D-001	VCLOW	Carbon Disulfide		1	ug/L	U	8/1/97
SJS05-GW1D-001	VCLOW	Carbon Tetrachloride		1	ug/L	U	8/1/97
SJS05-GW1D-001	VCLOW	Chlorobenzene		1	ug/L	U	8/1/97
SJS05-GW1D-001	VCLOW	Chloroethane		1	ug/L	U	8/1/97
SJS05-GW1D-001	VCLOW	Chloroform	2	1	ug/L		8/1/97
SJS05-GW1D-001	VCLOW	Chloromethane		1	ug/L	U	8/1/97
SJS05-GW1D-001	VCLOW	cis-1,2-Dichloroethene		1	ug/L	U	8/1/97
SJS05-GW1D-001	VCLOW	cis-1,3-Dichloropropene		1	ug/L	U	8/1/97
SJS05-GW1D-001	VCLOW	Dibromochloromethane		1	ug/L	U	8/1/97
SJS05-GW1D-001	VCLOW	Ethylbenzene		1	ug/L	U	8/1/97
SJS05-GW1D-001	VCLOW	Methylene Chloride	2	1	ug/L	B	8/1/97
SJS05-GW1D-001	VCLOW	Styrene		1	ug/L	U	8/1/97
SJS05-GW1D-001	VCLOW	Tetrachloroethene		1	ug/L	U	8/1/97
SJS05-GW1D-001	VCLOW	Toluene		1	ug/L	U	8/1/97
SJS05-GW1D-001	VCLOW	Total Xylenes		1	ug/L	U	8/1/97
SJS05-GW1D-001	VCLOW	Trans-1,2-Dichloroethene		1	ug/L	U	8/1/97
SJS05-GW1D-001	VCLOW	trans-1,3-Dichloropropene		1	ug/L	U	8/1/97
SJS05-GW1D-001	VCLOW	Trichloroethene		1	ug/L	U	8/1/97
SJS05-GW1D-001	VCLOW	Vinyl Chloride		1	ug/L	U	8/1/97
SJS05-GW1D-001F	METAL	Aluminum	108	29	ug/L	B	8/11/97
SJS05-GW1D-001F	METAL	Antimony		2	ug/L	UL	8/13/97
SJS05-GW1D-001F	METAL	Arsenic		3	ug/L	UL	8/8/97
SJS05-GW1D-001F	METAL	Barium	11.6	1	ug/L	B	8/11/97
SJS05-GW1D-001F	METAL	Beryllium	1.1	1	ug/L	B	8/11/97
SJS05-GW1D-001F	METAL	Cadmium		0.5	ug/L	UL	8/8/97
SJS05-GW1D-001F	METAL	Calcium	65800	46	ug/L	J	8/11/97
SJS05-GW1D-001F	METAL	Chromium		7	ug/L	U	8/11/97
SJS05-GW1D-001F	METAL	Cobalt		8	ug/L	U	8/11/97
SJS05-GW1D-001F	METAL	Copper		6	ug/L	U	8/11/97
SJS05-GW1D-001F	METAL	Iron	40.7	5	ug/L	B	8/11/97
SJS05-GW1D-001F	METAL	Lead	1.4	1	ug/L	B	8/8/97
SJS05-GW1D-001F	METAL	Magnesium	5240	45	ug/L	J	8/11/97
SJS05-GW1D-001F	METAL	Manganese	10.1	1	ug/L	B	8/11/97
SJS05-GW1D-001F	METAL	Mercury	0.19	0.1	ug/L	B	8/7/97
SJS05-GW1D-001F	METAL	Nickel		7	ug/L	U	8/11/97
SJS05-GW1D-001F	METAL	Potassium	8860	97	ug/L		8/11/97
SJS05-GW1D-001F	METAL	Silver		1	ug/L	U	8/8/97
SJS05-GW1D-001F	METAL	Sodium	44100	28	ug/L	J	8/11/97
SJS05-GW1D-001F	METAL	Thallium		2	ug/L	U	8/8/97
SJS05-GW1D-001F	METAL	Vanadium		9	ug/L	U	8/11/97
SJS05-GW1D-001F	METAL	Zinc	55.1	3	ug/L	B	8/11/97
SJS05-GW1D-002	CTOTP	Total Phosphorous (as P)	0.485	0.13	mg/L		11/19/97
SJS05-GW1D-002	MCYAN	Aluminum		38.1	ug/L	U	11/27/97
SJS05-GW1D-002	MCYAN	Antimony		1.7	ug/L	U	11/21/97
SJS05-GW1D-002	MCYAN	Arsenic		3.2	ug/L	U	11/21/97
SJS05-GW1D-002	MCYAN	Barium	12.2	1	ug/L	B	11/27/97
SJS05-GW1D-002	MCYAN	Beryllium		0.58	ug/L	U	11/27/97
SJS05-GW1D-002	MCYAN	Cadmium		0.4	ug/L	U	11/21/97
SJS05-GW1D-002	MCYAN	Calcium	51600	46	ug/L		11/27/97
SJS05-GW1D-002	MCYAN	Chromium		4.6	ug/L	U	11/27/97
SJS05-GW1D-002	MCYAN	Cobalt		6	ug/L	U	11/27/97
SJS05-GW1D-002	MCYAN	Copper		5.8	ug/L	U	11/27/97
SJS05-GW1D-002	MCYAN	Cyanide		5	ug/L	U	11/12/97
SJS05-GW1D-002	MCYAN	Iron	109	5	ug/L	B	11/27/97
SJS05-GW1D-002	MCYAN	Lead		1.3	ug/L	U	11/21/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS05-GW1D-002	MCYAN	Magnesium	3750	45	ug/L	J	11/27/
SJS05-GW1D-002	MCYAN	Manganese	14.4	1	ug/L	B	11/27
SJS05-GW1D-002	MCYAN	Mercury		0.13	ug/L	U	11/19/
SJS05-GW1D-002	MCYAN	Nickel		6.3	ug/L	U	11/27/97
SJS05-GW1D-002	MCYAN	Potassium	7440	97	ug/L		11/27/97
SJS05-GW1D-002	MCYAN	Selenium		3.3	ug/L	U	11/21/97
SJS05-GW1D-002	MCYAN	Silver	1.7	3	ug/L	B	11/21/97
SJS05-GW1D-002	MCYAN	Sodium	41200	28	ug/L		11/27/97
SJS05-GW1D-002	MCYAN	Thallium	1.7	2	ug/L	B	11/21/97
SJS05-GW1D-002	MCYAN	Vanadium		6.8	ug/L	U	11/27/97
SJS05-GW1D-002	MCYAN	Zinc	4.8	3	ug/L	B	11/27/97
SJS05-GW1D-002	PSPCB	4,4'-DDD		0.1	ug/L	U	11/21/97
SJS05-GW1D-002	PSPCB	4,4'-DDE		0.1	ug/L	U	11/21/97
SJS05-GW1D-002	PSPCB	4,4'-DDT		0.1	ug/L	U	11/21/97
SJS05-GW1D-002	PSPCB	Aldrin		0.05	ug/L	U	11/21/97
SJS05-GW1D-002	PSPCB	alpha-BHC		0.05	ug/L	U	11/21/97
SJS05-GW1D-002	PSPCB	alpha-Chlordane		0.05	ug/L	U	11/21/97
SJS05-GW1D-002	PSPCB	Aroclor-1016		1	ug/L	U	11/21/97
SJS05-GW1D-002	PSPCB	Aroclor-1221		2	ug/L	U	11/21/97
SJS05-GW1D-002	PSPCB	Aroclor-1232		1	ug/L	U	11/21/97
SJS05-GW1D-002	PSPCB	Aroclor-1242		1	ug/L	U	11/21/97
SJS05-GW1D-002	PSPCB	Aroclor-1248		1	ug/L	U	11/21/97
SJS05-GW1D-002	PSPCB	Aroclor-1254		1	ug/L	U	11/21/97
SJS05-GW1D-002	PSPCB	Aroclor-1260		1	ug/L	U	11/21/97
SJS05-GW1D-002	PSPCB	beta-BHC		0.05	ug/L	U	11/21/97
SJS05-GW1D-002	PSPCB	delta-BHC		0.05	ug/L	U	11/21/97
SJS05-GW1D-002	PSPCB	Dieldrin		0.1	ug/L	U	11/21/97
SJS05-GW1D-002	PSPCB	Endosulfan I		0.05	ug/L	U	11/21/97
SJS05-GW1D-002	PSPCB	Endosulfan II		0.1	ug/L	U	11/21/97
SJS05-GW1D-002	PSPCB	Endosulfan Sulfate		0.1	ug/L	U	11/21/
SJS05-GW1D-002	PSPCB	Endrin		0.1	ug/L	U	11/21/
SJS05-GW1D-002	PSPCB	Endrin Aldehyde		0.1	ug/L	U	11/21/
SJS05-GW1D-002	PSPCB	Endrin Ketone		0.1	ug/L	U	11/21/97
SJS05-GW1D-002	PSPCB	gamma-BHC		0.05	ug/L	U	11/21/97
SJS05-GW1D-002	PSPCB	gamma-Chlordane		0.05	ug/L	U	11/21/97
SJS05-GW1D-002	PSPCB	Heptachlor		0.05	ug/L	U	11/21/97
SJS05-GW1D-002	PSPCB	Heptachlor Epoxide		0.05	ug/L	U	11/21/97
SJS05-GW1D-002	PSPCB	Methoxychlor		0.5	ug/L	U	11/21/97
SJS05-GW1D-002	PSPCB	Toxaphene		5	ug/L	U	11/21/97
SJS05-GW1D-002	SVTCL	1,2,4-Trichlorobenzene		10	ug/L	U	11/19/97
SJS05-GW1D-002	SVTCL	1,2-Dichlorobenzene		10	ug/L	U	11/19/97
SJS05-GW1D-002	SVTCL	1,3-Dichlorobenzene		10	ug/L	U	11/19/97
SJS05-GW1D-002	SVTCL	1,4-Dichlorobenzene		10	ug/L	U	11/19/97
SJS05-GW1D-002	SVTCL	2,2'-oxybis(1-Chloropropan		10	ug/L	U	11/19/97
SJS05-GW1D-002	SVTCL	2,4,5-Trichlorophenol		25	ug/L	U	11/19/97
SJS05-GW1D-002	SVTCL	2,4,6-Trichlorophenol		10	ug/L	U	11/19/97
SJS05-GW1D-002	SVTCL	2,4-Dichlorophenol		10	ug/L	U	11/19/97
SJS05-GW1D-002	SVTCL	2,4-Dimethylphenol		10	ug/L	U	11/19/97
SJS05-GW1D-002	SVTCL	2,4-Dinitrophenol		25	ug/L	U	11/19/97
SJS05-GW1D-002	SVTCL	2,4-Dinitrotoluene		10	ug/L	U	11/19/97
SJS05-GW1D-002	SVTCL	2,6-Dinitrotoluene		10	ug/L	U	11/19/97
SJS05-GW1D-002	SVTCL	2-Chloronaphthalene		10	ug/L	U	11/19/97
SJS05-GW1D-002	SVTCL	2-Chlorophenol		10	ug/L	U	11/19/97
SJS05-GW1D-002	SVTCL	2-Methylnaphthalene		10	ug/L	U	11/19/97
SJS05-GW1D-002	SVTCL	2-Methylphenol		10	ug/L	U	11/19/97
SJS05-GW1D-002	SVTCL	2-Nitroaniline		25	ug/L	U	11/19/97
SJS05-GW1D-002	SVTCL	2-Nitrophenol		10	ug/L	U	11/19/97
SJS05-GW1D-002	SVTCL	3,3'-Dichlorobenzidine		10	ug/L	U	11/19/97
SJS05-GW1D-002	SVTCL	3-Nitroaniline		25	ug/L	U	11/19/
SJS05-GW1D-002	SVTCL	4,6-Dinitro-2-Methylphenol		25	ug/L	U	11/19/

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS05-GW1D-002	SVTCL	4-Bromophenol-phenylethe		10	ug/L	U	11/19/97
SJS05-GW1D-002	SVTCL	4-Chloro-3-Methylphenol		10	ug/L	U	11/19/97
SJS05-GW1D-002	SVTCL	4-Chloroaniline		10	ug/L	U	11/19/97
SJS05-GW1D-002	SVTCL	4-Chlorophenyl-phenylethe		10	ug/L	U	11/19/97
SJS05-GW1D-002	SVTCL	4-Methylphenol		10	ug/L	U	11/19/97
SJS05-GW1D-002	SVTCL	4-Nitroaniline		25	ug/L	U	11/19/97
SJS05-GW1D-002	SVTCL	4-Nitrophenol		25	ug/L	U	11/19/97
SJS05-GW1D-002	SVTCL	Acenaphthene		10	ug/L	U	11/19/97
SJS05-GW1D-002	SVTCL	Acenaphthylene		10	ug/L	U	11/19/97
SJS05-GW1D-002	SVTCL	Anthracene		10	ug/L	U	11/19/97
SJS05-GW1D-002	SVTCL	Benzo(a)anthracene		10	ug/L	U	11/19/97
SJS05-GW1D-002	SVTCL	Benzo(a)pyrene		10	ug/L	U	11/19/97
SJS05-GW1D-002	SVTCL	Benzo(b)fluoranthene		10	ug/L	U	11/19/97
SJS05-GW1D-002	SVTCL	Benzo(g,h,i)perylene		10	ug/L	U	11/19/97
SJS05-GW1D-002	SVTCL	Benzo(k)fluoranthene		10	ug/L	U	11/19/97
SJS05-GW1D-002	SVTCL	bis(2-Chloroethoxy)methan		10	ug/L	U	11/19/97
SJS05-GW1D-002	SVTCL	bis(2-chloroethyl)ether		10	ug/L	U	11/19/97
SJS05-GW1D-002	SVTCL	bis(2-Ethylhexyl)phthalate		10	ug/L	U	11/19/97
SJS05-GW1D-002	SVTCL	Butylbenzylphthalate		10	ug/L	U	11/19/97
SJS05-GW1D-002	SVTCL	Carbazole		10	ug/L	U	11/19/97
SJS05-GW1D-002	SVTCL	Chrysene		10	ug/L	U	11/19/97
SJS05-GW1D-002	SVTCL	Di-n-butylphthalate		10	ug/L	U	11/19/97
SJS05-GW1D-002	SVTCL	Di-n-Octyl Phthalate		10	ug/L	U	11/19/97
SJS05-GW1D-002	SVTCL	Dibenzo(a,h)anthracene		10	ug/L	U	11/19/97
SJS05-GW1D-002	SVTCL	Dibenzofuran		10	ug/L	U	11/19/97
SJS05-GW1D-002	SVTCL	Diethylphthalate		10	ug/L	U	11/19/97
SJS05-GW1D-002	SVTCL	Dimethyl Phthalate		10	ug/L	U	11/19/97
SJS05-GW1D-002	SVTCL	Fluoranthene		10	ug/L	U	11/19/97
SJS05-GW1D-002	SVTCL	Fluorene		10	ug/L	U	11/19/97
SJS05-GW1D-002	SVTCL	Hexachlorobenzene		10	ug/L	U	11/19/97
SJS05-GW1D-002	SVTCL	Hexachlorobutadiene		10	ug/L	U	11/19/97
SJS05-GW1D-002	SVTCL	Hexachlorocyclopentadien		10	ug/L	U	11/19/97
SJS05-GW1D-002	SVTCL	Hexachloroethane		10	ug/L	U	11/19/97
SJS05-GW1D-002	SVTCL	Indeno(1,2,3-cd)pyrene		10	ug/L	U	11/19/97
SJS05-GW1D-002	SVTCL	Isophorone		10	ug/L	U	11/19/97
SJS05-GW1D-002	SVTCL	N-Nitroso-Di-n-Propylamine		10	ug/L	U	11/19/97
SJS05-GW1D-002	SVTCL	N-Nitrosodiphenylamine		10	ug/L	U	11/19/97
SJS05-GW1D-002	SVTCL	Naphthalene		10	ug/L	U	11/19/97
SJS05-GW1D-002	SVTCL	Nitrobenzene		10	ug/L	U	11/19/97
SJS05-GW1D-002	SVTCL	Pentachlorophenol		25	ug/L	U	11/19/97
SJS05-GW1D-002	SVTCL	Phenanthrene		10	ug/L	U	11/19/97
SJS05-GW1D-002	SVTCL	Phenol	10	10	ug/L	U	11/19/97
SJS05-GW1D-002	SVTCL	Pyrene		10	ug/L	U	11/19/97
SJS05-GW1D-002	VCLOW	1,1,1-Trichloroethane		1	ug/L	U	11/11/97
SJS05-GW1D-002	VCLOW	1,1,2,2-Tetrachloroethane		1	ug/L	U	11/11/97
SJS05-GW1D-002	VCLOW	1,1,2-Trichloroethane		1	ug/L	U	11/11/97
SJS05-GW1D-002	VCLOW	1,1-Dichloroethane		1	ug/L	U	11/11/97
SJS05-GW1D-002	VCLOW	1,1-Dichloroethene		1	ug/L	U	11/11/97
SJS05-GW1D-002	VCLOW	1,2,4-Trichlorobenzene		1	ug/L	U	11/11/97
SJS05-GW1D-002	VCLOW	1,2-Dibromo-3-chloropropa		1	ug/L	U	11/11/97
SJS05-GW1D-002	VCLOW	1,2-Dibromoethane		1	ug/L	U	11/11/97
SJS05-GW1D-002	VCLOW	1,2-Dichlorobenzene		1	ug/L	U	11/11/97
SJS05-GW1D-002	VCLOW	1,2-Dichloroethane		1	ug/L	U	11/11/97
SJS05-GW1D-002	VCLOW	1,2-Dichloropropane		1	ug/L	U	11/11/97
SJS05-GW1D-002	VCLOW	1,3-Dichlorobenzene		1	ug/L	U	11/11/97
SJS05-GW1D-002	VCLOW	1,4-Dichlorobenzene		1	ug/L	U	11/11/97
SJS05-GW1D-002	VCLOW	2-Hexanone		5	ug/L	U	11/11/97
SJS05-GW1D-002	VCLOW	4-Methyl-2-Pentanone		5	ug/L	U	11/11/97
SJS05-GW1D-002	VCLOW	Acetone	10	5	ug/L	B	11/11/97
SJS05-GW1D-002	VCLOW	Benzene		1	ug/L	U	11/11/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS05-GW1D-002	VCLOW	Bromochloromethane		1	ug/L	U	11/11/9
SJS05-GW1D-002	VCLOW	Bromodichloromethane		1	ug/L	U	11/11/
SJS05-GW1D-002	VCLOW	Bromoform		1	ug/L	U	11/11/
SJS05-GW1D-002	VCLOW	Bromomethane		1	ug/L	U	11/11/97
SJS05-GW1D-002	VCLOW	Carbon Disulfide	0.2	1	ug/L	J	11/11/97
SJS05-GW1D-002	VCLOW	Carbon Tetrachloride		1	ug/L	U	11/11/97
SJS05-GW1D-002	VCLOW	Chlorobenzene		1	ug/L	U	11/11/97
SJS05-GW1D-002	VCLOW	Chloroethane		1	ug/L	U	11/11/97
SJS05-GW1D-002	VCLOW	Chloroform		1	ug/L	U	11/11/97
SJS05-GW1D-002	VCLOW	Chloromethane		1	ug/L	U	11/11/97
SJS05-GW1D-002	VCLOW	cis-1,2-Dichloroethene		1	ug/L	U	11/11/97
SJS05-GW1D-002	VCLOW	cis-1,3-Dichloropropene		1	ug/L	U	11/11/97
SJS05-GW1D-002	VCLOW	Dibromochloromethane		1	ug/L	U	11/11/97
SJS05-GW1D-002	VCLOW	Ethylbenzene		1	ug/L	U	11/11/97
SJS05-GW1D-002	VCLOW	Methylene Chloride	3	2	ug/L	B	11/11/97
SJS05-GW1D-002	VCLOW	Styrene		1	ug/L	U	11/11/97
SJS05-GW1D-002	VCLOW	Tetrachloroethene		1	ug/L	U	11/11/97
SJS05-GW1D-002	VCLOW	Toluene		1	ug/L	U	11/11/97
SJS05-GW1D-002	VCLOW	Total Xylenes		1	ug/L	U	11/11/97
SJS05-GW1D-002	VCLOW	Trans-1,2-Dichloroethene		1	ug/L	U	11/11/97
SJS05-GW1D-002	VCLOW	trans-1,3-Dichloropropene		1	ug/L	U	11/11/97
SJS05-GW1D-002	VCLOW	Trichloroethene		1	ug/L	U	11/11/97
SJS05-GW1D-002	VCLOW	Vinyl Chloride		1	ug/L	U	11/11/97
SJS05-GW1D-002F	METAL	Aluminum		38.1	ug/L	U	11/27/97
SJS05-GW1D-002F	METAL	Antimony		1.7	ug/L	U	11/21/97
SJS05-GW1D-002F	METAL	Arsenic	3.6	3	ug/L	B	11/21/97
SJS05-GW1D-002F	METAL	Barium	11.4	1	ug/L	B	11/27/97
SJS05-GW1D-002F	METAL	Beryllium		0.58	ug/L	U	11/27/97
SJS05-GW1D-002F	METAL	Cadmium		0.4	ug/L	U	11/21/97
SJS05-GW1D-002F	METAL	Calcium	44700	46	ug/L		11/27/
SJS05-GW1D-002F	METAL	Chromium		4.6	ug/L	U	11/27/
SJS05-GW1D-002F	METAL	Cobalt		6	ug/L	U	11/27/
SJS05-GW1D-002F	METAL	Copper		5.8	ug/L	U	11/27/97
SJS05-GW1D-002F	METAL	Iron	67.5	5	ug/L	B	11/27/97
SJS05-GW1D-002F	METAL	Lead		1.3	ug/L	U	11/21/97
SJS05-GW1D-002F	METAL	Magnesium	2820	45	ug/L	J	11/27/97
SJS05-GW1D-002F	METAL	Manganese	13.6	1	ug/L	B	11/27/97
SJS05-GW1D-002F	METAL	Mercury		0.13	ug/L	U	11/19/97
SJS05-GW1D-002F	METAL	Nickel		6.3	ug/L	U	11/27/97
SJS05-GW1D-002F	METAL	Potassium	6960	97	ug/L		11/27/97
SJS05-GW1D-002F	METAL	Selenium		3.3	ug/L	U	11/21/97
SJS05-GW1D-002F	METAL	Silver		1.1	ug/L	U	11/21/97
SJS05-GW1D-002F	METAL	Sodium	37900	28	ug/L		11/27/97
SJS05-GW1D-002F	METAL	Thallium		1.5	ug/L	U	11/21/97
SJS05-GW1D-002F	METAL	Vanadium		6.8	ug/L	U	11/27/97
SJS05-GW1D-002F	METAL	Zinc	8.1	3	ug/L	B	11/27/97
SJS05-GW1S-001	CTOTP	Total Phosphorous (as P)	0.104	0.05	mg/L		7/29/97
SJS05-GW1S-001	MCYAN	Aluminum	1630	29	ug/L		7/22/97
SJS05-GW1S-001	MCYAN	Antimony		2	ug/L	U	7/21/97
SJS05-GW1S-001	MCYAN	Arsenic	4.8	3	ug/L	J	7/25/97
SJS05-GW1S-001	MCYAN	Barium	359	1	ug/L		7/22/97
SJS05-GW1S-001	MCYAN	Beryllium		1	ug/L	U	7/22/97
SJS05-GW1S-001	MCYAN	Cadmium		0.5	ug/L	U	7/21/97
SJS05-GW1S-001	MCYAN	Calcium	117000	46	ug/L		7/22/97
SJS05-GW1S-001	MCYAN	Chromium	8.5	4	ug/L	J	7/22/97
SJS05-GW1S-001	MCYAN	Cobalt		8	ug/L	U	7/22/97
SJS05-GW1S-001	MCYAN	Copper		6	ug/L	U	7/22/97
SJS05-GW1S-001	MCYAN	Cyanide		5	ug/L	U	7/22/97
SJS05-GW1S-001	MCYAN	Iron	58700	5	ug/L		7/22/
SJS05-GW1S-001	MCYAN	Lead		1	ug/L	U	7/21/

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS05-GW1S-001	IMCYAN	Magnesium	190000	45	ug/L		7/22/97
SJS05-GW1S-001	IMCYAN	Manganese	1300	1	ug/L		7/22/97
SJS05-GW1S-001	IMCYAN	Mercury	0.13	0.1	ug/L	B	7/29/97
SJS05-GW1S-001	IMCYAN	Nickel		7	ug/L	U	7/22/97
SJS05-GW1S-001	IMCYAN	Potassium	39500	97	ug/L		7/22/97
SJS05-GW1S-001	IMCYAN	Selenium		3	ug/L	U	7/21/97
SJS05-GW1S-001	IMCYAN	Silver	2.4	3	ug/L	B	7/21/97
SJS05-GW1S-001	IMCYAN	Sodium	1200000	28	ug/L	B	7/23/97
SJS05-GW1S-001	IMCYAN	Thallium	2.7	2	ug/L	B	7/21/97
SJS05-GW1S-001	IMCYAN	Vanadium	11.4	4	ug/L	J	7/22/97
SJS05-GW1S-001	IMCYAN	Zinc	46.1	3	ug/L		7/22/97
SJS05-GW1S-001	PSPCB	4,4'-DDD		0.1	ug/L	U	8/6/97
SJS05-GW1S-001	PSPCB	4,4'-DDE		0.1	ug/L	U	8/6/97
SJS05-GW1S-001	PSPCB	4,4'-DDT		0.1	ug/L	U	8/6/97
SJS05-GW1S-001	PSPCB	Aldrin		0.05	ug/L	U	8/6/97
SJS05-GW1S-001	PSPCB	alpha-BHC		0.05	ug/L	U	8/6/97
SJS05-GW1S-001	PSPCB	alpha-Chlordane		0.05	ug/L	U	8/6/97
SJS05-GW1S-001	PSPCB	Aroclor-1016		1	ug/L	U	8/6/97
SJS05-GW1S-001	PSPCB	Aroclor-1221		2	ug/L	U	8/6/97
SJS05-GW1S-001	PSPCB	Aroclor-1232		1	ug/L	U	8/6/97
SJS05-GW1S-001	PSPCB	Aroclor-1242		1	ug/L	U	8/6/97
SJS05-GW1S-001	PSPCB	Aroclor-1248		1	ug/L	U	8/6/97
SJS05-GW1S-001	PSPCB	Aroclor-1254		1	ug/L	U	8/6/97
SJS05-GW1S-001	PSPCB	Aroclor-1260		1	ug/L	U	8/6/97
SJS05-GW1S-001	PSPCB	beta-BHC		0.05	ug/L	U	8/6/97
SJS05-GW1S-001	PSPCB	delta-BHC		0.05	ug/L	U	8/6/97
SJS05-GW1S-001	PSPCB	Dieldrin		0.1	ug/L	U	8/6/97
SJS05-GW1S-001	PSPCB	Endosulfan I		0.05	ug/L	U	8/6/97
SJS05-GW1S-001	PSPCB	Endosulfan II		0.1	ug/L	U	8/6/97
SJS05-GW1S-001	PSPCB	Endosulfan Sulfate		0.1	ug/L	U	8/6/97
SJS05-GW1S-001	PSPCB	Endrin		0.1	ug/L	U	8/6/97
SJS05-GW1S-001	PSPCB	Endrin Aldehyde		0.1	ug/L	U	8/6/97
SJS05-GW1S-001	PSPCB	Endrin Ketone		0.1	ug/L	U	8/6/97
SJS05-GW1S-001	PSPCB	gamma-BHC		0.05	ug/L	U	8/6/97
SJS05-GW1S-001	PSPCB	gamma-Chlordane		0.05	ug/L	U	8/6/97
SJS05-GW1S-001	PSPCB	Heptachlor		0.05	ug/L	U	8/6/97
SJS05-GW1S-001	PSPCB	Heptachlor Epoxide		0.05	ug/L	U	8/6/97
SJS05-GW1S-001	PSPCB	Methoxychlor		0.5	ug/L	U	8/6/97
SJS05-GW1S-001	PSPCB	Toxaphene		5	ug/L	U	8/6/97
SJS05-GW1S-001	SVTCL	1,2,4-Trichlorobenzene		10	ug/L	U	7/25/97
SJS05-GW1S-001	SVTCL	1,2-Dichlorobenzene		10	ug/L	U	7/25/97
SJS05-GW1S-001	SVTCL	1,3-Dichlorobenzene		10	ug/L	U	7/25/97
SJS05-GW1S-001	SVTCL	1,4-Dichlorobenzene		10	ug/L	U	7/25/97
SJS05-GW1S-001	SVTCL	2,2'-oxybis(1-Chloropropan		10	ug/L	U	7/25/97
SJS05-GW1S-001	SVTCL	2,4,5-Trichlorophenol		25	ug/L	U	7/25/97
SJS05-GW1S-001	SVTCL	2,4,6-Trichlorophenol		10	ug/L	U	7/25/97
SJS05-GW1S-001	SVTCL	2,4-Dichlorophenol		10	ug/L	U	7/25/97
SJS05-GW1S-001	SVTCL	2,4-Dimethylphenol		10	ug/L	U	7/25/97
SJS05-GW1S-001	SVTCL	2,4-Dinitrophenol		25	ug/L	U	7/25/97
SJS05-GW1S-001	SVTCL	2,4-Dinitrotoluene		10	ug/L	U	7/25/97
SJS05-GW1S-001	SVTCL	2,6-Dinitrotoluene		10	ug/L	U	7/25/97
SJS05-GW1S-001	SVTCL	2-Chloronaphthalene		10	ug/L	U	7/25/97
SJS05-GW1S-001	SVTCL	2-Chlorophenol		10	ug/L	U	7/25/97
SJS05-GW1S-001	SVTCL	2-Methylnaphthalene		10	ug/L	U	7/25/97
SJS05-GW1S-001	SVTCL	2-Methylphenol		10	ug/L	U	7/25/97
SJS05-GW1S-001	SVTCL	2-Nitroaniline		25	ug/L	U	7/25/97
SJS05-GW1S-001	SVTCL	2-Nitrophenol		10	ug/L	U	7/25/97
SJS05-GW1S-001	SVTCL	3,3'-Dichlorobenzidine		10	ug/L	U	7/25/97
SJS05-GW1S-001	SVTCL	3-Nitroaniline		25	ug/L	U	7/25/97
SJS05-GW1S-001	SVTCL	4,6-Dinitro-2-Methylphenol		25	ug/L	U	7/25/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS05-GW1S-001	SVTCL	4-Bromophenyl phenylether		10	ug/L	U	7/25/9
SJS05-GW1S-001	SVTCL	4-Chloro-3-Methylphenol		10	ug/L	U	7/25/
SJS05-GW1S-001	SVTCL	4-Chloroaniline		10	ug/L	U	7/25/
SJS05-GW1S-001	SVTCL	4-Chlorophenyl-phenylethe		10	ug/L	U	7/25/97
SJS05-GW1S-001	SVTCL	4-Methylphenol		10	ug/L	U	7/25/97
SJS05-GW1S-001	SVTCL	4-Nitroaniline		25	ug/L	U	7/25/97
SJS05-GW1S-001	SVTCL	4-Nitrophenol		25	ug/L	U	7/25/97
SJS05-GW1S-001	SVTCL	Acenaphthene		10	ug/L	U	7/25/97
SJS05-GW1S-001	SVTCL	Acenaphthylene		10	ug/L	U	7/25/97
SJS05-GW1S-001	SVTCL	Anthracene		10	ug/L	U	7/25/97
SJS05-GW1S-001	SVTCL	Benzo(a)Anthracene		10	ug/L	U	7/25/97
SJS05-GW1S-001	SVTCL	Benzo(a)Pyrene		10	ug/L	U	7/25/97
SJS05-GW1S-001	SVTCL	Benzo(b)Fluoranthene		10	ug/L	U	7/25/97
SJS05-GW1S-001	SVTCL	Benzo(g,h,i)Perylene		10	ug/L	U	7/25/97
SJS05-GW1S-001	SVTCL	Benzo(k)fluoranthene		10	ug/L	U	7/25/97
SJS05-GW1S-001	SVTCL	Bis(2-chloroethoxy)Methan		10	ug/L	U	7/25/97
SJS05-GW1S-001	SVTCL	Bis(2-chloroethyl)Ether		10	ug/L	U	7/25/97
SJS05-GW1S-001	SVTCL	Bis(2-Ethylhexyl)Phthalate		10	ug/L	U	7/25/97
SJS05-GW1S-001	SVTCL	Butylbenzylphthalate		10	ug/L	U	7/25/97
SJS05-GW1S-001	SVTCL	Carbazole		10	ug/L	U	7/25/97
SJS05-GW1S-001	SVTCL	Chrysene		10	ug/L	U	7/25/97
SJS05-GW1S-001	SVTCL	Di-n-Butylphthalate		10	ug/L	U	7/25/97
SJS05-GW1S-001	SVTCL	Di-n-Octyl Phthalate		10	ug/L	U	7/25/97
SJS05-GW1S-001	SVTCL	Dibenz(a,h)Anthracene		10	ug/L	U	7/25/97
SJS05-GW1S-001	SVTCL	Dibenzofuran		10	ug/L	U	7/25/97
SJS05-GW1S-001	SVTCL	Diethylphthalate		10	ug/L	U	7/25/97
SJS05-GW1S-001	SVTCL	Dimethyl Phthalate		10	ug/L	U	7/25/97
SJS05-GW1S-001	SVTCL	Fluoranthene		10	ug/L	U	7/25/97
SJS05-GW1S-001	SVTCL	Fluorene		10	ug/L	U	7/25/97
SJS05-GW1S-001	SVTCL	Hexachlorobenzene		10	ug/L	U	7/25/9
SJS05-GW1S-001	SVTCL	Hexachlorobutadiene		10	ug/L	U	7/25/
SJS05-GW1S-001	SVTCL	Hexachlorocyclopentadien		10	ug/L	U	7/25/
SJS05-GW1S-001	SVTCL	Hexachloroethane		10	ug/L	U	7/25/97
SJS05-GW1S-001	SVTCL	Indeno(1,2,3-cd)Pyrene		10	ug/L	U	7/25/97
SJS05-GW1S-001	SVTCL	Isophorone		10	ug/L	U	7/25/97
SJS05-GW1S-001	SVTCL	N-Nitroso-Di-n-Propylamine		10	ug/L	U	7/25/97
SJS05-GW1S-001	SVTCL	N-Nitrosodiphenylamine		10	ug/L	U	7/25/97
SJS05-GW1S-001	SVTCL	Naphthalene		10	ug/L	U	7/25/97
SJS05-GW1S-001	SVTCL	Nitrobenzene		10	ug/L	U	7/25/97
SJS05-GW1S-001	SVTCL	Pentachlorophenol		25	ug/L	U	7/25/97
SJS05-GW1S-001	SVTCL	Phenanthrene		10	ug/L	U	7/25/97
SJS05-GW1S-001	SVTCL	Phenol		10	ug/L	U	7/25/97
SJS05-GW1S-001	SVTCL	Pyrene		10	ug/L	U	7/25/97
SJS05-GW1S-001	VCLOW	1,1,1-Trichloroethane		1	ug/L	U	7/21/97
SJS05-GW1S-001	VCLOW	1,1,2,2-Tetrachloroethane		1	ug/L	U	7/21/97
SJS05-GW1S-001	VCLOW	1,1,2-Trichloroethane		1	ug/L	U	7/21/97
SJS05-GW1S-001	VCLOW	1,1-Dichloroethane		1	ug/L	U	7/21/97
SJS05-GW1S-001	VCLOW	1,1-Dichloroethene		1	ug/L	U	7/21/97
SJS05-GW1S-001	VCLOW	1,2,4-Trichlorobenzene		1	ug/L	U	7/21/97
SJS05-GW1S-001	VCLOW	1,2-Dibromo-3-chloropropa		1	ug/L	U	7/21/97
SJS05-GW1S-001	VCLOW	1,2-Dibromoethane		1	ug/L	U	7/21/97
SJS05-GW1S-001	VCLOW	1,2-Dichlorobenzene		1	ug/L	U	7/21/97
SJS05-GW1S-001	VCLOW	1,2-Dichloroethane		1	ug/L	U	7/21/97
SJS05-GW1S-001	VCLOW	1,2-Dichloropropane		1	ug/L	U	7/21/97
SJS05-GW1S-001	VCLOW	1,3-Dichlorobenzene		1	ug/L	U	7/21/97
SJS05-GW1S-001	VCLOW	1,4-Dichlorobenzene		1	ug/L	U	7/21/97
SJS05-GW1S-001	VCLOW	2-Hexanone		5	ug/L	U	7/21/97
SJS05-GW1S-001	VCLOW	4-Methyl-2-Pentanone		5	ug/L	U	7/21/97
SJS05-GW1S-001	VCLOW	Acetone	11	5	ug/L	L	7/21/9
SJS05-GW1S-001	VCLOW	Benzene		1	ug/L	U	7/21/

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS05-GW1S-001	VCLOW	Bromochloromethane		1	ug/L	U	7/21/97
SJS05-GW1S-001	VCLOW	Bromodichloromethane		1	ug/L	U	7/21/97
SJS05-GW1S-001	VCLOW	Bromoform		1	ug/L	U	7/21/97
SJS05-GW1S-001	VCLOW	Bromomethane		1	ug/L	U	7/21/97
SJS05-GW1S-001	VCLOW	Carbon Disulfide		1	ug/L	U	7/21/97
SJS05-GW1S-001	VCLOW	Carbon Tetrachloride		1	ug/L	U	7/21/97
SJS05-GW1S-001	VCLOW	Chlorobenzene		1	ug/L	U	7/21/97
SJS05-GW1S-001	VCLOW	Chloroethane		1	ug/L	U	7/21/97
SJS05-GW1S-001	VCLOW	Chloroform		1	ug/L	U	7/21/97
SJS05-GW1S-001	VCLOW	Chloromethane		1	ug/L	U	7/21/97
SJS05-GW1S-001	VCLOW	cis-1,2-Dichloroethene		1	ug/L	U	7/21/97
SJS05-GW1S-001	VCLOW	cis-1,3-Dichloropropene		1	ug/L	U	7/21/97
SJS05-GW1S-001	VCLOW	Dibromochloromethane		1	ug/L	U	7/21/97
SJS05-GW1S-001	VCLOW	Ethylbenzene		1	ug/L	U	7/21/97
SJS05-GW1S-001	VCLOW	Methylene Chloride	3	1	ug/L	B	7/21/97
SJS05-GW1S-001	VCLOW	Styrene		1	ug/L	U	7/21/97
SJS05-GW1S-001	VCLOW	Tetrachloroethene		1	ug/L	U	7/21/97
SJS05-GW1S-001	VCLOW	Toluene	0.2	1	ug/L	J	7/21/97
SJS05-GW1S-001	VCLOW	Total Xylenes		1	ug/L	U	7/21/97
SJS05-GW1S-001	VCLOW	Trans-1,2-Dichloroethene		1	ug/L	U	7/21/97
SJS05-GW1S-001	VCLOW	Trans-1,3-Dichloropropene		1	ug/L	U	7/21/97
SJS05-GW1S-001	VCLOW	Trichloroethene		1	ug/L	U	7/21/97
SJS05-GW1S-001	VCLOW	Vinyl Chloride		1	ug/L	U	7/21/97
SJS05-GW1S-001F	METAL	Aluminum		44	ug/L	U	7/22/97
SJS05-GW1S-001F	METAL	Antimony		2	ug/L	U	7/21/97
SJS05-GW1S-001F	METAL	Arsenic	3.1	3	ug/L	J	7/25/97
SJS05-GW1S-001F	METAL	Barium	371	1	ug/L		7/22/97
SJS05-GW1S-001F	METAL	Beryllium		1	ug/L	U	7/22/97
SJS05-GW1S-001F	METAL	Cadmium		0.5	ug/L	U	7/21/97
SJS05-GW1S-001F	METAL	Calcium	118000	46	ug/L		7/22/97
SJS05-GW1S-001F	METAL	Chromium		7	ug/L	U	7/22/97
SJS05-GW1S-001F	METAL	Cobalt		8	ug/L	U	7/22/97
SJS05-GW1S-001F	METAL	Copper		6	ug/L	U	7/22/97
SJS05-GW1S-001F	METAL	Iron	65100	5	ug/L		7/22/97
SJS05-GW1S-001F	METAL	Lead		1	ug/L	U	7/21/97
SJS05-GW1S-001F	METAL	Magnesium	186000	45	ug/L		7/22/97
SJS05-GW1S-001F	METAL	Manganese	1290	1	ug/L		7/22/97
SJS05-GW1S-001F	METAL	Mercury	0.13	0.1	ug/L	B	7/29/97
SJS05-GW1S-001F	METAL	Nickel		7	ug/L	U	7/22/97
SJS05-GW1S-001F	METAL	Potassium	37100	97	ug/L		7/22/97
SJS05-GW1S-001F	METAL	Selenium		3	ug/L	U	7/21/97
SJS05-GW1S-001F	METAL	Silver	2.1	3	ug/L	B	7/21/97
SJS05-GW1S-001F	METAL	Sodium	1170000	28	ug/L		7/23/97
SJS05-GW1S-001F	METAL	Thallium	3.8	2	ug/L	B	7/21/97
SJS05-GW1S-001F	METAL	Vanadium		9	ug/L	U	7/22/97
SJS05-GW1S-001F	METAL	Zinc	36.6	3	ug/L	B	7/22/97
SJS05-GW1S-002	CTOTP	Total Phosphorous (as P)	0.187	0.05	mg/L		11/19/97
SJS05-GW1S-002	MCYAN	Aluminum	60	29	ug/L	B	11/27/97
SJS05-GW1S-002	MCYAN	Antimony		1.7	ug/L	U	11/21/97
SJS05-GW1S-002	MCYAN	Arsenic	8.8	3	ug/L	J	11/21/97
SJS05-GW1S-002	MCYAN	Barium	248	1	ug/L		11/27/97
SJS05-GW1S-002	MCYAN	Beryllium	1.7	1	ug/L	J	11/27/97
SJS05-GW1S-002	MCYAN	Cadmium		0.4	ug/L	U	11/21/97
SJS05-GW1S-002	MCYAN	Calcium	182000	46	ug/L		11/27/97
SJS05-GW1S-002	MCYAN	Chromium	11.4	4	ug/L		11/27/97
SJS05-GW1S-002	MCYAN	Cobalt		6	ug/L	U	11/27/97
SJS05-GW1S-002	MCYAN	Copper		5.8	ug/L	U	11/27/97
SJS05-GW1S-002	MCYAN	Cyanide		5	ug/L	U	11/12/97
SJS05-GW1S-002	MCYAN	Iron	64400	5	ug/L		11/27/97
SJS05-GW1S-002	MCYAN	Lead	1.6	1	ug/L	B	11/21/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS05-GW1S-002	MCYAN	Magnesium	221000	45	ug/L		11/27/
SJS05-GW1S-002	MCYAN	Manganese	2720	1	ug/L		11/27
SJS05-GW1S-002	MCYAN	Mercury		0.13	ug/L	U	11/19,
SJS05-GW1S-002	MCYAN	Nickel		6.3	ug/L	U	11/27/97
SJS05-GW1S-002	MCYAN	Potassium	72300	97	ug/L		11/27/97
SJS05-GW1S-002	MCYAN	Selenium		6.6	ug/L	U	11/24/97
SJS05-GW1S-002	MCYAN	Silver	2.5	3	ug/L	B	11/21/97
SJS05-GW1S-002	MCYAN	Sodium	1340000	28	ug/L		11/27/97
SJS05-GW1S-002	MCYAN	Thallium	1.8	2	ug/L	B	11/21/97
SJS05-GW1S-002	MCYAN	Vanadium		6.8	ug/L	U	11/27/97
SJS05-GW1S-002	MCYAN	Zinc	30.8	3	ug/L	B	11/27/97
SJS05-GW1S-002	PSPCB	4,4'-DDD		0.1	ug/L	U	11/21/97
SJS05-GW1S-002	PSPCB	4,4'-DDE		0.1	ug/L	U	11/21/97
SJS05-GW1S-002	PSPCB	4,4'-DDT		0.1	ug/L	U	11/21/97
SJS05-GW1S-002	PSPCB	Aldrin		0.05	ug/L	U	11/21/97
SJS05-GW1S-002	PSPCB	alpha-BHC		0.05	ug/L	U	11/21/97
SJS05-GW1S-002	PSPCB	alpha-Chlordane		0.05	ug/L	U	11/21/97
SJS05-GW1S-002	PSPCB	Aroclor-1016		1	ug/L	U	11/21/97
SJS05-GW1S-002	PSPCB	Aroclor-1221		2	ug/L	U	11/21/97
SJS05-GW1S-002	PSPCB	Aroclor-1232		1	ug/L	U	11/21/97
SJS05-GW1S-002	PSPCB	Aroclor-1242		1	ug/L	U	11/21/97
SJS05-GW1S-002	PSPCB	Aroclor-1248		1	ug/L	U	11/21/97
SJS05-GW1S-002	PSPCB	Aroclor-1254		1	ug/L	U	11/21/97
SJS05-GW1S-002	PSPCB	Aroclor-1260		1	ug/L	U	11/21/97
SJS05-GW1S-002	PSPCB	beta-BHC		0.05	ug/L	U	11/21/97
SJS05-GW1S-002	PSPCB	delta-BHC		0.05	ug/L	U	11/21/97
SJS05-GW1S-002	PSPCB	Dieldrin		0.1	ug/L	U	11/21/97
SJS05-GW1S-002	PSPCB	Endosulfan I		0.05	ug/L	U	11/21/97
SJS05-GW1S-002	PSPCB	Endosulfan II		0.1	ug/L	U	11/21/97
SJS05-GW1S-002	PSPCB	Endosulfan Sulfate		0.1	ug/L	U	11/21/
SJS05-GW1S-002	PSPCB	Endrin		0.1	ug/L	U	11/21
SJS05-GW1S-002	PSPCB	Endrin Aldehyde		0.1	ug/L	U	11/21,
SJS05-GW1S-002	PSPCB	Endrin Ketone		0.1	ug/L	U	11/21/97
SJS05-GW1S-002	PSPCB	gamma-BHC		0.05	ug/L	U	11/21/97
SJS05-GW1S-002	PSPCB	gamma-Chlordane		0.05	ug/L	U	11/21/97
SJS05-GW1S-002	PSPCB	Heptachlor		0.05	ug/L	U	11/21/97
SJS05-GW1S-002	PSPCB	Heptachlor Epoxide		0.05	ug/L	U	11/21/97
SJS05-GW1S-002	PSPCB	Methoxychlor		0.5	ug/L	U	11/21/97
SJS05-GW1S-002	PSPCB	Toxaphene		5	ug/L	U	11/21/97
SJS05-GW1S-002	SVTCL	1,2,4-Trichlorobenzene		10	ug/L	U	11/17/97
SJS05-GW1S-002	SVTCL	1,2-Dichlorobenzene		10	ug/L	U	11/17/97
SJS05-GW1S-002	SVTCL	1,3-Dichlorobenzene		10	ug/L	U	11/17/97
SJS05-GW1S-002	SVTCL	1,4-Dichlorobenzene		10	ug/L	U	11/17/97
SJS05-GW1S-002	SVTCL	2,2'-oxybis(1-Chloropropan		10	ug/L	U	11/17/97
SJS05-GW1S-002	SVTCL	2,4,5-Trichlorophenol		25	ug/L	U	11/17/97
SJS05-GW1S-002	SVTCL	2,4,6-Trichlorophenol		10	ug/L	U	11/17/97
SJS05-GW1S-002	SVTCL	2,4-Dichlorophenol		10	ug/L	U	11/17/97
SJS05-GW1S-002	SVTCL	2,4-Dimethylphenol		10	ug/L	U	11/17/97
SJS05-GW1S-002	SVTCL	2,4-Dinitrophenol		25	ug/L	U	11/17/97
SJS05-GW1S-002	SVTCL	2,4-Dinitrotoluene		10	ug/L	U	11/17/97
SJS05-GW1S-002	SVTCL	2,6-Dinitrotoluene		10	ug/L	U	11/17/97
SJS05-GW1S-002	SVTCL	2-Chloronaphthalene		10	ug/L	U	11/17/97
SJS05-GW1S-002	SVTCL	2-Chlorophenol		10	ug/L	U	11/17/97
SJS05-GW1S-002	SVTCL	2-Methylnaphthalene		10	ug/L	U	11/17/97
SJS05-GW1S-002	SVTCL	2-Methylphenol		10	ug/L	U	11/17/97
SJS05-GW1S-002	SVTCL	2-Nitroaniline		25	ug/L	U	11/17/97
SJS05-GW1S-002	SVTCL	2-Nitrophenol		10	ug/L	U	11/17/97
SJS05-GW1S-002	SVTCL	3,3'-Dichlorobenzidine		10	ug/L	U	11/17/97
SJS05-GW1S-002	SVTCL	3-Nitroaniline		25	ug/L	U	11/17/
SJS05-GW1S-002	SVTCL	4,6-Dinitro-2-Methylphenol		25	ug/L	U	11/17

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS05-GW1S-002	SVTCL	4-Bromophenol-phenylethe		10	ug/L	U	11/17/97
SJS05-GW1S-002	SVTCL	4-Chloro-3-Methylphenol		10	ug/L	U	11/17/97
SJS05-GW1S-002	SVTCL	4-Chloroaniline		10	ug/L	U	11/17/97
SJS05-GW1S-002	SVTCL	4-Chlorophenyl-phenylethe		10	ug/L	U	11/17/97
SJS05-GW1S-002	SVTCL	4-Methylphenol		10	ug/L	U	11/17/97
SJS05-GW1S-002	SVTCL	4-Nitroaniline		25	ug/L	U	11/17/97
SJS05-GW1S-002	SVTCL	4-Nitrophenol		25	ug/L	U	11/17/97
SJS05-GW1S-002	SVTCL	Acenaphthene		10	ug/L	U	11/17/97
SJS05-GW1S-002	SVTCL	Acenaphthylene		10	ug/L	U	11/17/97
SJS05-GW1S-002	SVTCL	Anthracene		10	ug/L	U	11/17/97
SJS05-GW1S-002	SVTCL	Benzo(a)anthracene		10	ug/L	U	11/17/97
SJS05-GW1S-002	SVTCL	Benzo(a)pyrene		10	ug/L	U	11/17/97
SJS05-GW1S-002	SVTCL	Benzo(b)fluoranthene		10	ug/L	U	11/17/97
SJS05-GW1S-002	SVTCL	Benzo(g,h,i)perylene		10	ug/L	U	11/17/97
SJS05-GW1S-002	SVTCL	Benzo(k)fluoranthene		10	ug/L	U	11/17/97
SJS05-GW1S-002	SVTCL	bis(2-Chloroethoxy)methan		10	ug/L	U	11/17/97
SJS05-GW1S-002	SVTCL	bis(2-chloroethyl)ether		10	ug/L	U	11/17/97
SJS05-GW1S-002	SVTCL	bis(2-Ethylhexyl)phthalate	1	10	ug/L	J	11/17/97
SJS05-GW1S-002	SVTCL	Butylbenzylphthalate		10	ug/L	U	11/17/97
SJS05-GW1S-002	SVTCL	Carbazole		10	ug/L	U	11/17/97
SJS05-GW1S-002	SVTCL	Chrysene		10	ug/L	U	11/17/97
SJS05-GW1S-002	SVTCL	Di-n-butylphthalate		10	ug/L	U	11/17/97
SJS05-GW1S-002	SVTCL	Di-n-Octyl Phthalate		10	ug/L	U	11/17/97
SJS05-GW1S-002	SVTCL	Dibenzo(a,h)anthracene		10	ug/L	U	11/17/97
SJS05-GW1S-002	SVTCL	Dibenzofuran		10	ug/L	U	11/17/97
SJS05-GW1S-002	SVTCL	Diethylphthalate		10	ug/L	U	11/17/97
SJS05-GW1S-002	SVTCL	Dimethyl Phthalate		10	ug/L	U	11/17/97
SJS05-GW1S-002	SVTCL	Fluoranthene		10	ug/L	U	11/17/97
SJS05-GW1S-002	SVTCL	Fluorene		10	ug/L	U	11/17/97
SJS05-GW1S-002	SVTCL	Hexachlorobenzene		10	ug/L	U	11/17/97
SJS05-GW1S-002	SVTCL	Hexachlorobutadiene		10	ug/L	U	11/17/97
SJS05-GW1S-002	SVTCL	Hexachlorocyclopentadien		10	ug/L	U	11/17/97
SJS05-GW1S-002	SVTCL	Hexachloroethane		10	ug/L	U	11/17/97
SJS05-GW1S-002	SVTCL	Indeno(1,2,3-cd)pyrene		10	ug/L	U	11/17/97
SJS05-GW1S-002	SVTCL	Isophorone		10	ug/L	U	11/17/97
SJS05-GW1S-002	SVTCL	N-Nitroso-Di-n-Propylamine		10	ug/L	U	11/17/97
SJS05-GW1S-002	SVTCL	N-Nitrosodiphenylamine		10	ug/L	U	11/17/97
SJS05-GW1S-002	SVTCL	Naphthalene		10	ug/L	U	11/17/97
SJS05-GW1S-002	SVTCL	Nitrobenzene		10	ug/L	U	11/17/97
SJS05-GW1S-002	SVTCL	Pentachlorophenol		25	ug/L	U	11/17/97
SJS05-GW1S-002	SVTCL	Phenanthrene		10	ug/L	U	11/17/97
SJS05-GW1S-002	SVTCL	Phenol		10	ug/L	U	11/17/97
SJS05-GW1S-002	SVTCL	Pyrene		10	ug/L	U	11/17/97
SJS05-GW1S-002	VCLOW	1,1,1-Trichloroethane		1	ug/L	U	11/11/97
SJS05-GW1S-002	VCLOW	1,1,2,2-Tetrachloroethane		1	ug/L	U	11/11/97
SJS05-GW1S-002	VCLOW	1,1,2-Trichloroethane		1	ug/L	U	11/11/97
SJS05-GW1S-002	VCLOW	1,1-Dichloroethane		1	ug/L	U	11/11/97
SJS05-GW1S-002	VCLOW	1,1-Dichloroethene		1	ug/L	U	11/11/97
SJS05-GW1S-002	VCLOW	1,2,4-Trichlorobenzene		1	ug/L	U	11/11/97
SJS05-GW1S-002	VCLOW	1,2-Dibromo-3-chloropropa		1	ug/L	U	11/11/97
SJS05-GW1S-002	VCLOW	1,2-Dibromoethane		1	ug/L	U	11/11/97
SJS05-GW1S-002	VCLOW	1,2-Dichlorobenzene		1	ug/L	U	11/11/97
SJS05-GW1S-002	VCLOW	1,2-Dichloroethane		1	ug/L	U	11/11/97
SJS05-GW1S-002	VCLOW	1,2-Dichloropropane		1	ug/L	U	11/11/97
SJS05-GW1S-002	VCLOW	1,3-Dichlorobenzene		1	ug/L	U	11/11/97
SJS05-GW1S-002	VCLOW	1,4-Dichlorobenzene		1	ug/L	U	11/11/97
SJS05-GW1S-002	VCLOW	2-Hexanone		5	ug/L	U	11/11/97
SJS05-GW1S-002	VCLOW	4-Methyl-2-Pentanone		5	ug/L	U	11/11/97
SJS05-GW1S-002	VCLOW	Benzene		1	ug/L	U	11/11/97
SJS05-GW1S-002	VCLOW	Bromochloromethane		1	ug/L	U	11/11/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS05-GW1S-002	VCLOW	Bromodichloromethane		1	ug/L	U	11/11/
SJS05-GW1S-002	VCLOW	Bromoform		1	ug/L	U	11/11/
SJS05-GW1S-002	VCLOW	Bromomethane		1	ug/L	U	11/11/
SJS05-GW1S-002	VCLOW	Carbon Disulfide		1	ug/L	U	11/11/97
SJS05-GW1S-002	VCLOW	Carbon Tetrachloride		1	ug/L	U	11/11/97
SJS05-GW1S-002	VCLOW	Chlorobenzene		1	ug/L	U	11/11/97
SJS05-GW1S-002	VCLOW	Chloroethane		1	ug/L	U	11/11/97
SJS05-GW1S-002	VCLOW	Chloroform		1	ug/L	U	11/11/97
SJS05-GW1S-002	VCLOW	Chloromethane		1	ug/L	U	11/11/97
SJS05-GW1S-002	VCLOW	cis-1,2-Dichloroethene		1	ug/L	U	11/11/97
SJS05-GW1S-002	VCLOW	cis-1,3-Dichloropropene		1	ug/L	U	11/11/97
SJS05-GW1S-002	VCLOW	Dibromochloromethane		1	ug/L	U	11/11/97
SJS05-GW1S-002	VCLOW	Ethylbenzene		1	ug/L	U	11/11/97
SJS05-GW1S-002	VCLOW	Methylene Chloride	2	2	ug/L	B	11/11/97
SJS05-GW1S-002	VCLOW	Styrene		1	ug/L	U	11/11/97
SJS05-GW1S-002	VCLOW	Tetrachloroethene		1	ug/L	U	11/11/97
SJS05-GW1S-002	VCLOW	Toluene		1	ug/L	U	11/11/97
SJS05-GW1S-002	VCLOW	Total Xylenes		1	ug/L	U	11/11/97
SJS05-GW1S-002	VCLOW	Trans-1,2-Dichloroethene		1	ug/L	U	11/11/97
SJS05-GW1S-002	VCLOW	trans-1,3-Dichloropropene		1	ug/L	U	11/11/97
SJS05-GW1S-002	VCLOW	Trichloroethene		1	ug/L	U	11/11/97
SJS05-GW1S-002	VCLOW	Vinyl Chloride		1	ug/L	U	11/11/97
SJS05-GW1S-002F	METAL	Aluminum		38.1	ug/L	U	11/27/97
SJS05-GW1S-002F	METAL	Antimony		1.7	ug/L	U	11/21/97
SJS05-GW1S-002F	METAL	Arsenic	8.3	3	ug/L	B	11/21/97
SJS05-GW1S-002F	METAL	Barium	250	1	ug/L		11/27/97
SJS05-GW1S-002F	METAL	Beryllium	0.58	1	ug/L	J	11/27/97
SJS05-GW1S-002F	METAL	Cadmium		0.4	ug/L	U	11/21/97
SJS05-GW1S-002F	METAL	Calcium	179000	46	ug/L		11/27/97
SJS05-GW1S-002F	METAL	Chromium	9.2	4	ug/L	J	11/27/
SJS05-GW1S-002F	METAL	Cobalt	36.8	3	ug/L	J	11/27/
SJS05-GW1S-002F	METAL	Copper		5.8	ug/L	U	11/27/
SJS05-GW1S-002F	METAL	Iron	67400	5	ug/L		11/27/97
SJS05-GW1S-002F	METAL	Lead		1.3	ug/L	U	11/21/97
SJS05-GW1S-002F	METAL	Magnesium	215000	45	ug/L		11/27/97
SJS05-GW1S-002F	METAL	Manganese	2560	1	ug/L		11/27/97
SJS05-GW1S-002F	METAL	Mercury		0.13	ug/L	U	11/19/97
SJS05-GW1S-002F	METAL	Nickel	18	4	ug/L	J	11/27/97
SJS05-GW1S-002F	METAL	Potassium	68900	97	ug/L		11/27/97
SJS05-GW1S-002F	METAL	Selenium		3.3	ug/L	U	11/21/97
SJS05-GW1S-002F	METAL	Silver	1.3	3	ug/L	B	11/21/97
SJS05-GW1S-002F	METAL	Sodium	1310000	28	ug/L		11/27/97
SJS05-GW1S-002F	METAL	Thallium	2.1	2	ug/L	B	11/21/97
SJS05-GW1S-002F	METAL	Vanadium		6.8	ug/L	U	11/27/97
SJS05-GW1S-002F	METAL	Zinc	60	3	ug/L	B	11/27/97
SJS05-GW2D-001	CTOTP	Total Phosphorous (as P)		1.3	mg/L	U	8/8/97
SJS05-GW2D-001	MCYAN	Aluminum	2250	29	ug/L		8/7/97
SJS05-GW2D-001	MCYAN	Antimony	3.1	1	ug/L	J	8/6/97
SJS05-GW2D-001	MCYAN	Arsenic	4.9	3	ug/L	J	8/6/97
SJS05-GW2D-001	MCYAN	Barium	26.5	1	ug/L	J	8/7/97
SJS05-GW2D-001	MCYAN	Beryllium	1.5	1	ug/L	K	8/7/97
SJS05-GW2D-001	MCYAN	Cadmium		0.5	ug/L	U	8/6/97
SJS05-GW2D-001	MCYAN	Calcium	68700	46	ug/L		8/7/97
SJS05-GW2D-001	MCYAN	Chromium	13	4	ug/L	B	8/7/97
SJS05-GW2D-001	MCYAN	Cobalt		8	ug/L	U	8/7/97
SJS05-GW2D-001	MCYAN	Copper		6	ug/L	U	8/7/97
SJS05-GW2D-001	MCYAN	Cyanide		5	ug/L	U	8/5/97
SJS05-GW2D-001	MCYAN	Iron	4420	5	ug/L	K	8/7/97
SJS05-GW2D-001	MCYAN	Lead	4.3	1	ug/L	B	8/6/
SJS05-GW2D-001	MCYAN	Magnesium	10000	45	ug/L		8/7/

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS05-GW2D-001	IMCYAN	Manganese	142	1	ug/L		8/7/97
SJS05-GW2D-001	IMCYAN	Mercury		0.12	ug/L	U	8/6/97
SJS05-GW2D-001	IMCYAN	Nickel		7	ug/L	U	8/7/97
SJS05-GW2D-001	IMCYAN	Potassium	7740	97	ug/L		8/7/97
SJS05-GW2D-001	IMCYAN	Selenium		3	ug/L	U	8/6/97
SJS05-GW2D-001	IMCYAN	Silver	6.3	3	ug/L	B	8/6/97
SJS05-GW2D-001	IMCYAN	Sodium	43000	28	ug/L		8/7/97
SJS05-GW2D-001	IMCYAN	Thallium		2	ug/L	U	8/7/97
SJS05-GW2D-001	IMCYAN	Vanadium	15.6	4	ug/L	K	8/7/97
SJS05-GW2D-001	IMCYAN	Zinc	14.4	3	ug/L	B	8/7/97
SJS05-GW2D-001	PSPCB	4,4'-DDD		0.1	ug/L	U	8/21/97
SJS05-GW2D-001	PSPCB	4,4'-DDE		0.1	ug/L	U	8/21/97
SJS05-GW2D-001	PSPCB	4,4'-DDT		0.1	ug/L	U	8/21/97
SJS05-GW2D-001	PSPCB	Aldrin		0.05	ug/L	U	8/21/97
SJS05-GW2D-001	PSPCB	alpha-BHC		0.05	ug/L	U	8/21/97
SJS05-GW2D-001	PSPCB	alpha-Chlordane		0.05	ug/L	U	8/21/97
SJS05-GW2D-001	PSPCB	Aroclor-1016		1	ug/L	U	8/21/97
SJS05-GW2D-001	PSPCB	Aroclor-1221		2	ug/L	U	8/21/97
SJS05-GW2D-001	PSPCB	Aroclor-1232		1	ug/L	U	8/21/97
SJS05-GW2D-001	PSPCB	Aroclor-1242		1	ug/L	U	8/21/97
SJS05-GW2D-001	PSPCB	Aroclor-1248		1	ug/L	U	8/21/97
SJS05-GW2D-001	PSPCB	Aroclor-1254		1	ug/L	U	8/21/97
SJS05-GW2D-001	PSPCB	Aroclor-1260		1	ug/L	U	8/21/97
SJS05-GW2D-001	PSPCB	beta-BHC		0.05	ug/L	U	8/21/97
SJS05-GW2D-001	PSPCB	delta-BHC		0.05	ug/L	U	8/21/97
SJS05-GW2D-001	PSPCB	Dieldrin		0.1	ug/L	U	8/21/97
SJS05-GW2D-001	PSPCB	Endosulfan I		0.05	ug/L	U	8/21/97
SJS05-GW2D-001	PSPCB	Endosulfan II		0.1	ug/L	U	8/21/97
SJS05-GW2D-001	PSPCB	Endosulfan Sulfate		0.1	ug/L	U	8/21/97
SJS05-GW2D-001	PSPCB	Endrin		0.1	ug/L	U	8/21/97
SJS05-GW2D-001	PSPCB	Endrin Aldehyde		0.1	ug/L	U	8/21/97
SJS05-GW2D-001	PSPCB	Endrin Ketone		0.1	ug/L	U	8/21/97
SJS05-GW2D-001	PSPCB	gamma-BHC		0.05	ug/L	U	8/21/97
SJS05-GW2D-001	PSPCB	gamma-Chlordane		0.05	ug/L	U	8/21/97
SJS05-GW2D-001	PSPCB	Heptachlor		0.05	ug/L	U	8/21/97
SJS05-GW2D-001	PSPCB	Heptachlor Epoxide		0.05	ug/L	U	8/21/97
SJS05-GW2D-001	PSPCB	Methoxychlor		0.5	ug/L	U	8/21/97
SJS05-GW2D-001	PSPCB	Toxaphene		5	ug/L	U	8/21/97
SJS05-GW2D-001	SVTCL	1,2,4-Trichlorobenzene		10	ug/L	U	8/15/97
SJS05-GW2D-001	SVTCL	1,2-Dichlorobenzene		10	ug/L	U	8/15/97
SJS05-GW2D-001	SVTCL	1,3-Dichlorobenzene		10	ug/L	U	8/15/97
SJS05-GW2D-001	SVTCL	1,4-Dichlorobenzene		10	ug/L	U	8/15/97
SJS05-GW2D-001	SVTCL	2,2'-oxybis(1-Chloropropan		10	ug/L	U	8/15/97
SJS05-GW2D-001	SVTCL	2,4,5-Trichlorophenol		25	ug/L	U	8/15/97
SJS05-GW2D-001	SVTCL	2,4,6-Trichlorophenol		10	ug/L	U	8/15/97
SJS05-GW2D-001	SVTCL	2,4-Dichlorophenol		10	ug/L	U	8/15/97
SJS05-GW2D-001	SVTCL	2,4-Dimethylphenol		10	ug/L	U	8/15/97
SJS05-GW2D-001	SVTCL	2,4-Dinitrophenol		25	ug/L	UJ	8/15/97
SJS05-GW2D-001	SVTCL	2,4-Dinitrotoluene		10	ug/L	U	8/15/97
SJS05-GW2D-001	SVTCL	2,6-Dinitrotoluene		10	ug/L	U	8/15/97
SJS05-GW2D-001	SVTCL	2-Chloronaphthalene		10	ug/L	U	8/15/97
SJS05-GW2D-001	SVTCL	2-Chlorophenol		10	ug/L	U	8/15/97
SJS05-GW2D-001	SVTCL	2-Methylnaphthalene		10	ug/L	U	8/15/97
SJS05-GW2D-001	SVTCL	2-Methylphenol		10	ug/L	U	8/15/97
SJS05-GW2D-001	SVTCL	2-Nitroaniline		25	ug/L	U	8/15/97
SJS05-GW2D-001	SVTCL	2-Nitrophenol		10	ug/L	U	8/15/97
SJS05-GW2D-001	SVTCL	3,3'-Dichlorobenzidine		10	ug/L	U	8/15/97
SJS05-GW2D-001	SVTCL	3-Nitroaniline		25	ug/L	U	8/15/97
SJS05-GW2D-001	SVTCL	4,6-Dinitro-2-Methylphenol		25	ug/L	U	8/15/97
JS05-GW2D-001	SVTCL	4-Bromophenol-phenylethe		10	ug/L	U	8/15/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS05-GW2D-001	SVTCL	4-Chloro-3-Methylphenol		10	ug/L	U	8/15/9
SJS05-GW2D-001	SVTCL	4-Chloroaniline		10	ug/L	U	8/15/
SJS05-GW2D-001	SVTCL	4-Chlorophenyl-phenylethe		10	ug/L	U	8/15/
SJS05-GW2D-001	SVTCL	4-Methylphenol		10	ug/L	U	8/15/97
SJS05-GW2D-001	SVTCL	4-Nitroaniline		25	ug/L	U	8/15/97
SJS05-GW2D-001	SVTCL	4-Nitrophenol		25	ug/L	U	8/15/97
SJS05-GW2D-001	SVTCL	Acenaphthene		10	ug/L	U	8/15/97
SJS05-GW2D-001	SVTCL	Acenaphthylene		10	ug/L	U	8/15/97
SJS05-GW2D-001	SVTCL	Anthracene		10	ug/L	U	8/15/97
SJS05-GW2D-001	SVTCL	Benzo(a)anthracene		10	ug/L	U	8/15/97
SJS05-GW2D-001	SVTCL	Benzo(a)pyrene		10	ug/L	U	8/15/97
SJS05-GW2D-001	SVTCL	Benzo(b)fluoranthene		10	ug/L	U	8/15/97
SJS05-GW2D-001	SVTCL	Benzo(g,h,i)perylene		10	ug/L	U	8/15/97
SJS05-GW2D-001	SVTCL	Benzo(k)fluoranthene		10	ug/L	U	8/15/97
SJS05-GW2D-001	SVTCL	bis(2-Chloroethoxy)methan		10	ug/L	U	8/15/97
SJS05-GW2D-001	SVTCL	bis(2-chloroethyl)ether		10	ug/L	U	8/15/97
SJS05-GW2D-001	SVTCL	bis(2-Ethylhexyl)phthalate		10	ug/L	U	8/15/97
SJS05-GW2D-001	SVTCL	Butylbenzylphthalate		10	ug/L	U	8/15/97
SJS05-GW2D-001	SVTCL	Carbazole		10	ug/L	U	8/15/97
SJS05-GW2D-001	SVTCL	Chrysene		10	ug/L	U	8/15/97
SJS05-GW2D-001	SVTCL	Di-n-butylphthalate		10	ug/L	U	8/15/97
SJS05-GW2D-001	SVTCL	Di-n-Octyl Phthalate		10	ug/L	U	8/15/97
SJS05-GW2D-001	SVTCL	Dibenzo(a,h)anthracene		10	ug/L	U	8/15/97
SJS05-GW2D-001	SVTCL	Dibenzofuran		10	ug/L	U	8/15/97
SJS05-GW2D-001	SVTCL	Diethylphthalate		10	ug/L	U	8/15/97
SJS05-GW2D-001	SVTCL	Dimethyl Phthalate		10	ug/L	U	8/15/97
SJS05-GW2D-001	SVTCL	Fluoranthene		10	ug/L	U	8/15/97
SJS05-GW2D-001	SVTCL	Fluorene		10	ug/L	U	8/15/97
SJS05-GW2D-001	SVTCL	Hexachlorobenzene		10	ug/L	U	8/15/97
SJS05-GW2D-001	SVTCL	Hexachlorobutadiene		10	ug/L	U	8/15/
SJS05-GW2D-001	SVTCL	Hexachlorocyclopentadien		10	ug/L	U	8/15/
SJS05-GW2D-001	SVTCL	Hexachloroethane		10	ug/L	U	8/15/
SJS05-GW2D-001	SVTCL	Indeno(1,2,3-cd)pyrene		10	ug/L	U	8/15/97
SJS05-GW2D-001	SVTCL	Isophorone		10	ug/L	U	8/15/97
SJS05-GW2D-001	SVTCL	N-Nitroso-Di-n-Propylamine		10	ug/L	U	8/15/97
SJS05-GW2D-001	SVTCL	N-Nitrosodiphenylamine		10	ug/L	U	8/15/97
SJS05-GW2D-001	SVTCL	Naphthalene		10	ug/L	U	8/15/97
SJS05-GW2D-001	SVTCL	Nitrobenzene		10	ug/L	U	8/15/97
SJS05-GW2D-001	SVTCL	Pentachlorophenol		25	ug/L	U	8/15/97
SJS05-GW2D-001	SVTCL	Phenanthrene		10	ug/L	U	8/15/97
SJS05-GW2D-001	SVTCL	Phenol		10	ug/L	U	8/15/97
SJS05-GW2D-001	SVTCL	Pyrene		10	ug/L	U	8/15/97
SJS05-GW2D-001	VCLOW	1,1,1-Trichloroethane		1	ug/L	U	8/5/97
SJS05-GW2D-001	VCLOW	1,1,2,2-Tetrachloroethane		1	ug/L	U	8/5/97
SJS05-GW2D-001	VCLOW	1,1,2-Trichloroethane		1	ug/L	U	8/5/97
SJS05-GW2D-001	VCLOW	1,1-Dichloroethane		1	ug/L	U	8/5/97
SJS05-GW2D-001	VCLOW	1,1-Dichloroethene		1	ug/L	U	8/5/97
SJS05-GW2D-001	VCLOW	1,2,4-Trichlorobenzene		1	ug/L	U	8/5/97
SJS05-GW2D-001	VCLOW	1,2-Dibromo-3-chloropropa		1	ug/L	U	8/5/97
SJS05-GW2D-001	VCLOW	1,2-Dibromoethane		1	ug/L	U	8/5/97
SJS05-GW2D-001	VCLOW	1,2-Dichlorobenzene		1	ug/L	U	8/5/97
SJS05-GW2D-001	VCLOW	1,2-Dichloroethane		1	ug/L	U	8/5/97
SJS05-GW2D-001	VCLOW	1,2-Dichloropropane		1	ug/L	U	8/5/97
SJS05-GW2D-001	VCLOW	1,3-Dichlorobenzene		1	ug/L	U	8/5/97
SJS05-GW2D-001	VCLOW	1,4-Dichlorobenzene		1	ug/L	U	8/5/97
SJS05-GW2D-001	VCLOW	2-Hexanone		5	ug/L	U	8/5/97
SJS05-GW2D-001	VCLOW	4-Methyl-2-Pentanone		5	ug/L	U	8/5/97
SJS05-GW2D-001	VCLOW	Acetone	14	5	ug/L	B	8/5/97
SJS05-GW2D-001	VCLOW	Benzene		1	ug/L	U	8/5/9
SJS05-GW2D-001	VCLOW	Bromochloromethane		1	ug/L	U	8/5/

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS05-GW2D-001	VCLOW	Bromodichloromethane		1	ug/L	U	8/5/97
SJS05-GW2D-001	VCLOW	Bromoform		1	ug/L	U	8/5/97
SJS05-GW2D-001	VCLOW	Bromomethane		1	ug/L	U	8/5/97
SJS05-GW2D-001	VCLOW	Carbon Disulfide		1	ug/L	U	8/5/97
SJS05-GW2D-001	VCLOW	Carbon Tetrachloride		1	ug/L	U	8/5/97
SJS05-GW2D-001	VCLOW	Chlorobenzene		1	ug/L	U	8/5/97
SJS05-GW2D-001	VCLOW	Chloroethane		1	ug/L	U	8/5/97
SJS05-GW2D-001	VCLOW	Chloroform	5	1	ug/L		8/5/97
SJS05-GW2D-001	VCLOW	Chloromethane		1	ug/L	U	8/5/97
SJS05-GW2D-001	VCLOW	cis-1,2-Dichloroethene		1	ug/L	U	8/5/97
SJS05-GW2D-001	VCLOW	cis-1,3-Dichloropropene		1	ug/L	U	8/5/97
SJS05-GW2D-001	VCLOW	Dibromochloromethane		1	ug/L	U	8/5/97
SJS05-GW2D-001	VCLOW	Ethylbenzene		1	ug/L	U	8/5/97
SJS05-GW2D-001	VCLOW	Methylene Chloride	3	1	ug/L	B	8/5/97
SJS05-GW2D-001	VCLOW	Styrene		1	ug/L	U	8/5/97
SJS05-GW2D-001	VCLOW	Tetrachloroethene		1	ug/L	U	8/5/97
SJS05-GW2D-001	VCLOW	Toluene		1	ug/L	U	8/5/97
SJS05-GW2D-001	VCLOW	Total Xylenes		1	ug/L	U	8/5/97
SJS05-GW2D-001	VCLOW	Trans-1,2-Dichloroethene		1	ug/L	U	8/5/97
SJS05-GW2D-001	VCLOW	trans-1,3-Dichloropropene		1	ug/L	U	8/5/97
SJS05-GW2D-001	VCLOW	Trichloroethene		1	ug/L	U	8/5/97
SJS05-GW2D-001	VCLOW	Vinyl Chloride		1	ug/L	U	8/5/97
SJS05-GW2D-001F	METAL	Aluminum	56	29	ug/L	B	8/7/97
SJS05-GW2D-001F	METAL	Antimony	2	1	ug/L	J	8/6/97
SJS05-GW2D-001F	METAL	Arsenic		3	ug/L	U	8/6/97
SJS05-GW2D-001F	METAL	Barium	20.4	1	ug/L	B	8/7/97
SJS05-GW2D-001F	METAL	Beryllium		1	ug/L	U	8/7/97
SJS05-GW2D-001F	METAL	Cadmium		0.5	ug/L	U	8/6/97
SJS05-GW2D-001F	METAL	Calcium	58900	46	ug/L		8/7/97
SJS05-GW2D-001F	METAL	Chromium		7	ug/L	U	8/7/97
SJS05-GW2D-001F	METAL	Cobalt		8	ug/L	U	8/7/97
SJS05-GW2D-001F	METAL	Copper		6	ug/L	U	8/7/97
SJS05-GW2D-001F	METAL	Iron	454	5	ug/L		8/7/97
SJS05-GW2D-001F	METAL	Lead	1.7	1	ug/L	J	8/6/97
SJS05-GW2D-001F	METAL	Magnesium	9360	45	ug/L		8/7/97
SJS05-GW2D-001F	METAL	Manganese	100	1	ug/L		8/7/97
SJS05-GW2D-001F	METAL	Mercury		0.13	ug/L	U	8/6/97
SJS05-GW2D-001F	METAL	Nickel		7	ug/L	U	8/7/97
SJS05-GW2D-001F	METAL	Potassium	7590	97	ug/L		8/7/97
SJS05-GW2D-001F	METAL	Selenium		3	ug/L	U	8/6/97
SJS05-GW2D-001F	METAL	Silver	4.5	3	ug/L	B	8/6/97
SJS05-GW2D-001F	METAL	Sodium	44900	28	ug/L		8/7/97
SJS05-GW2D-001F	METAL	Thallium		2	ug/L	U	8/7/97
SJS05-GW2D-001F	METAL	Vanadium		9	ug/L	U	8/7/97
SJS05-GW2D-001F	METAL	Zinc	13.4	3	ug/L	B	8/7/97
SJS05-GW2D-002	CTOTP	Total Phosphorous (as P)	0.363	0.05	mg/L		11/17/97
SJS05-GW2D-002	MCYAN	Aluminum	177	29	ug/L	B	11/26/97
SJS05-GW2D-002	MCYAN	Antimony		1.7	ug/L	U	11/18/97
SJS05-GW2D-002	MCYAN	Arsenic		3.2	ug/L	U	11/18/97
SJS05-GW2D-002	MCYAN	Barium	22	1	ug/L	J	11/26/97
SJS05-GW2D-002	MCYAN	Beryllium		0.58	ug/L	U	11/26/97
SJS05-GW2D-002	MCYAN	Cadmium		0.4	ug/L	U	11/18/97
SJS05-GW2D-002	MCYAN	Calcium	64000	46	ug/L		11/26/97
SJS05-GW2D-002	MCYAN	Chromium		4.6	ug/L	U	11/26/97
SJS05-GW2D-002	MCYAN	Cobalt		6	ug/L	U	11/26/97
SJS05-GW2D-002	MCYAN	Copper		5.8	ug/L	U	11/26/97
SJS05-GW2D-002	MCYAN	Cyanide		5	ug/L	U	11/12/97
SJS05-GW2D-002	MCYAN	Iron	1150	5	ug/L		11/26/97
SJS05-GW2D-002	MCYAN	Lead		1.3	ug/L	U	11/18/97
SJS05-GW2D-002	MCYAN	Magnesium	10500	45	ug/L		11/26/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS05-GW2D-002	MCYAN	Manganese	178	1	ug/L		11/26/
SJS05-GW2D-002	MCYAN	Mercury		0.13	ug/L	U	11/19/
SJS05-GW2D-002	MCYAN	Nickel		6.3	ug/L	U	11/26/
SJS05-GW2D-002	MCYAN	Potassium	7550	97	ug/L		11/26/97
SJS05-GW2D-002	MCYAN	Selenium		3.3	ug/L	U	11/18/97
SJS05-GW2D-002	MCYAN	Silver		1.1	ug/L	U	11/18/97
SJS05-GW2D-002	MCYAN	Sodium	43800	28	ug/L		11/26/97
SJS05-GW2D-002	MCYAN	Thallium	1.8	2	ug/L	B	11/19/97
SJS05-GW2D-002	MCYAN	Vanadium		6.8	ug/L	U	11/26/97
SJS05-GW2D-002	MCYAN	Zinc	14.5	3	ug/L	B	11/26/97
SJS05-GW2D-002	PSPCB	4,4'-DDD		0.1	ug/L	U	11/21/97
SJS05-GW2D-002	PSPCB	4,4'-DDE		0.1	ug/L	U	11/21/97
SJS05-GW2D-002	PSPCB	4,4'-DDT		0.1	ug/L	U	11/21/97
SJS05-GW2D-002	PSPCB	Aldrin		0.05	ug/L	U	11/21/97
SJS05-GW2D-002	PSPCB	alpha-BHC		0.05	ug/L	U	11/21/97
SJS05-GW2D-002	PSPCB	alpha-Chlordane		0.05	ug/L	U	11/21/97
SJS05-GW2D-002	PSPCB	Aroclor-1016		1	ug/L	U	11/21/97
SJS05-GW2D-002	PSPCB	Aroclor-1221		2	ug/L	U	11/21/97
SJS05-GW2D-002	PSPCB	Aroclor-1232		1	ug/L	U	11/21/97
SJS05-GW2D-002	PSPCB	Aroclor-1242		1	ug/L	U	11/21/97
SJS05-GW2D-002	PSPCB	Aroclor-1248		1	ug/L	U	11/21/97
SJS05-GW2D-002	PSPCB	Aroclor-1254		1	ug/L	U	11/21/97
SJS05-GW2D-002	PSPCB	Aroclor-1260		1	ug/L	U	11/21/97
SJS05-GW2D-002	PSPCB	beta-BHC		0.05	ug/L	U	11/21/97
SJS05-GW2D-002	PSPCB	delta-BHC		0.05	ug/L	U	11/21/97
SJS05-GW2D-002	PSPCB	Dieldrin		0.1	ug/L	U	11/21/97
SJS05-GW2D-002	PSPCB	Endosulfan I		0.05	ug/L	U	11/21/97
SJS05-GW2D-002	PSPCB	Endosulfan II		0.1	ug/L	U	11/21/97
SJS05-GW2D-002	PSPCB	Endosulfan Sulfate		0.1	ug/L	U	11/21/97
SJS05-GW2D-002	PSPCB	Endrin		0.1	ug/L	U	11/21/
SJS05-GW2D-002	PSPCB	Endrin Aldehyde		0.1	ug/L	U	11/21/
SJS05-GW2D-002	PSPCB	Endrin Ketone		0.1	ug/L	U	11/21/
SJS05-GW2D-002	PSPCB	gamma-BHC		0.05	ug/L	U	11/21/97
SJS05-GW2D-002	PSPCB	gamma-Chlordane		0.05	ug/L	U	11/21/97
SJS05-GW2D-002	PSPCB	Heptachlor		0.05	ug/L	U	11/21/97
SJS05-GW2D-002	PSPCB	Heptachlor Epoxide		0.05	ug/L	U	11/21/97
SJS05-GW2D-002	PSPCB	Methoxychlor		0.5	ug/L	U	11/21/97
SJS05-GW2D-002	PSPCB	Toxaphene		5	ug/L	U	11/21/97
SJS05-GW2D-002	SVTCL	1,2,4-Trichlorobenzene		10	ug/L	U	11/19/97
SJS05-GW2D-002	SVTCL	1,2-Dichlorobenzene		10	ug/L	U	11/19/97
SJS05-GW2D-002	SVTCL	1,3-Dichlorobenzene		10	ug/L	U	11/19/97
SJS05-GW2D-002	SVTCL	1,4-Dichlorobenzene		10	ug/L	U	11/19/97
SJS05-GW2D-002	SVTCL	2,2'-oxybis(1-Chloropropan		10	ug/L	U	11/19/97
SJS05-GW2D-002	SVTCL	2,4,5-Trichlorophenol		25	ug/L	U	11/19/97
SJS05-GW2D-002	SVTCL	2,4,6-Trichlorophenol		10	ug/L	U	11/19/97
SJS05-GW2D-002	SVTCL	2,4-Dichlorophenol		10	ug/L	U	11/19/97
SJS05-GW2D-002	SVTCL	2,4-Dimethylphenol		10	ug/L	U	11/19/97
SJS05-GW2D-002	SVTCL	2,4-Dinitrophenol		25	ug/L	U	11/19/97
SJS05-GW2D-002	SVTCL	2,4-Dinitrotoluene		10	ug/L	U	11/19/97
SJS05-GW2D-002	SVTCL	2,6-Dinitrotoluene		10	ug/L	U	11/19/97
SJS05-GW2D-002	SVTCL	2-Chloronaphthalene		10	ug/L	U	11/19/97
SJS05-GW2D-002	SVTCL	2-Chlorophenol		10	ug/L	U	11/19/97
SJS05-GW2D-002	SVTCL	2-Methylnaphthalene		10	ug/L	U	11/19/97
SJS05-GW2D-002	SVTCL	2-Methylphenol		10	ug/L	U	11/19/97
SJS05-GW2D-002	SVTCL	2-Nitroaniline		25	ug/L	U	11/19/97
SJS05-GW2D-002	SVTCL	2-Nitrophenol		10	ug/L	U	11/19/97
SJS05-GW2D-002	SVTCL	3,3'-Dichlorobenzidine		10	ug/L	U	11/19/97
SJS05-GW2D-002	SVTCL	3-Nitroaniline		25	ug/L	U	11/19/97
SJS05-GW2D-002	SVTCL	4,6-Dinitro-2-Methylphenol		25	ug/L	U	11/19/
SJS05-GW2D-002	SVTCL	4-Bromophenol-phenylethe		10	ug/L	U	11/19/

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS05-GW2D-002	SVTCL	4-Chloro-3-Methylphenol		10	ug/L	U	11/19/97
SJS05-GW2D-002	SVTCL	4-Chloroaniline		10	ug/L	U	11/19/97
SJS05-GW2D-002	SVTCL	4-Chlorophenyl-phenylethe		10	ug/L	U	11/19/97
SJS05-GW2D-002	SVTCL	4-Methylphenol		10	ug/L	U	11/19/97
SJS05-GW2D-002	SVTCL	4-Nitroaniline		25	ug/L	U	11/19/97
SJS05-GW2D-002	SVTCL	4-Nitrophenol		25	ug/L	U	11/19/97
SJS05-GW2D-002	SVTCL	Acenaphthene		10	ug/L	U	11/19/97
SJS05-GW2D-002	SVTCL	Acenaphthylene		10	ug/L	U	11/19/97
SJS05-GW2D-002	SVTCL	Anthracene		10	ug/L	U	11/19/97
SJS05-GW2D-002	SVTCL	Benzo(a)anthracene		10	ug/L	U	11/19/97
SJS05-GW2D-002	SVTCL	Benzo(a)pyrene		10	ug/L	U	11/19/97
SJS05-GW2D-002	SVTCL	Benzo(b)fluoranthene		10	ug/L	U	11/19/97
SJS05-GW2D-002	SVTCL	Benzo(g,h,i)perylene		10	ug/L	U	11/19/97
SJS05-GW2D-002	SVTCL	Benzo(k)fluoranthene		10	ug/L	U	11/19/97
SJS05-GW2D-002	SVTCL	bis(2-Chloroethoxy)methan		10	ug/L	U	11/19/97
SJS05-GW2D-002	SVTCL	bis(2-chloroethyl)ether		10	ug/L	U	11/19/97
SJS05-GW2D-002	SVTCL	bis(2-Ethylhexyl)phthalate		10	ug/L	U	11/19/97
SJS05-GW2D-002	SVTCL	Butylbenzylphthalate		10	ug/L	U	11/19/97
SJS05-GW2D-002	SVTCL	Carbazole		10	ug/L	U	11/19/97
SJS05-GW2D-002	SVTCL	Chrysene		10	ug/L	U	11/19/97
SJS05-GW2D-002	SVTCL	Di-n-butylphthalate		10	ug/L	U	11/19/97
SJS05-GW2D-002	SVTCL	Di-n-Octyl Phthalate		10	ug/L	U	11/19/97
SJS05-GW2D-002	SVTCL	Dibenzo(a,h)anthracene		10	ug/L	U	11/19/97
SJS05-GW2D-002	SVTCL	Dibenzofuran		10	ug/L	U	11/19/97
SJS05-GW2D-002	SVTCL	Diethylphthalate		10	ug/L	U	11/19/97
SJS05-GW2D-002	SVTCL	Dimethyl Phthalate		10	ug/L	U	11/19/97
SJS05-GW2D-002	SVTCL	Fluoranthene		10	ug/L	U	11/19/97
SJS05-GW2D-002	SVTCL	Fluorene		10	ug/L	U	11/19/97
SJS05-GW2D-002	SVTCL	Hexachlorobenzene		10	ug/L	U	11/19/97
SJS05-GW2D-002	SVTCL	Hexachlorobutadiene		10	ug/L	U	11/19/97
SJS05-GW2D-002	SVTCL	Hexachlorocyclopentadien		10	ug/L	U	11/19/97
SJS05-GW2D-002	SVTCL	Hexachloroethane		10	ug/L	U	11/19/97
SJS05-GW2D-002	SVTCL	Indeno(1,2,3-cd)pyrene		10	ug/L	U	11/19/97
SJS05-GW2D-002	SVTCL	Isophorone		10	ug/L	U	11/19/97
SJS05-GW2D-002	SVTCL	N-Nitroso-Di-n-Propylamine		10	ug/L	U	11/19/97
SJS05-GW2D-002	SVTCL	N-Nitrosodiphenylamine		10	ug/L	U	11/19/97
SJS05-GW2D-002	SVTCL	Naphthalene		10	ug/L	U	11/19/97
SJS05-GW2D-002	SVTCL	Nitrobenzene		10	ug/L	U	11/19/97
SJS05-GW2D-002	SVTCL	Pentachlorophenol		25	ug/L	U	11/19/97
SJS05-GW2D-002	SVTCL	Phenanthrene		10	ug/L	U	11/19/97
SJS05-GW2D-002	SVTCL	Phenol		10	ug/L	U	11/19/97
SJS05-GW2D-002	SVTCL	Pyrene		10	ug/L	U	11/19/97
SJS05-GW2D-002	VCLOW	1,1,1-Trichloroethane		1	ug/L	U	11/11/97
SJS05-GW2D-002	VCLOW	1,1,2,2-Tetrachloroethane		1	ug/L	U	11/11/97
SJS05-GW2D-002	VCLOW	1,1,2-Trichloroethane		1	ug/L	U	11/11/97
SJS05-GW2D-002	VCLOW	1,1-Dichloroethane		1	ug/L	U	11/11/97
SJS05-GW2D-002	VCLOW	1,1-Dichloroethene		1	ug/L	U	11/11/97
SJS05-GW2D-002	VCLOW	1,2,4-Trichlorobenzene		1	ug/L	U	11/11/97
SJS05-GW2D-002	VCLOW	1,2-Dibromo-3-chloropropa		1	ug/L	U	11/11/97
SJS05-GW2D-002	VCLOW	1,2-Dibromoethane		1	ug/L	U	11/11/97
SJS05-GW2D-002	VCLOW	1,2-Dichlorobenzene		1	ug/L	U	11/11/97
SJS05-GW2D-002	VCLOW	1,2-Dichloroethane		1	ug/L	U	11/11/97
SJS05-GW2D-002	VCLOW	1,2-Dichloropropane		1	ug/L	U	11/11/97
SJS05-GW2D-002	VCLOW	1,3-Dichlorobenzene		1	ug/L	U	11/11/97
SJS05-GW2D-002	VCLOW	1,4-Dichlorobenzene		1	ug/L	U	11/11/97
SJS05-GW2D-002	VCLOW	2-Hexanone		5	ug/L	U	11/11/97
SJS05-GW2D-002	VCLOW	4-Methyl-2-Pentanone		5	ug/L	U	11/11/97
SJS05-GW2D-002	VCLOW	Acetone	64	5	ug/L	B	11/11/97
SJS05-GW2D-002	VCLOW	Benzene		1	ug/L	U	11/11/97
SJS05-GW2D-002	VCLOW	Bromochloromethane		1	ug/L	U	11/11/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS05-GW2D-002	VCLOW	Bromodichloromethane		1	ug/L	U	11/11
SJS05-GW2D-002	VCLOW	Bromoform		1	ug/L	U	11/11
SJS05-GW2D-002	VCLOW	Bromomethane		1	ug/L	U	11/11/
SJS05-GW2D-002	VCLOW	Carbon Disulfide		1	ug/L	U	11/11/97
SJS05-GW2D-002	VCLOW	Carbon Tetrachloride		1	ug/L	U	11/11/97
SJS05-GW2D-002	VCLOW	Chlorobenzene		1	ug/L	U	11/11/97
SJS05-GW2D-002	VCLOW	Chloroethane		1	ug/L	U	11/11/97
SJS05-GW2D-002	VCLOW	Chloroform	0.7	1	ug/L	B	11/11/97
SJS05-GW2D-002	VCLOW	Chloromethane		1	ug/L	U	11/11/97
SJS05-GW2D-002	VCLOW	cis-1,2-Dichloroethene		1	ug/L	U	11/11/97
SJS05-GW2D-002	VCLOW	cis-1,3-Dichloropropene		1	ug/L	U	11/11/97
SJS05-GW2D-002	VCLOW	Dibromochloromethane		1	ug/L	U	11/11/97
SJS05-GW2D-002	VCLOW	Ethylbenzene		1	ug/L	U	11/11/97
SJS05-GW2D-002	VCLOW	Methylene Chloride	2	2	ug/L	B	11/11/97
SJS05-GW2D-002	VCLOW	Styrene		1	ug/L	U	11/11/97
SJS05-GW2D-002	VCLOW	Tetrachloroethene		1	ug/L	U	11/11/97
SJS05-GW2D-002	VCLOW	Toluene		1	ug/L	U	11/11/97
SJS05-GW2D-002	VCLOW	Total Xylenes		1	ug/L	U	11/11/97
SJS05-GW2D-002	VCLOW	Trans-1,2-Dichloroethene		1	ug/L	U	11/11/97
SJS05-GW2D-002	VCLOW	trans-1,3-Dichloropropene		1	ug/L	U	11/11/97
SJS05-GW2D-002	VCLOW	Trichloroethene		1	ug/L	U	11/11/97
SJS05-GW2D-002	VCLOW	Vinyl Chloride		1	ug/L	U	11/11/97
SJS05-GW2D-002F	METAL	Aluminum		38.1	ug/L	U	11/26/97
SJS05-GW2D-002F	METAL	Antimony		1.7	ug/L	U	11/18/97
SJS05-GW2D-002F	METAL	Arsenic		3.2	ug/L	U	11/18/97
SJS05-GW2D-002F	METAL	Barium	19.4	1	ug/L	B	11/26/97
SJS05-GW2D-002F	METAL	Beryllium		0.58	ug/L	U	11/26/97
SJS05-GW2D-002F	METAL	Cadmium		0.4	ug/L	U	11/18/97
SJS05-GW2D-002F	METAL	Calcium	59200	46	ug/L		11/26/97
SJS05-GW2D-002F	METAL	Chromium		4.6	ug/L	U	11/26/
SJS05-GW2D-002F	METAL	Cobalt		6	ug/L	U	11/26
SJS05-GW2D-002F	METAL	Copper		5.8	ug/L	U	11/26/97
SJS05-GW2D-002F	METAL	Iron	848	5	ug/L		11/26/97
SJS05-GW2D-002F	METAL	Lead	1.8	1	ug/L	B	11/18/97
SJS05-GW2D-002F	METAL	Magnesium	9850	45	ug/L		11/26/97
SJS05-GW2D-002F	METAL	Manganese	166	1	ug/L		11/26/97
SJS05-GW2D-002F	METAL	Mercury		0.13	ug/L	U	11/19/97
SJS05-GW2D-002F	METAL	Nickel		6.3	ug/L	U	11/26/97
SJS05-GW2D-002F	METAL	Potassium	6780	97	ug/L		11/26/97
SJS05-GW2D-002F	METAL	Selenium		3.3	ug/L	U	11/18/97
SJS05-GW2D-002F	METAL	Silver		1.1	ug/L	U	11/18/97
SJS05-GW2D-002F	METAL	Sodium	41400	28	ug/L		11/26/97
SJS05-GW2D-002F	METAL	Thallium	2.8	2	ug/L	B	11/19/97
SJS05-GW2D-002F	METAL	Vanadium		6.8	ug/L	U	11/26/97
SJS05-GW2D-002F	METAL	Zinc	10.3	3	ug/L	B	11/26/97
SJS05-GW2S-001	CTOTP	Total Phosphorous (as P)	0.309	0.05	mg/L		7/30/97
SJS05-GW2S-001	MCYAN	Aluminum	1110	29	ug/L		7/28/97
SJS05-GW2S-001	MCYAN	Antimony		2	ug/L	U	7/29/97
SJS05-GW2S-001	MCYAN	Arsenic		3	ug/L	U	7/29/97
SJS05-GW2S-001	MCYAN	Barium	126	1	ug/L	J	7/28/97
SJS05-GW2S-001	MCYAN	Beryllium		1	ug/L	U	7/28/97
SJS05-GW2S-001	MCYAN	Cadmium		0.5	ug/L	U	7/29/97
SJS05-GW2S-001	MCYAN	Calcium	97800	46	ug/L		7/28/97
SJS05-GW2S-001	MCYAN	Chromium		7	ug/L	U	7/28/97
SJS05-GW2S-001	MCYAN	Cobalt		8	ug/L	U	7/28/97
SJS05-GW2S-001	MCYAN	Copper		6	ug/L	U	7/28/97
SJS05-GW2S-001	MCYAN	Cyanide		5	ug/L	U	7/22/97
SJS05-GW2S-001	MCYAN	Iron	13500	5	ug/L		7/28/97
SJS05-GW2S-001	MCYAN	Lead	1.1	1	ug/L	J	7/29/
SJS05-GW2S-001	MCYAN	Magnesium	156000	45	ug/L		7/28

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS05-GW2S-001	MCYAN	Manganese	992	1	ug/L		7/28/97
SJS05-GW2S-001	MCYAN	Mercury		0.12	ug/L	U	7/29/97
SJS05-GW2S-001	MCYAN	Nickel	14.1	4	ug/L	J	7/28/97
SJS05-GW2S-001	MCYAN	Potassium	49100	97	ug/L		7/28/97
SJS05-GW2S-001	MCYAN	Selenium		3	ug/L	UL	7/29/97
SJS05-GW2S-001	MCYAN	Silver	3.8	3	ug/L	B	7/29/97
SJS05-GW2S-001	MCYAN	Sodium	1340000	28	ug/L		7/28/97
SJS05-GW2S-001	MCYAN	Thallium		2	ug/L	U	7/29/97
SJS05-GW2S-001	MCYAN	Vanadium		9	ug/L	U	7/28/97
SJS05-GW2S-001	MCYAN	Zinc	23.5	3	ug/L	B	7/28/97
SJS05-GW2S-001	PSPCB	4,4'-DDD		0.1	ug/L	U	7/31/97
SJS05-GW2S-001	PSPCB	4,4'-DDE		0.1	ug/L	U	7/31/97
SJS05-GW2S-001	PSPCB	4,4'-DDT		0.1	ug/L	U	7/31/97
SJS05-GW2S-001	PSPCB	Aldrin		0.05	ug/L	U	7/31/97
SJS05-GW2S-001	PSPCB	alpha-BHC		0.05	ug/L	U	7/31/97
SJS05-GW2S-001	PSPCB	alpha-Chlordane		0.05	ug/L	U	7/31/97
SJS05-GW2S-001	PSPCB	Aroclor-1016		1	ug/L	U	7/31/97
SJS05-GW2S-001	PSPCB	Aroclor-1221		2	ug/L	U	7/31/97
SJS05-GW2S-001	PSPCB	Aroclor-1232		1	ug/L	U	7/31/97
SJS05-GW2S-001	PSPCB	Aroclor-1242		1	ug/L	U	7/31/97
SJS05-GW2S-001	PSPCB	Aroclor-1248		1	ug/L	U	7/31/97
SJS05-GW2S-001	PSPCB	Aroclor-1254		1	ug/L	U	7/31/97
SJS05-GW2S-001	PSPCB	Aroclor-1260		1	ug/L	U	7/31/97
SJS05-GW2S-001	PSPCB	beta-BHC		0.05	ug/L	U	7/31/97
SJS05-GW2S-001	PSPCB	delta-BHC		0.05	ug/L	U	7/31/97
SJS05-GW2S-001	PSPCB	Dieldrin		0.1	ug/L	U	7/31/97
SJS05-GW2S-001	PSPCB	Endosulfan I		0.05	ug/L	U	7/31/97
SJS05-GW2S-001	PSPCB	Endosulfan II		0.1	ug/L	U	7/31/97
SJS05-GW2S-001	PSPCB	Endosulfan Sulfate		0.1	ug/L	U	7/31/97
SJS05-GW2S-001	PSPCB	Endrin		0.1	ug/L	U	7/31/97
SJS05-GW2S-001	PSPCB	Endrin Aldehyde		0.1	ug/L	U	7/31/97
SJS05-GW2S-001	PSPCB	Endrin Ketone		0.1	ug/L	U	7/31/97
SJS05-GW2S-001	PSPCB	gamma-BHC		0.05	ug/L	U	7/31/97
SJS05-GW2S-001	PSPCB	gamma-Chlordane		0.05	ug/L	U	7/31/97
SJS05-GW2S-001	PSPCB	Heptachlor		0.05	ug/L	U	7/31/97
SJS05-GW2S-001	PSPCB	Heptachlor Epoxide		0.05	ug/L	U	7/31/97
SJS05-GW2S-001	PSPCB	Methoxychlor		0.5	ug/L	U	7/31/97
SJS05-GW2S-001	PSPCB	Toxaphene		5	ug/L	U	7/31/97
SJS05-GW2S-001	SVTCL	1,2,4-Trichlorobenzene		10	ug/L	U	8/2/97
SJS05-GW2S-001	SVTCL	1,2-Dichlorobenzene		10	ug/L	U	8/2/97
SJS05-GW2S-001	SVTCL	1,3-Dichlorobenzene		10	ug/L	U	8/2/97
SJS05-GW2S-001	SVTCL	1,4-Dichlorobenzene		10	ug/L	U	8/2/97
SJS05-GW2S-001	SVTCL	2,2'-oxybis(1-Chloropropan		10	ug/L	U	8/2/97
SJS05-GW2S-001	SVTCL	2,4,5-Trichlorophenol		25	ug/L	U	8/2/97
SJS05-GW2S-001	SVTCL	2,4,6-Trichlorophenol		10	ug/L	U	8/2/97
SJS05-GW2S-001	SVTCL	2,4-Dichlorophenol		10	ug/L	U	8/2/97
SJS05-GW2S-001	SVTCL	2,4-Dimethylphenol		10	ug/L	U	8/2/97
SJS05-GW2S-001	SVTCL	2,4-Dinitrophenol		25	ug/L	U	8/2/97
SJS05-GW2S-001	SVTCL	2,4-Dinitrotoluene		10	ug/L	U	8/2/97
SJS05-GW2S-001	SVTCL	2,6-Dinitrotoluene		10	ug/L	U	8/2/97
SJS05-GW2S-001	SVTCL	2-Chloronaphthalene		10	ug/L	U	8/2/97
SJS05-GW2S-001	SVTCL	2-Chlorophenol		10	ug/L	U	8/2/97
SJS05-GW2S-001	SVTCL	2-Methylnaphthalene		10	ug/L	U	8/2/97
SJS05-GW2S-001	SVTCL	2-Methylphenol		10	ug/L	U	8/2/97
SJS05-GW2S-001	SVTCL	2-Nitroaniline		25	ug/L	U	8/2/97
SJS05-GW2S-001	SVTCL	2-Nitrophenol		10	ug/L	U	8/2/97
SJS05-GW2S-001	SVTCL	3,3'-Dichlorobenzidine		10	ug/L	U	8/2/97
SJS05-GW2S-001	SVTCL	3-Nitroaniline		25	ug/L	U	8/2/97
SJS05-GW2S-001	SVTCL	4,6-Dinitro-2-Methylphenol		25	ug/L	U	8/2/97
SJS05-GW2S-001	SVTCL	4-Bromophenyl phenylether		10	ug/L	U	8/2/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS05-GW2S-001	SVTCL	4-Chloro-3-Methylphenol		10	ug/L	U	8/2/97
SJS05-GW2S-001	SVTCL	4-Chloroaniline		10	ug/L	U	8/2/
SJS05-GW2S-001	SVTCL	4-Chlorophenyl-phenylethe		10	ug/L	U	8/2/
SJS05-GW2S-001	SVTCL	4-Methylphenol		10	ug/L	U	8/2/97
SJS05-GW2S-001	SVTCL	4-Nitroaniline		25	ug/L	U	8/2/97
SJS05-GW2S-001	SVTCL	4-Nitrophenol		25	ug/L	U	8/2/97
SJS05-GW2S-001	SVTCL	Acenaphthene		10	ug/L	U	8/2/97
SJS05-GW2S-001	SVTCL	Acenaphthylene		10	ug/L	U	8/2/97
SJS05-GW2S-001	SVTCL	Anthracene		10	ug/L	U	8/2/97
SJS05-GW2S-001	SVTCL	Benzo(a)Anthracene		10	ug/L	U	8/2/97
SJS05-GW2S-001	SVTCL	Benzo(a)Pyrene		10	ug/L	U	8/2/97
SJS05-GW2S-001	SVTCL	Benzo(b)Fluoranthene		10	ug/L	U	8/2/97
SJS05-GW2S-001	SVTCL	Benzo(g,h,i)Perylene		10	ug/L	U	8/2/97
SJS05-GW2S-001	SVTCL	Benzo(k)fluoranthene		10	ug/L	U	8/2/97
SJS05-GW2S-001	SVTCL	Bis(2-chloroethoxy)Methan		10	ug/L	U	8/2/97
SJS05-GW2S-001	SVTCL	Bis(2-chloroethyl)Ether		10	ug/L	U	8/2/97
SJS05-GW2S-001	SVTCL	Bis(2-Ethylhexyl)Phthalate		10	ug/L	U	8/2/97
SJS05-GW2S-001	SVTCL	Butylbenzylphthalate		10	ug/L	U	8/2/97
SJS05-GW2S-001	SVTCL	Carbazole		10	ug/L	U	8/2/97
SJS05-GW2S-001	SVTCL	Chrysene		10	ug/L	U	8/2/97
SJS05-GW2S-001	SVTCL	Di-n-Butylphthalate		10	ug/L	U	8/2/97
SJS05-GW2S-001	SVTCL	Di-n-Octyl Phthalate		10	ug/L	U	8/2/97
SJS05-GW2S-001	SVTCL	Dibenz(a,h)Anthracene		10	ug/L	U	8/2/97
SJS05-GW2S-001	SVTCL	Dibenzofuran		10	ug/L	U	8/2/97
SJS05-GW2S-001	SVTCL	Diethylphthalate		10	ug/L	U	8/2/97
SJS05-GW2S-001	SVTCL	Dimethyl Phthalate		10	ug/L	U	8/2/97
SJS05-GW2S-001	SVTCL	Fluoranthene		10	ug/L	U	8/2/97
SJS05-GW2S-001	SVTCL	Fluorene		10	ug/L	U	8/2/97
SJS05-GW2S-001	SVTCL	Hexachlorobenzene		10	ug/L	U	8/2/97
SJS05-GW2S-001	SVTCL	Hexachlorobutadiene		10	ug/L	U	8/2/97
SJS05-GW2S-001	SVTCL	Hexachlorocyclopentadien		10	ug/L	U	8/2/
SJS05-GW2S-001	SVTCL	Hexachloroethane		10	ug/L	U	8/2/
SJS05-GW2S-001	SVTCL	Indeno(1,2,3-cd)Pyrene		10	ug/L	U	8/2/97
SJS05-GW2S-001	SVTCL	Isophorone		10	ug/L	U	8/2/97
SJS05-GW2S-001	SVTCL	N-Nitroso-Di-n-Propylamine		10	ug/L	U	8/2/97
SJS05-GW2S-001	SVTCL	N-Nitrosodiphenylamine		10	ug/L	U	8/2/97
SJS05-GW2S-001	SVTCL	Naphthalene		10	ug/L	U	8/2/97
SJS05-GW2S-001	SVTCL	Nitrobenzene		10	ug/L	U	8/2/97
SJS05-GW2S-001	SVTCL	Pentachlorophenol		25	ug/L	U	8/2/97
SJS05-GW2S-001	SVTCL	Phenanthrene		10	ug/L	U	8/2/97
SJS05-GW2S-001	SVTCL	Phenol		10	ug/L	U	8/2/97
SJS05-GW2S-001	SVTCL	Pyrene		10	ug/L	U	8/2/97
SJS05-GW2S-001	VCLOW	1,1,1-Trichloroethane		1	ug/L	U	7/25/97
SJS05-GW2S-001	VCLOW	1,1,2,2-Tetrachloroethane		1	ug/L	U	7/25/97
SJS05-GW2S-001	VCLOW	1,1,2-Trichloroethane		1	ug/L	U	7/25/97
SJS05-GW2S-001	VCLOW	1,1-Dichloroethane		1	ug/L	U	7/25/97
SJS05-GW2S-001	VCLOW	1,1-Dichloroethene		1	ug/L	U	7/25/97
SJS05-GW2S-001	VCLOW	1,2,4-Trichlorobenzene		1	ug/L	U	7/25/97
SJS05-GW2S-001	VCLOW	1,2-Dibromo-3-chloropropa		1	ug/L	U	7/25/97
SJS05-GW2S-001	VCLOW	1,2-Dibromoethane		1	ug/L	U	7/25/97
SJS05-GW2S-001	VCLOW	1,2-Dichlorobenzene		1	ug/L	U	7/25/97
SJS05-GW2S-001	VCLOW	1,2-Dichloroethane		1	ug/L	U	7/25/97
SJS05-GW2S-001	VCLOW	1,2-Dichloropropane		1	ug/L	U	7/25/97
SJS05-GW2S-001	VCLOW	1,3-Dichlorobenzene		1	ug/L	U	7/25/97
SJS05-GW2S-001	VCLOW	1,4-Dichlorobenzene		1	ug/L	U	7/25/97
SJS05-GW2S-001	VCLOW	2-Hexanone		5	ug/L	U	7/25/97
SJS05-GW2S-001	VCLOW	4-Methyl-2-Pentanone		5	ug/L	U	7/25/97
SJS05-GW2S-001	VCLOW	Acetone	8	5	ug/L	B	7/25/97
SJS05-GW2S-001	VCLOW	Benzene		1	ug/L	U	7/25/97
SJS05-GW2S-001	VCLOW	Bromochloromethane		1	ug/L	U	7/25

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS05-GW2S-001	VCLOW	Bromodichloromethane		1	ug/L	U	7/25/97
SJS05-GW2S-001	VCLOW	Bromoform		1	ug/L	U	7/25/97
SJS05-GW2S-001	VCLOW	Bromomethane		1	ug/L	U	7/25/97
SJS05-GW2S-001	VCLOW	Carbon Disulfide		1	ug/L	U	7/25/97
SJS05-GW2S-001	VCLOW	Carbon Tetrachloride		1	ug/L	U	7/25/97
SJS05-GW2S-001	VCLOW	Chlorobenzene		1	ug/L	U	7/25/97
SJS05-GW2S-001	VCLOW	Chloroethane		1	ug/L	U	7/25/97
SJS05-GW2S-001	VCLOW	Chloroform		1	ug/L	U	7/25/97
SJS05-GW2S-001	VCLOW	Chloromethane		1	ug/L	U	7/25/97
SJS05-GW2S-001	VCLOW	cis-1,2-Dichloroethene		1	ug/L	U	7/25/97
SJS05-GW2S-001	VCLOW	cis-1,3-Dichloropropene		1	ug/L	U	7/25/97
SJS05-GW2S-001	VCLOW	Dibromochloromethane		1	ug/L	U	7/25/97
SJS05-GW2S-001	VCLOW	Ethylbenzene		1	ug/L	U	7/25/97
SJS05-GW2S-001	VCLOW	Methylene Chloride	2	1	ug/L	B	7/25/97
SJS05-GW2S-001	VCLOW	Styrene		1	ug/L	U	7/25/97
SJS05-GW2S-001	VCLOW	Tetrachloroethene		1	ug/L	U	7/25/97
SJS05-GW2S-001	VCLOW	Toluene		1	ug/L	U	7/25/97
SJS05-GW2S-001	VCLOW	Total Xylenes		1	ug/L	U	7/25/97
SJS05-GW2S-001	VCLOW	Trans-1,2-Dichloroethene		1	ug/L	U	7/25/97
SJS05-GW2S-001	VCLOW	Trans-1,3-Dichloropropene		1	ug/L	U	7/25/97
SJS05-GW2S-001	VCLOW	Trichloroethene		1	ug/L	U	7/25/97
SJS05-GW2S-001	VCLOW	Vinyl Chloride		1	ug/L	U	7/25/97
SJS05-GW2S-001F	METAL	Aluminum		44	ug/L	U	7/28/97
SJS05-GW2S-001F	METAL	Antimony		2	ug/L	U	7/29/97
SJS05-GW2S-001F	METAL	Arsenic		3	ug/L	U	7/29/97
SJS05-GW2S-001F	METAL	Barium	120	1	ug/L	J	7/28/97
SJS05-GW2S-001F	METAL	Beryllium		1	ug/L	U	7/28/97
SJS05-GW2S-001F	METAL	Cadmium		0.5	ug/L	U	7/29/97
SJS05-GW2S-001F	METAL	Calcium	94800	46	ug/L		7/28/97
SJS05-GW2S-001F	METAL	Chromium		7	ug/L	U	7/28/97
SJS05-GW2S-001F	METAL	Cobalt		8	ug/L	U	7/28/97
SJS05-GW2S-001F	METAL	Copper		6	ug/L	U	7/28/97
SJS05-GW2S-001F	METAL	Iron	12300	5	ug/L		7/28/97
SJS05-GW2S-001F	METAL	Lead		1	ug/L	U	7/29/97
SJS05-GW2S-001F	METAL	Magnesium	153000	45	ug/L		7/28/97
SJS05-GW2S-001F	METAL	Manganese	950	1	ug/L		7/28/97
SJS05-GW2S-001F	METAL	Mercury		0.13	ug/L	U	7/29/97
SJS05-GW2S-001F	METAL	Nickel	7.4	4	ug/L	K	7/28/97
SJS05-GW2S-001F	METAL	Potassium	47800	97	ug/L		7/28/97
SJS05-GW2S-001F	METAL	Selenium		3	ug/L	U	7/29/97
SJS05-GW2S-001F	METAL	Silver	4.5	3	ug/L	B	7/29/97
SJS05-GW2S-001F	METAL	Sodium	1290000	28	ug/L		7/28/97
SJS05-GW2S-001F	METAL	Thallium		2	ug/L	U	7/29/97
SJS05-GW2S-001F	METAL	Vanadium		9	ug/L	U	7/28/97
SJS05-GW2S-001F	METAL	Zinc	28.5	3	ug/L	B	7/28/97
SJS05-GW2S-002	CTOTP	Total Phosphorous (as P)	0.136	0.05	mg/L		11/17/97
SJS05-GW2S-002	MCYAN	Aluminum	87400	29	ug/L		11/26/97
SJS05-GW2S-002	MCYAN	Antimony		1.7	ug/L	U	11/18/97
SJS05-GW2S-002	MCYAN	Arsenic	12	3	ug/L		11/18/97
SJS05-GW2S-002	MCYAN	Barium	14	1	ug/L	B	11/26/97
SJS05-GW2S-002	MCYAN	Beryllium	18.3	1	ug/L		11/26/97
SJS05-GW2S-002	MCYAN	Cadmium	9	0.3	ug/L		11/18/97
SJS05-GW2S-002	MCYAN	Calcium	66300	46	ug/L		11/26/97
SJS05-GW2S-002	MCYAN	Chromium	24.6	4	ug/L	B	11/26/97
SJS05-GW2S-002	MCYAN	Cobalt	257	3	ug/L		11/26/97
SJS05-GW2S-002	MCYAN	Copper	124	2	ug/L		11/26/97
SJS05-GW2S-002	MCYAN	Cyanide		5	ug/L	U	11/12/97
SJS05-GW2S-002	MCYAN	Iron	40800	5	ug/L		11/26/97
SJS05-GW2S-002	MCYAN	Lead	16.2	1	ug/L		11/18/97
SJS05-GW2S-002	MCYAN	Magnesium	45700	45	ug/L		11/26/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS05-GW2S-002	MCYAN	Manganese	4320	1	ug/L		11/26/
SJS05-GW2S-002	MCYAN	Mercury		0.13	ug/L	U	11/19/
SJS05-GW2S-002	MCYAN	Nickel	360	4	ug/L		11/26/
SJS05-GW2S-002	MCYAN	Potassium	13000	97	ug/L		11/26/97
SJS05-GW2S-002	MCYAN	Selenium		3.3	ug/L	U	11/18/97
SJS05-GW2S-002	MCYAN	Silver	2.8	3	ug/L	J	11/18/97
SJS05-GW2S-002	MCYAN	Sodium	79200	28	ug/L		11/26/97
SJS05-GW2S-002	MCYAN	Thallium		1.5	ug/L	U	11/19/97
SJS05-GW2S-002	MCYAN	Vanadium	9.9	4	ug/L	J	11/26/97
SJS05-GW2S-002	MCYAN	Zinc	2020	3	ug/L		11/26/97
SJS05-GW2S-002	PSPCB	4,4'-DDD		0.1	ug/L	U	11/21/97
SJS05-GW2S-002	PSPCB	4,4'-DDE		0.1	ug/L	U	11/21/97
SJS05-GW2S-002	PSPCB	4,4'-DDT		0.1	ug/L	U	11/21/97
SJS05-GW2S-002	PSPCB	Aldrin		0.05	ug/L	U	11/21/97
SJS05-GW2S-002	PSPCB	alpha-BHC		0.05	ug/L	U	11/21/97
SJS05-GW2S-002	PSPCB	alpha-Chlordane		0.05	ug/L	U	11/21/97
SJS05-GW2S-002	PSPCB	Aroclor-1016		1	ug/L	U	11/21/97
SJS05-GW2S-002	PSPCB	Aroclor-1221		2	ug/L	U	11/21/97
SJS05-GW2S-002	PSPCB	Aroclor-1232		1	ug/L	U	11/21/97
SJS05-GW2S-002	PSPCB	Aroclor-1242		1	ug/L	U	11/21/97
SJS05-GW2S-002	PSPCB	Aroclor-1248		1	ug/L	U	11/21/97
SJS05-GW2S-002	PSPCB	Aroclor-1254		1	ug/L	U	11/21/97
SJS05-GW2S-002	PSPCB	Aroclor-1260		1	ug/L	U	11/21/97
SJS05-GW2S-002	PSPCB	beta-BHC		0.05	ug/L	U	11/21/97
SJS05-GW2S-002	PSPCB	delta-BHC		0.05	ug/L	U	11/21/97
SJS05-GW2S-002	PSPCB	Dieldrin		0.1	ug/L	U	11/21/97
SJS05-GW2S-002	PSPCB	Endosulfan I		0.05	ug/L	U	11/21/97
SJS05-GW2S-002	PSPCB	Endosulfan II		0.1	ug/L	U	11/21/97
SJS05-GW2S-002	PSPCB	Endosulfan Sulfate		0.1	ug/L	U	11/21/97
SJS05-GW2S-002	PSPCB	Endrin		0.1	ug/L	U	11/21/
SJS05-GW2S-002	PSPCB	Endrin Aldehyde		0.1	ug/L	U	11/21/
SJS05-GW2S-002	PSPCB	Endrin Ketone		0.1	ug/L	U	11/21/
SJS05-GW2S-002	PSPCB	gamma-BHC		0.05	ug/L	U	11/21/97
SJS05-GW2S-002	PSPCB	gamma-Chlordane		0.05	ug/L	U	11/21/97
SJS05-GW2S-002	PSPCB	Heptachlor		0.05	ug/L	U	11/21/97
SJS05-GW2S-002	PSPCB	Heptachlor Epoxide		0.05	ug/L	U	11/21/97
SJS05-GW2S-002	PSPCB	Methoxychlor		0.5	ug/L	U	11/21/97
SJS05-GW2S-002	PSPCB	Toxaphene		5	ug/L	U	11/21/97
SJS05-GW2S-002	SVTCL	1,2,4-Trichlorobenzene		10	ug/L	U	11/19/97
SJS05-GW2S-002	SVTCL	1,2-Dichlorobenzene		10	ug/L	U	11/19/97
SJS05-GW2S-002	SVTCL	1,3-Dichlorobenzene		10	ug/L	U	11/19/97
SJS05-GW2S-002	SVTCL	1,4-Dichlorobenzene		10	ug/L	U	11/19/97
SJS05-GW2S-002	SVTCL	2,2'-oxybis(1-Chloropropan		10	ug/L	U	11/19/97
SJS05-GW2S-002	SVTCL	2,4,5-Trichlorophenol		25	ug/L	U	11/19/97
SJS05-GW2S-002	SVTCL	2,4,6-Trichlorophenol		10	ug/L	U	11/19/97
SJS05-GW2S-002	SVTCL	2,4-Dichlorophenol		10	ug/L	U	11/19/97
SJS05-GW2S-002	SVTCL	2,4-Dimethylphenol		10	ug/L	U	11/19/97
SJS05-GW2S-002	SVTCL	2,4-Dinitrophenol		25	ug/L	U	11/19/97
SJS05-GW2S-002	SVTCL	2,4-Dinitrotoluene		10	ug/L	U	11/19/97
SJS05-GW2S-002	SVTCL	2,6-Dinitrotoluene		10	ug/L	U	11/19/97
SJS05-GW2S-002	SVTCL	2-Chloronaphthalene		10	ug/L	U	11/19/97
SJS05-GW2S-002	SVTCL	2-Chlorophenol		10	ug/L	U	11/19/97
SJS05-GW2S-002	SVTCL	2-Methylnaphthalene		10	ug/L	U	11/19/97
SJS05-GW2S-002	SVTCL	2-Methylphenol		10	ug/L	U	11/19/97
SJS05-GW2S-002	SVTCL	2-Nitroaniline		25	ug/L	U	11/19/97
SJS05-GW2S-002	SVTCL	2-Nitrophenol		10	ug/L	U	11/19/97
SJS05-GW2S-002	SVTCL	3,3'-Dichlorobenzidine		10	ug/L	U	11/19/97
SJS05-GW2S-002	SVTCL	3-Nitroaniline		25	ug/L	U	11/19/97
SJS05-GW2S-002	SVTCL	4,6-Dinitro-2-Methylphenol		25	ug/L	U	11/19/
SJS05-GW2S-002	SVTCL	4-Bromophenol-phenylethe		10	ug/L	U	11/19

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS05-GW2S-002	SVTCL	4-Chloro-3-Methylphenol		10	ug/L	U	11/19/97
SJS05-GW2S-002	SVTCL	4-Chloroaniline		10	ug/L	U	11/19/97
SJS05-GW2S-002	SVTCL	4-Chlorophenyl-phenylethe		10	ug/L	U	11/19/97
SJS05-GW2S-002	SVTCL	4-Methylphenol		10	ug/L	U	11/19/97
SJS05-GW2S-002	SVTCL	4-Nitroaniline		25	ug/L	U	11/19/97
SJS05-GW2S-002	SVTCL	4-Nitrophenol		25	ug/L	U	11/19/97
SJS05-GW2S-002	SVTCL	Acenaphthene		10	ug/L	U	11/19/97
SJS05-GW2S-002	SVTCL	Acenaphthylene		10	ug/L	U	11/19/97
SJS05-GW2S-002	SVTCL	Anthracene		10	ug/L	U	11/19/97
SJS05-GW2S-002	SVTCL	Benzo(a)anthracene		10	ug/L	U	11/19/97
SJS05-GW2S-002	SVTCL	Benzo(a)pyrene		10	ug/L	U	11/19/97
SJS05-GW2S-002	SVTCL	Benzo(b)fluoranthene		10	ug/L	U	11/19/97
SJS05-GW2S-002	SVTCL	Benzo(g,h,i)perylene		10	ug/L	U	11/19/97
SJS05-GW2S-002	SVTCL	Benzo(k)fluoranthene		10	ug/L	U	11/19/97
SJS05-GW2S-002	SVTCL	bis(2-Chloroethoxy)methan		10	ug/L	U	11/19/97
SJS05-GW2S-002	SVTCL	bis(2-chloroethyl)ether		10	ug/L	U	11/19/97
SJS05-GW2S-002	SVTCL	bis(2-Ethylhexyl)phthalate		10	ug/L	U	11/19/97
SJS05-GW2S-002	SVTCL	Butylbenzylphthalate		10	ug/L	U	11/19/97
SJS05-GW2S-002	SVTCL	Carbazole		10	ug/L	U	11/19/97
SJS05-GW2S-002	SVTCL	Chrysene		10	ug/L	U	11/19/97
SJS05-GW2S-002	SVTCL	Di-n-butylphthalate		10	ug/L	U	11/19/97
SJS05-GW2S-002	SVTCL	Di-n-Octyl Phthalate		10	ug/L	U	11/19/97
SJS05-GW2S-002	SVTCL	Dibenzo(a,h)anthracene		10	ug/L	U	11/19/97
SJS05-GW2S-002	SVTCL	Dibenzofuran		10	ug/L	U	11/19/97
SJS05-GW2S-002	SVTCL	Diethylphthalate		10	ug/L	U	11/19/97
SJS05-GW2S-002	SVTCL	Dimethyl Phthalate		10	ug/L	U	11/19/97
SJS05-GW2S-002	SVTCL	Fluoranthene		10	ug/L	U	11/19/97
SJS05-GW2S-002	SVTCL	Fluorene		10	ug/L	U	11/19/97
SJS05-GW2S-002	SVTCL	Hexachlorobenzene		10	ug/L	U	11/19/97
SJS05-GW2S-002	SVTCL	Hexachlorobutadiene		10	ug/L	U	11/19/97
SJS05-GW2S-002	SVTCL	Hexachlorocyclopentadien		10	ug/L	U	11/19/97
SJS05-GW2S-002	SVTCL	Hexachloroethane		10	ug/L	U	11/19/97
SJS05-GW2S-002	SVTCL	Indeno(1,2,3-cd)pyrene		10	ug/L	U	11/19/97
SJS05-GW2S-002	SVTCL	Isophorone		10	ug/L	U	11/19/97
SJS05-GW2S-002	SVTCL	N-Nitroso-Di-n-Propylamine		10	ug/L	U	11/19/97
SJS05-GW2S-002	SVTCL	N-Nitrosodiphenylamine		10	ug/L	U	11/19/97
SJS05-GW2S-002	SVTCL	Naphthalene		10	ug/L	U	11/19/97
SJS05-GW2S-002	SVTCL	Nitrobenzene		10	ug/L	U	11/19/97
SJS05-GW2S-002	SVTCL	Pentachlorophenol		25	ug/L	U	11/19/97
SJS05-GW2S-002	SVTCL	Phenanthrene		10	ug/L	U	11/19/97
SJS05-GW2S-002	SVTCL	Phenol		10	ug/L	U	11/19/97
SJS05-GW2S-002	SVTCL	Pyrene		10	ug/L	U	11/19/97
SJS05-GW2S-002	VCLOW	1,1,1-Trichloroethane		1	ug/L	U	11/11/97
SJS05-GW2S-002	VCLOW	1,1,2,2-Tetrachloroethane		1	ug/L	U	11/11/97
SJS05-GW2S-002	VCLOW	1,1,2-Trichloroethane		1	ug/L	U	11/11/97
SJS05-GW2S-002	VCLOW	1,1-Dichloroethane		1	ug/L	U	11/11/97
SJS05-GW2S-002	VCLOW	1,1-Dichloroethene		1	ug/L	U	11/11/97
SJS05-GW2S-002	VCLOW	1,2,4-Trichlorobenzene		1	ug/L	U	11/11/97
SJS05-GW2S-002	VCLOW	1,2-Dibromo-3-chloropropa		1	ug/L	U	11/11/97
SJS05-GW2S-002	VCLOW	1,2-Dibromoethane		1	ug/L	U	11/11/97
SJS05-GW2S-002	VCLOW	1,2-Dichlorobenzene		1	ug/L	U	11/11/97
SJS05-GW2S-002	VCLOW	1,2-Dichloroethane		1	ug/L	U	11/11/97
SJS05-GW2S-002	VCLOW	1,2-Dichloropropane		1	ug/L	U	11/11/97
SJS05-GW2S-002	VCLOW	1,3-Dichlorobenzene		1	ug/L	U	11/11/97
SJS05-GW2S-002	VCLOW	1,4-Dichlorobenzene		1	ug/L	U	11/11/97
SJS05-GW2S-002	VCLOW	2-Hexanone		5	ug/L	U	11/11/97
SJS05-GW2S-002	VCLOW	4-Methyl-2-Pentanone		5	ug/L	U	11/11/97
SJS05-GW2S-002	VCLOW	Acetone	9	5	ug/L	B	11/11/97
SJS05-GW2S-002	VCLOW	Benzene		1	ug/L	U	11/11/97
SJS05-GW2S-002	VCLOW	Bromochloromethane		1	ug/L	U	11/11/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS05-GW2S-002	VCLOW	Bromodichloromethane		1	ug/L	U	11/11/97
SJS05-GW2S-002	VCLOW	Bromoform		1	ug/L	U	11/11/
SJS05-GW2S-002	VCLOW	Bromomethane		1	ug/L	U	11/11/
SJS05-GW2S-002	VCLOW	Carbon Disulfide	0.8	1	ug/L	J	11/11/97
SJS05-GW2S-002	VCLOW	Carbon Tetrachloride		1	ug/L	U	11/11/97
SJS05-GW2S-002	VCLOW	Chlorobenzene		1	ug/L	U	11/11/97
SJS05-GW2S-002	VCLOW	Chloroethane		1	ug/L	U	11/11/97
SJS05-GW2S-002	VCLOW	Chloroform		1	ug/L	U	11/11/97
SJS05-GW2S-002	VCLOW	Chloromethane		1	ug/L	U	11/11/97
SJS05-GW2S-002	VCLOW	cis-1,2-Dichloroethene		1	ug/L	U	11/11/97
SJS05-GW2S-002	VCLOW	cis-1,3-Dichloropropene		1	ug/L	U	11/11/97
SJS05-GW2S-002	VCLOW	Dibromochloromethane		1	ug/L	U	11/11/97
SJS05-GW2S-002	VCLOW	Ethylbenzene		1	ug/L	U	11/11/97
SJS05-GW2S-002	VCLOW	Methylene Chloride	2	2	ug/L	B	11/11/97
SJS05-GW2S-002	VCLOW	Styrene		1	ug/L	U	11/11/97
SJS05-GW2S-002	VCLOW	Tetrachloroethene		1	ug/L	U	11/11/97
SJS05-GW2S-002	VCLOW	Toluene		1	ug/L	U	11/11/97
SJS05-GW2S-002	VCLOW	Total Xylenes		1	ug/L	U	11/11/97
SJS05-GW2S-002	VCLOW	Trans-1,2-Dichloroethene		1	ug/L	U	11/11/97
SJS05-GW2S-002	VCLOW	trans-1,3-Dichloropropene		1	ug/L	U	11/11/97
SJS05-GW2S-002	VCLOW	Trichloroethene		1	ug/L	U	11/11/97
SJS05-GW2S-002	VCLOW	Vinyl Chloride		1	ug/L	U	11/11/97
SJS05-GW2S-002F	METAL	Aluminum	84200	29	ug/L		11/26/97
SJS05-GW2S-002F	METAL	Antimony		1.7	ug/L	U	11/18/97
SJS05-GW2S-002F	METAL	Arsenic	13.3	3	ug/L		11/18/97
SJS05-GW2S-002F	METAL	Barium	14.8	1	ug/L	B	11/26/97
SJS05-GW2S-002F	METAL	Beryllium	17.7	1	ug/L		11/26/97
SJS05-GW2S-002F	METAL	Cadmium	8.5	0.3	ug/L		11/18/97
SJS05-GW2S-002F	METAL	Calcium	63700	46	ug/L		11/26/97
SJS05-GW2S-002F	METAL	Chromium	33	4	ug/L		11/26/97
SJS05-GW2S-002F	METAL	Cobalt	270	3	ug/L		11/26/
SJS05-GW2S-002F	METAL	Copper	149	2	ug/L		11/26/
SJS05-GW2S-002F	METAL	Iron	40500	5	ug/L		11/26/97
SJS05-GW2S-002F	METAL	Lead	20.2	1	ug/L		11/18/97
SJS05-GW2S-002F	METAL	Magnesium	44300	45	ug/L		11/26/97
SJS05-GW2S-002F	METAL	Manganese	4200	1	ug/L		11/26/97
SJS05-GW2S-002F	METAL	Mercury		0.13	ug/L	U	11/19/97
SJS05-GW2S-002F	METAL	Nickel	353	4	ug/L		11/26/97
SJS05-GW2S-002F	METAL	Potassium	12500	97	ug/L		11/26/97
SJS05-GW2S-002F	METAL	Selenium		3.3	ug/L	U	11/18/97
SJS05-GW2S-002F	METAL	Silver		1.1	ug/L	U	11/18/97
SJS05-GW2S-002F	METAL	Sodium	76300	28	ug/L		11/26/97
SJS05-GW2S-002F	METAL	Thallium		1.5	ug/L	U	11/19/97
SJS05-GW2S-002F	METAL	Vanadium	8.8	4	ug/L	J	11/26/97
SJS05-GW2S-002F	METAL	Zinc	1980	3	ug/L		11/26/97
SJS05-GW3S-001	CTOTP	Total Phosphorous (as P)	0.128	0.05	mg/L		7/30/97
SJS05-GW3S-001	MCYAN	Aluminum	27100	29	ug/L		7/28/97
SJS05-GW3S-001	MCYAN	Antimony	3.7	1	ug/L	J	7/29/97
SJS05-GW3S-001	MCYAN	Arsenic	27.3	3	ug/L		7/29/97
SJS05-GW3S-001	MCYAN	Barium	77.8	1	ug/L	J	7/28/97
SJS05-GW3S-001	MCYAN	Beryllium	1.2	1	ug/L	J	7/28/97
SJS05-GW3S-001	MCYAN	Cadmium		0.5	ug/L	U	7/29/97
SJS05-GW3S-001	MCYAN	Calcium	53200	46	ug/L		7/28/97
SJS05-GW3S-001	MCYAN	Chromium	58.7	4	ug/L		7/28/97
SJS05-GW3S-001	MCYAN	Cobalt	41.5	3	ug/L	J	7/28/97
SJS05-GW3S-001	MCYAN	Copper	12.8	2	ug/L	J	7/28/97
SJS05-GW3S-001	MCYAN	Cyanide		5	ug/L	U	7/22/97
SJS05-GW3S-001	MCYAN	Iron	83700	5	ug/L		7/28/97
SJS05-GW3S-001	MCYAN	Lead	19.2	1	ug/L		7/29/97
SJS05-GW3S-001	MCYAN	Magnesium	49600	45	ug/L		7/28/

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS05-GW3S-001	MCYAN	Manganese	2980	1	ug/L		7/28/97
SJS05-GW3S-001	MCYAN	Mercury	0.18	0.1	ug/L	B	7/29/97
SJS05-GW3S-001	MCYAN	Nickel	46.5	4	ug/L	K	7/28/97
SJS05-GW3S-001	MCYAN	Potassium	13200	97	ug/L		7/28/97
SJS05-GW3S-001	MCYAN	Selenium		3	ug/L	UL	7/29/97
SJS05-GW3S-001	MCYAN	Silver	4.1	3	ug/L	B	7/29/97
SJS05-GW3S-001	MCYAN	Sodium	198000	28	ug/L		7/28/97
SJS05-GW3S-001	MCYAN	Thallium		2	ug/L	U	7/29/97
SJS05-GW3S-001	MCYAN	Vanadium	82.8	4	ug/L		7/28/97
SJS05-GW3S-001	MCYAN	Zinc	153	3	ug/L		7/28/97
SJS05-GW3S-001	PSPCB	4,4'-DDD		0.1	ug/L	U	7/31/97
SJS05-GW3S-001	PSPCB	4,4'-DDE		0.1	ug/L	U	7/31/97
SJS05-GW3S-001	PSPCB	4,4'-DDT		0.1	ug/L	U	7/31/97
SJS05-GW3S-001	PSPCB	Aldrin		0.05	ug/L	U	7/31/97
SJS05-GW3S-001	PSPCB	alpha-BHC		0.05	ug/L	U	7/31/97
SJS05-GW3S-001	PSPCB	alpha-Chlordane		0.05	ug/L	U	7/31/97
SJS05-GW3S-001	PSPCB	Aroclor-1016		1	ug/L	U	7/31/97
SJS05-GW3S-001	PSPCB	Aroclor-1221		2	ug/L	U	7/31/97
SJS05-GW3S-001	PSPCB	Aroclor-1232		1	ug/L	U	7/31/97
SJS05-GW3S-001	PSPCB	Aroclor-1242		1	ug/L	U	7/31/97
SJS05-GW3S-001	PSPCB	Aroclor-1248		1	ug/L	U	7/31/97
SJS05-GW3S-001	PSPCB	Aroclor-1254		1	ug/L	U	7/31/97
SJS05-GW3S-001	PSPCB	Aroclor-1260		1	ug/L	U	7/31/97
SJS05-GW3S-001	PSPCB	beta-BHC		0.05	ug/L	U	7/31/97
SJS05-GW3S-001	PSPCB	delta-BHC		0.05	ug/L	U	7/31/97
SJS05-GW3S-001	PSPCB	Dieldrin		0.1	ug/L	U	7/31/97
SJS05-GW3S-001	PSPCB	Endosulfan I		0.05	ug/L	U	7/31/97
SJS05-GW3S-001	PSPCB	Endosulfan II		0.1	ug/L	U	7/31/97
SJS05-GW3S-001	PSPCB	Endosulfan Sulfate		0.1	ug/L	U	7/31/97
SJS05-GW3S-001	PSPCB	Endrin		0.1	ug/L	U	7/31/97
SJS05-GW3S-001	PSPCB	Endrin Aldehyde		0.1	ug/L	U	7/31/97
SJS05-GW3S-001	PSPCB	Endrin Ketone		0.1	ug/L	U	7/31/97
SJS05-GW3S-001	PSPCB	gamma-BHC		0.05	ug/L	U	7/31/97
SJS05-GW3S-001	PSPCB	gamma-Chlordane		0.05	ug/L	U	7/31/97
SJS05-GW3S-001	PSPCB	Heptachlor		0.05	ug/L	U	7/31/97
SJS05-GW3S-001	PSPCB	Heptachlor Epoxide		0.05	ug/L	U	7/31/97
SJS05-GW3S-001	PSPCB	Methoxychlor		0.5	ug/L	U	7/31/97
SJS05-GW3S-001	PSPCB	Toxaphene		5	ug/L	U	7/31/97
SJS05-GW3S-001	SVTCL	1,2,4-Trichlorobenzene		10	ug/L	U	7/29/97
SJS05-GW3S-001	SVTCL	1,2-Dichlorobenzene		10	ug/L	U	7/29/97
SJS05-GW3S-001	SVTCL	1,3-Dichlorobenzene		10	ug/L	U	7/29/97
SJS05-GW3S-001	SVTCL	1,4-Dichlorobenzene		10	ug/L	U	7/29/97
SJS05-GW3S-001	SVTCL	2,2'-oxybis(1-Chloropropan		10	ug/L	U	7/29/97
SJS05-GW3S-001	SVTCL	2,4,5-Trichlorophenol		25	ug/L	U	7/29/97
SJS05-GW3S-001	SVTCL	2,4,6-Trichlorophenol		10	ug/L	U	7/29/97
SJS05-GW3S-001	SVTCL	2,4-Dichlorophenol		10	ug/L	U	7/29/97
SJS05-GW3S-001	SVTCL	2,4-Dimethylphenol		10	ug/L	U	7/29/97
SJS05-GW3S-001	SVTCL	2,4-Dinitrophenol		25	ug/L	U	7/29/97
SJS05-GW3S-001	SVTCL	2,4-Dinitrotoluene		10	ug/L	U	7/29/97
SJS05-GW3S-001	SVTCL	2,6-Dinitrotoluene		10	ug/L	U	7/29/97
SJS05-GW3S-001	SVTCL	2-Chloronaphthalene		10	ug/L	U	7/29/97
SJS05-GW3S-001	SVTCL	2-Chlorophenol		10	ug/L	U	7/29/97
SJS05-GW3S-001	SVTCL	2-Methylnaphthalene		10	ug/L	U	7/29/97
SJS05-GW3S-001	SVTCL	2-Methylphenol		10	ug/L	U	7/29/97
SJS05-GW3S-001	SVTCL	2-Nitroaniline		25	ug/L	U	7/29/97
SJS05-GW3S-001	SVTCL	2-Nitrophenol		10	ug/L	U	7/29/97
SJS05-GW3S-001	SVTCL	3,3'-Dichlorobenzidine		10	ug/L	U	7/29/97
SJS05-GW3S-001	SVTCL	3-Nitroaniline		25	ug/L	U	7/29/97
SJS05-GW3S-001	SVTCL	4,6-Dinitro-2-Methylphenol		25	ug/L	U	7/29/97
SJS05-GW3S-001	SVTCL	4-Bromophenyl phenylether		10	ug/L	U	7/29/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS05-GW3S-001	SVTCL	4-Chloro-3-Methylphenol		10	ug/L	U	7/29/
SJS05-GW3S-001	SVTCL	4-Chloroaniline		10	ug/L	U	7/29
SJS05-GW3S-001	SVTCL	4-Chlorophenyl-phenylethe		10	ug/L	U	7/29/
SJS05-GW3S-001	SVTCL	4-Methylphenol		10	ug/L	U	7/29/97
SJS05-GW3S-001	SVTCL	4-Nitroaniline		25	ug/L	U	7/29/97
SJS05-GW3S-001	SVTCL	4-Nitrophenol		25	ug/L	U	7/29/97
SJS05-GW3S-001	SVTCL	Acenaphthene		10	ug/L	U	7/29/97
SJS05-GW3S-001	SVTCL	Acenaphthylene		10	ug/L	U	7/29/97
SJS05-GW3S-001	SVTCL	Anthracene		10	ug/L	U	7/29/97
SJS05-GW3S-001	SVTCL	Benzo(a)Anthracene		10	ug/L	U	7/29/97
SJS05-GW3S-001	SVTCL	Benzo(a)Pyrene		10	ug/L	U	7/29/97
SJS05-GW3S-001	SVTCL	Benzo(b)Fluoranthene		10	ug/L	U	7/29/97
SJS05-GW3S-001	SVTCL	Benzo(g,h,i)Perylene		10	ug/L	U	7/29/97
SJS05-GW3S-001	SVTCL	Benzo(k)fluoranthene		10	ug/L	U	7/29/97
SJS05-GW3S-001	SVTCL	Bis(2-chloroethoxy)Methan		10	ug/L	U	7/29/97
SJS05-GW3S-001	SVTCL	Bis(2-chloroethyl)Ether		10	ug/L	U	7/29/97
SJS05-GW3S-001	SVTCL	Bis(2-Ethylhexyl)Phthalate	2	10	ug/L	J	7/29/97
SJS05-GW3S-001	SVTCL	Butylbenzylphthalate		10	ug/L	U	7/29/97
SJS05-GW3S-001	SVTCL	Carbazole		10	ug/L	U	7/29/97
SJS05-GW3S-001	SVTCL	Chrysene		10	ug/L	U	7/29/97
SJS05-GW3S-001	SVTCL	Di-n-Butylphthalate		10	ug/L	U	7/29/97
SJS05-GW3S-001	SVTCL	Di-n-Octyl Phthalate		10	ug/L	U	7/29/97
SJS05-GW3S-001	SVTCL	Dibenz(a,h)Anthracene		10	ug/L	U	7/29/97
SJS05-GW3S-001	SVTCL	Dibenzofuran		10	ug/L	U	7/29/97
SJS05-GW3S-001	SVTCL	Diethylphthalate		10	ug/L	U	7/29/97
SJS05-GW3S-001	SVTCL	Dimethyl Phthalate		10	ug/L	U	7/29/97
SJS05-GW3S-001	SVTCL	Fluoranthene		10	ug/L	U	7/29/97
SJS05-GW3S-001	SVTCL	Fluorene		10	ug/L	U	7/29/97
SJS05-GW3S-001	SVTCL	Hexachlorobenzene		10	ug/L	U	7/29/97
SJS05-GW3S-001	SVTCL	Hexachlorobutadiene		10	ug/L	U	7/29/
SJS05-GW3S-001	SVTCL	Hexachlorocyclopentadien		10	ug/L	U	7/29/
SJS05-GW3S-001	SVTCL	Hexachloroethane		10	ug/L	U	7/29/
SJS05-GW3S-001	SVTCL	Indeno(1,2,3-cd)Pyrene		10	ug/L	U	7/29/97
SJS05-GW3S-001	SVTCL	Isophorone		10	ug/L	U	7/29/97
SJS05-GW3S-001	SVTCL	N-Nitroso-Di-n-Propylamine		10	ug/L	U	7/29/97
SJS05-GW3S-001	SVTCL	N-Nitrosodiphenylamine		10	ug/L	U	7/29/97
SJS05-GW3S-001	SVTCL	Naphthalene		10	ug/L	U	7/29/97
SJS05-GW3S-001	SVTCL	Nitrobenzene		10	ug/L	U	7/29/97
SJS05-GW3S-001	SVTCL	Pentachlorophenol		25	ug/L	U	7/29/97
SJS05-GW3S-001	SVTCL	Phenanthrene		10	ug/L	U	7/29/97
SJS05-GW3S-001	SVTCL	Phenol		10	ug/L	U	7/29/97
SJS05-GW3S-001	SVTCL	Pyrene		10	ug/L	U	7/29/97
SJS05-GW3S-001	VCLOW	1,1,1-Trichloroethane		1	ug/L	U	7/21/97
SJS05-GW3S-001	VCLOW	1,1,2,2-Tetrachloroethane		1	ug/L	U	7/21/97
SJS05-GW3S-001	VCLOW	1,1,2-Trichloroethane		1	ug/L	U	7/21/97
SJS05-GW3S-001	VCLOW	1,1-Dichloroethane		1	ug/L	U	7/21/97
SJS05-GW3S-001	VCLOW	1,1-Dichloroethene		1	ug/L	U	7/21/97
SJS05-GW3S-001	VCLOW	1,2,4-Trichlorobenzene		1	ug/L	U	7/21/97
SJS05-GW3S-001	VCLOW	1,2-Dibromo-3-chloropropa		1	ug/L	U	7/21/97
SJS05-GW3S-001	VCLOW	1,2-Dibromoethane		1	ug/L	U	7/21/97
SJS05-GW3S-001	VCLOW	1,2-Dichlorobenzene		1	ug/L	U	7/21/97
SJS05-GW3S-001	VCLOW	1,2-Dichloroethane		1	ug/L	U	7/21/97
SJS05-GW3S-001	VCLOW	1,2-Dichloropropane		1	ug/L	U	7/21/97
SJS05-GW3S-001	VCLOW	1,3-Dichlorobenzene		1	ug/L	U	7/21/97
SJS05-GW3S-001	VCLOW	1,4-Dichlorobenzene		1	ug/L	U	7/21/97
SJS05-GW3S-001	VCLOW	2-Hexanone		5	ug/L	U	7/21/97
SJS05-GW3S-001	VCLOW	4-Methyl-2-Pentanone		5	ug/L	U	7/21/97
SJS05-GW3S-001	VCLOW	Benzene		1	ug/L	U	7/21/97
SJS05-GW3S-001	VCLOW	Bromochloromethane		1	ug/L	U	7/21/
SJS05-GW3S-001	VCLOW	Bromodichloromethane		1	ug/L	U	7/21/

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS05-GW3S-001	VCLOW	Bromoform		1	ug/L	U	7/21/97
SJS05-GW3S-001	VCLOW	Bromomethane		1	ug/L	U	7/21/97
SJS05-GW3S-001	VCLOW	Carbon Disulfide		1	ug/L	U	7/21/97
SJS05-GW3S-001	VCLOW	Carbon Tetrachloride		1	ug/L	U	7/21/97
SJS05-GW3S-001	VCLOW	Chlorobenzene		1	ug/L	U	7/21/97
SJS05-GW3S-001	VCLOW	Chloroethane		1	ug/L	U	7/21/97
SJS05-GW3S-001	VCLOW	Chloroform		1	ug/L	U	7/21/97
SJS05-GW3S-001	VCLOW	Chloromethane		1	ug/L	U	7/21/97
SJS05-GW3S-001	VCLOW	cis-1,2-Dichloroethene		1	ug/L	U	7/21/97
SJS05-GW3S-001	VCLOW	cis-1,3-Dichloropropene		1	ug/L	U	7/21/97
SJS05-GW3S-001	VCLOW	Dibromochloromethane		1	ug/L	U	7/21/97
SJS05-GW3S-001	VCLOW	Ethylbenzene		1	ug/L	U	7/21/97
SJS05-GW3S-001	VCLOW	Methylene Chloride	3	1	ug/L	B	7/21/97
SJS05-GW3S-001	VCLOW	Styrene		1	ug/L	U	7/21/97
SJS05-GW3S-001	VCLOW	Tetrachloroethene		1	ug/L	U	7/21/97
SJS05-GW3S-001	VCLOW	Toluene		1	ug/L	U	7/21/97
SJS05-GW3S-001	VCLOW	Total Xylenes		1	ug/L	U	7/21/97
SJS05-GW3S-001	VCLOW	Trans-1,2-Dichloroethene		1	ug/L	U	7/21/97
SJS05-GW3S-001	VCLOW	Trans-1,3-Dichloropropene		1	ug/L	U	7/21/97
SJS05-GW3S-001	VCLOW	Trichloroethene		1	ug/L	U	7/21/97
SJS05-GW3S-001	VCLOW	Vinyl Chloride		1	ug/L	U	7/21/97
SJS05-GW3S-001F	METAL	Aluminum		44	ug/L	U	7/28/97
SJS05-GW3S-001F	METAL	Antimony		2	ug/L	U	7/29/97
SJS05-GW3S-001F	METAL	Arsenic		3	ug/L	U	7/29/97
SJS05-GW3S-001F	METAL	Barium	21.5	1	ug/L	B	7/28/97
SJS05-GW3S-001F	METAL	Beryllium		1	ug/L	U	7/28/97
SJS05-GW3S-001F	METAL	Cadmium		0.5	ug/L	U	7/29/97
SJS05-GW3S-001F	METAL	Calcium	68400	46	ug/L		7/28/97
SJS05-GW3S-001F	METAL	Chromium		7	ug/L	U	7/28/97
SJS05-GW3S-001F	METAL	Cobalt	22.3	3	ug/L	J	7/28/97
SJS05-GW3S-001F	METAL	Copper		6	ug/L	U	7/28/97
SJS05-GW3S-001F	METAL	Iron	40700	5	ug/L		7/28/97
SJS05-GW3S-001F	METAL	Lead		1	ug/L	U	7/29/97
SJS05-GW3S-001F	METAL	Magnesium	56900	45	ug/L		7/28/97
SJS05-GW3S-001F	METAL	Manganese	3140	1	ug/L		7/28/97
SJS05-GW3S-001F	METAL	Mercury		0.12	ug/L	U	7/29/97
SJS05-GW3S-001F	METAL	Nickel	13.5	4	ug/L	K	7/28/97
SJS05-GW3S-001F	METAL	Potassium	9250	97	ug/L		7/28/97
SJS05-GW3S-001F	METAL	Selenium		3	ug/L	U	7/29/97
SJS05-GW3S-001F	METAL	Silver	3.7	3	ug/L	B	7/29/97
SJS05-GW3S-001F	METAL	Sodium	249000	28	ug/L		7/28/97
SJS05-GW3S-001F	METAL	Thallium		2	ug/L	U	7/29/97
SJS05-GW3S-001F	METAL	Vanadium		9	ug/L	U	7/28/97
SJS05-GW3S-001F	METAL	Zinc	39.9	3	ug/L	B	7/28/97
SJS05-GW3S-001FP	METAL	Aluminum	72.3	29	ug/L	B	7/28/97
SJS05-GW3S-001FP	METAL	Antimony	3.1	1	ug/L	B	7/29/97
SJS05-GW3S-001FP	METAL	Arsenic		3	ug/L	U	7/29/97
SJS05-GW3S-001FP	METAL	Barium	22.9	1	ug/L	B	7/28/97
SJS05-GW3S-001FP	METAL	Beryllium		1	ug/L	U	7/28/97
SJS05-GW3S-001FP	METAL	Cadmium		0.5	ug/L	U	7/29/97
SJS05-GW3S-001FP	METAL	Calcium	68500	46	ug/L		7/28/97
SJS05-GW3S-001FP	METAL	Chromium		7	ug/L	U	7/28/97
SJS05-GW3S-001FP	METAL	Cobalt	19.2	3	ug/L	J	7/28/97
SJS05-GW3S-001FP	METAL	Copper		6	ug/L	U	7/28/97
SJS05-GW3S-001FP	METAL	Iron	40600	5	ug/L		7/28/97
SJS05-GW3S-001FP	METAL	Lead	1.3	1	ug/L	B	7/29/97
SJS05-GW3S-001FP	METAL	Magnesium	57100	45	ug/L		7/28/97
SJS05-GW3S-001FP	METAL	Manganese	3150	1	ug/L		7/28/97
SJS05-GW3S-001FP	METAL	Mercury		0.12	ug/L	U	7/29/97
SJS05-GW3S-001FP	METAL	Nickel	14.1	4	ug/L	K	7/28/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS05-GW3S-001FP	METAL	Potassium	9570	97	ug/L		7/28
SJS05-GW3S-001FP	METAL	Selenium		3	ug/L	U	7/2
SJS05-GW3S-001FP	METAL	Silver	6	3	ug/L	B	7/29,
SJS05-GW3S-001FP	METAL	Sodium	250000	28	ug/L		7/28/97
SJS05-GW3S-001FP	METAL	Thallium		2	ug/L	U	7/29/97
SJS05-GW3S-001FP	METAL	Vanadium		9	ug/L	U	7/28/97
SJS05-GW3S-001FP	METAL	Zinc	41.5	3	ug/L	B	7/28/97
SJS05-GW3S-001P	CTOTP	Total Phosphorous (as P)	0.251	0.05	mg/L		7/30/97
SJS05-GW3S-001P	MCYAN	Aluminum	17100	29	ug/L		7/28/97
SJS05-GW3S-001P	MCYAN	Antimony	6	1	ug/L	J	7/29/97
SJS05-GW3S-001P	MCYAN	Arsenic	18.4	3	ug/L		7/29/97
SJS05-GW3S-001P	MCYAN	Barium	64.1	1	ug/L	J	7/28/97
SJS05-GW3S-001P	MCYAN	Beryllium		1	ug/L	U	7/28/97
SJS05-GW3S-001P	MCYAN	Cadmium		0.5	ug/L	U	7/29/97
SJS05-GW3S-001P	MCYAN	Calcium	49700	46	ug/L		7/28/97
SJS05-GW3S-001P	MCYAN	Chromium	36.1	4	ug/L		7/28/97
SJS05-GW3S-001P	MCYAN	Cobalt	33.4	3	ug/L	J	7/28/97
SJS05-GW3S-001P	MCYAN	Copper	11.2	2	ug/L	J	7/28/97
SJS05-GW3S-001P	MCYAN	Cyanide		5	ug/L	U	7/22/97
SJS05-GW3S-001P	MCYAN	Iron	65200	5	ug/L		7/28/97
SJS05-GW3S-001P	MCYAN	Lead	13.5	1	ug/L		7/29/97
SJS05-GW3S-001P	MCYAN	Magnesium	45000	45	ug/L		7/28/97
SJS05-GW3S-001P	MCYAN	Manganese	2670	1	ug/L		7/28/97
SJS05-GW3S-001P	MCYAN	Mercury	0.29	0.1	ug/L	B	7/29/97
SJS05-GW3S-001P	MCYAN	Nickel	41.1	4	ug/L	K	7/28/97
SJS05-GW3S-001P	MCYAN	Potassium	11100	97	ug/L		7/28/97
SJS05-GW3S-001P	MCYAN	Selenium		3	ug/L	UL	7/29/97
SJS05-GW3S-001P	MCYAN	Silver	6.9	3	ug/L	B	7/29/97
SJS05-GW3S-001P	MCYAN	Sodium	186000	28	ug/L		7/28/97
SJS05-GW3S-001P	MCYAN	Thallium	2.1	2	ug/L	J	7/29
SJS05-GW3S-001P	MCYAN	Vanadium	60.2	4	ug/L		7/2
SJS05-GW3S-001P	MCYAN	Zinc	109	3	ug/L		7/28,
SJS05-GW3S-001P	PSPCB	4,4'-DDD		0.1	ug/L	U	7/31/97
SJS05-GW3S-001P	PSPCB	4,4'-DDE		0.1	ug/L	U	7/31/97
SJS05-GW3S-001P	PSPCB	4,4'-DDT		0.1	ug/L	U	7/31/97
SJS05-GW3S-001P	PSPCB	Aldrin		0.05	ug/L	U	7/31/97
SJS05-GW3S-001P	PSPCB	alpha-BHC		0.05	ug/L	U	7/31/97
SJS05-GW3S-001P	PSPCB	alpha-Chlordane		0.05	ug/L	U	7/31/97
SJS05-GW3S-001P	PSPCB	Aroclor-1016		1	ug/L	U	7/31/97
SJS05-GW3S-001P	PSPCB	Aroclor-1221		2	ug/L	U	7/31/97
SJS05-GW3S-001P	PSPCB	Aroclor-1232		1	ug/L	U	7/31/97
SJS05-GW3S-001P	PSPCB	Aroclor-1242		1	ug/L	U	7/31/97
SJS05-GW3S-001P	PSPCB	Aroclor-1248		1	ug/L	U	7/31/97
SJS05-GW3S-001P	PSPCB	Aroclor-1254		1	ug/L	U	7/31/97
SJS05-GW3S-001P	PSPCB	Aroclor-1260		1	ug/L	U	7/31/97
SJS05-GW3S-001P	PSPCB	beta-BHC		0.05	ug/L	U	7/31/97
SJS05-GW3S-001P	PSPCB	delta-BHC		0.05	ug/L	U	7/31/97
SJS05-GW3S-001P	PSPCB	Dieldrin		0.1	ug/L	U	7/31/97
SJS05-GW3S-001P	PSPCB	Endosulfan I		0.05	ug/L	U	7/31/97
SJS05-GW3S-001P	PSPCB	Endosulfan II		0.1	ug/L	U	7/31/97
SJS05-GW3S-001P	PSPCB	Endosulfan Sulfate		0.1	ug/L	U	7/31/97
SJS05-GW3S-001P	PSPCB	Endrin		0.1	ug/L	U	7/31/97
SJS05-GW3S-001P	PSPCB	Endrin Aldehyde		0.1	ug/L	U	7/31/97
SJS05-GW3S-001P	PSPCB	Endrin Ketone		0.1	ug/L	U	7/31/97
SJS05-GW3S-001P	PSPCB	gamma-BHC		0.05	ug/L	U	7/31/97
SJS05-GW3S-001P	PSPCB	gamma-Chlordane		0.05	ug/L	U	7/31/97
SJS05-GW3S-001P	PSPCB	Heptachlor		0.05	ug/L	U	7/31/97
SJS05-GW3S-001P	PSPCB	Heptachlor Epoxide		0.05	ug/L	U	7/31/97
SJS05-GW3S-001P	PSPCB	Methoxychlor		0.5	ug/L	U	7/31
SJS05-GW3S-001P	PSPCB	Toxaphene		5	ug/L	U	7/3

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS05-GW3S-001P	SVTCL	1,2,4-Trichlorobenzene		10	ug/L	U	7/29/97
SJS05-GW3S-001P	SVTCL	1,2-Dichlorobenzene		10	ug/L	U	7/29/97
SJS05-GW3S-001P	SVTCL	1,3-Dichlorobenzene		10	ug/L	U	7/29/97
SJS05-GW3S-001P	SVTCL	1,4-Dichlorobenzene		10	ug/L	U	7/29/97
SJS05-GW3S-001P	SVTCL	2,2'-oxybis(1-Chloropropan		10	ug/L	U	7/29/97
SJS05-GW3S-001P	SVTCL	2,4,5-Trichlorophenol		25	ug/L	U	7/29/97
SJS05-GW3S-001P	SVTCL	2,4,6-Trichlorophenol		10	ug/L	U	7/29/97
SJS05-GW3S-001P	SVTCL	2,4-Dichlorophenol		10	ug/L	U	7/29/97
SJS05-GW3S-001P	SVTCL	2,4-Dimethylphenol		10	ug/L	U	7/29/97
SJS05-GW3S-001P	SVTCL	2,4-Dinitrophenol		25	ug/L	U	7/29/97
SJS05-GW3S-001P	SVTCL	2,4-Dinitrotoluene		10	ug/L	U	7/29/97
SJS05-GW3S-001P	SVTCL	2,6-Dinitrotoluene		10	ug/L	U	7/29/97
SJS05-GW3S-001P	SVTCL	2-Chloronaphthalene		10	ug/L	U	7/29/97
SJS05-GW3S-001P	SVTCL	2-Chlorophenol		10	ug/L	U	7/29/97
SJS05-GW3S-001P	SVTCL	2-Methylnaphthalene		10	ug/L	U	7/29/97
SJS05-GW3S-001P	SVTCL	2-Methylphenol		10	ug/L	U	7/29/97
SJS05-GW3S-001P	SVTCL	2-Nitroaniline		25	ug/L	U	7/29/97
SJS05-GW3S-001P	SVTCL	2-Nitrophenol		10	ug/L	U	7/29/97
SJS05-GW3S-001P	SVTCL	3,3'-Dichlorobenzidine		10	ug/L	U	7/29/97
SJS05-GW3S-001P	SVTCL	3-Nitroaniline		25	ug/L	U	7/29/97
SJS05-GW3S-001P	SVTCL	4,6-Dinitro-2-Methylphenol		25	ug/L	U	7/29/97
SJS05-GW3S-001P	SVTCL	4-Bromophenyl phenylether		10	ug/L	U	7/29/97
SJS05-GW3S-001P	SVTCL	4-Chloro-3-Methylphenol		10	ug/L	U	7/29/97
SJS05-GW3S-001P	SVTCL	4-Chloroaniline		10	ug/L	U	7/29/97
SJS05-GW3S-001P	SVTCL	4-Chlorophenyl-phenylethe		10	ug/L	U	7/29/97
SJS05-GW3S-001P	SVTCL	4-Methylphenol		10	ug/L	U	7/29/97
SJS05-GW3S-001P	SVTCL	4-Nitroaniline		25	ug/L	U	7/29/97
SJS05-GW3S-001P	SVTCL	4-Nitrophenol		25	ug/L	U	7/29/97
SJS05-GW3S-001P	SVTCL	Acenaphthene		10	ug/L	U	7/29/97
SJS05-GW3S-001P	SVTCL	Acenaphthylene		10	ug/L	U	7/29/97
SJS05-GW3S-001P	SVTCL	Anthracene		10	ug/L	U	7/29/97
SJS05-GW3S-001P	SVTCL	Benzo(a)Anthracene		10	ug/L	U	7/29/97
SJS05-GW3S-001P	SVTCL	Benzo(a)Pyrene		10	ug/L	U	7/29/97
SJS05-GW3S-001P	SVTCL	Benzo(b)Fluoranthene		10	ug/L	U	7/29/97
SJS05-GW3S-001P	SVTCL	Benzo(g,h,i)Perylene		10	ug/L	U	7/29/97
SJS05-GW3S-001P	SVTCL	Benzo(k)fluoranthene		10	ug/L	U	7/29/97
SJS05-GW3S-001P	SVTCL	Bis(2-chloroethoxy)Methan		10	ug/L	U	7/29/97
SJS05-GW3S-001P	SVTCL	Bis(2-chloroethyl)Ether		10	ug/L	U	7/29/97
SJS05-GW3S-001P	SVTCL	Bis(2-Ethylhexyl)Phthalate	1	10	ug/L	J	7/29/97
SJS05-GW3S-001P	SVTCL	Butylbenzylphthalate		10	ug/L	U	7/29/97
SJS05-GW3S-001P	SVTCL	Carbazole		10	ug/L	U	7/29/97
SJS05-GW3S-001P	SVTCL	Chrysene		10	ug/L	U	7/29/97
SJS05-GW3S-001P	SVTCL	Di-n-Butylphthalate		10	ug/L	U	7/29/97
SJS05-GW3S-001P	SVTCL	Di-n-Octyl Phthalate		10	ug/L	U	7/29/97
SJS05-GW3S-001P	SVTCL	Dibenz(a,h)Anthracene		10	ug/L	U	7/29/97
SJS05-GW3S-001P	SVTCL	Dibenzofuran		10	ug/L	U	7/29/97
SJS05-GW3S-001P	SVTCL	Diethylphthalate		10	ug/L	U	7/29/97
SJS05-GW3S-001P	SVTCL	Dimethyl Phthalate		10	ug/L	U	7/29/97
SJS05-GW3S-001P	SVTCL	Fluoranthene		10	ug/L	U	7/29/97
SJS05-GW3S-001P	SVTCL	Fluorene		10	ug/L	U	7/29/97
SJS05-GW3S-001P	SVTCL	Hexachlorobenzene		10	ug/L	U	7/29/97
SJS05-GW3S-001P	SVTCL	Hexachlorobutadiene		10	ug/L	U	7/29/97
SJS05-GW3S-001P	SVTCL	Hexachlorocyclopentadien		10	ug/L	U	7/29/97
SJS05-GW3S-001P	SVTCL	Hexachloroethane		10	ug/L	U	7/29/97
SJS05-GW3S-001P	SVTCL	Indeno(1,2,3-cd)Pyrene		10	ug/L	U	7/29/97
SJS05-GW3S-001P	SVTCL	Isophorone		10	ug/L	U	7/29/97
SJS05-GW3S-001P	SVTCL	N-Nitroso-Di-n-Propylamine		10	ug/L	U	7/29/97
SJS05-GW3S-001P	SVTCL	N-Nitrosodiphenylamine		10	ug/L	U	7/29/97
SJS05-GW3S-001P	SVTCL	Naphthalene		10	ug/L	U	7/29/97
SJS05-GW3S-001P	SVTCL	Nitrobenzene		10	ug/L	U	7/29/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS05-GW3S-001P	SVTCL	Pentachlorophenol		25	ug/L	U	7/29/9
SJS05-GW3S-001P	SVTCL	Phenanthrene		10	ug/L	U	7/29/
SJS05-GW3S-001P	SVTCL	Phenol		10	ug/L	U	7/29/9
SJS05-GW3S-001P	SVTCL	Pyrene		10	ug/L	U	7/29/97
SJS05-GW3S-001P	VCLOW	1,1,1-Trichloroethane		1	ug/L	U	7/21/97
SJS05-GW3S-001P	VCLOW	1,1,2,2-Tetrachloroethane		1	ug/L	U	7/21/97
SJS05-GW3S-001P	VCLOW	1,1,2-Trichloroethane		1	ug/L	U	7/21/97
SJS05-GW3S-001P	VCLOW	1,1-Dichloroethane		1	ug/L	U	7/21/97
SJS05-GW3S-001P	VCLOW	1,1-Dichloroethene		1	ug/L	U	7/21/97
SJS05-GW3S-001P	VCLOW	1,2,4-Trichlorobenzene		1	ug/L	U	7/21/97
SJS05-GW3S-001P	VCLOW	1,2-Dibromo-3-chloropropa		1	ug/L	U	7/21/97
SJS05-GW3S-001P	VCLOW	1,2-Dibromoethane		1	ug/L	U	7/21/97
SJS05-GW3S-001P	VCLOW	1,2-Dichlorobenzene		1	ug/L	U	7/21/97
SJS05-GW3S-001P	VCLOW	1,2-Dichloroethane		1	ug/L	U	7/21/97
SJS05-GW3S-001P	VCLOW	1,2-Dichloropropane		1	ug/L	U	7/21/97
SJS05-GW3S-001P	VCLOW	1,3-Dichlorobenzene		1	ug/L	U	7/21/97
SJS05-GW3S-001P	VCLOW	1,4-Dichlorobenzene		1	ug/L	U	7/21/97
SJS05-GW3S-001P	VCLOW	2-Hexanone		5	ug/L	U	7/21/97
SJS05-GW3S-001P	VCLOW	4-Methyl-2-Pentanone		5	ug/L	U	7/21/97
SJS05-GW3S-001P	VCLOW	Benzene		1	ug/L	U	7/21/97
SJS05-GW3S-001P	VCLOW	Bromochloromethane		1	ug/L	U	7/21/97
SJS05-GW3S-001P	VCLOW	Bromodichloromethane		1	ug/L	U	7/21/97
SJS05-GW3S-001P	VCLOW	Bromoform		1	ug/L	U	7/21/97
SJS05-GW3S-001P	VCLOW	Bromomethane		1	ug/L	U	7/21/97
SJS05-GW3S-001P	VCLOW	Carbon Disulfide	0.3	1	ug/L	J	7/21/97
SJS05-GW3S-001P	VCLOW	Carbon Tetrachloride		1	ug/L	U	7/21/97
SJS05-GW3S-001P	VCLOW	Chlorobenzene		1	ug/L	U	7/21/97
SJS05-GW3S-001P	VCLOW	Chloroethane		1	ug/L	U	7/21/97
SJS05-GW3S-001P	VCLOW	Chloroform		1	ug/L	U	7/21/97
SJS05-GW3S-001P	VCLOW	Chloromethane		1	ug/L	U	7/21/97
SJS05-GW3S-001P	VCLOW	cis-1,2-Dichloroethene		1	ug/L	U	7/21/9
SJS05-GW3S-001P	VCLOW	cis-1,3-Dichloropropene		1	ug/L	U	7/21/97
SJS05-GW3S-001P	VCLOW	Dibromochloromethane		1	ug/L	U	7/21/97
SJS05-GW3S-001P	VCLOW	Ethylbenzene		1	ug/L	U	7/21/97
SJS05-GW3S-001P	VCLOW	Methylene Chloride	4	1	ug/L	B	7/21/97
SJS05-GW3S-001P	VCLOW	Styrene		1	ug/L	U	7/21/97
SJS05-GW3S-001P	VCLOW	Tetrachloroethene		1	ug/L	U	7/21/97
SJS05-GW3S-001P	VCLOW	Toluene		1	ug/L	U	7/21/97
SJS05-GW3S-001P	VCLOW	Total Xylenes		1	ug/L	U	7/21/97
SJS05-GW3S-001P	VCLOW	Trans-1,2-Dichloroethene		1	ug/L	U	7/21/97
SJS05-GW3S-001P	VCLOW	Trans-1,3-Dichloropropene		1	ug/L	U	7/21/97
SJS05-GW3S-001P	VCLOW	Trichloroethene		1	ug/L	U	7/21/97
SJS05-GW3S-001P	VCLOW	Vinyl Chloride		1	ug/L	U	7/21/97
SJS05-GW3S-002	CTOTP	Total Phosphorous (as P)	0.189	0.05	mg/L		11/17/97
SJS05-GW3S-002	EXPLO	1,3,5-Trinitrobenzene		25	ug/L	U	11/25/97
SJS05-GW3S-002	EXPLO	1,3-Dinitrobenzene		25	ug/L	U	11/25/97
SJS05-GW3S-002	EXPLO	2,4,6-Trinitrotoluene		25	ug/L	U	11/25/97
SJS05-GW3S-002	EXPLO	2,4-Dinitrotoluene		25	ug/L	U	11/25/97
SJS05-GW3S-002	EXPLO	2,6-Dinitrotoluene		25	ug/L	U	11/25/97
SJS05-GW3S-002	EXPLO	2-am-4,6-Dinitrotoluene		25	ug/L	U	11/25/97
SJS05-GW3S-002	EXPLO	2-Nitrotoluene		25	ug/L	U	11/25/97
SJS05-GW3S-002	EXPLO	3-Nitrotoluene		25	ug/L	U	11/25/97
SJS05-GW3S-002	EXPLO	4-am-2,6-Dinitrotoluene		25	ug/L	U	11/25/97
SJS05-GW3S-002	EXPLO	4-Nitrotoluene		25	ug/L	U	11/25/97
SJS05-GW3S-002	EXPLO	HMX		25	ug/L	U	11/25/97
SJS05-GW3S-002	EXPLO	Nitrobenzene		25	ug/L	U	11/25/97
SJS05-GW3S-002	EXPLO	RDX		25	ug/L	U	11/25/97
SJS05-GW3S-002	EXPLO	TETRYL		25	ug/L	U	11/25/97
SJS05-GW3S-002	MCYAN	Aluminum	30400	29	ug/L		11/26/
SJS05-GW3S-002	MCYAN	Antimony		1.7	ug/L	U	11/1

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS05-GW3S-002	MCYAN	Arsenic	5.7	3	ug/L	J	11/18/97
SJS05-GW3S-002	MCYAN	Barium	22	1	ug/L	J	11/26/97
SJS05-GW3S-002	MCYAN	Beryllium	13.5	1	ug/L		11/26/97
SJS05-GW3S-002	MCYAN	Cadmium	11	0.3	ug/L		11/18/97
SJS05-GW3S-002	MCYAN	Calcium	40700	46	ug/L		11/26/97
SJS05-GW3S-002	MCYAN	Chromium	7.6	4	ug/L	B	11/26/97
SJS05-GW3S-002	MCYAN	Cobalt	141	3	ug/L		11/26/97
SJS05-GW3S-002	MCYAN	Copper	62.2	2	ug/L		11/26/97
SJS05-GW3S-002	MCYAN	Cyanide		5	ug/L	U	11/12/97
SJS05-GW3S-002	MCYAN	Iron	17700	5	ug/L		11/26/97
SJS05-GW3S-002	MCYAN	Lead	26.1	1	ug/L		11/18/97
SJS05-GW3S-002	MCYAN	Magnesium	35600	45	ug/L		11/26/97
SJS05-GW3S-002	MCYAN	Manganese	3620	1	ug/L		11/26/97
SJS05-GW3S-002	MCYAN	Mercury		0.13	ug/L	U	11/19/97
SJS05-GW3S-002	MCYAN	Nickel	238	4	ug/L		11/26/97
SJS05-GW3S-002	MCYAN	Potassium	15000	97	ug/L		11/26/97
SJS05-GW3S-002	MCYAN	Selenium		3.3	ug/L	U	11/18/97
SJS05-GW3S-002	MCYAN	Silver	1.5	3	ug/L	J	11/18/97
SJS05-GW3S-002	MCYAN	Sodium	22000	28	ug/L		11/26/97
SJS05-GW3S-002	MCYAN	Thallium		1.5	ug/L	U	11/19/97
SJS05-GW3S-002	MCYAN	Vanadium		6.8	ug/L	U	11/26/97
SJS05-GW3S-002	MCYAN	Zinc	1540	3	ug/L		11/26/97
SJS05-GW3S-002	PSPCB	4,4'-DDD		0.1	ug/L	U	11/20/97
SJS05-GW3S-002	PSPCB	4,4'-DDE		0.1	ug/L	U	11/20/97
SJS05-GW3S-002	PSPCB	4,4'-DDT		0.1	ug/L	U	11/20/97
SJS05-GW3S-002	PSPCB	Aldrin		0.05	ug/L	U	11/20/97
SJS05-GW3S-002	PSPCB	alpha-BHC		0.05	ug/L	U	11/20/97
SJS05-GW3S-002	PSPCB	alpha-Chlordane		0.05	ug/L	U	11/20/97
SJS05-GW3S-002	PSPCB	Aroclor-1016		1	ug/L	U	11/20/97
SJS05-GW3S-002	PSPCB	Aroclor-1221		2	ug/L	U	11/20/97
SJS05-GW3S-002	PSPCB	Aroclor-1232		1	ug/L	U	11/20/97
SJS05-GW3S-002	PSPCB	Aroclor-1242		1	ug/L	U	11/20/97
SJS05-GW3S-002	PSPCB	Aroclor-1248		1	ug/L	U	11/20/97
SJS05-GW3S-002	PSPCB	Aroclor-1254		1	ug/L	U	11/20/97
SJS05-GW3S-002	PSPCB	Aroclor-1260		1	ug/L	U	11/20/97
SJS05-GW3S-002	PSPCB	beta-BHC		0.05	ug/L	U	11/20/97
SJS05-GW3S-002	PSPCB	delta-BHC		0.05	ug/L	U	11/20/97
SJS05-GW3S-002	PSPCB	Dieldrin		0.1	ug/L	U	11/20/97
SJS05-GW3S-002	PSPCB	Endosulfan I		0.05	ug/L	U	11/20/97
SJS05-GW3S-002	PSPCB	Endosulfan II		0.1	ug/L	U	11/20/97
SJS05-GW3S-002	PSPCB	Endosulfan Sulfate		0.1	ug/L	U	11/20/97
SJS05-GW3S-002	PSPCB	Endrin		0.1	ug/L	U	11/20/97
SJS05-GW3S-002	PSPCB	Endrin Aldehyde		0.1	ug/L	U	11/20/97
SJS05-GW3S-002	PSPCB	Endrin Ketone		0.1	ug/L	U	11/20/97
SJS05-GW3S-002	PSPCB	gamma-BHC		0.05	ug/L	U	11/20/97
SJS05-GW3S-002	PSPCB	gamma-Chlordane		0.05	ug/L	U	11/20/97
SJS05-GW3S-002	PSPCB	Heptachlor		0.05	ug/L	U	11/20/97
SJS05-GW3S-002	PSPCB	Heptachlor Epoxide		0.05	ug/L	U	11/20/97
SJS05-GW3S-002	PSPCB	Methoxychlor		0.5	ug/L	U	11/20/97
SJS05-GW3S-002	PSPCB	Toxaphene		5	ug/L	U	11/20/97
SJS05-GW3S-002	SVTCL	1,2,4-Trichlorobenzene		10	ug/L	U	11/19/97
SJS05-GW3S-002	SVTCL	1,2-Dichlorobenzene		10	ug/L	U	11/19/97
SJS05-GW3S-002	SVTCL	1,3-Dichlorobenzene		10	ug/L	U	11/19/97
SJS05-GW3S-002	SVTCL	1,4-Dichlorobenzene		10	ug/L	U	11/19/97
SJS05-GW3S-002	SVTCL	2,2'-oxybis(1-Chloropropan		10	ug/L	U	11/19/97
SJS05-GW3S-002	SVTCL	2,4,5-Trichlorophenol		25	ug/L	U	11/19/97
SJS05-GW3S-002	SVTCL	2,4,6-Trichlorophenol		10	ug/L	U	11/19/97
SJS05-GW3S-002	SVTCL	2,4-Dichlorophenol		10	ug/L	U	11/19/97
SJS05-GW3S-002	SVTCL	2,4-Dimethylphenol		10	ug/L	U	11/19/97
SJS05-GW3S-002	SVTCL	2,4-Dinitrophenol		25	ug/L	U	11/19/97

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS05-GW3S-002	SVTCL	2,4-Dinitrotoluene		10	ug/L	U	11/19/
SJS05-GW3S-002	SVTCL	2,6-Dinitrotoluene		10	ug/L	U	11/19/
SJS05-GW3S-002	SVTCL	2-Chloronaphthalene		10	ug/L	U	11/19/97
SJS05-GW3S-002	SVTCL	2-Chlorophenol		10	ug/L	U	11/19/97
SJS05-GW3S-002	SVTCL	2-Methylnaphthalene		10	ug/L	U	11/19/97
SJS05-GW3S-002	SVTCL	2-Methylphenol		10	ug/L	U	11/19/97
SJS05-GW3S-002	SVTCL	2-Nitroaniline		25	ug/L	U	11/19/97
SJS05-GW3S-002	SVTCL	2-Nitrophenol		10	ug/L	U	11/19/97
SJS05-GW3S-002	SVTCL	3,3'-Dichlorobenzidine		10	ug/L	U	11/19/97
SJS05-GW3S-002	SVTCL	3-Nitroaniline		25	ug/L	U	11/19/97
SJS05-GW3S-002	SVTCL	4,6-Dinitro-2-Methylphenol		25	ug/L	U	11/19/97
SJS05-GW3S-002	SVTCL	4-Bromophenol-phenylethe		10	ug/L	U	11/19/97
SJS05-GW3S-002	SVTCL	4-Chloro-3-Methylphenol		10	ug/L	U	11/19/97
SJS05-GW3S-002	SVTCL	4-Chloroaniline		10	ug/L	U	11/19/97
SJS05-GW3S-002	SVTCL	4-Chlorophenyl-phenylethe		10	ug/L	U	11/19/97
SJS05-GW3S-002	SVTCL	4-Methylphenol		10	ug/L	U	11/19/97
SJS05-GW3S-002	SVTCL	4-Nitroaniline		25	ug/L	U	11/19/97
SJS05-GW3S-002	SVTCL	4-Nitrophenol		25	ug/L	U	11/19/97
SJS05-GW3S-002	SVTCL	Acenaphthene		10	ug/L	U	11/19/97
SJS05-GW3S-002	SVTCL	Acenaphthylene		10	ug/L	U	11/19/97
SJS05-GW3S-002	SVTCL	Anthracene		10	ug/L	U	11/19/97
SJS05-GW3S-002	SVTCL	Benzo(a)anthracene		10	ug/L	U	11/19/97
SJS05-GW3S-002	SVTCL	Benzo(a)pyrene		10	ug/L	U	11/19/97
SJS05-GW3S-002	SVTCL	Benzo(b)fluoranthene		10	ug/L	U	11/19/97
SJS05-GW3S-002	SVTCL	Benzo(g,h,i)perylene		10	ug/L	U	11/19/97
SJS05-GW3S-002	SVTCL	Benzo(k)fluoranthene		10	ug/L	U	11/19/97
SJS05-GW3S-002	SVTCL	bis(2-Chloroethoxy)methan		10	ug/L	U	11/19/97
SJS05-GW3S-002	SVTCL	bis(2-chloroethyl)ether		10	ug/L	U	11/19/97
SJS05-GW3S-002	SVTCL	bis(2-Ethylhexyl)phthalate		10	ug/L	U	11/19/97
SJS05-GW3S-002	SVTCL	Butylbenzylphthalate		10	ug/L	U	11/19/97
SJS05-GW3S-002	SVTCL	Carbazole		10	ug/L	U	11/19/9
SJS05-GW3S-002	SVTCL	Chrysene		10	ug/L	U	11/19/97
SJS05-GW3S-002	SVTCL	Di-n-butylphthalate		10	ug/L	U	11/19/97
SJS05-GW3S-002	SVTCL	Di-n-Octyl Phthalate		10	ug/L	U	11/19/97
SJS05-GW3S-002	SVTCL	Dibenzo(a,h)anthracene		10	ug/L	U	11/19/97
SJS05-GW3S-002	SVTCL	Dibenzofuran		10	ug/L	U	11/19/97
SJS05-GW3S-002	SVTCL	Diethylphthalate		10	ug/L	U	11/19/97
SJS05-GW3S-002	SVTCL	Dimethyl Phthalate		10	ug/L	U	11/19/97
SJS05-GW3S-002	SVTCL	Fluoranthene		10	ug/L	U	11/19/97
SJS05-GW3S-002	SVTCL	Fluorene		10	ug/L	U	11/19/97
SJS05-GW3S-002	SVTCL	Hexachlorobenzene		10	ug/L	U	11/19/97
SJS05-GW3S-002	SVTCL	Hexachlorobutadiene		10	ug/L	U	11/19/97
SJS05-GW3S-002	SVTCL	Hexachlorocyclopentadien		10	ug/L	U	11/19/97
SJS05-GW3S-002	SVTCL	Hexachloroethane		10	ug/L	U	11/19/97
SJS05-GW3S-002	SVTCL	Indeno(1,2,3-cd)pyrene		10	ug/L	U	11/19/97
SJS05-GW3S-002	SVTCL	Isophorone		10	ug/L	U	11/19/97
SJS05-GW3S-002	SVTCL	N-Nitroso-Di-n-Propylamine		10	ug/L	U	11/19/97
SJS05-GW3S-002	SVTCL	N-Nitrosodiphenylamine		10	ug/L	U	11/19/97
SJS05-GW3S-002	SVTCL	Naphthalene		10	ug/L	U	11/19/97
SJS05-GW3S-002	SVTCL	Nitrobenzene		10	ug/L	U	11/19/97
SJS05-GW3S-002	SVTCL	Pentachlorophenol		25	ug/L	U	11/19/97
SJS05-GW3S-002	SVTCL	Phenanthrene		10	ug/L	U	11/19/97
SJS05-GW3S-002	SVTCL	Phenol		10	ug/L	U	11/19/97
SJS05-GW3S-002	SVTCL	Pyrene		10	ug/L	U	11/19/97
SJS05-GW3S-002	VCLOW	1,1,1-Trichloroethane		1	ug/L	U	11/11/97
SJS05-GW3S-002	VCLOW	1,1,2,2-Tetrachloroethane		1	ug/L	U	11/11/97
SJS05-GW3S-002	VCLOW	1,1,2-Trichloroethane		1	ug/L	U	11/11/97
SJS05-GW3S-002	VCLOW	1,1-Dichloroethane		1	ug/L	U	11/11/97
SJS05-GW3S-002	VCLOW	1,1-Dichloroethene		1	ug/L	U	11/11/97
SJS05-GW3S-002	VCLOW	1,2,4-Trichlorobenzene		1	ug/L	U	11/11/

Sample ID	Analysis	Chemical	Result	Det Limit	Units	DV Qual	Date Anal
SJS05-GW3S-002	VCLOW	1,2-Dibromo-3-chloropropa		1	ug/L	U	11/11/97
SJS05-GW3S-002	VCLOW	1,2-Dibromoethane		1	ug/L	U	11/11/97
SJS05-GW3S-002	VCLOW	1,2-Dichlorobenzene		1	ug/L	U	11/11/97
SJS05-GW3S-002	VCLOW	1,2-Dichloroethane		1	ug/L	U	11/11/97
SJS05-GW3S-002	VCLOW	1,2-Dichloropropane		1	ug/L	U	11/11/97
SJS05-GW3S-002	VCLOW	1,3-Dichlorobenzene		1	ug/L	U	11/11/97
SJS05-GW3S-002	VCLOW	1,4-Dichlorobenzene		1	ug/L	U	11/11/97
SJS05-GW3S-002	VCLOW	2-Hexanone		5	ug/L	U	11/11/97
SJS05-GW3S-002	VCLOW	4-Methyl-2-Pentanone		5	ug/L	U	11/11/97
SJS05-GW3S-002	VCLOW	Acetone	7	5	ug/L	B	11/11/97
SJS05-GW3S-002	VCLOW	Benzene		1	ug/L	U	11/11/97
SJS05-GW3S-002	VCLOW	Bromochloromethane		1	ug/L	U	11/11/97
SJS05-GW3S-002	VCLOW	Bromodichloromethane		1	ug/L	U	11/11/97
SJS05-GW3S-002	VCLOW	Bromoform		1	ug/L	U	11/11/97
SJS05-GW3S-002	VCLOW	Bromomethane		1	ug/L	U	11/11/97
SJS05-GW3S-002	VCLOW	Carbon Disulfide		1	ug/L	U	11/11/97
SJS05-GW3S-002	VCLOW	Carbon Tetrachloride		1	ug/L	U	11/11/97
SJS05-GW3S-002	VCLOW	Chlorobenzene		1	ug/L	U	11/11/97
SJS05-GW3S-002	VCLOW	Chloroethane		1	ug/L	U	11/11/97
SJS05-GW3S-002	VCLOW	Chloroform		1	ug/L	U	11/11/97
SJS05-GW3S-002	VCLOW	Chloromethane		1	ug/L	U	11/11/97
SJS05-GW3S-002	VCLOW	cis-1,2-Dichloroethene		1	ug/L	U	11/11/97
SJS05-GW3S-002	VCLOW	cis-1,3-Dichloropropene		1	ug/L	U	11/11/97
SJS05-GW3S-002	VCLOW	Dibromochloromethane		1	ug/L	U	11/11/97
SJS05-GW3S-002	VCLOW	Ethylbenzene		1	ug/L	U	11/11/97
SJS05-GW3S-002	VCLOW	Methylene Chloride	2	2	ug/L	B	11/11/97
SJS05-GW3S-002	VCLOW	Styrene		1	ug/L	U	11/11/97
SJS05-GW3S-002	VCLOW	Tetrachloroethene		1	ug/L	U	11/11/97
SJS05-GW3S-002	VCLOW	Toluene		1	ug/L	U	11/11/97
SJS05-GW3S-002	VCLOW	Total Xylenes		1	ug/L	U	11/11/97
SJS05-GW3S-002	VCLOW	Trans-1,2-Dichloroethene		1	ug/L	U	11/11/97
SJS05-GW3S-002	VCLOW	trans-1,3-Dichloropropene		1	ug/L	U	11/11/97
SJS05-GW3S-002	VCLOW	Trichloroethene		1	ug/L	U	11/11/97
SJS05-GW3S-002	VCLOW	Vinyl Chloride		1	ug/L	U	11/11/97
SJS05-GW3S-002F	METAL	Aluminum	30900	29	ug/L		11/26/97
SJS05-GW3S-002F	METAL	Antimony		1.7	ug/L	U	11/18/97
SJS05-GW3S-002F	METAL	Arsenic	5.8	3	ug/L	J	11/18/97
SJS05-GW3S-002F	METAL	Barium	22.5	1	ug/L	J	11/26/97
SJS05-GW3S-002F	METAL	Beryllium	14.1	1	ug/L		11/26/97
SJS05-GW3S-002F	METAL	Cadmium	11.5	0.3	ug/L		11/18/97
SJS05-GW3S-002F	METAL	Calcium	41100	46	ug/L		11/26/97
SJS05-GW3S-002F	METAL	Chromium	21.8	4	ug/L		11/26/97
SJS05-GW3S-002F	METAL	Cobalt	173	3	ug/L		11/26/97
SJS05-GW3S-002F	METAL	Copper	89.6	2	ug/L		11/26/97
SJS05-GW3S-002F	METAL	Iron	18000	5	ug/L		11/26/97
SJS05-GW3S-002F	METAL	Lead	29.3	1	ug/L		11/18/97
SJS05-GW3S-002F	METAL	Magnesium	36100	45	ug/L		11/26/97
SJS05-GW3S-002F	METAL	Manganese	3670	1	ug/L		11/26/97
SJS05-GW3S-002F	METAL	Mercury		0.13	ug/L	U	11/19/97
SJS05-GW3S-002F	METAL	Nickel	248	4	ug/L		11/26/97
SJS05-GW3S-002F	METAL	Potassium	15000	97	ug/L		11/26/97
SJS05-GW3S-002F	METAL	Selenium		3.3	ug/L	U	11/18/97
SJS05-GW3S-002F	METAL	Silver		1.1	ug/L	U	11/18/97
SJS05-GW3S-002F	METAL	Sodium	22000	28	ug/L		11/26/97
SJS05-GW3S-002F	METAL	Thallium		1.5	ug/L	U	11/19/97
SJS05-GW3S-002F	METAL	Vanadium	7.6	4	ug/L	J	11/26/97
SJS05-GW3S-002F	METAL	Zinc	1600	3	ug/L		11/26/97

APPENDIX H

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 I

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.

Dewlin Harris
Randy M Jackson
Harvey S. Harbold

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
CONSENSUS AGREEMENT #6.A.1
(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.

SIGNATORIES TO THE AGREEMENT:

We the undersigned have reached the above agreement on this 7th day of August 1997.

James T. Harris
Devlin Harris
Randy M. Jackson
Timothy A. Kasik
Harry S. Harbold
Jack A. Johnson

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.

James J. Hom
Deevin Hams
Randy m Jackson
Timothy F. Fleck
Harry S. Harbold
James R. Bess

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
Timothy A. Pelsor
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
CONSENSUS AGREEMENT #6.A.4

SIGNATORIES TO THE AGREEMENT:

We the undersigned have reached the above agreement on this 7th day of August 1997.

Randy Jackson

Timothy A. Rasile

Harry S. Hadold

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.

Harry S. Harbold

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.

Dealin Hamm

Randy M Jackson

Harvey S. Harbold

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 J

Site 2 Risk Tables

TABLE 1

SELECTION OF EXPOSURE PATHWAYS

St. Julien's Creek - Landfill B (Site 2)

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 2

Data Usability Worksheets

DATA USEABILITY WORKSHEET
Site: St. Juliens Creek, Landfill B (Site 2)
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 2.
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 five 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-160797, TB-230797, and TB-310797. The field blanks associated with this group of samples are FB-150797-TAPG, FB-150797-DI2, and FB-230797DI3. The equipment rinsate blanks associated with this group of samples is EB-160797-GW, EB-230797-GW and EB-310797F-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 2.
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 B (Site 2)
Medium: Groundwater

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, 2-butanone, barium, bis(2-ethylhexyl)phthalate, bromodichloromethane, chloroform, carbon disulfide, chromium, dibromochloromethane, methylene chloride, mercury, 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?	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 B (Site 2)
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 B (Site 2)
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 B (Site 2)
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 2.
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 2. These depths are usable for consideration for contaminant transfer to groundwater, transfer to air, and also direct exposure for residents, trespassers, construction workers, and grounds keepers. 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 apply to this group of samples includes TB-250697. Field blanks that apply to this group of samples include FB-230697-TAP and FB-230697-DI. The equipment rinsate blank that apply to this group of samples is EB-250697-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 2.
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 B (Site 2)
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, aluminum, antimony, barium, bromodichloromethane, carbon disulfide, chloroform, copper, lead, nickel, silver, zinc, 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?	Yes. Relative percent difference (RPD) was below the stated goal of <25%. No MS/MSD analysis was performed for the organic and inorganic fractions of the sample delivery group containing all of the surface soil samples.
Summarize the effect of DQO issues on the risk assessment, if applicable.	No MS/MSD analysis was performed for the organic and inorganic fractions for the sample delivery group. 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 B (Site 2)
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 B (Site 2)
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 B (Site 2)
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 2.
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 0-6' at Site 2. These depths are usable for consideration for contaminant transfer to groundwater with current exposure to residents, and transfer to air as well as, 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. The trip blank that apply to this group of samples includes TB-250697. Field blanks that apply to this group of samples include FB-230697-TAP and FB-230697-DI. The equipment rinsate blank that apply to this group of samples is 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 2.
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 B (Site 2)
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, aluminum, antimony, barium, bromodichloromethane, carbon disulfide, chloroform, copper, lead, nickel, silver, zinc, 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 all of the sub-surface samples.
Summarize the effect of DQO issues on the risk assessment, if applicable.	RPD goal was not satisfied. However, it is not unusual for soil samples to have RPDs up to 100% (RPDs for the duplicate samples were under 100%) and still have no negative effect on the usability of the data. No MS/MSD analysis was performed for the organic and inorganic fractions for the sample delivery group. 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 B (Site 2)
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 B (Site 2)
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 B (Site 2)
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 2.
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 2. 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 2.
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 B (Site 2)
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.).	Acetone, antimony, barium, bromodichloromethane, bis(2-ethylhexyl)phthalate, 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?	No. Relative percent difference for the semi-volatile and pesticides/PCBs fractions was above the stated goal of <25%.
Summarize the effect of DQO issues on the risk assessment, if applicable.	RPD goal was not satisfied. However, sediment samples routinely have RPDs up to 100% (RPDs for the duplicate fractions were below 63%) and still have no negative effect on the usability of the data.

EXHIBIT 3-3

DATA USEABILITY WORKSHEET (continued)
Site: St. Juliens Creek, Landfill B (Site 2)
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 B (Site 2)
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 B (Site 2)
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.	Results are available for one location only. This will be discussed 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 AWQC values 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 B (Site 2)
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?	No. Relative percent difference was above the stated goal of <20% for the total metals.
Summarize the effect of DQO issues on the risk assessment, if applicable.	RPD goal was not satisfied for the total metals fraction. The RPD of 38% for this sample/duplicate pair will not negatively effect the usability of the data.

EXHIBIT 3-3

DATA USEABILITY WORKSHEET (continued)
Site: St. Juliens Creek, Landfill B (Site 2)
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 B (Site 2)
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 2

Deep Groundwater Current/Future

TABLE 2.1
OCCURRENCE, DISTRIBUTION AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN
St. Juliens Creek - Landfill B (Site 2)

Scenario Timeframe: Current
Medium: Deep Groundwater
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)
7439896	Iron	788		876		ug/l	GW-2D	1/2	5-5	876	N/A	1100	N/A	N/A	NO	BSL
7439965	Manganese	221		228		ug/l	GW-2D	1/2	1-1	228	N/A	84	N/A	N/A	YES	ASL
67663	Chloroform	6		6		ug/l	GW-2D	1/2	1-1	6	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 Norf 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 3.1
MEDIUM-SPECIFIC EXPOSURE POINT CONCENTRATION SUMMARY
St. Juliens Creek - Landfill B (Site 2)

Scenario Timeframe: Current
Medium: DeepGroundwater
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	114.25	N/A	228.00		mg/l	0.228	Max	(1)	0.114	Mean-N	(1)
Chloroform	ug/l	3.25	N/A	6.00		mg/l	0.006	Max	(1)	0.003	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 B (Site 2)

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, 1995b	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. The skin surface area presented in this table was derived by averaging the mean child (2 to 7 years) male and female values.

EPA, 1995: Assessing Dermal Exposure from Soil, Technical Guidance manual, Region III, EPA/903-K-95-003.

EPA, 1995b: Exposure Factors Handbook, June 1995, EPA/600/P-95/002A

TABLE 4.3
VALUES USED FOR DAILY INTAKE CALCULATIONS
St. Julien's Creek - Landfill B (Site 2)

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 4.4
VALUES USED FOR DAILY INTAKE CALCULATIONS
St. Juliens Creek - Landfill B (Site 2)

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	25	EPA, 1991	25	EPA, 1991	
	CF	Volumetric Conversion Factor for Water	l/cm^2	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	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 by averaging the mean adult male and female values.

TABLE 5.1
NON-CANCER TOXICITY DATA -- ORAL/DERMAL
St. Juliens Creek - Landfill B (Site 2)

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	1.4E-01	mg/kg/day	1.00	1.4E-01	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 B (Site 2)

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 (2) (MM/DD/YY)
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

(1) Provide equation for derivation in text.
(2) For IRIS values, provide the date IRIS was searched.
For HEAST values, provide the date of HEAST.
For NCEA values, provide the date of article provided by NCEA.

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 7.1.RME
CALCULATION OF NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
St. Juliens Creek - Landfill B (Site 2)

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	0.228	mg/l	0.228	mg/l	M	6.2E-03	mg/kg-day	1.4E-01	mg/kg/day	N/A	N/A	4.5E-02
	Chloroform	0.006	mg/l	0.006	mg/l	M	1.6E-04	mg/kg-day	1.0E-02	mg/kg/day	N/A	N/A	1.6E-02
Dermal	Manganese	0.228	mg/l	0.228	mg/l	M	7.1E-06	mg/kg-day	1.4E-01	mg/kg/day	N/A	N/A	5.1E-05
	Chloroform	0.006	mg/l	0.006	mg/l	M	3.3E-06	mg/kg-day	1.0E-02	mg/kg/day	N/A	N/A	3.3E-04

M = Medium Specific

Total Hazard Index Across All Exposure Routes/Pathways 6.1E-02

TABLE 7.1.CT
CALCULATION OF NON-CANCER HAZARDS
CENTRAL TENDENCIES
St. Juliens Creek - Landfill B (Site 2)

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	0.114	mg/l	0.114	mg/l	M	3.1E-03	mg/kg-day	1.4E-01	mg/kg/day	N/A	N/A	2.2E-02
	Chloroform	0.003	mg/l	0.003	mg/l	M	8.9E-05	mg/kg-day	1.0E-02	mg/kg/day	N/A	N/A	8.9E-03
Dermal	Manganese	0.114	mg/l	0.114	mg/l	M	3.6E-06	mg/kg-day	1.4E-01	mg/kg/day	N/A	N/A	2.5E-05
	Chloroform	0.003	mg/l	0.003	mg/l	M	1.8E-06	mg/kg-day	1.0E-02	mg/kg/day	N/A	N/A	1.8E-04

M = Medium Specific

Total Hazard Index Across All Exposure Routes/Pathways: 3.1E-02

TABLE 7.2.RME
CALCULATION OF NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
St. Juliens Creek - Landfill B (Site 2)

Scenario Timeframe: Current
Medium: Deep Groundwater
Exposure Medium: Groundwater
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	Manganese	2.3E-01	mg/l	2.3E-01	mg/l	M	3.6E-03	mg/kg-day	1.4E-01	mg/kg/day	N/A	N/A	2.6E-02
	Chloroform	6.0E-03	mg/l	6.0E-03	mg/l	M	9.6E-05	mg/kg-day	1.0E-02	mg/kg/day	N/A	N/A	9.6E-03
Dermal	Manganese	2.3E-01	mg/l	2.3E-01	mg/l	M	1.0E-05	mg/kg-day	1.4E-01	mg/kg/day	N/A	N/A	7.5E-05
	Chloroform	6.0E-03	mg/l	6.0E-03	mg/l	M	4.9E-06	mg/kg-day	1.0E-02	mg/kg/day	N/A	N/A	4.9E-04

M = Medium Specific

Total Hazard Index Across All Exposure Routes/Pathways 3.6E-02

TABLE 7.2.CT
CALCULATION OF NON-CANCER HAZARDS
CENTRAL TENDENCIES
St. Juliens Creek - Landfill B (Site 2)

Scenario Timeframe: Current
Medium: Deep Groundwater
Exposure Medium: Groundwater
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	Manganese	0.114	mg/l	0.114	mg/l	M	1.8E-03	mg/kg-day	1.4E-01	mg/kg/day	N/A	N/A	1.3E-02
	Chloroform	0.003	mg/l	0.003	mg/l	M	5.2E-05	mg/kg-day	1.0E-02	mg/kg/day	N/A	N/A	5.2E-03
Dermal	Manganese	0.114	mg/l	0.114	mg/l	M	5.3E-06	mg/kg-day	1.4E-01	mg/kg/day	N/A	N/A	3.8E-05
	Chloroform	0.003	mg/l	0.003	mg/l	M	2.7E-06	mg/kg-day	1.0E-02	mg/kg/day	N/A	N/A	2.7E-04

M = Medium specific

Total Hazard Index Across All Exposure Routes/Pathways 1.9E-02

TABLE 7.3.RME
CALCULATION OF NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
St. Juliens Creek - Landfill B (Site 2)

Scenario Timeframe: Future
Medium: Groundwater
Exposure Medium: Deep 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 (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Dermal	Manganese	2.3E-01	mg/l	2.3E-01	mg/l	M	5.9E-06	mg/kg-day	1.4E-01	mg/kg/day	N/A	N/A	4.2E-05
	Chloroform	6.0E-03	mg/l	6.0E-03	mg/l	M	2.8E-06	mg/kg-day	1.0E-02	mg/kg/day	N/A	N/A	2.8E-04
												Total Hazard Index Across All Exposure Routes/Pathways	3.2E-04

TABLE 7.3.CT
CALCULATION OF NON-CANCER HAZARDS
CENTRAL TENDENCIES
St. Juliens Creek - Landfill B (Site 2)

Scenario Timeframe: Future
Medium: Groundwater
Exposure Medium: Deep 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 (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Dermal	Manganese	1.1E-01	mg/l	1.1E-01	mg/l	M	3.0E-06	mg/kg-day	1.4E-01	mg/kg/day	N/A	N/A	2.1E-05
	Chloroform	3.3E-03	mg/l	3.3E-03	mg/l	M	1.5E-06	mg/kg-day	1.0E-02	mg/kg/day	N/A	N/A	1.5E-04
												Total Hazard Index Across All Exposure Routes/Pathways	1.7E-04

TABLE 8.1.RME
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
St. Juliens Creek - Landfill B (Site 2)

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 (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
Ingestion	Manganese	0.228	mg/l	0.228	mg/l	M	2.7E-03	mg/kg-day	N/A	N/A	N/A
	Chloroform	0.006	mg/l	0.006	mg/l	M	7.0E-05	mg/kg-day	6.1E-03	mg/kg-day -1	4.3E-07
Dermal	Manganese	0.228	mg/l	0.228	mg/l	M	2.4E-06	mg/kg-day	N/A	N/A	N/A
	Chloroform	0.006	mg/l	0.006	mg/l	M	1.1E-06	mg/kg-day	6.1E-03	mg/kg-day -1	6.9E-09
										Total Risk Across All Exposure Routes/Pathways	4.4E-07

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for risk calculation.

TABLE 8.1.CT
CALCULATION OF CANCER RISKS
CENTRAL TENDENCIES
St. Juliens Creek - Landfill B (Site 2)

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 (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
Ingestion	Manganese	0.114	mg/l	0.114	mg/l	M	1.3E-03	mg/kg-day	N/A	N/A	N/A
	Chloroform	0.003	mg/l	0.003	mg/l	M	3.8E-05	mg/kg-day	6.1E-03	mg/kg-day -1	2.3E-07
Dermal	Manganese	0.114	mg/l	0.114	mg/l	M	1.2E-06	mg/kg-day	N/A	N/A	N/A
	Chloroform	0.003	mg/l	0.003	mg/l	M	6.2E-07	mg/kg-day	6.1E-03	mg/kg-day -1	3.8E-09
										Total Risk Across All Exposure Routes/Pathways	2.4E-07

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for risk calculation.

TABLE 8.2.RME
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
St. Juliens Creek - Landfill B (Site 2)

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 (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
Ingestion	Manganese	2.3E-01	mg/l	2.3E-01	mg/l	M	1.2E-03	mg/kg-day	N/A	N/A	N/A
	Chloroform	6.0E-03	mg/l	6.0E-03	mg/l	M	3.3E-05	mg/kg-day	6.1E-03	mg/kg-day -1	2.0E-07
Dermal	Manganese	2.3E-01	mg/l	2.3E-01	mg/l	M	9.0E-07	mg/kg-day	N/A	N/A	N/A
	Chloroform	6.0E-03	mg/l	6.0E-03	mg/l	M	4.2E-07	mg/kg-day	6.1E-03	mg/kg-day -1	2.6E-09
										Total Risk Across All Exposure Routes/Pathways	2.0E-07

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for risk calculation.

TABLE 8.2.CT
CALCULATION OF CANCER RISKS
CENTRAL TENDENCIES
St. Juliens Creek - Landfill B (Site 2)

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 (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
Ingestion	Manganese	1.1E-01	mg/l	1.1E-01	mg/l	M	6.3E-04	mg/kg-day	N/A	N/A	N/A
	Chloroform	3.3E-03	mg/l	3.3E-03	mg/l	M	1.8E-05	mg/kg-day	6.1E-03	mg/kg-day -1	1.1E-07
Dermal	Manganese	1.1E-01	mg/l	1.1E-01	mg/l	M	4.5E-07	mg/kg-day	N/A	N/A	N/A
	Chloroform	3.3E-03	mg/l	3.3E-03	mg/l	M	2.3E-07	mg/kg-day	6.1E-03	mg/kg-day -1	1.4E-09
										Total Risk Across All Exposure Routes/Pathways	1.1E-07

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for risk calculation.

TABLE 8.3.RME
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
St. Juliens Creek - Landfill B (Site 2)

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 (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
Dermal	Manganese	2.3E-01	mg/l	2.3E-01	mg/l	M	7.5E-06	mg/kg-day	N/A	N/A	N/A
	Chloroform	6.0E-03	mg/l	6.0E-03	mg/l	M	3.5E-06	mg/kg-day	6.1E-03	mg/kg-day -1	2.1E-08
										Total Risk Across All Exposure Routes/Pathways	2.1E-08

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for risk calculation.

TABLE 8.3.CT
CALCULATION OF CANCER RISKS
CENTRAL TENDENCIES
St. Juliens Creek - Landfill B (Site 2)

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 (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
Dermal	Manganese	1.1E-01	mg/l	1.1E-01	mg/l	M	3.8E-06	mg/kg-day	N/A	N/A	N/A
	Chloroform	3.3E-03	mg/l	3.3E-03	mg/l	M	1.9E-06	mg/kg-day	6.1E-03	mg/kg-day -1	1.2E-08
										Total Risk Across All Exposure Routes/Pathways	1.2E-08

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for risk calculation.

Site 2

Shallow Groundwater Future

TABLE 2.2
OCCURRENCE, DISTRIBUTION AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN
St. Juliens Creek - Landfill B (Site 2)

Scenario Timeframe: Current
Medium: Shallow Groundwater
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)
7429905	Aluminum	130	J	35500	J	ug/l	GW-2S	4/4	29-44	35500	N/A	3700	N/A	N/A	YES	ASL
7440382	Arsenic	6.2		6.2	J	ug/l	GW-3S	1/4	3-3	6.2	N/A	0.045	N/A	N/A	YES	ASL
7440393	Barium	55.1	J	726		ug/l	GW-2S	3/4	1-1	726	N/A	260	N/A	N/A	YES	ASL
7440417	Beryllium	0.58	J	0.77	J	ug/l	GW-2S	2/4	1-1	0.77	N/A	0.016	100	MCL	YES	ASL
18540299	Chromium	12	J	58.3	J	ug/l	GW-2S	3/4	4-7	58.3	N/A	18	100	MCL	YES	ASL
7440484	Cobalt	15.4	J	15.4	J	ug/l	GW-2S	1/4	3-8	15.4	N/A	22	N/A	N/A	NO	BSL
7440508	Copper	6.3	K	6.3	J	ug/l	GW-3S	1/4	2-6	6.3	N/A	N/A	1300	MCL	NO	BSL
7439896	Iron	1240		377000	J	ug/l	GW-2S	4/4	5-5	377000	N/A	1100	N/A	N/A	YES	ASL
7439921	Lead	8.2		36.7	L	ug/l	GW-2S	2/4	1-1	36.7	N/A	15	15	MCL	YES	ASL
7439965	Manganese	197		1380		ug/l	GW-3S	4/4	1-1	1380	N/A	84	N/A	N/A	YES	ASL
7440020	Nickel	8.2	J	11.2	J	ug/l	GW-3S	3/4	4-7	11.2	N/A	73	100	MCL	NO	BSL
7440224	Silver	1.5		1.5	J	ug/l	GW-2S	1/4	3-3	1.5	N/A	18	N/A	N/A	NO	BSL
7440280	Thallium	6.9		6.9	J	ug/l	GW-2S	1/4	2-2	6.9	N/A	N/A	2	MCL	YES	ASL
7440622	Vanadium	12.3	J	79.6		ug/l	GW-2S	3/4	4-9	79.6	N/A	26	N/A	N/A	YES	ASL
7440666	Zinc	15.3		319		ug/l	GW-3S	2/4	3-5	319	N/A	1100	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 *Naval Base Norf 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 B (Site 2)

Scenario Timeframe: Future
Medium: Groundwater
Exposure Medium: Shallow 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	10922.50	N/A	35500	J	mg/l	35.500	Max	(1)	10.923	Mean-N	(1)
Arsenic	ug/l	2.70	N/A	6.2	J	mg/l	0.006	Max	(1)	0.003	Mean-N	(1)
Barium	ug/l	339.15	N/A	726.00		mg/l	0.726	Max	(1)	0.339	Mean-N	(1)
Beryllium	ug/l	0.59	N/A	0.77	J	mg/l	0.001	Max	(1)	0.001	Mean-N	(1)
Chromium	ug/l	21.23	N/A	56.30	J	mg/l	0.056	Max	(1)	0.021	Mean-N	(1)
Iron	ug/l	151985.00	N/A	377000.00	J	mg/l	377.000	Max	(1)	151.985	Mean-N	(1)
Manganese	ug/l	804.25	N/A	1380.00		mg/l	1.380	Max	(1)	0.804	Mean-N	(1)
Thallium	ug/l	2.48	N/A	6.90	J	mg/l	0.007	Max	(1)	0.002	Mean-N	(1)
Vanadium	ug/l	28.68	N/A	79.60		mg/l	0.080	Max	(1)	0.029	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 B (Site 2)

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^2	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 B (Site 2)

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	2.7E-01	mg/kg/day	NOAEL	100	NCEA	8/26/96
Arsenic	Chronic	3.0E-04	mg/kg/day	0.95	2.9E-04	mg/kg/day	Skin	3	IRIS	11/17/97
Barium	Chronic	7.0E-02	mg/kg/day	1.00	7.0E-02	mg/kg/day	Heart	4	IRIS	11/17/97
Beryllium	Chronic	5.0E-03	mg/kg/day	0.01	5.0E-05	mg/kg/day	NOAEL	101	IRIS	11/17/97
Chromium	Chronic	5.0E-03	mg/kg/day	0.01	5.0E-05	mg/kg/day	NOAEL	505	IRIS	11/17/97
Iron	Chronic	3.0E-01	mg/kg/day	0.05	1.5E-02	mg/kg/day	N/A	N/A	RBC:N/A	10/22/97
Manganese	Chronic	2.3E-02	mg/kg/day	1.00	2.3E-02	mg/kg/day	NOAEL	2	IRIS	11/17/97
Thallium	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Vanadium	Chronic	7.00E-03	mg/kg/day	0.02	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
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 B (Site 2)

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 (2) (MM/DD/YY)
Aluminum	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Arsenic	1.5E+00	9.5E-01	1.4E+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	1.0E-02	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
Thallium	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

(1) Provide equation for derivation in text.
(2) For IRIS values, provide the date IRIS was searched.
For HEAST values, provide the date of HEAST.
For NCEA values, provide the date of article provided by NCEA.

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 7.4.RME
CALCULATION OF NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
St. Juliens Creek - Landfill B (Site 2)

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	35.500	mg/l	35.500	mg/l	M	9.2E-04	mg/kg-day	1.0E+00	mg/kg/day	N/A	N/A	9.2E-04
	Arsenic	0.006	mg/l	0.006	mg/l	M	1.6E-07	mg/kg-day	3.0E-04	mg/kg/day	N/A	N/A	5.4E-04
	Barium	0.726	mg/l	0.726	mg/l	M	1.9E-05	mg/kg-day	7.0E-02	mg/kg/day	N/A	N/A	2.7E-04
	Beryllium	0.001	mg/l	0.001	mg/l	M	2.0E-08	mg/kg-day	5.0E-03	mg/kg/day	N/A	N/A	4.0E-06
	Chromium	0.056	mg/l	0.056	mg/l	M	1.5E-06	mg/kg-day	5.0E-03	mg/kg/day	N/A	N/A	2.9E-04
	Iron	377.000	mg/l	377.000	mg/l	M	9.8E-03	mg/kg-day	3.0E-01	mg/kg/day	N/A	N/A	3.3E-02
	Manganese	1.380	mg/l	1.380	mg/l	M	3.6E-05	mg/kg-day	2.3E-02	mg/kg/day	N/A	N/A	1.6E-03
	Thallium	0.007	mg/l	0.007	mg/l	M	1.8E-07	mg/kg-day	N/A	mg/kg/day	N/A	N/A	N/A
	Vanadium	0.080	mg/l	0.080	mg/l	M	2.1E-06	mg/kg-day	7.0E-03	mg/kg/day	N/A	N/A	2.9E-04

M = Medium Specific

Total Hazard Index Across All Exposure Routes/Pathways 3.6E-02

TABLE 7.4.CT
CALCULATION OF NON-CANCER HAZARDS
CENTRAL TENDENCIES
St. Juliens Creek - Landfill B (Site 2)

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	10.923	mg/l	10.923	mg/l	M	2.8E-04	mg/kg-day	1.0E+00	mg/kg/day	N/A	N/A	2.8E-04
	Arsenic	0.003	mg/l	0.003	mg/l	M	7.0E-08	mg/kg-day	3.0E-04	mg/kg/day	N/A	N/A	2.3E-04
	Barium	0.339	mg/l	0.339	mg/l	M	8.8E-06	mg/kg-day	7.0E-02	mg/kg/day	N/A	N/A	1.3E-04
	Beryllium	0.001	mg/l	0.001	mg/l	M	1.5E-08	mg/kg-day	5.0E-03	mg/kg/day	N/A	N/A	3.0E-06
	Chromium	0.021	mg/l	0.021	mg/l	M	5.5E-07	mg/kg-day	5.0E-03	mg/kg/day	N/A	N/A	1.1E-04
	Iron	151.985	mg/l	151.985	mg/l	M	3.9E-03	mg/kg-day	3.0E-01	mg/kg/day	N/A	N/A	1.3E-02
	Manganese	0.804	mg/l	0.804	mg/l	M	2.1E-05	mg/kg-day	2.3E-02	mg/kg/day	N/A	N/A	9.1E-04
	Thallium	0.002	mg/l	0.002	mg/l	M	6.4E-08	mg/kg-day	N/A	mg/kg/day	N/A	N/A	N/A
	Vanadium	0.029	mg/l	0.029	mg/l	M	7.4E-07	mg/kg-day	7.0E-03	mg/kg/day	N/A	N/A	1.1E-04

M = Medium Specific

Total Hazard Index Across All Exposure Routes/Pathways 1.5E-02

TABLE 8.4.RME
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
St. Juliens Creek - Landfill B (Site 2)

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	35.500	mg/l	35.500	mg/l	M	3.3E-04	mg/kg-day	N/A	N/A	N/A
	Barium	0.726	mg/l	0.726	mg/l	M	6.7E-06	mg/kg-day	N/A	N/A	N/A
	Beryllium	0.001	mg/l	0.001	mg/l	M	7.1E-09	mg/kg-day	4.3E-02	N/A	3.1E-10
	Chromium	0.056	mg/l	0.056	mg/l	M	5.2E-07	mg/kg-day	N/A	N/A	N/A
	Iron	377.000	mg/l	377.000	mg/l	M	3.5E-03	mg/kg-day	N/A	N/A	N/A
	Manganese	1.380	mg/l	1.380	mg/l	M	1.3E-05	mg/kg-day	N/A	N/A	N/A
	Thallium	0.007	mg/l	0.007	mg/l	M	6.4E-08	mg/kg-day	N/A	N/A	N/A
	Vanadium	0.080	mg/l	0.080	mg/l	M	7.4E-07	mg/kg-day	N/A	N/A	N/A
										Total Risk Across All Exposure Routes/Pathways	3.1E-10

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for risk calculation.

TABLE 8.4.CT
CALCULATION OF CANCER RISKS
CENTRAL TENDENCIES
St. Juliens Creek - Landfill B (Site 2)

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	10.923	mg/l	10.923	mg/l	M	1.0E-04	mg/kg-day	N/A	N/A	N/A
	Barium	0.003	mg/l	0.003	mg/l	M	2.5E-08	mg/kg-day	N/A	N/A	N/A
	Beryllium	0.339	mg/l	0.339	mg/l	M	3.1E-06	mg/kg-day	4.3E-02	N/A	1.4E-07
	Chromium	0.001	mg/l	0.001	mg/l	M	5.4E-09	mg/kg-day	N/A	N/A	N/A
	Iron	0.021	mg/l	0.021	mg/l	M	2.0E-07	mg/kg-day	N/A	N/A	N/A
	Manganese	151.985	mg/l	151.985	mg/l	M	1.4E-03	mg/kg-day	N/A	N/A	N/A
	Thallium	0.804	mg/l	0.804	mg/l	M	7.4E-06	mg/kg-day	N/A	N/A	N/A
	Vanadium	0.002	mg/l	0.002	mg/l	M	2.3E-08	mg/kg-day	N/A	N/A	N/A
										Total Risk Across All Exposure Routes/Pathways	1.4E-07

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for risk calculation.

Site 2

Surface Soil Current/Future

TABLE 2.3
OCCURRENCE, DISTRIBUTION AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN
St. Juliens Creek - Landfill B (Site 2)

Scenario Timeframe: Current
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)
91576	2-Methylnaphthalene	310	J	310	J	ug/kg	SS-03	1/9	330-1700	310	NA	310000	NA	NA	NO	BSL
72548	4,4'-DDD	2.8	J	4200		ug/kg	SS-09	9/9	3.3-350	4200	NA	2700	NA	NA	YES	ASL
72559	4,4'-DDE	19		460		ug/kg	SS-09	8/9	3.3-35	460	NA	1900	NA	NA	NO	BSL
50293	4,4'-DDT	9.2	J	900		ug/kg	SS-09	8/9	3.3-350	900	NA	1900	NA	NA	NO	BSL
83329	Acenaphthene	100	J	170	J	ug/kg	SS-03	2/9	330-1700	170	NA	470000	NA	NA	NO	BSL
67641	Acetone	7	J	35		ug/kg	SS-10	2/9	10-11	35	NA	780000	NA	NA	NO	BSL
7429905	Aluminum	2680		18600		mg/kg	SS-06	9/9	7.42-8.79	18600	NA	7800	NA	NA	YES	ASL
120127	Anthracene	150	J	590	J	ug/kg	SS03	2/9	330-1700	590	NA	2300000	NA	NA	NO	BSL
7440360	Antimony	7	J	7	J	mg/kg	SS03	1/9	0.34-0.4	7	NA	3.1	NA	NA	YES	ASL
7440382	Arsenic	2.2		12		mg/kg	SS03	9/9	0.51-0.6	12	NA	0.43	NA	NA	YES	ASL
7440393	Barium	22.5	J	306		mg/kg	SS03	9/9	0.34-0.4	306	NA	550	NA	NA	NO	BSL
56553	Benzo(a)Anthracene	120	J	2300		ug/kg	SS03	7/9	330-1700	2300	NA	880	NA	NA	YES	ASL
50328	Benzo(a)Pyrene	130	J	1400	J	ug/kg	SS03	7/9	330-1700	1400	NA	88	NA	NA	YES	ASL
205992	Benzo(b)Fluoranthene	240	J	1700	J	ug/kg	SS03	7/9	330-1700	1700	NA	880	NA	NA	YES	ASL
207089	Benzo(k)Fluoranthene	87	J	1100	J	ug/kg	SS03	7/9	330-1700	1100	NA	8800	NA	NA	NO	BSL
7440417	Beryllium	0.23	J	13.4		mg/kg	SS06	5/9	0.17-0.2	13.4	NA	0.15	NA	NA	YES	ASL
117817	Bis(2-Ethylhexyl)Phthalate	35		54	J	ug/kg	SS09	2/9	330-1700	54	NA	46000	NA	NA	NO	BSL
85687	Butylbenzylphthalate	280	J	280	J	ug/kg	SS06	1/9	330-1700	280	NA	1600000	NA	NA	NO	BSL
7440439	Cadmium	0.25	J	0.68	J	mg/kg	SS04	6/9	0.08-0.1	0.68	NA	3.9	NA	NA	NO	BSL
86748	Carbazole	120	J	300	J	ug/kg	SS03	2/9	330-1700	300	NA	32000	NA	NA	NO	BSL
218019	Chrysene	150	J	2700		ug/kg	SS03	7/9	330-1700	2700	NA	88000	NA	NA	NO	BSL
7440484	Cobalt	1.5	J	62.6		mg/kg	SS06	6/9	1.35-1.6	62.6	NA	470	NA	NA	NO	BSL
7440508	Copper	8.4		4260		mg/kg	SS03	9/9	1.01-1.2	4260	NA	27000	NA	NA	NO	BSL
57125	Cyanide	0.85	J	0.85	J	mg/kg	SS03	1/9	0.5-0.53	0.85	NA	160000	NA	NA	NO	BSL
84742	Di-n-Butylphthalate	210	J	210	J	ug/kg	SS03	1/9	330-1700	210	NA	780000	NA	NA	NO	BSL
53703	Dibenz(a,h)Anthracene	54	J	54	J	ug/kg	SS02	1/9	330-1700	54	NA	88	NA	NA	NO	BSL
132649	Dibenzofuran	70	J	70	J	ug/kg	SS02	1/9	330-1700	70	NA	31000	NA	NA	NO	BSL
60571	Dieldrin	3.8	J	3.8	J	ug/kg	SS02	1/9	3.3-35	3.8	NA	40	NA	NA	NO	BSL
206440	Fluoranthene	140	J	5000		ug/kg	SS03	7/9	330-1700	5000	NA	310000	NA	NA	NO	BSL
86737	Fluorene	110	J	380	J	ug/kg	SS03	2/9	330-1700	380	NA	310000	NA	NA	NO	BSL
193395	Indeno(1,2,3-cd)Pyrene	86	J	800	J	ug/kg	SS03	7/9	330-1700	800	NA	880	NA	NA	NO	BSL
7439896	Iron	2560		106000		mg/kg	SS03	9/9	2.87-3.39	106000	NA	2300	NA	NA	YES	ASL
7439965	Manganese	27.2		688		mg/kg	SS03	9/9	0.34-0.4	688	NA	180	NA	NA	YES	ASL
439976	Mercury	0.11		0.56		mg/kg	SS07	9/9	0.04-0.05	0.56	NA	2.3	NA	NA	NO	BSL
91203	Naphthalene	52	J	52	J	ug/kg	SS02	1/9	330-1700	52	NA	310000	NA	NA	NO	BSL
7440020	Nickel	3.5	J	246		mg/kg	SS06	9/9	1.18-1.4	246	NA	160	NA	NA	YES	BSL
129000	Pyrene	220	J	7200		ug/kg	SS03	7/9	330-1700	7200	NA	230000	NA	NA	NO	ASL
7782492	Selenium	1		1		mg/kg	SS02	1/9	0.51-0.6	1	NA	39	NA	NA	NO	BSL
108883	Toluene	1	J	2	J	ug/kg	SS08	2/9	10-11	2	NA	1600000	NA	NA	NO	BSL
7440622	Vanadium	12.5		66.1		mg/kg	SS03	9/9	1.52-1.8	66.1	NA	55	NA	NA	YES	ASL
7440666	Zinc	41.5		7560		mg/kg	SS06	9/9	0.84-1	7560	NA	2300	NA	NA	YES	ASL

(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 pr 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 (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 B (Site 2)

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
4,4'-DDD	ug/kg	486.16	13,097.06	4200.00		mg/kg	4.20	Max	(1)	0.49	Mean-N	(1)
Aluminum	mg/kg	6,521.11	9,897.46	18600.00		mg/kg	9897.46	Max	(1)	6521.11	Mean-N	(1)
Antimony	mg/kg	1.16	28.83	7.00	J	mg/kg	7.00	Max	(1)	1.16	Mean-N	(1)
Arsenic	mg/kg	4.55	15.73	12.00		mg/kg	12.00	Max	(1)	4.55	Mean-N	(1)
Benzo(a)Anthracene	ug/kg	615.56	1,395.07	2300.00		mg/kg	1.40	Max	(1)	0.62	Mean-N	(1)
Benzo(a)Pyrene	ug/kg	507.78	1,030.22	1400.00	J	mg/kg	1.03	Max	(1)	0.51	Mean-N	(1)
Benzo(b)Fluoranthene	ug/kg	646.67	1,098.79	1700.00	J	mg/kg	1.10	Max	(1)	0.65	Mean-N	(1)
Beryllium	mg/kg	1.91	18.86	13.40		mg/kg	13.40	Max	(1)	1.91	Mean-N	(1)
Iron	mg/kg	28,112.22	106,611.96	106000.00		mg/kg	106000.00	Max	(1)	28112.22	Mean-N	(1)
Manganese	mg/kg	169.69	588.72	688.00		mg/kg	588.72	Max	(1)	169.69	Mean-N	(1)
Nickel	mg/kg	49.66	351.03	246.00		mg/kg	246.00	Max	(1)	49.66	Mean-N	(1)
Vanadium	mg/kg	26.48	36.81	66.10		mg/kg	36.81	Max	(1)	26.48	Mean-N	(1)
Zinc	mg/kg	1,157.46	18,416.80	7560.00		mg/kg	7560.00	Max	(1)	1157.46	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 B (Site 2)

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 B (Site 2)

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	10	EPA, 1991	10	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	3,650	EPA, 1989	3,650	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	3,300	EPA, 1995b	3,300	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	10	EPA, 1991	10	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	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, 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 16 years) male and female values.

TABLE 4.7

VALUES USED FOR DAILY INTAKE CALCULATIONS

St. Juliens Creek - Landfill B (Site 2)

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	30	EPA, 1991	30	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	10,950	EPA, 1989	10,950	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	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	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.

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 B (Site 2)

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 B (Site 2)

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 B (Site 2)

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: 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	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 B (Site 2)

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 (MM/DD/YY)
4,4'-DDD	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	RBC: N/A	N/A
Aluminum	Chronic	1.0E+00	mg/kg/day	0.27	2.7E-01	mg/kg/day	N/A	N/A	N/A	10/07/97
Antimony	Chronic	4.0E-04	mg/kg/day	0.10	4.0E-05	mg/kg/day	Blood	1001	IRIS	11/17/97
Arsenic	Chronic	3.0E-04	mg/kg/day	0.95	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	0.01	5.0E-05	mg/kg/day	NOAEL	100	IRIS	11/17/97
Iron	N/A	3.0E-01	mg/kg/day	0.05	1.5E-02	mg/kg/day	N/A	N/A	RBC: N/A	10/7/97
Manganese	Chronic	1.4E-01	mg/kg/day	1.00	1.4E-01	mg/kg/day	NOAEL	2	IRIS	11/17/97
Nickel	N/A	2.0E-02	mg/kg/day	0.10	2.0E-03	mg/kg/day	NOAEL	301	IRIS	11/17/97
Vanadium	Chronic	7.0E-03	mg/kg/day	0.02	1.4E-04	mg/kg/day	NOAEL	100	HEAST	07/00/97
Zinc	N/A	3.00E-01	mg/kg/day	0.25	7.5E-02	mg/kg/day	Blood	4	IRIS	10/7/97

N/A = Not Applicable

TABLE 6.3
CANCER TOXICITY DATA -- ORAL/DERMAL
St. Juliens Creek - Landfill B (Site 2)

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)
4,4'-DDD	2.40E-01	0.80	1.9E-01	mg/kg-day -1	B 2	IRIS	11/17/97
Aluminum	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Antimony	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)Anthracene	7.3E-01	N/A	7.3E-01	mg/kg-day -1	N/A	RBC	10/07/97
Benzo(a)Pyrene	7.3E+00	N/A	7.3E+00	mg/kg-day -1	B2	IRIS	11/17/97
Benzo(b)Fluoranthene	7.3E-01	N/A	7.3E-01	mg/kg-day -1	N/A	RBC	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
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
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
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 B (Site 2)

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	4,4'-DDD	4.2	mg/kg	4.20	mg/kg	M	8.0E-06	mg/kg-day	N/A	mg/kg/day	N/A	N/A	N/A
	Aluminum	18600	mg/kg	18600.00	mg/kg	M	3.5E-02	mg/kg-day	1.0E+00	mg/kg/day	N/A	N/A	3.53E-02
	Antimony	7	mg/kg	7.00	mg/kg	M	1.3E-05	mg/kg-day	4.0E-05	mg/kg/day	N/A	N/A	3.32E-01
	Arsenic	12	mg/kg	12.00	mg/kg	M	2.3E-05	mg/kg-day	3.0E-04	mg/kg/day	N/A	N/A	7.60E-02
	Benzo(a)Anthracene	2.3	mg/kg	2.30	mg/kg	M	4.4E-06	mg/kg-day	N/A	mg/kg/day	N/A	N/A	N/A
	Benzo(a)Pyrene	1.4	mg/kg	1.40	mg/kg	M	2.7E-06	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Benzo(b)Fluoranthene	1.7	mg/kg	1.70	mg/kg	M	3.2E-06	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Beryllium	13.4	mg/kg	13.40	mg/kg	M	2.5E-05	mg/kg-day	5.0E-03	mg/kg/day	N/A	N/A	5.09E-03
	Iron	106000	mg/kg	106000.00	mg/kg	M	2.0E-01	mg/kg-day	3.0E-01	mg/kg/day	N/A	N/A	6.71E-01
	Manganese	688	mg/kg	688.00	mg/kg	M	1.3E-03	mg/kg-day	1.4E-01	mg/kg/day	N/A	N/A	9.33E-03
	Nickel	246	mg/kg	246.00	mg/kg	M	4.7E-04	mg/kg-day	2.0E-03	mg/kg/day	N/A	N/A	2.34E-01
	Vanadium	66.1	mg/kg	66.10	mg/kg	M	1.3E-04	mg/kg-day	1.4E-04	mg/kg/day	N/A	N/A	8.97E-01
	Zinc	7560	mg/kg	7560.00	mg/kg	M	1.4E-02	mg/kg-day	7.5E-02	N/A	N/A	N/A	1.91E-01
Dermal	4,4'-DDD	4.2	mg/kg	4.20	mg/kg	M	1.1E-05	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Aluminum	18600	mg/kg	18600.00	mg/kg	M	4.7E-03	mg/kg-day	2.7E-01	mg/kg/day	N/A	N/A	1.73E-02
	Antimony	7	mg/kg	7.00	mg/kg	M	1.8E-06	mg/kg-day	4.0E-05	mg/kg/day	N/A	N/A	4.40E-02
	Arsenic	12	mg/kg	12.00	mg/kg	M	9.7E-06	mg/kg-day	2.9E-04	mg/kg/day	N/A	N/A	3.39E-02
	Benzo(a)Anthracene	2.3	mg/kg	2.30	mg/kg	M	5.8E-06	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Benzo(a)Pyrene	1.4	mg/kg	1.40	mg/kg	M	3.5E-06	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Benzo(b)Fluoranthene	1.7	mg/kg	1.70	mg/kg	M	4.3E-06	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Beryllium	13.4	mg/kg	13.40	mg/kg	M	3.4E-06	mg/kg-day	5.0E-05	mg/kg/day	N/A	N/A	6.75E-02
	Iron	106000	mg/kg	106000.00	mg/kg	M	2.7E-02	mg/kg-day	1.5E-02	mg/kg/day	N/A	N/A	1.78E+00
	Manganese	688	mg/kg	688.00	mg/kg	M	1.7E-04	mg/kg-day	1.4E-01	mg/kg/day	N/A	N/A	1.24E-03
	Nickel	246	mg/kg	246.00	mg/kg	M	6.2E-05	mg/kg-day	2.0E-03	mg/kg/day	N/A	N/A	3.10E-02
	Vanadium	66.1	mg/kg	66.10	mg/kg	M	1.7E-05	mg/kg-day	1.4E-04	mg/kg/day	N/A	N/A	1.19E-01
	Zinc	7560	mg/kg	7560.00	mg/kg	M	1.9E-03	mg/kg-day	7.5E-02	mg/kg/day	N/A	N/A	2.54E-02
												Total Hazard Index Across All Exposure Routes/Pathways	4.6E+00

M= Medium Specific

TABLE 7.5.CT
CALCULATION OF NON-CANCER HAZARDS
CENTRAL TENDENCIES
St. Juliens Creek - Landfill B (Site 2)

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	4,4'-DDD	0.49	mg/kg	0.49	mg/kg	M	9.2E-07	mg/kg-day	N/A	mg/kg/day	N/A	N/A	N/A
	Aluminum	6521.11	mg/kg	6521.11	mg/kg	M	1.2E-02	mg/kg-day	1.0E+00	mg/kg/day	N/A	N/A	1.24E-02
	Antimony	1.16	mg/kg	1.16	mg/kg	M	2.2E-06	mg/kg-day	4.0E-05	mg/kg/day	N/A	N/A	5.50E-02
	Arsenic	4.55	mg/kg	4.55	mg/kg	M	8.6E-06	mg/kg-day	3.0E-04	mg/kg/day	N/A	N/A	2.88E-02
	Benzo(a)Anthracene	0.62	mg/kg	0.62	mg/kg	M	1.2E-06	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Benzo(a)Pyrene	0.51	mg/kg	0.51	mg/kg	M	9.6E-07	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Benzo(b)Fluoranthene	0.65	mg/kg	0.65	mg/kg	M	1.2E-06	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Beryllium	1.91	mg/kg	1.91	mg/kg	M	3.6E-06	mg/kg-day	5.0E-03	mg/kg/day	N/A	N/A	7.26E-04
	Iron	28112.22	mg/kg	28112.22	mg/kg	M	5.3E-02	mg/kg-day	3.0E-01	mg/kg/day	N/A	N/A	1.78E-01
	Manganese	169.69	mg/kg	169.69	mg/kg	M	3.2E-04	mg/kg-day	1.4E-01	mg/kg/day	N/A	N/A	2.30E-03
	Nickel	49.66	mg/kg	49.66	mg/kg	M	9.4E-05	mg/kg-day	2.0E-03	mg/kg/day	N/A	N/A	4.72E-02
	Vanadium	26.48	mg/kg	26.48	mg/kg	M	5.0E-05	mg/kg-day	1.4E-04	mg/kg/day	N/A	N/A	3.59E-01
	Zinc	1157.46	mg/kg	1157.46	mg/kg	M	2.2E-03	mg/kg-day	7.5E-02	N/A	N/A	N/A	2.93E-02
Dermal	4,4'-DDD	0.49	mg/kg	0.49	mg/kg	M	1.2E-06	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Aluminum	6521.11	mg/kg	6521.11	mg/kg	M	1.6E-03	mg/kg-day	2.7E-01	mg/kg/day	N/A	N/A	6.08E-03
	Antimony	1.16	mg/kg	1.16	mg/kg	M	2.9E-07	mg/kg-day	4.0E-05	mg/kg/day	N/A	N/A	7.29E-03
	Arsenic	4.55	mg/kg	4.55	mg/kg	M	3.7E-06	mg/kg-day	2.9E-04	mg/kg/day	N/A	N/A	1.29E-02
	Benzo(a)Anthracene	0.62	mg/kg	0.62	mg/kg	M	1.5E-06	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Benzo(a)Pyrene	0.51	mg/kg	0.51	mg/kg	M	1.3E-06	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Benzo(b)Fluoranthene	0.65	mg/kg	0.65	mg/kg	M	1.6E-06	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Beryllium	1.91	mg/kg	1.91	mg/kg	M	4.8E-07	mg/kg-day	5.0E-05	mg/kg/day	N/A	N/A	9.61E-03
	Iron	28112.22	mg/kg	28112.22	mg/kg	M	7.1E-03	mg/kg-day	1.5E-02	mg/kg/day	N/A	N/A	4.72E-01
	Manganese	169.69	mg/kg	169.69	mg/kg	M	4.3E-05	mg/kg-day	1.4E-01	mg/kg/day	N/A	N/A	3.05E-04
	Nickel	49.66	mg/kg	49.66	mg/kg	M	1.2E-05	mg/kg-day	2.0E-03	mg/kg/day	N/A	N/A	6.25E-03
	Vanadium	26.48	mg/kg	26.48	mg/kg	M	6.7E-06	mg/kg-day	1.4E-04	mg/kg/day	N/A	N/A	4.76E-02
	Zinc	1157.46	mg/kg	1157.46	mg/kg	M	2.9E-04	mg/kg-day	7.5E-02	mg/kg/day	N/A	N/A	3.88E-03
												Total Hazard Index Across All Exposure Routes/Pathways	1.3E+00

M= Medium Specific

TABLE 7.6.RME
CALCULATION OF NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
St. Juliens Creek - Landfill B (Site 2)

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	4,4'-DDD	4.2	mg/kg	4.20	mg/kg	M	1.3E-06	mg/kg-day	N/A	mg/kg/day	N/A	N/A	N/A
	Aluminum	18600	mg/kg	18600.00	mg/kg	M	5.9E-03	mg/kg-day	1.0E+00	mg/kg/day	N/A	N/A	5.9E-03
	Antimony	7	mg/kg	7.00	mg/kg	M	2.2E-06	mg/kg-day	4.0E-05	mg/kg/day	N/A	N/A	5.5E-02
	Arsenic	12	mg/kg	12.00	mg/kg	M	3.8E-06	mg/kg-day	3.0E-04	mg/kg/day	N/A	N/A	1.3E-02
	Benzo(a)Anthracene	2.3	mg/kg	2.30	mg/kg	M	7.3E-07	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Benzo(a)Pyrene	1.4	mg/kg	1.40	mg/kg	M	4.4E-07	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Benzo(b)Fluoranthene	1.7	mg/kg	1.70	mg/kg	M	5.4E-07	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Beryllium	13.4	mg/kg	13.40	mg/kg	M	4.2E-06	mg/kg-day	5.0E-03	mg/kg/day	N/A	N/A	8.5E-04
	Iron	106000	mg/kg	106000.00	mg/kg	M	3.4E-02	mg/kg-day	3.0E-01	mg/kg/day	N/A	N/A	1.1E-01
	Manganese	688	mg/kg	688.00	mg/kg	M	2.2E-04	mg/kg-day	1.4E-01	mg/kg/day	N/A	N/A	1.6E-03
	Nickel	246	mg/kg	246.00	mg/kg	M	7.8E-05	mg/kg-day	2.0E-03	mg/kg/day	N/A	N/A	3.9E-02
	Vanadium	66.1	mg/kg	66.10	mg/kg	M	2.1E-05	mg/kg-day	1.4E-04	mg/kg/day	N/A	N/A	1.5E-01
	Zinc	7560	mg/kg	7560.00	mg/kg	M	2.4E-03	mg/kg-day	7.5E-02	mg/kg/day	N/A	N/A	3.2E-02
Dermal	4,4'-DDD	4.2	mg/kg	4.20	mg/kg	M	4.5E-06	mg/kg-day	N/A	mg/kg/day	N/A	N/A	N/A
	Aluminum	18600	mg/kg	18600.00	mg/kg	M	2.0E-03	mg/kg-day	2.7E-01	mg/kg/day	N/A	N/A	7.4E-03
	Antimony	7	mg/kg	7.00	mg/kg	M	2.4E-06	mg/kg-day	4.0E-05	mg/kg/day	N/A	N/A	6.0E-02
	Arsenic	12	mg/kg	12.00	mg/kg	M	4.1E-06	mg/kg-day	2.9E-04	mg/kg/day	N/A	N/A	1.4E-02
	Benzo(a)Anthracene	2.3	mg/kg	2.30	mg/kg	M	2.5E-06	mg/kg-day	N/A	mg/kg/day	N/A	N/A	N/A
	Benzo(a)Pyrene	1.4	mg/kg	1.40	mg/kg	M	1.5E-06	mg/kg-day	N/A	mg/kg/day	N/A	N/A	N/A
	Benzo(b)Fluoranthene	1.7	mg/kg	1.70	mg/kg	M	1.8E-06	mg/kg-day	N/A	mg/kg/day	N/A	N/A	N/A
	Beryllium	13.4	mg/kg	13.40	mg/kg	M	1.4E-06	mg/kg-day	5.0E-05	mg/kg/day	N/A	N/A	2.9E-02
	Iron	106000	mg/kg	106000.00	mg/kg	M	1.1E-02	mg/kg-day	1.5E-02	mg/kg/day	N/A	N/A	7.6E-01
	Manganese	688	mg/kg	688.00	mg/kg	M	7.4E-05	mg/kg-day	1.4E-01	mg/kg/day	N/A	N/A	5.3E-04
	Nickel	246	mg/kg	246.00	mg/kg	M	2.6E-05	mg/kg-day	2.0E-03	mg/kg/day	N/A	N/A	1.3E-02
	Vanadium	66.1	mg/kg	66.10	mg/kg	M	7.1E-06	mg/kg-day	1.4E-04	mg/kg/day	N/A	N/A	5.1E-02
	Zinc	7560	mg/kg	7560.00	mg/kg	M	8.1E-04	mg/kg-day	7.5E-02	mg/kg/day	N/A	N/A	1.1E-02
												Total Hazard Index Across All Exposure Routes/Pathways	1.4E+00

M= Medium Specific

TABLE 7.6.CT
CALCULATION OF NON-CANCER HAZARDS
CENTRAL TENDENCIES
St. Juliens Creek - Landfill B (Site 2)

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	4,4'-DDD	0.49	mg/kg	0.49	mg/kg	M	1.5E-07	mg/kg-day	N/A	mg/kg/day	N/A	N/A	N/A
	Aluminum	6521.11	mg/kg	6521.11	mg/kg	M	2.1E-03	mg/kg-day	1.0E+00	mg/kg/day	N/A	N/A	2.1E-03
	Antimony	1.16	mg/kg	1.16	mg/kg	M	3.7E-07	mg/kg-day	4.0E-05	mg/kg/day	N/A	N/A	9.2E-03
	Arsenic	4.55	mg/kg	4.55	mg/kg	M	1.4E-06	mg/kg-day	3.0E-04	mg/kg/day	N/A	N/A	4.8E-03
	Benzo(a)Anthracene	0.62	mg/kg	0.62	mg/kg	M	1.9E-07	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Benzo(a)Pyrene	0.51	mg/kg	0.51	mg/kg	M	1.6E-07	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Benzo(b)Fluoranthene	0.65	mg/kg	0.65	mg/kg	M	2.0E-07	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Beryllium	1.91	mg/kg	1.91	mg/kg	M	6.0E-07	mg/kg-day	5.0E-03	mg/kg/day	N/A	N/A	1.2E-04
	Iron	28112.22	mg/kg	28112.22	mg/kg	M	8.9E-03	mg/kg-day	3.0E-01	mg/kg/day	N/A	N/A	3.0E-02
	Manganese	169.69	mg/kg	169.69	mg/kg	M	5.4E-05	mg/kg-day	1.4E-01	mg/kg/day	N/A	N/A	3.8E-04
	Nickel	49.66	mg/kg	49.66	mg/kg	M	1.6E-05	mg/kg-day	2.0E-03	mg/kg/day	N/A	N/A	7.9E-03
	Vanadium	26.48	mg/kg	26.48	mg/kg	M	8.4E-06	mg/kg-day	1.4E-04	mg/kg/day	N/A	N/A	6.0E-02
	Zinc	1157.46	mg/kg	1157.46	mg/kg	M	3.7E-04	mg/kg-day	7.5E-02	mg/kg/day	N/A	N/A	4.9E-03
Dermal	4,4'-DDD	0.49	mg/kg	0.49	mg/kg	M	5.2E-07	mg/kg-day	N/A	mg/kg/day	N/A	N/A	N/A
	Aluminum	6521.11	mg/kg	6521.11	mg/kg	M	7.0E-04	mg/kg-day	2.7E-01	mg/kg/day	N/A	N/A	2.6E-03
	Antimony	1.16	mg/kg	1.16	mg/kg	M	4.0E-07	mg/kg-day	4.0E-05	mg/kg/day	N/A	N/A	9.9E-03
	Arsenic	4.55	mg/kg	4.55	mg/kg	M	1.6E-06	mg/kg-day	2.9E-04	mg/kg/day	N/A	N/A	5.5E-03
	Benzo(a)Anthracene	0.62	mg/kg	0.62	mg/kg	M	6.6E-07	mg/kg-day	N/A	mg/kg/day	N/A	N/A	N/A
	Benzo(a)Pyrene	0.51	mg/kg	0.51	mg/kg	M	5.4E-07	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Benzo(b)Fluoranthene	0.65	mg/kg	0.65	mg/kg	M	6.9E-07	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Beryllium	1.91	mg/kg	1.91	mg/kg	M	2.0E-07	mg/kg-day	5.0E-05	mg/kg/day	N/A	N/A	4.1E-03
	Iron	28112.22	mg/kg	28112.22	mg/kg	M	3.0E-03	mg/kg-day	1.5E-02	mg/kg/day	N/A	N/A	2.0E-01
	Manganese	169.69	mg/kg	169.69	mg/kg	M	1.8E-05	mg/kg-day	1.4E-01	mg/kg/day	N/A	N/A	1.3E-04
	Nickel	49.66	mg/kg	49.66	mg/kg	M	5.3E-06	mg/kg-day	2.0E-03	mg/kg/day	N/A	N/A	2.7E-03
	Vanadium	26.48	mg/kg	26.48	mg/kg	M	2.8E-06	mg/kg-day	1.4E-04	mg/kg/day	N/A	N/A	2.0E-02
	Zinc	1157.46	mg/kg	1157.46	mg/kg	M	1.2E-04	mg/kg-day	7.5E-02	mg/kg/day	N/A	N/A	1.7E-03
												Total Hazard Index Across All Exposure Routes/Pathways	3.7E-01

M= Medium Specific

TABLE 7.7.RME
CALCULATION OF NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
St. Juliens Creek - Landfill B (Site 2)

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	4,4'-DDD	4.2	mg/kg	4.20		M	8.5E-07	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Aluminum	18600	mg/kg	18600.00	mg/kg	M	3.8E-03	mg/kg-day	1.0E+00	mg/kg/day	N/A	N/A	3.8E-03
	Antimony	7	mg/kg	7.00		M	1.4E-06	mg/kg-day	4.0E-05	mg/kg/day	N/A	N/A	3.6E-02
	Arsenic	12	mg/kg	12.00	mg/kg	M	2.4E-06	mg/kg-day	3.0E-04	mg/kg/day	N/A	N/A	8.1E-03
	Benzo(a)Anthracene	2.3	mg/kg	2.30		M	4.7E-07	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Benzo(a)Pyrene	1.4	mg/kg	1.40	mg/kg	M	2.8E-07	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Benzo(b)Fluoranthene	1.7	mg/kg	1.70	mg/kg	M	3.5E-07	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Beryllium	13.4	mg/kg	13.40	mg/kg	M	2.7E-06	mg/kg-day	5.0E-03	mg/kg/day	N/A	N/A	5.5E-04
	Iron	106000	mg/kg	106000.00	mg/kg	M	2.2E-02	mg/kg-day	3.0E-01	mg/kg/day	N/A	N/A	7.2E-02
	Manganese	688	mg/kg	688.00	mg/kg	M	1.4E-04	mg/kg-day	1.4E-01	mg/kg/day	N/A	N/A	1.0E-03
	Nickel	246	mg/kg	246.00		M	5.0E-05	mg/kg-day	2.0E-03	mg/kg/day	N/A	N/A	2.5E-02
	Vanadium	66.1	mg/kg	66.10	mg/kg	M	1.3E-05	mg/kg-day	1.4E-04	mg/kg/day	N/A	N/A	9.6E-02
	Zinc	7560	mg/kg	7560.00		M	1.5E-03	mg/kg-day	7.5E-02	mg/kg/day	N/A	N/A	2.1E-02
Dermal	4,4'-DDD	4.2	mg/kg	4.20	mg/kg	M	5.0E-06	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Aluminum	18600	mg/kg	18600.00	mg/kg	M	2.2E-03	mg/kg-day	2.7E-01	mg/kg/day	N/A	N/A	8.1E-03
	Antimony	7	mg/kg	7.00	mg/kg	M	8.3E-07	mg/kg-day	4.0E-05	mg/kg/day	N/A	N/A	2.1E-02
	Arsenic	12	mg/kg	12.00	mg/kg	M	4.5E-06	mg/kg-day	2.9E-04	mg/kg/day	N/A	N/A	1.6E-02
	Benzo(a)Anthracene	2.3	mg/kg	2.30	mg/kg	M	2.7E-06	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Benzo(a)Pyrene	1.4	mg/kg	1.40	mg/kg	M	1.7E-06	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Benzo(b)Fluoranthene	1.7	mg/kg	1.70	mg/kg	M	2.0E-06	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Beryllium	13.4	mg/kg	13.40	mg/kg	M	3.4E-06	mg/kg-day	5.0E-05	mg/kg/day	N/A	N/A	6.7E-02
	Iron	106000	mg/kg	106000.00	mg/kg	M	2.7E-02	mg/kg-day	1.5E-02	mg/kg/day	N/A	N/A	1.8E+00
	Manganese	688	mg/kg	688.00	mg/kg	M	1.7E-04	mg/kg-day	1.4E-01	mg/kg/day	N/A	N/A	1.2E-03
	Nickel	246	mg/kg	246.00	mg/kg	M	6.2E-05	mg/kg-day	2.0E-03	mg/kg/day	N/A	N/A	3.1E-02
	Vanadium	66.1	mg/kg	66.10	mg/kg	M	1.7E-05	mg/kg-day	1.4E-04	mg/kg/day	N/A	N/A	1.2E-01
	Zinc	7560	mg/kg	7560.00	mg/kg	M	1.9E-03	mg/kg-day	7.5E-02	mg/kg/day	N/A	N/A	2.5E-02
												Total Hazard Index Across All Exposure Routes/Pathways	2.3E+00

M= Medium Specific

TABLE 7.7.CT
CALCULATION OF NON-CANCER HAZARDS
CENTRAL TENDENCIES
St. Juliens Creek - Landfill B (Site 2)

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	4,4'-DDD	0.49	mg/kg	0.49	mg/kg	M	9.9E-08	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Aluminum	6521.11	mg/kg	6521.11	mg/kg	M	1.3E-03	mg/kg-day	1.0E+00	mg/kg/day	N/A	N/A	1.3E-03
	Antimony	1.16	mg/kg	1.16	mg/kg	M	2.4E-07	mg/kg-day	4.0E-05	mg/kg/day	N/A	N/A	5.9E-03
	Arsenic	4.55	mg/kg	4.55	mg/kg	M	9.3E-07	mg/kg-day	3.0E-04	mg/kg/day	N/A	N/A	3.1E-03
	Benzo(a)Anthracene	0.62	mg/kg	0.62	mg/kg	M	1.3E-07	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Benzo(a)Pyrene	0.51	mg/kg	0.51	mg/kg	M	1.0E-07	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Benzo(b)Fluoranthene	0.65	mg/kg	0.65	mg/kg	M	1.3E-07	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Beryllium	1.91	mg/kg	1.91	mg/kg	M	3.9E-07	mg/kg-day	5.0E-03	mg/kg/day	N/A	N/A	7.8E-05
	Iron	28112.22	mg/kg	28112.22	mg/kg	M	5.7E-03	mg/kg-day	3.0E-01	mg/kg/day	N/A	N/A	1.9E-02
	Manganese	169.69	mg/kg	169.69	mg/kg	M	3.5E-05	mg/kg-day	1.4E-01	mg/kg/day	N/A	N/A	2.5E-04
	Nickel	49.66	mg/kg	49.66	mg/kg	M	1.0E-05	mg/kg-day	2.0E-03	mg/kg/day	N/A	N/A	5.1E-03
	Vanadium	26.48	mg/kg	26.48	mg/kg	M	5.4E-06	mg/kg-day	1.4E-04	mg/kg/day	N/A	N/A	3.8E-02
	Zinc	1157.46	mg/kg	1157.46	mg/kg	M	2.4E-04	mg/kg-day	7.5E-02	mg/kg/day	N/A	N/A	3.1E-03
Dermal	4,4'-DDD	0.49	mg/kg	0.49	mg/kg	M	5.7E-07	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Aluminum	6521.11	mg/kg	6521.11	mg/kg	M	7.7E-04	mg/kg-day	2.7E-01	mg/kg/day	N/A	N/A	2.9E-03
	Antimony	1.16	mg/kg	1.16	mg/kg	M	1.4E-07	mg/kg-day	4.0E-05	mg/kg/day	N/A	N/A	3.4E-03
	Arsenic	4.55	mg/kg	4.55	mg/kg	M	1.7E-06	mg/kg-day	2.9E-04	mg/kg/day	N/A	N/A	6.0E-03
	Benzo(a)Anthracene	0.62	mg/kg	0.62	mg/kg	M	7.3E-07	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Benzo(a)Pyrene	0.51	mg/kg	0.51	mg/kg	M	6.0E-07	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Benzo(b)Fluoranthene	0.65	mg/kg	0.65	mg/kg	M	7.6E-07	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Beryllium	1.91	mg/kg	1.91	mg/kg	M	4.8E-07	mg/kg-day	5.0E-05	mg/kg/day	N/A	N/A	9.6E-03
	Iron	28112.22	mg/kg	28112.22	mg/kg	M	7.1E-03	mg/kg-day	1.5E-02	mg/kg/day	N/A	N/A	4.7E-01
	Manganese	169.69	mg/kg	169.69	mg/kg	M	4.3E-05	mg/kg-day	1.4E-01	mg/kg/day	N/A	N/A	3.1E-04
	Nickel	49.66	mg/kg	49.66	mg/kg	M	1.2E-05	mg/kg-day	2.0E-03	mg/kg/day	N/A	N/A	6.2E-03
	Vanadium	26.48	mg/kg	26.48	mg/kg	M	6.7E-06	mg/kg-day	1.4E-04	mg/kg/day	N/A	N/A	4.8E-02
	Zinc	1157.46	mg/kg	1157.46	mg/kg	M	2.9E-04	mg/kg-day	7.5E-02	mg/kg/day	N/A	N/A	3.9E-03
												Total Hazard Index Across All Exposure Routes/Pathways	6.3E-01

M= Medium Specific

TABLE 7.8.RME
CALCULATION OF NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
St. Juliens Creek - Landfill B (Site 2)

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	4,4'-DDD	4.2	mg/kg	4.20	mg/kg	M	5.4E-05	mg/kg-day	N/A	mg/kg/day	N/A		N/A
	Aluminum	18600	mg/kg	18600.00	mg/kg	M	2.4E-01	mg/kg-day	1.0E+00	mg/kg/day	N/A	N/A	2.4E-01
	Antimony	7	mg/kg	7.00	mg/kg	M	8.9E-05	mg/kg-day	4.0E-05	mg/kg/day	N/A	N/A	2.2E+00
	Arsenic	12	mg/kg	12.00	mg/kg	M	1.5E-04	mg/kg-day	3.0E-04	mg/kg/day	N/A	N/A	5.1E-01
	Benzo(a)Anthracene	2.3	mg/kg	2.30	mg/kg	M	2.9E-05	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Benzo(a)Pyrene	1.4	mg/kg	1.40	mg/kg	M	1.8E-05	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Benzo(b)Fluoranthene	1.7	mg/kg	1.70	mg/kg	M	2.2E-05	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Beryllium	13.4	mg/kg	13.40	mg/kg	M	1.7E-04	mg/kg-day	5.0E-03	mg/kg/day	N/A	N/A	3.4E-02
	Iron	106000	mg/kg	106000.00	mg/kg	M	1.4E+00	mg/kg-day	3.0E-01	mg/kg/day	N/A	N/A	4.5E+00
	Manganese	688	mg/kg	688.00	mg/kg	M	8.8E-03	mg/kg-day	1.4E-01	mg/kg/day	N/A	N/A	6.3E-02
	Nickel	246	mg/kg	246.00	mg/kg	M	3.1E-03	mg/kg-day	2.0E-03	mg/kg/day	N/A	N/A	1.6E+00
	Vanadium	66.1	mg/kg	66.10	mg/kg	M	8.5E-04	mg/kg-day	1.4E-04	mg/kg/day	N/A	N/A	6.0E+00
	Zinc	7560	mg/kg	7560.00	mg/kg	M	9.7E-02	mg/kg-day	7.5E-02	mg/kg/day	N/A	N/A	1.3E+00
Dermal	4,4'-DDD	4.2	mg/kg	4.20	mg/kg	M	7.1E-05	mg/kg-day	N/A	mg/kg/day	N/A	N/A	N/A
	Aluminum	18600	mg/kg	18600.00	mg/kg	M	3.2E-02	mg/kg-day	2.7E-01	mg/kg/day	N/A	N/A	1.2E-01
	Antimony	7	mg/kg	7.00	mg/kg	M	1.2E-05	mg/kg-day	4.0E-05	mg/kg/day	N/A	N/A	3.0E-01
	Arsenic	12	mg/kg	12.00	mg/kg	M	6.5E-05	mg/kg-day	2.9E-04	mg/kg/day	N/A	N/A	2.3E-01
	Benzo(a)Anthracene	2.3	mg/kg	2.30	mg/kg	M	3.9E-05	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Benzo(a)Pyrene	1.4	mg/kg	1.40	mg/kg	M	2.4E-05	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Benzo(b)Fluoranthene	1.7	mg/kg	1.70	mg/kg	M	2.9E-05	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Beryllium	13.4	mg/kg	13.40	mg/kg	M	2.3E-05	mg/kg-day	5.0E-05	mg/kg/day	N/A	N/A	4.5E-01
	Iron	106000	mg/kg	106000.00	mg/kg	M	1.8E-01	mg/kg-day	1.5E-02	mg/kg/day	N/A	N/A	1.2E+01
	Manganese	688	mg/kg	688.00	mg/kg	M	1.2E-03	mg/kg-day	1.4E-01	mg/kg/day	N/A	N/A	8.3E-03
	Nickel	246	mg/kg	246.00	mg/kg	M	4.2E-04	mg/kg-day	2.0E-03	mg/kg/day	N/A	N/A	2.1E-01
	Vanadium	66.1	mg/kg	66.10	mg/kg	M	1.1E-04	mg/kg-day	1.4E-04	mg/kg/day	N/A	N/A	8.0E-01
	Zinc	7560	mg/kg	7560.00	mg/kg	M	1.3E-02	mg/kg-day	7.5E-02	mg/kg/day	N/A	N/A	1.7E-01
												Total Hazard Index Across All Exposure Routes/Pathways	3.1E+01

M= Medium Specific

TABLE 7.8.CT
CALCULATION OF NON-CANCER HAZARDS
CENTRAL TENDENCIES
St. Juliens Creek - Landfill B (Site 2)

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	4,4'-DDD	0.49	mg/kg	0.49	mg/kg	M	6.2E-06	mg/kg-day	N/A	mg/kg/day	N/A	N/A	N/A
	Aluminum	6521.11	mg/kg	6521.11	mg/kg	M	8.3E-02	mg/kg-day	1.0E+00	mg/kg/day	N/A	N/A	8.3E-02
	Antimony	1.16	mg/kg	1.16	mg/kg	M	1.5E-05	mg/kg-day	4.0E-05	mg/kg/day	N/A	N/A	3.7E-01
	Arsenic	4.55	mg/kg	4.55	mg/kg	M	5.8E-05	mg/kg-day	3.0E-04	mg/kg/day	N/A	N/A	1.9E-01
	Benzo(a)Anthracene	0.62	mg/kg	0.62	mg/kg	M	7.9E-06	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Benzo(a)Pyrene	0.51	mg/kg	0.51	mg/kg	M	6.5E-06	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Benzo(b)Fluoranthene	0.65	mg/kg	0.65	mg/kg	M	8.3E-06	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Beryllium	1.91	mg/kg	1.91	mg/kg	M	2.4E-05	mg/kg-day	5.0E-03	mg/kg/day	N/A	N/A	4.9E-03
	Iron	28112.22	mg/kg	28112.22	mg/kg	M	3.6E-01	mg/kg-day	3.0E-01	mg/kg/day	N/A	N/A	1.2E+00
	Manganese	169.69	mg/kg	169.69	mg/kg	M	2.2E-03	mg/kg-day	1.4E-01	mg/kg/day	N/A	N/A	1.5E-02
	Nickel	49.66	mg/kg	49.66	mg/kg	M	6.3E-04	mg/kg-day	2.0E-03	mg/kg/day	N/A	N/A	3.2E-01
	Vanadium	26.48	mg/kg	26.48	mg/kg	M	3.4E-04	mg/kg-day	1.4E-04	mg/kg/day	N/A	N/A	2.4E+00
	Zinc	1157.46	mg/kg	1157.46	mg/kg	M	1.5E-02	mg/kg-day	7.5E-02	N/A	N/A	N/A	2.0E-01
Dermal	4,4'-DDD	0.49	mg/kg	0.49	mg/kg	M	8.3E-06	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Aluminum	6521.11	mg/kg	6521.11	mg/kg	M	1.1E-02	mg/kg-day	2.7E-01	mg/kg/day	N/A	N/A	4.1E-02
	Antimony	1.16	mg/kg	1.16	mg/kg	M	2.0E-06	mg/kg-day	4.0E-05	mg/kg/day	N/A	N/A	4.9E-02
	Arsenic	4.55	mg/kg	4.55	mg/kg	M	2.5E-05	mg/kg-day	2.9E-04	mg/kg/day	N/A	N/A	8.7E-02
	Benzo(a)Anthracene	0.62	mg/kg	0.62	mg/kg	M	1.0E-05	mg/kg-day	N/A	mg/kg/day	N/A	N/A	N/A
	Benzo(a)Pyrene	0.51	mg/kg	0.51	mg/kg	M	8.6E-06	mg/kg-day	N/A	mg/kg/day	N/A	N/A	N/A
	Benzo(b)Fluoranthene	0.65	mg/kg	0.65	mg/kg	M	1.1E-05	mg/kg-day	N/A	mg/kg/day	N/A	N/A	N/A
	Beryllium	1.91	mg/kg	1.91	mg/kg	M	3.2E-06	mg/kg-day	5.0E-05	mg/kg/day	N/A	N/A	6.5E-02
	Iron	28112.22	mg/kg	28112.22	mg/kg	M	4.8E-02	mg/kg-day	1.5E-02	mg/kg/day	N/A	N/A	3.2E+00
	Manganese	169.69	mg/kg	169.69	mg/kg	M	2.9E-04	mg/kg-day	1.4E-01	mg/kg/day	N/A	N/A	2.1E-03
	Nickel	49.66	mg/kg	49.66	mg/kg	M	8.4E-05	mg/kg-day	2.0E-03	mg/kg/day	N/A	N/A	4.2E-02
	Vanadium	26.48	mg/kg	26.48	mg/kg	M	4.5E-05	mg/kg-day	1.4E-04	mg/kg/day	N/A	N/A	3.2E-01
	Zinc	1157.46	mg/kg	1157.46	mg/kg	M	2.0E-03	mg/kg-day	7.5E-02	mg/kg/day	N/A	N/A	2.6E-02
												Total Hazard Index Across All Exposure Routes/Pathways	8.6E+00

M= Medium Specific

TABLE 7.9.RME
CALCULATION OF NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
St. Juliens Creek - Landfill B (Site 2)

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	4,4'-DDD	4.2	mg/kg	4.20	mg/kg	M	5.8E-06	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Aluminum	18600	mg/kg	18600.00	mg/kg	M	2.5E-02	mg/kg-day	1.0E+00	mg/kg/day	N/A	N/A	2.5E-02
	Antimony	7	mg/kg	7.00	mg/kg	M	9.6E-06	mg/kg-day	4.0E-05	mg/kg/day	N/A	N/A	2.4E-01
	Arsenic	12	mg/kg	12.00	mg/kg	M	1.6E-05	mg/kg-day	3.0E-04	mg/kg/day	N/A	N/A	5.5E-02
	Benzo(a)Anthracene	2.3	mg/kg	2.30	mg/kg	M	3.2E-06	mg/kg-day	N/A	mg/kg/day	N/A	N/A	N/A
	Benzo(a)Pyrene	1.4	mg/kg	1.40	mg/kg	M	1.9E-06	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Benzo(b)Fluoranthene	1.7	mg/kg	1.70	mg/kg	M	2.3E-06	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Beryllium	13.4	mg/kg	13.40	mg/kg	M	1.8E-05	mg/kg-day	5.0E-03	mg/kg/day	N/A	N/A	3.7E-03
	Iron	106000	mg/kg	106000.00	mg/kg	M	1.5E-01	mg/kg-day	3.0E-01	mg/kg/day	N/A	N/A	4.8E-01
	Manganese	688	mg/kg	688.00	mg/kg	M	9.4E-04	mg/kg-day	1.4E-01	mg/kg/day	N/A	N/A	6.7E-03
	Nickel	246	mg/kg	246.00	mg/kg	M	3.4E-04	mg/kg-day	2.0E-03	mg/kg/day	N/A	N/A	1.7E-01
	Vanadium	66.1	mg/kg	66.10	mg/kg	M	9.1E-05	mg/kg-day	1.4E-04	mg/kg/day	N/A	N/A	6.5E-01
	Zinc	7560	mg/kg	7560.00	mg/kg	M	1.0E-02	mg/kg-day	7.5E-02	mg/kg/day	N/A	N/A	1.4E-01
Dermal	4,4'-DDD	4.2	mg/kg	4.20	mg/kg	M	3.3E-05	mg/kg-day	N/A	mg/kg/day	N/A	N/A	N/A
	Aluminum	18600	mg/kg	18600.00	mg/kg	M	1.5E-02	mg/kg-day	2.7E-01	mg/kg/day	N/A	N/A	5.5E-02
	Antimony	7	mg/kg	7.00	mg/kg	M	5.6E-06	mg/kg-day	4.0E-05	mg/kg/day	N/A	N/A	1.4E-01
	Arsenic	12	mg/kg	12.00	mg/kg	M	3.1E-05	mg/kg-day	2.9E-04	mg/kg/day	N/A	N/A	1.1E-01
	Benzo(a)Anthracene	2.3	mg/kg	2.30	mg/kg	M	1.8E-05	mg/kg-day	N/A	mg/kg/day	N/A	N/A	N/A
	Benzo(a)Pyrene	1.4	mg/kg	1.40	mg/kg	M	1.1E-05	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Benzo(b)Fluoranthene	1.7	mg/kg	1.70	mg/kg	M	1.4E-05	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Beryllium	13.4	mg/kg	13.40	mg/kg	M	1.1E-05	mg/kg-day	5.0E-05	mg/kg/day	N/A	N/A	2.1E-01
	Iron	106000	mg/kg	106000.00	mg/kg	M	8.4E-02	mg/kg-day	1.5E-02	mg/kg/day	N/A	N/A	5.6E+00
	Manganese	688	mg/kg	688.00	mg/kg	M	5.5E-04	mg/kg-day	1.4E-01	mg/kg/day	N/A	N/A	3.9E-03
	Nickel	246	mg/kg	246.00	mg/kg	M	2.0E-04	mg/kg-day	2.0E-03	mg/kg/day	N/A	N/A	9.8E-02
	Vanadium	66.1	mg/kg	66.10	mg/kg	M	5.3E-05	mg/kg-day	1.4E-04	mg/kg/day	N/A	N/A	3.8E-01
	Zinc	7560	mg/kg	7560.00	mg/kg	M	6.0E-03	mg/kg-day	7.5E-02	mg/kg/day	N/A	N/A	8.0E-02
												Total Hazard Index Across All Exposure Routes/Pathways	8.5E+00

M= Medium Specific

TABLE 7.9.CT
CALCULATION OF NON-CANCER HAZARDS
CENTRAL TENDENCIES
St. Juliens Creek - Landfill B (Site 2)

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	4,4'-DDD	0.49	mg/kg	0.49	mg/kg	M	6.7E-07	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Aluminum	6521.11	mg/kg	6521.11	mg/kg	M	8.9E-03	mg/kg-day	1.0E+00	mg/kg/day	N/A	N/A	8.9E-03
	Antimony	1.16	mg/kg	1.16	mg/kg	M	1.6E-06	mg/kg-day	4.0E-05	mg/kg-day	N/A	N/A	4.0E-02
	Arsenic	4.55	mg/kg	4.55	mg/kg	M	6.2E-06	mg/kg-day	3.0E-04	mg/kg-day	N/A	N/A	2.1E-02
	Benzo(a)Anthracene	0.62	mg/kg	0.62	mg/kg	M	8.4E-07	mg/kg-day	N/A	mg/kg-day	N/A	N/A	N/A
	Benzo(a)Pyrene	0.51	mg/kg	0.51	mg/kg	M	7.0E-07	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Benzo(b)Fluoranthene	0.65	mg/kg	0.65	mg/kg	M	8.9E-07	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Beryllium	1.91	mg/kg	1.91	mg/kg	M	2.6E-06	mg/kg-day	5.0E-03	mg/kg/day	N/A	N/A	5.2E-04
	Iron	28112.22	mg/kg	28112.22	mg/kg	M	3.9E-02	mg/kg-day	3.0E-01	mg/kg/day	N/A	N/A	1.3E-01
	Manganese	169.69	mg/kg	169.69	mg/kg	M	2.3E-04	mg/kg-day	1.4E-01	mg/kg/day	N/A	N/A	1.7E-03
	Nickel	49.66	mg/kg	49.66	mg/kg	M	6.8E-05	mg/kg-day	2.0E-03	mg/kg-day	N/A	N/A	3.4E-02
	Vanadium	26.48	mg/kg	26.48	mg/kg	M	3.6E-05	mg/kg-day	1.4E-04	mg/kg-day	N/A	N/A	2.6E-01
	Zinc	1157.46	mg/kg	1157.46	mg/kg	M	1.6E-03	mg/kg-day	7.5E-02	mg/kg-day	N/A	N/A	2.1E-02
Dermal	4,4'-DDD	0.49	mg/kg	0.49	mg/kg	M	3.9E-06	mg/kg-day	N/A	mg/kg-day	N/A	N/A	N/A
	Aluminum	6521.11	mg/kg	6521.11	mg/kg	M	5.2E-03	mg/kg-day	2.7E-01	mg/kg-day	N/A	N/A	1.9E-02
	Antimony	1.16	mg/kg	1.16	mg/kg	M	9.2E-07	mg/kg-day	4.0E-05	mg/kg-day	N/A	N/A	2.3E-02
	Arsenic	4.55	mg/kg	4.55	mg/kg	M	1.2E-05	mg/kg-day	2.9E-04	mg/kg-day	N/A	N/A	4.1E-02
	Benzo(a)Anthracene	0.62	mg/kg	0.62	mg/kg	M	4.9E-06	mg/kg-day	N/A	mg/kg-day	N/A	N/A	N/A
	Benzo(a)Pyrene	0.51	mg/kg	0.51	mg/kg	M	4.0E-06	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Benzo(b)Fluoranthene	0.65	mg/kg	0.65	mg/kg	M	5.1E-06	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Beryllium	1.91	mg/kg	1.91	mg/kg	M	1.5E-06	mg/kg-day	5.0E-05	mg/kg/day	N/A	N/A	3.0E-02
	Iron	28112.22	mg/kg	28112.22	mg/kg	M	2.2E-02	mg/kg-day	1.5E-02	mg/kg/day	N/A	N/A	1.5E+00
	Manganese	169.69	mg/kg	169.69	mg/kg	M	1.3E-04	mg/kg-day	1.4E-01	mg/kg/day	N/A	N/A	9.6E-04
	Nickel	49.66	mg/kg	49.66	mg/kg	M	3.9E-05	mg/kg-day	2.0E-03	mg/kg-day	N/A	N/A	2.0E-02
	Vanadium	26.48	mg/kg	26.48	mg/kg	M	2.1E-05	mg/kg-day	1.4E-04	mg/kg-day	N/A	N/A	1.5E-01
	Zinc	1157.46	mg/kg	1157.46	mg/kg	M	9.2E-04	mg/kg-day	7.5E-02	mg/kg-day	N/A	N/A	1.2E-02
												Total Hazard Index Across All Exposure Routes/Pathways	2.3E+00

M= Medium Specific

TABLE 7.10.RME
CALCULATION OF NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
St. Juliens Creek - Landfill B (Site 2)

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	4,4'-DDD	4.2	mg/kg	4.20	mg/kg	M	2.1E-06	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Aluminum	18600	mg/kg	18600.00	mg/kg	M	9.1E-03	mg/kg-day	1.0E+00	mg/kg/day	N/A	N/A	9.1E-03
	Antimony	7	mg/kg	7.00	mg/kg	M	3.4E-06	mg/kg-day	4.0E-05	mg/kg/day	N/A	N/A	8.6E-02
	Arsenic	12	mg/kg	12.00	mg/kg	M	5.9E-06	mg/kg-day	3.0E-04	mg/kg/day	N/A	N/A	2.0E-02
	Benzo(a)Anthracene	2.3	mg/kg	2.30	mg/kg	M	1.1E-06	mg/kg-day	N/A	mg/kg/day	N/A	N/A	N/A
	Benzo(a)Pyrene	1.4	mg/kg	1.40	mg/kg	M	6.8E-07	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Benzo(b)Fluoranthene	1.7	mg/kg	1.70	mg/kg	M	8.3E-07	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Beryllium	13.4	mg/kg	13.40	mg/kg	M	6.6E-06	mg/kg-day	5.0E-03	mg/kg/day	N/A	N/A	1.3E-03
	Iron	106000	mg/kg	106000.00	mg/kg	M	5.2E-02	mg/kg-day	3.0E-01	mg/kg/day	N/A	N/A	1.7E-01
	Manganese	688	mg/kg	688.00	mg/kg	M	3.4E-04	mg/kg-day	1.4E-01	mg/kg/day	N/A	N/A	2.4E-03
	Nickel	246	mg/kg	246.00	mg/kg	M	1.2E-04	mg/kg-day	2.0E-03	mg/kg/day	N/A	N/A	6.0E-02
	Vanadium	66.1	mg/kg	66.10	mg/kg	M	3.2E-05	mg/kg-day	1.4E-04	mg/kg/day	N/A	N/A	2.3E-01
	Zinc	7560	mg/kg	7560.00	mg/kg	M	3.7E-03	mg/kg-day	7.5E-02	mg/kg/day	N/A	N/A	4.9E-02
	4,4'-DDD	4.2	mg/kg	4.20	mg/kg	M	2.2E-05	mg/kg-day	N/A	mg/kg/day	N/A	N/A	N/A
Dermal	Aluminum	18600	mg/kg	18600.00	mg/kg	M	9.6E-03	mg/kg-day	2.7E-01	mg/kg/day	N/A	N/A	3.6E-02
	Antimony	7	mg/kg	7.00	mg/kg	M	3.6E-06	mg/kg-day	4.0E-05	mg/kg/day	N/A	N/A	9.1E-02
	Arsenic	12	mg/kg	12.00	mg/kg	M	2.0E-05	mg/kg-day	2.9E-04	mg/kg/day	N/A	N/A	7.0E-02
	Benzo(a)Anthracene	2.3	mg/kg	2.30	mg/kg	M	1.2E-05	mg/kg-day	N/A	mg/kg/day	N/A	N/A	N/A
	Benzo(a)Pyrene	1.4	mg/kg	1.40	mg/kg	M	7.3E-06	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Benzo(b)Fluoranthene	1.7	mg/kg	1.70	mg/kg	M	8.8E-06	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Beryllium	13.4	mg/kg	13.40	mg/kg	M	6.9E-06	mg/kg-day	5.0E-05	mg/kg/day	N/A	N/A	1.4E-01
	Iron	106000	mg/kg	106000.00	mg/kg	M	5.5E-02	mg/kg-day	1.5E-02	mg/kg/day	N/A	N/A	3.7E+00
	Manganese	688	mg/kg	688.00	mg/kg	M	3.6E-04	mg/kg-day	1.4E-01	mg/kg/day	N/A	N/A	2.5E-03
	Nickel	246	mg/kg	246.00	mg/kg	M	1.3E-04	mg/kg-day	2.0E-03	mg/kg/day	N/A	N/A	6.4E-02
	Vanadium	66.1	mg/kg	66.10	mg/kg	M	3.4E-05	mg/kg-day	1.4E-04	mg/kg/day	N/A	N/A	2.4E-01
	Zinc	7560	mg/kg	7560.00	mg/kg	M	3.9E-03	mg/kg-day	7.5E-02	mg/kg/day	N/A	N/A	5.2E-02
												Total Hazard Index Across All Exposure Routes/Pathways	5.0E+00

M= Medium Specific

TABLE 7.10.CT
CALCULATION OF NON-CANCER HAZARDS
CENTRAL TENDENCIES
St. Juliens Creek - Landfill B (Site 2)

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	4,4'-DDD	0.49	mg/kg	0.49	mg/kg	M	2.4E-07	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Aluminum	6521.11	mg/kg	6521.11	mg/kg	M	3.2E-03	mg/kg-day	1.0E+00	mg/kg/day	N/A	N/A	3.2E-03
	Antimony	1.16	mg/kg	1.16	mg/kg	M	5.7E-07	mg/kg-day	4.0E-05	mg/kg-day	N/A	N/A	1.4E-02
	Arsenic	4.55	mg/kg	4.55	mg/kg	M	2.2E-06	mg/kg-day	3.0E-04	mg/kg-day	N/A	N/A	7.4E-03
	Benzo(a)Anthracene	0.62	mg/kg	0.62	mg/kg	M	3.0E-07	mg/kg-day	N/A	mg/kg-day	N/A	N/A	N/A
	Benzo(a)Pyrene	0.51	mg/kg	0.51	mg/kg	M	2.5E-07	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Benzo(b)Fluoranthene	0.65	mg/kg	0.65	mg/kg	M	3.2E-07	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Beryllium	1.91	mg/kg	1.91	mg/kg	M	9.3E-07	mg/kg-day	5.0E-03	mg/kg/day	N/A	N/A	1.9E-04
	Iron	28112.22	mg/kg	28112.22	mg/kg	M	1.4E-02	mg/kg-day	3.0E-01	mg/kg/day	N/A	N/A	4.6E-02
	Manganese	169.69	mg/kg	169.69	mg/kg	M	8.3E-05	mg/kg-day	1.4E-01	mg/kg/day	N/A	N/A	5.9E-04
	Nickel	49.66	mg/kg	49.66	mg/kg	M	2.4E-05	mg/kg-day	2.0E-03	mg/kg-day	N/A	N/A	1.2E-02
	Vanadium	26.48	mg/kg	26.48	mg/kg	M	1.3E-05	mg/kg-day	1.4E-04	mg/kg-day	N/A	N/A	9.3E-02
	Zinc	1157.46	mg/kg	1157.46	mg/kg	M	5.7E-04	mg/kg-day	7.5E-02	mg/kg-day	N/A	N/A	7.6E-03
	4,4'-DDD	0.49	mg/kg	0.49	mg/kg	M	2.5E-06	mg/kg-day	N/A	mg/kg-day	N/A	N/A	N/A
Dermal	Aluminum	6521.11	mg/kg	6521.11	mg/kg	M	3.4E-03	mg/kg-day	2.7E-01	mg/kg-day	N/A	N/A	1.3E-02
	Antimony	1.16	mg/kg	1.16	mg/kg	M	6.0E-07	mg/kg-day	4.0E-05	mg/kg-day	N/A	N/A	1.5E-02
	Arsenic	4.55	mg/kg	4.55	mg/kg	M	7.6E-06	mg/kg-day	2.9E-04	mg/kg-day	N/A	N/A	2.7E-02
	Benzo(a)Anthracene	0.62	mg/kg	0.62	mg/kg	M	3.2E-06	mg/kg-day	N/A	mg/kg-day	N/A	N/A	N/A
	Benzo(a)Pyrene	0.51	mg/kg	0.51	mg/kg	M	2.6E-06	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Benzo(b)Fluoranthene	0.65	mg/kg	0.65	mg/kg	M	3.4E-06	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Beryllium	1.91	mg/kg	1.91	mg/kg	M	9.9E-07	mg/kg-day	5.0E-05	mg/kg/day	N/A	N/A	2.0E-02
	Iron	28112.22	mg/kg	28112.22	mg/kg	M	1.5E-02	mg/kg-day	1.5E-02	mg/kg/day	N/A	N/A	9.7E-01
	Manganese	169.69	mg/kg	169.69	mg/kg	M	8.8E-05	mg/kg-day	1.4E-01	mg/kg/day	N/A	N/A	6.3E-04
	Nickel	49.66	mg/kg	49.66	mg/kg	M	2.6E-05	mg/kg-day	2.0E-03	mg/kg-day	N/A	N/A	1.3E-02
	Vanadium	26.48	mg/kg	26.48	mg/kg	M	1.4E-05	mg/kg-day	1.4E-04	mg/kg-day	N/A	N/A	9.8E-02
	Zinc	1157.46	mg/kg	1157.46	mg/kg	M	6.0E-04	mg/kg-day	7.5E-02	mg/kg-day	N/A	N/A	8.0E-03
												Total Hazard Index Across All Exposure Routes/Pathways	1.3E+00

TABLE 7.11.RME
CALCULATION OF NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
St. Juliens Creek - Landfill B (Site 2)

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	4,4'-DDD	4.2	mg/kg	4.20	mg/kg	M	2.0E-05	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Aluminum	18600	mg/kg	18600.00	mg/kg	M	8.7E-02	mg/kg-day	1.0E+00	mg/kg/day	N/A	N/A	8.7E-02
	Antimony	7	mg/kg	7.00	mg/kg	M	3.3E-05	mg/kg-day	4.0E-05	mg/kg/day	N/A	N/A	8.2E-01
	Arsenic	12	mg/kg	12.00	mg/kg	M	5.6E-05	mg/kg-day	3.0E-04	mg/kg/day	N/A	N/A	1.9E-01
	Benzo(a)Anthracene	2.3	mg/kg	2.30	mg/kg	M	1.1E-05	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Benzo(a)Pyrene	1.4	mg/kg	1.40	mg/kg	M	6.6E-06	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Benzo(b)Fluoranthene	1.7	mg/kg	1.70	mg/kg	M	8.0E-06	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Beryllium	13.4	mg/kg	13.40	mg/kg	M	6.3E-05	mg/kg-day	5.0E-03	mg/kg/day	N/A	N/A	1.3E-02
	Iron	106000	mg/kg	106000.00	mg/kg	M	5.0E-01	mg/kg-day	3.0E-01	mg/kg/day	N/A	N/A	1.7E+00
	Manganese	688	mg/kg	688.00	mg/kg	M	3.2E-03	mg/kg-day	1.4E-01	mg/kg/day	N/A	N/A	2.3E-02
	Nickel	246	mg/kg	246.00	mg/kg	M	1.2E-03	mg/kg-day	2.0E-03	mg/kg/day	N/A	N/A	5.8E-01
	Vanadium	66.1	mg/kg	66.10	mg/kg	M	3.1E-04	mg/kg-day	1.4E-04	mg/kg/day	N/A	N/A	2.2E+00
	Zinc	7560	mg/kg	7560.00	mg/kg	M	3.5E-02	mg/kg-day	7.5E-02	mg/kg/day	N/A	N/A	4.7E-01
Dermal	4,4'-DDD	4.2	mg/kg	4.20	mg/kg	M	2.2E-05	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Aluminum	18600	mg/kg	18600.00	mg/kg	M	9.6E-03	mg/kg-day	2.7E-01	mg/kg/day	N/A	N/A	3.6E-02
	Antimony	7	mg/kg	7.00	mg/kg	M	3.6E-06	mg/kg-day	4.0E-05	mg/kg/day	N/A	N/A	9.1E-02
	Arsenic	12	mg/kg	12.00	mg/kg	M	2.0E-05	mg/kg-day	2.9E-04	mg/kg/day	N/A	N/A	7.0E-02
	Benzo(a)Anthracene	2.3	mg/kg	2.30	mg/kg	M	1.2E-05	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Benzo(a)Pyrene	1.4	mg/kg	1.40	mg/kg	M	7.2E-06	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Benzo(b)Fluoranthene	1.7	mg/kg	1.70	mg/kg	M	8.8E-06	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Beryllium	13.4	mg/kg	13.40	mg/kg	M	6.9E-06	mg/kg-day	5.0E-05	mg/kg/day	N/A	N/A	1.4E-01
	Iron	106000	mg/kg	106000.00	mg/kg	M	5.5E-02	mg/kg-day	1.5E-02	mg/kg/day	N/A	N/A	3.7E+00
	Manganese	688	mg/kg	688.00	mg/kg	M	3.6E-04	mg/kg-day	1.4E-01	mg/kg/day	N/A	N/A	2.5E-03
	Nickel	246	mg/kg	246.00	mg/kg	M	1.3E-04	mg/kg-day	2.0E-03	mg/kg/day	N/A	N/A	6.4E-02
	Vanadium	66.1	mg/kg	66.10	mg/kg	M	3.4E-05	mg/kg-day	1.4E-04	mg/kg/day	N/A	N/A	2.4E-01
	Zinc	7560	mg/kg	7560.00	mg/kg	M	3.9E-03	mg/kg-day	7.5E-02	mg/kg/day	N/A	N/A	5.2E-02
												Total Hazard Index Across All Exposure Routes/Pathways	9.5E+00

TABLE 7.11.CT
CALCULATION OF NON-CANCER HAZARDS
CENTRAL TENDENCIES
St. Juliens Creek - Landfill B (Site 2)

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	4,4'-DDD	0.49	mg/kg	0.49	mg/kg	M	2.3E-06	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Aluminum	6521.11	mg/kg	6521.11	mg/kg	M	3.1E-02	mg/kg-day	1.0E+00	mg/kg/day	N/A	N/A	3.1E-02
	Antimony	1.16	mg/kg	1.16	mg/kg	M	5.4E-06	mg/kg-day	4.0E-05	mg/kg/day	N/A	N/A	1.4E-01
	Arsenic	4.55	mg/kg	4.55	mg/kg	M	2.1E-05	mg/kg-day	3.0E-04	mg/kg/day	N/A	N/A	7.1E-02
	Benzo(a)Anthracene	0.62	mg/kg	0.62	mg/kg	M	2.9E-06	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Benzo(a)Pyrene	0.51	mg/kg	0.51	mg/kg	M	2.4E-06	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Benzo(b)Fluoranthene	0.65	mg/kg	0.65	mg/kg	M	3.0E-06	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Beryllium	1.91	mg/kg	1.91	mg/kg	M	8.9E-06	mg/kg-day	5.0E-03	mg/kg/day	N/A	N/A	1.8E-03
	Iron	28112.22	mg/kg	28112.22	mg/kg	M	1.3E-01	mg/kg-day	3.0E-01	mg/kg/day	N/A	N/A	4.4E-01
	Manganese	169.69	mg/kg	169.69	mg/kg	M	7.9E-04	mg/kg-day	1.4E-01	mg/kg/day	N/A	N/A	5.7E-03
	Nickel	49.66	mg/kg	49.66	mg/kg	M	2.3E-04	mg/kg-day	2.0E-03	mg/kg/day	N/A	N/A	1.2E-01
	Vanadium	26.48	mg/kg	26.48	mg/kg	M	1.2E-04	mg/kg-day	1.4E-04	mg/kg/day	N/A	N/A	8.9E-01
	Zinc	1157.46	mg/kg	1157.46	mg/kg	M	5.4E-03	mg/kg-day	7.5E-02	mg/kg/day	N/A	N/A	7.2E-02
Dermal	4,4'-DDD	0.49	mg/kg	0.49	mg/kg	M	2.5E-06	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Aluminum	6521.11	mg/kg	6521.11	mg/kg	M	3.4E-03	mg/kg-day	2.7E-01	mg/kg/day	N/A	N/A	1.2E-02
	Antimony	1.16	mg/kg	1.16	mg/kg	M	6.0E-07	mg/kg-day	4.0E-05	mg/kg/day	N/A	N/A	1.5E-02
	Arsenic	4.55	mg/kg	4.55	mg/kg	M	7.5E-06	mg/kg-day	2.9E-04	mg/kg/day	N/A	N/A	2.6E-02
	Benzo(a)Anthracene	0.62	mg/kg	0.62	mg/kg	M	3.2E-06	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Benzo(a)Pyrene	0.51	mg/kg	0.51	mg/kg	M	2.6E-06	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Benzo(b)Fluoranthene	0.65	mg/kg	0.65	mg/kg	M	3.3E-06	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Beryllium	1.91	mg/kg	1.91	mg/kg	M	9.9E-07	mg/kg-day	5.0E-05	mg/kg/day	N/A	N/A	2.0E-02
	Iron	28112.22	mg/kg	28112.22	mg/kg	M	1.5E-02	mg/kg-day	1.5E-02	mg/kg/day	N/A	N/A	9.7E-01
	Manganese	169.69	mg/kg	169.69	mg/kg	M	8.8E-05	mg/kg-day	1.4E-01	mg/kg/day	N/A	N/A	6.3E-04
	Nickel	49.66	mg/kg	49.66	mg/kg	M	2.6E-05	mg/kg-day	2.0E-03	mg/kg/day	N/A	N/A	1.3E-02
	Vanadium	26.48	mg/kg	26.48	mg/kg	M	1.4E-05	mg/kg-day	1.4E-04	mg/kg/day	N/A	N/A	9.8E-02
	Zinc	1157.46	mg/kg	1157.46	mg/kg	M	6.0E-04	mg/kg-day	7.5E-02	mg/kg/day	N/A	N/A	8.0E-03
												Total Hazard Index Across All Exposure Routes/Pathways	2.8E+00

TABLE 8.5.RME
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
St. Juliens Creek - Landfill B (Site 2)

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 (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
Ingestion	4,4'-DDD	4.2	mg/kg	4.20	mg/kg	M	6.8E-07	mg/kg-day	0.192	mg/kg-day -1	1.3E-07
	Aluminum	18600	mg/kg	18600.00	mg/kg	M	3.0E-03	mg/kg-day	N/A	N/A	N/A
	Antimony	7	mg/kg	7.00	mg/kg	M	1.1E-06	mg/kg-day	N/A	N/A	N/A
	Arsenic	12	mg/kg	12.00	mg/kg	M	2.0E-06	mg/kg-day	1.5E+00	mg/kg-day -1	2.9E-06
	Benzo(a)Anthracene	2.3	mg/kg	2.30	mg/kg	M	3.7E-07	mg/kg-day	0.73	mg/kg-day -1	2.7E-07
	Benzo(a)Pyrene	1.4	mg/kg	1.40	mg/kg	M	2.3E-07	mg/kg-day	7.3E+00	mg/kg-day -1	1.7E-06
	Benzo(b)Fluoranthene	1.7	mg/kg	1.70	mg/kg	M	2.8E-07	mg/kg-day	7.3E-01	mg/kg-day -1	2.0E-07
	Beryllium	13.4	mg/kg	13.40	mg/kg	M	2.2E-06	mg/kg-day	4.3E+00	mg/kg-day -1	9.4E-06
	Iron	106000	mg/kg	106000.00	mg/kg	M	1.7E-02	mg/kg-day	N/A	N/A	N/A
	Manganese	688	mg/kg	688.00	mg/kg	M	1.1E-04	mg/kg-day	N/A	N/A	N/A
	Nickel	246	mg/kg	246.00	mg/kg	M	4.0E-05	mg/kg-day	N/A	N/A	N/A
	Vanadium	66.1	mg/kg	66.10	mg/kg	M	1.1E-05	mg/kg-day	N/A	N/A	N/A
	Zinc	7560	mg/kg	7560.00	mg/kg	M	1.2E-03	mg/kg-day	N/A	N/A	N/A
Dermal	4,4'-DDD	4.2	mg/kg	4.20	mg/kg	M	9.1E-07	mg/kg-day	0.192	mg/kg-day -1	1.7E-07
	Aluminum	18600	mg/kg	18600.00	mg/kg	M	4.0E-04	mg/kg-day	N/A	N/A	N/A
	Antimony	7	mg/kg	7.00	mg/kg	M	1.5E-07	mg/kg-day	N/A	N/A	N/A
	Arsenic	12	mg/kg	12.00	mg/kg	M	2.6E-07	mg/kg-day	1.6E+00	mg/kg-day -1	4.1E-07
	Benzo(a)Anthracene	2.3	mg/kg	2.30	mg/kg	M	5.0E-08	mg/kg-day	N/A	N/A	N/A
	Benzo(a)Pyrene	1.4	mg/kg	1.40	mg/kg	M	3.0E-08	mg/kg-day	N/A	N/A	N/A
	Benzo(b)Fluoranthene	1.7	mg/kg	1.70	mg/kg	M	3.7E-08	mg/kg-day	N/A	N/A	N/A
	Beryllium	13.4	mg/kg	13.40	mg/kg	M	2.9E-07	mg/kg-day	4.3E+02	mg/kg-day -1	1.2E-04
	Iron	106000	mg/kg	106000.00	mg/kg	M	2.3E-03	mg/kg-day	N/A	N/A	N/A
	Manganese	688	mg/kg	688.00	mg/kg	M	1.5E-05	mg/kg-day	N/A	N/A	N/A
	Nickel	246	mg/kg	246.00	mg/kg	M	5.3E-06	mg/kg-day	N/A	N/A	N/A
	Vanadium	66.1	mg/kg	66.10	mg/kg	M	1.4E-06	mg/kg-day	N/A	N/A	N/A
	Zinc	7560	mg/kg	7560.00	mg/kg	M	1.6E-04	mg/kg-day	N/A	N/A	N/A
										Total Risk Across All Exposure Routes/Pathways	1.4E-04

TABLE 8.5.CT
CALCULATION OF CANCER RISKS
CENTRAL TENDENCIES
St. Juliens Creek - Landfill B (Site 2)

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 (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
Ingestion	4,4'-DDD	0.49	mg/kg	0.49	mg/kg	M	7.9E-08	mg/kg-day	0.192	mg/kg-day -1	1.5E-08
	Aluminum	6521.11	mg/kg	6521.11	mg/kg	M	1.1E-03	mg/kg-day	N/A	N/A	N/A
	Antimony	1.16	mg/kg	1.16	mg/kg	M	1.9E-07	mg/kg-day	N/A	N/A	N/A
	Arsenic	4.55	mg/kg	4.55	mg/kg	M	7.4E-07	mg/kg-day	1.5E+00	mg/kg-day -1	1.1E-06
	Benzo(a)Anthracene	0.62	mg/kg	0.62	mg/kg	M	1.0E-07	mg/kg-day	0.73	mg/kg-day -1	7.3E-08
	Benzo(a)Pyrene	0.51	mg/kg	0.51	mg/kg	M	8.3E-08	mg/kg-day	7.3E+00	mg/kg-day -1	6.0E-07
	Benzo(b)Fluoranthene	0.65	mg/kg	0.65	mg/kg	M	1.1E-07	mg/kg-day	7.3E-01	mg/kg-day -1	7.7E-08
	Beryllium	1.91	mg/kg	1.91	mg/kg	M	3.1E-07	mg/kg-day	4.3E+00	mg/kg-day -1	1.3E-06
	Iron	28112.22	mg/kg	28112.22	mg/kg	M	4.6E-03	mg/kg-day	N/A	N/A	N/A
	Manganese	169.69	mg/kg	169.69	mg/kg	M	2.8E-05	mg/kg-day	N/A	N/A	N/A
	Nickel	49.66	mg/kg	49.66	mg/kg	M	8.1E-06	mg/kg-day	N/A	N/A	N/A
	Vanadium	26.48	mg/kg	26.48	mg/kg	M	4.3E-06	mg/kg-day	N/A	N/A	N/A
	Zinc	1157.46	mg/kg	1157.46	mg/kg	M	1.9E-04	mg/kg-day	N/A	N/A	N/A
Dermal	4,4'-DDD	0.49	mg/kg	0.49	mg/kg	M	1.0E-07	mg/kg-day	0.192	mg/kg-day -1	2.0E-08
	Aluminum	6521.11	mg/kg	6521.11	mg/kg	M	1.4E-04	mg/kg-day	N/A	N/A	N/A
	Antimony	1.16	mg/kg	1.16	mg/kg	M	2.5E-08	mg/kg-day	N/A	N/A	N/A
	Arsenic	4.55	mg/kg	4.55	mg/kg	M	9.8E-08	mg/kg-day	1.6E+00	mg/kg-day -1	1.6E-07
	Benzo(a)Anthracene	0.62	mg/kg	0.62	mg/kg	M	1.3E-08	mg/kg-day	N/A	N/A	N/A
	Benzo(a)Pyrene	0.51	mg/kg	0.51	mg/kg	M	1.1E-08	mg/kg-day	N/A	N/A	N/A
	Benzo(b)Fluoranthene	0.65	mg/kg	0.65	mg/kg	M	1.4E-08	mg/kg-day	N/A	N/A	N/A
	Beryllium	1.91	mg/kg	1.91	mg/kg	M	4.1E-08	mg/kg-day	4.3E+02	mg/kg-day -1	1.8E-05
	Iron	28112.22	mg/kg	28112.22	mg/kg	M	6.1E-04	mg/kg-day	N/A	N/A	N/A
	Manganese	169.69	mg/kg	169.69	mg/kg	M	3.7E-06	mg/kg-day	N/A	N/A	N/A
	Nickel	49.66	mg/kg	49.66	mg/kg	M	1.1E-06	mg/kg-day	N/A	N/A	N/A
	Vanadium	26.48	mg/kg	26.48	mg/kg	M	5.7E-07	mg/kg-day	N/A	N/A	N/A
	Zinc	1157.46	mg/kg	1157.46	mg/kg	M	2.5E-05	mg/kg-day	N/A	N/A	N/A
										Total Risk Across All Exposure Routes/Pathways	2.1E-05

TABLE 8.6.RME
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
St. Juliens Creek - Landfill B (Site 2)

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 (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
Ingestion	4,4'-DDD	4.2	mg/kg	4.20	mg/kg	M	2.1E-07	mg/kg-day	0.192	mg/kg-day	4.0E-08
	Aluminum	18600	mg/kg	18600.00	mg/kg	M	9.3E-04	mg/kg-day	N/A	N/A	N/A
	Antimony	7	mg/kg	7.00	mg/kg	M	3.5E-07	mg/kg-day	N/A	N/A	N/A
	Arsenic	12	mg/kg	12.00	mg/kg	M	6.0E-07	mg/kg-day	1.5E+00	mg/kg-day -1	9.0E-07
	Benzo(a)Anthracene	2.3	mg/kg	2.30	mg/kg	M	1.1E-07	mg/kg-day	0.73	mg/kg-day	8.4E-08
	Benzo(a)Pyrene	1.4	mg/kg	1.40	mg/kg	M	7.0E-08	mg/kg-day	7.3E+00	mg/kg-day -1	5.1E-07
	Benzo(b)Fluoranthene	1.7	mg/kg	1.70	mg/kg	M	8.5E-08	mg/kg-day	7.3E-01	mg/kg-day -1	6.2E-08
	Beryllium	13.4	mg/kg	13.40	mg/kg	M	6.7E-07	mg/kg-day	4.3E+00	mg/kg-day -1	2.9E-06
	Iron	106000	mg/kg	106000.00	mg/kg	M	5.3E-03	mg/kg-day	N/A	N/A	N/A
	Manganese	688	mg/kg	688.00	mg/kg	M	3.4E-05	mg/kg-day	N/A	N/A	N/A
	Nickel	246	mg/kg	246.00	mg/kg	M	1.2E-05	mg/kg-day	N/A	N/A	N/A
	Vanadium	66.1	mg/kg	66.10	mg/kg	M	3.3E-06	mg/kg-day	N/A	N/A	N/A
	Zinc	7560	mg/kg	7560.00	mg/kg	M	3.8E-04	mg/kg-day	N/A	N/A	N/A
Dermal	4,4'-DDD	4.2	mg/kg	4.20	mg/kg	M	7.1E-07	mg/kg-day	0.192	mg/kg-day	1.4E-07
	Aluminum	18600	mg/kg	18600.00	mg/kg	M	3.1E-04	mg/kg-day	N/A	N/A	N/A
	Antimony	7	mg/kg	7.00	mg/kg	M	1.2E-07	mg/kg-day	N/A	N/A	N/A
	Arsenic	12	mg/kg	12.00	mg/kg	M	6.5E-07	mg/kg-day	1.6E+00	mg/kg-day -1	1.0E-06
	Benzo(a)Anthracene	2.3	mg/kg	2.30	mg/kg	M	3.9E-07	mg/kg-day	N/A	N/A	N/A
	Benzo(a)Pyrene	1.4	mg/kg	1.40	mg/kg	M	2.4E-07	mg/kg-day	N/A	N/A -1	N/A
	Benzo(b)Fluoranthene	1.7	mg/kg	1.70	mg/kg	M	2.9E-07	mg/kg-day	N/A	N/A -1	N/A
	Beryllium	13.4	mg/kg	13.40	mg/kg	M	2.3E-07	mg/kg-day	4.3E+02	mg/kg-day -1	9.7E-05
	Iron	106000	mg/kg	106000.00	mg/kg	M	1.8E-03	mg/kg-day	N/A	N/A	N/A
	Manganese	688	mg/kg	688.00	mg/kg	M	1.2E-05	mg/kg-day	N/A	N/A	N/A
	Nickel	246	mg/kg	246.00	mg/kg	M	4.1E-06	mg/kg-day	N/A	N/A	N/A
	Vanadium	66.1	mg/kg	66.10	mg/kg	M	1.1E-06	mg/kg-day	N/A	N/A	N/A
	Zinc	7560	mg/kg	7560.00	mg/kg	M	1.3E-04	mg/kg-day	N/A	N/A	N/A
										Total Risk Across All Exposure Routes/Pathways	1.0E-04

TABLE 8.6.CT
CALCULATION OF CANCER RISKS
CENTRAL TENDENCIES
St. Juliens Creek - Landfill B (Site 2)

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 (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
Ingestion	4,4'-DDD	0.49	mg/kg	0.49	mg/kg	M	2.4E-08	mg/kg-day	0.192	mg/kg-day	4.6E-09
	Aluminum	6521.11	mg/kg	6521.11	mg/kg	M	3.2E-04	mg/kg-day	N/A	N/A	N/A
	Antimony	1.16	mg/kg	1.16	mg/kg	M	5.8E-08	mg/kg-day	N/A	N/A	N/A
	Arsenic	4.55	mg/kg	4.55	mg/kg	M	2.3E-07	mg/kg-day	1.5E+00	mg/kg-day -1	3.4E-07
	Benzo(a)Anthracene	0.62	mg/kg	0.62	mg/kg	M	3.1E-08	mg/kg-day	0.73	mg/kg-day	2.2E-08
	Benzo(a)Pyrene	0.51	mg/kg	0.51	mg/kg	M	2.5E-08	mg/kg-day	7.3E+00	mg/kg-day -1	1.8E-07
	Benzo(b)Fluoranthene	0.65	mg/kg	0.65	mg/kg	M	3.2E-08	mg/kg-day	7.3E-01	mg/kg-day -1	2.3E-08
	Beryllium	1.91	mg/kg	1.91	mg/kg	M	9.5E-08	mg/kg-day	4.3E+00	mg/kg-day -1	4.1E-07
	Iron	28112.22	mg/kg	28112.22	mg/kg	M	1.4E-03	mg/kg-day	N/A	N/A	N/A
	Manganese	169.69	mg/kg	169.69	mg/kg	M	8.4E-06	mg/kg-day	N/A	N/A	N/A
	Nickel	49.66	mg/kg	49.66	mg/kg	M	2.5E-06	mg/kg-day	N/A	N/A	N/A
	Vanadium	26.48	mg/kg	26.48	mg/kg	M	1.3E-06	mg/kg-day	N/A	N/A	N/A
	Zinc	1157.46	mg/kg	1157.46	mg/kg	M	5.8E-05	mg/kg-day	N/A	N/A	N/A
Dermal	4,4'-DDD	0.49	mg/kg	0.49	mg/kg	M	8.2E-08	mg/kg-day	0.192	mg/kg-day	1.6E-08
	Aluminum	6521.11	mg/kg	6521.11	mg/kg	M	1.1E-04	mg/kg-day	N/A	N/A	N/A
	Antimony	1.16	mg/kg	1.16	mg/kg	M	1.9E-08	mg/kg-day	N/A	N/A	N/A
	Arsenic	4.55	mg/kg	4.55	mg/kg	M	2.4E-07	mg/kg-day	1.6E+00	mg/kg-day -1	3.9E-07
	Benzo(a)Anthracene	0.62	mg/kg	0.62	mg/kg	M	1.0E-07	mg/kg-day	N/A	N/A	N/A
	Benzo(a)Pyrene	0.51	mg/kg	0.51	mg/kg	M	8.5E-08	mg/kg-day	N/A	N/A -1	N/A
	Benzo(b)Fluoranthene	0.65	mg/kg	0.65	mg/kg	M	1.1E-07	mg/kg-day	N/A	N/A -1	N/A
	Beryllium	1.91	mg/kg	1.91	mg/kg	M	3.2E-08	mg/kg-day	4.3E+02	mg/kg-day -1	1.4E-05
	Iron	28112.22	mg/kg	28112.22	mg/kg	M	4.7E-04	mg/kg-day	N/A	N/A	N/A
	Manganese	169.69	mg/kg	169.69	mg/kg	M	2.9E-06	mg/kg-day	N/A	N/A	N/A
	Nickel	49.66	mg/kg	49.66	mg/kg	M	8.3E-07	mg/kg-day	N/A	N/A	N/A
	Vanadium	26.48	mg/kg	26.48	mg/kg	M	4.5E-07	mg/kg-day	N/A	N/A	N/A
	Zinc	1157.46	mg/kg	1157.46	mg/kg	M	1.9E-05	mg/kg-day	N/A	N/A	N/A
										Total Risk Across All Exposure Routes/Pathways	1.5E-05

TABLE 8.7.RME
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
St. Juliens Creek - Landfill B (Site 2)

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	4,4'-DDD	4.2	mg/kg	4.20	mg/kg	M	2.9E-07	mg/kg-day	0.192	mg/kg-day -1	5.6E-08
	Aluminum	18600	mg/kg	18600.00	mg/kg	M	1.3E-03	mg/kg-day	N/A	N/A	N/A
	Antimony	7	mg/kg	7.00	mg/kg	M	4.9E-07	mg/kg-day	N/A	N/A	N/A
	Arsenic	12	mg/kg	12.00	mg/kg	M	8.4E-07	mg/kg-day	1.5E+00	mg/kg-day -1	1.3E-06
	Benzo(a)Anthracene	2.3	mg/kg	2.30	mg/kg	M	1.6E-07	mg/kg-day	0.73	mg/kg-day -1	1.2E-07
	Benzo(a)Pyrene	1.4	mg/kg	1.40	mg/kg	M	9.8E-08	mg/kg-day	7.3E+00	mg/kg-day -1	7.1E-07
	Benzo(b)Fluoranthene	1.7	mg/kg	1.70	mg/kg	M	1.2E-07	mg/kg-day	7.3E-01	mg/kg-day -1	8.7E-08
	Beryllium	13.4	mg/kg	13.40	mg/kg	M	9.4E-07	mg/kg-day	4.3E+00	mg/kg-day -1	4.0E-06
	Iron	106000	mg/kg	106000.00	mg/kg	M	7.4E-03	mg/kg-day	N/A	N/A	N/A
	Manganese	688	mg/kg	688.00	mg/kg	M	4.8E-05	mg/kg-day	N/A	N/A	N/A
	Nickel	246	mg/kg	246.00	mg/kg	M	1.7E-05	mg/kg-day	N/A	N/A	N/A
	Vanadium	66.1	mg/kg	66.10	mg/kg	M	4.6E-06	mg/kg-day	N/A	N/A	N/A
	Zinc	7560	mg/kg	7560.00	mg/kg	M	5.3E-04	mg/kg-day	N/A	N/A	N/A
Dermal	4,4'-DDD	4.2	mg/kg	4.20	mg/kg	M	7.1E-07	mg/kg-day	0.192	mg/kg-day -1	1.4E-07
	Aluminum	18600	mg/kg	18600.00	mg/kg	M	3.1E-04	mg/kg-day	N/A	N/A	N/A
	Antimony	7	mg/kg	7.00	mg/kg	M	1.2E-07	mg/kg-day	N/A	N/A	N/A
	Arsenic	12	mg/kg	12.00	mg/kg	M	6.5E-07	mg/kg-day	1.6E+00	mg/kg-day -1	1.0E-06
	Benzo(a)Anthracene	2.3	mg/kg	2.30	mg/kg	M	3.9E-07	mg/kg-day	N/A	N/A	N/A
	Benzo(a)Pyrene	1.4	mg/kg	1.40	mg/kg	M	2.4E-07	mg/kg-day	N/A	N/A	N/A
	Benzo(b)Fluoranthene	1.7	mg/kg	1.70	mg/kg	M	2.9E-07	mg/kg-day	N/A	N/A	N/A
	Beryllium	13.4	mg/kg	13.40	mg/kg	M	2.3E-07	mg/kg-day	4.3E+02	mg/kg-day -1	9.7E-05
	Iron	106000	mg/kg	106000.00	mg/kg	M	1.8E-03	mg/kg-day	N/A	N/A	N/A
	Manganese	688	mg/kg	688.00	mg/kg	M	1.2E-05	mg/kg-day	N/A	N/A	N/A
	Nickel	246	mg/kg	246.00	mg/kg	M	4.1E-06	mg/kg-day	N/A	N/A	N/A
	Vanadium	66.1	mg/kg	66.10	mg/kg	M	1.1E-06	mg/kg-day	N/A	N/A	N/A
	Zinc	7560	mg/kg	7560.00	mg/kg	M	1.3E-04	mg/kg-day	N/A	N/A	N/A
										Total Risk Across All Exposure Routes/Pathways	1.0E-04

TABLE 8.7.CT
CALCULATION OF CANCER RISKS
CENTRAL TENDENCIES
St. Juliens Creek - Landfill B (Site 2)

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	4,4'-DDD	0.49	mg/kg	0.49	mg/kg	M	3.4E-08	mg/kg-day	0.192	mg/kg-day -1	6.5E-09
	Aluminum	6521.11	mg/kg	6521.11	mg/kg	M	4.6E-04	mg/kg-day	N/A	N/A	N/A
	Antimony	1.16	mg/kg	1.16	mg/kg	M	8.1E-08	mg/kg-day	N/A	N/A	N/A
	Arsenic	4.55	mg/kg	4.55	mg/kg	M	3.2E-07	mg/kg-day	1.5E+00	mg/kg-day -1	4.8E-07
	Benzo(a)Anthracene	0.62	mg/kg	0.62	mg/kg	M	4.3E-08	mg/kg-day	0.73	mg/kg-day -1	3.1E-08
	Benzo(a)Pyrene	0.51	mg/kg	0.51	mg/kg	M	3.5E-08	mg/kg-day	7.3E+00	mg/kg-day -1	2.6E-07
	Benzo(b)Fluoranthene	0.65	mg/kg	0.65	mg/kg	M	4.5E-08	mg/kg-day	7.3E-01	mg/kg-day -1	3.3E-08
	Beryllium	1.91	mg/kg	1.91	mg/kg	M	1.3E-07	mg/kg-day	4.3E+00	mg/kg-day -1	5.7E-07
	Iron	28112.22	mg/kg	28112.22	mg/kg	M	2.0E-03	mg/kg-day	N/A	N/A	N/A
	Manganese	169.69	mg/kg	169.69	mg/kg	M	1.2E-05	mg/kg-day	N/A	N/A	N/A
	Nickel	49.66	mg/kg	49.66	mg/kg	M	3.5E-06	mg/kg-day	N/A	N/A	N/A
	Vanadium	26.48	mg/kg	26.48	mg/kg	M	1.8E-06	mg/kg-day	N/A	N/A	N/A
	Zinc	1157.46	mg/kg	1157.46	mg/kg	M	8.1E-05	mg/kg-day	N/A	N/A	N/A
Dermal	4,4'-DDD	0.49	mg/kg	0.49	mg/kg	M	8.2E-08	mg/kg-day	0.192	mg/kg-day -1	1.6E-08
	Aluminum	6521.11	mg/kg	6521.11	mg/kg	M	1.1E-04	mg/kg-day	N/A	N/A	N/A
	Antimony	1.16	mg/kg	1.16	mg/kg	M	1.9E-08	mg/kg-day	N/A	N/A	N/A
	Arsenic	4.55	mg/kg	4.55	mg/kg	M	2.4E-07	mg/kg-day	1.6E+00	mg/kg-day -1	3.9E-07
	Benzo(a)Anthracene	0.62	mg/kg	0.62	mg/kg	M	1.0E-07	mg/kg-day	N/A	N/A	N/A
	Benzo(a)Pyrene	0.51	mg/kg	0.51	mg/kg	M	8.5E-08	mg/kg-day	N/A	N/A	N/A
	Benzo(b)Fluoranthene	0.65	mg/kg	0.65	mg/kg	M	1.1E-07	mg/kg-day	N/A	N/A	N/A
	Beryllium	1.91	mg/kg	1.91	mg/kg	M	3.2E-08	mg/kg-day	4.3E+02	mg/kg-day -1	1.4E-05
	Iron	28112.22	mg/kg	28112.22	mg/kg	M	4.7E-04	mg/kg-day	N/A	N/A	N/A
	Manganese	169.69	mg/kg	169.69	mg/kg	M	2.9E-06	mg/kg-day	N/A	N/A	N/A
	Nickel	49.66	mg/kg	49.66	mg/kg	M	8.3E-07	mg/kg-day	N/A	N/A	N/A
	Vanadium	26.48	mg/kg	26.48	mg/kg	M	4.5E-07	mg/kg-day	N/A	N/A	N/A
	Zinc	1157.46	mg/kg	1157.46	mg/kg	M	1.9E-05	mg/kg-day	N/A	N/A	N/A
										Total Risk Across All Exposure Routes/Pathways	1.6E-05

TABLE 8.8.RME
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
St. Juliens Creek - Landfill B (Site 2)

Scenario Timeframe: Current
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 (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
Ingestion	4,4'-DDD	4.2	mg/kg	4.20	mg/kg	M	4.6E-06	mg/kg-day	0.192	mg/kg-day -1	8.8E-07
	Aluminum	18600	mg/kg	18600.00	mg/kg	M	2.0E-02	mg/kg-day	N/A	N/A	N/A
	Antimony	7	mg/kg	7.00	mg/kg	M	7.7E-06	mg/kg-day	N/A	N/A	N/A
	Arsenic	12	mg/kg	12.00	mg/kg	M	1.3E-05	mg/kg-day	1.5E+00	mg/kg-day -1	2.0E-05
	Benzo(a)Anthracene	2.3	mg/kg	2.30	mg/kg	M	2.5E-06	mg/kg-day	0.73	mg/kg-day -1	1.8E-06
	Benzo(a)Pyrene	1.4	mg/kg	1.40	mg/kg	M	1.5E-06	mg/kg-day	7.3E+00	mg/kg-day -1	1.1E-05
	Benzo(b)Fluoranthene	1.7	mg/kg	1.70	mg/kg	M	1.9E-06	mg/kg-day	7.3E-01	mg/kg-day -1	1.4E-06
	Beryllium	13.4	mg/kg	13.40	mg/kg	M	1.5E-05	mg/kg-day	4.3E+00	mg/kg-day -1	6.3E-05
	Iron	106000	mg/kg	106000.00	mg/kg	M	1.2E-01	mg/kg-day	N/A	N/A	N/A
	Manganese	688	mg/kg	688.00	mg/kg	M	7.5E-04	mg/kg-day	N/A	N/A	N/A
	Nickel	246	mg/kg	246.00	mg/kg	M	2.7E-04	mg/kg-day	N/A	N/A	N/A
	Vanadium	66.1	mg/kg	66.10	mg/kg	M	7.2E-05	mg/kg-day	N/A	N/A	N/A
	Zinc	7560	mg/kg	7560.00	mg/kg	M	8.3E-03	mg/kg-day	N/A	N/A	N/A
Dermal	4,4'-DDD	4.2	mg/kg	4.20	mg/kg	M	6.1E-06	mg/kg-day	0.192	mg/kg-day -1	1.2E-06
	Aluminum	18600	mg/kg	18600.00	mg/kg	M	2.7E-03	mg/kg-day	N/A	N/A	N/A
	Antimony	7	mg/kg	7.00	mg/kg	M	1.0E-06	mg/kg-day	N/A	N/A	N/A
	Arsenic	12	mg/kg	12.00	mg/kg	M	5.6E-06	mg/kg-day	1.6E+00	mg/kg-day -1	8.8E-06
	Benzo(a)Anthracene	2.3	mg/kg	2.30	mg/kg	M	3.3E-06	mg/kg-day	N/A	N/A	N/A
	Benzo(a)Pyrene	1.4	mg/kg	1.40	mg/kg	M	2.0E-06	mg/kg-day	N/A	N/A	N/A
	Benzo(b)Fluoranthene	1.7	mg/kg	1.70	mg/kg	M	2.5E-06	mg/kg-day	N/A	N/A	N/A
	Beryllium	13.4	mg/kg	13.40	mg/kg	M	1.9E-06	mg/kg-day	4.3E+02	mg/kg-day -1	8.4E-04
	Iron	106000	mg/kg	106000.00	mg/kg	M	1.5E-02	mg/kg-day	N/A	N/A	N/A
	Manganese	688	mg/kg	688.00	mg/kg	M	1.0E-04	mg/kg-day	N/A	N/A	N/A
	Nickel	246	mg/kg	246.00	mg/kg	M	3.6E-05	mg/kg-day	N/A	N/A	N/A
	Vanadium	66.1	mg/kg	66.10	mg/kg	M	9.6E-06	mg/kg-day	N/A	N/A	N/A
	Zinc	7560	mg/kg	7560.00	mg/kg	M	1.1E-03	mg/kg-day	N/A	N/A	N/A
										Total Risk Across All Exposure Routes/Pathways	9.4E-04

TABLE 8.8.CT
CALCULATION OF CANCER RISKS
CENTRAL TENDENCIES
St. Juliens Creek - Landfill B (Site 2)

Scenario Timeframe: Current
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 (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
Ingestion	4,4'-DDD	0.49	mg/kg	0.49	mg/kg	M	5.3E-07	mg/kg-day	0.192	mg/kg-day -1	1.0E-07
	Aluminum	6521.11	mg/kg	6521.11	mg/kg	M	7.1E-03	mg/kg-day	N/A	N/A	N/A
	Antimony	1.16	mg/kg	1.16	mg/kg	M	1.3E-06	mg/kg-day	N/A	N/A	N/A
	Arsenic	4.55	mg/kg	4.55	mg/kg	M	5.0E-06	mg/kg-day	1.5E+00	mg/kg-day -1	7.5E-06
	Benzo(a)Anthracene	0.62	mg/kg	0.62	mg/kg	M	6.7E-07	mg/kg-day	0.73	mg/kg-day -1	4.9E-07
	Benzo(a)Pyrene	0.51	mg/kg	0.51	mg/kg	M	5.6E-07	mg/kg-day	7.3E+00	mg/kg-day -1	4.1E-06
	Benzo(b)Fluoranthene	0.65	mg/kg	0.65	mg/kg	M	7.1E-07	mg/kg-day	7.3E-01	mg/kg-day -1	5.2E-07
	Beryllium	1.91	mg/kg	1.91	mg/kg	M	2.1E-06	mg/kg-day	4.3E+00	mg/kg-day -1	9.0E-06
	Iron	28112.22	mg/kg	28112.22	mg/kg	M	3.1E-02	mg/kg-day	N/A	N/A	N/A
	Manganese	169.69	mg/kg	169.69	mg/kg	M	1.9E-04	mg/kg-day	N/A	N/A	N/A
	Nickel	49.66	mg/kg	49.66	mg/kg	M	5.4E-05	mg/kg-day	N/A	N/A	N/A
	Vanadium	26.48	mg/kg	26.48	mg/kg	M	2.9E-05	mg/kg-day	N/A	N/A	N/A
	Zinc	1157.46	mg/kg	1157.46	mg/kg	M	1.3E-03	mg/kg-day	N/A	N/A	N/A
Dermal	4,4'-DDD	0.49	mg/kg	0.49	mg/kg	M	7.1E-07	mg/kg-day	0.192	mg/kg-day -1	1.4E-07
	Aluminum	6521.11	mg/kg	6521.11	mg/kg	M	9.5E-04	mg/kg-day	N/A	N/A	N/A
	Antimony	1.16	mg/kg	1.16	mg/kg	M	1.7E-07	mg/kg-day	N/A	N/A	N/A
	Arsenic	4.55	mg/kg	4.55	mg/kg	M	2.1E-06	mg/kg-day	1.6E+00	mg/kg-day -1	3.3E-06
	Benzo(a)Anthracene	0.62	mg/kg	0.62	mg/kg	M	8.9E-07	mg/kg-day	N/A	N/A	N/A
	Benzo(a)Pyrene	0.51	mg/kg	0.51	mg/kg	M	7.4E-07	mg/kg-day	N/A	N/A	N/A
	Benzo(b)Fluoranthene	0.65	mg/kg	0.65	mg/kg	M	9.4E-07	mg/kg-day	N/A	N/A	N/A
	Beryllium	1.91	mg/kg	1.91	mg/kg	M	2.8E-07	mg/kg-day	4.3E+02	mg/kg-day -1	1.2E-04
	Iron	28112.22	mg/kg	28112.22	mg/kg	M	4.1E-03	mg/kg-day	N/A	N/A	N/A
	Manganese	169.69	mg/kg	169.69	mg/kg	M	2.5E-05	mg/kg-day	N/A	N/A	N/A
	Nickel	49.66	mg/kg	49.66	mg/kg	M	7.2E-06	mg/kg-day	N/A	N/A	N/A
	Vanadium	26.48	mg/kg	26.48	mg/kg	M	3.8E-06	mg/kg-day	N/A	N/A	N/A
	Zinc	1157.46	mg/kg	1157.46	mg/kg	M	1.7E-04	mg/kg-day	N/A	N/A	N/A
										Total Risk Across All Exposure Routes/Pathways	1.4E-04

TABLE 8.9.RME
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
St. Juliens Creek - Landfill B (Site 2)

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 (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
Ingestion	4,4'-DDD	4.2	mg/kg	4.20	mg/kg	M	2.0E-06	mg/kg-day	0.192	mg/kg-day -1	3.8E-07
	Aluminum	18600	mg/kg	18600.00	mg/kg	M	8.7E-03	mg/kg-day	N/A	N/A	N/A
	Antimony	7	mg/kg	7.00	mg/kg	M	3.3E-06	mg/kg-day	N/A	N/A	N/A
	Arsenic	12	mg/kg	12.00	mg/kg	M	5.6E-06	mg/kg-day	1.5E+00	mg/kg-day -1	8.5E-06
	Benzo(a)Anthracene	2.3	mg/kg	2.30	mg/kg	M	1.1E-06	mg/kg-day	0.73	mg/kg-day -1	7.9E-07
	Benzo(a)Pyrene	1.4	mg/kg	1.40	mg/kg	M	6.6E-07	mg/kg-day	7.3E+00	mg/kg-day -1	4.8E-06
	Benzo(b)Fluoranthene	1.7	mg/kg	1.70	mg/kg	M	8.0E-07	mg/kg-day	7.3E-01	mg/kg-day -1	5.8E-07
	Beryllium	13.4	mg/kg	13.40	mg/kg	M	6.3E-06	mg/kg-day	4.3E+00	mg/kg-day -1	2.7E-05
	Iron	106000	mg/kg	106000.00	mg/kg	M	5.0E-02	mg/kg-day	N/A	N/A	N/A
	Manganese	688	mg/kg	688.00	mg/kg	M	3.2E-04	mg/kg-day	N/A	N/A	N/A
	Nickel	246	mg/kg	246.00	mg/kg	M	1.2E-04	mg/kg-day	N/A	N/A	N/A
	Vanadium	66.1	mg/kg	66.10	mg/kg	M	3.1E-05	mg/kg-day	N/A	N/A	N/A
	Zinc	7560	mg/kg	7560.00	mg/kg	M	3.6E-03	mg/kg-day	N/A	N/A	N/A
Dermal	4,4'-DDD	4.2	mg/kg	4.20	mg/kg	M	1.1E-05	mg/kg-day	0.192	mg/kg-day -1	2.2E-06
	Aluminum	18600	mg/kg	18600.00	mg/kg	M	5.1E-03	mg/kg-day	N/A	N/A	N/A
	Antimony	7	mg/kg	7.00	mg/kg	M	1.9E-06	mg/kg-day	N/A	N/A	N/A
	Arsenic	12	mg/kg	12.00	mg/kg	M	1.0E-05	mg/kg-day	1.6E+00	mg/kg-day -1	1.7E-05
	Benzo(a)Anthracene	2.3	mg/kg	2.30	mg/kg	M	6.3E-06	mg/kg-day	N/A	N/A	N/A
	Benzo(a)Pyrene	1.4	mg/kg	1.40	mg/kg	M	3.8E-06	mg/kg-day	N/A	N/A	N/A
	Benzo(b)Fluoranthene	1.7	mg/kg	1.70	mg/kg	M	4.6E-06	mg/kg-day	N/A	N/A	N/A
	Beryllium	13.4	mg/kg	13.40	mg/kg	M	3.7E-06	mg/kg-day	4.3E+02	mg/kg-day -1	1.6E-03
	Iron	106000	mg/kg	106000.00	mg/kg	M	2.9E-02	mg/kg-day	N/A	N/A	N/A
	Manganese	688	mg/kg	688.00	mg/kg	M	1.9E-04	mg/kg-day	N/A	N/A	N/A
	Nickel	246	mg/kg	246.00	mg/kg	M	6.7E-05	mg/kg-day	N/A	N/A	N/A
	Vanadium	66.1	mg/kg	66.10	mg/kg	M	1.8E-05	mg/kg-day	N/A	N/A	N/A
	Zinc	7560	mg/kg	7560.00	mg/kg	M	2.1E-03	mg/kg-day	N/A	N/A	N/A
										Total Risk Across All Exposure Routes/Pathways	1.6E-03

TABLE 8.9.CT
CALCULATION OF CANCER RISKS
CENTRAL TENDENCIES
St. Juliens Creek - Landfill B (Site 2)

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 (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
Ingestion	4,4'-DDD	0.49	mg/kg	0.49	mg/kg	M	2.3E-07	mg/kg-day	0.192	mg/kg-day -1	4.4E-08
	Aluminum	6521.11	mg/kg	6521.11	mg/kg	M	3.1E-03	mg/kg-day	N/A	N/A	N/A
	Antimony	1.16	mg/kg	1.16	mg/kg	M	5.4E-07	mg/kg-day	N/A	N/A	N/A
	Arsenic	4.55	mg/kg	4.55	mg/kg	M	2.1E-06	mg/kg-day	1.5E+00	mg/kg-day -1	3.2E-06
	Benzo(a)Anthracene	0.62	mg/kg	0.62	mg/kg	M	2.9E-07	mg/kg-day	0.73	mg/kg-day -1	2.1E-07
	Benzo(a)Pyrene	0.51	mg/kg	0.51	mg/kg	M	2.4E-07	mg/kg-day	7.3E+00	mg/kg-day -1	1.7E-06
	Benzo(b)Fluoranthene	0.65	mg/kg	0.65	mg/kg	M	3.0E-07	mg/kg-day	7.3E-01	mg/kg-day -1	2.2E-07
	Beryllium	1.91	mg/kg	1.91	mg/kg	M	9.0E-07	mg/kg-day	4.3E+00	mg/kg-day -1	3.9E-06
	Iron	28112.22	mg/kg	28112.22	mg/kg	M	1.3E-02	mg/kg-day	N/A	N/A	N/A
	Manganese	169.69	mg/kg	169.69	mg/kg	M	8.0E-05	mg/kg-day	N/A	N/A	N/A
	Nickel	49.66	mg/kg	49.66	mg/kg	M	2.3E-05	mg/kg-day	N/A	N/A	N/A
	Vanadium	26.48	mg/kg	26.48	mg/kg	M	1.2E-05	mg/kg-day	N/A	N/A	N/A
	Zinc	1157.46	mg/kg	1157.46	mg/kg	M	5.4E-04	mg/kg-day	N/A	N/A	N/A
Dermal	4,4'-DDD	0.49	mg/kg	0.49	mg/kg	M	1.3E-06	mg/kg-day	0.192	mg/kg-day -1	2.5E-07
	Aluminum	6521.11	mg/kg	6521.11	mg/kg	M	1.8E-03	mg/kg-day	N/A	N/A	N/A
	Antimony	1.16	mg/kg	1.16	mg/kg	M	3.2E-07	mg/kg-day	N/A	N/A	N/A
	Arsenic	4.55	mg/kg	4.55	mg/kg	M	4.0E-06	mg/kg-day	1.6E+00	mg/kg-day -1	6.3E-06
	Benzo(a)Anthracene	0.62	mg/kg	0.62	mg/kg	M	1.7E-06	mg/kg-day	N/A	N/A	N/A
	Benzo(a)Pyrene	0.51	mg/kg	0.51	mg/kg	M	1.4E-06	mg/kg-day	N/A	N/A	N/A
	Benzo(b)Fluoranthene	0.65	mg/kg	0.65	mg/kg	M	1.8E-06	mg/kg-day	N/A	N/A	N/A
	Beryllium	1.91	mg/kg	1.91	mg/kg	M	5.2E-07	mg/kg-day	4.3E+02	mg/kg-day -1	2.2E-04
	Iron	28112.22	mg/kg	28112.22	mg/kg	M	7.7E-03	mg/kg-day	N/A	N/A	N/A
	Manganese	169.69	mg/kg	169.69	mg/kg	M	4.6E-05	mg/kg-day	N/A	N/A	N/A
	Nickel	49.66	mg/kg	49.66	mg/kg	M	1.4E-05	mg/kg-day	N/A	N/A	N/A
	Vanadium	26.48	mg/kg	26.48	mg/kg	M	7.2E-06	mg/kg-day	N/A	N/A	N/A
	Zinc	1157.46	mg/kg	1157.46	mg/kg	M	3.2E-04	mg/kg-day	N/A	N/A	N/A
										Total Risk Across All Exposure Routes/Pathways	2.4E-04

TABLE 8.10.RME
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
St. Juliens Creek - Landfill B (Site 2)

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 (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
Ingestion	4,4'-DDD	4.2	mg/kg	4.20	mg/kg	M	7.3E-07	mg/kg-day	0.192	mg/kg-day	1.4E-07
	Aluminum	18600	mg/kg	18600.00	mg/kg	M	3.2E-03	mg/kg-day	N/A	N/A	N/A
	Antimony	7	mg/kg	7.00	mg/kg	M	1.2E-06	mg/kg-day	N/A	N/A	N/A
	Arsenic	12	mg/kg	12.00	mg/kg	M	2.1E-06	mg/kg-day	1.425	mg/kg-day -1	3.0E-06
	Benzo(a)Anthracene	2.3	mg/kg	2.30	mg/kg	M	4.0E-07	mg/kg-day	0.73	mg/kg-day	2.9E-07
	Benzo(a)Pyrene	1.4	mg/kg	1.40	mg/kg	M	2.4E-07	mg/kg-day	7.3	mg/kg-day -1	1.8E-06
	Benzo(b)Fluoranthene	1.7	mg/kg	1.70	mg/kg	M	3.0E-07	mg/kg-day	0.73	mg/kg-day -1	2.2E-07
	Beryllium	13.4	mg/kg	13.40	mg/kg	M	2.3E-06	mg/kg-day	0.043	mg/kg-day -1	1.0E-07
	Iron	106000	mg/kg	106000.00	mg/kg	M	1.9E-02	mg/kg-day	N/A	N/A	N/A
	Manganese	688	mg/kg	688.00	mg/kg	M	1.2E-04	mg/kg-day	N/A	N/A	N/A
	Nickel	246	mg/kg	246.00	mg/kg	M	4.3E-05	mg/kg-day	N/A	N/A	N/A
	Vanadium	66.1	mg/kg	66.10	mg/kg	M	1.2E-05	mg/kg-day	N/A	N/A	N/A
	Zinc	7560	mg/kg	7560.00	mg/kg	M	1.3E-03	mg/kg-day	N/A	N/A	N/A
Dermal	4,4'-DDD	4.2	mg/kg	4.20	mg/kg	M	7.8E-06	mg/kg-day	0.192	mg/kg-day	1.5E-06
	Aluminum	18600	mg/kg	18600.00	mg/kg	M	3.4E-03	mg/kg-day	N/A	N/A	N/A
	Antimony	7	mg/kg	7.00	mg/kg	M	1.3E-06	mg/kg-day	N/A	N/A	N/A
	Arsenic	12	mg/kg	12.00	mg/kg	M	7.1E-06	mg/kg-day	1.425	mg/kg-day -1	1.0E-05
	Benzo(a)Anthracene	2.3	mg/kg	2.30	mg/kg	M	4.3E-06	mg/kg-day	N/A	N/A	N/A
	Benzo(a)Pyrene	1.4	mg/kg	1.40	mg/kg	M	2.6E-06	mg/kg-day	N/A	N/A -1	N/A
	Benzo(b)Fluoranthene	1.7	mg/kg	1.70	mg/kg	M	3.1E-06	mg/kg-day	N/A	N/A -1	N/A
	Beryllium	13.4	mg/kg	13.40	mg/kg	M	2.5E-06	mg/kg-day	0.043	mg/kg-day -1	1.1E-07
	Iron	106000	mg/kg	106000.00	mg/kg	M	2.0E-02	mg/kg-day	N/A	N/A	N/A
	Manganese	688	mg/kg	688.00	mg/kg	M	1.3E-04	mg/kg-day	N/A	N/A	N/A
	Nickel	246	mg/kg	246.00	mg/kg	M	4.6E-05	mg/kg-day	N/A	N/A	N/A
	Vanadium	66.1	mg/kg	66.10	mg/kg	M	1.2E-05	mg/kg-day	N/A	N/A	N/A
	Zinc	7560	mg/kg	7560.00	mg/kg	M	1.4E-03	mg/kg-day	N/A	N/A	N/A
										Total Risk Across All Exposure Routes/Pathways	1.7E-05

TABLE 8.10.CT
CALCULATION OF CANCER RISKS
CENTRAL TENDENCIES
St. Juliens Creek - Landfill B (Site 2)

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 (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
Ingestion	4,4'-DDD	0.49	mg/kg	0.49	mg/kg	M	8.5E-08	mg/kg-day	0.192	mg/kg-day	1.6E-08
	Aluminum	6521.11	mg/kg	6521.11	mg/kg	M	1.1E-03	mg/kg-day	N/A	N/A	N/A
	Antimony	1.16	mg/kg	1.16	mg/kg	M	2.0E-07	mg/kg-day	N/A	N/A	N/A
	Arsenic	4.55	mg/kg	4.55	mg/kg	M	8.0E-07	mg/kg-day	1.425	mg/kg-day -1	1.1E-06
	Benzo(a)Anthracene	0.62	mg/kg	0.62	mg/kg	M	1.1E-07	mg/kg-day	0.73	mg/kg-day	7.9E-08
	Benzo(a)Pyrene	0.51	mg/kg	0.51	mg/kg	M	8.9E-08	mg/kg-day	7.3	mg/kg-day -1	6.5E-07
	Benzo(b)Fluoranthene	0.65	mg/kg	0.65	mg/kg	M	1.1E-07	mg/kg-day	0.73	mg/kg-day -1	8.2E-08
	Beryllium	1.91	mg/kg	1.91	mg/kg	M	3.3E-07	mg/kg-day	0.043	mg/kg-day -1	1.4E-08
	Iron	28112.22	mg/kg	28112.22	mg/kg	M	4.9E-03	mg/kg-day	N/A	N/A	N/A
	Manganese	169.69	mg/kg	169.69	mg/kg	M	3.0E-05	mg/kg-day	N/A	N/A	N/A
	Nickel	49.66	mg/kg	49.66	mg/kg	M	8.7E-06	mg/kg-day	N/A	N/A	N/A
	Vanadium	26.48	mg/kg	26.48	mg/kg	M	4.6E-06	mg/kg-day	N/A	N/A	N/A
	Zinc	1157.46	mg/kg	1157.46	mg/kg	M	2.0E-04	mg/kg-day	N/A	N/A	N/A
Dermal	4,4'-DDD	0.49	mg/kg	0.49	mg/kg	M	9.0E-07	mg/kg-day	0.192	mg/kg-day	1.7E-07
	Aluminum	6521.11	mg/kg	6521.11	mg/kg	M	1.2E-03	mg/kg-day	N/A	N/A	N/A
	Antimony	1.16	mg/kg	1.16	mg/kg	M	2.1E-07	mg/kg-day	N/A	N/A	N/A
	Arsenic	4.55	mg/kg	4.55	mg/kg	M	2.7E-06	mg/kg-day	1.425	mg/kg-day -1	3.8E-06
	Benzo(a)Anthracene	0.62	mg/kg	0.62	mg/kg	M	1.1E-06	mg/kg-day	N/A	N/A	N/A
	Benzo(a)Pyrene	0.51	mg/kg	0.51	mg/kg	M	9.4E-07	mg/kg-day	N/A	N/A -1	N/A
	Benzo(b)Fluoranthene	0.65	mg/kg	0.65	mg/kg	M	1.2E-06	mg/kg-day	N/A	N/A -1	N/A
	Beryllium	1.91	mg/kg	1.91	mg/kg	M	3.5E-07	mg/kg-day	0.043	mg/kg-day -1	1.5E-08
	Iron	28112.22	mg/kg	28112.22	mg/kg	M	5.2E-03	mg/kg-day	N/A	N/A	N/A
	Manganese	169.69	mg/kg	169.69	mg/kg	M	3.1E-05	mg/kg-day	N/A	N/A	N/A
	Nickel	49.66	mg/kg	49.66	mg/kg	M	9.2E-06	mg/kg-day	N/A	N/A	N/A
	Vanadium	26.48	mg/kg	26.48	mg/kg	M	4.9E-06	mg/kg-day	N/A	N/A	N/A
	Zinc	1157.46	mg/kg	1157.46	mg/kg	M	2.1E-04	mg/kg-day	N/A	N/A	N/A
										Total Risk Across All Exposure Routes/Pathways	6.0E-06

TABLE 8.11.RME
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
St. Juliens Creek - Landfill B (Site 2)

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 (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
Ingestion	4,4'-DDD	4.2	mg/kg	4.20	mg/kg	M	1.4E-07	mg/kg-day	0.192	mg/kg-day	2.7E-08
	Aluminum	18600	mg/kg	18600.00	mg/kg	M	6.2E-04	mg/kg-day	N/A	N/A	N/A
	Antimony	7	mg/kg	7.00	mg/kg	M	2.3E-07	mg/kg-day	N/A	N/A	N/A
	Arsenic	12	mg/kg	12.00	mg/kg	M	4.0E-07	mg/kg-day	1.425	mg/kg-day -1	5.7E-07
	Benzo(a)Anthracene	2.3	mg/kg	2.30	mg/kg	M	7.7E-08	mg/kg-day	0.73	mg/kg-day -1	5.6E-08
	Benzo(a)Pyrene	1.4	mg/kg	1.40	mg/kg	M	4.7E-08	mg/kg-day	7.3	mg/kg-day -1	3.4E-07
	Benzo(b)Fluoranthene	1.7	mg/kg	1.70	mg/kg	M	5.7E-08	mg/kg-day	0.73	mg/kg-day -1	4.2E-08
	Beryllium	13.4	mg/kg	13.40	mg/kg	M	4.5E-07	mg/kg-day	0.043	mg/kg-day -1	1.9E-08
	Iron	106000	mg/kg	106000.00	mg/kg	M	3.6E-03	mg/kg-day	N/A	N/A	N/A
	Manganese	688	mg/kg	688.00	mg/kg	M	2.3E-05	mg/kg-day	N/A	N/A	N/A
	Nickel	246	mg/kg	246.00	mg/kg	M	8.3E-06	mg/kg-day	N/A	N/A	N/A
	Vanadium	66.1	mg/kg	66.10	mg/kg	M	2.2E-06	mg/kg-day	N/A	N/A	N/A
	Zinc	7560	mg/kg	7560.00	mg/kg	M	2.5E-04	mg/kg-day	N/A	N/A	N/A
Dermal	4,4'-DDD	4.2	mg/kg	4.20	mg/kg	M	1.6E-07	mg/kg-day	0.192	mg/kg-day	3.0E-08
	Aluminum	18600	mg/kg	18600.00	mg/kg	M	6.9E-05	mg/kg-day	N/A	N/A	N/A
	Antimony	7	mg/kg	7.00	mg/kg	M	2.6E-08	mg/kg-day	N/A	N/A	N/A
	Arsenic	12	mg/kg	12.00	mg/kg	M	1.4E-07	mg/kg-day	1.425	mg/kg-day -1	2.0E-07
	Benzo(a)Anthracene	2.3	mg/kg	2.30	mg/kg	M	8.5E-08	mg/kg-day	N/A	N/A	N/A
	Benzo(a)Pyrene	1.4	mg/kg	1.40	mg/kg	M	5.2E-08	mg/kg-day	N/A	N/A -1	N/A
	Benzo(b)Fluoranthene	1.7	mg/kg	1.70	mg/kg	M	6.3E-08	mg/kg-day	N/A	N/A -1	N/A
	Beryllium	13.4	mg/kg	13.40	mg/kg	M	5.0E-08	mg/kg-day	0.043	mg/kg-day -1	2.1E-09
	Iron	106000	mg/kg	106000.00	mg/kg	M	3.9E-04	mg/kg-day	N/A	N/A	N/A
	Manganese	688	mg/kg	688.00	mg/kg	M	2.5E-06	mg/kg-day	N/A	N/A	N/A
	Nickel	246	mg/kg	246.00	mg/kg	M	9.1E-07	mg/kg-day	N/A	N/A	N/A
	Vanadium	66.1	mg/kg	66.10	mg/kg	M	2.4E-07	mg/kg-day	N/A	N/A	N/A
	Zinc	7560	mg/kg	7560.00	mg/kg	M	2.8E-05	mg/kg-day	N/A	N/A	N/A
										Total Risk Across All Exposure Routes/Pathways	1.3E-06

TABLE 8.11.CT
CALCULATION OF CANCER RISKS
CENTRAL TENDENCIES
St. Juliens Creek - Landfill B (Site 2)

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 (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
Ingestion	4,4'-DDD	0.49	mg/kg	0.49	mg/kg	M	1.6E-08	mg/kg-day	0.192	mg/kg-day	3.1E-09
	Aluminum	6521.11	mg/kg	6521.11	mg/kg	M	2.2E-04	mg/kg-day	N/A	N/A	N/A
	Antimony	1.16	mg/kg	1.16	mg/kg	M	3.9E-08	mg/kg-day	N/A	N/A	N/A
	Arsenic	4.55	mg/kg	4.55	mg/kg	M	1.5E-07	mg/kg-day	1.425	mg/kg-day -1	2.2E-07
	Benzo(a)Anthracene	0.62	mg/kg	0.62	mg/kg	M	2.1E-08	mg/kg-day	0.73	mg/kg-day -1	1.5E-08
	Benzo(a)Pyrene	0.51	mg/kg	0.51	mg/kg	M	1.7E-08	mg/kg-day	7.3	mg/kg-day -1	1.2E-07
	Benzo(b)Fluoranthene	0.65	mg/kg	0.65	mg/kg	M	2.2E-08	mg/kg-day	0.73	mg/kg-day -1	1.6E-08
	Beryllium	1.91	mg/kg	1.91	mg/kg	M	6.4E-08	mg/kg-day	0.043	mg/kg-day -1	2.8E-09
	Iron	28112.22	mg/kg	28112.22	mg/kg	M	9.4E-04	mg/kg-day	N/A	N/A	N/A
	Manganese	169.69	mg/kg	169.69	mg/kg	M	5.7E-06	mg/kg-day	N/A	N/A	N/A
	Nickel	49.66	mg/kg	49.66	mg/kg	M	1.7E-06	mg/kg-day	N/A	N/A	N/A
	Vanadium	26.48	mg/kg	26.48	mg/kg	M	8.9E-07	mg/kg-day	N/A	N/A	N/A
	Zinc	1157.46	mg/kg	1157.46	mg/kg	M	3.9E-05	mg/kg-day	N/A	N/A	N/A
Dermal	4,4'-DDD	0.49	mg/kg	0.49	mg/kg	M	1.8E-08	mg/kg-day	0.192	mg/kg-day	3.5E-09
	Aluminum	6521.11	mg/kg	6521.11	mg/kg	M	2.4E-05	mg/kg-day	N/A	N/A	N/A
	Antimony	1.16	mg/kg	1.16	mg/kg	M	4.3E-09	mg/kg-day	N/A	N/A	N/A
	Arsenic	4.55	mg/kg	4.55	mg/kg	M	5.4E-08	mg/kg-day	1.425	mg/kg-day -1	7.7E-08
	Benzo(a)Anthracene	0.62	mg/kg	0.62	mg/kg	M	2.3E-08	mg/kg-day	N/A	N/A	N/A
	Benzo(a)Pyrene	0.51	mg/kg	0.51	mg/kg	M	1.9E-08	mg/kg-day	N/A	N/A -1	N/A
	Benzo(b)Fluoranthene	0.65	mg/kg	0.65	mg/kg	M	2.4E-08	mg/kg-day	N/A	N/A -1	N/A
	Beryllium	1.91	mg/kg	1.91	mg/kg	M	7.1E-09	mg/kg-day	0.043	mg/kg-day -1	3.0E-10
	Iron	28112.22	mg/kg	28112.22	mg/kg	M	1.0E-04	mg/kg-day	N/A	N/A	N/A
	Manganese	169.69	mg/kg	169.69	mg/kg	M	6.3E-07	mg/kg-day	N/A	N/A	N/A
	Nickel	49.66	mg/kg	49.66	mg/kg	M	1.8E-07	mg/kg-day	N/A	N/A	N/A
	Vanadium	26.48	mg/kg	26.48	mg/kg	M	9.8E-08	mg/kg-day	N/A	N/A	N/A
	Zinc	1157.46	mg/kg	1157.46	mg/kg	M	4.3E-06	mg/kg-day	N/A	N/A	N/A
										Total Risk Across All Exposure Routes/Pathways	4.6E-07

Site 2

Surface Soil to Groundwater

TABLE 2.4
OCCURRENCE, DISTRIBUTION AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN
St. Juliens Creek - Landfill B (Site 2)

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)
91576	2-Methylnaphthalene	310	J	310	J	ug/kg	SS-03	1/9	330-1700	310	NA	NA	NA	NA	NO	NTX
72548	4,4'-DDD	2.8	J	4200		ug/kg	SS-09	9/9	3.3-350	4200	NA	700	NA	NA	YES	ASL
72559	4,4'-DDE	19		460		ug/kg	SS-09	8/9	3.3-35	460	NA	NA	NA	NA	NO	NTX
50293	4,4'-DDT	9.2	J	900		ug/kg	SS-09	8/9	3.3-350	900	NA	NA	NA	NA	NO	NTX
83329	Acenaphthene	100	J	170	J	ug/kg	SS-03	2/9	330-1700	170	NA	NA	NA	NA	NO	NTX
67641	Acetone	7	J	35		ug/kg	SS-10	2/9	10-11	35	NA	NA	NA	NA	NO	NTX
7429905	Aluminum	2680		18600		mg/kg	SS-06	9/9	7.42-8.79	18600	NA	NA	NA	NA	NO	NTX
120127	Anthracene	150	J	590	J	ug/kg	SS03	2/9	330-1700	590	NA	NA	NA	NA	NO	NTX
7440360	Antimony	7	J	7	J	mg/kg	SS03	1/9	0.34-0.4	7	NA	NA	NA	NA	NO	NTX
7440382	Arsenic	2.2		12		mg/kg	SS03	9/9	0.51-0.6	12	NA	NA	NA	NA	NO	NTX
7440393	Barium	22.5	J	306		mg/kg	SS03	9/9	0.34-0.4	306	NA	32	NA	NA	YES	ASL
56553	Benzo(a)Anthracene	120	J	2300		ug/kg	SS03	7/9	330-1700	2300	NA	700	NA	NA	YES	ASL
50328	Benzo(a)Pyrene	130	J	1400	J	ug/kg	SS03	7/9	330-1700	1400	NA	NA	NA	NA	NO	NTX
205992	Benzo(b)Fluoranthene	240	J	1700	J	ug/kg	SS03	7/9	330-1700	1700	NA	NA	NA	NA	NO	NTX
207089	Benzo(k)Fluoranthene	87	J	1100	J	ug/kg	SS03	7/9	330-1700	1100	NA	NA	NA	NA	NO	NTX
7440417	Beryllium	0.23	J	13.4		mg/kg	SS06	5/9	0.17-0.2	13.4	NA	NA	NA	NA	NO	NTX
117817	Bis(2-Ethylhexyl)Phthalate	35		54	J	ug/kg	SS09	2/9	330-1700	54	NA	NA	NA	NA	NO	NTX
85687	Butylbenzylphthalate	280	J	280	J	ug/kg	SS06	1/9	330-1700	280	NA	NA	NA	NA	NO	NTX
7440439	Cadmium	0.25	J	0.68	J	mg/kg	SS04	6/9	0.08-0.1	0.68	NA	NA	NA	NA	NO	NTX
86748	Carbazole	120	J	300	J	ug/kg	SS03	2/9	330-1700	300	NA	NA	NA	NA	NO	NTX
218019	Chrysene	150	J	2700		ug/kg	SS03	7/9	330-1700	2700	NA	NA	NA	NA	NO	NTX
7440484	Cobalt	1.5	J	62.6		mg/kg	SS06	6/9	1.35-1.6	62.6	NA	NA	NA	NA	NO	NTX
7440508	Copper	9.4		4260		mg/kg	SS03	9/9	1.01-1.2	4260	NA	NA	NA	NA	NO	NTX
57125	Cyanide	0.85	J	0.85	J	mg/kg	SS03	1/9	0.5-0.53	0.85	NA	NA	NA	NA	NO	NTX
84742	Di-n-Butylphthalate	210	J	210	J	ug/kg	SS03	1/9	330-1700	210	NA	NA	NA	NA	NO	NTX
53703	Dibenz(a,h)Anthracene	54	J	54	J	ug/kg	SS02	1/9	330-1700	54	NA	NA	NA	NA	NO	NTX
132649	Dibenzofuran	70	J	70	J	ug/kg	SS02	1/9	330-1700	70	NA	NA	NA	NA	NO	NTX
60571	Dieldrin	3.8	J	3.8	J	ug/kg	SS02	1/9	3.3-35	3.8	NA	1	NA	NA	YES	ASL
206440	Fluoranthene	140	J	5000		ug/kg	SS03	7/9	330-1700	5000	NA	NA	NA	NA	NO	NTX
86737	Fluorene	110	J	380	J	ug/kg	SS03	2/9	330-1700	380	NA	NA	NA	NA	NO	NTX
193395	Indeno(1,2,3-cd)Pyrene	86	J	800	J	ug/kg	SS03	7/9	330-1700	800	NA	NA	NA	NA	NO	NTX
7439896	Iron	2560		106000		mg/kg	SS03	9/9	2.87-3.39	106000	NA	NA	NA	NA	NO	NTX
7439965	Manganese	27.2		688		mg/kg	SS03	9/9	0.34-0.4	688	NA	NA	NA	NA	NO	NTX
7439976	Mercury	0.11		0.56		mg/kg	SS07	9/9	0.04-0.05	0.56	NA	NA	NA	NA	NO	NTX
91203	Naphthalene	52	J	52	J	ug/kg	SS02	1/9	330-1700	52	NA	NA	NA	NA	NO	NTX
7440020	Nickel	3.5	J	246		mg/kg	SS06	9/9	1.18-1.4	246	NA	21	NA	NA	YES	ASL
129000	Pyrene	220	J	7200		ug/kg	SS03	7/9	330-1700	7200	NA	NA	NA	NA	NO	NTX
7782492	Selenium	1		1		mg/kg	SS02	1/9	0.51-0.6	1	NA	NA	NA	NA	NO	NTX
108883	Toluene	1	J	2	J	ug/kg	SS06	2/9	10-11	2	NA	NA	NA	NA	NO	NTX
7440622	Vanadium	12.5		66.1		mg/kg	SS03	9/9	1.52-1.8	66.1	NA	NA	NA	NA	NO	NTX
7440666	Zinc	41.5		7560		mg/kg	SS06	9/9	0.84-1	7560	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, U.S. EPA Region III. (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 2

Surface Soil to Air

TABLE 2.5
OCCURRENCE, DISTRIBUTION AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN
St. Juliens Creek - Landfill B (Site 2)

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)
91576	2-Methylnaphthalene	310	J	310	J	ug/kg	SS-03	1/9	330-1700	310	NA	NA	NA	NA	NO	NTX
72548	4,4'-DDD	2.8	J	4200		ug/kg	SS-09	9/9	3.3-350	4200	NA	NA	NA	NA	NO	NTX
72559	4,4'-DDE	19		460		ug/kg	SS-09	8/9	3.3-35	460	NA	NA	NA	NA	NO	NTX
50293	4,4'-DDT	9.2	J	900		ug/kg	SS-09	8/9	3.3-350	900	NA	NA	NA	NA	NO	NTX
83329	Acenaphthene	100	J	170	J	ug/kg	SS-03	2/9	330-1700	170	NA	NA	NA	NA	NO	NTX
67641	Acetone	7	J	35		ug/kg	SS-10	2/9	10-11	35	NA	NA	NA	NA	NO	NTX
7429905	Aluminum	2680		18600		mg/kg	SS-06	9/9	7.42-8.79	18600	NA	NA	NA	NA	NO	NTX
120127	Anthracene	150	J	590	J	ug/kg	SS03	2/9	330-1700	590	NA	NA	NA	NA	NO	NTX
7440360	Antimony	7	J	7	J	mg/kg	SS03	1/9	0.34-0.4	7	NA	NA	NA	NA	NO	NTX
7440382	Arsenic	2.2		12		mg/kg	SS03	9/9	0.51-0.6	12	NA	NA	NA	NA	NO	NTX
7440393	Barium	22.5	J	306		mg/kg	SS03	9/9	0.34-0.4	306	NA	NA	NA	NA	NO	NTX
56553	Benzo(a)Anthracene	120	J	2300		ug/kg	SS03	7/9	330-1700	2300	NA	NA	NA	NA	NO	NTX
50328	Benzo(a)Pyrene	130	J	1400	J	ug/kg	SS03	7/9	330-1700	1400	NA	NA	NA	NA	NO	NTX
205992	Benzo(b)Fluoranthene	240	J	1700	J	ug/kg	SS03	7/9	330-1700	1700	NA	NA	NA	NA	NO	NTX
207089	Benzo(k)Fluoranthene	87	J	1100	J	ug/kg	SS03	7/9	330-1700	1100	NA	NA	NA	NA	NO	NTX
7440417	Beryllium	0.23	J	13.4		mg/kg	SS06	5/9	0.17-0.2	13.4	NA	NA	NA	NA	NO	NTX
117817	Bis(2-Ethylhexyl)Phthalate	35		54	J	ug/kg	SS09	2/9	330-1700	54	NA	NA	NA	NA	NO	NTX
85687	Butylbenzylphthalate	280	J	280	J	ug/kg	SS06	1/9	330-1700	280	NA	NA	NA	NA	NO	NTX
7440439	Cadmium	0.25	J	0.68	J	mg/kg	SS04	6/9	0.08-0.1	0.68	NA	NA	NA	NA	NO	NTX
86748	Carbazole	120	J	300	J	ug/kg	SS03	2/9	330-1700	300	NA	NA	NA	NA	NO	NTX
218019	Chrysene	150	J	2700		ug/kg	SS03	7/9	330-1700	2700	NA	NA	NA	NA	NO	NTX
7440484	Cobalt	1.5	J	62.6		mg/kg	SS06	6/9	1.35-1.6	62.6	NA	NA	NA	NA	NO	NTX
7440508	Copper	8.4		4260		mg/kg	SS03	9/9	1.01-1.2	4260	NA	NA	NA	NA	NO	NTX
57125	Cyanide	0.85	J	0.85	J	mg/kg	SS03	1/9	0.5-0.53	0.85	NA	NA	NA	NA	NO	NTX
84742	Di-n-Butylphthalate	210	J	210	J	ug/kg	SS03	1/9	330-1700	210	NA	NA	NA	NA	NO	NTX
53703	Dibenz(a,h)Anthracene	54	J	54	J	ug/kg	SS02	1/9	330-1700	54	NA	NA	NA	NA	NO	NTX
132649	Dibenzofuran	70	J	70	J	ug/kg	SS02	1/9	330-1700	70	NA	NA	NA	NA	NO	NTX
60571	Dieldrin	3.8	J	3.8	J	ug/kg	SS02	1/9	3.3-35	3.8	NA	NA	NA	NA	NO	NTX
206440	Fluoranthene	140	J	5000		ug/kg	SS03	7/9	330-1700	5000	NA	NA	NA	NA	NO	NTX
86737	Fluorene	110	J	380	J	ug/kg	SS03	2/9	330-1700	380	NA	NA	NA	NA	NO	NTX
193395	Indeno(1,2,3-cd)Pyrene	86	J	800	J	ug/kg	SS03	7/9	330-1700	800	NA	NA	NA	NA	NO	NTX
7439896	Iron	2560		106000		mg/kg	SS03	9/9	2.87-3.39	106000	NA	NA	NA	NA	NO	NTX
7439965	Manganese	27.2		688		mg/kg	SS03	9/9	0.34-0.4	688	NA	NA	NA	NA	NO	NTX
7439976	Mercury	0.11		0.56		mg/kg	SS07	9/9	0.04-0.05	0.56	NA	NA	NA	NA	NO	NTX
91203	Naphthalene	52	J	52	J	ug/kg	SS02	1/9	330-1700	52	NA	NA	NA	NA	NO	NTX
7440020	Nickel	3.5	J	246		mg/kg	SS06	9/9	1.18-1.4	246	NA	NA	NA	NA	NO	NTX
129000	Pyrene	220	J	7200		ug/kg	SS03	7/9	330-1700	7200	NA	NA	NA	NA	NO	NTX
7782492	Selenium	1		1		mg/kg	SS02	1/9	0.51-0.6	1	NA	NA	NA	NA	NO	NTX
108883	Toluene	1	J	2	J	ug/kg	SS08	2/9	10-11	2	NA	NA	NA	NA	NO	NTX
7440622	Vanadium	12.5		66.1		mg/kg	SS03	9/9	1.52-1.8	66.1	NA	NA	NA	NA	NO	NTX
7440666	Zinc	41.5		7560		mg/kg	SS06	9/9	0.84-1	7560	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, U.S. EPA Region III. (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 2

Subsurface Soil Current/Future

TABLE 2.6
OCCURRENCE, DISTRIBUTION AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN
St. Juliens Creek - Landfill B (Site 2)

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	43	J	43	J	ug/kg	SB-04	1/4	11-16	43	NA	4700000	NA	NA	NO	BSL
72548	4,4'-DDD	5.6		83		ug/kg	SB-04	3/4	3.5-7.5	83	NA	2700	NA	NA	NO	BSL
72559	4,4'-DDE	31		110		ug/kg	SB-03	4/4	3.5-35	110	NA	1900	NA	NA	NO	BSL
50293	4,4'-DDT	6.3	J	36	J	ug/kg	SB-05	4/4	3.5-7.5	36	NA	1900	NA	NA	NO	BSL
67641	Acetone	6		210		ug/kg	SB-04	2/4	11-16	210	NA	780000	NA	NA	NO	BSL
7429905	Aluminum	2000		11900		mg/kg	SB-04	4/4	7.27-11.04	11900	NA	7800	NA	NA	YES	ASL
120127	Anthracene	45	J	45	J	ug/kg	SB-03	1/4	350-460	45	NA	2300000	NA	NA	NO	BSL
7440360	Antimony	0.63	J	0.63	J	mg/kg	SB-04	1/4	0.33-0.5	0.63	NA	3.1	NA	NA	NO	BSL
7440382	Arsenic	1.2		6.3		mg/kg	SB-04	4/4	0.5-0.75	6.3	NA	2.3	NA	NA	YES	ASL
7440393	Barium	8.4		291		mg/kg	SB-03	4/4	0.33-0.5	291	NA	550	NA	NA	NO	BSL
56553	Benzo(a)Anthracene	290	J	290	J	ug/kg	SB-03	1/4	350-460	290	NA	880	NA	NA	NO	BSL
50328	Benzo(a)Pyrene	290	J	290	J	ug/kg	SB-03	1/4	350-460	290	NA	88	NA	NA	YES	ASL
205992	Benzo(b)Fluoranthene	530		530		ug/kg	SB-03	1/4	350-460	530	NA	880	NA	NA	NO	BSL
207089	Benzo(k)Fluoranthene	210	J	210	J	ug/kg	SB-03	1/4	350-460	210	NA	8800	NA	NA	NO	BSL
7440417	Beryllium	0.34	J	0.35	J	mg/kg	SB-03	2/4	0.17-0.25	0.35	NA	0.15	NA	NA	YES	ASL
117817	Bis(2-Ethylhexyl)Phthalate	39	J	49	J	ug/kg	SB-03	2/4	350-460	49	NA	46000	NA	NA	NO	BSL
7440439	Cadmium	0.43		4.4		mg/kg	SB-03	2/4	0.08-0.13	4.4	NA	3.9	NA	NA	YES	ASL
218019	Chrysene	360		360		ug/kg	SB-03	1/4	350-460	360	NA	88000	NA	NA	NO	BSL
7440484	Cobalt	3.6	J	4	J	mg/kg	SB-04	2/4	1.32-2.01	4	NA	470	NA	NA	NO	BSL
7440508	Copper	3.8		433		mg/kg	SB-03	4/4	0.99-1.51	433	NA	27000	NA	NA	NO	BSL
53703	Dibenz(a,h)Anthracene	55	J	55	J	ug/kg	SB-03	1/4	350-460	55	NA	88	NA	NA	NO	BSL
206440	Fluoranthene	51		640		ug/kg	SB-03	2/4	350-460	640	NA	310000	NA	NA	NO	BSL
193395	Indeno(1,2,3-cd)Pyrene	200	J	200	J	ug/kg	SB-03	1/4	350-460	200	NA	880	NA	NA	NO	BSL
7439896	Iron	1850		16700		mg/kg	SB-03	4/4	2.81-4.27	16700	NA	2300	NA	NA	YES	ASL
7439965	Manganese	8.2	K	134	K	mg/kg	SB-03	4/4	0.33-0.5	134	NA	180	NA	NA	NO	BSL
7439976	Mercury	0.06	L	0.55	L	mg/kg	SB-03	4/4	0.05-0.06	0.55	NA	2.3	NA	NA	NO	BSL
7440020	Nickel	1.9		31.8		mg/kg	SB-03	3/4	1.16-1.76	31.8	NA	160	NA	NA	NO	BSL
129000	Pyrene	67		590		ug/kg	SB-03	1/4	350-460	590	NA	230000	NA	NA	NO	BSL
7440622	Vanadium	5.3		27.5		mg/kg	SB-03	4/4	1.49-2.26	27.5	NA	55	NA	NA	NO	BSL
7440666	Zinc	44.9		2420		mg/kg	SB-03	3/4	0.83-1.26	2420	NA	2300	NA	NA	YES	ASL

(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 pre Human Health Risk Assessment Consensus Agreement #6.A.5, Naval Base Norfolk Partnership, August 1997.
(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 3.4
MEDIUM-SPECIFIC EXPOSURE POINT CONCENTRATION SUMMARY
St. Juliens Creek - Landfill B (Site 2)

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	6781.67	N/A	11900.00		mg/kg	11900.00	Max	(1)	6781.67	Mean-N	(1)
Arsenic	mg/kg	3.25	N/A	6.30		mg/kg	6.30	Max	(1)	3.25	Mean-N	(1)
Benzo(a)Pyrene	ug/kg	207.50	N/A	290.00	J	mg/kg	0.29	Max	(1)	0.21	Mean-N	(1)
Beryllium	mg/kg	0.24	N/A	0.35	J	mg/kg	0.35	Max	(1)	0.24	Mean-N	(1)
Cadmium	mg/kg	0.84	N/A	4.40		mg/kg	4.40	Max	(1)	0.84	Mean-N	(1)
Iron	mg/kg	9133.33	N/A	16700.00		mg/kg	16700.00	Max	(1)	9133.33	Mean-N	(1)
Zinc	mg/kg	449.595	N/A	2420.00			2420.00	Max	(1)	449.60	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 média will consist of the maximum detected concentration and the arithmetic mean.

TABLE 4.12

VALUES USED FOR DAILY INTAKE CALCULATIONS

St. Juliens Creek - Landfill B (Site 2)

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 B (Site 2)

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	1/16/98
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
Cadmium	Chronic	5.0E-04	mg/kg/day	0.03	1E-05	mg/kg/day	Kidney	11	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	1/16/98
Zinc	Chronic	3E-01	mg/kg/day	0.25	8E-02	mg/kg/day	Blood	4	IRIS	11/17/97

N/A = Not Applicable

TABLE 6.4
CANCER TOXICITY DATA -- ORAL/DERMAL
St. Juliens Creek - Landfill B (Site 2)

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	7.3E+00	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
Cadmium	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
Zinc	N/A	N/A	N/A	N/A	N/A	N/A	N/A

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

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 B (Site 2)

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	11900	mg/kg	11900.00	mg/kg	M	5.6E-02	mg/kg-day	1.0E+00	mg/kg/day	N/A	N/A	5.6E-02
	Arsenic	6.3	mg/kg	6.30	mg/kg	M	3.0E-05	mg/kg-day	3.0E-04	mg/kg/day	N/A	N/A	9.8E-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
	Beryllium	0.35	mg/kg	0.35	mg/kg	M	1.6E-06	mg/kg-day	5.0E-03	mg/kg/day	N/A	N/A	3.3E-04
	Cadmium	4.4	mg/kg	4.40	mg/kg	M	2.1E-05	mg/kg-day	5.0E-04	mg/kg/day	N/A	N/A	4.1E-02
	Iron	16700	mg/kg	16700.00	mg/kg	M	7.8E-02	mg/kg-day	3.0E-01	mg/kg/day	N/A	N/A	2.6E-01
	Zinc	2420	mg/kg	2420.00	mg/kg	M	1.1E-02	mg/kg-day	3.0E-01	mg/kg-day	N/A	N/A	3.8E-02
Dermal	Aluminum	11900	mg/kg	11900.00	mg/kg	M	6.2E-03	mg/kg-day	2.7E-01	mg/kg/day	N/A	N/A	2.3E-02
	Arsenic	6.3	mg/kg	6.30	mg/kg	M	1.0E-05	mg/kg-day	2.9E-04	mg/kg/day	N/A	N/A	3.7E-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
	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	3.6E-03
	Cadmium	4.4	mg/kg	4.40	mg/kg	M	2.1E-05	mg/kg-day	5.0E-04	mg/kg/day	N/A	N/A	4.1E-02
	Iron	16700	mg/kg	16700.00	mg/kg	M	8.6E-03	mg/kg-day	1.5E-02	mg/kg/day	N/A	N/A	5.8E-01
	Zinc	2420	mg/kg	2420.00	mg/kg	M	1.1E-02	mg/kg-day	3.0E-01	mg/kg-day	N/A	N/A	3.8E-02
												Total Hazard Index Across All Exposure Routes/Pathways	1.2E+00

TABLE 7.12.CT
CALCULATION OF NON-CANCER HAZARDS
CENTRAL TENDENCIES
St. Juliens Creek - Landfill B (Site 2)

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	6781.67	mg/kg	6781.67	mg/kg	M	3.2E-02	mg/kg-day	1.0E+00	mg/kg/day	N/A	N/A	3.2E-02
	Arsenic	3.25	mg/kg	3.25	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	0.21	mg/kg	0.21	mg/kg	M	9.7E-07	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Beryllium	0.24	mg/kg	0.24	mg/kg	M	1.1E-06	mg/kg-day	5.0E-03	mg/kg/day	N/A	N/A	2.2E-04
	Cadmium	0.84	mg/kg	0.84	mg/kg	M	3.9E-06	mg/kg-day	5.0E-04	mg/kg-day	N/A	N/A	7.9E-03
	Iron	9133.33	mg/kg	9133.33	mg/kg	M	4.3E-02	mg/kg-day	3.0E-01	mg/kg/day	N/A	N/A	1.4E-01
	Zinc	449.60	mg/kg	449.60	mg/kg	M	2.1E-03	mg/kg-day	3.0E-01	mg/kg-day	N/A	N/A	7.0E-03
Dermal	Aluminum	6781.67	mg/kg	6781.67	mg/kg	M	3.5E-03	mg/kg-day	2.7E-01	mg/kg/day	N/A	N/A	1.3E-02
	Arsenic	3.25	mg/kg	3.25	mg/kg	M	5.4E-06	mg/kg-day	2.9E-04	mg/kg/day	N/A	N/A	1.9E-02
	Benzo(a)Pyrene	0.21	mg/kg	0.21	mg/kg	M	1.1E-06	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Beryllium	0.24	mg/kg	0.24	mg/kg	M	1.2E-07	mg/kg-day	5.0E-05	mg/kg/day	N/A	N/A	2.5E-03
	Cadmium	0.84	mg/kg	0.84	mg/kg	M	3.9E-06	mg/kg-day	5.0E-04	mg/kg-day	N/A	N/A	7.9E-03
	Iron	9133.33	mg/kg	9133.33	mg/kg	M	4.7E-03	mg/kg-day	1.5E-02	mg/kg/day	N/A	N/A	3.1E-01
	Zinc	449.60	mg/kg	449.60	mg/kg	M	2.1E-03	mg/kg-day	3.0E-01	mg/kg-day	N/A	N/A	7.0E-03
												Total Hazard Index Across All Exposure Routes/Pathways	6.0E-01

TABLE 8.12.RME
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
St. Juliens Creek - Landfill B (Site 2)

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	11900	mg/kg	11900.00	mg/kg	M	4.0E-04	mg/kg-day	N/A	N/A	N/A
	Arsenic	6.3	mg/kg	6.30	mg/kg	M	2.1E-07	mg/kg-day	1.5E+00	mg/kg-day -1	3.17E-07
	Benzo(a)Pyrene	0.29	mg/kg	0.29	mg/kg	M	9.7E-09	mg/kg-day	7.3E+00	mg/kg-day -1	7.10E-08
	Beryllium	0.35	mg/kg	0.35	mg/kg	M	1.2E-08	mg/kg-day	4.3E+00	mg/kg-day -1	5.05E-08
	Cadmium	4.4	mg/kg	4.40	mg/kg	M	1.5E-07	mg/kg-day	N/A	N/A	N/A
	Iron	16700	mg/kg	16700.00	mg/kg	M	5.6E-04	mg/kg-day	N/A	N/A	N/A
	Zinc	2420	mg/kg	2420.00	mg/kg	M	8.1E-05	mg/kg-day	N/A	N/A	N/A
Dermal	Aluminum	11900	mg/kg	11900.00	mg/kg	M	4.4E-05	mg/kg-day	N/A	N/A	N/A
	Arsenic	6.3	mg/kg	6.30	mg/kg	M	7.5E-08	mg/kg-day	1.6E+00	mg/kg-day -1	1.18E-07
	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
	Beryllium	0.35	mg/kg	0.35	mg/kg	M	1.3E-09	mg/kg-day	4.3E+02	mg/kg-day -1	5.57E-07
	Cadmium	4.4	mg/kg	4.40	mg/kg	M	1.6E-08	mg/kg-day	N/A	N/A	N/A
	Iron	16700	mg/kg	16700.00	mg/kg	M	6.2E-05	mg/kg-day	N/A	N/A	N/A
	Zinc	2420	mg/kg	2420.00	mg/kg	M	9.0E-06	mg/kg-day	N/A	N/A	N/A

M = Medium Specific

Total Risk Across All Exposure Routes/Pathways 1.1E-06

TABLE 8.12.CT
CALCULATION OF CANCER RISKS
CENTRAL TENDENCIES
St. Juliens Creek - Landfill B (Site 2)

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	6781.67	mg/kg	6781.67	mg/kg	M	2.3E-04	mg/kg-day	N/A	N/A	N/A
	Arsenic	3.25	mg/kg	3.25	mg/kg	M	1.1E-07	mg/kg-day	1.5E+00	mg/kg-day -1	1.64E-07
	Benzo(a)Pyrene	0.21	mg/kg	0.21	mg/kg	M	7.0E-09	mg/kg-day	7.3E+00	mg/kg-day -1	5.08E-08
	Beryllium	0.24	mg/kg	0.24	mg/kg	M	8.0E-09	mg/kg-day	4.3E+00	mg/kg-day -1	3.43E-08
	Cadmium	0.84	mg/kg	0.84	mg/kg	M	2.8E-08	mg/kg-day	N/A	N/A	N/A
	Iron	9133.33	mg/kg	9133.33	mg/kg	M	3.1E-04	mg/kg-day	N/A	N/A	N/A
	Zinc	449.60	mg/kg	449.60	mg/kg	M	1.5E-05	mg/kg-day	N/A	N/A	N/A
Dermal	Aluminum	6781.67	mg/kg	6781.67	mg/kg	M	2.5E-05	mg/kg-day	N/A	N/A	N/A
	Arsenic	3.25	mg/kg	3.25	mg/kg	M	3.9E-08	mg/kg-day	1.6E+00	mg/kg-day -1	6.08E-08
	Benzo(a)Pyrene	0.21	mg/kg	0.21	mg/kg	M	7.7E-09	mg/kg-day	N/A	mg/kg-day -1	N/A
	Beryllium	0.24	mg/kg	0.24	mg/kg	M	8.8E-10	mg/kg-day	4.3E+02	mg/kg-day -1	3.78E-07
	Cadmium	0.84	mg/kg	0.84	mg/kg	M	3.1E-09	mg/kg-day	N/A	N/A	N/A
	Iron	9133.33	mg/kg	9133.33	mg/kg	M	3.4E-05	mg/kg-day	N/A	N/A	N/A
	Zinc	449.60	mg/kg	449.60	mg/kg	M	1.7E-06	mg/kg-day	N/A	N/A	N/A
										Total Risk Across All Exposure Routes/Pathways	6.9E-07

M = Medium Specific

Site 2

Subsurface Soil to Groundwater

TABLE 2.7
OCCURRENCE, DISTRIBUTION AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN
St. Juliens Creek - Landfill 8 (Site 2)

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 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	43	J	43	J	ug/kg	SB-04	1/4	11-16	43	NA	NA	NA	NA	NO	BSL
72548	4,4'-DDD	5.6		83		ug/kg	SB-04	3/4	3.5-7.5	83	NA	NA	NA	NA	NO	BSL
72559	4,4'-DDE	31		110		ug/kg	SB-03	4/4	3.5-35	110	NA	NA	NA	NA	NO	BSL
50293	4,4'-DDT	6.3	J	36	J	ug/kg	SB-05	4/4	3.5-7.5	36	NA	NA	NA	NA	NO	BSL
67641	Acetone	6		210		ug/kg	SB-04	2/4	11-16	210	NA	NA	NA	NA	NO	BSL
7429905	Aluminum	2000		11900		mg/kg	SB-04	4/4	7.27-11.04	11900	NA	NA	NA	NA	NO	BSL
120127	Anthracene	45	J	45	J	ug/kg	SB-03	1/4	350-460	45	NA	NA	NA	NA	NO	BSL
7440360	Antimony	0.63	J	0.63	J	mg/kg	SB-04	1/4	0.33-0.5	0.63	NA	NA	NA	NA	NO	BSL
7440382	Arsenic	1.2		6.3		mg/kg	SB-04	4/4	0.5-0.75	6.3	NA	NA	NA	NA	NO	BSL
7440393	Barium	8.4		291		mg/kg	SB-03	4/4	0.33-0.5	291	NA	32	NA	NA	YES	ASL
56553	Benzo(a)Anthracene	290	J	290	J	ug/kg	SB-03	1/4	350-460	290	NA	NA	NA	NA	NO	BSL
50328	Benzo(a)Pyrene	290	J	290	J	ug/kg	SB-03	1/4	350-460	290	NA	NA	NA	NA	NO	BSL
205992	Benzo(b)Fluoranthene	530		530		ug/kg	SB-03	1/4	350-460	530	NA	NA	NA	NA	NO	BSL
207089	Benzo(k)Fluoranthene	210	J	210	J	ug/kg	SB-03	1/4	350-460	210	NA	NA	NA	NA	NO	BSL
7440417	Beryllium	0.34	J	0.35	J	mg/kg	SB-03	2/4	0.17-0.25	0.35	NA	NA	NA	NA	NO	BSL
117817	Bis(2-Ethylhexyl)Phthalate	39	J	49	J	ug/kg	SB-03	2/4	350-460	49	NA	NA	NA	NA	NO	BSL
7440439	Cadmium	0.43		4.4		mg/kg	SB-03	2/4	0.08-0.13	4.4	NA	NA	NA	NA	NO	BSL
218019	Chryzene	360		360		ug/kg	SB-03	1/4	350-460	360	NA	NA	NA	NA	NO	BSL
7440484	Cobalt	3.6	J	4	J	mg/kg	SB-04	2/4	1.32-2.01	4	NA	NA	NA	NA	NO	BSL
7440508	Copper	3.8		433		mg/kg	SB-03	4/4	0.99-1.51	433	NA	NA	NA	NA	NO	BSL
53703	Dibenz(a,h)Anthracene	55	J	55	J	ug/kg	SB-03	1/4	350-460	55	NA	NA	NA	NA	NO	BSL
206440	Fluoranthene	51		640		ug/kg	SB-03	2/4	350-460	640	NA	NA	NA	NA	NO	BSL
193395	Indeno(1,2,3-cd)Pyrene	200	J	200	J	ug/kg	SB-03	1/4	350-460	200	NA	NA	NA	NA	NO	BSL
7439896	Iron	1850		16700		mg/kg	SB-03	4/4	2.81-4.27	16700	NA	NA	NA	NA	NO	BSL
7439965	Manganese	8.2	K	134	K	mg/kg	SB-03	4/4	0.33-0.5	134	NA	NA	NA	NA	NO	BSL
7439976	Mercury	0.06	L	0.55	L	mg/kg	SB-03	4/4	0.05-0.06	0.55	NA	NA	NA	NA	NO	BSL
7440020	Nickel	1.9		31.8		mg/kg	SB-03	3/4	1.16-1.76	31.8	NA	21	NA	NA	YES	ASL
129000	Pyrene	67		590		ug/kg	SB-03	1/4	350-460	590	NA	NA	NA	NA	NO	BSL
7440622	Vanadium	5.3		27.5		mg/kg	SB-03	4/4	1.49-2.26	27.5	NA	NA	NA	NA	NO	BSL
7440666	Zinc	44.9		2420		mg/kg	SB-03	3/4	0.83-1.26	2420	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 provided in Risk-Based Concentration Table, March 1997, U.S. EPA Region III.
(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 2

Subsurface Soil to Air

TABLE 2.8
OCCURRENCE, DISTRIBUTION AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN
St. Juliens Creek - Landfill B (Site 2)

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	43	J	43	J	ug/kg	SB-04	1/4	11-16	43	NA	NA	NA	NA	NO	NTX
72548	4,4'-DDD	5.6		83		ug/kg	SB-04	3/4	3.5-7.5	83	NA	NA	NA	NA	NO	NTX
72559	4,4'-DDE	31		110		ug/kg	SB-03	4/4	3.5-35	110	NA	NA	NA	NA	NO	NTX
50293	4,4'-DDT	6.3	J	36	J	ug/kg	SB-05	4/4	3.5-7.5	36	NA	NA	NA	NA	NO	NTX
67641	Acetone	6		210		ug/kg	SB-04	2/4	11-16	210	NA	NA	NA	NA	NO	NTX
7429905	Aluminum	2000		11900		mg/kg	SB-04	4/4	7.27-11.04	11900	NA	NA	NA	NA	NO	NTX
120127	Anthracene	45	J	45	J	ug/kg	SB-03	1/4	350-460	45	NA	NA	NA	NA	NO	NTX
7440360	Antimony	0.63	J	0.63	J	mg/kg	SB-04	1/4	0.33-0.5	0.63	NA	NA	NA	NA	NO	NTX
7440382	Arsenic	1.2		6.3		mg/kg	SB-04	4/4	0.5-0.75	6.3	NA	NA	NA	NA	NO	NTX
7440393	Barium	8.4		291		mg/kg	SB-03	4/4	0.33-0.5	291	NA	NA	NA	NA	NO	NTX
56553	Benzo(a)Anthracene	290	J	290	J	ug/kg	SB-03	1/4	350-460	290	NA	NA	NA	NA	NO	NTX
50328	Benzo(a)Pyrene	290	J	290	J	ug/kg	SB-03	1/4	350-460	290	NA	NA	NA	NA	NO	NTX
205992	Benzo(b)Fluoranthene	530		530		ug/kg	SB-03	1/4	350-460	530	NA	NA	NA	NA	NO	NTX
207089	Benzo(k)Fluoranthene	210	J	210	J	ug/kg	SB-03	1/4	350-460	210	NA	NA	NA	NA	NO	NTX
7440417	Beryllium	0.34	J	0.35	J	mg/kg	SB-03	2/4	0.17-0.25	0.35	NA	NA	NA	NA	NO	NTX
117817	Bis(2-Ethylhexyl)Phthalate	39	J	49	J	ug/kg	SB-03	2/4	350-460	49	NA	NA	NA	NA	NO	NTX
7440439	Cadmium	0.43		4.4		mg/kg	SB-03	2/4	0.08-0.13	4.4	NA	NA	NA	NA	NO	NTX
218019	Chrysene	360		360		ug/kg	SB-03	1/4	350-460	360	NA	NA	NA	NA	NO	NTX
7440484	Cobalt	3.6	J	4	J	mg/kg	SB-04	2/4	1.32-2.01	4	NA	NA	NA	NA	NO	NTX
7440508	Copper	3.8		433		mg/kg	SB-03	4/4	0.99-1.51	433	NA	NA	NA	NA	NO	NTX
53703	Dibenz(a,h)Anthracene	55	J	55	J	ug/kg	SB-03	1/4	350-460	55	NA	NA	NA	NA	NO	NTX
206440	Fluoranthene	51		640		ug/kg	SB-03	2/4	350-460	640	NA	NA	NA	NA	NO	NTX
193395	Indeno(1,2,3-cd)Pyrene	200	J	200	J	ug/kg	SB-03	1/4	350-460	200	NA	NA	NA	NA	NO	NTX
7439896	Iron	1850		16700		mg/kg	SB-03	4/4	2.81-4.27	16700	NA	NA	NA	NA	NO	NTX
7439965	Manganese	8.2	K	134	K	mg/kg	SB-03	4/4	0.33-0.5	134	NA	NA	NA	NA	NO	NTX
7439976	Mercury	0.06	L	0.55	L	mg/kg	SB-03	4/4	0.05-0.06	0.55	NA	NA	NA	NA	NO	NTX
7440020	Nickel	1.9		31.8		mg/kg	SB-03	3/4	1.16-1.76	31.8	NA	NA	NA	NA	NO	NTX
129000	Pyrene	67		590		ug/kg	SB-03	1/4	350-460	590	NA	NA	NA	NA	NO	NTX
7440622	Vanadium	5.3		27.5		mg/kg	SB-03	4/4	1.49-2.26	27.5	NA	NA	NA	NA	NO	NTX
7440666	Zinc	44.9		2420		mg/kg	SB-03	3/4	0.83-1.26	2420	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 provided in Risk-Based Concentration Table, March 1997, U.S. EPA Region III. (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 2

Sediment

TABLE 2.9
OCCURRENCE, DISTRIBUTION AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN
St. Juliens Creek - Landfill B (Site 2)

Scenario Timeframe: Current/Future
Medium: Sediment
Exposure Medium: Sediment
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)
540590	1,2-Dichloroethene (total)	9	J	9	J		SD-03	1/2	31-37	9	NA	2.4E+06	NA	NA	NO	BSL
72548	4,4'-DDD	210	J	310	J		SD-02	2/2	3.3-110	310	NA	9.6E+04	NA	NA	NO	BSL
72559	4,4'-DDE	71	J	130	J		SD-03	2/2	3.3-12	130	NA	6.7E+04	NA	NA	NO	BSL
50293	4,4'-DDT	8.8	J	28	J		SD-02	2/2	3.3-12	28	NA	6.7E+04	NA	NA	NO	BSL
108101	4-Methyl-2-Pentanone	5	J	5	J		SD-02	1/2	31-37	5	NA	2.2E+07	NA	NA	NO	BSL
67641	Acetone	92		450			SD-03	2/2	31-37	450	NA	2.7E+07	NA	NA	NO	BSL
7429905	Aluminum	10900		27200			SD-03	2/2	22.35-33.36	27200	NA	2.7E+05	NA	NA	NO	BSL
120127	Anthracene	130	L	130	L		SD-03	1/2	1300-9100	130	NA	2.7E+05	NA	NA	NO	BSL
7440360	Antimony	27.6	L	27.6	L		SD-03	1/2	1.02-1.52	27.6	NA	1.1E+02	NA	NA	NO	BSL
7440382	Arsenic		J	19.4			SD-03	2/2	1.52-2.27	19.4	NA	8.1E+01	NA	NA	NO	BSL
7440393	Barium	5.4		109	J		SD-03	2/2	1.02-1.52	109	NA	1.9E+04	NA	NA	NO	NTX
56553	Benzo(a)Anthracene	55.7	J	440	L		SD-03	1/2	330-1400	440	NA	3.1E+04	NA	NA	NO	BSL
50328	Benzo(a)Pyrene	440	L	660	L		SD-03	1/2	330-1400	660	NA	3.1E+03	NA	NA	NO	BSL
205992	Benzo(b)Fluoranthene	660	L	1300	L		SD-03	2/2	330-1400	1300	NA	3.1E+04	NA	NA	NO	BSL
207089	Benzo(k)Fluoranthene	1200	L	470	J		SD-03	1/2	330-1400	470	NA	3.1E+05	NA	NA	NO	NUT
7440417	Beryllium	470	J	1.1	J		SD-03	1/2	0.51-0.76	1.1	NA	5.3E+00	NA	NA	NO	BSL
7440439	Cadmium	1.1	J	4			SD-02	2/2	0.25-0.38	4	NA	1.4E+02	NA	NA	NO	BSL
75150	Carbon Disulfide	2.5		81			SD-03	1/2	31-37	81	NA	2.7E+07	NA	NA	NO	BSL
218019	Chrysene	81		680	L		SD-03	1/2	1300-9100	680	NA	3.1E+06	NA	NA	NO	BSL
7440484	Cobalt	680	L	10.7	J		SD-03	1/2	4.06-6.07	10.7	NA	1.6E+04	NA	NA	NO	BSL
7440508	Copper	10.7	J	2620			SD-03	2/2	3.05-4.55	2620	NA	9.5E+05	NA	NA	NO	BSL
60571	Dieldrin	344		36			SD-03	1/2	11-13	36	NA	1.4E+03	NA	NA	NO	BSL
84662	Diethylphthalate	36		250	L		SD-03	1/2	1300-9100	250	NA	2.2E+08	NA	NA	NO	BSL
206440	Fluoranthene	250	L	930	J		SD-02	2/2	1300-9100	930	NA	1.1E+07	NA	NA	NO	BSL
193395	Indeno(1,2,3-cd)Pyrene	850	J	530	L		SD-03	1/2	1300-9100	530	NA	3.1E+04	NA	NA	NO	BSL
7439896	Iron	530	L	31100			SD-03	2/2	8.63-12.89	31100	NA	8.1E+04	NA	NA	NO	BSL
7439965	Manganese	18500		235			SD-03	2/2	1.02-1.52	235	NA	6.2E+03	NA	NA	NO	BSL
7439976	Mercury	105		0.79			SD-03	2/2	0.14-0.19	0.79	NA	8.1E+01	NA	NA	NO	BSL
7440020	Nickel	0.45		41.5			SD-03	2/2	3.56-5.31	41.5	NA	5.4E+03	NA	NA	NO	NUT
129000	Pyrene	16.4		1200	J		SD-02	2/2	1300-9100	1200	NA	6.1E+06	NA	NA	NO	BSL
7440622	Vanadium	1100	J	115			SD-03	2/2	4.57-6.82	115	NA	1.9E+03	NA	NA	NO	BSL
7440666	Zinc	28.8		1400	L		SD-03	2/2	2.54-3.79	1400	NA	8.1E+04	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 prescribed in 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 (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 2

Surface Water

TABLE 2.10
OCCURRENCE, DISTRIBUTION AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN
St. Juliens Creek - Landfill B (Site 2)

Scenario Timeframe: Current/Future
Medium: Surface Water
Exposure Medium: Surface Water
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)
7440360	Antimony	2	J	2	J	ug/l	SW-02	1/1	N/A	2	N/A	30	4300	VAWQS	NO	BSL
7440382	Arsenic	3.1	J	3.1	J	ug/l	SW-02	1/1	N/A	3.1	N/A	190	N/A	VAWQS	NO	BSL
117817	Bis(2-Ethylhexyl)Phthalate	3	J	3	J	ug/l	SW-02	1/1	N/A	3	N/A	160	N/A	VAWQS	NO	BSL
7440439	Cadmium	1.9	L	1.9	L	ug/l	SW-02	1/1	N/A	1.9	N/A	1.1	N/A	VAWQS	YES	ASL
7440473	Chromium	166		166		ug/l	SW-02	1/1	N/A	166	N/A	11	N/A	VAWQS	YES	ASL
7440508	Copper	203		203		ug/l	SW-02	1/1	N/A	203	N/A	12	N/A	VAWQS	YES	ASL
7439896	Iron	10700		10700		ug/l	SW-02	1/1	N/A	10700	N/A	1000	N/A	VAWQS	YES	ASL
7439921	Lead	77.9	L	77.9	L	ug/l	SW-02	1/1	N/A	77.9	N/A	3.2	N/A	VAWQS	YES	ASL
7440666	Zinc	268		268		ug/l	SW-02	1/1	N/A	268	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)
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 B (Site 2)

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
Cadmium	ug/l	N/A	N/A	1.90	L	mg/l	0.002	Max	(1)	N/A	N/A	N/A
Chromium	ug/l	N/A	N/A	166.00		mg/l	0.166	Max	(1)	N/A	N/A	N/A
Copper	ug/l	N/A	N/A	203.00		mg/l	0.203	Max	(1)	N/A	N/A	N/A
Iron	ug/l	N/A	N/A	10700.00		mg/l	10.700	Max	(1)	N/A	N/A	N/A
Lead	ug/l	N/A	N/A	77.90	L	mg/l	0.078	Max	(1)	N/A	N/A	N/A
Zinc	ug/l	N/A	N/A	268.00		mg/l	0.268	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.

TABLE 4.13

VALUES USED FOR DAILY INTAKE CALCULATIONS
St. Julien's Creek - Landfill B (Site 2)

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 B (Site 2)

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 B (Site 2)

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 B (Site 2)

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 B (Site 2)

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 B (Site 2)

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)
Cadmium	Chronic	5.0E-04	mg/kg/day	0.05	2.5E-05	mg/kg/day	Kidney	11	IRIS	11/17/97
Chromium	Chronic	5.0E-03	mg/kg/day	0.01	5.0E-05	mg/kg/day	NOAEL	501	IRIS	02/09/98
Copper	Chronic	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	0.05	1.5E-02	mg/kg/day	N/A	N/A	RBC: N/A	10/7/97
Lead	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Zinc	Chronic	3.0E-01	mg/kg/day	0.25	7.5E-02	mg/kg/day	Blood	4	IRIS	11/17/97

N/A = Not Applicable

TABLE 6.5
CANCER TOXICITY DATA -- ORAL/DERMAL
St. Juliens Creek - Landfill B (Site 2)

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)
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
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
Lead	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 B (Site 2)

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 (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Dermal	Cadmium	0.002	mg/l	0.002	mg/l	M	2.4E-08	mg/kg-day	2.5E-05	mg/kg/day	N/A	N/A	9.6E-04
	Chromium	0.17	mg/l	0.17	mg/l	M	2.1E-06	mg/kg-day	5.0E-05	mg/kg/day	N/A	N/A	4.2E-02
	Copper	0.20	mg/l	0.20	mg/l	M	2.6E-06	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Iron	10.70	mg/l	10.70	mg/l	M	1.3E-04	mg/kg-day	1.5E-02	mg/kg/day	N/A	N/A	9.0E-03
	Zinc	0.27	mg/l	0.27	mg/l	M	3.4E-06	mg/kg-day	7.5E-02	mg/kg/day	N/A	N/A	4.5E-05
												Total Hazard Index Across All Exposure Routes/Pathways	5.2E-02

TABLE 7.14.RME
CALCULATION OF NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
St. Juliens Creek - Landfill B (Site 2)

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 (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Dermal	Cadmium	0.002	mg/l	0.00	mg/l	M	9.9E-09	mg/kg-day	2.5E-05	mg/kg/day	N/A	N/A	4.0E-04
	Chromium	0.17	mg/l	0.17	mg/l	M	8.7E-07	mg/kg-day	5.0E-05	mg/kg/day	N/A	N/A	1.7E-02
	Copper	0.20	mg/l	0.20	mg/l	M	1.1E-06	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Iron	10.70	mg/l	10 70	mg/l	M	5.6E-05	mg/kg-day	1.5E-02	mg/kg/day	N/A	N/A	3.7E-03
	Zinc	0.27	mg/l	0.27	mg/l	M	1.4E-06	mg/kg-day	7.5E-02	mg/kg/day	N/A	N/A	1.9E-05
												Total Hazard Index Across All Exposure Routes/Pathways	2.1E-02

TABLE 7.15.RME
CALCULATION OF NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
St. Juliens Creek - Landfill B (Site 2)

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 (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Dermal	Cadmium	0.002	mg/l	0.00	mg/l	M	1.1E-08	mg/kg-day	2.5E-05	mg/kg/day	N/A	N/A	4.5E-04
	Chromium	0.17	mg/l	0.17	mg/l	M	9.8E-07	mg/kg-day	5.0E-05	mg/kg/day	N/A	N/A	2.0E-02
	Copper	0.20	mg/l	0.20	mg/l	M	1.2E-06	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Iron	10.70	mg/l	10.70	mg/l	M	6.3E-05	mg/kg-day	1.5E-02	mg/kg/day	N/A	N/A	4.2E-03
	Zinc	0.27	mg/l	0.27	mg/l	M	1.6E-06	mg/kg-day	7.5E-02	mg/kg/day	N/A	N/A	2.1E-05
												Total Hazard Index Across All Exposure Routes/Pathways	2.4E-02

TABLE 7.16.RME
CALCULATION OF NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
St. Juliens Creek - Landfill B (Site 2)

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 (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Dermal	Cadmium	0.002	mg/l	0.00	mg/l	M	1.6E-07	mg/kg-day	2.5E-05	mg/kg/day	N/A	N/A	6.4E-03
	Chromium	0.17	mg/l	0.17	mg/l	M	1.4E-05	mg/kg-day	5.0E-05	mg/kg/day	N/A	N/A	2.8E-01
	Copper	0.20	mg/l	0.20	mg/l	M	1.7E-05	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Iron	10.70	mg/l	10.70	mg/l	M	9.1E-04	mg/kg-day	1.5E-02	mg/kg/day	N/A	N/A	6.0E-02
	Zinc	0.27	mg/l	0.27	mg/l	M	2.3E-05	mg/kg-day	7.5E-02	mg/kg/day	N/A	N/A	3.0E-04
												Total Hazard Index Across All Exposure Routes/Pathways	3.5E-01

TABLE 7.17.RME
CALCULATION OF NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
St. Juliens Creek - Landfill B (Site 2)

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 (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose (2)	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Dermal	Cadmium	0.002	mg/l	0.00	mg/l	M	7.5E-08	mg/kg-day	2.5E-05	mg/kg/day	N/A	N/A	3.0E-03
	Chromium	0.17	mg/l	0.17	mg/l	M	6.6E-06	mg/kg-day	5.0E-05	mg/kg/day	N/A	N/A	1.3E-01
	Copper	0.20	mg/l	0.20	mg/l	M	8.1E-06	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Iron	10.70	mg/l	10.70	mg/l	M	4.3E-04	mg/kg-day	1.5E-02	mg/kg/day	N/A	N/A	2.8E-02
	Zinc	0.27	mg/l	0.27	mg/l	M	1.1E-05	mg/kg-day	7.5E-02	mg/kg/day	N/A	N/A	1.4E-04
												Total Hazard Index Across All Exposure Routes/Pathways	1.6E-01

APPENDIX K

Site 5 Risk Tables

TABLE 1

SELECTION OF EXPOSURE PATHWAYS

St. Julien's Creek - Burning Grounds (Site 5)

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 5

Data Usability Worksheets

DATA USEABILITY WORKSHEET
Site: St. Juliens Creek, Burning Grounds (Site 5)
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 5.
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 five 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-150797, TB-160797, and TB-300797. The field blanks associated with this group of samples are FB-150797-TAPGW, FB-150797-DI2, and FB-230797-DI3. The equipment rinsate blanks associated with this group of samples is EB-150797-GW, EB- 160797-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 5.
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, Burning Grounds (Site 5)
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, carbon disulfide, chloroform, copper, dibromochloromethane, 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?	No. Relative percent difference was above the stated goal of <20%.
Summarize the effect of DQO issues on the risk assessment, if applicable.	The RPD goal was not satisfied for the total and dissolved metals fractions. 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, Burning Grounds (Site 5)
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, Burning Grounds (Site 5)
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, Burning Grounds (Site 5)
Medium: Surface 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 5.
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 5. These depths are usable for consideration for contaminant transfer to the shallow groundwater aquifer, transfer to air, and also direct exposure for residents, tresspassers, 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. Trip blanks that applies to this group of samples are TB-240697 and TB-260697. 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 are EB-240697-SS, and 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 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, Burning Grounds (Site 5)
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 , antimony, 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?	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.	The RPD goal was not satisfied. However, soil samples routinely have RPDs as high as 100%. RPDs for these duplicate soil samples were 69%. This RPD value will not negatively effect the usability of the data.

EXHIBIT 3-3

DATA USEABILITY WORKSHEET (continued)
Site: St. Juliens Creek, Burning Grounds (Site 5)
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

DATA USEABILITY WORKSHEET
Site: St. Juliens Creek, Burning Grounds (Site 5)
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 5.
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 0-6' at Site 5. 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-240697 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-240697-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 5.
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, Burning Grounds (Site 5)
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.).	Aluminum, acetone, barium, chloroform, carbon disulfide, copper, chromium, lead, nickel, silver, 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?	Relative percent difference was above the stated goal of <25%. No MS/MSD analysis was performed for the organic fractions of the sample delivery group containing SB-05 and SB-08.
Summarize the effect of DQO issues on the risk assessment, if applicable.	RPD goal was not satisfied. However, soil samples routinely have RPDs of up to 100% (RPDs for the duplicate samples noted here were under 80%). The RPDs noted for these samples do 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-05 and SB-08.

EXHIBIT 3-3

DATA USEABILITY WORKSHEET (continued)
Site: St. Juliens Creek, Burning Grounds (Site 5)
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, Burning Grounds (Site 5)
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.

TABLE 7.4.CT
CALCULATION OF NON-CANCER HAZARDS
CENTRAL TENDENCIES
St. Juliens Creek -Burning Grounds (Site 5)

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	Antimony	0.001975	mg/l	2.0E-03	mg/l	M	1.5E-10	mg/kg-day	4.0E-05	mg/kg/day	N/A	N/A	3.7E-06
	Arsenic	0.00325	mg/l	3.3E-03	mg/l	M	2.4E-10	mg/kg-day	2.9E-04	mg/kg/day	N/A	N/A	8.4E-07
	Beryllium	0.000895	mg/l	9.0E-04	mg/l	M	6.6E-11	mg/kg-day	5.0E-05	mg/kg/day	N/A	N/A	1.3E-06
	Iron	2.785	mg/l	2.8E+00	mg/l	M	2.1E-07	mg/kg-day	1.5E-02	mg/kg/day	N/A	N/A	1.4E-05
	Manganese	0.16	mg/l	1.6E-01	mg/l	M	1.2E-08	mg/kg-day	2.3E-02	mg/kg/day	N/A	N/A	5.1E-07
	Chloroform	0.00275	mg/l	2.8E-03	mg/l	M	3.6E-09	mg/kg-day	1.0E-02	mg/kg/day	N/A	N/A	3.6E-07
												Total Hazard Index Across All Exposure Routes/Pathways	2.0E-05

EXHIBIT 3-3

DATA USEABILITY WORKSHEET (continued)
Site: St. Juliens Creek, Burning Grounds (Site 5)
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, Burning Grounds (Site 5)
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 5.
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 5. 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 5.
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, Burning Grounds (Site 5)
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, antimony, bis(2-ethylhexyl)phthalate, copper, lead, magnesium, methylene chloride, silver, nickel, 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?	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, Burning Grounds (Site 5)
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, Burning Grounds (Site 5)
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 5

Deep Groundwater Current/Future

TABLE 2.1
OCCURRENCE, DISTRIBUTION AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN
St. Juliens Creek -Burning Grounds (Site 5)

Scenario Timeframe: Current
Medium: Deep Groundwater
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)
7429905	Aluminum	2250		2250		mg/kg	GW2D	1/2	29-39.1	2250	NA	3700	NA	NA	NO	BSL
7440360	Antimony	3.1	J	3.1	J	mg/kg	GW2D	1/2	1-1.7	3.1	NA	1.5	6	MCL	YES	ASL
7440382	Arsenic	4.9	J	4.9	J	mg/kg	GW2D	1/2	3-3.2	4.9	NA	0.045	50	MCL	YES	ASL
7440393	Barium	22	J	26.5	J	mg/kg	GW2D	2/2	1-1	26.5	NA	260	2000	MCL	NO	BSL
7440417	Beryllium	1.5	K	1.5	K	mg/kg	GW2D	1/2	0.58-1	1.5	NA	0.016	4	MCL	YES	ASL
7439896	Iron	1150	K	4420	K	mg/kg	GW2D	2/2	5-5	4420	NA	1100	NA	NA	YES	ASL
7439965	Manganese	142		178		mg/kg	GW2D	2/2	1-1	178	NA	84	NA	NA	YES	ASL
7440622	Vanadium	15.6	K	15.6	K	mg/kg	GW2D	1/2	4-6.8	15.6	NA	26	NA	NA	NO	BSL
67663	Chloroform	5		5		ug/kg	GW2D	1/2	1-1	5	NA	0.15	NA	NA	YES	ASL

(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 15 ug/l, as prescribed in 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 (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 3.1
MEDIUM-SPECIFIC EXPOSURE POINT CONCENTRATION SUMMARY
St. Juliens Creek - Burning Grounds (Site 5)

Scenario Timeframe: Current
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
Antimony	ug/l	1.975	N/A	3.1	J	mg/l	0.003	Max	(1)	0.002	Mean	(1)
Arsenic	ug/l	3.250	N/A	4.9	J	mg/l	0.005	Max	(1)	0.003	Mean	(1)
Beryllium	ug/l	0.895	N/A	1.5	K	mg/l	0.002	Max	(1)	0.001	Mean	(1)
Iron	ug/l	2785.000	N/A	4420		mg/l	4.420	Max	(1)	2.785	Mean	(1)
Manganese	ug/l	160.000	N/A	178		mg/l	0.178	Max	(1)	0.160	Mean	(1)
Chloroform	ug/l	2.750	N/A	5		mg/l	0.005	Max	(1)	0.003	Mean	(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 G 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 - Burning Grounds (Site 5)

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	8,760	EPA, 1989a	8,760	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, 1995b	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	8,760	EPA, 1989a	8,760	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. The skin surface area presented in this table was derived by averaging the mean child (2 to 7 years) male and female values.

EPA, 1995: Assessing Dermal Exposure from Soil, Technical Guidance manual, Region III, EPA/903-K-95-003.

EPA, 1995b: Exposure Factors Handbook, June 1995, EPA/600/P-95/002A

TABLE 4.3

VALUES USED FOR DAILY INTAKE CALCULATIONS

St. Julien's Creek - Burning Grounds (Site 5)

Scenario Timeframe: Current
Medium: Groundwater
Exposure Medium: Deep 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	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	
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	24	EPA, 1991	24	EPA, 1991	
	CF	Volumetric Conversion Factor for Water	l/cm^2	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	
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 - Burning Grounds (Site 5)

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	25	EPA, 1991	25	EPA, 1991	
	CF	Volumetric Conversion Factor for Water	l/cm^2	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.

TABLE 5.1
NON-CANCER TOXICITY DATA -- ORAL/DERMAL
St. Juliens Creek - Burning Grounds (Site 5)

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)
Antimony	Chronic	4.0E-04	mg/kg/day	0.10	4.0E-05	mg/kg/day	Blood	1001	IRIS	11/17/97
Arsenic	Chronic	3.0E-04	mg/kg/day	0.95	2.9E-04	mg/kg/day	Skin	3	IRIS	11/17/97
Beryllium	Chronic	5.0E-03	mg/kg/day	0.01	5.0E-05	mg/kg/day	NOAEL	101	IRIS	11/17/97
Iron	Chronic	3.0E-01	mg/kg/day	0.05	1.5E-02	mg/kg/day	N/A	N/A	RBC:N/A	10/7/97
Manganese	Chronic	2.3E-02	mg/kg/day	1.00	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
HEAST= Health Effects Assessment Summary Tables
NCEA= National Center for Environmental Assessment
RBC= *Region III Updated Risk-Based Concentration Table.* October, 1997.
For NCEA values, provide the date of the article provided by NCEA.

TABLE 6.1
CANCER TOXICITY DATA -- ORAL/DERMAL
St. Juliens Creek - Burning Grounds (Site 5)

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 (2) (MM/DD/YY)
Antimony	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
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
Chloroform	6.1E-03	1.00	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

Weight of Evidence:
- Known/Likely
- Cannot be Determined
- Not Likely

TABLE 7.2.RME
CALCULATION OF NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
St. Juliens Creek Burning Grounds (Site 5)

Scenario Timeframe: Current
Medium: Deep Groundwater
Exposure Medium: Groundwater
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	Antimony	0.0031	mg/l	3.1E-03	mg/l	M	5.0E-05	mg/kg-day	0.0004	mg/kg/day	N/A	N/A	1.2E-01
	Arsenic	0.0049	mg/l	4.9E-03	mg/l	M	7.8E-05	mg/kg-day	0.0003	mg/kg/day	N/A	N/A	2.6E-01
	Beryllium	0.0015	mg/l	1.5E-03	mg/l	M	2.4E-05	mg/kg-day	0.005	mg/kg/day	N/A	N/A	4.8E-03
	Iron	4.42	mg/l	4.4E+00	mg/l	M	7.1E-02	mg/kg-day	0.3	mg/kg/day	N/A	N/A	2.4E-01
	Manganese	0.178	mg/l	1.8E-01	mg/l	M	2.8E-03	mg/kg-day	0.023	mg/kg/day	N/A	N/A	1.2E-01
	Chloroform	0.005	mg/l	5.0E-03	mg/l	M	8.0E-05	mg/kg-day	0.01	mg/kg/day	N/A	N/A	8.0E-03
Dermal	Antimony	0.0031	mg/l	3.1E-03	mg/l	M	3.6E-08	mg/kg-day	4.0E-05	mg/kg/day	N/A	N/A	8.9E-04
	Arsenic	0.0049	mg/l	4.9E-03	mg/l	M	5.6E-08	mg/kg-day	2.9E-04	mg/kg/day	N/A	N/A	2.0E-04
	Beryllium	0.0015	mg/l	1.5E-03	mg/l	M	1.7E-08	mg/kg-day	5.0E-05	mg/kg/day	N/A	N/A	3.5E-04
	Iron	4.42	mg/l	4.4E+00	mg/l	M	5.1E-05	mg/kg-day	1.5E-02	mg/kg/day	N/A	N/A	3.4E-03
	Manganese	0.178	mg/l	1.8E-01	mg/l	M	2.0E-06	mg/kg-day	2.3E-02	mg/kg/day	N/A	N/A	8.9E-05
	Chloroform	0.005	mg/l	5.0E-03	mg/l	M	1.0E-06	mg/kg-day	1.0E-02	mg/kg/day	N/A	N/A	1.0E-04
												Total Hazard Index Across All Exposure Routes/Pathways	7.6E-01

TABLE 7.2.CT
CALCULATION OF NON-CANCER HAZARDS
CENTRAL TENDENCIES
St. Juliens Creek -Burning Grounds (Site 5)

Scenario Timeframe: Current
Medium: Deep Groundwater
Exposure Medium: Groundwater
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	Antimony	0.001975	mg/l	2.0E-03	mg/l	M	3.2E-05	mg/kg-day	0.0004	mg/kg/day	N/A	N/A	7.9E-02
	Arsenic	0.00325	mg/l	3.3E-03	mg/l	M	5.2E-05	mg/kg-day	0.0003	mg/kg/day	N/A	N/A	1.7E-01
	Beryllium	0.000895	mg/l	9.0E-04	mg/l	M	1.4E-05	mg/kg-day	0.005	mg/kg/day	N/A	N/A	2.9E-03
	Iron	2.785	mg/l	2.8E+00	mg/l	M	4.5E-02	mg/kg-day	0.3	mg/kg/day	N/A	N/A	1.5E-01
	Manganese	0.16	mg/l	1.6E-01	mg/l	M	2.6E-03	mg/kg-day	0.023	mg/kg/day	N/A	N/A	1.1E-01
	Chloroform	0.00275	mg/l	2.8E-03	mg/l	M	4.4E-05	mg/kg-day	0.01	mg/kg/day	N/A	N/A	4.4E-03
Dermal	Antimony	0.001975	mg/l	2.0E-03	mg/l	M	2.3E-08	mg/kg-day	4.0E-05	mg/kg/day	N/A	N/A	5.7E-04
	Arsenic	0.00325	mg/l	3.3E-03	mg/l	M	3.7E-08	mg/kg-day	2.9E-04	mg/kg/day	N/A	N/A	1.3E-04
	Beryllium	0.000895	mg/l	9.0E-04	mg/l	M	1.0E-08	mg/kg-day	5.0E-05	mg/kg/day	N/A	N/A	2.1E-04
	Iron	2.785	mg/l	2.8E+00	mg/l	M	3.2E-05	mg/kg-day	1.5E-02	mg/kg/day	N/A	N/A	2.1E-03
	Manganese	0.16	mg/l	1.6E-01	mg/l	M	1.8E-06	mg/kg-day	2.3E-02	mg/kg/day	N/A	N/A	8.0E-05
	Chloroform	0.00275	mg/l	2.8E-03	mg/l	M	5.6E-07	mg/kg-day	1.0E-02	mg/kg/day	N/A	N/A	5.6E-05
												Total Hazard Index Across All Exposure Routes/Pathways	5.2E-01

TABLE 7.3.RME
CALCULATION OF NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
St. Juliens Creek -Burning Grounds (Site 5)

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	Antimony	0.0031	mg/l	0.003	mg/l	M	8.5E-05	mg/kg-day	0.0004	mg/kg/day	N/A	N/A	2.1E-01
	Arsenic	0.0049	mg/l	0.005	mg/l	M	1.3E-04	mg/kg-day	0.0003	mg/kg/day	N/A	N/A	4.5E-01
	Beryllium	0.0015	mg/l	0.002	mg/l	M	4.1E-05	mg/kg-day	0.005	mg/kg/day	N/A	N/A	8.2E-03
	Iron	4.42	mg/l	4.420	mg/l	M	1.2E-01	mg/kg-day	0.3	mg/kg/day	N/A	N/A	4.0E-01
	Manganese	0.178	mg/l	0.178	mg/l	M	4.9E-03	mg/kg-day	0.023	mg/kg/day	N/A	N/A	2.1E-01
	Chloroform	0.005	mg/l	0.005	mg/l	M	1.4E-04	mg/kg-day	0.01	mg/kg/day	N/A	N/A	1.4E-02
Dermal	Antimony	0.0031	mg/l	0.003	mg/l	M	7.7E-08	mg/kg-day	4.0E-05	mg/kg/day	N/A	N/A	1.9E-03
	Arsenic	0.0049	mg/l	0.005	mg/l	M	1.2E-07	mg/kg-day	2.9E-04	mg/kg/day	N/A	N/A	4.3E-04
	Beryllium	0.0015	mg/l	0.002	mg/l	M	3.7E-08	mg/kg-day	5.0E-05	mg/kg/day	N/A	N/A	7.5E-04
	Iron	4.42	mg/l	4.420	mg/l	M	1.1E-04	mg/kg-day	1.5E-02	mg/kg/day	N/A	N/A	7.3E-03
	Manganese	0.178	mg/l	0.178	mg/l	M	4.4E-06	mg/kg-day	2.3E-02	mg/kg/day	N/A	N/A	1.9E-04
	Chloroform	0.005	mg/l	0.005	mg/l	M	2.2E-06	mg/kg-day	1.0E-02	mg/kg/day	N/A	N/A	2.2E-04
												Total Hazard Index Across All Exposure Routes/Pathways	1.3E+00

TABLE 7.4.RME
CALCULATION OF NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
St. Juliens Creek -Burning Grounds (Site 5)

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	Antimony	0.0031	mg/l	3.1E-03	mg/l	M	2.3E-10	mg/kg-day	4.0E-05	mg/kg/day	N/A	N/A	5.7E-06
	Arsenic	0.0049	mg/l	4.9E-03	mg/l	M	3.6E-10	mg/kg-day	2.9E-04	mg/kg/day	N/A	N/A	1.3E-06
	Beryllium	0.0015	mg/l	1.5E-03	mg/l	M	1.1E-10	mg/kg-day	5.0E-05	mg/kg/day	N/A	N/A	2.2E-06
	Iron	4.42	mg/l	4.4E+00	mg/l	M	3.3E-07	mg/kg-day	1.5E-02	mg/kg/day	N/A	N/A	2.2E-05
	Manganese	0.178	mg/l	1.8E-01	mg/l	M	1.3E-08	mg/kg-day	2.3E-02	mg/kg/day	N/A	N/A	5.7E-07
	Chloroform	0.005	mg/l	5.0E-03	mg/l	M	6.6E-09	mg/kg-day	1.0E-02	mg/kg/day	N/A	N/A	6.6E-07
												Total Hazard Index Across All Exposure Routes/Pathways	3.2E-05

TABLE 7.3.CT
CALCULATION OF NON-CANCER HAZARDS
CENTRAL TENDENCIES
St. Juliens Creek -Burning Grounds (Site 5)

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	Antimony	0.001975	mg/l	0.002	mg/l	M	5.4E-05	mg/kg-day	0.0004	mg/kg/day	N/A	N/A	1.4E-01
	Arsenic	0.00325	mg/l	0.003	mg/l	M	8.9E-05	mg/kg-day	0.0003	mg/kg/day	N/A	N/A	3.0E-01
	Beryllium	0.000895	mg/l	0.001	mg/l	M	2.5E-05	mg/kg-day	0.005	mg/kg/day	N/A	N/A	4.9E-03
	Iron	2.785	mg/l	2.785	mg/l	M	7.6E-02	mg/kg-day	0.3	mg/kg/day	N/A	N/A	2.5E-01
	Manganese	0.16	mg/l	0.160	mg/l	M	4.4E-03	mg/kg-day	0.023	mg/kg/day	N/A	N/A	1.9E-01
	Chloroform	0.00275	mg/l	0.003	mg/l	M	7.5E-05	mg/kg-day	0.01	mg/kg/day	N/A	N/A	7.5E-03
Dermal	Antimony	0.001975	mg/l	0.002	mg/l	M	4.9E-08	mg/kg-day	4.0E-05	mg/kg/day	N/A	N/A	1.2E-03
	Arsenic	0.00325	mg/l	0.003	mg/l	M	8.1E-08	mg/kg-day	2.9E-04	mg/kg/day	N/A	N/A	2.8E-04
	Beryllium	0.000895	mg/l	0.001	mg/l	M	2.2E-08	mg/kg-day	5.0E-05	mg/kg/day	N/A	N/A	4.5E-04
	Iron	2.785	mg/l	2.785	mg/l	M	6.9E-05	mg/kg-day	1.5E-02	mg/kg/day	N/A	N/A	4.6E-03
	Manganese	0.16	mg/l	0.160	mg/l	M	4.0E-06	mg/kg-day	2.3E-02	mg/kg/day	N/A	N/A	1.7E-04
	Chloroform	0.00275	mg/l	0.003	mg/l	M	1.2E-06	mg/kg-day	1.0E-02	mg/kg/day	N/A	N/A	1.2E-04
												Total Hazard Index Across All Exposure Routes/Pathways	9.0E-01

TABLE 8.2.RME
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
St. Juliens Creek - Burning Grounds (Site 5)

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	Antimony	3.1E-03	mg/l	3.1E-03	mg/l	M	1.7E-05	mg/kg-day	N/A	N/A	N/A
	Arsenic	4.9E-03	mg/l	4.9E-03	mg/l	M	2.7E-05	mg/kg-day	1.425	mg/kg-day -1	3.8E-05
	Beryllium	1.5E-03	mg/l	1.5E-03	mg/l	M	8.2E-06	mg/kg-day	0.043	mg/kg-day -1	3.5E-07
	Iron	4.4E+00	mg/l	4.4E+00	mg/l	M	2.4E-02	mg/kg-day	N/A	N/A	N/A
	Manganese	1.8E-01	mg/l	1.8E-01	mg/l	M	9.8E-04	mg/kg-day	N/A	N/A	N/A
	Chloroform	5.0E-03	mg/l	5.0E-03	mg/l	M	2.7E-05	mg/kg-day	0.0061	mg/kg-day -1	1.7E-07
Dermal	Antimony	3.1E-03	mg/l	3.1E-03	mg/l	M	1.2E-08	mg/kg-day	N/A	N/A	N/A
	Arsenic	4.9E-03	mg/l	4.9E-03	mg/l	M	1.9E-08	mg/kg-day	1.4E+00	mg/kg-day -1	2.8E-08
	Beryllium	1.5E-03	mg/l	1.5E-03	mg/l	M	5.9E-09	mg/kg-day	4.3E-02	mg/kg-day -1	2.5E-10
	Iron	4.4E+00	mg/l	4.4E+00	mg/l	M	1.7E-05	mg/kg-day	N/A	N/A	N/A
	Manganese	1.8E-01	mg/l	1.8E-01	mg/l	M	1.2E-05	mg/kg-day	N/A	N/A	N/A
	Chloroform	5.0E-03	mg/l	5.0E-03	mg/l	M	2.0E-08	mg/kg-day	6.1E-03	mg/kg-day -1	1.2E-10
										Total Risk Across All Exposure Routes/Pathways	3.9E-05

TABLE 8.2.CT
CALCULATION OF CANCER RISKS
CENTRAL TENDENCIES
St. Juliens Creek - Burning Grounds (Site 5)

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	Antimony	2.0E-03	mg/l	2.0E-03	mg/l	M	1.1E-05	mg/kg-day	N/A	N/A	N/A
	Arsenic	3.3E-03	mg/l	3.3E-03	mg/l	M	1.8E-05	mg/kg-day	1.425	mg/kg-day -1	2.5E-05
	Beryllium	9.0E-04	mg/l	9.0E-04	mg/l	M	4.9E-06	mg/kg-day	0.043	mg/kg-day -1	2.1E-07
	Iron	2.8E+00	mg/l	2.8E+00	mg/l	M	1.5E-02	mg/kg-day	N/A	N/A	N/A
	Manganese	1.6E-01	mg/l	1.6E-01	mg/l	M	8.8E-04	mg/kg-day	N/A	N/A	N/A
	Chloroform	2.8E-03	mg/l	2.8E-03	mg/l	M	1.5E-05	mg/kg-day	0.0061	mg/kg-day -1	9.2E-08
Dermal	Antimony	2.0E-03	mg/l	2.0E-03	mg/l	M	7.8E-09	mg/kg-day	N/A	N/A	N/A
	Arsenic	3.3E-03	mg/l	3.3E-03	mg/l	M	1.3E-08	mg/kg-day	1.4E+00	mg/kg-day -1	1.8E-08
	Beryllium	9.0E-04	mg/l	9.0E-04	mg/l	M	3.5E-09	mg/kg-day	4.3E-02	mg/kg-day -1	1.5E-10
	Iron	2.8E+00	mg/l	2.8E+00	mg/l	M	1.1E-05	mg/kg-day	N/A	N/A	N/A
	Manganese	1.6E-01	mg/l	1.6E-01	mg/l	M	1.1E-05	mg/kg-day	N/A	N/A	N/A
	Chloroform	2.8E-03	mg/l	2.8E-03	mg/l	M	1.1E-08	mg/kg-day	6.1E-03	mg/kg-day -1	6.6E-11
										Total Risk Across All Exposure Routes/Pathways	2.6E-05

TABLE 8.3.RME
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
St. Juliens Creek - Burning Grounds (Site 5)

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	Antimony	3.1E-03	mg/l	3.1E-03	mg/l	M	2.9E-05	mg/kg-day	N/A	N/A	N/A
	Arsenic	4.9E-03	mg/l	4.9E-03	mg/l	M	4.6E-05	mg/kg-day	1.4E+00	mg/kg-day -1	6.6E-05
	Beryllium	1.5E-03	mg/l	1.5E-03	mg/l	M	1.4E-05	mg/kg-day	4.3E-02	mg/kg-day -1	6.1E-07
	Iron	4.4E+00	mg/l	4.4E+00	mg/l	M	4.2E-02	mg/kg-day	N/A	N/A	N/A
	Manganese	1.8E-01	mg/l	1.8E-01	mg/l	M	1.7E-03	mg/kg-day	N/A	N/A	N/A
	Chloroform	5.0E-03	mg/l	5.0E-03	mg/l	M	4.7E-05	mg/kg-day	6.1E-03	mg/kg-day -1	2.9E-07
Dermal	Antimony	3.1E-03	mg/l	3.1E-03	mg/l	M	2.6E-08	mg/kg-day	N/A	N/A	N/A
	Arsenic	4.9E-03	mg/l	4.9E-03	mg/l	M	4.2E-08	mg/kg-day	1.4E+00	mg/kg-day -1	6.0E-08
	Beryllium	1.5E-03	mg/l	1.5E-03	mg/l	M	1.3E-08	mg/kg-day	4.3E-02	mg/kg-day -1	5.5E-10
	Iron	4.4E+00	mg/l	4.4E+00	mg/l	M	3.8E-05	mg/kg-day	N/A	N/A	N/A
	Manganese	1.8E-01	mg/l	1.8E-01	mg/l	M	1.5E-06	mg/kg-day	N/A	N/A	N/A
	Chloroform	5.0E-03	mg/l	5.0E-03	mg/l	M	7.6E-07	mg/kg-day	6.1E-03	mg/kg-day -1	4.6E-09
										Total Risk Across All Exposure Routes/Pathways	6.7E-05

TABLE 8.3.CT
CALCULATION OF CANCER RISKS
CENTRAL TENDENCIES
St. Juliens Creek - Burning Grounds (Site 5)

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	Antimony	0.002	mg/l	0.002	mg/l	M	1.9E-05	mg/kg-day	N/A	N/A	N/A
	Arsenic	0.003	mg/l	0.003	mg/l	M	3.1E-05	mg/kg-day	1.425	mg/kg-day -1	4.4E-05
	Beryllium	0.001	mg/l	0.001	mg/l	M	8.4E-06	mg/kg-day	0.043	mg/kg-day -1	3.6E-07
	Iron	2.785	mg/l	2.785	mg/l	M	2.6E-02	mg/kg-day	N/A	N/A	N/A
	Manganese	0.160	mg/l	0.160	mg/l	M	1.5E-03	mg/kg-day	N/A	N/A	N/A
	Chloroform	0.003	mg/l	0.003	mg/l	M	2.6E-05	mg/kg-day	0.0061	mg/kg-day -1	1.6E-07
Dermal	Antimony	0.002	mg/l	0.002	mg/l	M	1.7E-08	mg/kg-day	N/A	N/A	N/A
	Arsenic	0.003	mg/l	0.003	mg/l	M	2.8E-08	mg/kg-day	1.4E+00	mg/kg-day -1	3.9E-08
	Beryllium	0.001	mg/l	0.001	mg/l	M	7.6E-09	mg/kg-day	4.3E-02	mg/kg-day -1	3.3E-10
	Iron	2.785	mg/l	2.785	mg/l	M	2.4E-05	mg/kg-day	N/A	N/A	N/A
	Manganese	0.160	mg/l	0.160	mg/l	M	1.4E-06	mg/kg-day	N/A	N/A	N/A
	Chloroform	0.003	mg/l	0.003	mg/l	M	4.2E-07	mg/kg-day	6.1E-03	mg/kg-day -1	2.5E-09
										Total Risk Across All Exposure Routes/Pathways	4.4E-05

M = Medium specific

TABLE 8.4.RME
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
St. Juliens Creek - Burning Grounds (Site 5)

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	Antimony	3.1E-03	mg/l	3.1E-03	mg/l	M	2.9E-08	mg/kg-day	N/A	N/A	N/A
	Arsenic	4.9E-03	mg/l	4.9E-03	mg/l	M	4.5E-08	mg/kg-day	1.4E+00	mg/kg-day -1	6.5E-08
	Beryllium	1.5E-03	mg/l	1.5E-03	mg/l	M	1.4E-08	mg/kg-day	4.3E-02	mg/kg-day -1	6.0E-10
	Iron	4.4E+00	mg/l	4.4E+00	mg/l	M	4.1E-05	mg/kg-day	N/A	N/A	N/A
	Manganese	1.8E-01	mg/l	1.8E-01	mg/l	M	1.6E-06	mg/kg-day	N/A	N/A	N/A
	Chloroform	5.0E-03	mg/l	5.0E-03	mg/l	M	8.2E-07	mg/kg-day	6.1E-03	mg/kg-day -1	5.0E-09
										Total Risk Across All Exposure Routes/Pathways	7.0E-08

M = Medium Specific

TABLE 8.4.CT
CALCULATION OF CANCER RISKS
CENTRAL TENDENCIES
St. Juliens Creek - Burning Grounds (Site 5)

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	Antimony	0.002	mg/l	0.002	mg/l	M	1.8E-08	mg/kg-day	N/A	N/A	N/A
	Arsenic	0.003	mg/l	0.003	mg/l	M	3.0E-08	mg/kg-day	1.4E+00	mg/kg-day -1	4.3E-08
	Beryllium	0.001	mg/l	0.001	mg/l	M	8.3E-09	mg/kg-day	4.3E-02	mg/kg-day -1	3.6E-10
	Iron	2.785	mg/l	2.785	mg/l	M	2.6E-05	mg/kg-day	N/A	N/A	N/A
	Manganese	0.160	mg/l	0.160	mg/l	M	1.5E-06	mg/kg-day	N/A	N/A	N/A
	Chloroform	0.003	mg/l	0.003	mg/l	M	4.5E-07	mg/kg-day	6.1E-03	mg/kg-day -1	2.8E-09
										Total Risk Across All Exposure Routes/Pathways	4.6E-08

M = Medium Specific

Site 5

Shallow Groundwater

TABLE 2.2
OCCURRENCE, DISTRIBUTION AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN
St. Juliens Creek -Burning Grounds (Site 5)

Scenario Timeframe: Current
Medium: Shallow Groundwater
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)
7429905	Aluminum	1110		87400		mg/kg	2S	4/4	29-44	87400	NA	3700	NA	NA	YES	ASL
7440360	Antimony	3.7	J	6	J	mg/kg	3S	1/4	1-2	6	NA	1.5	6	MCL	YES	ASL
7440382	Arsenic	5.7		27.3	J	mg/kg	3S	3/4	3-3.2	27.3	NA	0.045	50	MCL	YES	ASL
7440393	Barium	22	J	126	J	mg/kg	2S	3/4	1-1	126	NA	260	2000	MCL	NO	BSL
7440417	Beryllium	1.2	J	18.3		mg/kg	2S	3/4	0.58-1	18.3	NA	0.016	4	MCL	YES	ASL
7440439	Cadmium	9		11		mg/kg	3S	2/4	0.3-0.5	11	NA	1.8	5	MCL	YES	ASL
16540299	Chromium	36.1		58.7		mg/kg	3S	1/4	4-7	58.7	NA	18	100	MCL	YES	ASL
7440484	Cobalt	33.4	J	257		mg/kg	2S	3/4	3-8	257	NA	220	NA	NA	YES	ASL
7440508	Copper	11.2		124		mg/kg	2S	3/4	2-6	124	NA	N/A	1300	MCL	NO	BSL
7439896	Iron	13600		83700		mg/kg	3S	4/4	5-5	83700	NA	1100	NA	NA	YES	ASL
7439921	Lead	1.1	J	26.1		mg/kg	3S	4/4	1-1.3	26.1	NA	15	15	MCL	YES	ASL
7439965	Manganese	992		4320		mg/kg	2S	4/4	1-1	4320	NA	84	NA	NA	YES	ASL
7440020	Nickel	14.1	J	360		mg/kg	2S	4/4	4-7	360	NA	73	100	MCL	YES	ASL
7440224	Silver	1.5	J	2.8	J	mg/kg	2S	2/4	1.1-3	2.8	NA	18	NA	NA	NO	BSL
1314325	Thallium	2.1	J	2.1	J	mg/kg	3S	1/4	1.5-2	2.1	NA	N/A	2	MCL	YES	ASL
7440622	Vanadium	9.9	J	82.8		mg/kg	3S	2/4	4-9	82.8	NA	26	NA	NA	YES	ASL
7440666	Zinc	109		2020		mg/kg	2S	3/4	3-3	2020	NA	1100	NA	NA	YES	ASL
117817	bis(2-Ethylhexyl)phthalate	1	J	2	J	ug/kg	3S	1/4	10-10	2	NA	4.8	6	MCL	NO	BSL
75150	Carbon Disulfide	0.3	J	0.8	J	ug/kg	2S	2/4	1-1	0.8	NA	100	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 15 ug/l, as prescribed in 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 (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 3.2
MEDIUM-SPECIFIC EXPOSURE POINT CONCENTRATION SUMMARY
St. Juliens Creek - Burning Grounds (Site 5)

Scenario Timeframe: Current
Medium: Shallow 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	36502.50	N/A	87400		mg/l	87.400	Max	(1)	36.503	Mean	(1)
Antimony	ug/l	2.18	N/A	6		mg/l	0.006	Max	(1)	0.002	Mean	(1)
Arsenic	ug/l	11.63	N/A	27.3		mg/l	0.027	Max	(1)	0.012	Mean	(1)
Beryllium	ug/l	8.38	N/A	18.3		mg/l	0.018	Max	(1)	0.008	Mean	(1)
Cadmium	ug/l	5.125	N/A	11		mg/l	0.011	Max	(1)	0.005	Mean	(1)
Chromium	ug/l	23.6	N/A	58.7		mg/l	0.059	Max	(1)	0.024	Mean	(1)
Cobalt	ug/l	110.875	N/A	257		mg/l	0.257	Max	(1)	0.111	Mean	(1)
Iron	ug/l	51850	N/A	83700		mg/l	83.700	Max	(1)	51.850	Mean	(1)
Manganese	ug/l	2978	N/A	4320		mg/l	4.320	Max	(1)	2.978	Mean	(1)
Nickel	ug/l	164.65	N/A	360		mg/l	0.360	Max	(1)	0.165	Mean	(1)
Thallium	ug/l	1.15	N/A	2.1		mg/l	0.002	Max	(1)	0.001	Mean	(1)
Vanadium	ug/l	25.15	N/A	82.8		mg/l	0.083	Max	(1)	0.025	Mean	(1)
Zinc	ug/l	934.125	N/A	2020		mg/l	2.020	Max	(1)	0.934	Mean	(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 G 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 - Burning Grounds (Site 5)

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^2	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 - Burning Grounds (Site 5)

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	2.7E-01	mg/kg/day	N/A	N/A	RBC:N/A	10/7/97
Antimony	Chronic	4.0E-04	mg/kg/day	0.10	4.0E-05	mg/kg/day	Blood	1001	IRIS	11/17/97
Arsenic	Chronic	3.0E-04	mg/kg/day	0.95	2.9E-04	mg/kg/day	Skin	3	IRIS	11/17/97
Beryllium	Chronic	5.0E-03	mg/kg/day	0.01	5.0E-05	mg/kg/day	NOAEL	101	IRIS	11/17/97
Cadmium	Chronic	5.0E-04	mg/kg/day	0.05	2.5E-05	mg/kg/day	Kidney	11	IRIS	11/17/97
Manganese	Chronic	5.0E-03	mg/kg/day	0.010	5.0E-05	mg/kg/day	NOAEL	505	IRIS	02/09/98
Cobalt	Chronic	6.0E-02	mg/kg/day	0.30	1.8E-02	mg/kg/day	N/A	N/A	RBC:N/A	10/7/97
Iron	Chronic	3.0E-01	mg/kg/day	0.05	1.5E-02	mg/kg/day	N/A	N/A	RBC:N/A	10/7/97
Manganese	Chronic	2.3E-02	mg/kg/day	1.00	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
Thallium	Chronic	N/A	mg/kg/day	N/A	N/A	mg/kg/day	N/A	N/A	N/A	N/A
Vanadium	Chronic	7.0E-03	mg/kg/day	0.020	1.4E-04	mg/kg/day	NOAEL	100	HEAST	07/00/97
Zinc	Chronic	3.0E-01	mg/kg/day	0.25	7.5E-02	mg/kg/day	Blood	4	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.
For NCEA values, provide the date of the article provided by NCEA.

TABLE 6.2
CANCER TOXICITY DATA -- ORAL/DERMAL
St. Juliens Creek - Burning Grounds (Site 5)

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
Antimony	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
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
Cobalt	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
Thallium	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
Zinc	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Chloroform	6.1E-03	1.00	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

Weight of Evidence:
- Known/Likely
- Cannot be Determined
- Not Likely

TABLE 7.1.RME
CALCULATION OF NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
St. Juliens Creek -Burning Grounds (Site 5)

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	87.4	mg/l	8.7E+01	mg/l	M	2.3E-03	mg/kg-day	0.27	mg/kg/day	N/A	N/A	8.4E-03
	Antimony	0.006	mg/l	6.0E-03	mg/l	M	1.6E-07	mg/kg-day	0.00004	mg/kg/day	N/A	N/A	3.9E-03
	Arsenic	0.0273	mg/l	2.7E-02	mg/l	M	7.1E-07	mg/kg-day	0.000285	mg/kg/day	N/A	N/A	2.5E-03
	Beryllium	0.0183	mg/l	1.8E-02	mg/l	M	4.7E-07	mg/kg-day	0.00005	mg/kg/day	N/A	N/A	9.5E-03
	Cadmium	0.011	mg/l	1.1E-02	mg/l	M	2.9E-07	mg/kg-day	0.000025	mg/kg/day	N/A	N/A	1.1E-02
	Chromium	0.0587	mg/l	5.9E-02	mg/l	M	1.5E-06	mg/kg-day	0.00005	mg/kg/day	N/A	N/A	3.0E-02
	Cobalt	0.257	mg/l	2.6E-01	mg/l	M	6.7E-06	mg/kg-day	0.018	mg/kg/day	N/A	N/A	3.7E-04
	Iron	83.7	mg/l	8.4E+01	mg/l	M	2.2E-03	mg/kg-day	0.015	mg/kg/day	N/A	N/A	1.4E-01
	Manganese	4.32	mg/l	4.3E+00	mg/l	M	1.1E-04	mg/kg-day	0.023	mg/kg/day	N/A	N/A	4.9E-03
	Nickel	0.36	mg/l	3.6E-01	mg/l	M	9.3E-06	mg/kg-day	0.002	mg/kg/day	N/A	N/A	4.7E-03
	Thallium	0.0021	mg/l	2.1E-03	mg/l	M	5.4E-08	mg/kg-day	N/A	mg/kg/day	N/A	N/A	N/A
	Vanadium	0.0828	mg/l	8.3E-02	mg/l	M	2.1E-06	mg/kg-day	0.00014	mg/kg/day	N/A	N/A	1.5E-02
	Zinc	2.02	mg/l	2.0E+00	mg/l	M	5.2E-05	mg/kg-day	0.075	mg/kg/day	N/A	N/A	7.0E-04

Total Hazard Index Across All Exposure Routes/Pathways 2.4E-01

TABLE 7.1.CT
CALCULATION OF NON-CANCER HAZARDS
CENTRALTENDENCIES
St. Juliens Creek -Burning Grounds (Site 5)

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	36.5025	mg/l	3.7E+01	mg/l	M	9.5E-04	mg/kg-day	0.27	mg/kg/day	N/A	N/A	3.5E-03
	Antimony	0.002175	mg/l	2.2E-03	mg/l	M	5.6E-08	mg/kg-day	0.00004	mg/kg/day	N/A	N/A	1.4E-03
	Arsenic	0.011625	mg/l	1.2E-02	mg/l	M	3.0E-07	mg/kg-day	0.000285	mg/kg/day	N/A	N/A	1.1E-03
	Beryllium	0.008375	mg/l	8.4E-03	mg/l	M	2.2E-07	mg/kg-day	0.00005	mg/kg/day	N/A	N/A	4.3E-03
	Cadmium	0.005125	mg/l	5.1E-03	mg/l	M	1.3E-07	mg/kg-day	0.000025	mg/kg/day	N/A	N/A	5.3E-03
	Chromium	0.0236	mg/l	2.4E-02	mg/l	M	6.1E-07	mg/kg-day	0.00005	mg/kg/day	N/A	N/A	1.2E-02
	Cobalt	0.110875	mg/l	1.1E-01	mg/l	M	2.9E-06	mg/kg-day	0.018	mg/kg/day	N/A	N/A	1.6E-04
	Iron	51.85	mg/l	5.2E+01	mg/l	M	1.3E-03	mg/kg-day	0.015	mg/kg/day	N/A	N/A	9.0E-02
	Manganese	2.978	mg/l	3.0E+00	mg/l	M	7.7E-05	mg/kg-day	0.023	mg/kg/day	N/A	N/A	3.4E-03
	Nickel	0.16465	mg/l	1.6E-01	mg/l	M	4.3E-06	mg/kg-day	0.002	mg/kg/day	N/A	N/A	2.1E-03
	Thallium	0.00115	mg/l	1.2E-03	mg/l	M	3.0E-08	mg/kg-day	N/A	mg/kg/day	N/A	N/A	N/A
	Vanadium	0.02515	mg/l	2.5E-02	mg/l	M	6.5E-07	mg/kg-day	0.00014	mg/kg/day	N/A	N/A	4.7E-03
	Zinc	0.934125	mg/l	9.3E-01	mg/l	M	2.4E-05	mg/kg-day	0.075	mg/kg/day	N/A	N/A	3.2E-04
												Total Hazard Index Across All Exposure Routes/Pathways	1.3E-01

TABLE 8.1.RME
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
St. Juliens Creek - Burning Grounds (Site 5)

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	87.400	mg/l	8.74E+01	mg/l	M	8.1E-04	mg/kg-day	N/A	N/A	N/A
	Antimony	0.006	mg/l	6.00E-03	mg/l	M	5.6E-08	mg/kg-day	N/A	N/A	N/A
	Arsenic	0.027	mg/l	2.73E-02	mg/l	M	2.5E-07	mg/kg-day	1.425	mg/kg-day -1	3.6E-07
	Beryllium	0.018	mg/l	1.83E-02	mg/l	M	1.7E-07	mg/kg-day	0.043	mg/kg-day -1	7.3E-09
	Cadmium	0.011	mg/l	1.10E-02	mg/l	M	1.0E-07	mg/kg-day	N/A	N/A	N/A
	Chromium	0.059	mg/l	5.87E-02	mg/l	M	5.4E-07	mg/kg-day	N/A	N/A	N/A
	Cobalt	0.257	mg/l	2.57E-01	mg/l	M	2.4E-06	mg/kg-day	N/A	N/A	N/A
	Iron	83.700	mg/l	8.37E+01	mg/l	M	7.8E-04	mg/kg-day	N/A	N/A	N/A
	Manganese	4.320	mg/l	4.32E+00	mg/l	M	4.0E-05	mg/kg-day	N/A	N/A	N/A
	Nickel	0.360	mg/l	3.60E-01	mg/l	M	3.3E-06	mg/kg-day	N/A	N/A	N/A
	Thallium	0.002	mg/l	2.10E-03	mg/l	M	1.9E-08	mg/kg-day	N/A	N/A	N/A
	Vanadium	0.083	mg/l	8.28E-02	mg/l	M	7.7E-07	mg/kg-day	N/A	N/A	N/A
	Zinc	2.020	mg/l	2.02E+00	mg/l	M	3.3E-04	mg/kg-day	N/A	N/A	N/A
										Total Risk Across All Exposure Routes/Pathways	3.7E-07

TABLE 8.1.CT
CALCULATION OF CANCER RISKS
CENTRAL TENDENCIES
St. Juliens Creek - Burning Grounds (Site 5)

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	36.503	mg/l	3.65E+01	mg/l	M	3.4E-04	mg/kg-day	N/A	N/A	N/A
	Antimony	0.002	mg/l	2.18E-03	mg/l	M	2.0E-08	mg/kg-day	N/A	N/A	N/A
	Arsenic	0.012	mg/l	1.16E-02	mg/l	M	1.1E-07	mg/kg-day	1.425	mg/kg-day -1	1.5E-07
	Beryllium	0.008	mg/l	8.38E-03	mg/l	M	7.8E-08	mg/kg-day	0.043	mg/kg-day -1	3.3E-09
	Cadmium	0.005	mg/l	5.13E-03	mg/l	M	4.7E-08	mg/kg-day	N/A	N/A	N/A
	Chromium	0.024	mg/l	2.36E-02	mg/l	M	2.2E-07	mg/kg-day	N/A	N/A	N/A
	Cobalt	0.111	mg/l	1.11E-01	mg/l	M	1.0E-06	mg/kg-day	N/A	N/A	N/A
	Iron	51.850	mg/l	5.19E+01	mg/l	M	4.8E-04	mg/kg-day	N/A	N/A	N/A
	Manganese	2.978	mg/l	2.98E+00	mg/l	M	2.8E-05	mg/kg-day	N/A	N/A	N/A
	Nickel	0.165	mg/l	1.65E-01	mg/l	M	1.5E-06	mg/kg-day	N/A	N/A	N/A
	Thallium	0.001	mg/l	1.15E-03	mg/l	M	1.1E-08	mg/kg-day	N/A	N/A	N/A
	Vanadium	0.025	mg/l	2.52E-02	mg/l	M	2.3E-07	mg/kg-day	N/A	N/A	N/A
	Zinc	0.934	mg/l	9.34E-01	mg/l	M	8.7E-06	mg/kg-day	N/A	N/A	N/A
										Total Risk Across All Exposure Routes/Pathways	1.6E-07

Site 5

Surface Soil Current/Future

TABLE 2.1
OCCURRENCE, DISTRIBUTION AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN
St. Juliens Creek - Burning Grounds (Site 5)

Scenario Timeframe: 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)
540590	1,2-Dichloroethene (total)	1	J	1	J	ug/kg	SS08	1/8	10-11	1	NA	70000	NA	NA	NO	BSL
121142	2,4-Dinitrotoluene	180	J	3200		ug/kg	SS03	4/8	330-2000	3200	NA	16000	NA	NA	NO	BSL
78933	2-Butanone	28		210		ug/kg	SS06	1/8	10-11	210	NA	4700000	NA	NA	NO	BSL
72548	4,4'-DDD	9		310	J	ug/kg	SS09	5/8	3.3-37	310	NA	2700	NA	NA	NO	BSL
72559	4,4'-DDE	3.8	J	2200		ug/kg	SS09	7/8	3.3-370	2200	NA	1900	NA	NA	YES	ASL
50293	4,4'-DDT	13	J	1200		ug/kg	SS09	6/8	3.3-370	1200	NA	1900	NA	NA	NO	BSL
83329	Acenaphthene	41	J	41	J	ug/kg	SS02	4/8	330-2000	41	NA	470000	NA	NA	NO	BSL
67641	Acetone	11	J	28		ug/kg	SS06	5/8	10-11	28	NA	780000	NA	NA	NO	BSL
319846	alpha-BHC	3.5		3.5		ug/kg	SS08	1/8	1.7-19	3.5	NA	100	NA	NA	NO	BSL
7429905	Aluminum	4760		20200		mg/kg	SS03	8/8	6.88-9.92	20200	NA	7800	NA	NA	YES	ASL
120127	Anthracene	49	J	54	J	ug/kg	SS04	2/8	330-2000	54	NA	2300000	NA	NA	NO	BSL
7440360	Antimony	0.51	L	1.1	L	mg/kg	SS05	5/8	0.31-0.4	1.1	NA	3.1	NA	NA	NO	BSL
7440382	Arsenic	2	K	111	K	mg/kg	SS09	8/8	0.47-0.68	111	NA	2.3	NA	NA	YES	ASL
7440393	Barium	35	J	1040		mg/kg	SS07	8/8	0.31-0.4	1040	NA	550	NA	NA	YES	ASL
56553	Benzo(a)Anthracene	37	J	810	J	ug/kg	SS03	8/8	330-2000	810	NA	880	NA	NA	NO	BSL
50328	Benzo(a)Pyrene	73	J	460	J	ug/kg	SS03	7/8	330-2000	460	NA	88	NA	NA	YES	ASL
205992	Benzo(b)Fluoranthene	300	J	1900	J	ug/kg	SS03	8/8	330-2000	1900	NA	880	NA	NA	YES	ASL
207089	Benzo(k)Fluoranthene	76	J	700	J	ug/kg	SS03	7/8	330-2000	700	NA	8800	NA	NA	NO	BSL
7440417	Beryllium	0.38		1.2		mg/kg	SS03	8/8	0.16-0.23	1.2	NA	0.15	NA	NA	YES	ASL
7440439	Cadmium	0.24		6		mg/kg	SS06	5/8	0.08-0.11	6	NA	3.9	NA	NA	YES	ASL
86748	Carbazole	40	J	61	J	ug/kg	SS06	1/8	330-2000	61	NA	32000	NA	NA	NO	BSL
218019	Chrysene	56	J	1100	J	ug/kg	SS03	8/8	330-2000	1100	NA	88000	NA	NA	NO	BSL
7440484	Cobalt	2.5		17.7		mg/kg	SS03	8/8	1.25-1.8	17.7	NA	470	NA	NA	NO	BSL
7440508	Copper	17.1		6470		mg/kg	SS07	8/8	0.94-1.35	6470	NA	27000	NA	NA	NO	BSL
57125	Cyanide	0.6	J	1.45	J	ug/kg	SS03	2/8	0.49-0.57	1.45	NA	160000	NA	NA	NO	BSL
84742	Di-n-Butylphthalate	38	J	4700		ug/kg	SS03	5/8	330-2000	4700	NA	780000	NA	NA	NO	BSL
53703	Dibenz(a,h)Anthracene	61	J	61	J	ug/kg	SS04	1/8	330-2000	61	NA	88	NA	NA	NO	BSL
60571	Dieldrin	5		6.8		ug/kg	SS08	2/8	3.3-37	6.8	NA	40	NA	NA	NO	BSL
206440	Fluoranthene	63	J	790		ug/kg	SS06	8/8	330-2000	790	NA	310000	NA	NA	NO	BSL
193395	Indeno(1,2,3-cd)Pyrene	35	J	540	J	ug/kg	SS03	8/8	330-2000	540	NA	880	NA	NA	NO	BSL
7439896	Iron	9900		120000		mg/kg	SS02	8/8	2.66-3.83	120000	NA	2300	NA	NA	YES	ASL
7439921	Lead	33.5	J	7210	J	mg/kg	SS07	8/8	0.16-0.23	899	NA	400	NA	NA	YES	ASL
7439965	Manganese	63.4	K	852		mg/kg	SS05	8/8	0.31-0.45	852	NA	180	NA	NA	YES	ASL
7439976	Mercury	0.08	L	0.98	L	mg/kg	SS05	8/8	0.04-0.06	0.98	NA	2.3	NA	NA	NO	BSL
75092	Methylene Chloride	120		120		ug/kg	SS07	1/8	10-11	120	NA	85000	NA	NA	NO	BSL
86306	N-Nitrosodiphenylamine	120	J	530	J	ug/kg	SS03	2/8	330-2000	530	NA	130000	NA	NA	NO	BSL
7440020	Nickel	2.6	J	91.5		mg/kg	SS03	7/8	1.09-1.58	91.5	NA	160	NA	NA	NO	BSL
129000	Pyrene	81	J	1200		ug/kg	SS09	6/8	330-2000	1200	NA	230000	NA	NA	NO	BSL
7440224	Silver	0.76	J	3.5		mg/kg	SS08	1/8	0.16-0.23	3.5	NA	39	NA	NA	NO	BSL
127184	Tetrachloroethene	1	J	4	J	ug/kg	SS09	3/8	10-11	4	NA	12000	NA	NA	NO	BSL
108883	Toluene	2	J	5	J	ug/kg	SS09	4/8	10-11	5	NA	1600000	NA	NA	NO	BSL
1330207	Total Xylenes	3	J	3	J	ug/kg	SS05	1/8	10-11	3	NA	16000000	NA	NA	NO	BSL
7440622	Vanadium	12.7		55.7		mg/kg	SS02	8/8	1.41-2.03	55.7	NA	55	NA	NA	YES	ASL
7440666	Zinc	77.8		8490	L	mg/kg	SS07	8/8	0.78-1.13	8490	NA	2300	NA	NA	YES	BSL

(1) Minimum and maximum detected concentrations.

(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. Human Health Risk Assessment Consensus Agreement #5.A.6, Naval Base Norfolk Partnership, August 1997.

(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
St. Juliens Creek - Burning Grounds (Site 5)

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
4,4-DDE	ug/kg	368.56	11478.04	2200.00		mg/kg	2.20	Max	(1)	0.37	Mean	(1)
Aluminum	mg/kg	9402.50	13247.42	20200.00		mg/kg	13247.42	95UCL	(1)	9402.50	Mean	(1)
Arsenic	mg/kg	25.54	146.18	111.00	K	mg/kg	111.00	Max	(1)	25.54	Mean	(1)
Barium	mg/kg	170.78	1013.13	1040.00		mg/kg	1013.13	95UCL	(1)	170.78	Mean	(1)
Benzo(a)Pyrene	ug/kg	224.75	421.66	480.00	J	mg/kg	0.42	95UCL	(1)	0.22	Mean	(1)
Benzo(b)Fluoranthene	ug/kg	686.50	1672.97	700.00	J	mg/kg	0.70	Max	(1)	0.69	Mean	(1)
Beryllium	mg/kg	0.6575	0.90	1.20		mg/kg	0.90	95UCL	(1)	0.66	Mean	(1)
Cadmium	mg/kg	0.37375	11.71	6.00		mg/kg	6.00	Max	(1)	0.37	Mean	(1)
Iron	mg/kg	17687.5	58914.73	120000.00		mg/kg	58914.73	95UCL	(1)	17687.50	Mean	(1)
Manganese	mg/kg	178.4	550.45	852.00		mg/kg	550.45	95UCL	(1)	178.40	Mean	(1)
Vanadium	mg/kg	31.475	47.32	55.70		mg/kg	47.32	95UCL	(1)	31.48	Mean	(1)
Zinc	mg/kg	160.3375	5338.79	8490.00	L	mg/kg	5338.79	95UCL	(1)	160.34	Mean	(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 - Burning Grounds (Site 5)

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 - Burning Grounds (Site 5)

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 - Burning Grounds (Site 5)

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 - Burning Grounds (Site 5)

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 - Burning Grounds (Site 5)

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 - Burning Grounds (Site 5)

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 - Burning Grounds (Site 5)

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 - Burning Grounds (Site 5)

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)
4,4'-DDE	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Aluminum	Chronic	1.0E+00	mg/kg/day	0.27	2.7E-01	mg/kg/day	N/A	N/A	RBC:N/A	10/22/97
Arsenic	Chronic	3.0E-04	mg/kg/day	0.95	2.9E-04	mg/kg/day	Skin	3	IRIS	11/17/97
Barium	Chronic	7.0E-02	mg/kg/day	1.00	7.0E-02	mg/kg/day	NOAEL	4	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	0.01	5.0E-05	mg/kg/day	NOAEL	100	IRIS	11/17/97
Cadmium	Chronic	5.0E-04	mg/kg/day	0.03	1.3E-05	mg/kg/day	NOAEL	11	IRIS	11/17/97
Iron	Chronic	3.0E-01	mg/kg/day	0.05	1.5E-02	mg/kg/day	N/A	N/A	RBC:N/A	10/22/97
Manganese	Chronic	2.3E-02	mg/kg/day	1.00	2.3E-02	mg/kg/day	NOAEL	2E+00	IRIS	11/17/97
Vanadium	Chronic	7.0E-03	mg/kg/day	0.02	1.4E-04	mg/kg/day	NOAEL	1E+02	HEAST	07/00/97
Zinc	Chronic	3.00E-01	mg/kg/day	0.25	7.5E-02	mg/kg/day	Blood	4	IRIS	11/17/97

N/A = Not Applicable

TABLE 6.3

CANCER TOXICITY DATA -- ORAL/DERMAL

St. Juliens Creek -Burning Grounds (Site 5)

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)
4,4'-DDE	3.40E-01	0.80	2.7E-01	mg/kg-day $^{-1}$	B2	IRIS	11/17/97
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
Barium	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Benzo(a)Pyrene	7.3E+00	N/A	N/A	mg/kg-day $^{-1}$	B2	IRIS	11/17/97
Benzo(b)Fluoranthe	7.3E-01	N/A	N/A	mg/kg-day $^{-1}$	N/A	RBC:N/A	10/08/97
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
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
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

TABLE 7.5.RME
CALCULATION OF NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
St. Juliens Creek -Burning Grounds (Site 5)

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	4,4'-DDE	2.20	mg/kg	2.20	mg/kg	M	4.2E-06	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Aluminum	13247.42	mg/kg	13247.42	mg/kg	M	2.5E-02	mg/kg-day	1.0E+00	mg/kg/day	N/A	N/A	2.5E-02
	Arsenic	111.00	mg/kg	111.00	mg/kg	M	2.1E-04	mg/kg-day	3.0E-04	mg/kg/day	N/A	N/A	7.0E-01
	Barium	1013.13	mg/kg	1013.13	mg/kg	M	1.9E-03	mg/kg-day	7.0E-02	mg/kg/day	N/A	N/A	2.7E-02
	Benzo(a)Pyrene	0.42	mg/kg	0.42	mg/kg	M	8.0E-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	0.90	mg/kg	0.90	mg/kg	M	1.7E-06	mg/kg-day	5.0E-03	mg/kg/day	N/A	N/A	3.4E-04
	Cadmium	6.00	mg/kg	6.00	mg/kg	M	1.1E-05	mg/kg-day	5.0E-04	mg/kg/day	N/A	N/A	2.3E-02
	Iron	58914.73	mg/kg	58914.73	mg/kg	M	1.1E-01	mg/kg-day	3.0E-01	mg/kg/day	N/A	N/A	3.7E-01
	Manganese	550.45	mg/kg	550.45	mg/kg	M	1.0E-03	mg/kg-day	2.3E-02	mg/kg/day	N/A	N/A	4.5E-02
	Vanadium	47.32	mg/kg	47.32	mg/kg	M	9.0E-05	mg/kg-day	7.0E-03	mg/kg/day	N/A	N/A	1.3E-02
	Zinc	5338.79	mg/kg	5338.79	mg/kg	M	1.0E-02	mg/kg-day	3.0E-01	mg/kg/day	N/A	N/A	3.4E-02
Dermal	4,4'-DDE	2.20	mg/kg	2.20	mg/kg	M	5.5E-06	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Aluminum	13247.42	mg/kg	13247.42	mg/kg	M	3.3E-03	mg/kg-day	2.7E-01	mg/kg/day	N/A	N/A	1.2E-02
	Arsenic	111.00	mg/kg	111.00	mg/kg	M	8.9E-05	mg/kg-day	2.9E-04	mg/kg/day	N/A	N/A	3.1E-01
	Barium	1013.13	mg/kg	1013.13	mg/kg	M	2.5E-04	mg/kg-day	7.0E-02	mg/kg/day	N/A	N/A	3.6E-03
	Benzo(a)Pyrene	0.42	mg/kg	0.42	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	1.8E-06	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Beryllium	0.90	mg/kg	0.90	mg/kg	M	2.3E-07	mg/kg-day	5.0E-05	mg/kg/day	N/A	N/A	4.5E-03
	Cadmium	6.00	mg/kg	6.00	mg/kg	M	1.5E-06	mg/kg-day	1.3E-05	mg/kg/day	N/A	N/A	1.2E-01
	Iron	58914.73	mg/kg	58914.73	mg/kg	M	1.5E-02	mg/kg-day	1.5E-02	mg/kg/day	N/A	N/A	9.9E-01
	Manganese	550.45	mg/kg	550.45	mg/kg	M	1.4E-04	mg/kg-day	2.3E-02	mg/kg/day	N/A	N/A	6.0E-03
	Vanadium	47.32	mg/kg	47.32	mg/kg	M	1.2E-05	mg/kg-day	1.4E-04	mg/kg/day	N/A	N/A	8.5E-02
	Zinc	5338.79	mg/kg	5338.79	mg/kg	M	1.3E-03	mg/kg-day	7.5E-02	mg/kg/day	N/A	N/A	1.8E-02
												Total Hazard Index Across All Exposure Routes/Pathways	2.8E+00

TABLE 7.5.CT
CALCULATION OF NON-CANCER HAZARDS
CENTRAL TENDENCIES
St. Juliens Creek -Burning Grounds (Site 5)

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	4,4'-DDE	0.37	mg/kg	0.37	mg/kg	M	7.0E-07	mg/kg-day	N/A	N/A			N/A
	Aluminum	9402.50	mg/kg	9402.50	mg/kg	M	1.8E-02	mg/kg-day	1.0E+00	mg/kg/day	N/A	N/A	1.8E-02
	Arsenic	25.54	mg/kg	25.54	mg/kg	M	4.9E-05	mg/kg-day	3.0E-04	mg/kg/day	N/A	N/A	1.6E-01
	Barium	170.78	mg/kg	170.78	mg/kg	M	3.2E-04	mg/kg-day	7.0E-02	mg/kg/day			4.6E-03
	Benzo(a)Pyrene	0.22	mg/kg	0.22	mg/kg	M	4.3E-07	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Benzo(b)Fluoranthene	0.69	mg/kg	0.69	mg/kg	M	1.3E-06	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Beryllium	0.66	mg/kg	0.66	mg/kg	M	1.2E-06	mg/kg-day	5.0E-03	mg/kg/day	N/A	N/A	2.5E-04
	Cadmium	0.37	mg/kg	0.37	mg/kg	M	7.1E-07	mg/kg-day	5.0E-04	mg/kg/day			1.4E-03
	Iron	17687.50	mg/kg	17687.50	mg/kg	M	3.4E-02	mg/kg-day	3.0E-01	mg/kg/day	N/A	N/A	1.1E-01
	Manganese	178.40	mg/kg	178.40	mg/kg	M	3.4E-04	mg/kg-day	2.3E-02	mg/kg/day	N/A	N/A	1.5E-02
	Vanadium	31.48	mg/kg	31.48	mg/kg	M	6.0E-05	mg/kg-day	7.0E-03	mg/kg/day	N/A	N/A	8.5E-03
	Zinc	160.34	mg/kg	160.34	mg/kg	M	3.0E-04	mg/kg-day	3.0E-01	mg/kg/day			1.0E-03
Dermal	4,4'-DDE	0.37	mg/kg	0.37	mg/kg	M	9.3E-07	mg/kg-day	N/A	N/A			N/A
	Aluminum	9402.50	mg/kg	9402.50	mg/kg	M	2.4E-03	mg/kg-day	2.7E-01	mg/kg/day	N/A	N/A	8.8E-03
	Arsenic	25.54	mg/kg	25.54	mg/kg	M	2.1E-05	mg/kg-day	2.9E-04	mg/kg/day	N/A	N/A	7.2E-02
	Barium	170.78	mg/kg	170.78	mg/kg	M	4.3E-05	mg/kg-day	7.0E-02	mg/kg/day			6.1E-04
	Benzo(a)Pyrene	0.22	mg/kg	0.22	mg/kg	M	5.7E-07	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Benzo(b)Fluoranthene	0.69	mg/kg	0.69	mg/kg	M	1.7E-06	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Beryllium	0.66	mg/kg	0.66	mg/kg	M	1.7E-07	mg/kg-day	5.0E-05	mg/kg/day	N/A	N/A	3.3E-03
	Cadmium	0.37	mg/kg	0.37	mg/kg	M	9.4E-08	mg/kg-day	1.3E-05	mg/kg/day			7.5E-03
	Iron	17687.50	mg/kg	17687.50	mg/kg	M	4.5E-03	mg/kg-day	1.5E-02	mg/kg/day	N/A	N/A	3.0E-01
	Manganese	178.40	mg/kg	178.40	mg/kg	M	4.5E-05	mg/kg-day	2.3E-02	mg/kg/day	N/A	N/A	2.0E-03
	Vanadium	31.48	mg/kg	31.48	mg/kg	M	7.9E-06	mg/kg-day	1.4E-04	mg/kg/day	N/A	N/A	5.7E-02
	Zinc	160.34	mg/kg	160.34	mg/kg	M	4.0E-05	mg/kg-day	7.5E-02	mg/kg/day			5.4E-04
												Total Hazard Index Across All Exposure Routes/Pathways	7.7E-01

TABLE 7.6.RME
CALCULATION OF NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
St. Juliens Creek - Burning Grounds (Site 5)

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	4,4'-DDE	2.20	mg/kg	111.00	mg/kg	M	3.5E-05	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Aluminum	13247.42	mg/kg	1013.13	mg/kg	M	3.2E-04	mg/kg-day	1.0E+00	mg/kg/day	N/A	N/A	3.2E-04
	Arsenic	111.00	mg/kg	111.00	mg/kg	M	3.5E-05	mg/kg-day	3.0E-04	mg/kg/day	N/A	N/A	1.2E-01
	Barium	1013.13	mg/kg	1013.13	mg/kg	M	3.2E-04	mg/kg-day	7.0E-02	mg/kg/day	N/A	N/A	4.6E-03
	Benzo(a)Pyrene	0.42	mg/kg	0.42	mg/kg	M	1.3E-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	2.2E-07	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Beryllium	0.90	mg/kg	0.90	mg/kg	M	2.9E-07	mg/kg-day	5.0E-03	mg/kg/day	N/A	N/A	5.7E-05
	Cadmium	6.00	mg/kg	6.00	mg/kg	M	1.9E-06	mg/kg-day	5.0E-04	mg/kg/day	N/A	N/A	3.8E-03
	Iron	58914.73	mg/kg	58914.73	mg/kg	M	1.9E-02	mg/kg-day	3.0E-01	mg/kg/day	N/A	N/A	6.2E-02
	Manganese	550.45	mg/kg	550.45	mg/kg	M	1.7E-04	mg/kg-day	2.3E-02	mg/kg/day	N/A	N/A	7.6E-03
	Vanadium	47.32	mg/kg	47.32	mg/kg	M	1.5E-05	mg/kg-day	7.0E-03	mg/kg/day	N/A	N/A	2.1E-03
	Zinc	5338.79	mg/kg	5338.79	mg/kg	M	1.7E-03	mg/kg-day	3.0E-01	mg/kg/day	N/A	N/A	5.6E-03
Dermal	4,4'-DDE	2.20	mg/kg	2.20	mg/kg	M	2.4E-06	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Aluminum	13247.42	mg/kg	13247.42	mg/kg	M	1.4E-03	mg/kg-day	2.7E-01	mg/kg/day	N/A	N/A	5.3E-03
	Arsenic	111.00	mg/kg	111.00	mg/kg	M	3.8E-05	mg/kg-day	2.9E-04	mg/kg/day	N/A	N/A	1.3E-01
	Barium	1013.13	mg/kg	1013.13	mg/kg	M	1.1E-04	mg/kg-day	7.0E-02	mg/kg/day	N/A	N/A	1.5E-03
	Benzo(a)Pyrene	0.42	mg/kg	0.42	mg/kg	M	4.5E-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	0.90	mg/kg	0.90	mg/kg	M	9.6E-08	mg/kg-day	5.0E-05	mg/kg/day	N/A	N/A	1.9E-03
	Cadmium	6.00	mg/kg	6.00	mg/kg	M	6.4E-07	mg/kg-day	1.3E-05	mg/kg/day	N/A	N/A	5.1E-02
	Iron	58914.73	mg/kg	58914.73	mg/kg	M	6.3E-03	mg/kg-day	1.5E-02	mg/kg/day	N/A	N/A	4.2E-01
	Manganese	550.45	mg/kg	550.45	mg/kg	M	5.9E-05	mg/kg-day	2.3E-02	mg/kg/day	N/A	N/A	2.6E-03
	Vanadium	47.32	mg/kg	47.32	mg/kg	M	5.1E-06	mg/kg-day	1.4E-04	mg/kg/day	N/A	N/A	3.6E-02
	Zinc	5338.79	mg/kg	5338.79	mg/kg	M	5.7E-04	mg/kg-day	7.5E-02	mg/kg/day	N/A	N/A	7.6E-03
												Total Hazard Index Across All Exposure Routes/Pathways	8.6E-01

TABLE 7.6.CT
CALCULATION OF NON-CANCER HAZARDS
CENTRAL TENDENCIES
St. Juliens Creek - Burning Grounds (Site 5)

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	4,4'-DDE	0.37	mg/kg	25.54	mg/kg	M	8.1E-06	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Aluminum	9402.50	mg/kg	170.78	mg/kg	M	5.4E-05	mg/kg-day	1.0E+00	mg/kg/day	N/A	N/A	5.4E-05
	Arsenic	25.54	mg/kg	25.54	mg/kg	M	8.1E-06	mg/kg-day	3.0E-04	mg/kg/day	N/A	N/A	2.7E-02
	Barium	170.78	mg/kg	170.78	mg/kg	M	5.4E-05	mg/kg-day	7.0E-02	mg/kg/day	N/A	N/A	7.7E-04
	Benzo(a)Pyrene	0.22	mg/kg	0.22	mg/kg	M	7.1E-08	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Benzo(b)Fluoranthene	0.69	mg/kg	0.69	mg/kg	M	2.2E-07	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Beryllium	0.66	mg/kg	0.66	mg/kg	M	2.1E-07	mg/kg-day	5.0E-03	mg/kg/day	N/A	N/A	4.2E-05
	Cadmium	0.37	mg/kg	0.37	mg/kg	M	1.2E-07	mg/kg-day	5.0E-04	mg/kg/day	N/A	N/A	2.4E-04
	Iron	17687.50	mg/kg	17687.50	mg/kg	M	5.6E-03	mg/kg-day	3.0E-01	mg/kg/day	N/A	N/A	1.9E-02
	Manganese	178.40	mg/kg	178.40	mg/kg	M	5.6E-05	mg/kg-day	2.3E-02	mg/kg/day	N/A	N/A	2.5E-03
	Vanadium	31.48	mg/kg	31.48	mg/kg	M	1.0E-05	mg/kg-day	7.0E-03	mg/kg/day	N/A	N/A	1.4E-03
	Zinc	160.34	mg/kg	160.34	mg/kg	M	5.1E-05	mg/kg-day	3.0E-01	mg/kg/day	N/A	N/A	1.7E-04
Dermal	4,4'-DDE	0.37	mg/kg	0.37	mg/kg	M	3.9E-07	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Aluminum	9402.50	mg/kg	9402.50	mg/kg	M	1.0E-03	mg/kg-day	2.7E-01	mg/kg/day	N/A	N/A	3.7E-03
	Arsenic	25.54	mg/kg	25.54	mg/kg	M	8.7E-06	mg/kg-day	2.9E-04	mg/kg/day	N/A	N/A	3.1E-02
	Barium	170.78	mg/kg	170.78	mg/kg	M	1.8E-05	mg/kg-day	7.0E-02	mg/kg/day	N/A	N/A	2.6E-04
	Benzo(a)Pyrene	0.22	mg/kg	0.22	mg/kg	M	2.4E-07	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Benzo(b)Fluoranthene	0.69	mg/kg	0.69	mg/kg	M	7.3E-07	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Beryllium	0.66	mg/kg	0.66	mg/kg	M	7.0E-08	mg/kg-day	5.0E-05	mg/kg/day	N/A	N/A	1.4E-03
	Cadmium	0.37	mg/kg	0.37	mg/kg	M	4.0E-08	mg/kg-day	1.3E-05	mg/kg/day	N/A	N/A	3.2E-03
	Iron	17687.50	mg/kg	17687.50	mg/kg	M	1.9E-03	mg/kg-day	1.5E-02	mg/kg/day	N/A	N/A	1.3E-01
	Manganese	178.40	mg/kg	178.40	mg/kg	M	1.9E-05	mg/kg-day	2.3E-02	mg/kg/day	N/A	N/A	8.3E-04
	Vanadium	31.48	mg/kg	31.48	mg/kg	M	3.4E-06	mg/kg-day	1.4E-04	mg/kg/day	N/A	N/A	2.4E-02
	Zinc	160.34	mg/kg	160.34	mg/kg	M	1.7E-05	mg/kg-day	7.5E-02	mg/kg/day	N/A	N/A	2.3E-04
												Total Hazard Index Across All Exposure Routes/Pathways	2.4E-01

TABLE 7.7 RME
CALCULATION OF NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
St. Juliens Creek - Burning Grounds (Site 5)

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	4,4'-DDE	2.20	mg/kg	2.20	mg/kg	M	4.5E-07	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Aluminum	13247.42	mg/kg	13247.42	mg/kg	M	2.7E-03	mg/kg-day	1.0E+00	mg/kg/day	N/A	N/A	2.7E-03
	Arsenic	111.00	mg/kg	111.00	mg/kg	M	2.3E-05	mg/kg-day	3.0E-04	mg/kg/day	N/A	N/A	7.5E-02
	Barium	1013.13	mg/kg	1013.13	mg/kg	M	2.1E-04	mg/kg-day	7.0E-02	mg/kg/day	N/A	N/A	2.9E-03
	Benzo(a)Pyrene	0.42	mg/kg	0.42	mg/kg	M	8.6E-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	0.90	mg/kg	0.90	mg/kg	M	1.8E-07	mg/kg-day	5.0E-03	mg/kg/day	N/A	N/A	3.7E-05
	Cadmium	6.00	mg/kg	6.00	mg/kg	M	1.2E-06	mg/kg-day	5.0E-04	mg/kg/day	N/A	N/A	2.4E-03
	Iron	58914.73	mg/kg	58914.73	mg/kg	M	1.2E-02	mg/kg-day	3.0E-01	mg/kg/day	N/A	N/A	4.0E-02
	Manganese	550.45	mg/kg	550.45	mg/kg	M	1.1E-04	mg/kg-day	2.3E-02	mg/kg/day	N/A	N/A	4.9E-03
	Vanadium	47.32	mg/kg	47.32	mg/kg	M	9.6E-06	mg/kg-day	7.0E-03	mg/kg/day	N/A	N/A	1.4E-03
	Zinc	5338.79	mg/kg	5338.79	mg/kg	M	1.1E-03	mg/kg-day	3.0E-01	mg/kg/day	N/A	N/A	3.6E-03
Dermal	4,4'-DDE	2.20	mg/kg	2.20	mg/kg	M	2.6E-06	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Aluminum	13247.42	mg/kg	13247.42	mg/kg	M	1.6E-03	mg/kg-day	2.7E-01	mg/kg/day	N/A	N/A	5.8E-03
	Arsenic	111.00	mg/kg	111.00	mg/kg	M	4.2E-05	mg/kg-day	2.9E-04	mg/kg/day	N/A	N/A	1.5E-01
	Barium	1013.13	mg/kg	1013.13	mg/kg	M	1.2E-04	mg/kg-day	7.0E-02	mg/kg/day	N/A	N/A	1.7E-03
	Benzo(a)Pyrene	0.42	mg/kg	0.42	mg/kg	M	5.0E-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	8.3E-07	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Beryllium	0.90	mg/kg	0.90	mg/kg	M	1.1E-07	mg/kg-day	5.0E-05	mg/kg/day	N/A	N/A	2.1E-03
	Cadmium	6.00	mg/kg	6.00	mg/kg	M	7.1E-07	mg/kg-day	1.3E-05	mg/kg/day	N/A	N/A	5.7E-02
	Iron	58914.73	mg/kg	58914.73	mg/kg	M	7.0E-03	mg/kg-day	1.5E-02	mg/kg/day	N/A	N/A	4.6E-01
	Manganese	550.45	mg/kg	550.45	mg/kg	M	6.5E-05	mg/kg-day	2.3E-02	mg/kg/day	N/A	N/A	2.8E-03
	Vanadium	47.32	mg/kg	47.32	mg/kg	M	5.6E-06	mg/kg-day	1.4E-04	mg/kg/day	N/A	N/A	4.0E-02
	Zinc	5338.79	mg/kg	5338.79	mg/kg	M	6.3E-04	mg/kg-day	7.5E-02	mg/kg/day	N/A	N/A	8.4E-03
												Total Hazard Index Across All Exposure Routes/Pathways	8.6E-01

TABLE 7.7.CT
CALCULATION OF NON-CANCER HAZARDS
CENTRAL TENDENCIES
St. Juliens Creek - Burning Grounds (Site 5)

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	4,4'-DDE	0.37	mg/kg	0.37	mg/kg	M	7.5E-08	mg/kg-day	N/A	mg/kg-day	N/A	N/A	N/A
	Aluminum	9402.50	mg/kg	9402.50	mg/kg	M	1.9E-03	mg/kg-day	1.0E+00	mg/kg-day	mg/kg/day	N/A	N/A
	Arsenic	25.54	mg/kg	25.54	mg/kg	M	5.2E-06	mg/kg-day	3.0E-04	mg/kg-day	mg/kg/day	N/A	N/A
	Barium	170.78	mg/kg	170.78	mg/kg	M	3.5E-05	mg/kg-day	7.0E-02	mg/kg-day	mg/kg/day	N/A	N/A
	Benzo(a)Pyrene	0.22	mg/kg	0.22	mg/kg	M	4.6E-08	mg/kg-day	N/A	mg/kg-day	N/A	N/A	N/A
	Benzo(b)Fluoranthene	0.69	mg/kg	0.69	mg/kg	M	1.4E-07	mg/kg-day	N/A	mg/kg-day	N/A	N/A	N/A
	Beryllium	0.66	mg/kg	0.66	mg/kg	M	1.3E-07	mg/kg-day	5.0E-03	mg/kg-day	mg/kg/day	N/A	N/A
	Cadmium	0.37	mg/kg	0.37	mg/kg	M	7.6E-08	mg/kg-day	5.0E-04	mg/kg-day	mg/kg/day	N/A	N/A
	Iron	17687.50	mg/kg	17687.50	mg/kg	M	3.6E-03	mg/kg-day	3.0E-01	mg/kg-day	mg/kg/day	N/A	N/A
	Manganese	178.40	mg/kg	178.40	mg/kg	M	3.6E-05	mg/kg-day	2.3E-02	mg/kg-day	mg/kg/day	N/A	N/A
	Vanadium	31.48	mg/kg	31.48	mg/kg	M	6.4E-06	mg/kg-day	7.0E-03	mg/kg-day	mg/kg/day	N/A	N/A
	Zinc	160.34	mg/kg	160.34	mg/kg	M	3.3E-05	mg/kg-day	3.0E-01	mg/kg-day	mg/kg/day	N/A	N/A
Dermal	4,4'-DDE	0.37	mg/kg	0.37	mg/kg	M	4.4E-07	mg/kg-day	N/A	mg/kg-day	N/A	N/A	N/A
	Aluminum	9402.50	mg/kg	9402.50	mg/kg	M	1.1E-03	mg/kg-day	2.7E-01	mg/kg-day	mg/kg/day	N/A	N/A
	Arsenic	25.54	mg/kg	25.54	mg/kg	M	9.6E-06	mg/kg-day	2.9E-04	mg/kg-day	mg/kg/day	N/A	N/A
	Barium	170.78	mg/kg	170.78	mg/kg	M	2.0E-05	mg/kg-day	7.0E-02	mg/kg-day	mg/kg/day	N/A	N/A
	Benzo(a)Pyrene	0.22	mg/kg	0.22	mg/kg	M	2.7E-07	mg/kg-day	N/A	mg/kg-day	N/A	N/A	N/A
	Benzo(b)Fluoranthene	0.69	mg/kg	0.69	mg/kg	M	8.1E-07	mg/kg-day	N/A	mg/kg-day	N/A	N/A	N/A
	Beryllium	0.66	mg/kg	0.66	mg/kg	M	7.8E-08	mg/kg-day	5.0E-05	mg/kg-day	mg/kg/day	N/A	N/A
	Cadmium	0.37	mg/kg	0.37	mg/kg	M	4.4E-08	mg/kg-day	1.3E-05	mg/kg-day	mg/kg/day	N/A	N/A
	Iron	17687.50	mg/kg	17687.50	mg/kg	M	2.1E-03	mg/kg-day	1.5E-02	mg/kg-day	mg/kg/day	N/A	N/A
	Manganese	178.40	mg/kg	178.40	mg/kg	M	2.1E-05	mg/kg-day	2.3E-02	mg/kg-day	mg/kg/day	N/A	N/A
	Vanadium	31.48	mg/kg	31.48	mg/kg	M	3.7E-06	mg/kg-day	1.4E-04	mg/kg-day	mg/kg/day	N/A	N/A
	Zinc	160.34	mg/kg	160.34	mg/kg	M	1.9E-05	mg/kg-day	7.5E-02	mg/kg-day	mg/kg/day	N/A	N/A
												Total Hazard Index Across All Exposure Routes/Pathways	0.0E+00

TABLE 7.8.RME
CALCULATION OF NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
St. Juliens Creek - Burning Grounds (Site 5)

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	4,4'-DDE	2.20	mg/kg	2.20	mg/kg	M	2.8E-05	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Aluminum	13247.42	mg/kg	13247.42	mg/kg	M	1.7E-01	mg/kg-day	1.0E+00	mg/kg/day	N/A	N/A	1.7E-01
	Arsenic	111.00	mg/kg	111.00	mg/kg	M	1.4E-03	mg/kg-day	3.0E-04	mg/kg/day	N/A	N/A	4.7E+00
	Barium	1013.13	mg/kg	1013.13	mg/kg	M	1.3E-02	mg/kg-day	7.0E-02	mg/kg/day	N/A	N/A	1.9E-01
	Benzo(a)Pyrene	0.42	mg/kg	0.42	mg/kg	M	5.4E-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	0.90	mg/kg	0.90	mg/kg	M	1.2E-05	mg/kg-day	5.0E-03	mg/kg/day	N/A	N/A	2.3E-03
	Cadmium	6.00	mg/kg	6.00	mg/kg	M	7.7E-05	mg/kg-day	5.0E-04	mg/kg/day	N/A	N/A	1.5E-01
	Iron	58914.73	mg/kg	58914.73	mg/kg	M	7.5E-01	mg/kg-day	3.0E-01	mg/kg/day	N/A	N/A	2.5E+00
	Manganese	550.45	mg/kg	550.45	mg/kg	M	7.0E-03	mg/kg-day	2.3E-02	mg/kg/day	N/A	N/A	3.1E-01
	Vanadium	47.32	mg/kg	47.32	mg/kg	M	6.0E-04	mg/kg-day	7.0E-03	mg/kg/day	N/A	N/A	8.6E-02
	Zinc	5338.79	mg/kg	5338.79	mg/kg	M	6.8E-02	mg/kg-day	3.0E-01	mg/kg/day	N/A	N/A	2.3E-01
Dermal	4,4'-DDE	2.20	mg/kg	2.20	mg/kg	M	3.7E-05	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Aluminum	13247.42	mg/kg	13247.42	mg/kg	M	2.2E-02	mg/kg-day	2.7E-01	mg/kg/day	N/A	N/A	8.3E-02
	Arsenic	111.00	mg/kg	111.00	mg/kg	M	6.0E-04	mg/kg-day	2.9E-04	mg/kg/day	N/A	N/A	2.1E+00
	Barium	1013.13	mg/kg	1013.13	mg/kg	M	1.7E-03	mg/kg-day	7.0E-02	mg/kg/day	N/A	N/A	2.5E-02
	Benzo(a)Pyrene	0.42	mg/kg	0.42	mg/kg	M	7.1E-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	1.2E-05	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Beryllium	0.90	mg/kg	0.90	mg/kg	M	1.5E-06	mg/kg-day	5.0E-05	mg/kg/day	N/A	N/A	3.1E-02
	Cadmium	6.00	mg/kg	6.00	mg/kg	M	1.0E-05	mg/kg-day	1.3E-05	mg/kg/day	N/A	N/A	8.1E-01
	Iron	58914.73	mg/kg	58914.73	mg/kg	M	1.0E-01	mg/kg-day	1.5E-02	mg/kg/day	N/A	N/A	6.7E+00
	Manganese	550.45	mg/kg	550.45	mg/kg	M	9.3E-04	mg/kg-day	2.3E-02	mg/kg/day	N/A	N/A	4.1E-02
	Vanadium	47.32	mg/kg	47.32	mg/kg	M	8.0E-05	mg/kg-day	1.4E-04	mg/kg/day	N/A	N/A	5.7E-01
	Zinc	5338.79	mg/kg	5338.79	mg/kg	M	9.0E-03	mg/kg-day	7.5E-02	mg/kg/day	N/A	N/A	1.2E-01
												Total Hazard Index Across All Exposure Routes/Pathways	1.9E+01

TABLE 7.8.CT
CALCULATION OF NON-CANCER HAZARDS
CENTRAL TENDENCIES
St. Juliens Creek - Burning Grounds (Site 5)

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	4,4'-DDE	0.37	mg/kg	0.37	mg/kg	M	4.7E-06	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Aluminum	9402.50	mg/kg	9402.50	mg/kg	M	1.2E-01	mg/kg-day	1.0E+00	mg/kg/day	N/A	N/A	1.2E-01
	Arsenic	25.54	mg/kg	25.54	mg/kg	M	3.3E-04	mg/kg-day	3.0E-04	mg/kg/day	N/A	N/A	1.1E+00
	Barium	170.78	mg/kg	170.78	mg/kg	M	2.2E-03	mg/kg-day	7.0E-02	mg/kg/day	N/A	N/A	3.1E-02
	Benzo(a)Pyrene	0.22	mg/kg	0.22	mg/kg	M	2.9E-06	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Benzo(b)Fluoranthene	0.69	mg/kg	0.69	mg/kg	M	8.8E-06	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Beryllium	0.66	mg/kg	0.66	mg/kg	M	8.4E-06	mg/kg-day	5.0E-03	mg/kg/day	N/A	N/A	1.7E-03
	Cadmium	0.37	mg/kg	0.37	mg/kg	M	4.8E-06	mg/kg-day	5.0E-04	mg/kg/day	N/A	N/A	9.6E-03
	Iron	17687.50	mg/kg	17687.50	mg/kg	M	2.3E-01	mg/kg-day	3.0E-01	mg/kg/day	N/A	N/A	7.5E-01
	Manganese	178.40	mg/kg	178.40	mg/kg	M	2.3E-03	mg/kg-day	2.3E-02	mg/kg/day	N/A	N/A	9.9E-02
	Vanadium	31.48	mg/kg	31.48	mg/kg	M	4.0E-04	mg/kg-day	7.0E-03	mg/kg/day	N/A	N/A	5.7E-02
	Zinc	160.34	mg/kg	160.34	mg/kg	M	2.0E-03	mg/kg-day	3.0E-01	mg/kg/day	N/A	N/A	6.8E-03
Dermal	4,4'-DDE	0.37	mg/kg	0.37	mg/kg	M	6.2E-06	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Aluminum	9402.50	mg/kg	9402.50	mg/kg	M	1.6E-02	mg/kg-day	2.7E-01	mg/kg/day	N/A	N/A	5.9E-02
	Arsenic	25.54	mg/kg	25.54	mg/kg	M	1.4E-04	mg/kg-day	2.9E-04	mg/kg/day	N/A	N/A	4.9E-01
	Barium	170.78	mg/kg	170.78	mg/kg	M	2.9E-04	mg/kg-day	7.0E-02	mg/kg/day	N/A	N/A	4.1E-03
	Benzo(a)Pyrene	0.22	mg/kg	0.22	mg/kg	M	3.8E-06	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Benzo(b)Fluoranthene	0.69	mg/kg	0.69	mg/kg	M	1.2E-05	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Beryllium	0.66	mg/kg	0.66	mg/kg	M	1.1E-06	mg/kg-day	5.0E-05	mg/kg/day	N/A	N/A	2.2E-02
	Cadmium	0.37	mg/kg	0.37	mg/kg	M	6.3E-07	mg/kg-day	1.3E-05	mg/kg/day	N/A	N/A	5.1E-02
	Iron	17687.50	mg/kg	17687.50	mg/kg	M	3.0E-02	mg/kg-day	1.5E-02	mg/kg/day	N/A	N/A	2.0E+00
	Manganese	178.40	mg/kg	178.40	mg/kg	M	3.0E-04	mg/kg-day	2.3E-02	mg/kg/day	N/A	N/A	1.3E-02
	Vanadium	31.48	mg/kg	31.48	mg/kg	M	5.3E-05	mg/kg-day	1.4E-04	mg/kg/day	N/A	N/A	3.8E-01
	Zinc	160.34	mg/kg	160.34	mg/kg	M	2.7E-04	mg/kg-day	7.5E-02	mg/kg/day	N/A	N/A	3.6E-03
												Total Hazard Index Across All Exposure Routes/Pathways	5.2E+00

TABLE 7.9.RME
CALCULATION OF NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
St. Juliens Creek - Burning Grounds (Site 5)

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	4,4'-DDE	2.20	mg/kg	2.20	mg/kg	M	3.0E-06	mg/kg-day	N/A	mg/kg-day	N/A	N/A	N/A
	Aluminum	13247.42	mg/kg	13247.42	mg/kg	M	1.8E-02	mg/kg-day	1.0E+00	mg/kg-day	mg/kg/day	N/A	1.8E-02
	Arsenic	111.00	mg/kg	111.00	mg/kg	M	1.5E-04	mg/kg-day	3.0E-04	mg/kg-day	mg/kg/day	N/A	5.1E-01
	Barium	1013.13	mg/kg	1013.13	mg/kg	M	1.4E-03	mg/kg-day	7.0E-02	mg/kg-day	mg/kg/day	N/A	2.0E-02
	Benzo(a)Pyrene	0.42	mg/kg	0.42	mg/kg	M	5.8E-07	mg/kg-day	N/A	mg/kg-day	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	mg/kg-day	N/A	N/A	N/A
	Beryllium	0.90	mg/kg	0.90	mg/kg	M	1.2E-06	mg/kg-day	5.0E-03	mg/kg-day	mg/kg/day	N/A	2.5E-04
	Cadmium	6.00	mg/kg	6.00	mg/kg	M	8.2E-06	mg/kg-day	5.0E-04	mg/kg-day	mg/kg/day	N/A	1.6E-02
	Iron	58914.73	mg/kg	58914.73	mg/kg	M	8.1E-02	mg/kg-day	3.0E-01	mg/kg-day	mg/kg/day	N/A	2.7E-01
	Manganese	550.45	mg/kg	550.45	mg/kg	M	7.5E-04	mg/kg-day	2.3E-02	mg/kg-day	mg/kg/day	N/A	3.3E-02
	Vanadium	47.32	mg/kg	47.32	mg/kg	M	6.5E-05	mg/kg-day	7.0E-03	mg/kg-day	mg/kg/day	N/A	9.3E-03
	Zinc	5338.79	mg/kg	5338.79	mg/kg	M	7.3E-03	mg/kg-day	3.0E-01	mg/kg-day	mg/kg/day	N/A	2.4E-02
Dermal	4,4'-DDE	2.20	mg/kg	2.20	mg/kg	M	1.7E-05	mg/kg-day	N/A	mg/kg-day	N/A	N/A	N/A
	Aluminum	13247.42	mg/kg	13247.42	mg/kg	M	1.1E-02	mg/kg-day	2.7E-01	mg/kg-day	mg/kg/day	N/A	3.9E-02
	Arsenic	111.00	mg/kg	111.00	mg/kg	M	2.8E-04	mg/kg-day	2.9E-04	mg/kg-day	mg/kg/day	N/A	9.9E-01
	Barium	1013.13	mg/kg	1013.13	mg/kg	M	8.0E-04	mg/kg-day	7.0E-02	mg/kg-day	mg/kg/day	N/A	1.1E-02
	Benzo(a)Pyrene	0.42	mg/kg	0.42	mg/kg	M	3.4E-06	mg/kg-day	N/A	mg/kg-day	N/A	N/A	N/A
	Benzo(b)Fluoranthene	0.70	mg/kg	0.70	mg/kg	M	5.6E-06	mg/kg-day	N/A	mg/kg-day	N/A	N/A	N/A
	Beryllium	0.90	mg/kg	0.90	mg/kg	M	7.2E-07	mg/kg-day	5.0E-05	mg/kg-day	mg/kg/day	N/A	1.4E-02
	Cadmium	6.00	mg/kg	6.00	mg/kg	M	4.8E-06	mg/kg-day	1.3E-05	mg/kg-day	mg/kg/day	N/A	3.8E-01
	Iron	58914.73	mg/kg	58914.73	mg/kg	M	4.7E-02	mg/kg-day	1.5E-02	mg/kg-day	mg/kg/day	N/A	3.1E+00
	Manganese	550.45	mg/kg	550.45	mg/kg	M	4.4E-04	mg/kg-day	2.3E-02	mg/kg-day	mg/kg/day	N/A	1.9E-02
	Vanadium	47.32	mg/kg	47.32	mg/kg	M	3.8E-05	mg/kg-day	1.4E-04	mg/kg-day	mg/kg/day	N/A	2.7E-01
	Zinc	5338.79	mg/kg	5338.79	mg/kg	M	4.2E-03	mg/kg-day	7.5E-02	mg/kg-day	mg/kg/day	N/A	5.7E-02
												Total Hazard Index Across All Exposure Routes/Pathways	5.8E+00

TABLE 7.9.CT
CALCULATION OF NON-CANCER HAZARDS
CENTRAL TENDENCIES
St. Juliens Creek - Burning Grounds (Site 5)

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	4,4'-DDE	0.37	mg/kg	0.37	mg/kg	M	5.0E-07	mg/kg-day	N/A	mg/kg-day	N/A	N/A	N/A
	Aluminum	9402.50	mg/kg	9402.50	mg/kg	M	1.3E-02	mg/kg-day	1.0E+00	mg/kg-day	mg/kg/day	N/A	1.3E-02
	Arsenic	25.54	mg/kg	25.54	mg/kg	M	3.5E-05	mg/kg-day	3.0E-04	mg/kg-day	mg/kg/day	N/A	1.2E-01
	Barium	170.78	mg/kg	170.78	mg/kg	M	2.3E-04	mg/kg-day	7.0E-02	mg/kg-day	mg/kg/day	N/A	3.3E-03
	Benzo(a)Pyrene	0.22	mg/kg	0.22	mg/kg	M	3.1E-07	mg/kg-day	N/A	mg/kg-day	N/A	N/A	N/A
	Benzo(b)Fluoranthene	0.69	mg/kg	0.69	mg/kg	M	9.4E-07	mg/kg-day	N/A	mg/kg-day	N/A	N/A	N/A
	Beryllium	0.66	mg/kg	0.66	mg/kg	M	9.0E-07	mg/kg-day	5.0E-03	mg/kg-day	mg/kg/day	N/A	1.8E-04
	Cadmium	0.37	mg/kg	0.37	mg/kg	M	5.1E-07	mg/kg-day	5.0E-04	mg/kg-day	mg/kg/day	N/A	1.0E-03
	Iron	17687.50	mg/kg	17687.50	mg/kg	M	2.4E-02	mg/kg-day	3.0E-01	mg/kg-day	mg/kg/day	N/A	8.1E-02
	Manganese	178.40	mg/kg	178.40	mg/kg	M	2.4E-04	mg/kg-day	2.3E-02	mg/kg-day	mg/kg/day	N/A	1.1E-02
	Vanadium	31.48	mg/kg	31.48	mg/kg	M	4.3E-05	mg/kg-day	7.0E-03	mg/kg-day	mg/kg/day	N/A	6.2E-03
	Zinc	160.34	mg/kg	160.34	mg/kg	M	2.2E-04	mg/kg-day	3.0E-01	mg/kg-day	mg/kg/day	N/A	7.3E-04
Dermal	4,4'-DDE	0.37	mg/kg	0.37	mg/kg	M	2.9E-06	mg/kg-day	N/A	mg/kg-day	N/A	N/A	N/A
	Aluminum	9402.50	mg/kg	9402.50	mg/kg	M	7.5E-03	mg/kg-day	2.7E-01	mg/kg-day	mg/kg/day	N/A	2.8E-02
	Arsenic	25.54	mg/kg	25.54	mg/kg	M	6.5E-05	mg/kg-day	2.9E-04	mg/kg-day	mg/kg/day	N/A	2.3E-01
	Barium	170.78	mg/kg	170.78	mg/kg	M	1.4E-04	mg/kg-day	7.0E-02	mg/kg-day	mg/kg/day	N/A	1.9E-03
	Benzo(a)Pyrene	0.22	mg/kg	0.22	mg/kg	M	1.8E-06	mg/kg-day	N/A	mg/kg-day	N/A	N/A	N/A
	Benzo(b)Fluoranthene	0.69	mg/kg	0.69	mg/kg	M	5.5E-06	mg/kg-day	N/A	mg/kg-day	N/A	N/A	N/A
	Beryllium	0.66	mg/kg	0.66	mg/kg	M	5.2E-07	mg/kg-day	5.0E-05	mg/kg-day	mg/kg/day	N/A	1.0E-02
	Cadmium	0.37	mg/kg	0.37	mg/kg	M	3.0E-07	mg/kg-day	1.3E-05	mg/kg-day	mg/kg/day	N/A	2.4E-02
	Iron	17687.50	mg/kg	17687.50	mg/kg	M	1.4E-02	mg/kg-day	1.5E-02	mg/kg-day	mg/kg/day	N/A	9.4E-01
	Manganese	178.40	mg/kg	178.40	mg/kg	M	1.4E-04	mg/kg-day	2.3E-02	mg/kg-day	mg/kg/day	N/A	6.2E-03
	Vanadium	31.48	mg/kg	31.48	mg/kg	M	2.5E-05	mg/kg-day	1.4E-04	mg/kg-day	mg/kg/day	N/A	1.8E-01
	Zinc	160.34	mg/kg	160.34	mg/kg	M	1.3E-04	mg/kg-day	7.5E-02	mg/kg-day	mg/kg/day	N/A	1.7E-03
												Total Hazard Index Across All Exposure Routes/Pathways	1.6E+00

TABLE 7.10.RME
CALCULATION OF NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
St. Juliens Creek - Burning Grounds (Site 5)

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	4,4'-DDE	2.20	mg/kg	2.20	mg/kg	M	1.1E-06	mg/kg-day	N/A	mg/kg-day	N/A	N/A	N/A
	Aluminum	13247.42	mg/kg	13247.42	mg/kg	M	6.5E-03	mg/kg-day	1.0E+00	mg/kg-day	N/A	N/A	6.5E-03
	Arsenic	111.00	mg/kg	111.00	mg/kg	M	5.4E-05	mg/kg-day	3.0E-04	mg/kg-day	N/A	N/A	1.8E-01
	Barium	1013.13	mg/kg	1013.13	mg/kg	M	5.0E-04	mg/kg-day	7.0E-02	mg/kg-day	N/A	N/A	7.1E-03
	Benzo(a)Pyrene	0.42	mg/kg	0.42	mg/kg	M	2.1E-07	mg/kg-day	N/A	mg/kg-day	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	mg/kg-day	N/A	N/A	N/A
	Beryllium	0.90	mg/kg	0.90	mg/kg	M	4.4E-07	mg/kg-day	5.0E-03	mg/kg-day	N/A	N/A	8.8E-05
	Cadmium	6.00	mg/kg	6.00	mg/kg	M	2.9E-06	mg/kg-day	5.0E-04	mg/kg-day	N/A	N/A	5.9E-03
	Iron	58914.73	mg/kg	58914.73	mg/kg	M	2.9E-02	mg/kg-day	3.0E-01	mg/kg-day	N/A	N/A	9.6E-02
	Manganese	550.45	mg/kg	550.45	mg/kg	M	2.7E-04	mg/kg-day	2.3E-02	mg/kg-day	N/A	N/A	1.2E-02
	Vanadium	47.32	mg/kg	47.32	mg/kg	M	2.3E-05	mg/kg-day	7.0E-03	mg/kg-day	N/A	N/A	3.3E-03
	Zinc	5338.79	mg/kg	5338.79	mg/kg	M	2.6E-03	mg/kg-day	3.0E-01	mg/kg-day	N/A	N/A	8.7E-03
Dermal	4,4'-DDE	2.20	mg/kg	2.20	mg/kg	M	1.1E-05	mg/kg-day	N/A	mg/kg-day	N/A	N/A	N/A
	Aluminum	13247.42	mg/kg	13247.42	mg/kg	M	6.9E-03	mg/kg-day	2.7E-01	mg/kg-day	N/A	N/A	2.5E-02
	Arsenic	111.00	mg/kg	111.00	mg/kg	M	1.8E-04	mg/kg-day	2.9E-04	mg/kg-day	N/A	N/A	6.5E-01
	Barium	1013.13	mg/kg	1013.13	mg/kg	M	5.3E-04	mg/kg-day	7.0E-02	mg/kg-day	N/A	N/A	7.5E-03
	Benzo(a)Pyrene	0.42	mg/kg	0.42	mg/kg	M	2.2E-06	mg/kg-day	N/A	mg/kg-day	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	mg/kg-day	N/A	N/A	N/A
	Beryllium	0.90	mg/kg	0.90	mg/kg	M	4.7E-07	mg/kg-day	5.0E-05	mg/kg-day	N/A	N/A	9.3E-03
	Cadmium	6.00	mg/kg	6.00	mg/kg	M	3.1E-06	mg/kg-day	1.3E-05	mg/kg-day	N/A	N/A	2.5E-01
	Iron	58914.73	mg/kg	58914.73	mg/kg	M	3.1E-02	mg/kg-day	1.5E-02	mg/kg-day	N/A	N/A	2.0E+00
	Manganese	550.45	mg/kg	550.45	mg/kg	M	2.9E-04	mg/kg-day	2.3E-02	mg/kg-day	N/A	N/A	1.2E-02
	Vanadium	47.32	mg/kg	47.32	mg/kg	M	2.5E-05	mg/kg-day	1.4E-04	mg/kg-day	N/A	N/A	1.8E-01
	Zinc	5338.79	mg/kg	5338.79	mg/kg	M	2.8E-03	mg/kg-day	7.5E-02	mg/kg-day	N/A	N/A	3.7E-02
												Total Hazard Index Across All Exposure Routes/Pathways	3.5E+00

TABLE 7.10.CT
CALCULATION OF NON-CANCER HAZARDS
CENTRAL TENDENCIES
St. Juliens Creek - Burning Grounds (Site 5)

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	4,4'-DDE	0.37	mg/kg	0.37	mg/kg	M	1.8E-07	mg/kg-day	N/A	mg/kg-day	N/A	N/A	N/A
	Aluminum	9402.50	mg/kg	9402.50	mg/kg	M	4.6E-03	mg/kg-day	1.0E+00	mg/kg-day	N/A	N/A	4.6E-03
	Arsenic	25.54	mg/kg	25.54	mg/kg	M	1.2E-05	mg/kg-day	3.0E-04	mg/kg-day	N/A	N/A	4.2E-02
	Barium	170.78	mg/kg	170.78	mg/kg	M	8.4E-05	mg/kg-day	7.0E-02	mg/kg-day	N/A	N/A	1.2E-03
	Benzo(a)Pyrene	0.22	mg/kg	0.22	mg/kg	M	1.1E-07	mg/kg-day	N/A	mg/kg-day	N/A	N/A	N/A
	Benzo(b)Fluoranthene	0.69	mg/kg	0.69	mg/kg	M	3.4E-07	mg/kg-day	N/A	mg/kg-day	N/A	N/A	N/A
	Beryllium	0.66	mg/kg	0.66	mg/kg	M	3.2E-07	mg/kg-day	5.0E-03	mg/kg-day	N/A	N/A	6.4E-05
	Cadmium	0.37	mg/kg	0.37	mg/kg	M	1.8E-07	mg/kg-day	5.0E-04	mg/kg-day	N/A	N/A	3.7E-04
	Iron	17687.50	mg/kg	17687.50	mg/kg	M	8.7E-03	mg/kg-day	3.0E-01	mg/kg-day	N/A	N/A	2.9E-02
	Manganese	178.40	mg/kg	178.40	mg/kg	M	8.7E-05	mg/kg-day	2.3E-02	mg/kg-day	N/A	N/A	3.8E-03
	Vanadium	31.48	mg/kg	31.48	mg/kg	M	1.5E-05	mg/kg-day	7.0E-03	mg/kg-day	N/A	N/A	2.2E-03
	Zinc	160.34	mg/kg	160.34	mg/kg	M	7.8E-05	mg/kg-day	3.0E-01	mg/kg-day	N/A	N/A	2.6E-04
Dermal	4,4'-DDE	0.37	mg/kg	0.37	mg/kg	M	1.9E-06	mg/kg-day	N/A	mg/kg-day	N/A	N/A	N/A
	Aluminum	9402.50	mg/kg	9402.50	mg/kg	M	4.9E-03	mg/kg-day	2.7E-01	mg/kg-day	N/A	N/A	1.8E-02
	Arsenic	25.54	mg/kg	25.54	mg/kg	M	4.2E-05	mg/kg-day	2.9E-04	mg/kg-day	N/A	N/A	1.5E-01
	Barium	170.78	mg/kg	170.78	mg/kg	M	8.9E-05	mg/kg-day	7.0E-02	mg/kg-day	N/A	N/A	1.3E-03
	Benzo(a)Pyrene	0.22	mg/kg	0.22	mg/kg	M	1.2E-06	mg/kg-day	N/A	mg/kg-day	N/A	N/A	N/A
	Benzo(b)Fluoranthene	0.69	mg/kg	0.69	mg/kg	M	3.6E-06	mg/kg-day	N/A	mg/kg-day	N/A	N/A	N/A
	Beryllium	0.66	mg/kg	0.66	mg/kg	M	3.4E-07	mg/kg-day	5.0E-05	mg/kg-day	N/A	N/A	6.8E-03
	Cadmium	0.37	mg/kg	0.37	mg/kg	M	1.9E-07	mg/kg-day	1.3E-05	mg/kg-day	N/A	N/A	1.6E-02
	Iron	17687.50	mg/kg	17687.50	mg/kg	M	9.2E-03	mg/kg-day	1.5E-02	mg/kg-day	N/A	N/A	6.1E-01
	Manganese	178.40	mg/kg	178.40	mg/kg	M	9.3E-05	mg/kg-day	2.3E-02	mg/kg-day	N/A	N/A	4.0E-03
	Vanadium	31.48	mg/kg	31.48	mg/kg	M	1.6E-05	mg/kg-day	1.4E-04	mg/kg-day	N/A	N/A	1.2E-01
	Zinc	160.34	mg/kg	160.34	mg/kg	M	8.3E-05	mg/kg-day	7.5E-02	mg/kg-day	N/A	N/A	1.1E-03
												Total Hazard Index Across All Exposure Routes/Pathways	1.0E+00

TABLE 7.11.RME
CALCULATION OF NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
St. Juliens Creek - Burning Grounds (Site 5)

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	4,4'-DDE	2.20	mg/kg	2.20	mg/kg	M	1.0E-11	mg/kg-day	N/A	mg/kg-day	N/A	N/A	N/A
	Aluminum	13247.42	mg/kg	13247.42	mg/kg	M	6.2E-08	mg/kg-day	1.0E+00	mg/kg-day	N/A	N/A	6.2E-08
	Arsenic	111.00	mg/kg	111.00	mg/kg	M	5.2E-10	mg/kg-day	3.0E-04	mg/kg-day	N/A	N/A	1.7E-06
	Barium	1013.13	mg/kg	1013.13	mg/kg	M	4.7E-09	mg/kg-day	7.0E-02	mg/kg-day	N/A	N/A	6.8E-08
	Benzo(a)Pyrene	0.42	mg/kg	0.42	mg/kg	M	2.0E-12	mg/kg-day	N/A	mg/kg-day	N/A	N/A	N/A
	Benzo(b)Fluoranthene	0.70	mg/kg	0.70	mg/kg	M	3.3E-12	mg/kg-day	N/A	mg/kg-day	N/A	N/A	N/A
	Beryllium	0.90	mg/kg	0.90	mg/kg	M	4.2E-12	mg/kg-day	5.0E-03	mg/kg-day	N/A	N/A	8.4E-10
	Cadmium	6.00	mg/kg	6.00	mg/kg	M	2.8E-11	mg/kg-day	5.0E-04	mg/kg-day	N/A	N/A	5.6E-08
	Iron	58914.73	mg/kg	58914.73	mg/kg	M	2.8E-07	mg/kg-day	3.0E-01	mg/kg-day	N/A	N/A	9.2E-07
	Manganese	550.45	mg/kg	550.45	mg/kg	M	2.6E-09	mg/kg-day	2.3E-02	mg/kg-day	N/A	N/A	1.1E-07
	Vanadium	47.32	mg/kg	47.32	mg/kg	M	2.2E-10	mg/kg-day	7.0E-03	mg/kg-day	N/A	N/A	3.2E-08
	Zinc	5338.79	mg/kg	5338.79	mg/kg	M	2.5E-08	mg/kg-day	3.0E-01	mg/kg-day	N/A	N/A	8.3E-08
Dermal	4,4'-DDE	2.20	mg/kg	2.20	mg/kg	M	1.1E-05	mg/kg-day	N/A	mg/kg-day	N/A	N/A	N/A
	Aluminum	13247.42	mg/kg	13247.42	mg/kg	M	6.9E-03	mg/kg-day	2.7E-01	mg/kg-day	N/A	N/A	2.5E-02
	Arsenic	111.00	mg/kg	111.00	mg/kg	M	1.8E-04	mg/kg-day	2.9E-04	mg/kg-day	N/A	N/A	6.4E-01
	Barium	1013.13	mg/kg	1013.13	mg/kg	M	5.2E-04	mg/kg-day	7.0E-02	mg/kg-day	N/A	N/A	7.5E-03
	Benzo(a)Pyrene	0.42	mg/kg	0.42	mg/kg	M	2.2E-06	mg/kg-day	N/A	mg/kg-day	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	mg/kg-day	N/A	N/A	N/A
	Beryllium	0.90	mg/kg	0.90	mg/kg	M	4.7E-07	mg/kg-day	5.0E-05	mg/kg-day	N/A	N/A	9.3E-03
	Cadmium	6.00	mg/kg	6.00	mg/kg	M	3.1E-06	mg/kg-day	1.3E-05	mg/kg-day	N/A	N/A	2.5E-01
	Iron	58914.73	mg/kg	58914.73	mg/kg	M	3.0E-02	mg/kg-day	1.5E-02	mg/kg-day	N/A	N/A	2.0E+00
	Manganese	550.45	mg/kg	550.45	mg/kg	M	2.8E-04	mg/kg-day	2.3E-02	mg/kg-day	N/A	N/A	1.2E-02
	Vanadium	47.32	mg/kg	47.32	mg/kg	M	2.4E-05	mg/kg-day	1.4E-04	mg/kg-day	N/A	N/A	1.7E-01
	Zinc	5338.79	mg/kg	5338.79	mg/kg	M	2.8E-03	mg/kg-day	7.5E-02	mg/kg-day	N/A	N/A	3.7E-02
												Total Hazard Index Across All Exposure Routes/Pathways	3.2E+00

TABLE 7.11.CT
CALCULATION OF NON-CANCER HAZARDS
CENTRAL TENDENCIES
St. Juliens Creek - Burning Grounds (Site 5)

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	4,4'-DDE	0.37	mg/kg	0.37	mg/kg	M	1.7E-12	mg/kg-day	N/A	mg/kg-day	N/A	N/A	N/A
	Aluminum	9402.50	mg/kg	9402.50	mg/kg	M	4.4E-08	mg/kg-day	1.0E+00	mg/kg-day	N/A	N/A	4.4E-08
	Arsenic	25.54	mg/kg	25.54	mg/kg	M	1.2E-10	mg/kg-day	3.0E-04	mg/kg-day	N/A	N/A	4.0E-07
	Barium	170.78	mg/kg	170.78	mg/kg	M	8.0E-10	mg/kg-day	7.0E-02	mg/kg-day	N/A	N/A	1.1E-08
	Benzo(a)Pyrene	0.22	mg/kg	0.22	mg/kg	M	1.1E-12	mg/kg-day	N/A	mg/kg-day	N/A	N/A	N/A
	Benzo(b)Fluoranthene	0.69	mg/kg	0.69	mg/kg	M	3.2E-12	mg/kg-day	N/A	mg/kg-day	N/A	N/A	N/A
	Beryllium	0.66	mg/kg	0.66	mg/kg	M	3.1E-12	mg/kg-day	5.0E-03	mg/kg-day	N/A	N/A	6.2E-10
	Cadmium	0.37	mg/kg	0.37	mg/kg	M	1.8E-12	mg/kg-day	5.0E-04	mg/kg-day	N/A	N/A	3.5E-09
	Iron	17687.50	mg/kg	17687.50	mg/kg	M	8.3E-08	mg/kg-day	3.0E-01	mg/kg-day	N/A	N/A	2.8E-07
	Manganese	178.40	mg/kg	178.40	mg/kg	M	8.4E-10	mg/kg-day	2.3E-02	mg/kg-day	N/A	N/A	3.6E-08
	Vanadium	31.48	mg/kg	31.48	mg/kg	M	1.5E-10	mg/kg-day	7.0E-03	mg/kg-day	N/A	N/A	2.1E-08
	Zinc	160.34	mg/kg	160.34	mg/kg	M	7.5E-10	mg/kg-day	3.0E-01	mg/kg-day	N/A	N/A	2.5E-09
Dermal	4,4'-DDE	0.37	mg/kg	0.37	mg/kg	M	1.9E-06	mg/kg-day	N/A	mg/kg-day	N/A	N/A	N/A
	Aluminum	9402.50	mg/kg	9402.50	mg/kg	M	4.9E-03	mg/kg-day	2.7E-01	mg/kg-day	N/A	N/A	1.8E-02
	Arsenic	25.54	mg/kg	25.54	mg/kg	M	4.2E-05	mg/kg-day	2.9E-04	mg/kg-day	N/A	N/A	1.5E-01
	Barium	170.78	mg/kg	170.78	mg/kg	M	8.8E-05	mg/kg-day	7.0E-02	mg/kg-day	N/A	N/A	1.3E-03
	Benzo(a)Pyrene	0.22	mg/kg	0.22	mg/kg	M	1.2E-06	mg/kg-day	N/A	mg/kg-day	N/A	N/A	N/A
	Benzo(b)Fluoranthene	0.69	mg/kg	0.69	mg/kg	M	3.6E-06	mg/kg-day	N/A	mg/kg-day	N/A	N/A	N/A
	Beryllium	0.66	mg/kg	0.66	mg/kg	M	3.4E-07	mg/kg-day	5.0E-05	mg/kg-day	N/A	N/A	6.8E-03
	Cadmium	0.37	mg/kg	0.37	mg/kg	M	1.9E-07	mg/kg-day	1.3E-05	mg/kg-day	N/A	N/A	1.5E-02
	Iron	17687.50	mg/kg	17687.50	mg/kg	M	9.1E-03	mg/kg-day	1.5E-02	mg/kg-day	N/A	N/A	6.1E-01
	Manganese	178.40	mg/kg	178.40	mg/kg	M	9.2E-05	mg/kg-day	2.3E-02	mg/kg-day	N/A	N/A	4.0E-03
	Vanadium	31.48	mg/kg	31.48	mg/kg	M	1.6E-05	mg/kg-day	1.4E-04	mg/kg-day	N/A	N/A	1.2E-01
	Zinc	160.34	mg/kg	160.34	mg/kg	M	8.3E-05	mg/kg-day	7.5E-02	mg/kg-day	N/A	N/A	1.1E-03
												Total Hazard Index Across All Exposure Routes/Pathways	9.2E-01

TABLE 8.5.RME
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
St. Juliens Creek - Burning Grounds (Site 5)

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 (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
Ingestion	4,4'-DDE	2.20	mg/kg	2.20	mg/kg	M	3.6E-07	mg/kg-day	3.40E-01	mg/kg-day -1	1.2E-07
	Aluminum	13247.42	mg/kg	13247.42	mg/kg	M	2.2E-03	mg/kg-day	N/A	N/A	N/A
	Arsenic	111.00	mg/kg	111.00	mg/kg	M	1.8E-05	mg/kg-day	1.50E+00	mg/kg-day -1	2.7E-05
	Barium	1013.13	mg/kg	1013.13	mg/kg	M	1.6E-04	mg/kg-day	N/A	N/A	N/A
	Benzo(a)Pyrene	0.42	mg/kg	0.42	mg/kg	M	6.9E-08	mg/kg-day	7.30E+00	mg/kg-day -1	5.0E-07
	Benzo(b)Fluoranthene	0.70	mg/kg	0.70	mg/kg	M	1.1E-07	mg/kg-day	7.30E-01	mg/kg-day -1	8.3E-08
	Beryllium	0.90	mg/kg	0.90	mg/kg	M	1.5E-07	mg/kg-day	4.30E+00	mg/kg-day -1	6.3E-07
	Cadmium	6.00	mg/kg	6.00	mg/kg	M	9.8E-07	mg/kg-day	N/A	N/A	N/A
	Iron	58914.73	mg/kg	58914.73	mg/kg	M	9.6E-03	mg/kg-day	N/A	N/A	N/A
	Manganese	550.45	mg/kg	550.45	mg/kg	M	9.0E-05	mg/kg-day	N/A	N/A	N/A
	Vanadium	47.32	mg/kg	47.32	mg/kg	M	7.7E-06	mg/kg-day	N/A	N/A	N/A
	Zinc	5338.79	mg/kg	5338.79	mg/kg	M	8.7E-04	mg/kg-day	N/A	N/A	N/A
	4,4'-DDE	2.20	mg/kg	2.20	mg/kg	M	4.7E-07	mg/kg-day	0.272	N/A	1.3E-07
Dermal	Aluminum	13247.42	mg/kg	13247.42	mg/kg	M	2.9E-04	mg/kg-day	N/A	N/A	N/A
	Arsenic	111.00	mg/kg	111.00	mg/kg	M	2.4E-06	mg/kg-day	1.425	mg/kg-day -1	3.4E-06
	Barium	1013.13	mg/kg	1013.13	mg/kg	M	2.2E-05	mg/kg-day	N/A	N/A	N/A
	Benzo(a)Pyrene	0.42	mg/kg	0.42	mg/kg	M	9.1E-09	mg/kg-day	N/A	mg/kg-day -1	N/A
	Benzo(b)Fluoranthene	0.70	mg/kg	0.70	mg/kg	M	1.5E-08	mg/kg-day	N/A	mg/kg-day -1	N/A
	Beryllium	0.90	mg/kg	0.90	mg/kg	M	1.9E-08	mg/kg-day	0.043	mg/kg-day -1	8.4E-10
	Cadmium	6.00	mg/kg	6.00	mg/kg	M	1.3E-07	mg/kg-day	N/A	N/A	N/A
	Iron	58914.73	mg/kg	58914.73	mg/kg	M	1.3E-03	mg/kg-day	N/A	N/A	N/A
	Manganese	550.45	mg/kg	550.45	mg/kg	M	1.2E-05	mg/kg-day	N/A	N/A	N/A
	Vanadium	47.32	mg/kg	47.32	mg/kg	M	1.0E-06	mg/kg-day	N/A	N/A	N/A
	Zinc	5338.79	mg/kg	5338.79	mg/kg	M	1.2E-04	mg/kg-day	N/A	N/A	N/A
										Total Risk Across All Exposure Routes/Pathways	3.2E-05

TABLE 8.5.CT
CALCULATION OF CANCER RISKS
CENTRAL TENDENCIES
St. Juliens Creek - Burning Grounds (Site 5)

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 (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
Ingestion	4,4'-DDE	0.37	mg/kg	0.37	mg/kg	M	6.0E-08	mg/kg-day	3.40E-01	mg/kg-day -1	2.0E-08
	Aluminum	9402.50	mg/kg	9402.50	mg/kg	M	1.5E-03	mg/kg-day	N/A	N/A	N/A
	Arsenic	25.54	mg/kg	25.54	mg/kg	M	4.2E-06	mg/kg-day	1.50E+00	mg/kg-day -1	6.2E-06
	Barium	170.78	mg/kg	170.78	mg/kg	M	2.8E-05	mg/kg-day	N/A	N/A	N/A
	Benzo(a)Pyrene	0.22	mg/kg	0.22	mg/kg	M	3.7E-08	mg/kg-day	7.30E+00	mg/kg-day -1	2.7E-07
	Benzo(b)Fluoranthen	0.69	mg/kg	0.69	mg/kg	M	1.1E-07	mg/kg-day	7.30E-01	mg/kg-day -1	8.2E-08
	Beryllium	0.66	mg/kg	0.66	mg/kg	M	1.1E-07	mg/kg-day	4.30E+00	mg/kg-day -1	4.6E-07
	Cadmium	0.37	mg/kg	0.37	mg/kg	M	6.1E-08	mg/kg-day	N/A	N/A	N/A
	Iron	17687.50	mg/kg	17687.50	mg/kg	M	2.9E-03	mg/kg-day	N/A	N/A	N/A
	Manganese	178.40	mg/kg	178.40	mg/kg	M	2.9E-05	mg/kg-day	N/A	N/A	N/A
	Vanadium	31.48	mg/kg	31.48	mg/kg	M	5.1E-06	mg/kg-day	N/A	N/A	N/A
	Zinc	160.34	mg/kg	160.34	mg/kg	M	2.6E-05	mg/kg-day	N/A	N/A	N/A
Dermal	4,4'-DDE	0.37	mg/kg	0.37	mg/kg	M	8.0E-08	mg/kg-day	0.272	N/A	2.2E-08
	Aluminum	9402.50	mg/kg	9402.50	mg/kg	M	2.0E-04	mg/kg-day	N/A	N/A	N/A
	Arsenic	25.54	mg/kg	25.54	mg/kg	M	5.5E-07	mg/kg-day	1.425	mg/kg-day -1	7.9E-07
	Barium	170.78	mg/kg	170.78	mg/kg	M	3.7E-06	mg/kg-day	N/A	N/A	N/A
	Benzo(a)Pyrene	0.22	mg/kg	0.22	mg/kg	M	4.8E-09	mg/kg-day	N/A	mg/kg-day -1	N/A
	Benzo(b)Fluoranthen	0.69	mg/kg	0.69	mg/kg	M	1.5E-08	mg/kg-day	N/A	mg/kg-day -1	N/A
	Beryllium	0.66	mg/kg	0.66	mg/kg	M	1.4E-08	mg/kg-day	0.043	mg/kg-day -1	6.1E-10
	Cadmium	0.37	mg/kg	0.37	mg/kg	M	8.1E-09	mg/kg-day	N/A	N/A	N/A
	Iron	17687.50	mg/kg	17687.50	mg/kg	M	3.8E-04	mg/kg-day	N/A	N/A	N/A
	Manganese	178.40	mg/kg	178.40	mg/kg	M	3.8E-06	mg/kg-day	N/A	N/A	N/A
	Vanadium	31.48	mg/kg	31.48	mg/kg	M	6.8E-07	mg/kg-day	N/A	N/A	N/A
	Zinc	160.34	mg/kg	160.34	mg/kg	M	3.5E-06	mg/kg-day	N/A	N/A	N/A
										Total Risk Across All Exposure Routes/Pathways	7.9E-06

TABLE 8.7.RME
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
St. Juliens Creek - Burning Grounds (Site 5)

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	4,4'-DDE	2.2	mg/kg	2.20	mg/kg	M	1.5E-07	mg/kg-day	3.40E-01	mg/kg-day -1	5.2E-08
	Aluminum	13247.4242	mg/kg	13247.42	mg/kg	M	9.2E-04	mg/kg-day	N/A	N/A	N/A
	Arsenic	111	mg/kg	111.00	mg/kg	M	7.7E-06	mg/kg-day	1.50E+00	mg/kg-day -1	1.2E-05
	Barium	1013.12829	mg/kg	1013.13	mg/kg	M	7.1E-05	mg/kg-day	N/A	N/A	N/A
	Benzo(a)Pyrene	0.42165561	mg/kg	0.42	mg/kg	M	2.9E-08	mg/kg-day	7.30E+00	mg/kg-day -1	2.1E-07
	Benzo(b)Fluoranthen	0.7	mg/kg	0.70	mg/kg	M	7.7E-07	mg/kg-day	7.30E-01	mg/kg-day -1	5.6E-07
	Beryllium	0.90114403	mg/kg	0.90	mg/kg	M	6.3E-08	mg/kg-day	4.30E+00	mg/kg-day -1	2.7E-07
	Cadmium	6	mg/kg	6.00	mg/kg	M	6.6E-06	mg/kg-day	N/A	N/A	N/A
	Iron	58914.731	mg/kg	58914.73	mg/kg	M	6.5E-02	mg/kg-day	N/A	N/A	N/A
	Manganese	550.450801	mg/kg	550.45	mg/kg	M	3.8E-05	mg/kg-day	N/A	N/A	N/A
	Vanadium	47.3195245	mg/kg	47.32	mg/kg	M	5.2E-05	mg/kg-day	N/A	N/A	N/A
	Zinc	5338.79424	mg/kg	5338.79	mg/kg	M	5.9E-03	mg/kg-day	N/A	N/A	N/A
Dermal	4,4'-DDE	2.2	mg/kg	2.20	mg/kg	M	8.9E-07	mg/kg-day	0.272	N/A	2.4E-07
	Aluminum	13247.4242	mg/kg	13247.42	mg/kg	M	5.4E-04	mg/kg-day	N/A	N/A	N/A
	Arsenic	111	mg/kg	111.00	mg/kg	M	1.4E-05	mg/kg-day	1.425	mg/kg-day -1	2.0E-05
	Barium	1013.12829	mg/kg	1013.13	mg/kg	M	4.1E-05	mg/kg-day	N/A	N/A	N/A
	Benzo(a)Pyrene	0.42165561	mg/kg	0.42	mg/kg	M	1.7E-07	mg/kg-day	N/A	mg/kg-day -1	N/A
	Benzo(b)Fluoranthen	0.7	mg/kg	0.70	mg/kg	M	2.8E-07	mg/kg-day	N/A	mg/kg-day -1	N/A
	Beryllium	0.90114403	mg/kg	0.90	mg/kg	M	3.6E-08	mg/kg-day	0.043	mg/kg-day -1	1.6E-09
	Cadmium	6	mg/kg	6.00	mg/kg	M	2.4E-07	mg/kg-day	N/A	N/A	N/A
	Iron	58914.731	mg/kg	58914.73	mg/kg	M	2.4E-03	mg/kg-day	N/A	N/A	N/A
	Manganese	550.450801	mg/kg	550.45	mg/kg	M	2.2E-05	mg/kg-day	N/A	N/A	N/A
	Vanadium	47.3195245	mg/kg	47.32	mg/kg	M	1.9E-06	mg/kg-day	N/A	N/A	N/A
	Zinc	5338.79424	mg/kg	5338.79	mg/kg	M	2.2E-04	mg/kg-day	N/A	N/A	N/A
										Total Risk Across All Exposure Routes/Pathways	3.3E-05

TABLE 8.7.CT
CALCULATION OF CANCER RISKS
CENTRAL TENDENCIES
St. Juliens Creek - Burning Grounds (Site 5)

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	4,4'-DDE	0.37	mg/kg	0.37	mg/kg	M	2.6E-08	mg/kg-day	3.40E-01	mg/kg-day -1	8.7E-09
	Aluminum	9402.50	mg/kg	9402.50	mg/kg	M	6.6E-04	mg/kg-day	N/A	N/A	N/A
	Arsenic	25.54	mg/kg	25.54	mg/kg	M	1.8E-06	mg/kg-day	1.50E+00	mg/kg-day -1	2.7E-06
	Barium	170.78	mg/kg	170.78	mg/kg	M	1.2E-05	mg/kg-day	N/A	N/A	N/A
	Benzo(a)Pyrene	0.22	mg/kg	0.22	mg/kg	M	1.6E-08	mg/kg-day	7.30E+00	mg/kg-day -1	1.1E-07
	Benzo(b)Fluoranthen	0.69	mg/kg	0.69	mg/kg	M	7.5E-07	mg/kg-day	7.30E-01	mg/kg-day -1	5.5E-07
	Beryllium	0.66	mg/kg	0.66	mg/kg	M	4.6E-08	mg/kg-day	4.30E+00	mg/kg-day -1	2.0E-07
	Cadmium	0.37	mg/kg	0.37	mg/kg	M	4.1E-07	mg/kg-day	N/A	N/A	N/A
	Iron	17687.50	mg/kg	17687.50	mg/kg	M	1.9E-02	mg/kg-day	N/A	N/A	N/A
	Manganese	178.40	mg/kg	178.40	mg/kg	M	1.2E-05	mg/kg-day	N/A	N/A	N/A
	Vanadium	31.48	mg/kg	31.48	mg/kg	M	3.4E-05	mg/kg-day	N/A	N/A	N/A
	Zinc	160.34	mg/kg	160.34	mg/kg	M	1.8E-04	mg/kg-day	N/A	N/A	N/A
Dermal	4,4'-DDE	0.37	mg/kg	0.37	mg/kg	M	1.5E-07	mg/kg-day	0.272	N/A	4.1E-08
	Aluminum	9402.50	mg/kg	9402.50	mg/kg	M	3.8E-04	mg/kg-day	N/A	N/A	N/A
	Arsenic	25.54	mg/kg	25.54	mg/kg	M	3.3E-06	mg/kg-day	1.425	mg/kg-day -1	4.7E-06
	Barium	170.78	mg/kg	170.78	mg/kg	M	6.9E-06	mg/kg-day	N/A	N/A	N/A
	Benzo(a)Pyrene	0.22	mg/kg	0.22	mg/kg	M	9.1E-08	mg/kg-day	N/A	mg/kg-day -1	N/A
	Benzo(b)Fluoranthen	0.69	mg/kg	0.69	mg/kg	M	2.8E-07	mg/kg-day	N/A	mg/kg-day -1	N/A
	Beryllium	0.66	mg/kg	0.66	mg/kg	M	2.7E-08	mg/kg-day	0.043	mg/kg-day -1	1.1E-09
	Cadmium	0.37	mg/kg	0.37	mg/kg	M	1.5E-08	mg/kg-day	N/A	N/A	N/A
	Iron	17687.50	mg/kg	17687.50	mg/kg	M	7.2E-04	mg/kg-day	N/A	N/A	N/A
	Manganese	178.40	mg/kg	178.40	mg/kg	M	7.2E-06	mg/kg-day	N/A	N/A	N/A
	Vanadium	31.48	mg/kg	31.48	mg/kg	M	1.3E-06	mg/kg-day	N/A	N/A	N/A
	Zinc	160.34	mg/kg	160.34	mg/kg	M	6.5E-06	mg/kg-day	N/A	N/A	N/A
										Total Risk Across All Exposure Routes/Pathways	8.3E-06

TABLE 8.8.RME
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
St. Juliens Creek - Burning Grounds (Site 5)

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 (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
Ingestion	4,4'-DDE	2.2	mg/kg	2.20	mg/kg	M	2.4E-06	mg/kg-day	3.40E-01	mg/kg-day -1	8.2E-07
	Aluminum	13247.4242	mg/kg	13247.42	mg/kg	M	1.5E-02	mg/kg-day	N/A	N/A	N/A
	Arsenic	111	mg/kg	111.00	mg/kg	M	1.2E-04	mg/kg-day	1.50E+00	mg/kg-day -1	1.8E-04
	Barium	1013.12829	mg/kg	1013.13	mg/kg	M	1.1E-03	mg/kg-day	N/A	N/A	N/A
	Benzo(a)Pyrene	0.42165561	mg/kg	0.42	mg/kg	M	4.6E-07	mg/kg-day	7.30E+00	mg/kg-day -1	3.4E-06
	Benzo(b)Fluoranthene	0.7	mg/kg	0.70	mg/kg	M	7.7E-07	mg/kg-day	7.30E-01	mg/kg-day -1	5.6E-07
	Beryllium	0.90114403	mg/kg	0.90	mg/kg	M	9.9E-07	mg/kg-day	4.30E+00	mg/kg-day -1	4.2E-06
	Cadmium	6	mg/kg	6.00	mg/kg	M	6.6E-06	mg/kg-day	N/A	N/A	N/A
	Iron	58914.731	mg/kg	58914.73	mg/kg	M	6.5E-02	mg/kg-day	N/A	N/A	N/A
	Manganese	550.450801	mg/kg	550.45	mg/kg	M	6.0E-04	mg/kg-day	N/A	N/A	N/A
	Vanadium	47.3195245	mg/kg	47.32	mg/kg	M	5.2E-05	mg/kg-day	N/A	N/A	N/A
	Zinc	5338.79424	mg/kg	5338.79	mg/kg	M	5.9E-03	mg/kg-day	N/A	N/A	N/A
Dermal	4,4'-DDE	2.2	mg/kg	2.20	mg/kg	M	3.2E-06	mg/kg-day	0.272	N/A	8.7E-07
	Aluminum	13247.4242	mg/kg	13247.42	mg/kg	M	1.9E-03	mg/kg-day	N/A	N/A	N/A
	Arsenic	111	mg/kg	111.00	mg/kg	M	7.7E-06	mg/kg-day	1.425	mg/kg-day -1	1.1E-05
	Barium	1013.12829	mg/kg	1013.13	mg/kg	M	1.5E-04	mg/kg-day	N/A	N/A	N/A
	Benzo(a)Pyrene	0.42165561	mg/kg	0.42	mg/kg	M	6.1E-07	mg/kg-day	N/A	mg/kg-day -1	N/A
	Benzo(b)Fluoranthene	0.7	mg/kg	0.70	mg/kg	M	1.0E-06	mg/kg-day	N/A	mg/kg-day -1	N/A
	Beryllium	0.90114403	mg/kg	0.90	mg/kg	M	1.3E-07	mg/kg-day	0.043	mg/kg-day -1	5.6E-09
	Cadmium	6	mg/kg	6.00	mg/kg	M	8.7E-07	mg/kg-day	N/A	N/A	N/A
	Iron	58914.731	mg/kg	58914.73	mg/kg	M	8.6E-03	mg/kg-day	N/A	N/A	N/A
	Manganese	550.450801	mg/kg	550.45	mg/kg	M	8.0E-05	mg/kg-day	N/A	N/A	N/A
	Vanadium	47.3195245	mg/kg	47.32	mg/kg	M	6.9E-06	mg/kg-day	N/A	N/A	N/A
	Zinc	5338.79424	mg/kg	5338.79	mg/kg	M	7.8E-04	mg/kg-day	N/A	N/A	N/A
										Total Risk Across All Exposure Routes/Pathways	2.0E-04

TABLE 8.8.CT
CALCULATION OF CANCER RISKS
CENTRAL TENDENCIES
St. Juliens Creek - Burning Grounds (Site 5)

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 (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
Ingestion	4,4'-DDE	0.37	mg/kg	0.37	mg/kg	M	4.0E-07	mg/kg-day	3.40E-01	mg/kg-day -1	1.4E-07
	Aluminum	9402.50	mg/kg	9402.50	mg/kg	M	1.0E-02	mg/kg-day	N/A	N/A	N/A
	Arsenic	25.54	mg/kg	25.54	mg/kg	M	2.8E-05	mg/kg-day	1.50E+00	mg/kg-day -1	4.2E-05
	Barium	170.78	mg/kg	170.78	mg/kg	M	1.9E-04	mg/kg-day	N/A	N/A	N/A
	Benzo(a)Pyrene	0.22	mg/kg	0.22	mg/kg	M	2.5E-07	mg/kg-day	7.30E+00	mg/kg-day -1	1.8E-06
	Benzo(b)Fluoranthen	0.69	mg/kg	0.69	mg/kg	M	7.5E-07	mg/kg-day	7.30E-01	mg/kg-day -1	5.5E-07
	Beryllium	0.66	mg/kg	0.66	mg/kg	M	7.2E-07	mg/kg-day	4.30E+00	mg/kg-day -1	3.1E-06
	Cadmium	0.37	mg/kg	0.37	mg/kg	M	4.1E-07	mg/kg-day	N/A	N/A	N/A
	Iron	17687.50	mg/kg	17687.50	mg/kg	M	1.9E-02	mg/kg-day	N/A	N/A	N/A
	Manganese	178.40	mg/kg	178.40	mg/kg	M	2.0E-04	mg/kg-day	N/A	N/A	N/A
	Vanadium	31.48	mg/kg	31.48	mg/kg	M	3.4E-05	mg/kg-day	N/A	N/A	N/A
	Zinc	160.34	mg/kg	160.34	mg/kg	M	1.8E-04	mg/kg-day	N/A	N/A	N/A
Dermal	4,4'-DDE	0.37	mg/kg	0.37	mg/kg	M	5.4E-07	mg/kg-day	0.272	N/A	1.5E-07
	Aluminum	9402.50	mg/kg	9402.50	mg/kg	M	1.4E-03	mg/kg-day	N/A	N/A	N/A
	Arsenic	25.54	mg/kg	25.54	mg/kg	M	1.8E-06	mg/kg-day	1.425	mg/kg-day -1	2.5E-06
	Barium	170.78	mg/kg	170.78	mg/kg	M	2.5E-05	mg/kg-day	N/A	N/A	N/A
	Benzo(a)Pyrene	0.22	mg/kg	0.22	mg/kg	M	3.3E-07	mg/kg-day	N/A	mg/kg-day -1	N/A
	Benzo(b)Fluoranthen	0.69	mg/kg	0.69	mg/kg	M	1.0E-06	mg/kg-day	N/A	mg/kg-day -1	N/A
	Beryllium	0.66	mg/kg	0.66	mg/kg	M	9.5E-08	mg/kg-day	0.043	mg/kg-day -1	4.1E-09
	Cadmium	0.37	mg/kg	0.37	mg/kg	M	5.4E-08	mg/kg-day	N/A	N/A	N/A
	Iron	17687.50	mg/kg	17687.50	mg/kg	M	2.6E-03	mg/kg-day	N/A	N/A	N/A
	Manganese	178.40	mg/kg	178.40	mg/kg	M	2.6E-05	mg/kg-day	N/A	N/A	N/A
	Vanadium	31.48	mg/kg	31.48	mg/kg	M	4.6E-06	mg/kg-day	N/A	N/A	N/A
	Zinc	160.34	mg/kg	160.34	mg/kg	M	2.3E-05	mg/kg-day	N/A	N/A	N/A
										Total Risk Across All Exposure Routes/Pathways	5.0E-05

TABLE 8.9.RME
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
St. Juliens Creek - Burning Grounds (Site 5)

Scenario Timeframe: Current
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 (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
Ingestion	4,4'-DDE	2.2	mg/kg	2.20	mg/kg	M	1.0E-06	mg/kg-day	3.40E-01	mg/kg-day -1	3.5E-07
	Aluminum	13247.4242	mg/kg	13247.42	mg/kg	M	6.2E-03	mg/kg-day	N/A	N/A	N/A
	Arsenic	111	mg/kg	111.00	mg/kg	M	5.2E-05	mg/kg-day	1.50E+00	mg/kg-day -1	7.8E-05
	Barium	1013.12829	mg/kg	1013.13	mg/kg	M	4.8E-04	mg/kg-day	N/A	N/A	N/A
	Benzo(a)Pyrene	0.42165561	mg/kg	0.42	mg/kg	M	2.0E-07	mg/kg-day	7.30E+00	mg/kg-day -1	1.4E-06
	Benzo(b)Fluoranthen	0.7	mg/kg	0.70	mg/kg	M	3.3E-07	mg/kg-day	7.30E-01	mg/kg-day -1	2.4E-07
	Beryllium	0.90114403	mg/kg	0.90	mg/kg	M	4.2E-07	mg/kg-day	4.30E+00	mg/kg-day -1	1.8E-06
	Cadmium	6	mg/kg	6.00	mg/kg	M	2.8E-06	mg/kg-day	N/A	N/A	N/A
	Iron	58914.731	mg/kg	58914.73	mg/kg	M	2.8E-02	mg/kg-day	N/A	N/A	N/A
	Manganese	550.450801	mg/kg	550.45	mg/kg	M	2.6E-04	mg/kg-day	N/A	N/A	N/A
	Vanadium	47.3195245	mg/kg	47.32	mg/kg	M	2.2E-05	mg/kg-day	N/A	N/A	N/A
	Zinc	5338.79424	mg/kg	5338.79	mg/kg	M	2.5E-03	mg/kg-day	N/A	N/A	N/A
Dermal	4,4'-DDE	2.2	mg/kg	2.20	mg/kg	M	6.0E-06	mg/kg-day	0.272	N/A	1.6E-06
	Aluminum	13247.4242	mg/kg	13247.42	mg/kg	M	3.6E-03	mg/kg-day	N/A	N/A	N/A
	Arsenic	111	mg/kg	111.00	mg/kg	M	9.7E-05	mg/kg-day	1.425	mg/kg-day -1	1.4E-04
	Barium	1013.12829	mg/kg	1013.13	mg/kg	M	2.8E-04	mg/kg-day	N/A	N/A	N/A
	Benzo(a)Pyrene	0.42165561	mg/kg	0.42	mg/kg	M	1.1E-06	mg/kg-day	N/A	mg/kg-day -1	N/A
	Benzo(b)Fluoranthen	0.7	mg/kg	0.70	mg/kg	M	1.9E-06	mg/kg-day	N/A	mg/kg-day -1	N/A
	Beryllium	0.90114403	mg/kg	0.90	mg/kg	M	3.6E-08	mg/kg-day	0.043	mg/kg-day -1	1.6E-09
	Cadmium	6	mg/kg	6.00	mg/kg	M	2.4E-07	mg/kg-day	N/A	N/A	N/A
	Iron	58914.731	mg/kg	58914.73	mg/kg	M	2.4E-03	mg/kg-day	N/A	N/A	N/A
	Manganese	550.450801	mg/kg	550.45	mg/kg	M	2.2E-05	mg/kg-day	N/A	N/A	N/A
	Vanadium	47.3195245	mg/kg	47.32	mg/kg	M	1.9E-06	mg/kg-day	N/A	N/A	N/A
	Zinc	5338.79424	mg/kg	5338.79	mg/kg	M	2.2E-04	mg/kg-day	N/A	N/A	N/A
										Total Risk Across All Exposure Routes/Pathways	2.2E-04

TABLE 8.9.CT
CALCULATION OF CANCER RISKS
CENTRAL TENDENCIES
St. Juliens Creek - Burning Grounds (Site 5)

Scenario Timeframe: Current
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 (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
Ingestion	4,4'-DDE	0.37	mg/kg	0.37	mg/kg	M	1.7E-07	mg/kg-day	3.40E-01	mg/kg-day -1	5.9E-08
	Aluminum	9402.50	mg/kg	9402.50	mg/kg	M	4.4E-03	mg/kg-day	N/A	N/A	N/A
	Arsenic	25.54	mg/kg	25.54	mg/kg	M	1.2E-05	mg/kg-day	1.50E+00	mg/kg-day -1	1.8E-05
	Barium	170.78	mg/kg	170.78	mg/kg	M	8.0E-05	mg/kg-day	N/A	N/A	N/A
	Benzo(a)Pyrene	0.22	mg/kg	0.22	mg/kg	M	1.1E-07	mg/kg-day	7.30E+00	mg/kg-day -1	7.7E-07
	Benzo(b)Fluoranthen	0.69	mg/kg	0.69	mg/kg	M	3.2E-07	mg/kg-day	7.30E-01	mg/kg-day -1	2.4E-07
	Beryllium	0.66	mg/kg	0.66	mg/kg	M	3.1E-07	mg/kg-day	4.30E+00	mg/kg-day -1	1.3E-06
	Cadmium	0.37	mg/kg	0.37	mg/kg	M	1.8E-07	mg/kg-day	N/A	N/A	N/A
	Iron	17687.50	mg/kg	17687.50	mg/kg	M	8.3E-03	mg/kg-day	N/A	N/A	N/A
	Manganese	178.40	mg/kg	178.40	mg/kg	M	8.4E-05	mg/kg-day	N/A	N/A	N/A
	Vanadium	31.48	mg/kg	31.48	mg/kg	M	1.5E-05	mg/kg-day	N/A	N/A	N/A
	Zinc	160.34	mg/kg	160.34	mg/kg	M	7.5E-05	mg/kg-day	N/A	N/A	N/A
Dermal	4,4'-DDE	0.37	mg/kg	0.37	mg/kg	M	1.0E-06	mg/kg-day	0.272	N/A	2.7E-07
	Aluminum	9402.50	mg/kg	9402.50	mg/kg	M	2.6E-03	mg/kg-day	N/A	N/A	N/A
	Arsenic	25.54	mg/kg	25.54	mg/kg	M	2.2E-05	mg/kg-day	1.425	mg/kg-day -1	3.2E-05
	Barium	170.78	mg/kg	170.78	mg/kg	M	4.7E-05	mg/kg-day	N/A	N/A	N/A
	Benzo(a)Pyrene	0.22	mg/kg	0.22	mg/kg	M	6.1E-07	mg/kg-day	N/A	mg/kg-day -1	N/A
	Benzo(b)Fluoranthen	0.69	mg/kg	0.69	mg/kg	M	1.9E-06	mg/kg-day	N/A	mg/kg-day -1	N/A
	Beryllium	0.66	mg/kg	0.66	mg/kg	M	2.7E-08	mg/kg-day	0.043	mg/kg-day -1	1.1E-09
	Cadmium	0.37	mg/kg	0.37	mg/kg	M	1.5E-08	mg/kg-day	N/A	N/A	N/A
	Iron	17687.50	mg/kg	17687.50	mg/kg	M	7.2E-04	mg/kg-day	N/A	N/A	N/A
	Manganese	178.40	mg/kg	178.40	mg/kg	M	7.2E-06	mg/kg-day	N/A	N/A	N/A
	Vanadium	31.48	mg/kg	31.48	mg/kg	M	1.3E-06	mg/kg-day	N/A	N/A	N/A
	Zinc	160.34	mg/kg	160.34	mg/kg	M	6.5E-06	mg/kg-day	N/A	N/A	N/A
										Total Risk Across All Exposure Routes/Pathways	5.2E-05

TABLE 8.10.RME
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
St. Juliens Creek - Burning Grounds (Site 5)

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 (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
Ingestion	4,4'-DDE	2.2	mg/kg	2.20	mg/kg	M	3.8E-07	mg/kg-day	3.40E-01	mg/kg-day -1	1.3E-07
	Aluminum	13247.4242	mg/kg	13247.42	mg/kg	M	2.3E-03	mg/kg-day	N/A	N/A	N/A
	Arsenic	111	mg/kg	111.00	mg/kg	M	1.9E-05	mg/kg-day	1.50E+00	mg/kg-day -1	2.9E-05
	Barium	1013.12829	mg/kg	1013.13	mg/kg	M	1.8E-04	mg/kg-day	N/A	N/A	N/A
	Benzo(a)Pyrene	0.42165561	mg/kg	0.42	mg/kg	M	7.4E-08	mg/kg-day	7.30E+00	mg/kg-day -1	5.4E-07
	Benzo(b)Fluoranthene	0.7	mg/kg	0.70	mg/kg	M	1.2E-07	mg/kg-day	7.30E-01	mg/kg-day -1	8.9E-08
	Beryllium	0.90114403	mg/kg	0.90	mg/kg	M	1.6E-07	mg/kg-day	4.30E+00	mg/kg-day -1	6.8E-07
	Cadmium	6	mg/kg	6.00	mg/kg	M	1.0E-06	mg/kg-day	N/A	N/A	N/A
	Iron	58914.731	mg/kg	58914.73	mg/kg	M	1.0E-02	mg/kg-day	N/A	N/A	N/A
	Manganese	550.450801	mg/kg	550.45	mg/kg	M	9.6E-05	mg/kg-day	N/A	N/A	N/A
	Vanadium	47.3195245	mg/kg	47.32	mg/kg	M	8.3E-06	mg/kg-day	N/A	N/A	N/A
	Zinc	5338.79424	mg/kg	5338.79	mg/kg	M	9.3E-04	mg/kg-day	N/A	N/A	N/A
Dermal	4,4'-DDE	2.2	mg/kg	2.20	mg/kg	M	4.1E-06	mg/kg-day	0.272	N/A	1.1E-06
	Aluminum	13247.4242	mg/kg	13247.42	mg/kg	M	2.5E-03	mg/kg-day	N/A	N/A	N/A
	Arsenic	111	mg/kg	111.00	mg/kg	M	6.6E-05	mg/kg-day	1.425	mg/kg-day -1	9.4E-05
	Barium	1013.12829	mg/kg	1013.13	mg/kg	M	1.9E-04	mg/kg-day	N/A	N/A	N/A
	Benzo(a)Pyrene	0.42165561	mg/kg	0.42	mg/kg	M	7.8E-07	mg/kg-day	N/A	mg/kg-day -1	N/A
	Benzo(b)Fluoranthene	0.7	mg/kg	0.70	mg/kg	M	1.3E-06	mg/kg-day	N/A	mg/kg-day -1	N/A
	Beryllium	0.90114403	mg/kg	0.90	mg/kg	M	1.7E-07	mg/kg-day	0.043	mg/kg-day -1	7.2E-09
	Cadmium	6	mg/kg	6.00	mg/kg	M	1.1E-06	mg/kg-day	N/A	N/A	N/A
	Iron	58914.731	mg/kg	58914.73	mg/kg	M	1.1E-02	mg/kg-day	N/A	N/A	N/A
	Manganese	550.450801	mg/kg	550.45	mg/kg	M	1.0E-04	mg/kg-day	N/A	N/A	N/A
	Vanadium	47.3195245	mg/kg	47.32	mg/kg	M	8.8E-06	mg/kg-day	N/A	N/A	N/A
	Zinc	5338.79424	mg/kg	5338.79	mg/kg	M	9.9E-04	mg/kg-day	N/A	N/A	N/A
										Total Risk Across All Exposure Routes/Pathways	1.3E-04

TABLE 8.10.CT
CALCULATION OF CANCER RISKS
CENTRAL TENDENCIES
St. Juliens Creek - Burning Grounds (Site 5)

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 (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
Ingestion	4,4'-DDE	0.37	mg/kg	0.37	mg/kg	M	6.4E-08	mg/kg-day	3.40E-01	mg/kg-day -1	2.2E-08
	Aluminum	9402.50	mg/kg	9402.50	mg/kg	M	1.6E-03	mg/kg-day	N/A	N/A	N/A
	Arsenic	25.54	mg/kg	25.54	mg/kg	M	4.5E-06	mg/kg-day	1.50E+00	mg/kg-day -1	6.7E-06
	Barium	170.78	mg/kg	170.78	mg/kg	M	3.0E-05	mg/kg-day	N/A	N/A	N/A
	Benzo(a)Pyrene	0.22	mg/kg	0.22	mg/kg	M	3.9E-08	mg/kg-day	7.30E+00	mg/kg-day -1	2.9E-07
	Benzo(b)Fluoranthen	0.69	mg/kg	0.69	mg/kg	M	1.2E-07	mg/kg-day	7.30E-01	mg/kg-day -1	8.8E-08
	Beryllium	0.66	mg/kg	0.66	mg/kg	M	1.1E-07	mg/kg-day	4.30E+00	mg/kg-day -1	4.9E-07
	Cadmium	0.37	mg/kg	0.37	mg/kg	M	6.5E-08	mg/kg-day	N/A	N/A	N/A
	Iron	17687.50	mg/kg	17687.50	mg/kg	M	3.1E-03	mg/kg-day	N/A	N/A	N/A
	Manganese	178.40	mg/kg	178.40	mg/kg	M	3.1E-05	mg/kg-day	N/A	N/A	N/A
	Vanadium	31.48	mg/kg	31.48	mg/kg	M	5.5E-06	mg/kg-day	N/A	N/A	N/A
	Zinc	160.34	mg/kg	160.34	mg/kg	M	2.8E-05	mg/kg-day	N/A	N/A	N/A
Dermal	4,4'-DDE	0.37	mg/kg	0.37	mg/kg	M	6.8E-07	mg/kg-day	0.272	N/A	1.9E-07
	Aluminum	9402.50	mg/kg	9402.50	mg/kg	M	1.7E-03	mg/kg-day	N/A	N/A	N/A
	Arsenic	25.54	mg/kg	25.54	mg/kg	M	1.5E-05	mg/kg-day	1.425	mg/kg-day -1	2.2E-05
	Barium	170.78	mg/kg	170.78	mg/kg	M	3.2E-05	mg/kg-day	N/A	N/A	N/A
	Benzo(a)Pyrene	0.22	mg/kg	0.22	mg/kg	M	4.2E-07	mg/kg-day	N/A	mg/kg-day -1	N/A
	Benzo(b)Fluoranthen	0.69	mg/kg	0.69	mg/kg	M	1.3E-06	mg/kg-day	N/A	mg/kg-day -1	N/A
	Beryllium	0.66	mg/kg	0.66	mg/kg	M	1.2E-07	mg/kg-day	0.043	mg/kg-day -1	5.2E-09
	Cadmium	0.37	mg/kg	0.37	mg/kg	M	6.9E-08	mg/kg-day	N/A	N/A	N/A
	Iron	17687.50	mg/kg	17687.50	mg/kg	M	3.3E-03	mg/kg-day	N/A	N/A	N/A
	Manganese	178.40	mg/kg	178.40	mg/kg	M	3.3E-05	mg/kg-day	N/A	N/A	N/A
	Vanadium	31.48	mg/kg	31.48	mg/kg	M	5.8E-06	mg/kg-day	N/A	N/A	N/A
	Zinc	160.34	mg/kg	160.34	mg/kg	M	3.0E-05	mg/kg-day	N/A	N/A	N/A
										Total Risk Across All Exposure Routes/Pathways	2.9E-05

Site 5

Surface Soil to Groundwater

TABLE 2.2
OCCURRENCE, DISTRIBUTION AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN
St. Juliens Creek - Burning Grounds (Site 5)

Scenario Timeframe: Future
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)
540590	1,2-Dichloroethene (total)	1	J	1	J	ug/kg	SS08	1/8	10-11	1	NA	NA	NA	NA	NO	NTX
121142	2,4-Dinitrotoluene	180	J	3200		ug/kg	SS03	4/8	330-2000	3200	NA	400	NA	NA	YES	ASL
78933	2-Butanone	28		210		ug/kg	SS06	1/8	10-11	210	NA	NA	NA	NA	NO	NTX
72548	4,4'-DDD	9		310	J	ug/kg	SS09	5/8	3.3-37	310	NA	NA	NA	NA	NO	NTX
72559	4,4'-DDE	3.8	J	2200		ug/kg	SS09	7/8	3.3-370	2200	NA	500	NA	NA	YES	ASL
50293	4,4'-DDT	13	J	1200		ug/kg	SS09	6/8	3.3-370	1200	NA	1000	NA	NA	YES	ASL
83329	Acenaphthene	41	J	41	J	ug/kg	SS02	4/8	330-2000	41	NA	NA	NA	NA	NO	NTX
67641	Acetone	11	J	28		ug/kg	SS06	5/8	10-11	28	NA	NA	NA	NA	NO	NTX
319846	alpha-BHC	3.5		3.5		ug/kg	SS08	1/8	1.7-19	3.5	NA	0.4	NA	NA	YES	ASL
7429905	Aluminum	4760		20200		mg/kg	SS03	8/8	6.88-9.92	20200	NA	NA	NA	NA	NO	NTX
120127	Anthracene	49	J	54	J	ug/kg	SS04	2/8	330-2000	54	NA	NA	NA	NA	NO	NTX
7440360	Antimony	0.51	L	1.1	L	mg/kg	SS05	5/8	0.31-0.4	1.1	NA	NA	NA	NA	NO	NTX
7440382	Arsenic	2	K	111	K	mg/kg	SS09	8/8	0.47-0.68	111	NA	15	NA	NA	YES	ASL
7440393	Barium	35	J	1040		mg/kg	SS07	8/8	0.31-0.4	1040	NA	32	NA	NA	YES	ASL
56553	Benzo(a)Anthracene	37	J	810	J	ug/kg	SS03	8/8	330-2000	810	NA	700	NA	NA	YES	ASL
50328	Benzo(a)Pyrene	73	J	460	J	ug/kg	SS03	7/8	330-2000	460	NA	NA	NA	NA	NO	NTX
205992	Benzo(b)Fluoranthene	300	J	1900	J	ug/kg	SS03	8/8	330-2000	1900	NA	NA	NA	NA	NO	NTX
207089	Benzo(k)Fluoranthene	76	J	700	J	ug/kg	SS03	7/8	330-2000	700	NA	NA	NA	NA	NO	NTX
7440417	Beryllium	0.38		1.2		mg/kg	SS03	8/8	0.16-0.23	1.2	NA	NA	NA	NA	NO	NTX
7440439	Cadmium	0.24		6		mg/kg	SS06	5/8	0.08-0.11	6	NA	NA	NA	NA	NO	NTX
86748	Carbazole	40	J	61	J	ug/kg	SS06	1/8	330-2000	61	NA	NA	NA	NA	NO	NTX
218019	Chrysene	56	J	1100	J	ug/kg	SS03	8/8	330-2000	1100	NA	700	NA	NA	YES	ASL
7440484	Cobalt	2.5		17.7		mg/kg	SS03	8/8	1.25-1.8	17.7	NA	NA	NA	NA	NO	NTX
7440508	Copper	17.1		6470		mg/kg	SS07	8/8	0.94-1.35	6470	NA	NA	NA	NA	NO	NTX
57125	Cyanide	0.6	J	1.45	J	ug/kg	SS03	2/8	0.49-0.57	1.45	NA	NA	NA	NA	NO	NTX
84742	Di-n-Butylphthalate	38	J	4700		ug/kg	SS03	6/8	330-2000	4700	NA	NA	NA	NA	NO	NTX
53703	Dibenz(a,h)Anthracene	61	J	61	J	ug/kg	SS04	1/8	330-2000	61	NA	NA	NA	NA	NO	NTX
60571	Dieldrin	5		6.8		ug/kg	SS08	2/8	3.3-37	6.8	NA	1	NA	NA	YES	ASL
206440	Fluoranthene	63	J	790		ug/kg	SS06	8/8	330-2000	790	NA	NA	NA	NA	NO	NTX
193395	Indeno(1,2,3-cd)Pyrene	35	J	540	J	ug/kg	SS03	8/8	330-2000	540	NA	NA	NA	NA	NO	NTX
7439896	Iron	9900		120000		mg/kg	SS02	8/8	2.66-3.83	120000	NA	NA	NA	NA	NO	NTX
7439921	Lead	33.5	J	7210	J	mg/kg	SS07	8/8	0.16-0.23	899	NA	NA	NA	NA	NO	NTX
7439965	Manganese	63.4	K	852		mg/kg	SS05	8/8	0.31-0.45	852	NA	NA	NA	NA	NO	NTX
7439976	Mercury	0.08	L	0.98	L	mg/kg	SS05	8/8	0.04-0.06	0.98	NA	NA	NA	NA	NO	NTX
75092	Methylene Chloride	120		120		ug/kg	SS07	1/8	10-11	120	NA	10	NA	NA	YES	ASL
86306	N-Nitrosodiphenylamine	120	J	530	J	ug/kg	SS03	2/8	330-2000	530	NA	200	NA	NA	YES	ASL
7440020	Nickel	2.6	J	91.5		mg/kg	SS03	7/8	1.09-1.58	91.5	NA	21	NA	NA	YES	ASL
129000	Pyrene	81	J	1200		ug/kg	SS09	8/8	330-2000	1200	NA	NA	NA	NA	NO	NTX
7440224	Silver	0.76	J	3.5		mg/kg	SS08	1/8	0.16-0.23	3.5	NA	NA	NA	NA	NO	NTX
127184	Tetrachloroethene	1	J	4	J	ug/kg	SS09	3/8	10-11	4	NA	NA	NA	NA	NO	NTX
108883	Toluene	2	J	5	J	ug/kg	SS09	4/8	10-11	5	NA	NA	NA	NA	NO	NTX
1330207	Total Xylenes	3	J	3	J	ug/kg	SS05	1/8	10-11	3	NA	NA	NA	NA	NO	NTX
7440622	Vanadium	12.7		55.7		mg/kg	SS02	8/8	1.41-2.03	55.7	NA	NA	NA	NA	NO	NTX
7440666	Zinc	77.8		8490	L	mg/kg	SS07	8/8	0.78-1.13	8490	NA	NA	NA	NA	NO	NTX

(1) Minimum and maximum detected concentrations.

(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. 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 5

Surface Soil to Air

TABLE 2.3
OCCURRENCE, DISTRIBUTION AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN
St. Juliens Creek - Burning Grounds (Site 5)

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)
540590	1,2-Dichloroethene (total)	1	J	1	J	ug/kg	SS08	1/8	10-11	1	NA	NA	NA	NA	NO	NTX
121142	2,4-Dinitrotoluene	180	J	3200		ug/kg	SS03	4/8	330-2000	3200	NA	NA	NA	NA	NO	NTX
78933	2-Butanone	28		210		ug/kg	SS06	1/8	10-11	210	NA	NA	NA	NA	NO	NTX
72548	4,4'-DDD	9		310	J	ug/kg	SS09	5/8	3.3-37	310	NA	NA	NA	NA	NO	NTX
72559	4,4'-DDE	3.8	J	2200		ug/kg	SS09	7/8	3.3-370	2200	NA	NA	NA	NA	NO	NTX
50293	4,4'-DDT	13	J	1200		ug/kg	SS09	6/8	3.3-370	1200	NA	NA	NA	NA	NO	NTX
83329	Acenaphthene	41	J	41	J	ug/kg	SS02	4/8	330-2000	41	NA	NA	NA	NA	NO	NTX
67641	Acetone	11	J	28		ug/kg	SS06	5/8	10-11	28	NA	NA	NA	NA	NO	NTX
319846	alpha-BHC	3.5		3.5		ug/kg	SS06	1/8	1.7-19	3.5	NA	NA	NA	NA	NO	NTX
7429905	Aluminum	4760		20200		mg/kg	SS03	8/8	6.88-9.92	20200	NA	NA	NA	NA	NO	NTX
120127	Anthracene	49	J	54	J	ug/kg	SS04	2/8	330-2000	54	NA	NA	NA	NA	NO	NTX
7440360	Antimony	0.51	L	1.1	L	mg/kg	SS05	5/8	0.31-0.4	1.1	NA	NA	NA	NA	NO	NTX
7440382	Arsenic	2	K	111	K	mg/kg	SS09	8/8	0.47-0.68	111	NA	NA	NA	NA	NO	NTX
7440393	Barium	35	J	1040		mg/kg	SS07	8/8	0.31-0.4	1040	NA	NA	NA	NA	NO	NTX
56553	Benzo(a)Anthracene	37	J	810	J	ug/kg	SS03	6/8	330-2000	810	NA	NA	NA	NA	NO	NTX
50328	Benzo(a)Pyrene	73	J	480	J	ug/kg	SS03	7/8	330-2000	480	NA	NA	NA	NA	NO	NTX
205992	Benzo(b)Fluoranthene	300	J	1900	J	ug/kg	SS03	8/8	330-2000	1900	NA	NA	NA	NA	NO	NTX
207089	Benzo(k)Fluoranthene	76	J	700	J	ug/kg	SS03	7/8	330-2000	700	NA	NA	NA	NA	NO	NTX
7440417	Beryllium	0.38		1.2		mg/kg	SS03	8/8	0.16-0.23	1.2	NA	NA	NA	NA	NO	NTX
7440439	Cadmium	0.24		6		mg/kg	SS06	5/8	0.08-0.11	6	NA	NA	NA	NA	NO	NTX
86748	Carbazole	40	J	61	J	ug/kg	SS06	1/8	330-2000	61	NA	NA	NA	NA	NO	NTX
218019	Chrysene	56	J	1100	J	ug/kg	SS03	8/8	330-2000	1100	NA	NA	NA	NA	NO	NTX
7440484	Cobalt	2.5		17.7		mg/kg	SS03	8/8	1.25-1.8	17.7	NA	NA	NA	NA	NO	NTX
7440508	Copper	17.1		6470		mg/kg	SS07	8/8	0.94-1.35	6470	NA	NA	NA	NA	NO	NTX
57125	Cyanide	0.6	J	1.45	J	ug/kg	SS03	2/8	0.49-0.57	1.45	NA	NA	NA	NA	NO	NTX
84742	Di-n-Butylphthalate	38	J	4700		ug/kg	SS03	5/8	330-2000	4700	NA	NA	NA	NA	NO	NTX
53703	Dibenz(a,h)Anthracene	61	J	61	J	ug/kg	SS04	1/8	330-2000	61	NA	NA	NA	NA	NO	NTX
60571	Dieldrin	5		6.8		ug/kg	SS08	2/8	3.3-37	6.8	NA	NA	NA	NA	NO	NTX
206440	Fluoranthene	63	J	790		ug/kg	SS06	8/8	330-2000	790	NA	NA	NA	NA	NO	NTX
193395	Indeno(1,2,3-cd)Pyrene	35	J	540	J	ug/kg	SS03	8/8	330-2000	540	NA	NA	NA	NA	NO	NTX
7439896	Iron	9900		120000		mg/kg	SS02	8/8	2.66-3.83	120000	NA	NA	NA	NA	NO	NTX
7439921	Lead	33.5	J	7210	J	mg/kg	SS07	8/8	0.16-0.23	899	NA	NA	NA	NA	NO	NTX
7439965	Manganese	63.4	K	852		mg/kg	SS05	8/8	0.31-0.45	852	NA	NA	NA	NA	NO	NTX
7439976	Mercury	0.08	L	0.98	L	mg/kg	SS05	8/8	0.04-0.06	0.98	NA	NA	NA	NA	NO	NTX
75092	Methylene Chloride	120		120		ug/kg	SS07	1/8	10-11	120	NA	NA	NA	NA	NO	NTX
86306	N-Nitrosodiphenylamine	120	J	530	J	ug/kg	SS03	2/8	330-2000	530	NA	NA	NA	NA	NO	NTX
7440020	Nickel	2.6	J	91.5		mg/kg	SS03	7/8	1.09-1.58	91.5	NA	NA	NA	NA	NO	NTX
129000	Pyrene	81	J	1200		ug/kg	SS09	8/8	330-2000	1200	NA	NA	NA	NA	NO	NTX
7440224	Silver	0.76	J	3.5		mg/kg	SS08	1/8	0.16-0.23	3.5	NA	NA	NA	NA	NO	NTX
127184	Tetrachloroethene	1	J	4	J	ug/kg	SS09	3/8	10-11	4	NA	NA	NA	NA	NO	NTX
108883	Toluene	2	J	5	J	ug/kg	SS09	4/8	10-11	5	NA	NA	NA	NA	NO	NTX
1330207	Total Xylenes	3	J	3	J	ug/kg	SS05	1/8	10-11	3	NA	NA	NA	NA	NO	NTX
7440622	Vanadium	12.7		55.7		mg/kg	SS02	8/8	1.41-2.03	55.7	NA	NA	NA	NA	NO	NTX
7440666	Zinc	77.8		8490	L	mg/kg	SS07	8/8	0.78-1.13	8490	NA	NA	NA	NA	NO	NTX

(1) Minimum and maximum detected concentrations.

(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.
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 (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 5

Subsurface Soil Current/Future

TABLE 2.1
OCCURRENCE, DISTRIBUTION AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN
St. Juliens Creek -Burning Grounds (Site 5)

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	21		89		ug/kg	SB07	2/14	12-21	89	NA	4700000	NA	NA	NO	BSL
72548	4,4'-DDD	2.6		110		ug/kg	SB15	3/14	3.4-53	110	NA	2700	NA	NA	NO	BSL
72559	4,4'-DDE	5.9		310		ug/kg	SB05	3/14	3.4-53	310	NA	1900	NA	NA	NO	BSL
50293	4,4'-DDT	3.7		620		ug/kg	SB05	3/14	3.4-53	620	NA	1900	NA	NA	NO	BSL
67641	Acetone	11		170		ug/kg	SB11	3/14	12-18	170	NA	780000	NA	NA	NO	BSL
7429905	Aluminum	547	J	27900	J	mg/kg	SB02	14/14	7.28-15.74	27900	NA	7800	NA	NA	YES	ASL
120127	Anthracene	44	J	170	J	ug/kg	SB03	2/14	340-690	170	NA	2300000	NA	NA	NO	BSL
7440360	Antimony	0.64	L	2.3	L	mg/kg	SB09	4/14	0.36-0.72	2.3	NA	3.1	NA	NA	NO	BSL
7440382	Arsenic	0.93		18.6		mg/kg	SB02	10/14	0.5-1.07	18.6	NA	2.3	NA	NA	YES	ASL
7440393	Barium	6.9		103		mg/kg	SB07	9/14	0.33-0.72	103	NA	550	NA	NA	NO	BSL
56553	Benzo(a)Anthracene	65		490		ug/kg	SB03	5/14	340-690	490	NA	880	NA	NA	NO	BSL
50328	Benzo(a)Pyrene	60	J	270	J	ug/kg	SB03	6/14	340-690	270	NA	88	NA	NA	YES	ASL
205992	Benzo(b)Fluoranthene	42	J	630	J	ug/kg	SB03	6/14	340-690	630	NA	880	NA	NA	NO	BSL
207089	Benzo(k)Fluoranthene	120	J	180	J	ug/kg	SB07	4/14	340-690	180	NA	8800	NA	NA	NO	BSL
7440417	Beryllium	0.36	J	1.5	J	mg/kg	SB07	5/14	0.17-0.36	1.5	NA	0.15	NA	NA	YES	ASL
75150	Carbon Disulfide	2	J	17	J	ug/kg	SB07	2/14	12-21	17	NA	780000	NA	NA	NO	BSL
218019	Chrysene	76	J	450	J	ug/kg	SB03	7/14	340-690	450	NA	88000	NA	NA	NO	BSL
7440484	Cobalt	2		36		mg/kg	SB03	9/14	1.32-2.86	36	NA	470	NA	NA	NO	BSL
7440508	Copper	9.1		58.3		mg/kg	SB02	6/14	0.99-2.15	58.3	NA	27000	NA	NA	NO	BSL
206440	Fluoranthene	42		1500		ug/kg	SB03	9/14	340-690	1500	NA	310000	NA	NA	NO	BSL
193395	Indeno(1,2,3-cd)Pyrene	120	J	170	J	ug/kg	SB07	4/14	340-690	170	NA	880	NA	NA	NO	BSL
7439896	Iron	767		58000		mg/kg	SB08	14/14	2.81-6.08	58000	NA	2300	NA	NA	YES	ASL
7439965	Manganese	6.6	J	269	J	mg/kg	SB07	14/14	0.33-0.72	269	NA	180	NA	NA	YES	ASL
7439976	Mercury	0.18		0.69		mg/kg	SB07	4/14	0.05-0.09	0.69	NA	2.3	NA	NA	NO	BSL
75092	Methylene Chloride	14	J	14	J	ug/kg	SB05	1/14	12-21	14	NA	85000	NA	NA	NO	BSL
91203	Naphthalene	63	J	63	J	ug/kg	SB03	1/14	340-690	63	NA	310000	NA	NA	NO	BSL
7440020	Nickel	7.5		65.6		mg/kg	SB02	3/14	1.16-2.25	65.6	NA	160	NA	NA	NO	BSL
129000	Pyrene	42		980		ug/kg	SB03	7/14	340-690	980	NA	230000	NA	NA	NO	BSL
7440224	Silver	0.23	L	0.96	L	mg/kg	SB02	8/14	0.17-0.36	0.96	NA	39	NA	NA	NO	BSL
127184	Tetrachloroethene	2	J	3	J	ug/kg	SB08	2/14	12-21	3	NA	12000	NA	NA	NO	BSL
7440622	Vanadium	1.6		75.2		mg/kg	SB08	14/14	1.49-3.22	75.2	NA	55	NA	NA	YES	ASL
7440666	Zinc	63.3		310		mg/kg	SB07	5/14	0.83-1.79	310	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, a 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 (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 3.4
MEDIUM-SPECIFIC EXPOSURE POINT CONCENTRATION SUMMARY
St. Juliens Creek - Burning Grounds (Site 5)

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	8642.31	N/A	27900	J	mg/kg	27900.00	Max	(1)	8642.31	Mean	(1)
Arsenic	mg/kg	5.08	N/A	18.6		mg/kg	18.60	Max	(1)	5.08	Mean	(1)
Benzo(a)Pyrene	ug/kg	180.89	N/A	270	J	mg/kg	0.27	Max	(1)	0.18	Mean	(1)
Beryllium	mg/kg	0.42	N/A	1.5	J	mg/kg	1.50	Max	(1)	0.42	Mean	(1)
Iron	ug/kg	15773.75	N/A	58000	J	mg/kg	58.00	Max	(1)	15.77	Mean	(1)
Manganese	ug/kg	97.97	N/A	269	J	mg/kg	0.27	Max	(1)	0.10	Mean	(1)
Vanadium	mg/kg	19.735313	N/A	75.2		mg/kg	75.20	Max	(1)	19.74	Mean	(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 G of this report, exposure point concentrations for this media will consist of the maximum detected concentration and the mean.

TABLE 4.12

VALUES USED FOR DAILY INTAKE CALCULATIONS

St. Juliens Creek - Burning Grounds (Site 5)

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 - Burning Grounds (Site 5)

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
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	100	IRIS	11/17/97
Manganese	Chronic	2.3E-02	mg/kg/day	1.00	2E-02	mg/kg/day	NOAEL	2	IRIS	11/17/97
Vanadium	Chronic	7E-03	mg/kg/day	0.02	1E-04	mg/kg/day	NOAEL	100	HEAST	07/00/97

N/A = Not Applicable
RBC = *Risk-based Concentration Table*
IRIS = Integrated Risk Information System
HEAST = Health Effects Assessment Summary Tables

TABLE 6.4
CANCER TOXICITY DATA -- ORAL/DERMAL
St. Juliens Creek - Burning Grounds (Site 5)

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
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

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 - Burning Grounds (Site 5)

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	27900	mg/kg	27900.00	mg/kg	M	1.3E-01	mg/kg-day	1.0E+00	mg/kg/day	N/A	N/A	1.3E-01
	Arsenic	18.6	mg/kg	18.60	mg/kg	M	8.7E-05	mg/kg-day	3.0E-04	mg/kg/day	N/A	N/A	2.9E-01
	Benzo(a)Pyrene	0.27	mg/kg	0.27	mg/kg	M	1.3E-06	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Beryllium	1.5	mg/kg	1.50	mg/kg	M	7.0E-06	mg/kg-day	5.0E-03	mg/kg/day	N/A	N/A	1.4E-03
	Iron	58000	mg/kg	58000.00	mg/kg	M	2.7E-01	mg/kg-day	3.0E-01	mg/kg/day	N/A	N/A	9.1E-01
	Manganese	269	mg/kg	269.00	mg/kg	M	1.3E-03	mg/kg-day	2.3E-02	mg/kg/day	N/A	N/A	5.5E-02
	Vanadium	75.2	mg/kg	75.20	mg/kg	M	3.5E-04	mg/kg-day	7.0E-03	mg/kg/day	N/A	N/A	5.0E-02
Dermal	Aluminum	27900	mg/kg	27900.00	mg/kg	M	1.4E-02	mg/kg-day	2.7E-01	mg/kg/day	N/A	N/A	5.3E-02
	Arsenic	18.6	mg/kg	18.60	mg/kg	M	3.1E-05	mg/kg-day	2.9E-04	mg/kg/day	N/A	N/A	1.1E-01
	Benzo(a)Pyrene	0.27	mg/kg	0.27	mg/kg	M	1.4E-06	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Beryllium	1.5	mg/kg	1.50	mg/kg	M	7.8E-07	mg/kg-day	5.0E-05	mg/kg/day	N/A	N/A	1.6E-02
	Iron	58000	mg/kg	58000.00	mg/kg	M	3.0E-02	mg/kg-day	1.5E-02	mg/kg/day	N/A	N/A	2.0E+00
	Manganese	269	mg/kg	269.00	mg/kg	M	1.4E-04	mg/kg-day	2.3E-02	mg/kg/day	N/A	N/A	6.0E-03
	Vanadium	75.2	mg/kg	75.20	mg/kg	M	3.9E-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	3.9E+00

TABLE 7.12.CT
CALCULATION OF NON-CANCER HAZARDS
CENTRAL TENDENCIES
St. Juliens Creek - Burning Grounds (Site 5)

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	8642.3125	mg/kg	8642.31	mg/kg	M	4.0E-02	mg/kg-day	1.0E+00	mg/kg/day	N/A	N/A	4.0E-02
	Arsenic	5.07625	mg/kg	5.08	mg/kg	M	2.4E-05	mg/kg-day	3.0E-04	mg/kg/day	N/A	N/A	7.9E-02
	Benzo(a)Pyrene	180.888235	mg/kg	180.89	mg/kg	M	8.5E-04	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Beryllium	0.4209375	mg/kg	0.42	mg/kg	M	2.0E-06	mg/kg-day	5.0E-03	mg/kg/day	N/A	N/A	3.9E-04
	Iron	15773.75	mg/kg	15773.75	mg/kg	M	7.4E-02	mg/kg-day	3.0E-01	mg/kg/day	N/A	N/A	2.5E-01
	Manganese	97.96875	mg/kg	97.97	mg/kg	M	4.6E-04	mg/kg-day	2.3E-02	mg/kg/day	N/A	N/A	2.0E-02
	Vanadium	19.7353125	mg/kg	19.74	mg/kg	M	9.2E-05	mg/kg-day	7.0E-03	mg/kg/day	N/A	N/A	1.3E-02
Dermal	Aluminum	8642.3125	mg/kg	8642.31	mg/kg	M	4.5E-03	mg/kg-day	2.7E-01	mg/kg/day	N/A	N/A	1.7E-02
	Arsenic	5.07625	mg/kg	5.08	mg/kg	M	8.4E-06	mg/kg-day	2.9E-04	mg/kg/day	N/A	N/A	2.9E-02
	Benzo(a)Pyrene	180.888235	mg/kg	180.89	mg/kg	M	9.4E-04	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Beryllium	0.4209375	mg/kg	0.42	mg/kg	M	2.2E-07	mg/kg-day	5.0E-05	mg/kg/day	N/A	N/A	4.4E-03
	Iron	15773.75	mg/kg	15773.75	mg/kg	M	8.2E-03	mg/kg-day	1.5E-02	mg/kg/day	N/A	N/A	5.4E-01
	Manganese	97.96875	mg/kg	97.97	mg/kg	M	5.1E-05	mg/kg-day	2.3E-02	mg/kg/day	N/A	N/A	2.2E-03
	Vanadium	19.7353125	mg/kg	19.74	mg/kg	M	1.0E-05	mg/kg-day	1.4E-04	mg/kg/day	N/A	N/A	7.3E-02
												Total Hazard Index Across All Exposure Routes/Pathways	1.1E+00

TABLE 8.12.RME
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
St. Juliens Creek - Burning Grounds (Site 5)

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	27900	mg/kg	27900.00	mg/kg	M	9.4E-04	mg/kg-day	N/A	N/A	N/A
	Arsenic	18.6	mg/kg	18.60	mg/kg	M	6.2E-07	mg/kg-day	1.5E+00	mg/kg-day -1	9.36E-07
	Benzo(a)Pyrene	0.27	mg/kg	0.27	mg/kg	M	9.1E-09	mg/kg-day	7.3E+00	mg/kg-day -1	6.61E-08
	Beryllium	1.5	mg/kg	1.50	mg/kg	M	5.0E-08	mg/kg-day	4.3E+00	mg/kg-day -1	2.16E-07
	Iron	58000	mg/kg	58000.00	mg/kg	M	1.9E-03	mg/kg-day	N/A	N/A	N/A
	Manganese	269	mg/kg	269.00	mg/kg	M	9.0E-06	mg/kg-day	N/A	N/A	N/A
	Vanadium	75.2	mg/kg	75.20	mg/kg	M	2.5E-06	mg/kg-day	N/A	N/A	N/A
Dermal	Aluminum	27900	mg/kg	27900.00	mg/kg	M	1.0E-04	mg/kg-day	N/A	N/A	N/A
	Arsenic	18.6	mg/kg	18.60	mg/kg	M	2.2E-07	mg/kg-day	1.4E+00	mg/kg-day -1	3.14E-07
	Benzo(a)Pyrene	0.27	mg/kg	0.27	mg/kg	M	1.0E-08	mg/kg-day	N/A	mg/kg-day -1	N/A
	Beryllium	1.5	mg/kg	1.50	mg/kg	M	5.6E-09	mg/kg-day	4.3E-02	mg/kg-day -1	2.39E-10
	Iron	58000	mg/kg	58000.00	mg/kg	M	2.1E-04	mg/kg-day	N/A	N/A	N/A
	Manganese	269	mg/kg	269.00	mg/kg	M	1.0E-06	mg/kg-day	N/A	N/A	N/A
	Vanadium	75.2	mg/kg	75.20	mg/kg	M	2.8E-07	mg/kg-day	N/A	N/A	N/A
										Total Risk Across All Exposure Routes/Pathways	1.5E-06

TABLE 8.12.CT
CALCULATION OF CANCER RISKS
CENTRAL TENDENCIES
St. Juliens Creek - Burning Grounds (Site 5)

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	8642.3125	mg/kg	8642.31	mg/kg	M	2.9E-04	mg/kg-day	N/A	N/A	N/A
	Arsenic	5.07625	mg/kg	5.08	mg/kg	M	1.7E-07	mg/kg-day	1.5E+00	mg/kg-day -1	2.55E-07
	Benzo(a)Pyrene	180.888235	mg/kg	180.89	mg/kg	M	6.1E-06	mg/kg-day	7.3E+00	mg/kg-day -1	4.43E-05
	Beryllium	0.4209375	mg/kg	0.42	mg/kg	M	1.4E-08	mg/kg-day	4.3E+00	mg/kg-day -1	6.07E-08
	Iron	15773.75	mg/kg	15773.75	mg/kg	M	5.3E-04	mg/kg-day	N/A	N/A	N/A
	Manganese	97.96875	mg/kg	97.97	mg/kg	M	3.3E-06	mg/kg-day	N/A	N/A	N/A
	Vanadium	19.7353125	mg/kg	19.74	mg/kg	M	6.6E-07	mg/kg-day	N/A	N/A	N/A
Dermal	Aluminum	8642.3125	mg/kg	8642.31	mg/kg	M	3.2E-05	mg/kg-day	N/A	N/A	N/A
	Arsenic	5.07625	mg/kg	5.08	mg/kg	M	6.0E-08	mg/kg-day	1.4E+00	mg/kg-day -1	8.57E-08
	Benzo(a)Pyrene	180.888235	mg/kg	180.89	mg/kg	M	6.7E-06	mg/kg-day	N/A	mg/kg-day -1	N/A
	Beryllium	0.4209375	mg/kg	0.42	mg/kg	M	1.6E-09	mg/kg-day	4.3E-02	mg/kg-day -1	6.70E-11
	Iron	15773.75	mg/kg	15773.75	mg/kg	M	5.8E-05	mg/kg-day	N/A	N/A	N/A
	Manganese	97.96875	mg/kg	97.97	mg/kg	M	3.6E-07	mg/kg-day	N/A	N/A	N/A
	Vanadium	19.7353125	mg/kg	19.74	mg/kg	M	7.3E-08	mg/kg-day	N/A	N/A	N/A
										Total Risk Across All Exposure Routes/Pathways	4.5E-05

Site 5

Subsurface Soil to Groundwater

TABLE 2.2
OCCURRENCE, DISTRIBUTION AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN
St. Juliens Creek -Burning Grounds (Site 5)

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 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	21		89		ug/kg	SB07	2/14	12-21	89	NA	NA	NA	NA	NO	NTX
72548	4,4'-DDD	2.6		110		ug/kg	SB15	3/14	3.4-53	110	NA	NA	NA	NA	NO	NTX
72559	4,4'-DDE	5.9		310		ug/kg	SB05	3/14	3.4-53	310	NA	NA	NA	NA	NO	NTX
50293	4,4'-DDT	3.7		620		ug/kg	SB05	3/14	3.4-53	620	NA	NA	NA	NA	NO	NTX
67641	Acetone	11		170		ug/kg	SB11	3/14	12-18	170	NA	NA	NA	NA	NO	NTX
7429905	Aluminum	547	J	27900	J	mg/kg	SB02	14/14	7.28-15.74	27900	NA	NA	NA	NA	NO	NTX
120127	Anthracene	44	J	170	J	ug/kg	SB03	2/14	340-690	170	NA	NA	NA	NA	NO	NTX
7440360	Antimony	0.64	L	2.3	L	mg/kg	SB09	4/14	0.36-0.72	2.3	NA	NA	NA	NA	NO	NTX
7440382	Arsenic	0.93		18.6		mg/kg	SB02	10/14	0.5-1.07	18.6	NA	15	NA	NA	YES	ASL
7440393	Barium	6.9		103		mg/kg	SB07	9/14	0.33-0.72	103	NA	32	NA	NA	YES	ASL
56553	Benzo(a)Anthracene	65		490		ug/kg	SB03	5/14	340-690	490	NA	NA	NA	NA	NO	NTX
50328	Benzo(a)Pyrene	60	J	270	J	ug/kg	SB03	6/14	340-690	270	NA	NA	NA	NA	NO	NTX
205992	Benzo(b)Fluoranthene	42	J	630	J	ug/kg	SB03	6/14	340-690	630	NA	NA	NA	NA	NO	NTX
207089	Benzo(k)Fluoranthene	120	J	180	J	ug/kg	SB07	4/14	340-690	180	NA	NA	NA	NA	NO	NTX
7440417	Beryllium	0.36	J	1.5	J	mg/kg	SB07	5/14	0.17-0.36	1.5	NA	NA	NA	NA	NO	NTX
75150	Carbon Disulfide	2	J	17	J	ug/kg	SB07	2/14	12-21	17	NA	NA	NA	NA	NO	NTX
218019	Chrysene	76	J	450	J	ug/kg	SB03	7/14	340-690	450	NA	NA	NA	NA	NO	NTX
7440484	Cobalt	2		36		mg/kg	SB03	9/14	1.32-2.86	36	NA	NA	NA	NA	NO	NTX
7440508	Copper	9.1		58.3		mg/kg	SB02	6/14	0.99-2.15	58.3	NA	NA	NA	NA	NO	NTX
206440	Fluoranthene	42		1500		ug/kg	SB03	9/14	340-690	1500	NA	NA	NA	NA	NO	NTX
193395	Indeno(1,2,3-cd)Pyrene	120	J	170	J	ug/kg	SB07	4/14	340-690	170	NA	NA	NA	NA	NO	NTX
7439896	Iron	767		58000		mg/kg	SB08	14/14	2.81-6.08	58000	NA	NA	NA	NA	NO	NTX
7439965	Manganese	6.6	J	269	J	mg/kg	SB07	14/14	0.33-0.72	269	NA	NA	NA	NA	NO	NTX
7439976	Mercury	0.18		0.69		mg/kg	SB07	4/14	0.05-0.09	0.69	NA	NA	NA	NA	NO	NTX
75092	Methylene Chloride	14	J	14	J	ug/kg	SB05	1/14	12-21	14	NA	10	NA	NA	YES	ASL
91203	Naphthalene	63	J	63	J	ug/kg	SB03	1/14	340-690	63	NA	NA	NA	NA	NO	NTX
7440020	Nickel	7.5		65.6		mg/kg	SB02	3/14	1.16-2.25	65.6	NA	21	NA	NA	YES	ASL
129000	Pyrene	42		980		ug/kg	SB03	7/14	340-690	980	NA	NA	NA	NA	NO	NTX
7440224	Silver	0.23	L	0.96	L	mg/kg	SB02	8/14	0.17-0.36	0.96	NA	NA	NA	NA	NO	NTX
127184	Tetrachloroethene	2	J	3	J	ug/kg	SB08	2/14	12-21	3	NA	NA	NA	NA	NO	NTX
7440622	Vanadium	1.6		75.2		mg/kg	SB08	14/14	1.49-3.22	75.2	NA	NA	NA	NA	NO	NTX
7440666	Zinc	63.3		310		mg/kg	SB07	5/14	0.83-1.79	310	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, March 1998, U.S. EPA Region III. (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 5

Subsurface Soil to Air

TABLE 2.3
OCCURRENCE, DISTRIBUTION AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN
St. Juliens Creek -Burning Grounds (Site 5)

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	21		89		ug/kg	SB07	2/14	12-21	89	NA	NA	NA	NA	NO	NTX
72548	4,4'-DDD	2.6		110		ug/kg	SB15	3/14	3.4-53	110	NA	NA	NA	NA	NO	NTX
72559	4,4'-DDE	5.9		310		ug/kg	SB05	3/14	3.4-53	310	NA	NA	NA	NA	NO	NTX
50293	4,4'-DDT	3.7		620		ug/kg	SB05	3/14	3.4-53	620	NA	NA	NA	NA	NO	NTX
67641	Acetone	11		170		ug/kg	SB11	3/14	12-18	170	NA	NA	NA	NA	NO	NTX
7429905	Aluminum	547	J	27900	J	mg/kg	SB02	14/14	7.28-15.74	27900	NA	NA	NA	NA	NO	NTX
120127	Anthracene	44	J	170	J	ug/kg	SB03	2/14	340-690	170	NA	NA	NA	NA	NO	NTX
7440360	Antimony	0.64	L	2.3	L	mg/kg	SB09	4/14	0.36-0.72	2.3	NA	NA	NA	NA	NO	NTX
7440382	Arsenic	0.93		18.6		mg/kg	SB02	10/14	0.5-1.07	18.6	NA	NA	NA	NA	NO	NTX
7440393	Barium	6.9		103		mg/kg	SB07	9/14	0.33-0.72	103	NA	NA	NA	NA	NO	NTX
56553	Benzo(a)Anthracene	65		490		ug/kg	SB03	5/14	340-690	490	NA	NA	NA	NA	NO	NTX
50328	Benzo(a)Pyrene	60	J	270	J	ug/kg	SB03	6/14	340-690	270	NA	NA	NA	NA	NO	NTX
205992	Benzo(b)Fluoranthene	42	J	630	J	ug/kg	SB03	6/14	340-690	630	NA	NA	NA	NA	NO	NTX
207089	Benzo(k)Fluoranthene	120	J	180	J	ug/kg	SB07	4/14	340-690	180	NA	NA	NA	NA	NO	NTX
7440417	Beryllium	0.36	J	1.5	J	mg/kg	SB07	5/14	0.17-0.36	1.5	NA	NA	NA	NA	NO	NTX
75150	Carbon Disulfide	2	J	17	J	ug/kg	SB07	2/14	12-21	17	NA	NA	NA	NA	NO	NTX
218019	Chrysene	76	J	450	J	ug/kg	SB03	7/14	340-690	450	NA	NA	NA	NA	NO	NTX
7440484	Cobalt	2		36		mg/kg	SB03	9/14	1.32-2.86	36	NA	NA	NA	NA	NO	NTX
7440508	Copper	9.1		58.3		mg/kg	SB02	6/14	0.99-2.15	58.3	NA	NA	NA	NA	NO	NTX
206440	Fluoranthene	42		1500		ug/kg	SB03	9/14	340-690	1500	NA	NA	NA	NA	NO	NTX
193395	Indeno(1,2,3-cd)Pyrene	120	J	170	J	ug/kg	SB07	4/14	340-690	170	NA	NA	NA	NA	NO	NTX
7439896	Iron	767		58000		mg/kg	SB08	14/14	2.81-6.08	58000	NA	NA	NA	NA	NO	NTX
7439965	Manganese	6.6	J	269	J	mg/kg	SB07	14/14	0.33-0.72	269	NA	NA	NA	NA	NO	NTX
7439976	Mercury	0.18		0.69		mg/kg	SB07	4/14	0.05-0.09	0.69	NA	NA	NA	NA	NO	NTX
75092	Methylene Chloride	14	J	14	J	ug/kg	SB05	1/14	12-21	14	NA	NA	NA	NA	NO	NTX
91203	Naphthalene	63	J	63	J	ug/kg	SB03	1/14	340-690	63	NA	NA	NA	NA	NO	NTX
7440020	Nickel	7.5		65.6		mg/kg	SB02	3/14	1.16-2.25	65.6	NA	NA	NA	NA	NO	NTX
129000	Pyrene	42		980		ug/kg	SB03	7/14	340-690	980	NA	NA	NA	NA	NO	NTX
7440224	Silver	0.23	L	0.96	L	mg/kg	SB02	8/14	0.17-0.36	0.96	NA	NA	NA	NA	NO	NTX
127184	Tetrachloroethene	2	J	3	J	ug/kg	SB08	2/14	12-21	3	NA	NA	NA	NA	NO	NTX
7440622	Vanadium	1.6		75.2		mg/kg	SB08	14/14	1.49-3.22	75.2	NA	NA	NA	NA	NO	NTX
7440666	Zinc	63.3		310		mg/kg	SB07	5/14	0.83-1.79	310	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, March 1996, U.S. EPA Region III. (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 5

Sediment

TABLE 2.9
OCCURRENCE, DISTRIBUTION AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN
St. Juliens Creek - Burning Grounds (Site 5)

Scenario Timeframe: Current/Future
Medium: Sediment
Exposure Medium: Sediment
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)
121142	2,4-Dinitrotoluene	65	J	65	J	ug/kg	SD02	1/2	510-810	65	NA	1.9E+04	NA	NA	NO	BSL
72548	4,4'-DDD	19		110		ug/kg	SD03	2/2	6.2-71	110	NA	5.0E+04	NA	NA	NO	BSL
72559	4,4' DDE	12		64		ug/kg	SD03	2/2	6.2-51	64	NA	3.5E+04	NA	NA	NO	BSL
50293	4,4'-DDT	26	J	38		ug/kg	SD03	2/2	6.2-51	38	NA	3.5E+04	NA	NA	NO	BSL
83329	Acenaphthene	620	J	65	J	ug/kg	SD02	1/2	510-3600	65	NA	1.6E+07	NA	NA	NO	BSL
67641	Acetone	52		52		ug/kg	SD03	1/2	15-21	52	NA	2.7E+07	NA	NA	NO	BSL
7429905	Aluminum	13800		17000		mg/kg	SD03	2/2	12.6-18.1	17000	NA	2.7E+05	NA	NA	NO	BSL
120127	Anthracene	99	J	99	J	ug/kg	SD02	1/2	510-3600	99	NA	2.7E+05	NA	NA	NO	BSL
7440360	Antimony	0.94	L	0.94	L	mg/kg	SD03	1/2	0.57-0.82	0.94	NA	1.1E+02	NA	NA	NO	BSL
7440382	Arsenic	12.5		12.5		mg/kg	SD03	1/2	0.86-1.23	12.5	NA	8.1E+01	NA	NA	NO	BSL
7440393	Barium	53.1	L	133		mg/kg	SD02	2/2	0.57-0.82	133	NA	1.9E+04	NA	NA	NO	BSL
56553	Benzo(a)Anthracene	300	J	300	J	ug/kg	SD02	1/2	510-3600	300	NA	1.6E+04	NA	NA	NO	BSL
50328	Benzo(a)Pyrene	220	J	220	J	ug/kg	SD02	1/2	510-3600	220	NA	1.6E+03	NA	NA	NO	BSL
205992	Benzo(b)Fluoranthene	460	J	460	J	ug/kg	SD02	1/2	510-3600	460	NA	1.6E+04	NA	NA	NO	BSL
207089	Benzo(k)fluoranthene	160	J	160	J	ug/kg	SD02	1/2	510-3600	160	NA	1.6E+05	NA	NA	NO	BSL
7440417	Beryllium	0.74	J	2.4		mg/kg	SD03	2/2	0.29-0.41	2.4	NA	2.8E+00	NA	NA	NO	BSL
67663	Chloroform	3	J	3	J	ug/kg	SD02	1/2	15-21	3	NA	2.0E+06	NA	NA	NO	BSL
218019	Chrysene	410	J	450	J	ug/kg	SD02	2/2	510-3600	450	NA	1.6E+06	NA	NA	NO	BSL
7440484	Cobalt	4.3	J	4.3	J	mg/kg	SD02	1/2	2.29-3.29	4.3	NA	1.6E+04	NA	NA	NO	BSL
7440508	Copper	39		39.7		mg/kg	SD02	2/2	1.72-2.47	39.7	NA	9.5E+05	NA	NA	NO	BSL
57125	Cyanide	1.1	J	1.1	J	mg/kg	SD02	1/2	0.5-1.1	1.1	NA	5.4E+03	NA	NA	NO	BSL
60571	Dieldrin	21		21		ug/kg	SD03	1/2	6.2-7.1	21	NA	7.5E+02	NA	NA	NO	BSL
84662	Diethylphthalate	720	J	720	J	ug/kg	SD03	1/2	510-3600	720	NA	2.2E+08	NA	NA	NO	BSL
86737	Fluorene	63	J	63	J	ug/kg	SD02	1/2	510-3600	63	NA	1.1E+07	NA	NA	NO	BSL
193395	Indeno(1,2,3-cd)Pyrene	170	J	170	J	ug/kg	SD02	1/2	510-3600	170	NA	1.6E+04	NA	NA	NO	BSL
7439896	Iron	29100		161000		mg/kg	SD02	2/2	4.87-6.99	161000	NA	8.1E+04	NA	NA	YES	ASL
7439965	Manganese	48.1		76	K	mg/kg	SD02	2/2	0.57-0.82	76	NA	6.2E+03	NA	NA	NO	BSL
7439976	Mercury	0.17	J	0.29		mg/kg	SD02	2/2	0.08-0.1	0.29	NA	8.1E+01	NA	NA	NO	BSL
86306	N-Nitrosodiphenylamine	610	J	610	J	ug/kg	SD02	1/2	510-3600	610	NA	2.4E+06	NA	NA	NO	BSL
91203	Naphthalene	80	J	80	J	ug/kg	SD02	1/2	510-3600	80	NA	1.1E+07	NA	NA	NO	BSL
7440020	Nickel	7	J	7	J	mg/kg	SD03	1/2	2.01-2.88	7	NA	5.4E+03	NA	NA	NO	BSL
129000	Pyrene	680		680		ug/kg	SD02	1/2	510-3600	680	NA	8.1E+06	NA	NA	NO	BSL
7440224	Silver	1.6	J	1.6	J	mg/kg	SD02	1/2	0.29-0.41	1.6	NA	1.4E+03	NA	NA	NO	BSL
7440622	Vanadium	37.7		42.2		mg/kg	SD02	2/2	2.58-3.7	42.2	NA	1.9E+03	NA	NA	NO	BSL
7440666	Zinc	124		149	L	mg/kg	SD03	2/2	1.43-2.06	149	NA	8.1E+04	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 values derived in Appendix L of this report.
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.

(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 3.5
MEDIUM-SPECIFIC EXPOSURE POINT CONCENTRATION SUMMARY
Saint Juliens Creek - Burning Grounds (Site 5)

Scenario Timeframe: Current
Medium: Sediment
Exposure Medium: Sediment
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
Iron	mg/kg	82567	N/A	161000		mg/kg	161000	Max	(1)	82567	(1)	Mean

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 G, the exposure point concentration will consist of the maximum detected concentration and the arithmetic mean

TABLE 4.13

VALUES USED FOR DAILY INTAKE CALCULATIONS

St. Juliens Creek - Burning Grounds (Site 5)

Scenario Timeframe: Current
Medium: Sediment
Exposure Medium: Sediment
Exposure Point: Onsite
Receptor Population: Tresspasser
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 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	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 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	2650	EPA, 1992	2650	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	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 4.14

VALUES USED FOR DAILY INTAKE CALCULATIONS

St. Julien's Creek - Burning Grounds (Site 5)

Scenario Timeframe: Current
Medium: Sediment
Exposure Medium: Sediment
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	8,760	EPA, 1989	8,760	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	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, 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 4.15

VALUES USED FOR DAILY INTAKE CALCULATIONS

St. Juliens Creek - Burining Grounds (Site 5)

Scenario Timeframe: Current
Medium: Sediment
Exposure Medium: Sediment
Exposure Point: Onsite
Receptor Population: Tresspasser
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 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	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 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	5800	EPA, 1992	5800	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 4.16

VALUES USED FOR DAILY INTAKE CALCULATIONS

St. Juliens Creek - Burning Grounds (Site 5)

Scenario Timeframe: Future
Medium: Sediment
Exposure Medium: Sediment
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 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	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	EPA, 1991	
	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 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	2650	EPA, 1992	2650	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 4.17

VALUES USED FOR DAILY INTAKE CALCULATIONS

St. Juliens Creek - Burning Grounds (Site 5)

Scenario Timeframe: Future
Medium: Sediment
Exposure Medium: Sediment
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 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	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 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	5800	EPA, 1992	5800	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 5.5
NON-CANCER TOXICITY DATA -- ORAL/DERMAL
St. Juliens Creek - Burning Grounds (Site 5)

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)
Iron	chronic	3E-01	mg/kg/day	0.05	0.015	mg/kg/day	N/A	N/A	RBC:N/A	10/07/97

TABLE 6.5
CANCER TOXICITY DATA -- ORAL/DERMAL
St. Juliens Creek - Burning Grounds (Site 5)

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)
Iron	NA	NA	NA	NA	NA	NA	NA

TABLE 7.13.RME
CALCULATION OF NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
St. Juliens Creek - Burning Grounds (Site 5)

Scenario Timeframe: Current
Medium: Sediment
Exposure Medium: Sediment
Exposure Point: Onsite
Receptor Population: Tresspasser
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	Iron	161000	mg/kg	161000	mg/kg	M	3.1E-01	mg/kg-day	0.3	mg/kg-day	N/A	N/A	1.02E+00
Dermal	Iron	161000	mg/kg	161000	mg/kg	M	4.1E-02	mg/kg-day	0.015	mg/kg-day	N/A	N/A	2.70E+00
												Total Hazard Index Across All Exposure Routes/Pathways	3.7E+00

TABLE 7.13.CT
CALCULATION OF NON-CANCER HAZARDS
CENTRAL TENDENCIES
St. Juliens Creek - Burning Grounds (Site 5)

Scenario Timeframe: Current
Medium: Sediment
Exposure Medium: Sediment
Exposure Point: Onsite
Receptor Population: Tresspasser
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	Iron	82567	mg/kg	82567	mg/kg	M	1.6E-01	mg/kg-day	0.3	mg/kg-day	N/A	N/A	5.23E-01
Dermal	Iron	82567	mg/kg	82567	mg/kg	M	2.1E-02	mg/kg-day	0.015	mg/kg-day	N/A	N/A	1.39E+00
												Total Hazard Index Across All Exposure Routes/Pathways	1.9E+00

TABLE 7.14.RME
CALCULATION OF NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
St. Juliens Creek - Burning Grounds (Site 5)

Scenario Timeframe: Current
Medium: Sediment
Exposure Medium: Sediment
Exposure Point: Onsite
Receptor Population: Tresspasser
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	Iron	161000	mg/kg	161000	mg/kg	M	2.3E-02	mg/kg-day	0.3	mg/kg-day	N/A	N/A	7.79E-02
Dermal	Iron	161000	mg/kg	161000	mg/kg	M	7.9E-03	mg/kg-day	0.015	mg/kg-day	N/A	N/A	5.26E-01
												Total Hazard Index Across All Exposure Routes/Pathways	6.0E-01

TABLE 7.15.CT
CALCULATION OF NON-CANCER HAZARDS
CENTRAL TENDENCIES
St. Juliens Creek - Burning Grounds (Site 5)

Scenario Timeframe: Current
Medium: Sediment
Exposure Medium: Sediment
Exposure Point: Onsite
Receptor Population: Tresspasser
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	Iron	82567	mg/kg	82567	mg/kg	M	1.7E-02	mg/kg-day	0.3	mg/kg-day	N/A	N/A	5.60E-02
Dermal	Iron	82567	mg/kg	82567	mg/kg	M	9.7E-03	mg/kg-day	0.015	mg/kg-day	N/A	N/A	6.50E-01
												Total Hazard Index Across All Exposure Routes/Pathways	7.1E-01

TABLE 7.16.RME
CALCULATION OF NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
St. Juliens Creek - Burning Grounds (Site 5)

Scenario Timeframe: Future
Medium: Sediment
Exposure Medium: Sediment
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	Iron	161000	mg/kg	161000	mg/kg	M	2.1E+00	mg/kg-day	0.3	mg/kg-day	N/A	N/A	6.86E+00
Dermal	Iron	161000	mg/kg	161000	mg/kg	M	2.7E-01	mg/kg-day	0.015	mg/kg-day	N/A	N/A	1.82E+01
												Total Hazard Index Across All Exposure Routes/Pathways	2.5E+01

TABLE 7.16.CT
CALCULATION OF NON-CANCER HAZARDS
CENTRAL TENDENCIES
St. Juliens Creek - Burning Grounds (Site 5)

Scenario Timeframe: Future
Medium: Sediment
Exposure Medium: Sediment
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	Iron	82567	mg/kg	82567	mg/kg	M	1.1E+00	mg/kg-day	0.3	mg/kg-day	N/A	N/A	3.52E+00
Dermal	Iron	82567	mg/kg	82567	mg/kg	M	1.4E-01	mg/kg-day	0.015	mg/kg-day	N/A	N/A	9.32E+00
												Total Hazard Index Across All Exposure Routes/Pathways	1.3E+01

TABLE 7.17.RME
CALCULATION OF NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
St. Juliens Creek - Burning Grounds (Site 5)

Scenario Timeframe: Current
Medium: Sediment
Exposure Medium: Sediment
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	Iron	161000	mg/kg	161000	mg/kg	M	2.2E-01	mg/kg-day	0.3	mg/kg-day	N/A	N/A	7.35E-01
Dermal	Iron	161000	mg/kg	161000	mg/kg	M	1.3E-01	mg/kg-day	0.015	mg/kg-day	N/A	N/A	8.53E+00
												Total Hazard Index Across All Exposure Routes/Pathways	9.3E+00

TABLE 7.17.CT
CALCULATION OF NON-CANCER HAZARDS
CENTRAL TENDENCIES
St. Juliens Creek - Burning Grounds (Site 5)

Scenario Timeframe: Current
Medium: Sediment
Exposure Medium: Sediment
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	Iron	82567	mg/kg	82567	mg/kg	M	1.1E-01	mg/kg-day	0.3	mg/kg-day	N/A	N/A	3.77E-01
Dermal	Iron	82567	mg/kg	82567	mg/kg	M	6.6E-02	mg/kg-day	0.015	mg/kg-day	N/A	N/A	4.37E+00
												Total Hazard Index Across All Exposure Routes/Pathways	4.8E+00

APPENDIX L

Sediment COPC Screening Tables

Risk-Based Concentrations for Noncarcinogenic & Carcinogenic Effects
Sediment Ingestion for Recreational Adult and Adolescent Scenarios
Landfill B (Site 2)

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
1,2-Dichloroethene (total)	0.009	2430.9	NA		2431	2430900	ug/kg
4,4'-DDD	NA		0.24	96	96	95540	ug/kg
4,4'-DDE	NA		0.34	67	67	67440	ug/kg
4,4'-DDT	0.0005	135.05	0.34	67	67	67440	ug/kg
4-Methyl-2-Pentanone	0.08	21608	NA		21608	21608000	ug/kg
Acetone	0.1	27010	NA		27010	27010000	ug/kg
Aluminum	1	270100	NA		270100	270100	mg/kg
Anthracene	0.001	270.1	NA		270	270100	ug/kg
Antimony	0.0004	108.04	NA		108	108	mg/kg
Arsenic	0.0003	81.03	NA		81	81	mg/kg
Barium	0.07	18907	NA		18907	18907	mg/kg
Benzo(a)Anthracene	NA		0.73	31	31	31410	ug/kg
Benzo(a)Pyrene	NA		7.3	3	3	3141	ug/kg
Benzo(b)Fluoranthene	NA		0.73	31	31	31410	ug/kg
Benzo(k)Fluoranthene	NA		0.073	314	314	314103	ug/kg
Beryllium	0.005	1350.5	4.3	5	5	5	mg/kg
Cadmium	0.0005	135.05	NA		135	135	mg/kg
Carbon Disulfide	0.1	27010	NA		27010	27010000	ug/kg
Chrysene	NA		0.0073	3141	3141	3141026	ug/kg
Cobalt	0.06	16206	NA		16206	16206	mg/kg
Copper	3.5	945350	NA		945350	945350	mg/kg
Dieldrin	0.00005	13.505	16	1	1	1433	ug/kg
Diethylphthalate	0.8	216080	NA		216080	216080000	ug/kg
Fluoranthene	0.04	10804	NA		10804	10804000	ug/kg
Indeno(1,2,3-cd)Pyrene	NA		0.73	31	31	31410	ug/kg
Iron	0.3	81030	NA		81030	81030	mg/kg
Manganese	0.023	6212.3	NA		6212	6212	mg/kg
Mercury	0.0003	81.03	NA		81	81	mg/kg
Nickel	0.02	5402	NA		5402	5402	mg/kg
Pyrene	0.03	8103	NA		8103	8103000	ug/kg
Vanadium	0.007	1890.7	NA		1891	1891	mg/kg
Zinc	0.3	81030	NA		81030	81030	mg/kg

Noncarcinogenic effects calculations:

$$\text{RBC (mg/kg)} = \frac{\text{THI} * \text{BW} * \text{ATnc} * 365\ \text{days/year} * 1\text{E+06 mg/kg}}{\text{EF} * \text{ED} * (1/\text{OralRfD}) * \text{IngR} * \text{FC}}$$

Carcinogen calculations:

$$\text{RBC (mg/kg)} = \frac{\text{Risk} * \text{BW} * \text{ATc} * 365\ \text{days/year} * 1\text{E+06 mg/kg}}{\text{EF} * \text{ED} * \text{OSF} * \text{IngR} * \text{FC}}$$

EXPOSURE ASSUMPTIONS

Exposure setting	Adolescent	Adult
THI - Target hazard index (unitless)	0.1	N/A
Risk - Target excess lifetime cancer risk (unitle	N/A	0.000001
BW - Body weight (kilograms)	37	70
ATnc - Averaging time for noncarcinogens (yea	9	70
ATc - Averaging time for carcinogens (year)	N/A	70
EF - Exposure frequency (days/year)	100	52
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.

Risk-Based Concentrations for Noncarcinogenic & Carcinogenic Effects
Sediment Ingestion for Recreational Adult and Adolescent Scenarios
St. Juliens Creek - Burning Grounds (Site 5)

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
2,4-Dinitrotoluene	0.002	540.2	0.68	18	18	17534	ug/kg
4,4'-DDD	NA		0.24	50	50	49681	ug/kg
4,4'-DDE	NA		0.34	35	35	35069	ug/kg
4,4'-DDT	0.0005	135.05	0.34	35	35	35069	ug/kg
Acenaphthene	0.06	16206	NA		16206	16206000	ug/kg
Acetone	0.1	27010	NA		27010	27010000	ug/kg
Aluminum	1	270100	NA		270100	270100	mg/kg
Anthracene	0.001	270.1	NA		270	270100	ug/kg
Antimony	0.0004	108.04	NA		108	108	mg/kg
Arsenic	0.0003	81.03	NA		81	81	mg/kg
Barium	0.07	18907	NA		18907	18907	mg/kg
Benzo(a)Anthracene	NA		0.73	16	16	16333	ug/kg
Benzo(a)Pyrene	NA		7.3	2	2	1633	ug/kg
Benzo(b)Fluoranthene	NA		0.73	16	16	16333	ug/kg
Benzo(k)Fluoranthene	NA		0.073	163	163	163333	ug/kg
Beryllium	0.005	1350.5	4.3	3	3	3	mg/kg
Chloroform	0.01	2701	0.0061	1955	1955	1954645	ug/kg
Chrysene	NA		0.0073	1633	1633	1633333	ug/kg
Cobalt	0.06	16206	NA		16206	16206	mg/kg
Copper	3.5	945350	NA		945350	945350	mg/kg
Cyanide	0.02	5402	NA		5402	5402	mg/kg
Dieldrin	0.00005	13.505	16	1	1	745	ug/kg
Diethylphthalate	0.8	216080	NA		216080	216080000	ug/kg
Fluorene	0.04	10804	NA		10804	10804000	ug/kg
Indeno(1,2,3-cd)Pyrene	NA		0.73	16	16	16333	ug/kg
Iron	0.3	81030	NA		81030	81030	mg/kg
Manganese	0.023	6212.3	NA		6212	6212	mg/kg
Mercury	0.0003	81.03	NA		81	81	mg/kg
N-Nitrosodiphenylamine	NA		0.0049	2433	2433	2433333	ug/kg
Naphthalene	0.04	10804	NA		10804	10804000	ug/kg
Nickel	0.02	5402	NA		5402	5402	mg/kg
Pyrene	0.03	8103	NA		8103	8103000	ug/kg
Silver	0.005	1350.5	NA		1351	1351	mg/kg
Vanadium	0.007	1890.7	NA		1891	1891	mg/kg
Zinc	0.3	81030	NA		81030	81030	mg/kg

Noncarcinogenic effects calculations:

RBC (mg/kg) = THI * BW * ATnc *365 days/year * 1E+06 mg/kg / EF * ED * (1/OralRfD) * IngR * FC

Carcinogen calculations:

RBC (mg/kg) = Risk * BW * ATc * 365 days/year * 1E+06 mg/kg / EF * ED * OSF * IngR * FC

EXPOSURE ASSUMPTIONS

Exposure setting	Adolescent	Adult
THI - Target hazard index (unitless)	0.1	N/A

Risk-Based Concentrations for Noncarcinogenic & Carcinogenic Effects
Sediment Ingestion for Recreational Adult and Adolescent Scenarios
St. Juliens Creek - Burning Grounds (Site 5)

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
Risk - Target excess lifetime cancer risk (unitle		N/A	0.000001				
BW - Body weight (kilograms)		37	70				
ATnc - Averaging time for noncarcinogens (yea		9	N/A				
ATc - Averaging time for carcinogens (year)		N/A	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.

APPENDIX M

Chemical Specific Exposure Values

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.

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 x CF x SA x AF x ABS x EF x ED)/(BW x 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.

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

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

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.

REFERENCES

EPA, 1989. Risk Assessment Guidance for Superfund, Volume I, Human Health Evaluation Manual (Part A). Office of Emergency and Remedial Response, December, 1989. EPA/540/1-89/002.

EPA, 1992. Dermal Exposure Assessment: Principles and Applications. Interim Report. Office of Health and Environmental Assessment, January, 1992. EPA/600/8-91/011/B.

Feldmann, R.J. and H.I. Maibach, 1974. Percutaneous penetration of some pesticides and herbicides in man. Toxicol. Appl. Pharmacol. 28:126-132.

Franz, T.J., 1984. Percutaneous absorption of benzene. Adv. Modern Environ. Toxicol. Vol. 6. Applied Toxicology of Petroleum Hydrocarbons. Princeton Scientific Publishers, Inc., Princeton, N.J. pp. 61-70.

Kao, J.K., F.K. Patterson, and J. Hall, 1985. Skin penetration and metabolism of topically applied chemicals in six mammalian species, including man: An *in vitro* study with benzo[a]pyrene and testosterone. Toxicol. Appl. Pharmacol. 81:502-516.

Ryan, E.A., E.T. Hawkins, *et al.* 1987. Assessing Risk from Dermal Exposure at Hazardous Waste Sites. In Bennett, G. and J. Bennett, eds. Superfund '87: Proceedings of the Eighth National Conference; November 16-18; Washington, D.C. The Hazardous Materials Control Research Institute. pp. 166-168.

Skowronski, G.A., R.M. Turkall, and M.S. Abdel-Rahman. 1988. Soil adsorption alters bioavailability of benzene in dermally exposed male rats. Am. Ind. Hyg. Assoc. J. 49(10):506-511.

Wester, R.C., H.I. Maibach, *et al.* 1993a. *In vivo* and *in vitro* percutaneous absorption and skin decontamination of arsenic from water and soil. Fundamental and Applied Toxicology. Vol. 20, No. 3, pp. 336-340.

Wester, R.C., H.I. Maibach, *et al.* 1993b. Percutaneous absorption of pentachlorophenol from soil. Fundamental and Applied Toxicology. Vol. 20, No. 1, pp. 68-71.

For additional information, call (215) 597-1309.

Approved by: Thomas C. Voltaggio, Director
Hazardous Waste Management Division

http://www.epa.gov/reg3hwmd/risk/solabsg2.htr

APPENDIX N

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		
.cetone	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
yrene	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 & Douli, 1986
Vanadium	0.02	ATSDR, 1992
Zinc	0.25	NCEA 10-9-92
Iron	0.8	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, so 0 chemical abs by GI tract

Trans. 05

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 O

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

Tseng, W.P., Chu, H.M., How, S.W., Fong, J.M., Lin, C.S., and Yeh, S. 1968. Prevalence of Skin Cancer in an Endemic Area of Chronic Arsenicism in Taiwan. J. Natl. Cancer Inst. 40:453-463.

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).

REFERENCES

Agency for Toxic Substances and Disease Registry (ATSDR). 1993. *Toxicological Profile for Chloroform*. U.S. Public Health Service.

Bomski H., Sobolewska A., and A. Strakowski. 1967. Toxic damage of the liver by chloroform in chemical industry workers. Int. Arch. F. Gewerbepathologie u. Gewerbehygiene 24:127- 134.

Challen P.J.R., Hicklish D.E., and J. Bedford. 1958. Chronic chloroform intoxication. Br. J. Ind. Med. 15:243-249.

Malten K.E., Spruit D., Boemaars H.G.M., et al. 1968. Horny layer injury by solvents. Berufsdermatosen 16:135-147.

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.

Piersol G.M., Tumen H.J., and L.S. Kau. 1933. Fatal poisoning following the ingestion of chloroform. Med. Clin. North Am. 17:587-601.

Schroeder H.G. 1965. Acute and delayed chloroform poisoning. Br. J. Anaesth. 37:972-975.

Smith A.A., Volpitto P.P., Gramling Z.W., et al. 1973. Chloroform, halothane, and regional anesthesia: A comparative study. Anesth. Analg. 52:1-11.

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.

REFERENCES

American Conference of Governmental Industrial Hygienists (ACGIH). 1986. Documentation of the Threshold Limit Values and Biological Exposure Indices, 5th Ed. Cincinnati, Ohio.

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 P

Foster and Chrotowski Shower Model

SITE 2 - Landfill B
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	0.006	119.39	4.35E-03	1164.859	12.1415	11.48057	15.50794	2.421913	8.073044	0.00024
---------------				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
---------------				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

CHEMICAL	D	RFD	CSF	HQ	CR
Chloroform	2.40E-04	0.00E+00	8.05E-02	N/A	6.4E-06
----------	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	6.4E-06

SITE 5 - Burning Grounds
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	0.005	119.39	4.35E-03	1164.859	12.1415	11.48057	15.50794	2.018261	6.727536	0.0002
				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
				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
				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	2.00E-04	0.00E+00	8.05E-02	N/A	5.3E-06
----------	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	5.3E-06

APPENDIX Q

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

SOIL & DUST:
Soil: constant conc.
Dust: constant conc.

Age	Soil (ug Pb/g)	House Dust (ug Pb/g)
0-1	545.0	200.0
1-2	545.0	200.0
2-3	545.0	200.0
3-4	545.0	200.0
4-5	545.0	200.0
5-6	545.0	200.0
6-7	545.0	200.0

Site 2
Sediment = 545 mg/kg
Water = default
Geo Mean = 5.2
Intersect: 7.75%

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:	5.8	10.81	8.00
1-2:	6.5	15.90	12.49
2-3:	6.1	16.55	12.70
3-4:	5.8	16.75	12.92
4-5:	4.9	13.76	9.88
5-6:	4.2	13.16	9.00
6-7:	3.7	13.06	8.55

YEAR	Diet Uptake (ug/day)	Water Uptake (ug/day)	Paint Uptake (ug/day)	Air Uptake (ug/day)
0.5-1:	2.44	0.35	0.00	0.02
1-2:	2.51	0.87	0.00	0.03
2-3:	2.87	0.92	0.00	0.06
3-4:	2.80	0.95	0.00	0.07
4-5:	2.79	1.02	0.00	0.07
5-6:	2.97	1.09	0.00	0.09
6-7:	3.30	1.11	0.00	0.09

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	2370.0	200.0
1-2	2370.0	200.0
2-3	2370.0	200.0
3-4	2370.0	200.0
4-5	2370.0	200.0
5-6	2370.0	200.0
6-7	2370.0	200.0

Additional Dust Sources: None DEFAULT

PAINT Intake: 0.00 ug Pb/day DEFAULT

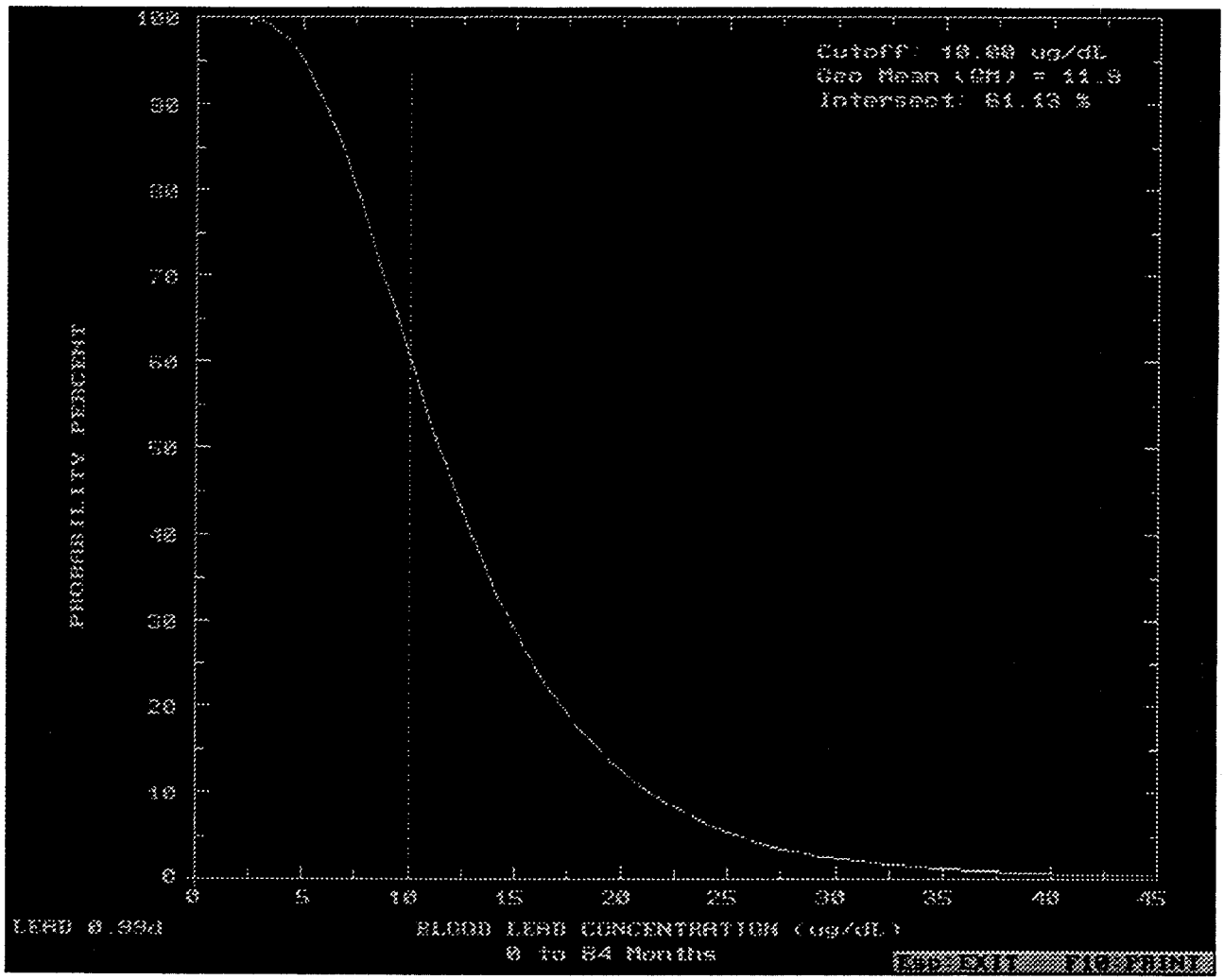
MATERNAL CONTRIBUTION: Infant Model
Maternal Blood Conc: 2.50 ug Pb/dL

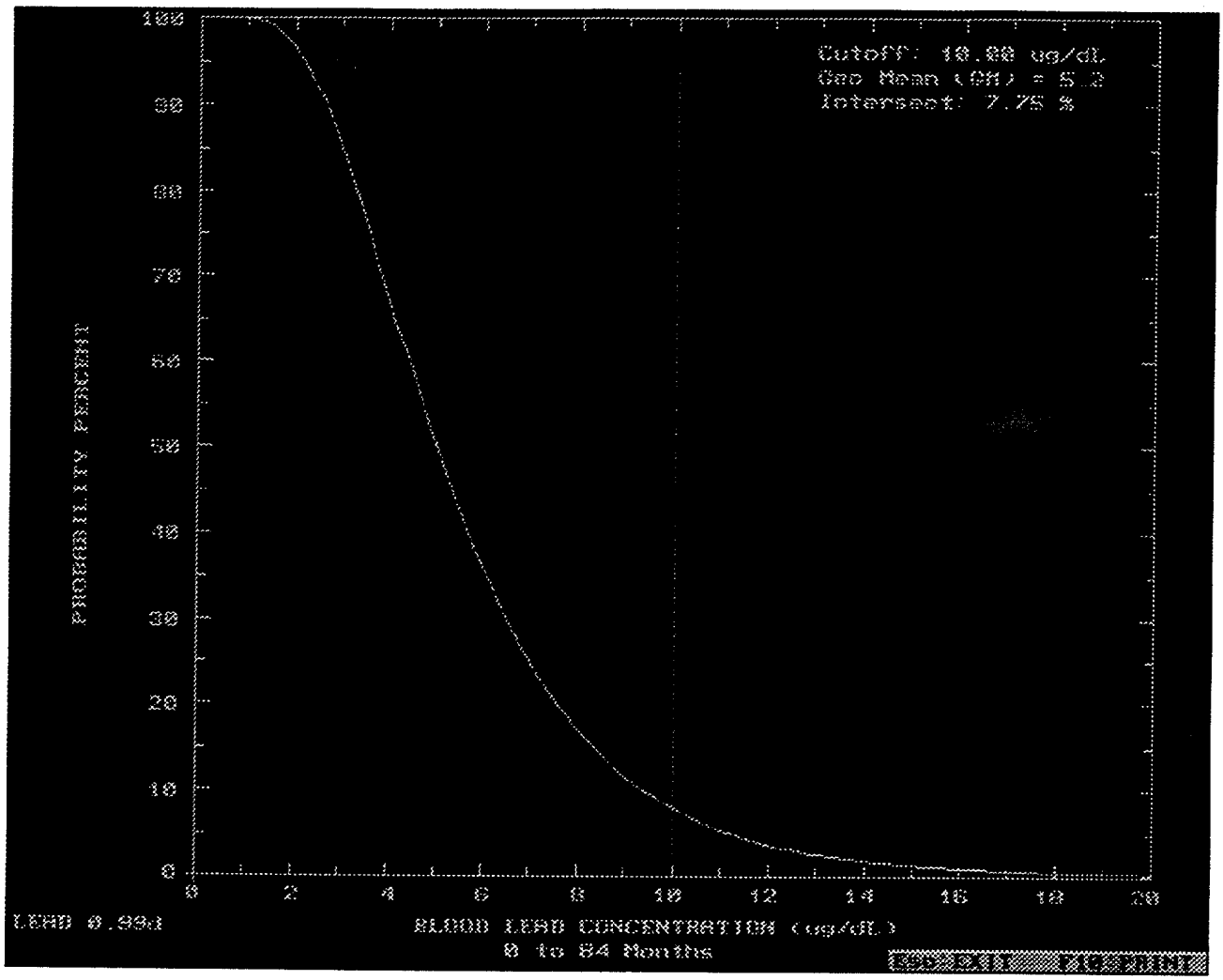
Site 2
Surface Soil = 2,370 mg/kg
Water: Default
Geo Mean = 11.9
Intersect = 61.13%

CALCULATED BLOOD Pb and Pb UPTAKES:

YEAR	Blood Level (ug/dL)	Total Uptake (ug/day)	Soil+Dust Uptake (ug/day)
0.5-1:	12.9	24.78	22.39
1-2:	14.8	36.84	34.03
2-3:	14.0	38.59	35.35
3-4:	13.6	39.92	36.64
4-5:	11.4	32.83	29.35
5-6:	9.8	31.04	27.24
6-7:	8.7	30.32	26.15

YEAR	Diet Uptake (ug/day)	Water Uptake (ug/day)	Paint Uptake (ug/day)	Air Uptake (ug/day)
0.5-1:	2.06	0.30	0.00	0.02
1-2:	2.06	0.71	0.00	0.03
2-3:	2.41	0.77	0.00	0.06
3-4:	2.40	0.82	0.00	0.07
4-5:	2.50	0.91	0.00	0.07
5-6:	2.72	0.99	0.00	0.09
6-7:	3.05	1.03	0.00	0.09


Cutoff: 10.00 ug/dL
Geo Mean (GM) = 11.9
Intersect: 61.13 %
PROBABILITY PERCENT
100
90
80
70
60
50
40
30
20
10
0
0
5
10
15
20
25
30
35
40
45
LEAD 0.994
BLOOD LEAD CONCENTRATION (ug/dL)
0 to 84 Months


Cutoff: 10.00 ug/dL
Geo Mean (GM) = 5.2
Intersect: 7.75 %
PROBABILITY PERCENT
100
90
80
70
60
50
40
30
20
10
0
0
2
4
6
8
10
12
14
16
18
20
LEAD 0.99d
BLOOD LEAD CONCENTRATION (ug/dL)
0 to 84 Months

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	7210.0	200.0
1-2	7210.0	200.0
2-3	7210.0	200.0
3-4	7210.0	200.0
4-5	7210.0	200.0
5-6	7210.0	200.0
6-7	7210.0	200.0

Additional Dust Sources: None DEFAULT

Site 5
Surface Soil: 7,210 mg/kg
Water - Default
Geo: 3.3 G
Intersect: 95.74%

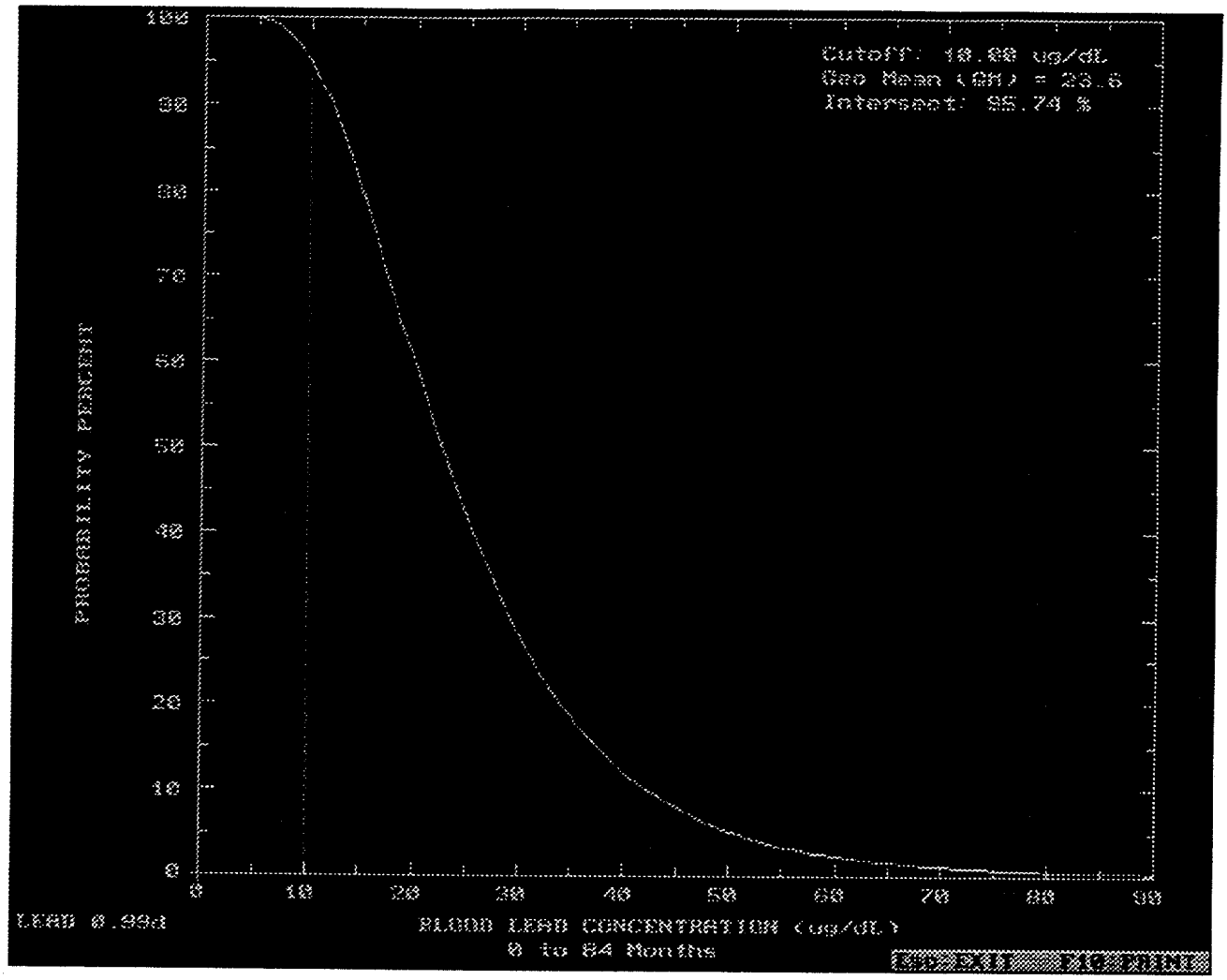
PAINT Intake: 0.00 ug Pb/day DEFAULT

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:	24.6	49.47	47.69
1-2:	28.3	72.60	70.54
2-3:	27.0	77.16	74.74
3-4:	26.7	81.49	79.00
4-5:	23.4	70.05	67.24
5-6:	20.5	67.43	64.26
6-7:	18.5	66.33	62.80

YEAR	Diet Uptake (ug/day)	Water Uptake (ug/day)	Paint Uptake (ug/day)	Air Uptake (ug/day)
0.5-1:	1.54	0.22	0.00	0.02
1-2:	1.50	0.52	0.00	0.03
2-3:	1.79	0.57	0.00	0.06
3-4:	1.81	0.62	0.00	0.07
4-5:	2.01	0.73	0.00	0.07
5-6:	2.25	0.82	0.00	0.09
6-7:	2.57	0.87	0.00	0.09


Cutoff: 10.00 ug/dL
Geo Mean (GM) = 23.6
Intercept: 95.74 %
PROBABILITY PERCENT
100
90
80
70
60
50
40
30
20
10
0
0
10
20
30
40
50
60
70
80
90
LEAD 0.99a
BLOOD LEAD CONCENTRATION (ug/dL)
0 to 84 Months

APPENDIX R

Adult Lead Model

Site 2							
Assessment of non-residential adult exposure to lead in surface soil.							
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	2370	0.4	0.05	0.12	219	350	5.26
2.2	2370	0.4	0.05	0.12	219	350	5.76
*Note: 1.7 - 2.2 range of default values.							
**Default Values							
***Maximum lead value in sediment.							

Site 2

Assessment of non-residential adult exposure to lead in subsurface soil.

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	885	0.4	0.05	0.12	219	350	3.03
2.2	885	0.4	0.05	0.12	219	350	3.53

*Note: 1.7 - 2.2 range of default values.

**Default Values

***Maximum lead value in sediment.

Site 2							
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	545	0.4	0.05	0.12	219	350	2.52
2.2	545	0.4	0.05	0.12	219	350	3.02
*Note: 1.7 - 2.2 range of default values.							
**Default Values							
***Maximum lead value in sediment.							

Site 5							
Assessment of non-residential adult exposure to lead in surface soil.							
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	7210	0.4	0.05	0.12	219	350	12.53
2.2	7210	0.4	0.05	0.12	219	350	13.03
*Note: 1.7 - 2.2 range of default values.							
**Default Values							
***Maximum lead value in sediment.							